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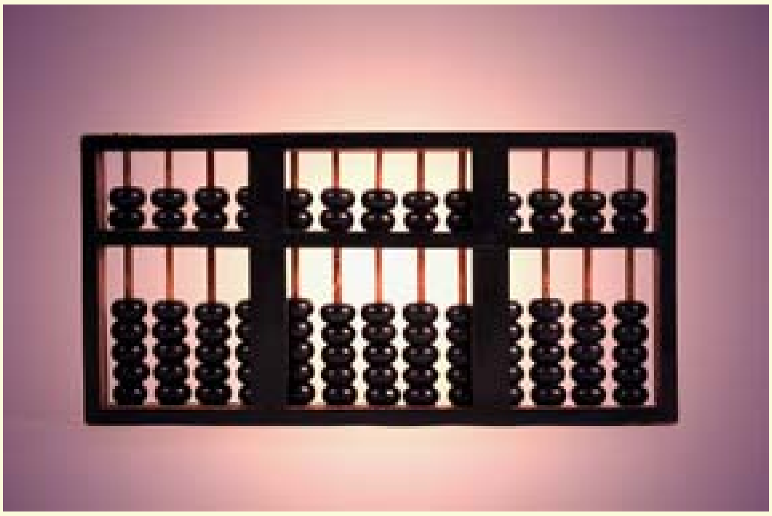

Oppenheim Research

Extra-Financials

Important value drivers in MDAX companies

2008-11-10

Extra-financials: Important Value Drivers in MDAX Companies

2008-11-10

Applied disclosures can be found in the appendix

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UNDERESTIMATED VALUE DRIVERS IN A KNOWLEDGE-BASED ECONOMY

Extra-financial assets are essential for companies that operate in a knowledge- and service-based society. Factors such as knowledge, patents, brands, innovation power, human resources, and corporate governance generate competitive advantages that are difficult to replicate, they help to secure market positions and thus represent a substantial part of the success or failure of a company. As these extra-financial factors are, however, not explicitly reflected in financial statements, it is unlikely that markets are efficient in evaluating them. An extra-financials research approach is complementary and adds transparency to standard valuation models. There are two ways to take extra financials into account: 1) by explicitly analysing and aggregating the individual factors or 2) by incorporating them into a discounted cash flow model after a qualitative assessment via discount factors or via assumptions on mid term growth and margins. Both approaches have their merits and should be superior compared to a simple model based on a pure static valuation yardstick.

SYSTEMATIC ANALYSIS GENERATES ALPHA

In its research, the Value Group shows that the systematic recording and analysis of 120 extra-financial criteria in total leads to an outperformance relative to a passive benchmark also in a case of the MDAX. The study identifies and displays the most important non-financial company characteristics relative to sector averages. In addition to a static comparison it also assesses important changes in extra-financial assets and their impact on growth. Many MDAX companies have made significant improvements in the area of extra-financials in the last years. The index heavyweights – the industrial goods and the basic materials companies – have recorded the largest improvements regarding extra-financials, due to visible efforts in the areas of human capital, corporate governance, and smaller improvements in the field of innovation capital. The companies in the sectors construction, household goods, and healthcare companies have yielded continuously good and often above-average results in the period 2005-2007(2008). On the other hand, the majority of the MDAX companies have to catch up considerably on indicators such as image & brand or the relationship management to external stakeholders.

MULTIPLE WAYS TO USE THE RESULTS

The results of the study show that a stock selection based on extra-financials does not only lead to a positive alpha but can also be used for long-short strategies within industries as well as across the universe of stocks. Extra-financials, however, always have to be analyzed in combination with the traditional financial indicators and the current macro environment. Therefore, we combined the results of the study by the Value Group with the recent research of Sal. Oppenheim. Based on this, the following companies show superior extra-financials:

MDAX stocks with strong extra-financials and a Sal. Oppenheim "Buy" rating											
	Price	Fair value	upside to FV	adj. EPS 2008	adj. EPS 2009	PER 2008	PER 2009	EV/EBITDA 2008	EV/EBITDA 2009	Div.yield 2008	Recommen-dation
Beiersdorf	41.10	58.00	41.1%	2.22	2.57	18.5	16.0	9.6	8.2	1.9	BUY
Celesio	23.18	33.60	45.0%	1.69	2.10	13.7	11.0	9.6	8.6	3.3	BUY
Douglas Holding	29.32	40.00	36.4%	2.41	2.54	14.7	11.6	6.6	5.5	4.1	BUY
Fraport	25.32	45.00	77.7%	1.84	1.85	13.8	13.7	6.0	7.1	4.3	BUY
GEA Group	11.33	20.00	76.5%	1.75	1.85	6.5	6.1	4.1	4.2	3.1	BUY
Lanxess	11.94	20.00	67.5%	3.10	2.20	3.9	5.4	2.5	2.9	8.8	BUY
Puma	131.43	180.00	37.0%	16.74	17.09	7.9	7.7	4.4	4.0	3.8	BUY
Rhön-Klinikum	16.77	22.00	31.2%	1.13	1.19	14.9	14.1	9.6	8.8	1.8	BUY
SGL Group	15.27	52.00	240.5%	2.98	3.60	5.1	4.2	3.8	3.1	0.0	BUY
Vossloh	59.90	85.00	41.9%	6.02	6.45	9.9	9.3	5.6	5.2	3.7	BUY

1. Extra-financial value drivers: Hidden value drivers?

Extra-financials illuminate the assets of a company beyond the balance sheet

A knowledge and service society thrives on intangible assets, more so than all forms of society that have preceded it. These assets are equally essential for companies operating within it. They are especially dependent on factors such as knowledge, patents and brand. These represent a substantial part of the success or failure of a company, and increasingly put the significance of monetary and material assets as dominant production factors in the shade. It is no longer only fixed assets which secure market position or competitive advantage for a company, but rather also **extra-financials**. These include research and innovation (innovation capital), expertise, training and qualification (human capital), excellent executive management (corporate governance), strong brands and an outstanding image in the market (image & brand). Furthermore, stable relationships and cooperation with other market participants, such as customers and suppliers, and equally the risk profile of the company, represent important factors. As a result information of this nature is not included on the balance sheet.

Extra-financials secure competitive advantages which are difficult to replicate

Extra-financials are, by definition, assets which characterise the points of differentiation of a company, and which can only be imitated by competitors with great difficulty or significant effort. Thus, they provide the company with important competitive advantages and function as strong value drivers for corporate success and shareholder value. They secure the vitality of a company by putting it in a position to respond to changing market demands more quickly and flexibly than competitors, for example because the company is more innovative, has excellent and highly motivated employees and exhibits a high level of recognition in the market. As a result, it is much more difficult for competitors and newcomers to acquire competitive advantages, and the company secures better prospects for success in the long term.

Information advantages for analysts and investors through systematic observation

It is often extra-financial value drivers which contribute to the vitality of competition. Innovation advantages and losses to reputation are especially striking examples of this. The growth and success of some companies can often be explained through an ideal combination of intangible value drivers and corresponding excellence strategies. Ultimately, this contains the key to increasing company value. Empirical results show that company values determined while taking into account extra-financials are closer to the actual company values than when only financials are used. Extra-financials therefore contain information that is relevant to the capital market.[1]

Sometimes, the matter of where, over and beyond financials, companies were able to create value and the conditions necessary for good results, and ultimately what led to the development of value drivers for the success of the company, can only be reconstructed in ex post observations. However, by means of systematic recording and analysis of extra-financials, possible changes and influences on the growth of a company can be uncovered ex ante. In order to exploit revenue opportunities better and to minimise risk more effectively, this can be valuable information advantage for both investors and analysts.

[1] Mandl, C, Lobe, S, Röder, K, Dürndorfer, M. (2007): Fundamental Valuation of Intangible Assets: A European Perspective http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1004755

2. Research approach of The Value Group

Principles

The Value Group is an independent company, specialising in asset advisory in the area of extra-financial research and the development of financial products. It is characterised by a unique approach to company valuation in the area of extra-financials. The research data is examined in relation to its effect on performance, and thus supports investors and analysts in the valuation and selection of companies for the purposes of investment decisions. The development of valuation standards for extra-financials and the examination of their relevance to the capital market are advanced in close reference to theory.

The Value Group is, among other things, project leader of a research project of the German Federal Ministry of Education and Research (BMBF), supported practically and in terms of content by a joint research group made up of departments from the areas of finance, financial services, accounting and controlling from various German tertiary education facilities. The focus of this research is also the examination of the relevance of intangible assets to the capital market.

Until now there have been only a few academic studies in Germany which have examined the relationship between extra-financials and company value. Many studies in the area of extra-financials have been conducted for US companies and the results are based on time series in US listed companies. The Value Group concentrates on the identification and recording of extra-financials for German and European companies and examines to what extent research results from the US can be transferred to Europe. The knowledge gained and correlations identified are integrated on an ongoing basis into the valuation approach and company ranking system of The Value Group. Conversely, The Value Group also provides data to European companies relating to extra-financial indicators, which serves as a basis for further theoretical, but also practical, analysis.

Method: Quantification and comparability ensure the objectivity of results

The analysis and valuation of extra-financials is subject to particular requirements. It is incomparably more difficult than the analysis of financials, as there are no market prices available for extra-financials, standardised valuation methods are largely lacking and some extra-financials only disclose their impact in combination with other factors.

A highly **quantitative** and objectively **comprehensible** procedure characterises the research of The Value Group and the valuation of extra-financial information conducted therein. The background and motivation of all analysis is the identification of individual indicators and combinations of indicators in the area of extra-financials, which have been proven to have a relationship with both share performance and company success in the sense of fundamental growth.

With an individual database and on the basis of a total of approximately 120 criteria, the substantial extra-financial characteristics of companies in the areas of corporate governance, human capital, innovation capital and image & brand, as well as in the areas of stakeholders and corporate risk, are recorded and summarised in standardised valuation tables. These are intensively examined in terms of statistics, and consolidated and expanded on an ongoing basis.

The focus of the data collection lies in the consideration of criteria oriented towards the capital market. Thus, for example, the criteria applied to the valuation of companies in the area of corporate governance are considerably stricter and more oriented towards the capital market than simply the fulfilment of the German Corporate Governance Code.

Information is taken from audited data sources

The information is sourced primarily from company publications. The following publications are drawn upon as a data basis for the company analysis: Company reports, sustainability reports, corporate responsibility reports, corporate governance reports, compliance statements, form 20-Fs, internet reports and statements and SEC filings.

Further information sources are company positions in so-called lead tables and rankings, databases (e.g. patent databases) as well as external data providers. All data is publicly available, and can thus be reproduced and examined at any time.

In some particular cases, The Value Group also approaches the company directly – as a rule, the Investor Relations department. Such an enquiry will be necessary if statements or reference values in relation to company data are missing. Interviews are not conducted and internal information only accessible to some individuals is not considered, in order to guarantee the highest possible degree of comparability and objectivity of the data.

Industry-specific valuation and consideration of growth over time

For each company analysed, a ranking according to individual indicators, as well as an overall ranking on the basis of all indicators, is available. Each company is compared to the industry average and the average of all analysed companies. Thus, important company characteristics and strength and weakness profiles can be displayed with individual extra-financial indicators and in the overall ranking.

It is not only company figures at the time of valuation which are incorporated in the analysis. The development of extra-financials in the preceding financial years, and the growth momentum in comparison to competitors, are also considered. In this process growth can be arranged on a time axis, thus enabling more precise judgments of relative competitive strength.

The research results of The Value Group are compressed into company rankings and detailed company and industry reports. Through the systematic and quantitative collection and evaluation of data, the extra-financial valuation results can be ideally combined with the results of traditional financial analysis and methods of company analysis.

3. Quality of Reporting on Extra-Financials in the MDAX

a) Extra-financials have changed requirements for communication in companies and on the capital market

Extra-financials: a new challenge for investor relations work

Extra- financials are at the top of the agenda of investor relations issues. Examples of companies, such as the following prove this: "Financial indicators help calculate the value of a company. For our customers as well as Vossloh, other factors count at least as much: our competence in the area of railroads, our international presence, our innovative strength, our members of staff and our relationships with customers which have grown over the years. These are factors which create values - for customers as much as for shareholders." (**Vossloh**, Annual Report 2006, p. 24) This shows that companies highly prioritise issues with a future perspective and sometimes prioritise them over a mere display of their financial figures.

Extra-financials can improve the quality of financial analysis and reduce asymmetric information in specific ways. It is of secondary importance whether or not the relevant information is published in an annual report or in sustainability reports and targeted company presentations. What is important, however, is that reporting is done in a standardised way to make it comparable according to quantitative criteria and therefore shed light on the magnitude of the published data of a company in the context of the entire company and its growth in earnings. "About 50% of companies do not apply financial or non-financial control quantities within the context of their control systems. Surprisingly, this also involves customers and staff, areas that are described as strategically important stakeholders by many boards of management in company reports, press releases, and so on. (cf. Kirchhoff/PWC, 2005, p. 11)

While accounting of extra-financials in company annual reports is mandatory according to IFRS, it leaves room for interpretation

Since 2005, EU-based companies focusing their activities on the capital market have been required to follow accounting procedures according to the EU-approved international financial reporting standards (IFRS) As far as reporting on extra-financials[2] of MDAX[3] or EURO STOXX[4]companies is concerned this means that IAS38 regulations are mandatory for the accounting of extra-financials in annual reports. The fact that extra-financials are the "eternal problem children of accounting law", as Adolf Moxter put it very much to the point, as early as 1979,[5] makes it difficult to achieve comprehensively regulated accounting and transparency of these values. This is particularly true when the extra financials have been set up by a company itself. According to IAS38.63 a company is not allowed to show in its balance sheets brand names, customer lists, publisher rights and printing titles it has created itself. Other self-created extra-financials, such as R&D for new products and services have to fulfil numerous criteria (IAS38.52 et seq), albeit with a lot of room for interpretation, in order to be listed in the balance sheets. Within an accounting framework extra-financials such as human capital are particularly problematic, since they cannot be fully controlled by the company and are not even considered to be

[2] In accounting extra-financials are called immaterial assets or intangible assets.
[3] MDAX® is the index of the German stock exchange "Deutsche Börse" for medium-size companies (midcap) from traditional areas and as a selective index it starts immediately below the DAX®. The MDAX comprises 50 values which are approved in the sub-area "prime standard" of the regulated market. (www.deutsche-boerse.com)
[4] The Dow Jones EURO STOXX Index is a broad yet liquid subset of the Dow Jones STOXX 600 Index. With a variable number of components, the index represents large, mid and small capitalisation companies of 12 Eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. (www.stoxx.com/indices/index_information)
[5] Moxter, Adolf (1979): Immaterielle Anlagenwerte im neuen Bilanzrecht, in: BetriebsBerater, p. 1102-1109.

capital assets. Costs which are related to extra-financials not listed on the balance sheet are immediately entered as deductible expenses in the profit and loss calculation and therefore lower company profits accordingly.

National regulations for reporting for non-financial performance indicators

Apart from the international accounting standards, European companies have to take into account applicable national laws when drawing up their annual reports. For German companies with a capital-market orientation this means drawing up and publishing a group annual report, according to §289 und §315 HGB (German Commercial Code) as well as DRS15 (German Accounting Standards), to provide an accurate image of business development and information about the state of the group. §315 HGB and DRS15.31 explicitly request that the group annual report include details about non-financial performance indicators such as information on environmental and employee concerns as well as research and development of a group (§289 and §315 HGB). In addition to this, DRS15.115 recommends reporting on extra-financials such as human capital, relationships with customers, suppliers and investors and organisational and procedural advantages by way of indicators. Recommendations for indicators include information on fluctuation, staff qualification, per-capita budget for staff development, customer satisfaction and loyalty (DRS15.119). The legislator has however refrained from making detailed requirements as far as specific content and any obligation to disclose particular key figures in the group report are concerned. Therefore German companies have considerable leeway in fashioning their reports, and companies use this in different ways, as an evaluation of the quality of reporting has shown.

Companies' voluntary reporting on extra-financial indicators

Apart from reporting required by law, companies can offer additional information relevant for decision-making. Voluntary reporting can take on various different forms and can also be done outside a traditional company report. Typical examples are sustainability and corporate social responsibility reports, innovation reports, environmental, human resources or corporate governance reports and company Internet pages structured according to these topics. "Reputation is the only area where more communication is directed outside the company than internally, for example, concerning sustainability and community activities. In the context of value-oriented reporting this area occupies a top position compared with such areas as customers, staff, suppliers, innovation and brand names. (cf.. Kirchhoff/PWC, 2005, p. 11)

In the future, reporting on extra-financial indicators will improve further. This is propelled by increased demand by large investors, fund managers and portfolio managers as well as publication of amended basic principles of reporting ("key performance indicators" by associations of analysts such as DVFA or EFFAS)[6]. The latter show that investors particularly consider information about future prospects of companies, which goes beyond mere ESG reporting, as very important. Factors, such as customer satisfaction and customer loyalty, research & development budget and number of patents, turnover achieved by new products and services make it easier to make predictions about future value development of joint stock companies in addition to mere financial key figures.

Benefits of voluntary reporting for companies

In many cases, it has been empirically documented that publication of comprehensive company information, including information provided by a company on a voluntary basis, can contribute to building long-term confidence in a company on capital markets. This is of great importance to all companies listed on a stock exchange, independent of their size. It is not only important for gaining and keeping long-term investors but also for increasing the value of a company and the value of its shares, for reducing the volatility of share prices and for procuring fresh capital and for the size of capital costs. Empirical research has shown that companies can

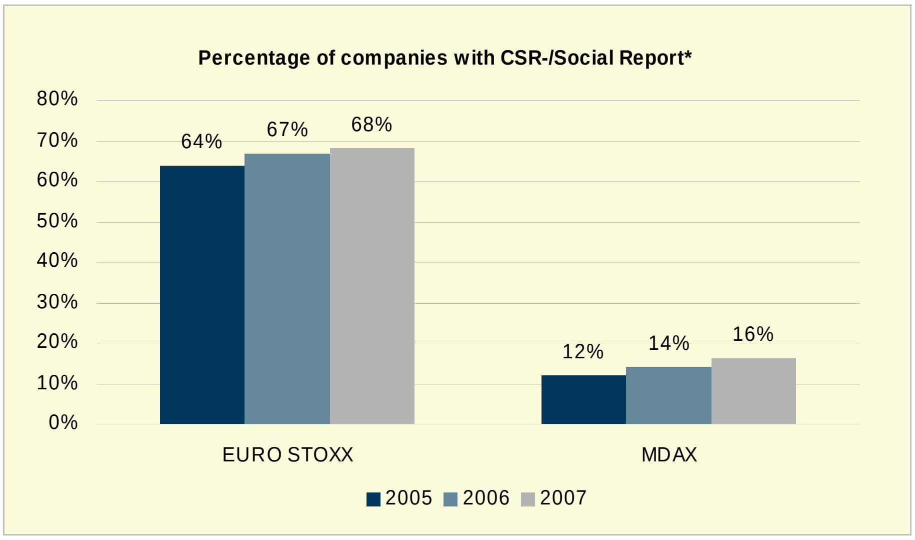
[6] DVFA (2008): KPIs for ESG. Key Performance Indicators for Environmental, Social and Governance Issues

benefit from voluntary disclosure of information through low cost of equity.[7] As early as 1997 Botosan, for example, found that in the US industrial companies with a low "analyst coverage" were able to reduce their equity costs and achieve higher transparency through increased voluntary reporting.[8] The past few months of slow-down at the stock exchanges have shown particularly clearly how differently investor relations departments inform shareholders about relevant changes within companies.[9] It was also shown that particularly in times of crises strong confidence in the management of a company is of vital importance for share holders and this confirms once again the central importance of extra-financial indicators as an early indicator for future financial results.

b) Reporting of MDAX companies: improving transparency

Markedly worse quality of data of MDAX companies compared with Large Caps

An analysis of MDAX companies and a comparison with EURO STOXX companies show that MDAX companies publish noticeably less information on extra-financials. Compared with EURO STOXX companies, MDAX companies also publish noticeably less voluntary information, such as corporate sustainability reports (CSR) or social reports. However, these reports contain markedly more information on extra-financial factors of a company than in the mandatory company reports in form of annual reports. **K+S** and **Heidelberg Druckmaschinen** are the only MDAX companies, which have published their own CSR reports and thus enabled year-on-year comparisons over the entire period of investigation. This continuity of reporting was found in as many as 19 of 100 EURO STOXX companies.



Source: The Value Group

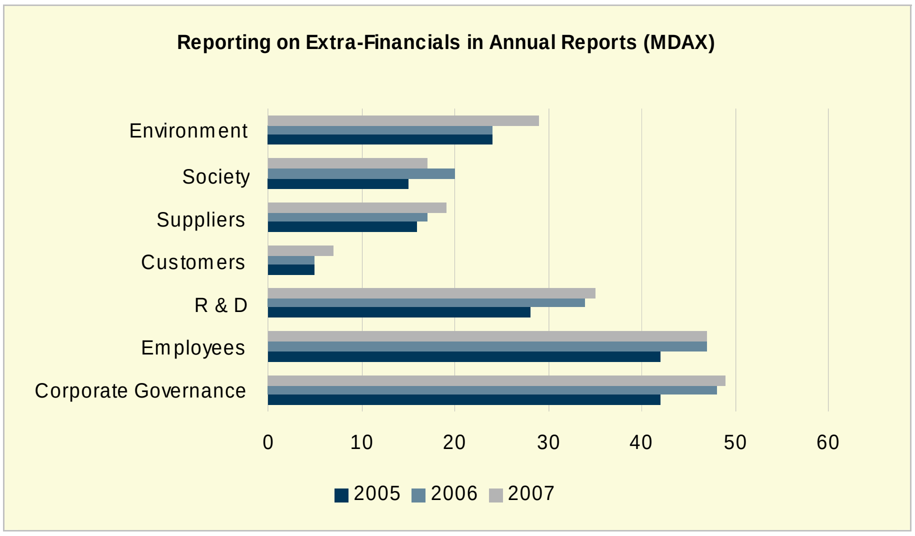
**) Corporate responsibility reports and social reports are usually published in the second half of a year and much later than regular company reports. The figure for 2007 refers to reports available at the time of conducting this research in July/August 2008.*

[7] Hail, Luzi (2002): The impact of voluntary corporate disclosures on the ex-ante cost of capital for Swiss firms, in: The European Accounting Review, Vol. 11, No. 4, 741-773; Kristandl, Gerhard (2007): The impact of voluntary disclosure on cost of equity capital and risk premium estimates, Dissertation.

[8] Botosan, C. (1997): Disclosure Level and the Cost of Equity Capital, in: The Accounting Review, Vol. 72, No.3, p. 323-349.

[9] Cf. Wirtschaftswoche, May 26, 2008, No..22, p. 200-204

An analysis of the content structure of company reports clearly shows which areas MDAX companies relate to and report on in terms of extra-financial indicators. The analysis not only takes into account the scope or usability of company reporting. Central dimensions such as staff, innovation, customers and suppliers, society and corporate governance are also taken into account.



Source: The Value Group

Improvement in quality and scope of company information on extra-financial factors

The three most frequent areas of reporting are ***corporate governance***, as well as ***staff*** and information about a company's ***R&D*** activities. A reason for this can be found by looking at legal regulations and established standards. Companies in Germany are obliged to issue an annual declaration with regards to the Corporate Governance Code (§161AktG = German Stock Corporation Act) and should, in accordance with DRS15, publish information on employees and on employee issues in their reports. The latter also applies to the areas of **research & development (R&D)** and **environment**. There is however little discussion of these areas in company reports and little tangible information is given. The range of information in company reporting is often related to the sector a company belongs to. For some sectors, such as chemistry and pharmaceuticals, the areas of environmental protection and R&D are central topics and affect the success of the company more than is the case for media companies or financial services providers. Reporting on **social responsibility** of a company varies and has decreased slightly but noticeably in density and quality of information in 2007.

MDAX companies have increased transparency and are more in line with larger European companies as far as reporting on extra-financials is concerned. Evidence for this is the continuous increase of voluntary disclosure by MDAX companies over the years 2005 to 2007. There have been continuous improvements in quantity and quality of data, particularly in the areas of *corporate governance*, *human capital* and *innovation capital.* The areas *image & brand* and *external stakeholders* are still lagging behind this development and show significant room for improvement.

Differences in reporting between companies: a lot of light, a lot of shadow

A look at the detailed picture shows which MDAX companies already stand out because of their comprehensive reporting on extra-financials. **Fraport** scores points with a detailed social report; **Wacker Chemie** as well as **Beiersdorf** are convincing due to positive results and good processing of data**.** The private equity company **Arques**, the German-Italian **AMB Generali**, companies in the media industry such as **ProSiebenSat.1** and **Premiere** and some industrial companies such as **Deutz**, **Kuka** or **Rheinmetall** however show results far below average.

Contrary to EURO STOXX companies it has to be noted, however, that information on extra-financials in M-DAX company reports is often missing or just described in a qualitative way. This is particularly noticeable in the area of human capital. Figures on staff development or staff turnover are rarely found at a group level. In some cases the reason for this is that although data are compiled for individual areas of business activities they cannot be aggregated for the entire company due to a lack of comparability. In many cases there is no system of uniform, aggregated staff reporting. In some cases it is being developed or about to be developed and implemented over the next few years. In terms of data quality this means that data reported by companies are only applicable to individual company segments or country segments and for some divisions. They have thus limited informative value on a sector or index level and are often not representative or valid enough for a particular company.

Symrise is the only MDAX company, which has, so far, not reported on employees in any form of company reporting. In this case, there is neither any qualitative nor quantitative information on employees, training and staff development budget or information on risks for staff. Although the company points out explicitly in its company report that "95% of all Symrise employees now (work) directly for customers, following a reorganisation of the company. This has heightened the awareness of our employees for their own responsibility and for their individual contribution to business processes. Symrise employees have a grasp of entrepreneurial issues and take decisions confidently." (Annual report 2006, p. 18) Against this background, it seems obvious that more information on this important business factor would be meaningful and instructive to enable investors to make predictions about future performance of the company.

4. Differences between MDAX sectors

a) Relative strength of the construction, chemical, household and health consumer goods industries

Second-line companies: a lot of light, a lot of shadow

In the calendar year 2007, the MDAX was not able to hold its ground against larger indices, such as the DAX. The latter developed much better with 22.3% than the second-line index which was only able to post a 4.9% rise in share prices, over the same period. While the DAX is home to some important banks which have been heavily affected by the financial crisis, the MDAX is dominated by other industries such as industrial goods or chemistry. The development of the MDAX would have been much worse had it not been for a few companies which have contributed significantly to a positive annual end result. In 2007, some companies experienced considerable growth, above all companies such as the potash manufacturer **K+S** or the **Salzgitter AG** which benefited from a steel boom. Many cyclical companies in the engineering and steel sector have fired the relative performance of the MDAX. Companies such as **Klöckner**, **SGL Carbon, Norddeutsche Affinerie or Demag Cranes** were able to post significant earnings.

Trend to improved management of extra-financials

Many MDAX companies have made significant improvements in the area of extra-financials on the whole, over the past years. This reinforced a trend towards improved management of extra-financial factors and increased relevance as value-drivers for company success.

Construction goods, household goods and health products show best consistency and above average results in the period of investigation

A comparison of industries represented in the MDAX showed that **construction goods, household goods** and **health products** companies yielded continuously good and often above-average results in the period of investigation 2005-2007. Apart from all the discussed extra-financial indicators these companies had results that were above the average of all MDAX companies that we looked at. This positive picture throughout was confirmed at the level of individual indicators even though some indicators, such as *human capital* and *innovation capital* still showed room for improvement.

Chemical companies fare well in the area of extra-financial indicators, as does the **technology industry**. However, this industry is only represented with one company in the MDAX and therefore no meaningful comparison of industries can be made with the technological sector.

Sector Monitor 2007 - Deviation of industries in individual indicators (from the average of all observed companies)

	Number of companies	Overall	Corporate Governance	Human Capital	Innovation Capital	External Stakeholder	Image & Brand	Corporate Risks
Automobiles	1	-0.15	1.13	-0.55	0.76	-0.89	-1.02	-0.51
Chemicals	5	0.10	0.13	0.02	0.23	0.52	0.32	-0.83
Retail	4	-0.20	0.29	-0.28	-0.43	0.12	0.85	-1.51
Financial Services	6	-0.29	-0.10	-0.30	-0.15	-0.68	-0.12	-0.08
Health Care	3	0.37	1.33	-0.26	-0.03	0.61	0.07	0.22
Basis Resources	3	0.03	-0.66	0.48	-0.80	0.28	-0.61	1.49
Household Goods	3	0.66	-0.33	0.52	0.11	0.34	1.20	1.89
Industrial Goods	15	-0.26	-0.20	0.01	-0.13	-0.63	-0.24	-0.62
Construction Goods	4	0.57	0.37	-0.02	-0.94	0.48	0.20	3.19
Food & Beverage	1	-1.10	-0.34	-1.06	1.25	-0.76	-1.96	-3.91
Media	2	-0.44	-0.39	0.15	-0.15	0.17	0.53	-2.51
Technology	1	1.30	0.07	0.71	0.42	0.40	0.91	5.09
Insurance	2	-0.58	-1.30	0.58	-0.15	0.04	-0.13	-1.91
	50	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Source: The Value Group

Retail and financial services providers surprisingly weak

Compared with other indexed companies, **retail** companies fare clearly below average over the entire period of investigation from 2005 to 2007 and have the largest gap in results compared with other MDAX companies in the area of extra-financials. When comparing the factor *human capital* with other industries, the companies in this sector are below the entire average of all companies and therefore in the weaker segment of the MDAX. The figures prove that the industry with the most immediate contact to customers and consumers does obviously not place enough importance on the relevance of the factor *human capital.*

The below-average results of the **financial services providers** are surprising at first glance. A closer look, however, reveals that real estate companies fare particularly badly and skew the image of the industry. However, it was possible to reduce the lag significantly last year and the whole industry is getting closer to the average results of other companies.

Media companies also show relative weaknesses in the MDAX comparison. They only score slightly above average for the indicators *human capital* and *image & brand.* However, this industry has a disproportionately low representation in the index and the results of **ProSieben Sat 1** and **Premiere** therefore have a disproportionately high influence on the whole picture.

Relative positioning in an industry context and in comparison over time

More insights can be gained by looking at the relative position of companies within the context of the industry and as far as timelines are concerned. In doing so we can identify unique selling points of companies and relative gains or losses in ranking compared to competitors. It is not unusual for these results to be early indicators of later financials. In the medium-term, they are reflected in financial results and changed market prices on the capital market. The results discussed below will illustrate this.

b) Index heavy weight industrial goods and basic materials record largest improvements in the area of extra-financials

Industrial goods and basic materials show clearest improvement in the management of their extra financials

A look at the results of the figure below shows that the companies from the industrial sector, which are strongly represented in the MDAX with 15 companies, can clearly record more marked improvements in the area of extra-financial review than other sectors. This is above all due to improvements at **Heidelberger Druck a**nd **SGL Carbon**. Companies within the **basic materials** sector have also achieved marked improvements over the past 3 years. The **Norddeutsche Affinerie** has contributed significantly to the positive result of the whole industry.

Sector Monitor - Changes 2005 - 2007								
	Number of companies	**Overall**	**CG**	**HC**	**IC**	**ES**	**IB**	**CR**
Automobiles	1	-0.50	1.97	-1.24	0.42	-0.83	-2.13	-2.07
Chemicals	5	-0.22	-0.28	0.20	0.45	-0.34	-0.44	-0.65
Retail	4	-0.16	1.32	-1.42	-0.24	0.46	0.65	-1.40
Financial Services	6	-0.09	-0.20	0.24	0.82	-0.82	-0.10	0.13
Health Care	3	1.09	2.62	-0.54	0.13	1.32	0.57	2.73
Basis Resources	3	0.80	-1.35	1.11	-0.17	1.42	0.35	4.40
Household Goods	3	1.55	1.14	0.09	-0.61	1.50	3.10	3.20
Industrial Goods	15	0.64	1.38	0.86	0.06	-0.73	-0.04	2.49
Construction & Materials	4	1.55	1.25	1.46	0.70	1.10	0.49	4.70
Food & Beverage	1	0.39	1.54	-0.07	3.35	0.45	-0.48	-2.40
Media	2	1.33	1.00	1.86	1.68	1.99	1.99	0.47
Technology	1	3.32	2.28	2.60	2.09	2.30	2.48	8.40
Insurance	2	2.35	2.00	3.82	2.98	2.36	2.15	1.84
	50	**0.93**	**1.13**	**0.69**	**0.90**	**0.78**	**0.66**	**1.68**

Source: The Value Group

Chemical companies intensify their efforts

Chemical companies, such as **Wacker Chemie** and **Lanxess** were also able to achieve significant improvements. The improved performance during 2007 compared with 2005 is above all due to visible efforts in the areas of *innovation capital*, *human capital* and *corporate governance.*

Improvements in the **automobile** and **technology** industries are not representative enough to make general statements because of the small number of companies in this index.

MDAX companies need to catch up considerably in the areas image & brand and management of external stakeholder relationships

It is noticeable that almost all MDAX companies have to catch up considerably on the indicators *image & brand* and management of relationships to *external stakeholders*. A strategical focus on these value drivers is apparently less developed than is the case with Large Caps, e.g. in the EURO STOXX. This is due to the structure of industries represented in the MDAX and the companies belonging to these industries. A higher proportion of companies have no direct business with end customers. Nevertheless, there is a need for action in these sectors because the way to tomorrow's competitive advantage needs to be paved today.

5. Building blocks and indicators for extra-financial excellence

a) Anatomy of winners and losers

A comparison of relative strengths and weaknesses by sectors

Companies with a high extra-financial excellence often produce better company results. "67% of German companies listed on the stock exchange consider the proven beneficial effect of higher transparency on the share price to be one of the motivating factors for improved company publicity. Nevertheless, there seems to be an uncertainty about the relationship between the quantity of company publications and share price development although it is generally argued that the capital market awards transparent company information (Kirchhoff/PWC-Studie, 2005, p. 11).

Investigation of relevance of research results for performance during the period 2005-2008

The examples of MDAX companies and sectors below will illustrate that greater extra-financial excellence of companies will result in better performance results on the capital market in subsequent years. Continuous data collection by the Value Group during the years 2005-2007 form the basis of this analysis. The research results from 2005-2006 were examined as far as their relevance on performance was concerned in the subsequent years of 2006-2008. The composition of MDAX underwent several changes during the period of data collection. Since today's index composition of the MDAX was not known at the time of the first data collection in 2005, only those companies were analysed in a back test which remained in the index after 2005. Otherwise we would be subject to the look-ahead bias in back testing and the results would be skewed. Analyses and discussion of results of individual companies and industries outside the back tests, however, always refer to all MDAX companies.

i) Innovation Capital

Large number of MDAX companies with intensive research activities

A look at MDAX companies quickly reveals that the indicator *innovation capital* plays a central role. 60% of the index is made up by companies from research-intensive industries and sectors close to research. A comparison with the representation of the sectors industrial manufacturers, chemical companies or technology in the DAX shows a markedly lower presence of 50%. And within the 100 largest (in terms of market capitalisation) EURO STOXX titles there are actually just 35%. 30% of MDAX companies are primarily from the "industrial goods" sector (DAX: around 13%) Successful and continuous research activities is particularly important for these high-tech companies, which are often highly specialised leaders in technology and global market leaders in their corresponding market segments. The present study compares innovation activities of companies by business year, the contribution of innovations for consolidating or improving competitive rankings and the correlation between research and development (R&D) commitment and performance on the capital market during subsequent years.[10]

Innovation as a determining factor for corporate value

Intangible assets, such as knowledge and know-how are important productive and economic factors for many MDAX companies and are therefore the key to future company success. They drive the development of new products and bring innovation in form of improvements to existing products. Non-tangible assets resulting from this, such as patent, brand rights or copyrights, can increase the value of a company significantly.

[10] For scientific resarch on US companies see: Chan, Lakonishok, Sougiannis (2001): The Stock Market Valuation of Research and Development Expenditures, in: Journal of Finance, LVI (6)

According to IFRS, even a few intangible assets, such as patents or patented technology and proprietary software development and databases can be shown in the balance sheets. The innovation power of a company, however, is defined by far more than is shown on the balance sheets. Therefore a bundle of criteria that goes beyond mere financial figures of a company is necessary to assess a company's innovative strength and its relative industrial strength.

Criteria

The Value Group assesses *innovation capital* based on the following sub-indicators:

- Intensity of and capacity for research and development
- Effectiveness of R&D activities
- Results of research and development

In a systematic analysis of companies we have considered individual criteria like **R&D expenses**, **R&D capital**, **R&D capacities** (**R&D staff**) by comparing industries, timelines and in relation to financial parameters (company results). Key figures for **capitalisation of R&D** and **patents** (**EPO patents*, WO* patents**[11]) are also important indicators for the assessment of *innovation capital*.

For the assessment, only those innovation components are taken into account which can be attributed directly to the assessed company. Innovative strength of associated companies or cooperation partners and finances used for this have only been taken into account where they could be attributed to the assessed company or were solely accessed by this company and has therefore increased or decreased the *innovation capital* of this company in a measurable way.

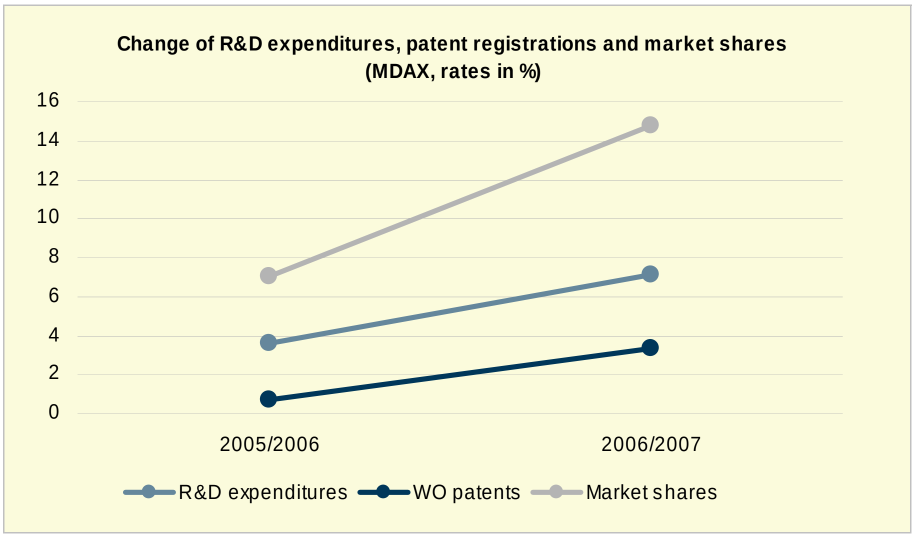
Rising R&D expenditure, 10% more staff in R&D, 4% more WO patents

The sum of R&D expenditure of all MDAX companies rose from 4.2 bn euros in 2005 to 4.6 bn euros in 2007. Rising R&D expenditure indicate that MDAX companies see "innovation capital" as an important variable for company success, with expected added value, and therefore push for an expansion of R&D. Some key figures are proof for an increase in innovation capital in the MDAX. Higher investments result in a considerable rise in the number of employees in the area of R&D. In the period 2005-2007, their number rose from 10,642 to 11,524 in 2007. In addition, newly registered world-wide (WO) patents rose by 4%, over the same period.

Direct results of intensive research

Marketability and unique selling points resulting from this will ultimately determine benefits and success of research activities. The figure below displays the relationship between higher research & development expenditure and an increase in patent registrations. It is noticeable that market shares rose even disproportionately compared with the corresponding research input and output of a company, over the same period. There is apparently a close link between the innovative strength and the competitive ranking of a company.

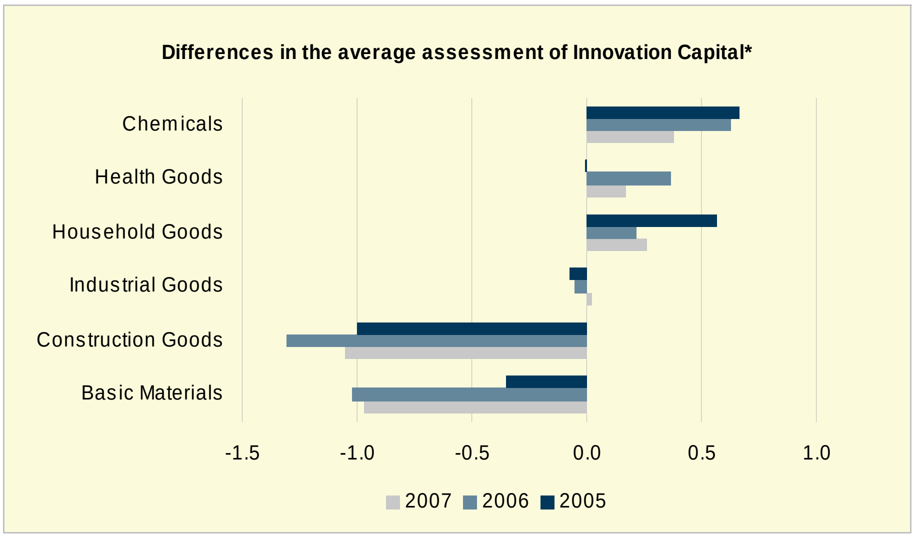
[11] Patents with validity in Europe and/or worldwide validity



Source: The Value Group; Thomson Financial Datastream

Chemical companies, health goods and household goods strong on innovation capital. Construction goods as well as basic materials with innovative strength far below average

Next to industrial manufacturing the chemical, health goods, household goods, construction goods and basic goods industries are also seen as research-intensive sectors and sectors close to research. Each industry has its own characteristics and requirements from an innovation capital perspective. In the figure below, these differences in the average assessment of the MDAX sectors are clearly visible. The sectors **chemical industry**, **health goods** and **household goods** fare relatively well being traditionally research-intensive companies; even so their results point towards a slight drop in innovation efforts in the areas of chemical and household goods. The sector **industrial goods** achieved average scores in each of the three years; however there is continuous expansion of innovation activities across all sectors. The sectors **construction goods** and **basic materials** regularly score below average in MDAX comparisons.



Source: The Value Group

**) Sectors with < 2 MDAX companies are not included in this figure.*

Rotation of innovation leaders

A look at the historical development of company assessments according to *innovation capital* reveals that there have been a few shifts over the past three years. **Beiersdorf**, **Krones** and **Puma** got top marks in the area of *innovation capital* for the business year 2005. Two years later **Symrise**, **SGL Carbon** and **Wacker Chemie** occupied the "top 3" ranks.

Innovation capital in the industrial goods sector. Innovation leader Krones

The intensity of investment in R&D against the background of company results plays an important role in the assessment of a company's innovative strength. The key figure R&D expenditure/sales is therefore an important key figure when comparing different companies. This reveals that companies with high innovative strength and high innovation capital values invest a considerably higher proportion of their turnover into research and development. **Krones** was ranked the most innovative company of the industrial goods sector in 2005. Krones invested 4.31% of its turnover into research while the industrial average was only 3.10%.

The engineering company, seated deep in the heart of Bavaria, did not only achieve a high score for the indicator *innovation capital* but convinced with continuously high scores for innovative strength throughout the period of investigation (2005 overall ranking: 4th, 2006: 3rd, 2007: 4th). Research expenditure was increased continuously and very strongly during the period of investigation 2005-2007 (from 73m to 89m and 92m euros). The company realised early on how to secure a competitive advantage for the future by investing in intensive research and development activities. **Krones** is a prime example of how a company and investors can benefit from positive interaction of several extra-financial factors. The global leader in beverage filling systems has always been led by the Kronseder family and they have set innovative strength as one of the highest company goals. The best example has been set by the former chief executive and company founder Hermann Kronseder, who has developed 630 patents himself and is therefore innovation personified. Moreover, several new research facilities were inaugurated from 2005-2006, and existing research sites were reorganised which resulted in an increase in efficiency. The latest results were presented at the end of the year 2007. A recent record with great publicity was achieved with the most lightweight 0.5 litre PET bottle which can be produced in large quantities, and which should secure the brand and customer loyalty to the engineering company in the long term.

Positive developments at SGL Carbon

Another company which stands out for above-average development in the area of *innovation capital* in the industrial goods sector is **SGL Carbon**. In 2005, this company was ranked 4th most innovative MDAX industrial manufacturer, improved this position in subsequent years and has since become industry leader. This improvement is due to a continuously strong expansion of innovation activities. Thus, R&D expenditure rose from 18m euros in 2004 to over 26m euros and up to 30m euros in 2007. The expansion of R&D capacities was also mirrored by an increase in R&D staff numbers, which rose from 169 in 2005 to 248 in 2007. Over the same period, the research output increased strongly in the form of WO patents. These increased by 50% and then again by 22%.

Innovation capital in the household goods sector. Beiersdorf - clear leader

In the household goods sector the skin and beauty care products manufacturer Beiersdorf stands out once again because of excellent results for several extra-financial indicators including innovation capital. In the past few years, this company has attracted attention because of annual growth rates in research investment of about 8% (2005: 109m euros, 2006: 118m euros and 2007: 127m euros). The registration of 1088 worldwide patents from 2005-2007 is another outstanding achievement. For comparison: the average MDAX company has only 345 comparable patents. Beiersdorf has the largest and most high-tech dermatological research centre in Germany, with 870 R&D employees working in its environment in the business year 2007. The company has entered into close cooperation with universities in important areas which cannot be covered by its own research staff. Beiersdorf has thus contributed to building the "Centrum für Angewandte Nanotechnologie" ("Centre for applied nanotechnology") in Hamburg. The company has built up excellent international consumer confidence which is reflected in their brand products regularly occupying top ranks in customer surveys. An example is the Reader's Digest survey from 2007, where Beiersdorf's top seller "Nivea" was named most trusted brand in the category skin care in all 15 countries (by 25,000 surveyed consumers).

Beiersdorf's excellence can also be highlighted in respect of several extra-financials (EFIs). This is not only an innovative company but it also manages to place its brands successfully (*image & brand*) and thus achieves strong customer loyalty (*external stakeholders*).

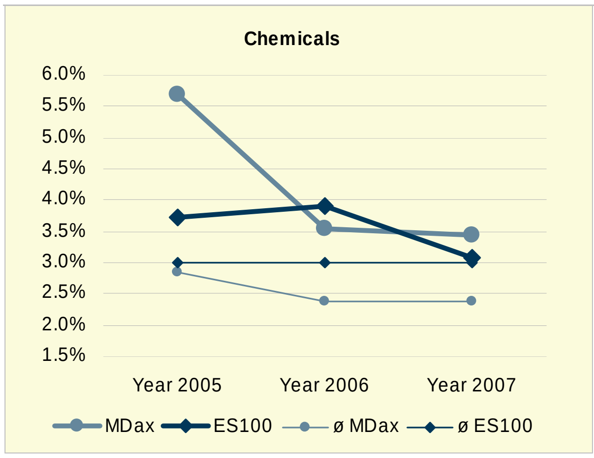
Innovation capital in the construction goods sector. Pfleiderer shows strong innovation activity

This industry has witnessed a true success story in the past few years. **Pfleiderer** did not only become market leader in 2007, but it also improved in the entire MDAX ranking from position 24 and 25 (2005 and 2006) to 5th (2007) in the area of *innovation capital*. The company more than doubled its investment in research. In 2005 and 2006, the company spent 0.9m euros and 2.8m euros in 2007. Of 3275 registered world patents 28 alone were registered last year.

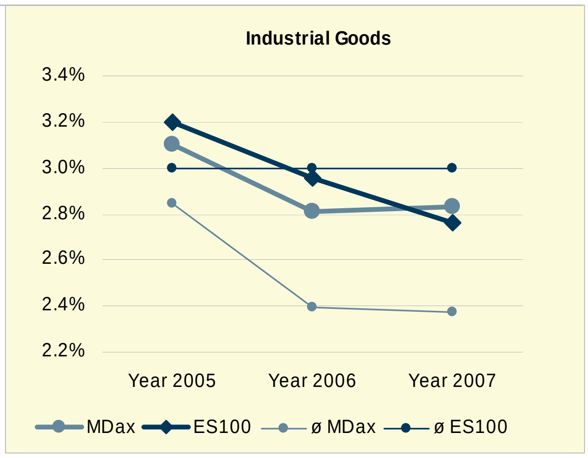
R&D intensity is not a question of company size or market capitalisation

A comparison of MDAX companies with the 100 largest companies (according to market capitalisation) of EURO STOXX in terms of R&D intensity shows that innovation is not a question of company size or market capitalisation. Individual MDAX sectors can well compete with larger companies, a fact which the figure below will illustrate with the key figure R&D expenditure/sales in a comparison by sector.

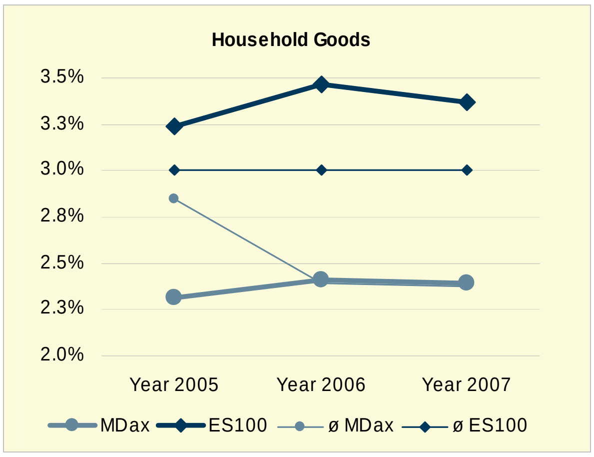
Sector comparison of MDAX with EuroStoxx (100): R&D Expenditures/Sales



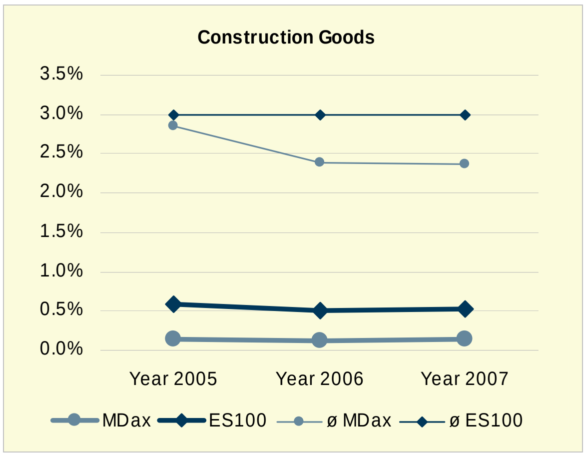
Source: The Value Group; Thomson Financial Datastream



Source: The Value Group; Thomson Financial Datastream



Source: The Value Group; Thomson Financial Datastream



Source: The Value Group; Thomson Financial Datastream

The collective comparison of companies (each of the thin lines in the graphs) shows that Large Caps invest a higher percentage of sales in research and development. The value of the largest 100 EURO STOXX companies (ES 100) has constantly remained at about 3%, whereas the MDAX slightly decreased from 2.8% in 2005 to around 2.4% in the two subsequent years. This decrease is above all attributed to the **chemical industry** and there it is mostly due to a reorganisation of the **Altana** group. Over the entire research period the above sector was the only one which repeatedly fared better than the larger EURO STOXX companies.

Innovation capital of the industrial sector at a high level compared to other European countries

As far as **industrial manufacturers** are concerned there was no great difference between the MDAX and EURO STOXX values. This proves once more that German companies, here the MDAX companies, can hold their own at an international level as far as R&D and innovative strength is concerned.

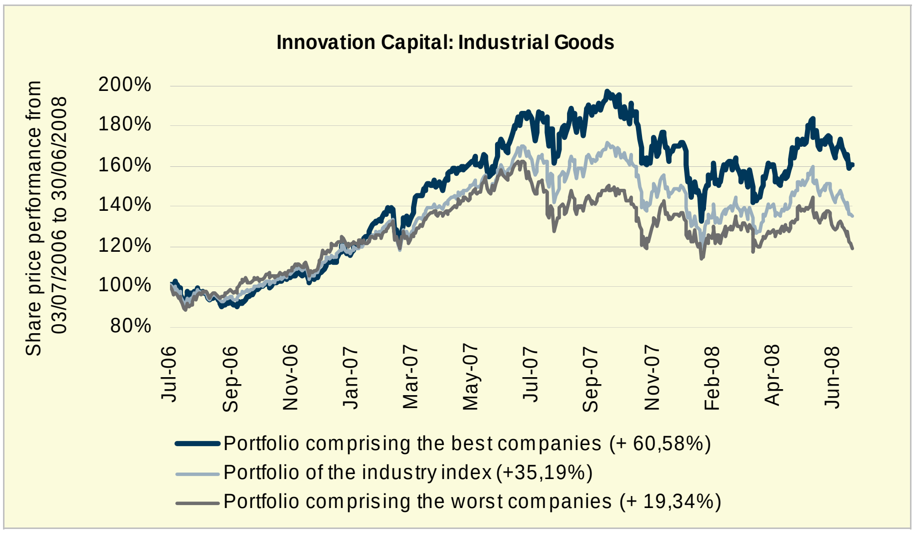
This is not the case as far as **household goods** companies are concerned. Although the sector value caught up with the MDAX average, there is still room for improvement when compared internationally. In the area of **construction goods** the above-mentioned lack of innovation is clearly visible. It is also noticeable that Large Caps do more for research. MDAX companies invest about 0.1% of their sales in research while the international competition invests as much as 0.5%.

All in all, it remains to be said that MDAX companies have improved significantly in the area *innovation capital* throughout the period of investigation 2005-2007, that great differences in innovation activities remain in different industries, and that these are still below average - with the exception of industrial goods - when compared to the largest Euro zone companies.

Innovation capital as an early indicator for the capital market – example of index heavyweight industrial goods

After an examination of the innovative strength of individual companies, we shall now demonstrate that it is also worth taking an intensive look at the capital market. Based on the research data of the year 2005, the performance during the two subsequent years will be displayed for the best and the worst of the industry.

In the sector industrial goods the four best companies according to *innovation capital* achieved an average return of around 61%. Over the same period the four worst companies according to *innovation capital* criteria fared far worse with around 19%. A simultaneous investment in the whole industry could have achieved a return of around 35%.



Source: The Value Group; Thomson Financial Datastream

Performance relevance of innovation capital also in other MDAX sectors

Data from the **household goods** sector also support the performance relevance of innovation capital. Since this industry is only represented in the index by just a few companies, a comparison of best and worst of the sector does not make sense and we shall instead compare individual companies. While investment in the industry leader Beiersdorf achieved a return of around 22%, **Hugo Boss AG**, the weakest company of this sector lost around 25% during the same period.

In the **construction goods** industry **HeidelbergCement AG** stood out on the strength of its greatest commitment in the year 2005. In subsequent years, the company achieved a return of around 5.8% and was therefore much better than the weakest title, **Pfleiderer**, whose shares lost around 59%. Due to radical changes being made in terms of innovation capital in both of these companies, it is likely that **Pfleiderer's** thrust of innovation will have positive effects on the capital market again in the medium term.

ii) Human Capital

Human capital – key factor for companies

"Successful companies have a good human resources policy" (**Beiersdorf**, Sustainability Report 2006, p. 25). These or similar words are used by many companies, and not only MDAX companies, in their annual reports to describe the importance of their staff for the success of the company. They refer to the fact that their own employees are the most important resource for company success, that they make the most valuable contribution to company success and thus document the importance of the human capital factor on a regular basis.

Voluntary reporting for human capital in MDAX still full of gaps

A look at the *actual* quantity and quality of reporting of companies about what appears to be their most important value driver shows gaps and weaknesses, some of which are large. "Growth requires brains" (**Altana**, business report 2005) - however, it is often kept secret how companies go about acquiring these brains, developing them, appraising them or trying to keep them and how the added value thus gained can actually be increased in provable ways. There are many reasons for a lack of reporting on the factor human capital. On one hand, there are no legal requirements for company reporting on human capital and no established standards and key figures across all companies for this area. On the other hand, there are many "home-made" reasons, such as a lack of company-wide standardised data and universal HC controlling or personnel reporting for all areas and locations of a company. As a result of this, important key figures cannot be provided for internal company control or external capital market communication. Last but not least, it is sometimes due to company strategy and policy that internal company figures are intentionally kept secret and transparency in this segment is relinquished for competitive reasons. If nothing else, share holders often do not have sufficient knowledge about the close and systematic relationship between human capital and company results and therefore there is a lack of specific requests to companies for providing meaningful key figures on human capital.

Close relationship of human capital and business success scientifically proven

Many studies analyse the importance of the human capital factor for company results and for how well a company does on the capital market.[12] There is a proven relationship between staff development and share price development.[13] It has also been scientifically documented that there is a relationship between rates of fluctuation and profitability of a company and even a relationship between specific abilities of managers and profit development of a company.[14] There is a close relationship between the annual human capital ranking and the quality of human

[12] See i.a. Hansson, B. (2004): Human capital and stock returns: Is the value premium an approximation for return on human capital?
[13] Bassi, et al. (2004): The impact of U.S. firms' investments in human capital on stock prices
[14] Demerjian, Lev, et al. (2006): Managerial Ability and Earnings Quality

capital management and this relationship has a bearing on company results and share performance. As an example, it has been proven for EURO STOXX companies that forecasting a company value by residual profits can be greatly improved if the human capital factor is also entered into the equation.[15]

It is therefore most surprising that this factor has not really caught the attention of analysts and investors yet when it comes to analysing and choosing companies. Given the fact that this factor entails some of the largest investments that many companies make it is all the more surprising. How many of the amounts invested in human capital are well invested and invested with a return, or whether the human capital strategies are successful or not will make a great difference for companies.

Criteria Human Capital

In its research and assessment of *human capital The Value Group* considers the following criteria, which according to scientific research have proven to be important value drivers:

- Development of human capital
- Stability of human capital
- Efficiency of human capital

When assessing the development of *human capital*, data on investment in **staff development** and the number of **training days** are taken into account. These data yield important indices for the development of *human capital* in terms of industry comparison and comparison of timelines. From these we can derive statements on **loyalty** to a company and to **future development** of human capital. In addition, **efficiency key figures** of *human capital* (on profit and sales) provide important information on improvements or decline of human capital management for a company as a whole and its relative strength in comparison with competitors. While efficiency key figures provide a lot of information for analysing ***profitability*** and ***value creation*** of a company, they should not be used unscrupulously and are only valid in the context of further *human capital* indicators. It is not rare for overly large efficiency increases in human capital with short-term effects to actually destroy valuable human capital in the medium term and therefore even be counter-productive.

Based on selected key figures for structure and stability of company employees (**development of work, staff or full-time equivalent** (FTE) staff) statements can be made on decrease in human capital; by interpreting **key figures on fluctuation** statements can be made on loss of employees beyond redundancies or reaching pension age. The most important and scientifically significant key figures of a human capital analysis from an investor's perspective are: **staff loyalty, fluctuation rate, leaving of key personnel** and **cost of replacement**. Being an attractive employer (***employer branding***) and thus having direct access to top professionals and qualified graduates as well as offering attractive **compensation packages** and **staff development opportunities** plays an important part in gaining and retaining motivated employees and therefore constitutes an important indirect factor for success.

Significantly poorer quality of human capital reporting at MDAX companies

A comparison of the largest companies of the EURO STOXX with the smaller companies of the MDAX shows very large differences with regard to the quality and quantity of reporting on human capital. In this category, only a few companies in the MDAX can compete with the abundance of data available for the EURO STOXX. The legal requirements for reporting on human capital are low in both indices, and the reporting by the companies is usually voluntary. A reason for the superior human capital reporting of the largest companies are the higher demands for transparency the capital market makes on these companies, and the resulting higher communicative breadth of the large caps.

[15] Our own research based on the human capital data of The Value Group, 2007

The most basic differences between the MDAX companies and the largest 100 companies in the EURO STOXX lie in the availability of data and key figures in the areas of ***human capital development*** (staff training, staff development days) as well as the ***stability of human capital*** (e.g. staff turnover, increase/decrease in the workforce).

The fact that the reporting is below average is all the more surprising as the companies are quite aware of the risks posed by the factor human capital, as can be demonstrated in the example of the management report of the company **Heidelberger Druckmaschinen**: “An excessive degree of high labour turnover could result in risks in the human resource area. We alleviate this by ensuring that Heidelberg remains an attractive employer and maintains a modern human resources policy.” (Heidelberger Druckmaschinen: Annual Report 2005/2006, p.85). However, specific information is lacking in the case of this company, which has been chosen only as an example. Neither the financial report nor the analyst presentation contains specific information which could offer insight into the effectiveness of the implemented measures and their effects on the actual turnover rates in the corporation. All of this information could be of great interest to investors and shareholders of the company.

Human capital efficiency: personnel expenditure lower net earnings in the retail sector

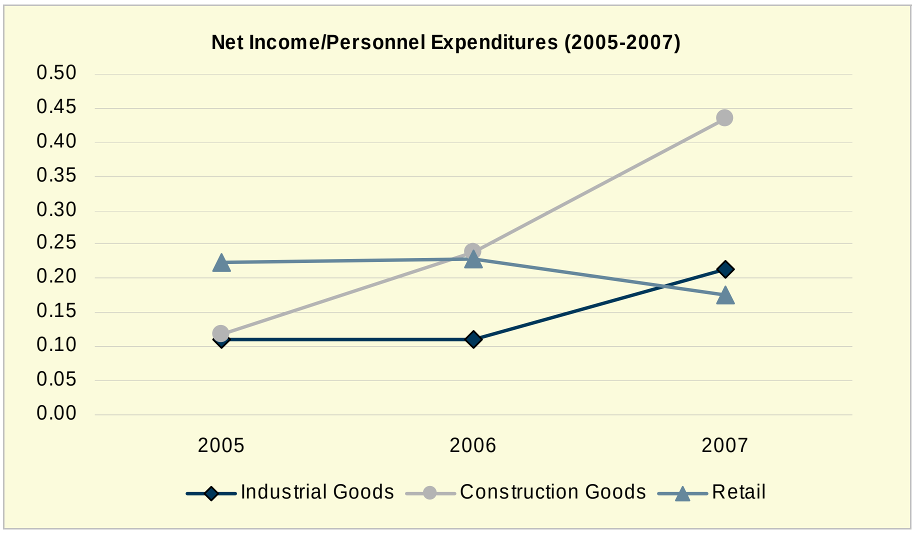
The costs resulting from inferior human capital management are considerable. For example, the additional costs for production stoppages or the late introduction of a product into the market, caused by an unfilled position for a skilled employee are often not directly linked to the weak points of human capital management in the problem analysis. The additional expenditure for filling positions as a consequence of increased fluctuation rates and the lacking attractiveness of the employer as well as the defection of key personnel to competitors (taking with them customers and know-how) is still being underestimated by many companies, both in regard to the causes and the effects. The currently observable lack of qualified personnel can in particular already be felt at companies concentrating on technology and engineering. Therefore, more efforts have to be made to identify possible risks in the area of human capital management and to implement countermeasures early on. If this is neglected, the consequence can be high costs for the elimination of bottlenecks and weak points. On a positive note, the **industrial companies**, which are overrepresented in the index, and traditionally very dependent on skilled labour, slightly exceed the average of all MDAX companies with regard to human capital. The sector appears to have recognized the importance of this factor earlier than others.

> *“Any company seeking to rank among the best in the marketplace needs the best employees—from production to management. Vossloh has incorporated this principle into its values. Our endeavours to provide high-quality training prove this, as does our low staff turnover, ensuring a level of stability in business relations which is highly appreciated by our customers.” (Homepage **Vossloh** 2007 – company profile)*

Personnel expenditures lower net income at retail, good scores at construction despite increasing personnel expenditures

The ***efficiency of human capital*** differs greatly across sectors. Personnel-intensive sectors with significantly higher expenditure for production and services often show significantly lower scores in comparison with less personnel-intensive ones. However, the purely sector-specific effects and developments during the examined time period are interesting with regard to the observation of individual companies in their immediate competitive environment.

The construction goods sector has seen the best development in the ratio of net earnings to personnel expenditure, while the **retail sector** stagnated and deteriorated in 2007. The index heavyweight **industrial goods** has improved its score in 2007, after stagnating in 2006.

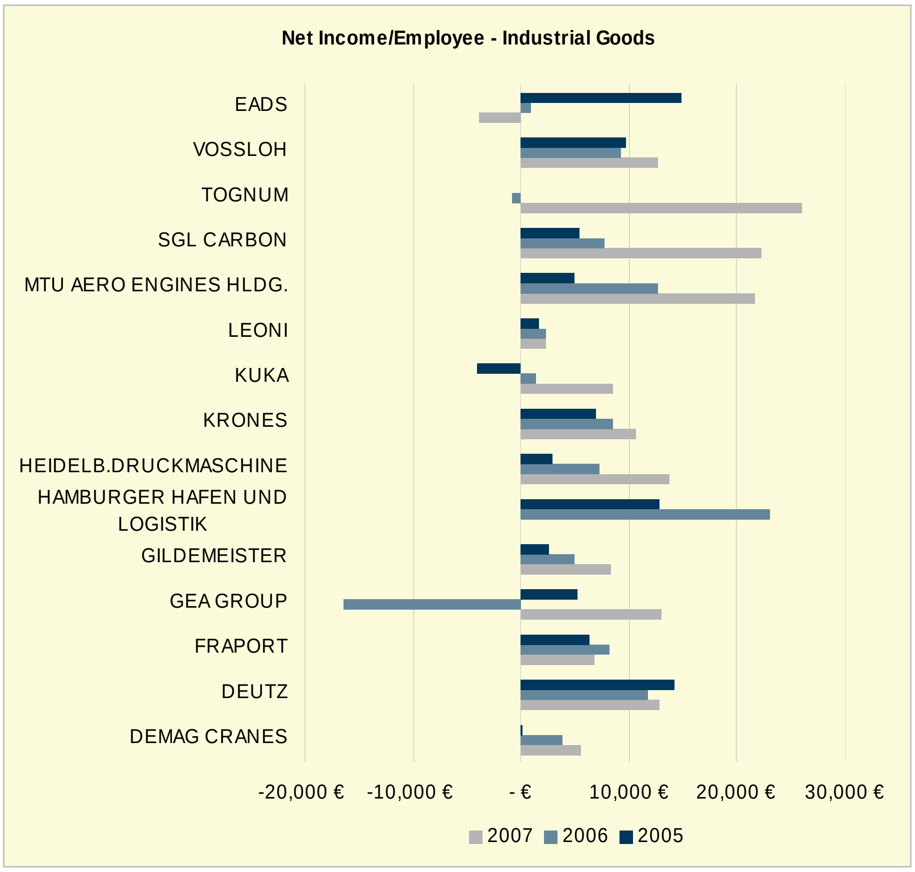


Source: The Value Group; Thomson Financial Datastream

Human capital – Tognum, SGL Carbon, GEA and Vossloh achieve above-average results

The motor manufacturer **Tognum**, a newcomer in the MDAX in 2007, which was a subsidiary of Daimler until the end of 2005, is among the leaders in the **industry.** The company excelled not only with regard to its significantly improved sales and earnings; it also reported human capital scores which were significantly above average. The *efficiency* of the employed human capital was particularly impressive. The net earnings per employee could be increased significantly in 2007 and amounted to around €25,946, while the sector average was only around €11,468 (see illustration). Earnings before taxes and personnel expenditure with a score of 0.44 (-0.02) per employee were also significantly better in comparison to the sector average. The company was also significantly better than the sector average with regard to value added, with **Tognum's** sales per employee of €346,654 (2006: €278,909) significantly exceeding the sector average of €238,061(2006:€220,645).

With regard to *human capital development*, **Tognum** records 9000 staff development days for the 5636 employees at Friedrichshafen, who account for 68% of the overall workforce. Without taking the numbers from other parts of the company into consideration, the company offers 1.6 staff development days per employee, which is above average in comparison to the other MDAX companies. The fact that a binding agreement exists between management and employees dealing with the issue of qualification shows the high importance attached to staff development. In addition, the IPO of **Tognum** yielded additional compensation for approximately 3100 employees in the form of company shares, thus improving both overall compensation levels and employee loyalty.



Source: The Value Group; Thomson Financial Datastream

SGL Carbon, a company which was able to profit from the strong demand in the areas of steel and aluminium, also achieved very high marks. Especially noteworthy is the very strong improvement in the category of *human capital efficiency* in recent years. While its values still lagged significantly in 2005 compared to the average in the industry, it rose into the top tier of industrial companies in 2007. **SGL Carbon** was thus able to improve the ratio of net earnings to staff expenditures appreciably from a score of 0.09 (in the financial year 2005), with the company achieving an above-average score of 0.39 in 2007. The net earnings per employee were also substantially higher at €22,330 (2005: €5,358), as were the sales per employee at €234,220 (2005: €203,078). The ranking of **SGL Carbon** in the area of human capital would be even higher if there was continuity in the reporting of the company with regard to the areas of staff development and training as well as stability and employee loyalty.

The mechanical engineering company **GEA** also achieved above-average results in the industrial goods sector with regard to human capital. In 2006, the company also recorded higher sales per employee than the average European company (€248,738 vs. €220,645). The positive development continued in 2007, and with a result of €265,775 **GEA** again surpassed the sector average (€238,061). In addition, GEA increased its efforts with regard to including incentives in its compensation structures for the executives in the upper echelons. In 2006, the expiring employee share programme was replaced by the GEA Performance Share Plan, which requires a contribution of 20% from the participating employees. **GEA** is also increasingly active with regard to the internal training of skilled staff, and continuously records an increased share of apprentices. The company's ranking puts it into the top section of the comparison group.

Human capital Kuka is lagging, Heidelberger Druckmaschinen is doing well

Kuka is among the companies which are doing substantially worse than the industry average with regard to human capital. The value added per employee at **Kuka** is significantly lower than average. The net earnings per employee have risen moderately since 2007, when the company scored below average, but with 8,513 € they were still about a third lower than the comparable average in the sector. The ratio of net profit to labour cost of 0.15 was also substantially below the score of other industrial companies (0.21). On the positive side, the robotics manufacturer with its main office in Augsburg was able to significantly increase its sales per employee in 2007, substantially improving its relative position in the financial year 2007. If **Kuka** manages to achieve further improvements of this factor, it could rise out of the lower tier of the industry in the foreseeable future.

One of the reasons for the below-average performance of **Kuka** is the low transparency of its reporting regarding the development of human capital. According to statements made by investor relations, no data are available regarding expenditures on staff development, staff turnover and the trends of human capital for the years 2005, 2006 and for the time period before the restructuring of the company divisions. The company started publishing data on the development of human capital (expenditures on staff development) in 2007. However, these data are not available for the whole of the corporation and therefore not conclusive enough with regard to the entire company.

The *human capital* scores of **Heidelberger Druckmaschinen** reflect the significant reduction of the workforce which has taken place in recent years. This process was halted in 2006/2007 and the workforce started expanding again, which indicates a success of the reorganisation. For example, the 2007 net earnings per employee increased significantly over previous years.

Innovative human resource instruments improve the management of human capital and the focus on results

Making human capital and the implementation of results-oriented human capital management a cornerstone of corporate strategy is an essential precondition for achieving good or excellent human capital results. These also often lead to an improved quality of internal company data which results in better management of human capital. Modern instruments of human resource management which are implemented on a company-wide scale are the fundamental factors in this regard, as is illustrated in the financial report of a company in the MDAX. “The basis for a continuous improvement of productivity is efficient management of human resources. For this reason, Vossloh introduced an innovative human resource controlling system, combining productivity indicators with the relevant financial control parameters.” (**Vossloh**, GB 2005, p. 50)

Adding value through the productivity of the employees

Human capital is an important intangible asset of the company. Valuing this resource is more difficult than many think; however, it does not suffice to add up the total sum of all labour costs. The assessment requires much more than simply recording the labour-related expenses which have been incurred. The assessment has to demonstrate how these expenditures can contribute concrete, measurable value to the company results, which measures can be taken by the company and how this can be attributed to the increase in human capital.

Human capital in retail: lots of light, more shadow

Retail in particular is a so-called “people’s business” and is based on a business model which is not primarily defined by technology but largely by the skills and the efforts of the employees as well as the direct contact to the customer and the end user. Therefore, the success of every company in the retail industry depends especially strongly on its employees. And because the service industry is so labour-intensive, good human resource management is even more noticeable in this segment. The top management has to manage very diligently selection and hiring procedures, training, work structuring, performance management as well as the other factors of the human resource management system. In other words: regardless which decisions management takes with regard to human resources – the decisions have to reflect the services the company intends to be known for and whether or not the promises to the customer can be kept. Unfortunately, negative examples for human capital management, such as below-average pay structures, burdensome working hours or stressful working conditions are especially numerous in the retail industry. Hardly any other industry cuts labour costs so aggressively as the retail industry. On the other hand, the industry has many above-average numbers of unskilled workers and temporary labourers as well as an above-average fluctuation level of the workforce. All of these factors pose special challenges for human capital management.

Douglas, weak; Celesio, above-average

Douglas is one of the names that achieves only below-average results in retail in comparison to both the MDAX and within the retail industry. This seems surprising, as the company considers its employees the deciding contributing factor to its success (**Douglas Holding**, Annual Report, p. 43) and declares in its mission statement: “The DOUGLAS Group is one of Europe’s leading retail organizations, offering outstanding service, first-class product ranges, an enjoyable and stimulating shopping ambiance, and the friendliest employees” (Annual Report 2004/2005, p. 2). The scores in the human capital ranking however are not, as expected, among the best in the comparative segment of the MDAX. On the other hand, there are only four – very heterogeneous – retail companies in the MDAX. The below-average results for **Douglas Holding** are surprising, because the company regularly has above-average scores in the area of human capital development, especially in the areas of advanced education and training. With regard to the share of apprentices, the company is leading among German retailers. However, the human capital efficiency of the company is low; in recent years the scores were regularly below average. With a total of €128,974 the sales per employee in 2007 were much lower than for the average retailer (€300,148) in the MDAX. The net earnings per employee in 2007 (€3,876) were also not able to recover from the weak results of the prior year (€3,604) and **Douglas Holding** lagged behind the industry average for 2007 of €5,423.

Celesio, Europe’s biggest pharmaceutical wholesaler and retailer, has a special position within the retail market. But looking at the company's human capital record is nevertheless interesting, as the company itself says: "It is estimated that up to 50 percent of the market value of a company is attributable to the workforce.” (**Celesio**, Annual Report 2006, p. 6), and further “selection and training of personnel is of central importance to enable the company to open up new business segments with highly qualified employees.” (**Celesio**, Annual Report 2007, p. 87). The company is owned by **Haniel** to 52.9% and thus one of **Haniel’s** biggest holdings. 92.1% of **Celesio’s** employees work abroad and approximately half of its earnings are generated in Great Britain. In this regard, too, the company is not typical for the MDAX.

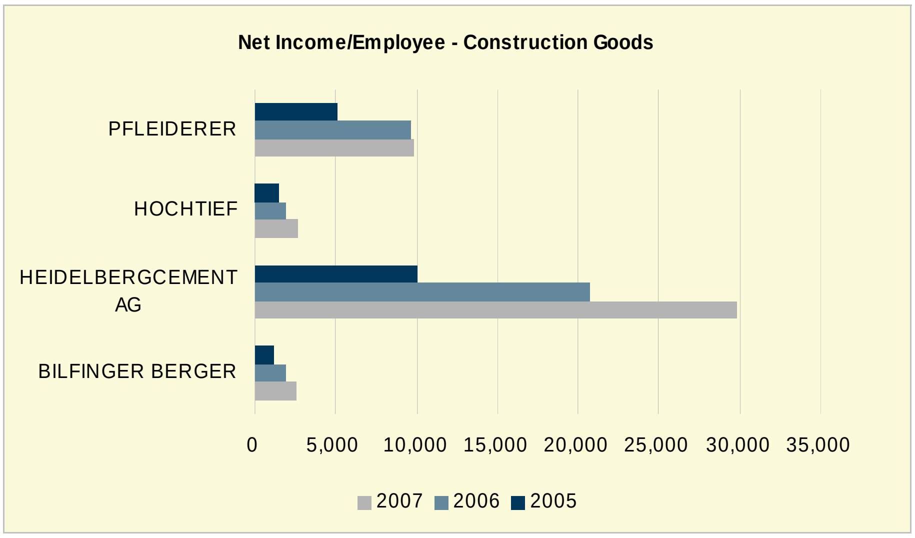
With respect to human capital, **Celesio** is the leader among the retail companies, which are underrepresented in the MDAX. It was able to keep its leading position over the entire observation period and achieve above-average scores in 2005 as well as in 2007.

The ratio of net earnings to personnel expenditure decreased continuously in the entire retail industry from 2005 to 2007 (2005: 0.23, 2007: 0.18). This was contrary to the development in most industries in the MDAX. **Celesio** was also affected by this trend and experienced a slight deterioration annually (from 0.39 in 2005 to 0.35 in 2007). However, this number was approximately twice as good as for the companies in the MDAX and in particular in the retail sector. **Celesio’s** net earnings per employee also declined in line with the industry trend and decreased from €11,886 in 2005 to €11,476 in 2007. On the other hand, **Celesio** was able to increase its sales per employee over the years at a rate slightly above the retail industry, thus recording more positive development than in the comparative segment. In 2007 **Celesio** recorded sales of €595,731 per employee.

MDAX: HeidelbergCement is the leading company in the sector construction materials.

The other companies in the sector construction materials present a markedly different picture. Personnel expenditures as well as the ratio of net earnings to personnel expenditures have both increased disproportionately strongly in the sector when compared to other business sectors in the MDAX. Sales per employee in the sector also increased at a higher rate in the last three years than in the rest of the MDAX and are 21.76% higher in 2007 than in 2005.

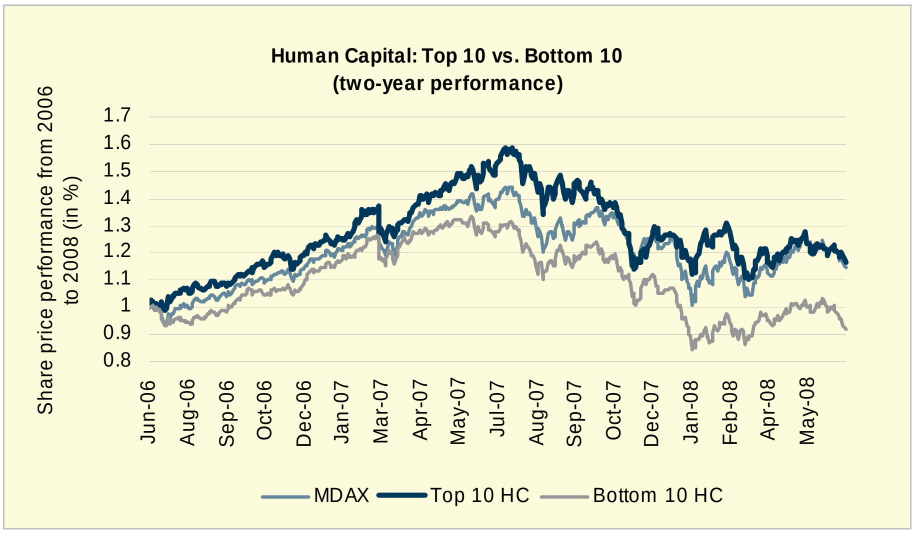
In the period from 2005-2007, the construction materials sector also improved with regard to human capital. **HeidelbergCement** in particular performed better than average in the sector. The company led the positive trend in the construction materials sector and with 6.5 achieved the highest score for the factor human capital in this industry (2005: 4.97). This top position is confirmed by the key efficiency figure of net earnings per employee (see the following illustration). While **Pfleiderer** was able to maintain its average human capital ratings achieved in previous years, **Bilfinger Berger** scored below average for the third time in a row. While **Bilfinger Berger** was able to improve marginally over the previous year with a total score of 4.09, the drastic job cuts in 2006, which were the result of the fundamental reorganisation of human capital in some parts of the company, still lower the total score.



Source: The Value Group; Thomson Financial Datastream

Human capital management important indicator for company growth and share price

The ten best companies of the MDAX, selected for the quality of the human capital scores of the financial year, were compared with the ten worst. The best companies were able to maintain or improve their top positions in the following months. Their shares performed significantly better than both the benchmark index and the worst companies.



Source: The Value Group; Thomson Financial Datastream

iii) Corporate Governance

Corporate governance comprises principles of good, diligent management and supervision of companies. This is important since in corporations the ownership of a company is separated from its management, which can lead to conflicts of interest (principal-agent conflicts). This is in particular a problem for publicly quoted companies. Here the hired managing director and executives don't act solely in the interest of the shareholders. This conflict of interest between providers of capital and the management of a company is not new by any means. It was already described in detail by Adam Smith's famous "Wealth of Nations" in 1776. It is therefore not surprising that this topic has received a lot of attention both from economic researchers and in the practice. Hardly any company is now able to dismiss the demands for more transparency with respect to setting and complying with rules and principles of corporate governance.

The fact that corporations which are well-managed and supervised are held in particularly high esteem by the public and the media is not surprising. Thus, investors should also be interested in looking for the best-of-class corporate management. This was demonstrated in many studies.[16]Many rating systems for rating the corporate governance of companies are based on the implementation of the national codex, for example, the German Corporate Governance Codex (GCGC). There are however criteria beyond the codex, which are relevant to both analysts and investors and which the company should therefore provide in its reporting.[17] Transparency for shareholders with regard to corporate governance differs greatly. The annual reports don't come close to providing all the information shareholders need to assess the chances of a company in succeeding and achieving its objectives.

Criteria of Corporate Governance

Because of this, the *Corporate Governance* rating of *The Value Group* goes beyond the recommendations and guidelines of the DCGC and takes into consideration the following main criteria:

- Management structure (board of directors, supervisory board)

[16] Cf. inter alia Gompers, Ishii, Metrick (2004): Corporate Governance and Equity Prices, in: The Quarterly Journal of Economics 118 (1)
[17] Cf. DVFA Working Group Corporate Governance, DVFA Scorecard.

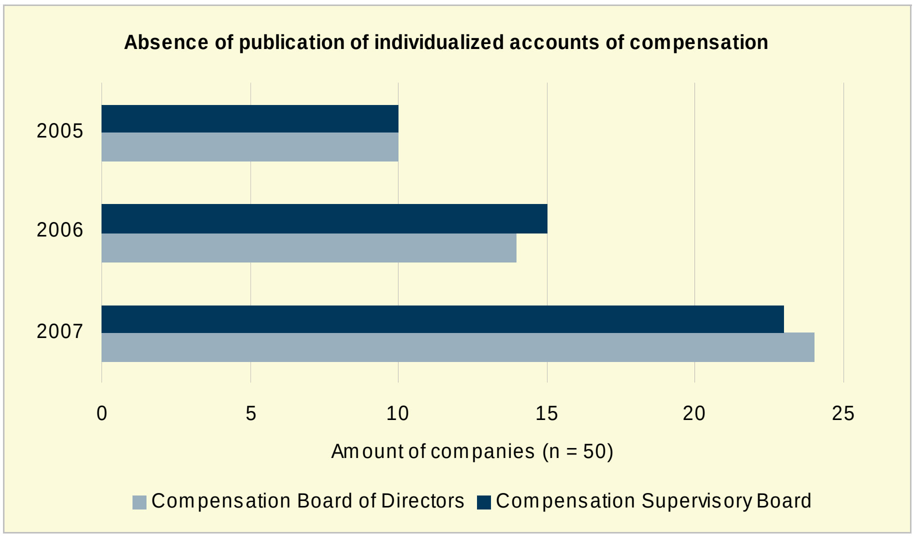
- Compensation structure (comparison to the industry, development over time and dependency on company results)
- Shareholder structure and shareholder rights
- Disclosure and accounting

Quality of corporate governance reporting

Generally, the implementation of good corporate governance is not a question of the size of a company. Small companies can do better than international corporations both with regard to the quality of corporate governance structures and transparency and the quality of the provided information. The quality of the annual reports improves every year. This is a general trend. Government regulations and the national directives have contributed materially to this development.

A fifth of all MDAX companies did not publish an individualized account of the compensation for the board of directors and the supervisory board

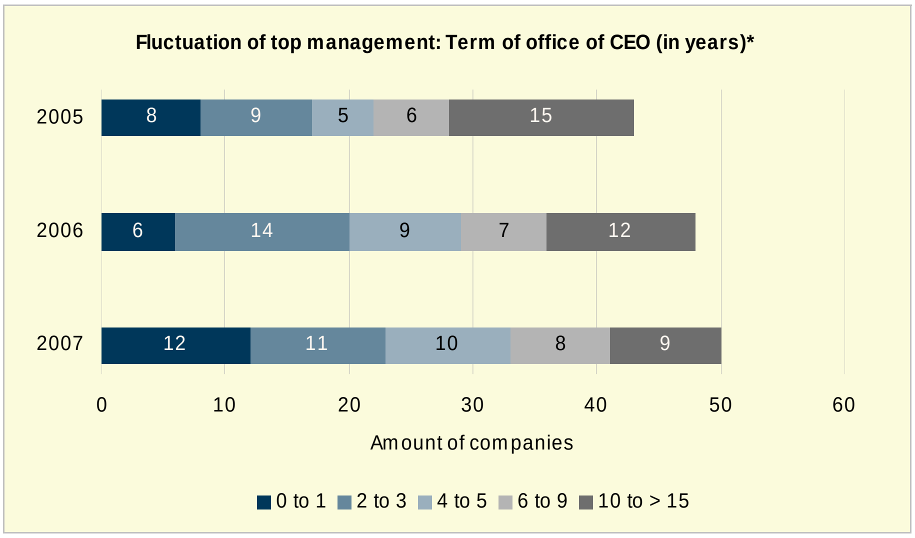
Some companies however still refuse to comply with the increased corporate governance requirements for transparency. In 2007, almost a fifth of all MDAX companies did not follow the recommendation of the DCGC to publish the individual compensation of the board of directors and the supervisory board. In these cases, the companies explicitly state this non-compliance in their GCGC compliance reports. In many cases this is the result of voting right majorities and the majority decisions at the annual shareholder meetings of the companies. In addition, more use could be made of executive compensation mechanisms oriented towards the long-term, and some companies could improve the transparency of specific disclosures.



Source: The Value Group

The fluctuation of top management in MDAX companies is high

Management within MDAX companies has become less stable in recent years. The fluctuation at the top has increased significantly. 12 companies appointed new chief executives in 2007 or they moved to the top within the past reporting and financial year. An examination of the development of recent years shows great changes at the top of companies. It appears that the times in which a chief executive would lead a company for 10 or even 15 years are over. More than half of the companies in the MDAX are led by executives who are in office for less than 2 or 3 years.



Source: The Value Group

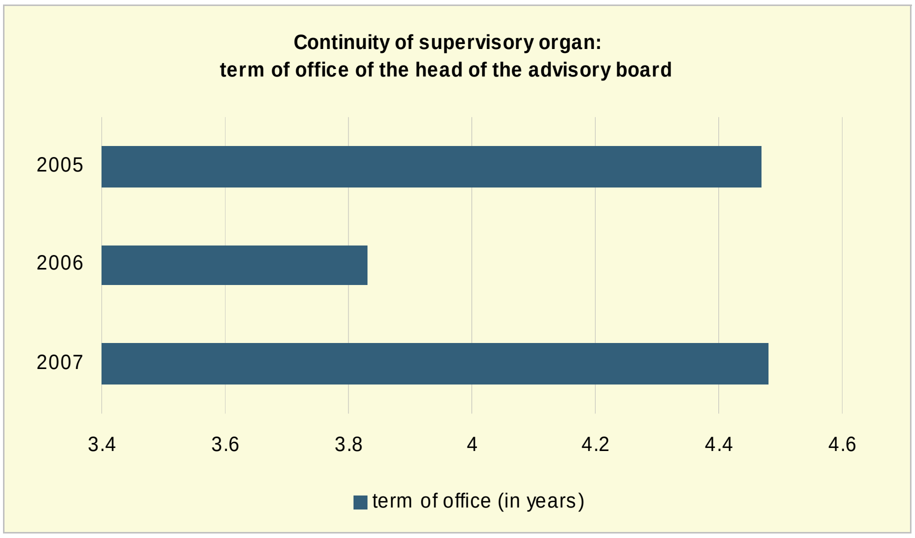
*) *Only companies which belonged to the MDAX for the entire period of observation were included. Some companies were only admitted into the MDAX in 2006 and 2007 and were therefore excluded.*

While generational succession and the appointment of executives with special expertise are often unavoidable, the frequent changes in top management should be seen critically with regard to the continuity of leadership. The change could cause uncertainty and instability in the corporate leadership. A negative example from the MDAX is **Arques**, which caused uncertainty and anxiety among investors by appointing two new executives during the observation period. In the middle of 2007 the founder and co-owner left the company, and his successor left only a few months later.

A change at the top often also results in significant costs. These are incurred primarily because of large severance payments for the premature termination of contracts and high compensation payments for parting managers. The provision in the Corporate Governance Codex regarding a cap on severance payments for managers who leave the company prior to the end of their contract will be toughened in the future. Up to now, this provision was only a suggestion; in the future severance payments are supposed to be capped at two annual salaries and companies are supposed to report regularly on the implementation and compliance with this provision.

Continuity of supervision in MDAX companies improved again

From the viewpoint of the shareholders, the independence and continuity of the supervisory organ of the company, the supervisory board, is of no less interest. Optimal supervision of the company requires profound knowledge of the company as well as of its strategy. This can generally be guaranteed by longstanding continuity of this supervisory organ. Frequent changes affect the detailed supervision of central corporate processes and hinder the supervision of the board of directors. After a significant increase in new appointments of members of supervisory boards in 2006, the average term of office at the head of the advisory boards in MDAX companies has returned to the duration of 2005 and is currently just short of 4.5 years.



Source: The Value Group

Value-oriented compensation of corporate management

The pay packages of executives (both the absolute as well as the relative amount) have been the subject of heated public discussions, in particular with regard to the amount of compensation. Compensating management based on results and linking compensation to the achievement of company objectives has been empirically identified as a relevant factor for the creation of value in corporate governance. Given this background, this aspect is included in the shareholder value-oriented rating of corporate governance by the research of The Value Group.

The reporting of compensation has become significantly more transparent and conclusive in recent years, which is also a result of the Executive Compensation Disclosure Act (ECDA). The amount of information provided about the compensation of executives and members of the supervisory board as well as the quality of the information have increased significantly during this time. Still missing is important information regarding severance payments, the structure of compensation schemes, in particular regarding long-term incentives, and retirement benefits as well as other additional benefits and other contractually agreed compensation. Consequently, a comprehensive comparison of compensation remains difficult, and the lack of government regulations in this area does nothing to improve the situation. Comparability is important for investors since it enables them to determine whether compensation packages are excessive in comparison to other companies in the same sector.

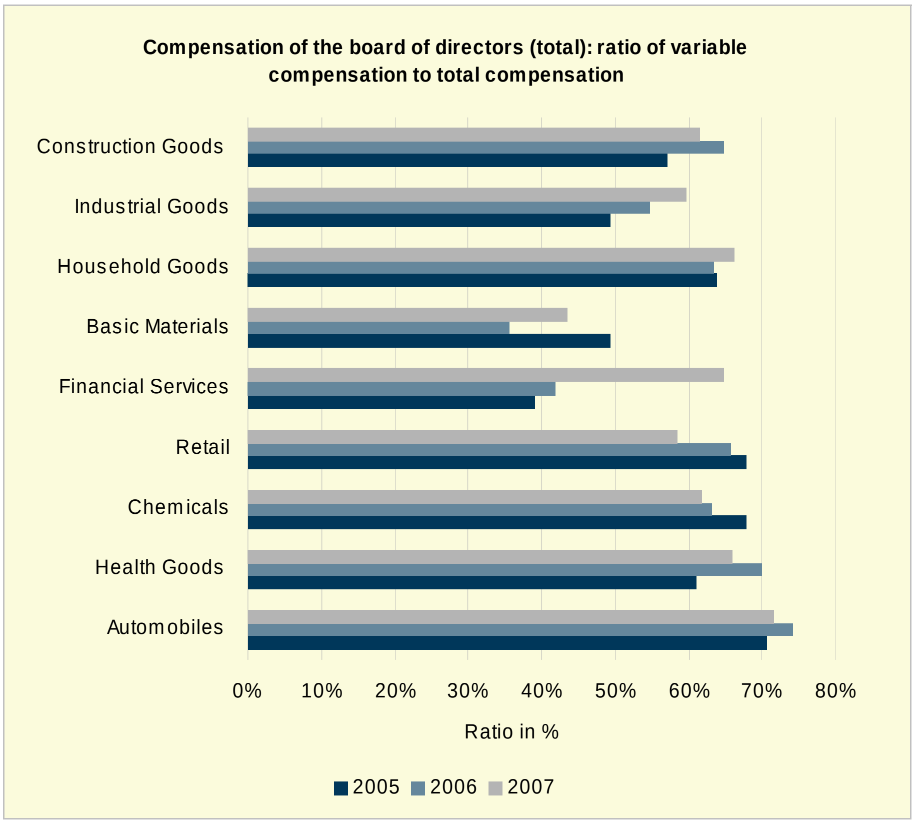
Compensation is increasingly tied to a company's success. Great differences between industry sectors

The German Corporate Governance Codex recommends a compensation package for executives comprised of fixed and variable components. The compensation should be appropriate. Performance, economic situation, success and future prospects of the company should be taken into consideration (see Corporate Governance Codex in the version dated June 2007).[18] Tying the compensation of the board of directors and the supervisory board to the long-term success of the company is not always sufficiently achieved in German companies. In recent years, however, a significant trend has developed among MDAX companies to results and performance-based compensation. This is true for both the compensation of executives as well as members of the supervisory board.

[18] Cf. Bassen, 2006: only 40% of the DAX companies have variable components with a long-term orientation in the compensation packages of the supervisory board.

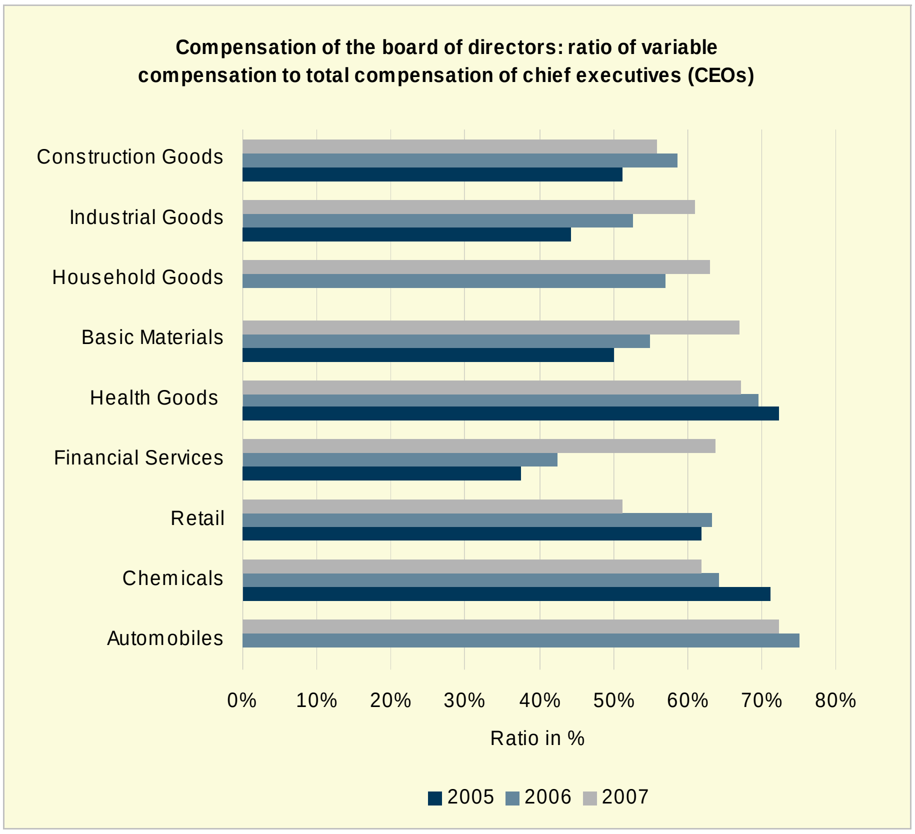
Most of the compensation packages of executives of MDAX companies are now based on variable components. The range of components is very large and comprises variables such as bonuses for success, bonuses based on sales, shares and share options, which can be tied to key figures of the corporate results such as market share, earnings or profit margins. Overall, companies have set benchmark targets for incentive-oriented compensation higher in recent years and they have increasingly tied it to long-term objectives of the company.

In recent years and months, the amount of variable compensation has been strongly affected by stimulated economic activity and rising earnings and sales. Since the variable components are tied to key figures of financial results, the variable share of the compensation of executives has risen significantly as a consequence. As expected, the variable part of the compensation among **financial services companies**, which also comprise a number of holding companies in the MDAX, is relatively high and has seen some of the highest growth rates in recent years. The situation is similar in other indices (such as the EURO STOXX or the DAX). In the **construction materials sector**, the **chemical industry** and the **health care industry** the variable component of compensation has decreased slightly in 2007, but over the whole of the observation period there has been a continuous increase of the variable share of the compensation of executives. Only in the **retail industry** have declining sales and gross margins resulted in a decrease of the variable compensation of executives. This shows that the compensation of executives by means of variable results and performance-based incentives is a result of an increasing connection between the measurable success of a company with the individual pay of the executives.



Source: The Value Group

The trend to a more variable compensation of the board of directors also exists with regard to the compensation packages of chief executives. The industry trends are also reflected here. In some sectors the chief executives have achieved a relatively higher variable component over the last three years. As a result, their individual compensation was tied more strongly to the company's results than is true for boards of directors of the respective industry sector on average.



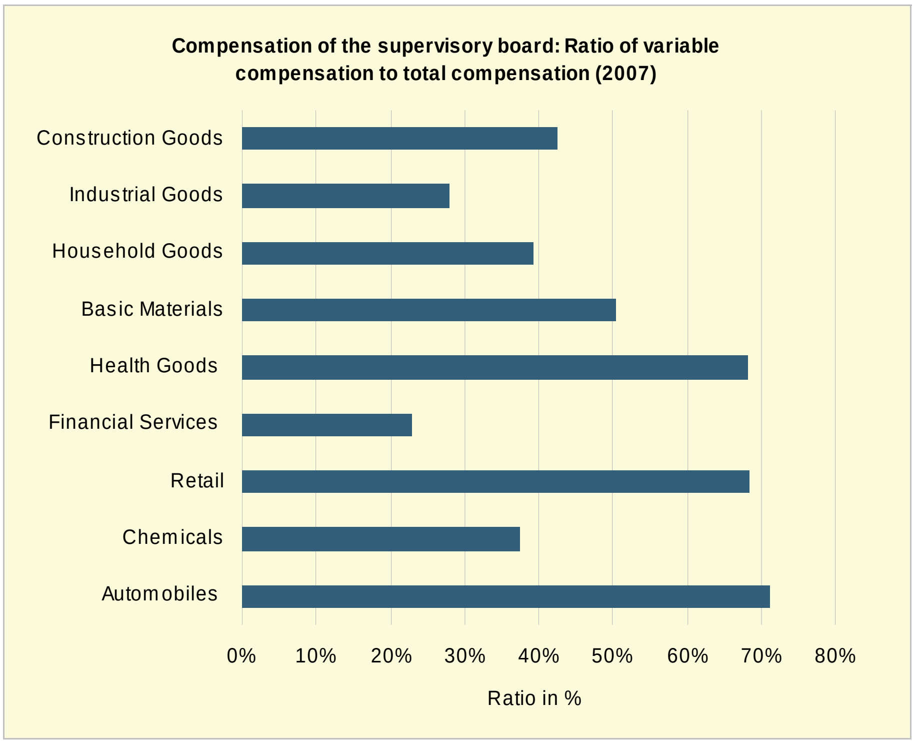
Source: The Value Group

Results-based compensation of the supervisory board

A stronger professionalization of the supervisory board as well as an intensification of its tasks has been demanded by many, among them shareholders. As a consequence, a better, meaning a more attractive and more performance-based compensation of the supervisory board has been discussed. Increasingly, demands have been made to make compensation more dependent on a company's financial results, comprising variable and long-term incentives for members of the supervisory board. This has been the subject of heated discussions, because financial incentives tied to the achievement of company objectives could be detrimental to the independence of the supervisory organ. In addition, compensation schemes which are tied to long-term objectives are difficult to implement in practice since they are often paid only after the contract ends or upon resignation.

The once-common practice of tying the compensation of the supervisory board to the annual dividends of a company still exists, but it has declined and been replaced with new models of compensation for the supervisory board.

The current situation of compensation of the supervisory board and the relative importance of variable components is shown in the following illustration. The **industrial goods sector** as well as the **financial service industry** shows the lowest share of variable components of total compensation, while the **health care industry**, **retail** and the **automotive industry** are among the leaders.



Source: The Value Group

A few examples from the MDAX demonstrate how much the compensation structures in the index still differ. Members of the supervisory board at **Celesio** have a ratio of variable compensation to total compensation of 0.94. This shows the disproportionately large weight of variable compensation in 2007. The variable payments to the members of the supervisory board total €1,177,000 while the fixed compensation is a relatively low €68,000.

The sports goods manufacturer **Puma** on the other hand has a ratio of 0.05, resulting from a very low variable component of the compensation of the supervisory board. Compensation packages for members of the board of directors consist of €11,900 in variable and €222,200 in fixed compensation. A further example for the very heterogeneous situation regarding the compensation of the supervisory boards in the MDAX is **Demag Cranes**, which has a ratio of 0, meaning that the supervisory board received no variable payments in 2007 at all. The total remuneration of the supervisory board is a relatively modest € 525,000.

On average, companies in the MDAX paid the members of their supervisory board €878,287 annually in 2007. The total compensation has increased by approximately 12.5% when compared to 2005.

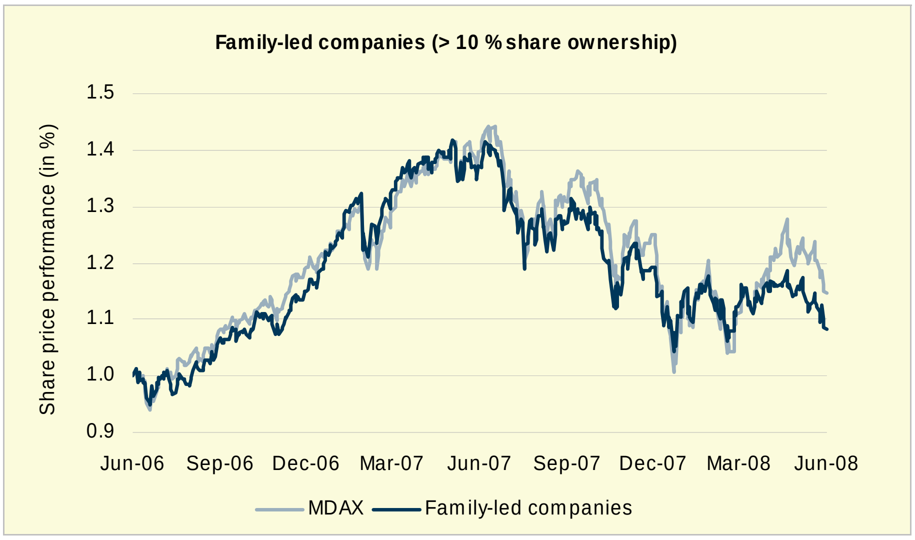
Significant increases in executive compensation – not always significant increases in corporate earnings

In theory, the value of the company and the salary of the chief executive should be directly correlated. The higher the company value, the higher the salary of the CEO. This is the result of studies carried out by the university researchers Gabaix and Landier (Princeton and New York, 2006). A comparison of the companies of the MDAX gives a mixed picture. In almost all sectors executive pay has increased. In the last three years, executive pay has increased significantly more than the net earnings of the companies during the same period; in some sectors (e.g. media companies), pay and corporate earnings have gone in opposite directions. Surprisingly, SGL Carbon is among the top companies in its sector. It achieved corporate governance rankings from 2005 to 2007, which were significantly better than those of the industry average. The company was again able to improve its performance and secure a top position in the corporate governance ranking of the industry in 2007. The reasons for this were the improvements in *management structure* and *compensation structure*, as well as the good score in results-based compensation and the relative size of the executive compensation packages. Conflicts of interest are kept to a minimum, since the supervisory board does not receive variable compensation tied to the company's earnings.

Family businesses do not outperform in the stock market

Family-run companies are often considered "better" companies and are thought to be especially long-term oriented and employee-friendly. But the narrative of the good family business has suffered, and not only because of the attempted takeover of Continental by the Frankonian Schaeffler Group. For a long time now family businesses have been acting just like other investors, securing stakes in companies which offer the opportunity of high returns, or selling them again when returns are too low. In principle, they are therefore no different from private equity companies. There are many examples for this; among those in the MDAX are the holdings of the Haniel family, which holds the majority of the pharmaceutical wholesaler **Celesio**, or **Altana**, whose main shareholder is Susanne Klatten.

It has often been claimed that family-led businesses and companies, in which a family business has a majority stake or even only a large stake, outperform corporations with a diversified shareholder structure in the stock market. We examined this correlation for the MDAX for the last two years and on the basis of the research of the financial year 2005. The results are disappointing. No correlation could be found between share ownership by strong family businesses and the performance of a company's share price.



Source: The Value Group; Thomson Financial Datastream

We screened companies whose family businesses held a significant share (> 10%), whether through direct ownership of the shares or through indirect ownership via holding companies controlled by the family. The 14 MDAX companies which were selected performed almost identically to the index for the whole of the observation period. Only in the last two months (May, June 2008) did the sample of family businesses perform somewhat worse than the benchmark index. This negative development is, however, attributable to singular cases (for example, **Pfleiderer** has again come under significant pressure in the recent past; one euro invested in **Pfleiderer** was reduced to 51 cents). The majority of the companies in the family business sample were able to hold their own during that period.

iv) Corporate Risks – Pension Risks

Risks to the company are important extra-financial factors in the analysis of companies

The direct relationship between opportunity and risk and its role in assessing investment opportunities has been known even before Modern Portfolio Theory established itself in finance. It is argued that a functional relationship exists between an expected return and the risk connected with it. A higher return can only be achieved by taking a bigger risk.

While assessing the opportunities of a company, it is important to also search for its risks – both the obvious and easily quantifiable as well as the hidden ones. If additional risks surface, this has direct implications for the risk expectations of the investors. For this reason, the assessment of the particular risk situation of a company is of special importance in extra-financial research. There are two large categories of risk:

- Risks from future obligations (in particular **pension risks**)
- Avoidance of other business risks (existence of internal supervisory systems and committees)

Pension risks can put investments in a company's future at risk

Many companies established company pension schemes in the past, which were either voluntary or legally mandatory, and in part remain so. Pension schemes consist of the pension obligation on one hand and the funding of the payment obligations with very long durations on the other. For the hundred largest European companies this amounts to €69,000 per employee on average, but can be as high as €200,000 per employee. For a company, this can result in payment obligations with a cash value in the billions of euros.

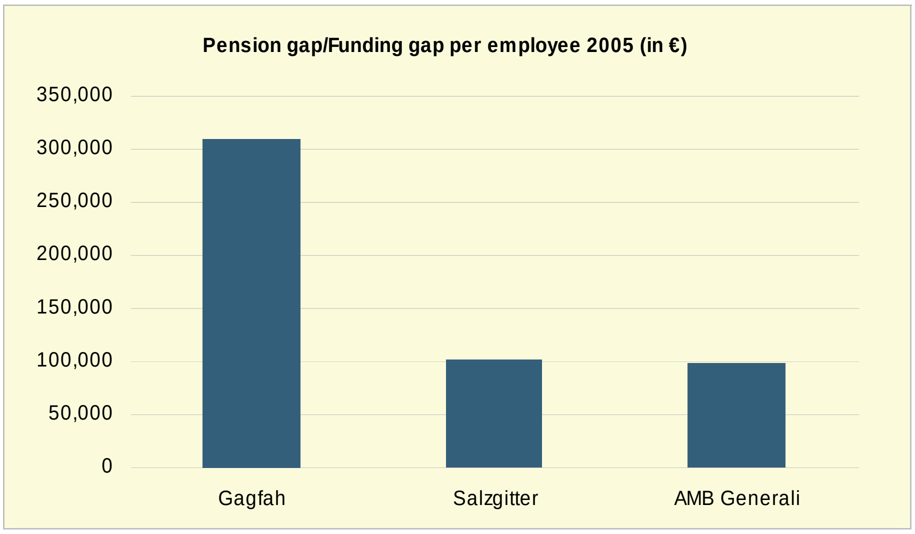
Both the assumptions with regard to the structure of the obligations (discount rates, mortality tables, growth rates, etc.) as well as the current amount of the pension fund being accumulated for this (including the assumptions regarding future returns) have an important impact on the future cash flow positions of the company. This has direct implications for the verdict on the future prospects of a company, since in a worst-case scenario a severe negative impact on cash flow would result in a lack of capital for investments in the company's future, as the cash flow would have to be used to pay obligations from the company's past.

Significant reduction of pension risks of the MDAX companies through increasingly full funding and pressure from investors

In the evaluation of business risks and pension risks of the MDAX companies in particular, the following results from the observation period 2005 to 2007 are particularly noteworthy:

- MDAX companies perform significantly more poorly than other European companies, in particular companies in the EURO STOXX.
- However, the companies were able to improve significantly in recent years in the category "pension risks". Between 2005 and 2006 the average score for "pension risk" of MDAX companies declined by 20% and another 15% in the following year.
- It is obvious that reducing pension risks has increasingly become a focus of management attention and concrete measures were taken. A visible result is the fact that only a few companies don't have the topic of fully funding pension plans on the agenda.
- The increasing number of investors influenced by the Anglo-American investment culture has led to a stronger focus on pension risks, because these investors tend to see "unfunded pension obligations" as a bigger problem then German investors.

In 2005, the MDAX companies had average pension obligations of €40,200 per employee. **Gagfah** even had obligations of €312,000 but this amount could be significantly reduced in the following years. The assets funding these liabilities totalled €10,600 on average, ranging from €86,700 to €0.



Source: The Value Group

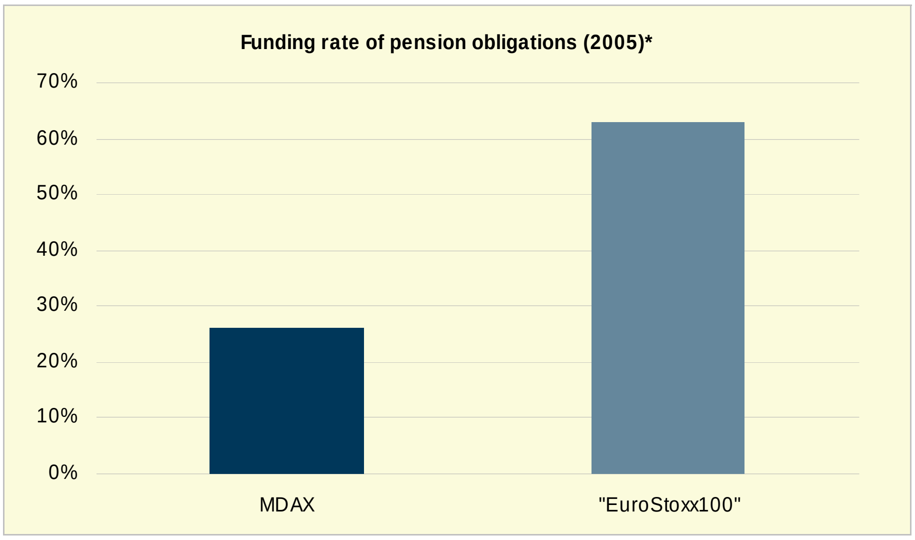
In 2006, the average pension obligation per employee amounted to 36.200 € with total assets of 13.200 €. The funding has thus improved significantly. The assumptions regarding discount factors and returns remained almost unchanged between 2005 and 2006; the improved funding is therefore a result of the actual allocation of funds.

A similar development can be seen in 2007, with average pension obligations dropping to 32.700 € and plan assets rising to 16.300 €. A decrease in the pension obligations in this year can be attributed largely to the recovery of discount factors for almost all MDAX companies.

Recently, some companies have started taking existing pension obligations from their balance sheet. The so-called Contractual Trust Agreements (CTAs) have found widespread use. This aspect is of significance not only with regard to the assessment of business risks (here: corporate risks as indicators of the extra-financials), but it has also received increased attention in the traditional area of financial analysis by long-term investors.

Pension obligations in the MDAX are higher than for other European large caps

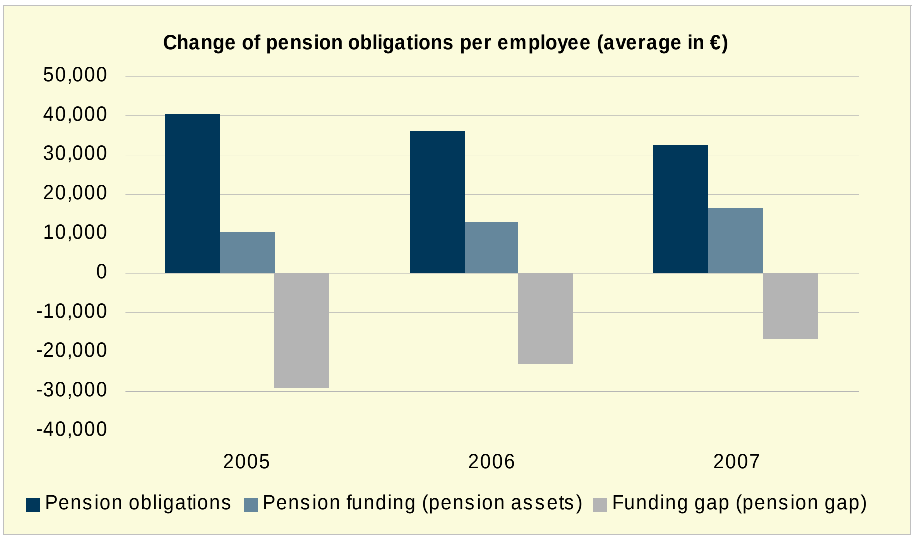
A comparison of MDAX companies with the hundred EURO STOXX companies with the highest market capitalization shows that the ratio of pension obligations to plan assets (funding for the obligations) yields significantly more positive results for the hundred largest European companies than for the MDAX companies. The basis for this comparison is the numbers from the financial year 2005. It has to be noted that the average pension obligations per employee are 70% higher for the "EURO STOXX 100". The MDAX companies are therefore subject to potentially higher risks from insufficient funding of their obligations.



Source: The Value Group

*) Funding rate = the percentage of obligations covered by pension assets

As mentioned above, however, pension risks for the MDAX companies are decreasing from year to year, since the funding rate is climbing significantly, as can be seen in the following illustration.



Source: The Value Group

According to the EFI research risk screening, the best companies of the respective financial year are with some regularity companies such as Wincor Nixdorf, Beiersdorf and Celesio. These companies have also reduced their pension risks every year. Wincor Nixdorf, for example, had a funding rate of 13.5% in 2005 and a rate of 100% in 2007. The situation is similar at Pfleiderer, which also increased its funding rate very significantly from 28% to 86%.

v) Image & Brand

Brand values in the strongly industrial MDAX are lower than for other indices. Large differences between sectors

Brand values can hide enormous potential for growth, and some companies generate a large part of the company's value primarily through their strong portfolio of brands or the strong company brand. Brands and image are therefore an important value driver in the analysis of extra financial success factors. Nevertheless, the importance of brands should not be overestimated as a single factor, because in many sectors, in particular innovative and industrial sectors, such as mechanical engineering, basic materials or health goods, brands are often less important than other extra-financial value drivers such as innovation capital, human capital or the relations with relevant stakeholders.[19] The research findings demonstrate that image & brand have to be integrated into a set of other important extra-financial indicators of a company in order to realize additional potential value.

Criteria of Image & Brand

The Value Group takes the criteria of the following sub-indicators into consideration:

- Brand stability
- Image
- Brand support

Data regarding marketing expenses in comparison with the corresponding company earnings and previous financial years is included in the assessment. Data regarding the market visibility of the company in sponsoring and marketing as well as rankings in representative and widely known lead tables (such as BBDO, Best Brands, Interbrand, Great Place to Work) shed light on the perception of companies in the relevant markets and on the perception by important target groups such as customers, employees, graduates and skilled personnel.

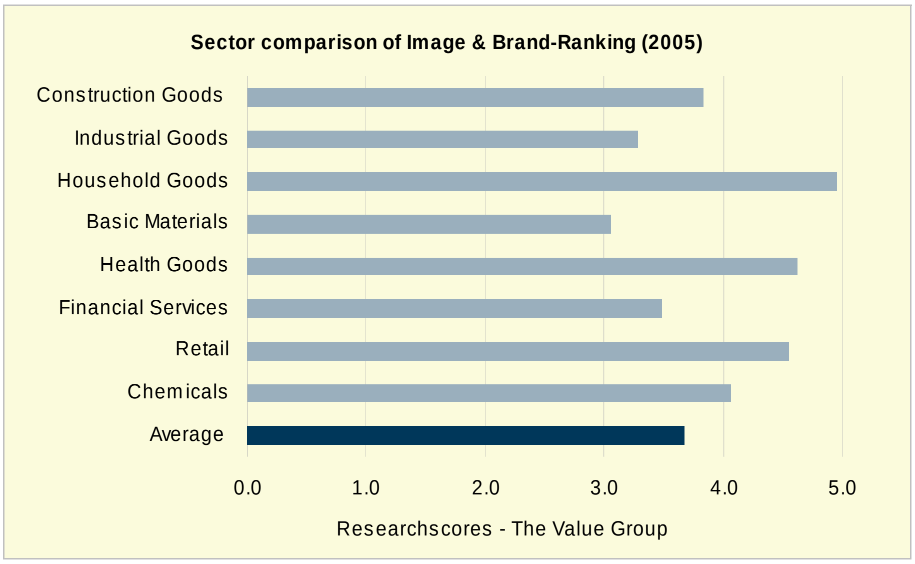
It has to be noted that companies are the primary focus of the evaluation, and not the individual brands they market and sell. It turns out that the brand of the whole company, for example, as an attractive potential employer (employer branding), as respected social actor can diverge drastically from the power of individual sub-brands (blockbusters).

Companies in the industrial goods sector show significant weaknesses with regard to image and brand

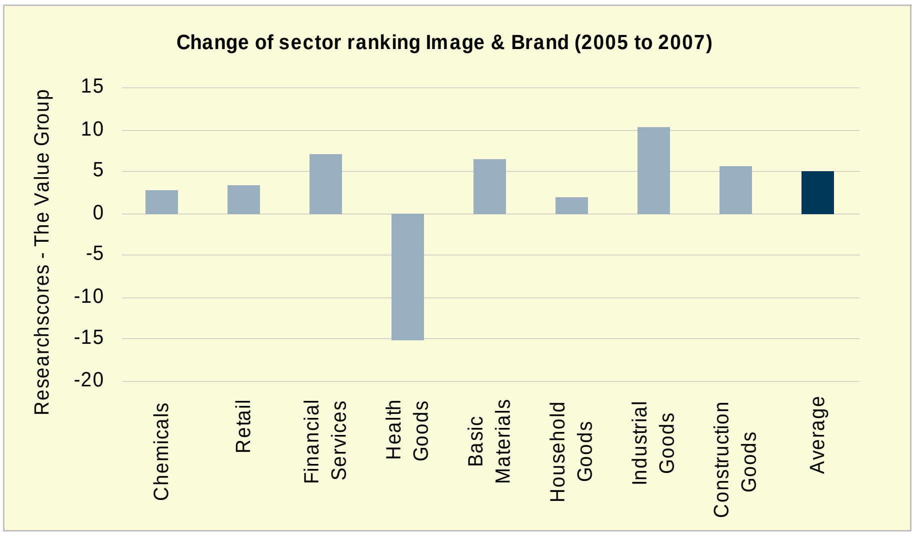
The MDAX index is dominated by companies from the industrial goods sector. The industrial goods sector together with the construction goods sector make up almost 40% of the MDAX. Traditionally, companies in the retail and banking sector emphasize the factors image & brand more, since they are much more focussed on the end customer than companies in the industrial goods sector. This is reflected in the evaluation results of the indicator image & brand in the MDAX.

This can be seen both by the companies which achieve the highest ratings in the category image & brand for the years 2005 to 2007 as well as in the cross-section analysis of the MDAX. Industrial companies, on average, are relegated to the lower mid-field of the spectrum and show the lowest individual scores in the category image & brand. The average score for the industrial goods sector (3.3) was significantly below the average of other sectors, compared to household goods for example with a score of 5.0.

[19] See Doyle (2001): Building Value-Based Branding Strategies, J. of Strategic Marketing; see Fernström (2005): A Marketing Perspective on Intellectual Capital, in: Marr, B.: Perspectives on Intellectual Capital



Source: The Value Group



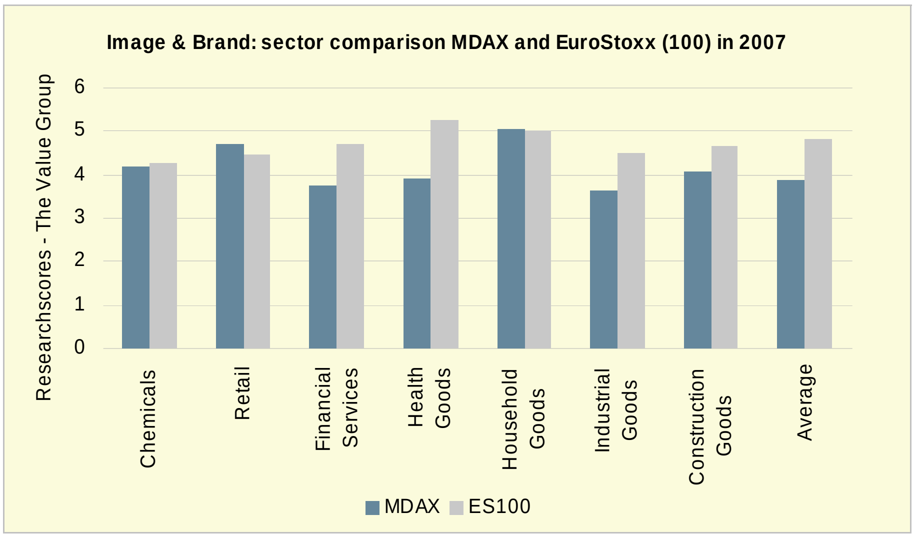
Source: The Value Group

Image & brand are an important factor for success particularly in businesses dealing directly with the end customer

There are some companies in the MDAX which depend on a good reputation and an unblemished image with the end customer to conduct their respective business. Because of this, these companies work to establish effective brands with a wide range and a strong message. The manufacturer of branded goods Beiersdorf is one of the prominent examples in the MDAX; it defines the significance of image and brand as central for its strategy. “Passion for Brands, Passion for People” (Beiersdorf, title of the Annual Report 2005).

Increasing significance and improvements with regard to *image & brand* in almost all sectors of the MDAX

A sector comparison of the companies from the “second row” shows significant differences to European Large Caps. The smaller the market capitalization of a company is, the lower the amount and quality of the data reported by a company regarding image & brand. However, in the financial year 2007, a positive development took place; the companies of the MDAX – with the exception of the health goods sector – achieved slight to significant improvements. The increasing significance of reputation and market value for the success of the company and the corporate strategy aimed at achieving these are the deciding factors for this development.



Source: The Value Group

Low brand and image ratings at engineering, construction and steel

The robotics manufacturer Kuka, the construction company Bilfinger Berger and the steel producer Klöckner as well as Südzucker are the MDAX companies with the lowest rankings in the category image & brand, achieving scores which are significantly below average.

Brand and image are most important for companies dealing with end customers and companies with a national range

Companies such as Hugo Boss and Douglas with a strong connection to the end customer are among the top companies in the category image & brand. Fraport is an industrial company and surprisingly a contender for the top ranks. The socio-political role of the airport operator in a very densely populated metropolitan area is an important reason for the investment in a strong brand and a good image in the market. The same applies for the factor external stakeholder (see the following chapter). The visibility of companies in the market is high, and this increases the importance of the factor image & brand as a value driver for the company disproportionately. In the case of Fraport, focused communication and marketing strategies are more important than in segments without a similarly strong market presence. While Fraport only ranks in the middle of the field in the sub-categories market dynamism and image, its score is significantly above average in the category brand support (this includes strong sponsoring activities as well as activities in the areas of culture, social issues and education).

Both the relevance and the expenditures for the factor image & brand are many times higher at the branded company Hugo Boss in comparison to other companies. The increasing significance of maintaining and improving the brand Boss is reflected in the increase in marketing expenditures of almost 30% within 3 years. While this figure is higher than the MDAX average, it is still slightly lower than in the same sector. In 2007 Hugo Boss was downgraded in regard to the factor image & brand; the company has been hit by a lot of negative publicity lately. The company recently underwent drastic changes which had a direct affect on the perception of the company, the image in the market and finally also on the performance of the shares. The company had to deal with frequent changes in the board of directors, the resignation of the CEO as well as difficulties in the search for a successor and disputes with the new major shareholder Permira.

vi) External Stakeholder

Stakeholder management: an important factor for the success of a company

Important factors influencing the assessment of intangible value drivers of a company are factors of the company's context, such as the perception of the company in society and the quality of the relationship to its most important partners (stakeholders). It has been shown that the quality of the relationship with these stakeholders can be either a detrimental risk factor or an important success factor, in particular in difficult market conditions and rapidly changing markets.

The importance of a smooth cooperation with stakeholders can be demonstrated particularly clearly in the example of the automotive industry, in which companies continuously "trim" their manufacturing divisions, outsourcing important parts of the production process. More and more, suppliers are taking over parts of the production process and the quality management of essential intermediary products. In some cases this goes as far as cooperative or even independent research and development, which demonstrates the quality and stability of the relationship to this important group of stakeholders.

Criteria

In the extra-financial research of The Value Group the factor of external stakeholder is systematically evaluated by assessing the following individual factors:

- Relationships to customers and suppliers
- Competitors and the assessment of relative competitiveness and market positioning
- Exercise and visibility of social responsibility

Sub-factors are criteria such as customer loyality to the company, the external assessment of the quality of the company and its products and services (for example in the form of awards for quality or ratings), rating scores for changes in market share and the strengthening of relative competitive advantages. The evaluation of corporate responsibility (for example, social and cultural engagement and measures regarding ecological sustainability) is central to the criteria for the evaluation of the company as a social actor.

In expert discussions, employees are also sometimes seen as stakeholders of the company. The research approach of The Value Group defines and evaluates this important group as an independent internal factor for the success of the company. The term stakeholder is therefore defined more narrowly as external stakeholder and only covers partners who are outside of the company and who are in a close active exchange with the company or partners with whom the company has other close mutual ties.

Increasing attention to stakeholder management – but significant weaknesses of the qualitative reporting

All MDAX companies have focused increasingly on this factor during the observation period of this study. This is reflected both in increasing transparency and better qualitative reporting as well as a stronger involvement of the companies. The participation in international assessment and rating procedures can be interpreted as an important indicator of transparency with regard to the communication with relevant stakeholders. A comparison with the 100 largest EURO STOXX companies shows significant differences regarding the quality of reporting and the transparency. MDAX companies score significantly lower. Especially noteworthy is the discrepancy in the rating by external rating agencies, such as the providers of financial ratings (Standard & Poor, Moody's or Fitch). While 80% of European large caps are rated by these companies, this applies only to 20% of companies in the MDAX. A comparison of participation in external rating procedures such as the Carbon Disclosure Project, the compliance with the requirements of the Global Compact and the DJ STOXX Sustainability Index also show a significant difference between European and German large caps on the one hand and the companies of the MDAX on the other. The transparency as well as the quality and quantity of the capital-market related communication with external stakeholders is significantly below average in the MDAX.

Success in stakeholder management only showing itself hesitantly

The quality of the relationship with stakeholders with the relevant target groups can only be changed gradually, similarly to reputation and image. Improvements through practical corporate measures and strategic changes are much slower in achieving results than other measures which are aimed at improving efficiency or cutting costs. However, changes on the level of the sector as well as of the companies can be seen even within a relatively short time frame, and this is also true for the period 2005-2007.

Top sectors: health goods and chemical industry

An overview by sector shows that **health goods** in particular achieve above-average scores in the areas of stakeholder management and the quality of its stakeholder relationships. Among the MDAX, this sector has been particularly successful in winning new customers, both by winning market shares from competitors and by acquiring other companies. It is therefore no surprise that companies were able to expand their market shares by approximately 46% in the time period from 2005 to 2007. This sector has gained almost twice as many market shares as the average of all companies in the MDAX. The **retail sector** saw a strong decline in the category stakeholder management in the time period from 2005 to 2007, losing its top rankings, while the **chemical industry** recognized the importance of the relationship with external stakeholders and managed to improve its standing.

Source: The Value Group

Challenges of stakeholder management Fraport and Rhön-Klinikum as well as the special case of EADS

Fraport, for example, is one of the industrial companies which have managed to improve their rating, and it has also performed better than the MDAX during that time. A detailed analysis of the company’s performance shows that the reasons for this are manifold. For **Fraport**, stakeholder management in general is of greater importance than for other companies of the sector. The company is at the centre of the conflict between competing issues such as regional economic development, questions of creating and safeguarding jobs and environmental issues. As a consequence, it has to try to find a balance amongst a multitude of very different stakeholders, while maximizing profits at the same time. It is therefore not surprising that **Fraport** is among the leading companies in the MDAX in reporting relevant information with regard to external stakeholders. Among other things, this is reflected in the presentation of the content and the quality of the reporting. As a result, the company achieves the highest score in the MDAX, by a wide margin, in the category “corporate responsibility” (role in state and society).

An analysis of the top ranking company of the health goods industry, **Rhön-Klinikum**, shows that the company is also very active in the areas of "corporate responsibility and visibility" as well as "customer relationship management", resulting in correspondingly high scores. The quality report of the company, a multitude of customer surveys and awards for quality demonstrate this. Rising market shares are a sign that this strategy has paid off both for this company and the whole of the sector.

EADS presents a completely different picture, both with regard to scale and to stakeholder management. For one thing, the stakeholder structure of **EADS** is a very particular one, because its market is characterized by the existence of only a few major competitors as well as a strong role of national and governmental interests. The state plays an important role both as shareholder and end customer. The company manages to achieve high ratings in the categories "state and society" and "stability and quality of customer management", and scores significantly higher than the average of all MDAX companies, which are usually subject to different competitive environments and stakeholder interests. An example for the good performance of **EADS** is the compliance with the requirements of the "*Global Compact*". **EADS** is one of only two companies in the MDAX that has made such a commitment. In addition, **EADS** was able to improve its credit rating. Moody's raised the rating from A3 to A1, improving the perception of the company in the market.

Close interrelationship between stakeholder management and *image & brand*

A close interrelationship between the image and the public perception of the company as well as the management of important stakeholders of the company was able to be found. This interrelationship had visible effects on the performance of the company in the stock market. A comparative analysis of the two extra-financial factors image & brand as well as external stakeholders in the following chapter show this.

b) The success of leading companies is not limited to one indicator

Extra-financial excellence is achieved through top results in multiple categories

Individual "champions" can be found for individual extra-financial indicators, but only a comprehensive review of all indicators of a company gives a complete picture of the company.

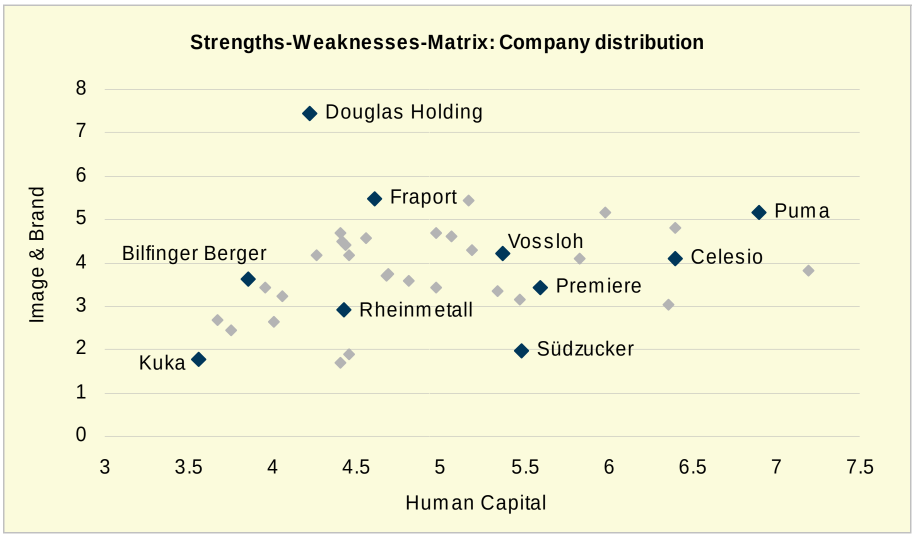
In order to show that increasing the number of observed indicators **leads** to an improvement with regard to the information, the rankings of two extra-financial indicators were combined, respectively. Every combination of indicators is depicted as a quadrangle with four quadrants.

Three examples show the additional information which can be gleaned by an investor when multiple criteria are combined and extra-financials are aggregated. In this context, companies fall into three groups (see the following illustration).

1. Companies which outperform on both indicators
2. Companies which outperform on one indicator and underperform on another (this is the case of two quadrants)
3. Companies which perform below average with regard to both indicators.

The aggregation of multiple extra-financial indicators improves the level of information: *image & brand* and human capital

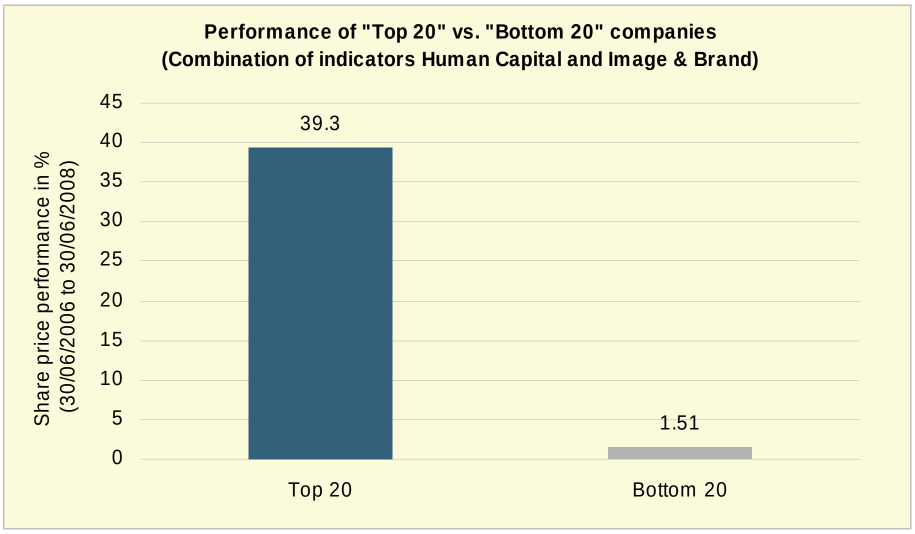
The scores of the MDAX companies of the indicators *image & brand* and *human capital* are the basis for this matrix:



Source: The Value Group

Examples for companies with above-average scores on both indicators are Puma or Vossloh, while Fraport, Douglas Holding and Südzucker only achieve relatively good results with regard to one of the indicators. Kuka and Rheinmetall for example have below-average scores both on *image & brand* (IB) as well as *human capital* (HC).

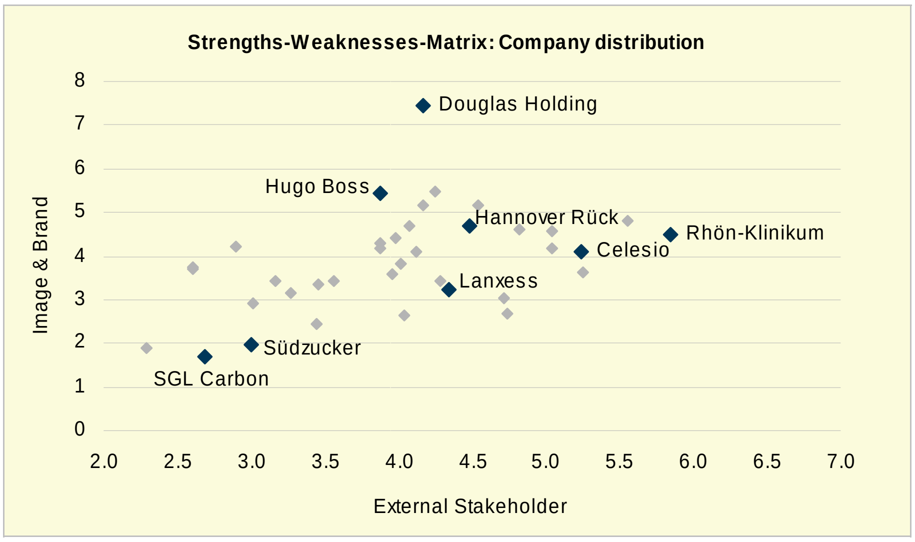
Contrasting the share price performance of the companies from the top and the bottom quadrant shows that for the combination of *image & brand* and *human capital,* based on the extra-financial assessment of the companies in the financial year 2005, the top companies outperformed the bottom companies by 37.79% over the following two years (middle of 2006 – middle of 2008).



Source: The Value Group; Thomson Financial Datastream

Combination of factors: external stakeholders and image & brand

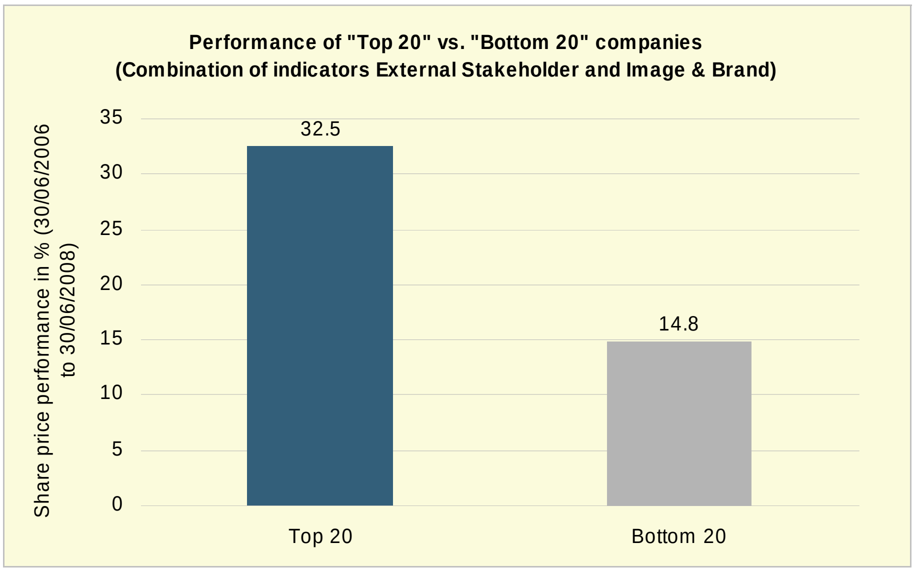
The aggregated scores of the performance of MDAX companies regarding the indicators *image & brand* and *external stakeholders* are the basis for this matrix:



Source: The Value Group

Examples for companies with above-average scores on both indicators are **Rhön-Klinikum** and **Celesio**, while **Boss** and **Douglas Holding** only achieve relatively good results with regard to one of the indicators. Both **SGL Carbon** and **Südzucker** have below-average scores on both *image & brand* as well as *human capital*, despite the fact that they score much better on other indicators.

A comparison of the share price performance of the companies from the top and the bottom quadrant show that for the combination of *image & brand* and *external stakeholder*, based on the extra-financial assessment of the companies in the financial year 2005, the top companies achieved a share price performance of 32.5% over the following two years (middle of 2006 – middle of 2008), while the shares of the weakest companies only realised 14.8%.



Source: The Value Group; Thomson Financial Datastream

The outperformance potential also exists in weaker markets

The consideration of only two extra-financial indicators already leads to better information, resulting in visible outperformance.

The analysis of the share price performance in recent months demonstrates that the selection of companies according to extra-financial criteria yields substantial value for investors. Both the combination of individual extra-financial indicators (EFIs) into pairs as well as the combination of all EFIs shows that the outperformance potential for companies with a high score in the extra financial rating persists.

Effect of extra-financial indicators: corporate governance is weaker, human capital stronger

When including all EFI indicators, the question whether or not some indicators are correlated more strongly with the future development of the share price arises. In general, this question can only be answered in the context of the respective sector, the developments in the relevant market, the relative strength of competitors, and with regard to longer periods of time.

The current evaluation indicates that the individual indicators *human capital, image & brand* and *innovation capital* had the largest effect on share price performance in the MDAX in recent years. Apparently, the factor *corporate governance* is receiving a lot of attention from market participants, and is thus already priced in. This factor shows the least correlation with the future performance of companies. A similar effect can be observed for this time period with regard to the companies in the EURO STOXX.[20]

All evaluations however demonstrate that the systematic combination of **all** extra-financial indicators has the highest positive correlation with the future performance of the share price. As a consequence, the inclusion of all extra-financial factors in the analysis yields the best results (see the chapter after next).

[20] See: Extra-financials. Alpha generation based on under-researched value drivers, Oppenheim Research, The Value Group, May 2008

6. MDAX-Extra-Financial-Monitor 2008

Changes and significant shifts

The **MDAX-EFI-Monitor 2008** for the financial year 2007 directs attention to the largest changes in the key extra-financial figures of the MDAX companies. These results are based on the analysis of companies from past financial years and from the complete evaluation period 2005-2007. The monitor illustrates the most significant changes of the rating and the ranking of the respective company.

MDAX-EFI-Monitor 2008						
Sector	**Industry**	**Construction**	**Household**	**Basic Materials**	**Retail**	**Chemicals**
Best-in-Class						
Companies	Tognum, SGL Carbon, Heidelberger Druck, Krones	Pfleiderer	Beiersdorf	Norddeutsche Affinerie	Celesio	Wacker Chemie
Worst-in-Class						
Companies	Kuka, Demag Cranes, Deutz	Bilfinger Berger	Hugo Boss	Kloeckner & Co.	Praktiker	K+S

Source: The Value Group

Changes in the top tier			
Year	**2007**	**2006**	**2005**
Companies	Wincor Nixdorf	Beiersdorf	Altana
	Beiersdorf	Wacker Chemie	Puma
	Puma	Puma	Celesio
	SGL	Fraport	Rhoen-Klinkum
	Wacker Chemie	Stada	Fraport

Source: The Value Group

Winners

Wincor Nixdorf achieved impressive growth in recent years. This also applies with regard to the area of extra-financials, where the company was able to achieve remarkable success. Over a time period of only three years, the company managed to rise from being below average to a top position in the extra-financial ranking.

SGL Carbon

SGL Carbon impresses through its significant improvement with regard to innovation capital, which it achieved through above-average investments in the expansion of R&D activities and capacities. Its corporate governance is rated above-average, both with regard to the compensation structure as well as the independence of the supervisory board.

Top positions

Puma

Puma achieves top rankings on extra-financial indicators for the third year in a row. Top scores in the area of image & brand as well as the positive score on human capital both contribute to this. However, the expansion of the marketing and distribution divisions over the last two years as well as the large increases in employee numbers in these areas led to a further decline of human capital efficiency

(EBIT/employee, fluctuating figures). The following months will show whether the manufacturer of branded sports goods, of which the holding company PPR holds a majority stake, is able to establish the product range under the sports brand Puma through new stores and a new designer as a brand with a high margin potential.

Wacker Chemie

Wacker is the technological leader in the chemical and the semiconductor industry, again achieving top scores in the field of innovation capital. In addition, it has scored above average with regard to human capital in the last years, and ranks among the top companies in the MDAX for the second year in a row. The high stability of the work force in comparison to the rest of the sector is noteworthy (turnover rate of approximately 0.5% in the years 2005-2007). This stability is promoted by above-average investments in vocational education of the staff (e.g. training seminars).

Beiersdorf

Beiersdorf is also among the leading companies of the MDAX for the second year running, boasting a high extra-financial excellence. The company is active in the household goods sector, and it has repeatedly undertaken above-average efforts in the area of innovation capital. It again expanded its expenditure for research in 2007, and the R&D output (patent registrations, research networks) also increased again. Strong brands, gain of market share and regular rankings on the relevant lead tables mark the performance of the company with regard to image & brand as well as stakeholder management as significantly above average.

7. Profiting from extra-financial excellence when picking stocks: Investing in the best

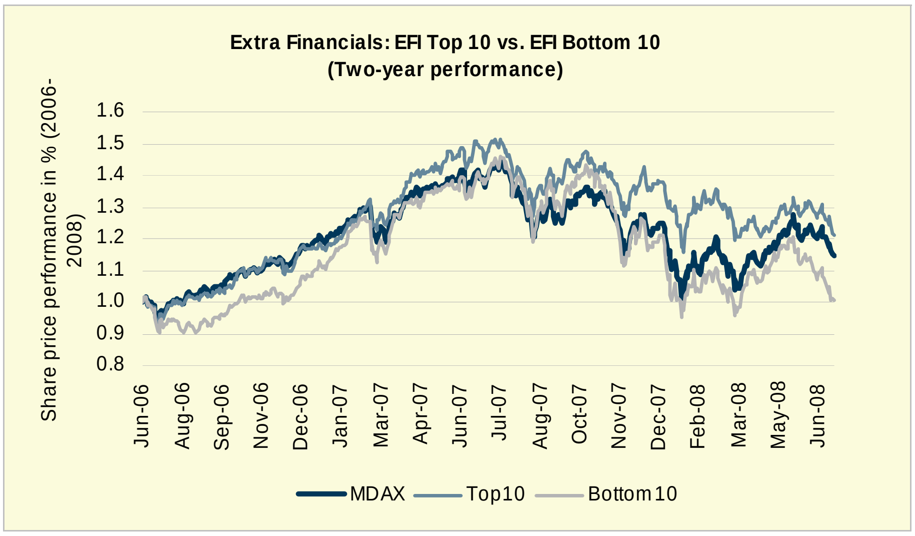
Performance of model portfolios based on the aggregated EFI results

It pays off to invest in companies on the basis of extra-financial criteria (EFI). To evaluate this approach, the relationship between the aggregate EFI results of the top companies (taking into consideration all extra-financial indicators of The Value Group's research) and the stock market performance was examined. To this end, multiple model portfolios were created on the basis of the extra-financial research results from the year 2005 (TVG Composite). The performance of these portfolios was modelled over a period of two years (from June 6, 2006[21] to June 30, 2008.)

We track the development of a portfolio consisting of the ten best companies according to the extra-financial-screening of The Value Group, and compare it with the development of the ten worst companies of the screening.

The MDAX (performance index) was used as a benchmark. On this basis, the observed time period showed an outperformance of 6% for the group consisting of the ten best companies (see illustration). Even more obvious is the result of a comparison between the MDAX and the ten companies with the lowest ranking according to the EFI criteria. The "Bottom 10" underperformed by 14% compared to the benchmark index in the time period 2006-2008.

Top 10 vs. Bottom 10: 6% outperformance of the best, 14% underperformance of the worst

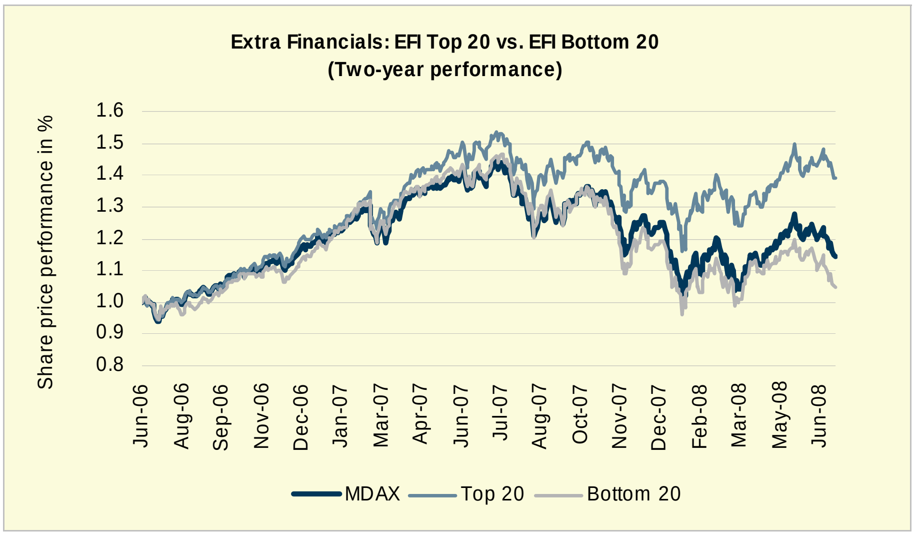


Source: The Value Group; Thomson Financial Datastream

Top 20 vs. Bottom 20: 34% outperformance of the best

The twenty best EFI companies (EFI Top 20) returned 39% over two years. This was 24% more then the MDAX (which returned 15%) and 34% more than the twenty weakest companies (EFI Bottom 20) of the EFI screening.

[21] After all available company data had been obtained and the EFI-screening had been completed

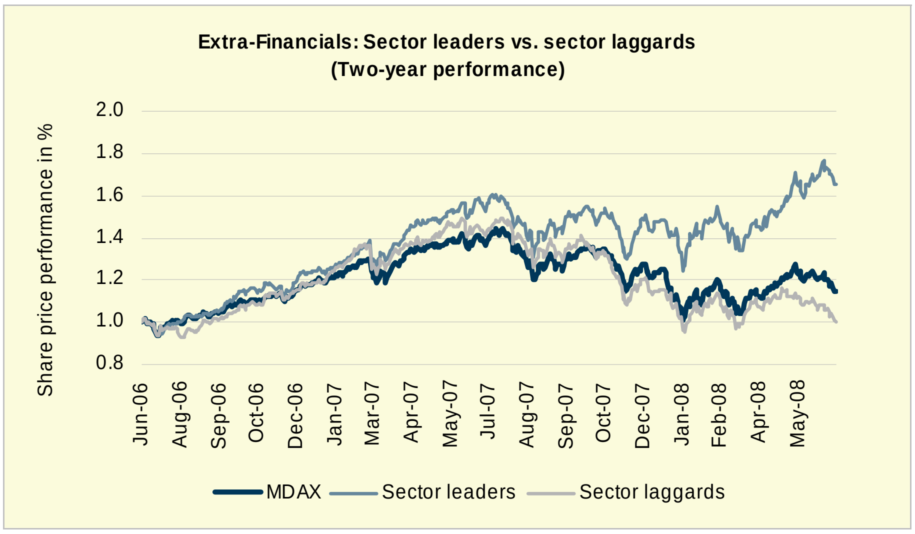


Source: The Value Group; Thomson Financial Datastream

Sector leaders outperform sector laggards by 68% and the index by 53%

We now examine the performance of a portfolio which consists of the best companies of a sector (the sector leaders) and contrast this with the development of the ten worst companies (sector laggards). A sector has to have at least two companies represented in the MDAX in order to enable a comparison. A sector with only one or two companies could not have a sector leader and was not considered in this evaluation.

On this basis, sector leaders according to EFI indicators outperformed the index by 53% and the weakest companies by 68% for the time period 2006 to 2008.



Source: The Value Group; Thomson Financial Datastream

Value of extra-financial information

The results demonstrate the correlation in the observed time period between the extra-financial excellence of a company and the performance in the capital market in the following years. It has been shown that the systematic and quantifiable information on extra-financials is a relevant leading indicator for capital market performance which can support an investment decision based on traditional methods in several ways.

A systematic and capital market oriented extra-financial research can generate added value for analysts, investors and portfolio managers. Market participants who value companies can access relevant evaluations and systematic and integrated assessments of extra-financial value drivers via the extra-financial data base of The Value Group. This enables analysts, investors and portfolio managers to better quantify and improve their assessment of the "soft factors" and their effect on the financial results of companies.

Core statements

Extra-financials are …

…intangible assets of a company which are not monetarily appraisable at a particular point in time, and thus cannot be included on the balance sheet, or can only be partially included, such as corporate governance, human capital or innovation.

…in today's knowledge and service society the decisive competitive factors in a market, which protect a company and its products from imitation, and thus make them successful in the long-term.

…demonstrable central value drivers in long term company performance, as they mark the relative competitive strength of a company, and economic opportunities associated with it.

…identifiable and measurable, and their influence on key company data, as well as on performance, can be systematically and empirically proven.

…leading indicators for (hidden) company risks and opportunities, as the successful management of extra-financials is manifested in the medium to long term success of a company.

…a valuable supplement within the framework of company valuation, as they substantially complement traditional financial analysis and methods of company valuation.

8. SOP: Integration into DCF models

Sal Oppenheim is evaluating all companies in a discounted cash flow model. Therefore the SOP research department implicitly includes extra-financials as important value drivers also via the discount factor, mid-term growth and margin assumptions as well as via key elements of the terminal value into its models. Companies that have superior extra-financials should be able to achieve a better return on capital employed as the strength of their brands should lead to better margins. Also a superior innovation capital should show up in better margins or in more efficient production. Good corporate governance reduces the investment risks and should thus be reflected in the discount factor. Finally the human capital will lead to higher productivity and more stable results which should thus be reflected in the estimated results as well as the applied discount factor.

In contrast to the Value Group we are not applying a strict quantitative analysis of extra-financials. Therefore an extra-financials analysis is complementary to the SOP-approach, as it increases the transparency of the assumptions. At the same time, our DCF based valuations reflect that the various aspects of extra-financials are rather different from sector to sector. At financials, for example, human resources and compliance are of higher importance whereas the value of image is more decisive at branded goods companies.

While we do not deny that the detailed analysis of extra-financials has its merits, we also confirm the superiority of a DCF based valuation that incorporates the important aspects of the extra-financials in a transparent way against a static peer-group valuation approach.

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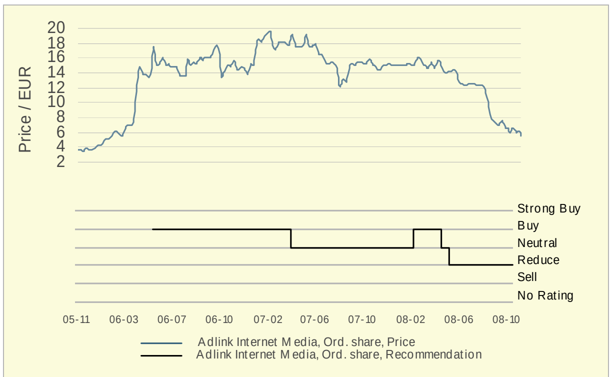

Rating Distribution				
	Coverage Universe		Investment banking-relationship	
Recommendation	No.	in %	No.	in %
Strong buy	9	2.2	4	8
Buy	156	38.5	22	46
Neutral	155	38.3	15	31
Reduce	45	11.1	5	10
Sell	1	0.2	0	0
No rating	39	9.6	2	4

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