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Changing from German GAAP to IFRS or US GAAP: Objectives and achievements - An empirical survey of German companies -


- Arbeitspapiere Industrielles Management und Controlling -

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Changing from German-GAAP to IFRS or US-GAAP: Objectives and achievements – An empirical survey on German companies –

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Changing from German-GAAP to IFRS or US-GAAP:
Objectives and achievements
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Since 1993, an increasing number of listed German companies have been publishing their consolidated financial statements in accordance with either IFRS or US-GAAP. From 1998 on, this has been approved as a substitute for the consolidated German-GAAP financial statements of listed companies (§ 292a HGB). With regard to this development, our study surveys the objectives that led these companies to choose international reporting systems (IFRS or US-GAAP) rather than German-GAAP as well as whether these objectives have been achieved. Rather surprisingly, we find that even though companies state that their overall expectations have been met to a satisfactory degree, a detailed analysis shows that several of the ex ante-objectives have not been achieved from an ex post point of view. Additionally, we show via a logistic regression analysis that companies choosing IFRS over US-GAAP and vice versa differ distinctly in their pursued objectives with the choice of international GAAP.
1 Introduction

Nearly a decade has passed since the first German company began publishing its consolidated financial statements according to international GAAP regimes, namely IFRS and US-GAAP. Yet until the EU-regulation 1606/2002, there had been no clear tendency in favor of one of these two 'international' types of GAAP. The following paper discusses three major empirical questions.

- First, we survey in detail which objectives German companies have pursued in publishing their consolidated financial statements either under IFRS or US-GAAP.
- Second, we critically inspect how far these objectives have been met from the point of view of the companies.
- Third, we analyze whether the motivations for choosing one of the two international reporting systems over the other has been following strictly discriminating preferences considering the objectives that motivated the use of a particular GAAP regime.

So far, the accounting literature has not yet provided an in-depth analysis of these research questions. Even though there have been several papers on accounting choice, e.g. Ball et al. (2000), these do rather cover the legal environment as well as other institutional factors, but not the companies’ individual objectives. Additionally, these papers naturally cover a broad number of countries and therefore do not provide an in-depth analysis of the specific situation in Germany. Leuz/Verrecchia (2000) have discussed the effects of changing to an international GAAP regimes for German companies, but their empirical analysis does not stretch towards the companies’ motivations behind this change. German papers by Krawitz et al. (2000) and by Spanheimer and Koch (2000) are the first empirical studies regarding the adaptation process of international GAAP regimes by German companies. Yet they focus merely on a descriptive record; only some explorative documentation on motivations for the adoption of either IFRS or US-GAAP is provided. Both papers find that the major motivations for German companies had been the meeting of capital market expectations together with a desire for increased international comparability of their respective financial statements.¹
The research questions raised in this article have to be viewed together with EU-regulation No. 1606/2002 that makes consolidated financial statements prepared under IFRS mandatory for capital market-oriented companies starting 2005. Therefore, the decision whether to change to an international GAAP regime, and – if so – to which type of GAAP regime, is no longer be subject to the listed companies’ discretion but depends on the use of the U.S. versus European capital market. Nevertheless, this important institutional development does taint neither the execution nor the relevance of our study.

First, our study has been conducted between September 2000 and February 2001. At that time, the May 2000 announcement of the EU-commission regarding the possible implementation of an EU-regulation making IFRS mandatory had already taken place. On the other hand, there had been an SEC discussion paper in late 2000 regarding the possible acceptance of the IFRS in the U.S. Therefore, a development of joint acceptance of both IFRS and US-GAAP in both the European Union as well as in the U.S. was a plausible future development just as the exclusion of US-GAAP for European capital-market oriented companies which by 2002 has become effective. To our mind the companies’ decisions to switch from German GAAP to either IFRS or to US-GAAP at that time had not been influenced by a foreseeable institutional regulation. This notion is supported by the fact that the number of companies using IFRS and US-GAAP at that time shows no clear bias towards one or the other.

Second, our results show that not only have several objectives pursued by changing to either IFRS or US-GAAP not been met from an ex post point of view, but also that IFRS- vs. US-GAAP-users differ distinctly in their objectives regarding the use of an international GAAP regime. Even under the existing EU-regulation, these results are useful to European companies that are planning to use IFRS as the main GAAP regime in the near future, as well as to such companies that intend to prepare two sets of financial statements, i.e. according to IFRS and to US-GAAP. The results indicate that simple change towards a given GAAP regime is not enough as a means to pursue a set of given goals. They also show that there is a consistent reasoning amongst the adopters of either IFRS or US-GAAP regarding attitudes and objectives which may serve as a guideline for the future decision-making of companies regarding the use of the U.S. capital market. Additionally, our results are also relevant for the further analysis of the choice of accounting systems. The divergence between analytical reasoning – what one would expect – and business reality – what is actually perceived –
regarding the companies’ objectives on a change towards international GAAP is striking and has to be explored more deeply.

The structure of our paper is as follows: In section 2 of our paper we will establish the objectives companies might follow with the adoption of an international GAAP regime from an analytical point of view. Section 3 presents the empirical research design and conception of our study. Section 4 discusses the first and the second research question, i.e. the ex ante and the ex post evaluation of objectives pursued by changing from German-GAAP to IFRS or US-GAAP. Section 5, discusses first on an analytical basis which arguments are relevant for the choice of IFRS over US-GAAP and vice versa and then empirically analyses the third research question whether a concise differentiation of companies adapting IFRS or US-GAAP is possible regarding the underlying objectives.

2 Objectives pursued by changing from German-GAAP to IFRS or US-GAAP: An overview

The objectives German companies pursue by changing from German-GAAP to an international GAAP regime can be divided into two groups. On the one hand, these are objectives which apply directly to the relationship with investors, respectively the capital market. We therefore denote these objectives as financial. On the other hand, there are objectives that primarily target other groups of stakeholders which therefore are denoted as operating.

Note that besides these two groups there are two overriding factors that must be taken into account when discussing the objectives regarding the change in the GAAP regime.

First, some companies effectively did not chose to adjust but had to do so as a consequence of not being independent, i.e. the obligation to follow a group consolidation of the parent using either IFRS or US-GAAP. These companies have been eliminated from our analysis.

Second, since 1997 the use of international reporting systems had been a prerequisite to be listed only in a specific stock market segment, i.e. the Neuer Markt in Germany. This is taken into account by segmenting the data base in our analysis into the two relevant types of stock market segments, i.e. DAX100 vs. Neuer Markt.
2.1 **Financial objectives**

The financial objectives pursued with the change to an international GAAP regime can be summarized as the following:

- Fulfillment of capital market expectations to a higher degree
- Improvement of comparability to industry peers
- Increasing diversification of investor community
- Internationalization of investor community
- Increasing attractiveness for institutional investors
- Planning of a foreign listing
- Reduction of the cost of equity
- Enhancement of credit rating

International reporting systems as IFRS of US-GAAP are viewed as capital market oriented systems that emphasize the supply of relevant information for investors. The extensive reporting obligations as well as the requirements of fair presentation and decision usefulness result in a more transparent exposure of the economical situation of a company compared to German-GAAP, which in contrast are characterized by creditor protection, limitations on profit distribution, and linkage with tax reporting requirements.³

The comparison to peer group firms plays a major role in the context of a financial analysis of companies. In most cases, ratios derived from financial statement analysis can be interpreted thoroughly only with reference to the respective industry sector.⁴ The better a company can be analyzed against its peers the more useful are the reported data to the company’s investors. Particularly in industry sectors where companies have to be compared to international peers, this comparison is enhanced by reporting under IFRS or US-GAAP.

Another objective that may determine the decision to switch to an international GAAP regime is the desire to enlarge and diversify the investor community. This is assumed to create a higher interest into the company’s shares as well as to reduce share price volatility, therefore improving the shares’ stock market performance. This objective is also important if a company plans to issue new stocks or bonds in future periods.⁵

Additionally, a company might not only want to diversify their investor base in their home country but also abroad. One reason may be the fact that the national capital market is too
limited to current or future capital needs. Another aim is the reduction of the stock price volatility by having geographically scattered investors. To attract foreign investors, the use of international GAAP is usually an imperative condition. Beyond the objective of attracting international investors, several companies use the change of GAAP regime to prepare the listing at a foreign stock exchange. As on the US capital markets only US-GAAP are accepted for the publication of financial statements, any company following the objective of a US-listing in fact has to change from German-GAAP to US-GAAP.

Finally, institutional investors play a specific role regarding the investor community. Important members of this group are e.g. Anglo-Saxon pension funds with considerable investment volumes as well as insurance companies or investment funds. Institutional investors are a relevant investor group from a capital-market oriented point of view as they usually trade large share volumes. Additionally, they typically follow long-time investment strategies that have a rather stabilizing effect on stock and bond prices. It has to be noted, though, that several institutional investors are subject to legal restrictions influencing a company’s choice of GAAP. Some U.S.-based insurance companies and pension funds are, for example, only allowed to invest in stocks listed in the U.S. by their statutes. A specific interest in this type of investors would imply in fact a decision towards US-GAAP.

In some circumstances, the change to an international GAAP regime is less motivated by direct enhancements regarding the investor community but is rather the major objective to reduce the cost of equity and in return increase market value. Behind this reasoning is the fact that higher transparency and better information could reduce the risk premium demanded by investors. This would decrease the cost of capital.

Finally, a positive influence on the credit rating of a company can be associated with the switching to an international GAAP regime. This is a result of the fact that rating agencies acknowledge transparence, details, and comparability in financial reporting. Therefore, the higher level of documentation could be rewarded when long-time opinions on the solvency of a company are generated.

2.2 Operating business objectives

In addition to financial objectives, several other motivations can be identified supporting the use of an international GAAP regime which rather stem operating business related reasons. In
this case, the use of an international GAAP regime then serves as "a key to the implementation of strategic steps". Typical operating business objectives are the following:

- Improvement of product and brand recognition
- Improved cooperation with foreign business partners
- Acquisition of foreign companies
- Improved cooperation with foreign authorities
- Improved recruiting of international employees
- Integration of internal and external reporting systems
- Implementation of value-based management systems

Many companies anticipate an increase of their product and brand name familiarity and thus a better position on their sales market in connection with the change to an international GAAP regime. The reasoning behind this objective is twofold. First, higher name recognition on international capital markets is supposed to transport to markets of goods and services via the investors’ consumption decisions. Second, the change to an investor-orientated international GAAP regimes can be seen as a signal of a stronger stakeholder-orientation and, therefore, as an increased orientation towards the company’s customers as an important group among the stakeholders.

Specifically in the context of internationalization strategies, the improvement or creation of new business cooperations, e.g. dealership agreements or joint ventures, in order to access new markets can play a major role. One objective of adjusting to IFRS or US-GAAP thus might be to appropriately communicate a company’s economic situation to other business partners. On the other hand, internationalization strategies can also be implemented by acquiring foreign business ventures. In this context, a major advantage of an international GAAP regime is the improved possibility to use one's own stocks as a means of payment, thus minimizing cash outflows in the course of an acquisition, as the company’s shares are more acceptable to foreign shareholders if prepared under IFRS or US-GAAP. Additionally, an international GAAP regime facilitates the communication with foreign local authorities.

Another operating business-type objective is the improvement of recruiting possibilities especially with regards to international employees. Highly qualified personnel is supposed be more attracted by a company preparing its financial statements under IFRS or US-GAAP than under German-GAAP, thus signaling a more international character. Additionally, stock-
based management compensation systems, e.g. stock plans or stock option plans, benefit from the adjustment to IFRS or US-GAAP. Particularly in the U.S., stock option plans underlie tax privileges only if the underlying company’s shares are listed in the U.S.

Finally, the restructuring of the accounting and control systems, i.e. the integration of internal and external accounting – which in Germany traditionally are based on different sets of data – as well as the introduction of value-based management systems are important motivations for German companies pursued by changing to international GAAP regimes. The reason is that IFRS as well as US-GAAP focus more strongly on a dynamic portray of a company’s economic situation compared to German-GAAP, therefore providing more relevant performance measures for decision-making especially in the context of value-based management.

3 Methodology of the empirical study

The empirical study underlying our analysis based on a survey of listed companies in Germany between September 2000 and February 2001. At that time, a total of about 800 listed companies was subject either to § 292a HGB – a section of the German commercial code that since 1998 has been allowing listed companies to prepare their consolidated financial statements not to German GAAP, but to an international GAAP regime – or to the regulations of the stock market segment Neuer Markt requiring a set of financial statements prepared to either IFRS or US-GAAP.

In our sample, we included two groups of firms. Besides the companies listed in the Neuer Markt we chose all companies listed in the DAX100. This is an index composed out of the 100 biggest listed companies and includes most of the companies having changed towards IFRS or US-GAAP due to § 292a HGB. Thus having captured most of the firms that were subject to our analysis, we included only those companies which were headquartered in Germany, as foreign companies did not face the decision to switch their reporting system in analogy to German companies.

As a result, our sample included 100 companies from the DAX100 and 259 Neuer Markt companies. The total of 359 companies was surveyed by means of a written questionnaire. The questionnaire has been pretested with three DAX100 and three Neuer Markt companies to assure comprehension and focus of the questions and the measurement constructs. A special
focus was also put on whether the list of possible objectives pursued with a change of GAAP was complete. The selection of companies included in the final analysis then was furthermore restricted to companies that either did put into practice a conversion to an international reporting system or did at least intend to do so. Companies that had been changed due to instructions of a parent company were also excluded from our analysis.

After these exclusions, a total number of 81 (23%) of the 359 companies returned an analyzable questionnaire. 31 companies were quoted in the DAX100 and 50 companies at the Neuer Markt. Out of the 81 companies 70 (86%) had adopted an international system already, 11 (14%) did plan to do so. As in 2000, a total of

The temporal distribution of the adjustments in the sample is shown in Figure 1.15

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Figure 1: Distribution of the year of adapting an international reporting system in the sample.
The distribution exhibits clearly that the companies participating in the survey switched by majority in 1999 and 2000. This has two methodological advantageous for the study:

- The event is still present in the respondents' memory.
- The companies in our sample are mostly not part of the precursor group (early adopters). We thus assume that in most cases the decision to change to an international GAAP regime has been made due to a rather diligent decision making process regarding the objectives pursued with such a change.

Note that as indicated in section 1 until our survey had been closed there had been no clear tendency towards either a joint relevance of US-GAAP and IFRS for the U.S. and European capital markets or the now effective mutual exclusive relevance of both types of GAAP on the respective capital markets.

This notion is also supported by the proportion of the number of IFRS respectively US-GAAP companies in the sample as demonstrated in Table 1. The various clusters are different in two criteria:

- a point in time versus a period of time view (cutoff in 2000 versus the time horizon from 1993 to 2000 on a firm-year basis)
- a focus only on large companies versus the use of all companies included in the CDAX stock index

<table>
<thead>
<tr>
<th>Cluster</th>
<th>IAS/IFRS</th>
<th>US-GAAP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>59%</td>
<td>41%</td>
<td>100 biggest companies based on firm years (1993-2000)</td>
</tr>
<tr>
<td>B</td>
<td>58%</td>
<td>42%</td>
<td>all companies based on firm years (1993-2000)</td>
</tr>
<tr>
<td>C</td>
<td>59%</td>
<td>41%</td>
<td>100 biggest companies for 2000</td>
</tr>
<tr>
<td>D</td>
<td>59%</td>
<td>41%</td>
<td>all companies for 2000</td>
</tr>
<tr>
<td>E</td>
<td>59%</td>
<td>41%</td>
<td>in the DAX100 sample</td>
</tr>
<tr>
<td>F</td>
<td>44%</td>
<td>56%</td>
<td>in the Neuer Markt sample</td>
</tr>
<tr>
<td>G</td>
<td>51%</td>
<td>49%</td>
<td>in the entire sample</td>
</tr>
</tbody>
</table>

Source: Thomson Financial (Worldscope) and own survey

Table 1: Frequency of international reporting systems in Germany
Clusters A to D should be regarded as an approximation of the entire capital market. As the distributions in the different clusters are almost identical, these can be seen as being representative for the base population. Cluster E to G demonstrate the distributions of the samples in this study. The respective ratio of 59/41 for the IFRS/US-GAAP distribution in the base population is comparable to the ratio of 51/49 in the sample. This similarity is considered to be sufficient.

In similar studies, comparable ratios were identified. The preference to chose one over another GAAP regime did not vary much over time or over market segments. A study conducted in September 1999 by Krawitz et al. (2000) determines a ratio of 46/54 on the Neuer Markt concluding a slight preference for US-GAAP. In other stock market segments (e.g. amtlicher Handel, geregelter Markt, Freiverkehr) they find a small bias towards IFRS. Analyzing the Neuer Markt between June 1998 and October 1999, d'Arcy and Leuz (2000) identify an almost balanced distribution of GAAP regimes.

The quality of the returned questionnaires is dependent on the position of the respective respondent. An analogous verification shows that 48% rank among the top management and 18% among the upper management level. 19% of the questionnaires are answered by the accounting department, 15% qualify as other respondents. With regard to the external influence which might require a company to switch to an international system as a requirement of its parent company, it was necessary to exclude these companies from the analysis.

The companies were asked to indicate their degree of accordance to pre-phrased statements on a scale from 1 to 5. Answer 1 was qualified as "does definitely not apply", 2 "does rather not apply", 3 "applies in some part, does not apply in other", 4 "rather applies", and 5 "definitely applies".
4 Objectives and achievements of international GAAP users: Results of the empirical study

4.1 Ex ante evaluation of objectives

The findings of our survey with regard to the different objectives companies might have on their agenda by changing to an international GAAP regime are shown for DAX100 companies and Neuer Markt companies separately in Table 2.

By means of the Mann-Whitney-U-Test (Z-value) it can be pinpointed that four items display a significant deviation in the answers of the two company groups. Two of these deviations appear plausible; the other two deviations are not intuitive.

The aspect 'Improvement of comparability to industry peers' is from the perspective of both company groups a major goal (4,2/3,5) whereas Neuer Markt companies attach significantly less importance to this item. The same is true considering the item 'Enhancement of credit rating' having a significantly lower relevance for Neuer Markt companies. A different evaluation of both items is explicable from the specific context the Neuer Markt-companies are imbedded in.

The objectives 'Planning of a foreign listing' and 'Acquisition of foreign companies' show implausible significantly lower averages for DAX100 companies as for Neuer Markt companies. The level is even below 2,5, i.e. in the rejection range. A reason for this result can possibly be the point in time of the survey (year-end of 2000) which was marked by the beginning of a substantial decline in the initial public offering market as well as in the mergers and acquisition market.

Looking at the most important aspect, both company groups agree. The item 'Fulfillment of capital market expectations to a higher degree' is valued at 4,7/4,6 (DAX100/Neuer Markt) as a reason for switching the reporting system. It follows the enhancement of the attractiveness of the stock for a wide range of investors, particularly institutional and foreign investors. Thus, objectives directly focused towards the capital market are the main reasons while business related objectives have a substantially lower importance. Yet, respondents agreed on a positive assessment of most of the latter aspects (average > 2,5) but the results are relatively weak in comparison to the investor related items.
### Evaluation of objectives

<table>
<thead>
<tr>
<th>Typ</th>
<th>Aspect</th>
<th>DAX100</th>
<th>Neuer Markt</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>financial</td>
<td>Fulfillment of capital market expectations to a higher degree</td>
<td>1 4,7 0,13</td>
<td>1 4,6 0,18</td>
<td>-0,10</td>
</tr>
<tr>
<td>financial</td>
<td>Increasing attractiveness for institutional investors</td>
<td>2 4,3 0,17</td>
<td>3 4,1 0,26</td>
<td>-0,73</td>
</tr>
<tr>
<td>financial</td>
<td>Improvement of comparability to industry peers</td>
<td>3 4,2 0,21</td>
<td>5 3,5 0,41</td>
<td>-1,71 *</td>
</tr>
<tr>
<td>financial</td>
<td>Increasing diversification of investor community</td>
<td>4 4,0 0,19</td>
<td>2 4,2 0,23</td>
<td>-1,20</td>
</tr>
<tr>
<td>financial</td>
<td>Internationalization of investor community</td>
<td>5 4,0 0,23</td>
<td>4 4,0 0,27</td>
<td>-0,36</td>
</tr>
<tr>
<td>financial</td>
<td>Enhancement of credit rating</td>
<td>6 3,4 0,35</td>
<td>12 2,6 0,49</td>
<td>-2,64 ***</td>
</tr>
<tr>
<td>business</td>
<td>Integration of internal and external reporting systems</td>
<td>7 3,4 0,39</td>
<td>6 3,3 0,41</td>
<td>-0,11</td>
</tr>
<tr>
<td>business</td>
<td>Improvement of cooperation with foreign business partner</td>
<td>8 3,2 0,32</td>
<td>8 3,1 0,39</td>
<td>-0,38</td>
</tr>
<tr>
<td>business</td>
<td>Implementation of value-based management systems</td>
<td>9 3,0 0,34</td>
<td>9 3,0 0,43</td>
<td>-0,11</td>
</tr>
<tr>
<td>business</td>
<td>Improvement of companies' product and brand recognition</td>
<td>10 3,0 0,41</td>
<td>10 2,9 0,46</td>
<td>-0,22</td>
</tr>
<tr>
<td>financial</td>
<td>Reduction of the cost of equity</td>
<td>11 2,7 0,48</td>
<td>13 2,5 0,52</td>
<td>-0,45</td>
</tr>
<tr>
<td>business</td>
<td>Improvement of cooperation with foreign authorities</td>
<td>12 2,4 0,43</td>
<td>14 2,2 0,61</td>
<td>-1,28</td>
</tr>
<tr>
<td>financial</td>
<td>Planning of a foreign listing</td>
<td>13 2,2 0,64</td>
<td>7 3,3 0,53</td>
<td>-2,65 ***</td>
</tr>
<tr>
<td>business</td>
<td>Improved recruitment of international employees</td>
<td>14 1,8 0,45</td>
<td>15 2,1 0,51</td>
<td>-1,05</td>
</tr>
<tr>
<td>business</td>
<td>Acquisition of foreign companies</td>
<td>15 1,9 0,71</td>
<td>11 2,7 0,54</td>
<td>-2,46 **</td>
</tr>
</tbody>
</table>

Mean=arithmetic mean of answers, CV=coefficient of variation, Z=Mann-Whitney-U-Test statistic
Level of significance: ***= below 0,01     **= below 0,05

Table 2: Results of the ex ante evaluation of objectives

From a conceptual point of view, an interesting result is the rather minor importance of the objective 'Reduction of the cost of equity' (2,7/2,5). From an economic point of view, precisely this argument is most relevant for maximizing the value of a company and it is the basic principle for most of the other rather action oriented measures.

#### 4.2 Ex post evaluation of objectives

In a second step, the companies were asked to evaluate whether their particular objectives had been achieved from an ex post point of view after having changed to either IFRS or US-GAAP. Based on an overall assessment on the objectives reached the result is positive in both
company groups, i.e. the DAX100 companies evaluate the overall achievement of objectives at 4,0 and the Neuer Markt companies only slightly lower at 3,8.

Analyzing this question based on the chosen GAAP we regime we do not find a significant difference as well: The respective arithmetic means of the assessment of whether the objectives have been achieved is 3,91 for IFRS users and 3,86 for US-GAAP users; the Mann-Whitney-U-Test ($Z = -0.281$) indicates no significant difference. The assessment of the question if the same decision would be taken again results in arithmetic means of 4,23 (IFRS users) and 4,27 (US-GAAP users) again without significant Z statistic (-0,365). Therefore, the contentment with the objectives achieved is equal regardless of the reporting system chosen.

Even though this indicates a a high achievement rate, our detailed results prove such a conclusion to be premature as can be observed by looking at the results of the single aspects in detail. All data is provided in Table 3.

<table>
<thead>
<tr>
<th>Deviation</th>
<th>Aspect</th>
<th>DAX100 Mean</th>
<th>Neuer Markt Mean</th>
<th>W</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expectations were fulfilled completely</td>
<td>- 4,0</td>
<td>- 3,8</td>
<td>-</td>
<td>-0,88</td>
</tr>
<tr>
<td>negative</td>
<td>Increasing attractiveness for institutional investors</td>
<td>4,3 2,7</td>
<td>4,1 3,1</td>
<td>-3,5 *** -3,5 ***</td>
<td>-1,11</td>
</tr>
<tr>
<td>negative</td>
<td>Increasing diversification of investor community</td>
<td>4,0 2,9</td>
<td>4,2 3,5</td>
<td>-2,9 *** -2,8 ***</td>
<td>-1,65</td>
</tr>
<tr>
<td>negative</td>
<td>Internationalization of investor community</td>
<td>4,0 3,2</td>
<td>4,0 3,0</td>
<td>-3,7 *** -2,2 **</td>
<td>-0,32</td>
</tr>
<tr>
<td>negative</td>
<td>Enhancement of credit rating</td>
<td>3,4 2,2</td>
<td>2,6 1,9</td>
<td>-3,8 *** -2,3 **</td>
<td>-1,00</td>
</tr>
<tr>
<td>negative</td>
<td>Improvement of cooperation with foreign business partner</td>
<td>3,2 2,4</td>
<td>3,1 2,5</td>
<td>-2,7 *** -2,9 ***</td>
<td>-0,30</td>
</tr>
<tr>
<td>negative</td>
<td>Improvement of cooperation with foreign authorities</td>
<td>2,4 2,1</td>
<td>2,2 1,7</td>
<td>-2,1 ** -1,3</td>
<td>-2,07 **</td>
</tr>
<tr>
<td>positive</td>
<td>Improvement of comparability to industry peers</td>
<td>4,2 4,2</td>
<td>3,5 4,0</td>
<td>1,5 2,7 *** -0,17</td>
<td></td>
</tr>
<tr>
<td>positive</td>
<td>Integration of internal and external reporting systems</td>
<td>3,4 4,1</td>
<td>3,3 3,8</td>
<td>-3,6 *** -3,5 ***</td>
<td>-1,26</td>
</tr>
</tbody>
</table>

Mean=arithmetic mean of answers, CV=coefficient of variation, Z=Mann-Whitney-U-Test statistic, W=Wilcoxon-Test statistic
Level of significance: ***= below 0,01    **= below 0,05

Table 3: Results of the ex post evaluation of objectives and comparison to ex ante results
By means of the Mann-Whitney-U-Test (Z-value) once again the difference in the assessment of each aspect between the two company groups is analyzed. As can be seen in Table 3, the two groups show only few deviations in their evaluation of the various aspects achieved. Thus, the assessment of the achieved objectives is much more homogenous than the evaluation of the importance of the aspects before the implementation of international reporting systems.

Using the Wilcoxon statistic\(^{19}\) (W-value) permits the comparison of the ex ante and ex post evaluation of the items for each group. A significant W-value indicates that the ex ante and ex post assessment is not equal. Therefore, a positive or a negative discrepancy between the expectation and the realization can be measured.\(^ {20}\)

The discrepancy for the eight items shown in Table 3 is particularly evident, i.e. statistically significant. Eight out of the fifteen tested aspects deviate, six out of these eight negatively deviate, and only two exceed the expectations. Neither a better cooperation with business partners or local authorities nor an improved credit rating could be achieved from the respondents' point of view. Increased diversification and internationalization of the investor base is still agreed on (as Z-values are insignificant) but the high expectations could not be met. A similar result shows the item ‘Increasing attractiveness for institutional investors’. Only the positive effects that stem from an improved comparability to industry peers and an advantageous integration of internal and external reporting systems are evaluated significantly better from the ex post perspective. Both aspects apply in particular for Neuer Markt companies.

At least a question mark should therefore be assigned to the positive assessment of the initial control question if overall the objectives have been achieved. The deviating judgment of the control question can have different sources. On one hand, objectives that have not been achieved may have a lower weight in the overall evaluation. Nevertheless, we feel that this might not be the case as we had put special focus on giving the companies a rather complete list of possible objectives not only by extensive analytical research and discussions during the pretest phase, but also by allowing the companies to name other reasons in the survey which they rarely did. We rather find that the divergence of positive overall assessment and negative assessment in detail is due to a response bias: An overall judgment as it was demanded by the control question results in higher uncertainty with respect to the respondents’ abilities to assess this question leading to a positive response bias.\(^ {21}\)
5 IFRS- vs. US-GAAP-users: Different objectives behind the choice of GAAP regime

As a number of studies has documented there has been no explicit trend towards the choice of one of the two alternative international reporting systems in Germany until 2002. Thus, it is interesting to know if in relation to the objectives indicated by the respondents in this survey a certain reporting system is chosen. The intention of this third part of the analysis is to determine which motivations might lead to the implementation of IFRS or US-GAAP respectively and to test whether discriminating items can be statistically validated. We will therefore first discuss the specific considerations that might have influenced German companies to choose IFRS over US-GAAP or vice versa, and then in the second part of this section give the results of our empirical analysis.

5.1 Analytical considerations of choice between IFRS vs. US-GAAP

When our survey was conducted, the choice between one of the two international reporting systems was open to all of the companies with only one restraint – a company might have been forced to switch to one particular system by its parent. Additionally, the listing at the U.S. American capital market forced a company to report according to US-GAAP as the IFRS until now have not been accepted as reporting standard by the SEC. Nevertheless, this did not automatically result in a turning away from IFRS. Schering e.g. began reporting after IFRS in 1994 and uses IFRS even after its listing on the NYSE in 2000; the U.S. American reporting requirements are fulfilled by a reconciliation.22

Other decision parameters influencing the usage of either IFRS or US-GAAP are the opinion on the global recognition of a system, the degree of influence in the standard setting process of a system, the expected difficulties in connection with the usage, and the expected implementation effort. A number of parameters are discussed below and it is argued which support the adjustment to IFRS and to US-GAAP respectively.

The US-GAAP were – at least at the time before the Enron debacle when this survey was carried out – regarded as the highest quality reporting system. One of the main reasons in this context was the smaller number of explicit earnings management opportunities in comparison to other reporting systems.23 In addition, many interpretations and implementation questions regarding IFRS were open and thus allowed additional windows of opportunity for earnings management. Over the past years, these flaws have been reduced by the Core Standard Project
by the IASC in order to receive the IOSCO approval for IFRS and the introduction of the SIC/IFRIC. At the same time, the revisions of existing IFRS have led to a clear convergence of IFRS towards US-GAAP, yet from the point of view of European companies their influence on the design of IFRS is disproportionate stronger compared to lobbying opportunities in the U.S.

Of major significance for the relevance of IFRS as a global reporting system is the still lacking acceptance by the U.S. American Security Exchange Commission (SEC) and thus the opening of the most important capital market of the world. The first step towards the global acceptance of IFRS was only in 2000 when IOSCO has recommended the approval of IFRS for cross-border listings. The SEC yet has not undertaken important formal steps to implement this recommendation, so it still remains open if and when IFRS will be acceptable on the U.S. capital market.

One of the main reasons of the SEC to refuse this recognition is the lack of a comparable enforcement mechanism. From today’s perspective, it is subject to debate if this attitude will change in the near future as IFRS-enforcement institutions will be established due to the CESR consultancy paper. On the other hand, the EU-regulation No. 1606/2002 excluding US-GAAP from the European capital markets may constrain the process of SEC acknowledgement. It is important to note with respect to our study that both IFRS enforcement and the existing EU-regulation have not been subject to discussion during our survey.

Besides the easier access to the capital market in the U.S., other specific reasons for choosing US-GAAP can be found. These can result from the companies current business situation or general business intentions e.g. to produce in the U.S. or to develop sales in the U.S. market.

Otherwise, for companies which are not at all or less focused on the U.S. the IFRS might be preferable as these are geographically wider spread i.e. in Europe, Asia, and Africa. In addition, the opportunity for lobbying activities with respect to the future development of the system is more advantageous from a German perspective as compared to the US-GAAP. German delegates are members within the organizational body of the IASC.

Apart from the development of the global domination of one or the other reporting system the cost for implementation have to be considered. German managers are skeptical about the
plenitude of case rules within the US-GAAP (‘Cookbook Accounting’). The IFRS system appears in comparison to the US-GAAP approach more systematic and concise. The high level of detail required by US-GAAP is one reason why – regarding cost aspects – IFRS are preferred.

As discussed the companies assign different attributes to the two international reporting systems. The empirical study by Horváth and Arnaout (1997) determines the following items as relevant for the decision:

- Companies which chose IFRS associate fewer cost for implementation and maintaining the system. In the year when the study was conducted the results were driven by the association of more earnings management opportunities within IFRS and the sentiment of a distinct similarity between IFRS and German-GAAP.

- The recommendation of external advisers (e.g. auditors, banks, management consultants) has influenced some decisions significantly.

- In Europe the acceptance and the usage of IFRS is superior to that of the US-GAAP.

- Companies preferring US-GAAP have a strong interest in the U.S. markets.

The assessment of the future global dominance for the chosen system seems to be particularly relevant for decision-making. Companies selecting IFRS assume IFRS to become the global system and vice versa. Yet, German managers attribute a higher quality of information to the US-GAAP. Empirical results exist so far only for the years 1997 and 1998. The study of Horváth and Arnaout (1997), for example, shows that 75% of the companies regard US-GAAP as future global system, only 63% expect IFRS. The study by Peemöller et al. (1999) indicates on the contrary, that in 1998 Neuer Markt-companies attributed a dominant position of US-GAAP in the future. However, in the same study IFRS user expect an increasing influence of IFRS. Similar results find Förschle and Glaum (1998) in 1997: The majority of German companies included in their survey had been expecting to report under IFRS in 2002.

5.2 Empirical results

Although the previous literature has projected a detailed opinion, it has not yet been statistically validated if the various objectives have in fact the ability to discriminate effectively between the users of IFRS and US-GAAP. To analyze this question, the companies in our survey were asked to evaluate seventeen items. These items were designed
to mirror context and form of both GAAP regimes, the necessary adjustment process, and the strategic goals associated with either IFRS or US-GAAP. By means of a logistical regression the significant items in the decision process can be identified in relation to the decision taken by the respective company.  

The seventeen statements that were polled are briefly illustrated. For contextual and formal criteria, first the rate of change of a reporting system was evaluated. Then the rigor and completeness of the reporting system and the limitation of alternative reporting options were questioned. On the other hand the question of sufficient flexibility of the reporting system was addressed. Next, the similarity to the German-GAAP had to be assessed and the question had to be answered if the SEC will accept the IFRS in the near future.

The statements testing the adjustment process were questioning the impact of external advisers, the complexity of the process, the cost incurred by changing the GAAP regime, and the availability of sufficient practitioner literature for the respective reporting system.

The items addressed towards strategic goals were asking whether the respective reporting system – according to the company’s judgment - would become the global standard, and if so, how the acceptance in Europe or worldwide would be assessed. In addition, the possibility to influence future regulations was to be judged. Finally, the intention to expand on the U.S. market, the possibility to be more easily benchmarked against competitors, an improved relationship to business partners, and substantial existing business of a subsidiary in the U.S. were evaluated by the companies.

In order to construct a concise model a method that stepwise includes variable was chosen. The inclusion of a variable is based on the Wald test, which uses a likelihood statistic with conditional estimators. The IFRS-users were assigned the internal value 0 and the US-GAAP-users the internal value 1 as input parameter.

Table 4 demonstrates the results of the estimation. The model correctly detects 37 out of 40 IFRS users and 33 out of 39 US-GAAP-users. This represents a percentage of nearly 90% of cases that are accurately assigned. Within the estimation six items are identified being responsible for the precise discrimination of IFRS- and US-GAAP-users. These items are shown in Table 4.
Table 4: Discriminating aspects for the choice of an international reporting system

The column labeled $e^\beta$ explains the direction and the strength of the independent variable in the logistic regression. The value of 3,479 for example for the item 'US-GAAP acceptance and employment is globally stronger' changes the probability to be member of the US-GAAP group (cf. internal value equals 1). In the neutral case the probability to be a member of each group is 1:1 (US-GAAP-user : IFRS-user). If the assessment of the answer to the statement 'US-GAAP acceptance and employment is globally stronger' is increased by one unit the probability to be a member of the US-GAAP group becomes 3,479:1. A different result is achieved if the answer to the statement on 'IFRS acceptance and employment is in Europe stronger'. The probability decreases to 0,393:1 to be member of the US-GAAP group. As no independent variable has an $e^\beta$ value that is near zero, the probability is definitely changed by each of the six items. In consequence, an $e^\beta$ value < 1 identifies an objective to choose IFRS; an $e^\beta$ value > 1 is a motive to choose US-GAAP respectively.

The characteristic of the $e^\beta$ value with respect to the chosen reporting system is in all cases in line with expectations. Thus, it can be demonstrated that the decision for US-GAAP is mainly driven by companies who have the intention to expand in the U.S., who attach more importance to a better global acceptance and prevalence of the respective reporting system, and who do not believe in an approval of the IFRS by the SEC in the near future. On the other hand, companies that have chosen IFRS presume a stronger similarity of IFRS to the German-
GAAP, a business focus on Europe, and attach higher value on the potential opportunity to exert some influence on the development of the reporting system.

The remaining eleven items are in the context of the logistic regression model not important for the decision on the respective reporting system. This shows that e.g. the costs for the adjustment process are assumed to be equal regardless of the reporting system chosen.

6 Conclusion

Approximately ten years ago German companies started to report under international GAAP regimes in addition to the consolidated German-GAAP statements. In 1998, German legislation introduced an amendment to the Commercial Code (§ 292a HGB), enabling listed companies to report consolidated financial statements under either IFRS or US-GAAP. Until the EU-regulation No. 1606/2002 became effective, listed companies were mainly free to decide which GAAP regime to choose depending on individual objectives pursued by the change of GAAP regime.

Our study picks up the arguments associated with a change of GAAP regime theoretically by first analyzing in detail which objectives have been pursued by German companies within the framework of a survey. In a second step, comparisons between the ex ante (pre transition) and ex post (post transition) evaluations of the respective objectives and their achievements are conducted. In a third step, the question is answered which specific motivations can be identified that were crucial for finally deciding on which GAAP regime to choose.

Our results show that the change to an international GAAP regime was mainly motivated by the expectation of attaining an improved standing in the capital markets, i.e. by financial objectives. Most particularly, this was the improved fulfillment of the demand for information, the diversification and internationalization of the investor basis, and the increased comparability with industry peers. Motivations based on operating business aspects (e.g. an improved cooperation with local authorities, the planning of a foreign listing, or an improved recruiting of international employees) or external factors such as the obligation to follow a group consolidation of the parent only played a minor role in the examined decision process.
The ex post evaluation of the achievements of these objectives gives an ambiguous picture. In general, the companies would say that, on the whole, they were able to achieve all the expectations. This holds for both IFRS and US-GAAP users.

Looking at the targets in detail, however, shows that nearly 50% of the goals were either not reached, or the level of achievement was significantly below what was expected. In particular, the expansion and the internationalization of the investor community as well as an increase in the attractiveness for institutional investors could not be realized. At this point a clear overestimation of the (positive) effects of converting to an international reporting system becomes obvious. This could in part be attributed to the 'conversion hype' at the end of the nineties. On the other hand, it can be shown that other long term oriented flanking measures, i.e. support by investor relations and a high level of communication with other stakeholders, are very important for a successful transition. As the empirical results show such a clear divergence between analytical theory – what one would expect – and business reality – what one perceives –, the need for more in-depth research on the process of change in GAAP regimes is clearly indicated.

The analysis of seventeen statements with respect to characteristics of a particular reporting system is implemented with a logistic regression model identifying the aspects that were most important for the final decision. Six aspects are identified by the model: Companies that have chosen IFRS supported the view that it is more similar to German-GAAP, is more common and accepted in Europe, and is associated with a better opportunity to influence the standard setting process. In turn, companies converted to a US-GAAP regime if they believed that this is more advantageous with regard to the U.S. market and that it is of higher global importance. In addition, they do not expect an approval of IFRS by the SEC in the near future. These results clearly show that attitudes towards both types of GAAP are different which can be exploited in future research e.g. regarding the standard-setting process and the role companies as institutional investors play in this context.

After the EU-regulation in July 2002 the situation has changed. It is an open question which solutions US-GAAP-users will develop. With regard to our analysis it will be interesting to see if the trend will head back to a parallel reporting in accordance with IFRS and US-GAAP or if the current US-GAAP-users will convert to IFRS. Independent of that question, the analysis at hand shows that, in general, some of the expected goals in connection with the transition could be achieved but major objectives have not been realized. In the light
of the substantial (opportunity) costs that have to be incurred with a change of GAAP regime, the decision in favor or against such a change should be carefully balanced. This is particularly relevant for companies in Europe that are not listed but might be obliged to report under IFRS in the future. But even if a company is forced to change to IFRS under the EU-directive, our analysis indicates that financial or operating business objectives associated with the change of GAAP regime may not be easy to achieve.

1 The findings of the studies are heterogeneous with respect to different market segments and with respect to the differentiation between IFRS and US-GAAP; tests about the achievement of both objectives and a statistical discrimination to link objectives and the reporting system chosen are not provided by these studies.

2 Note that the Neuer Markt has been terminated in 2003 due to several financial fraud cases that strongly reduced the investors’ trust in this segment. The remaining companies listed in the Neuer Markt were included into other capital-market segments.

6 See Pellens (2001), p. 89, mentioning the IPO of Deutsche Telekom with a volume of about 10 billion EURO in 1996 that could not be supplied by the capital market in Germany alone.
8 For the analytical explanation see Leuz/Verrecchia (2000), p. 91.
15 The companies that did only plan to switch to an international reporting system were excluded in the latter part of the analysis.
16 The size of a company was determined by its market capitalization. CDAX or Composite DAX is a stock index comprising all companies listed on the German stock market.
17 The Mann-Whitney-U-Test is designed to compare arithmetic means of two independent samples even if the items are not normally distributed. A significant Z-value shows statistical differences of the arithmetic means. See Toutenburg (2000), p. 172.
18 The coefficient of variation (CV) describes the homogeneity of the answers – the higher the CV the more heterogeneous the opinion on a specific aspect.
19 The Wilcoxon test is used to compare the rank of an item in two independent samples. See Toutenburg (2000), p. 182.
20 The number of companies in the analysis from here on is reduced by 11 companies as these did not yet adopt a different system at the cutoff time of the survey.
22 See http://www.schering.de
25 See Breker / Naumann / Tielmann (1999), p. 188.
27 This study carried out between November 1996 and Februar 1997 was answered by 56 companies. Multiple answers were possible.
28 Only 81 questionnaires of the survey could be analyzed with respect to this research question.
29 The requirement for the test is the existence of at least 25 cases in each dependent variable. The condition is met using 45 observations of IFRS users and 39 observations of US-GAAP users. Segmentation between DAX100 and Neuer Markt therefore is not possible. The Durbin-Watson statistic and the multicollinearity test deny the existence of autocorrelation and multicollinearity. For more details on logistic regressions see Krafft (1997), p. 625.
References


