Universitat Autònoma de Barcelona

Documents de treball

IFRS ADOPTION IN EUROPE: THE CASE OF GERMANY

Soledad Moya, Jordi Perramon, Anselm Constans

Document de treball núm. 05/1

Departament d'Economia de l'Empresa

Coordinador / Coordinator *Documents de treball:*

Carles Gispert
http://selene.uab.es/dep-economia-empresa/recerca/Documents.htm
e-mail: carles.gispert@uab.es
Telèfon / Phone: +34 93 5814296
Fax: +34 93 5812555

Edita / Publisher*:*

Departament d'economia de l'empresa
http://selene.uab.es/dep-economia-empresa/
Universitat Autònoma de Barcelona
Facultat de Ciències Econòmiques i Empresarials
Edifici B
08193 Bellaterra (Cerdanyola del Vallès), Spain
Tel. 93 5811209
Fax 93 5812555

Febrer / February , 2005

IFRS ADOPTION IN EUROPE: THE CASE OF GERMANY

Soledad Moya, Jordi Perramon, Anselm Constans

Document de treball núm. 05/1

IFRS ADOPTION IN EUROPE: THE CASE OF GERMANY[1]

Soledad Moya
Departament d'Economia de l'Empresa
Facultat de Ciències Econòmiques
Universitat Autònoma de Barcelona
Campus Bellaterra. Edifici B
08193 Bellaterra (Cerdanyola del Vallès)

E-mail: soledad.moya@uab.es

Jordi Perramon
Departament d'Economia i Empresa
Universitat Pompeu Fabra

and

Anselm Constans
Departament d'Economia i Empresa
Universitat Pompeu Fabra

[1] The authors thank Chris Nobes for his assistance throughout the study.

Abstract

From 2005 onwards, consolidated financial statements of listed European companies will have to comply with IFRS (IAS). Many German companies began adopting those standards in the 1990s, on a voluntary basis, because of their need to access international capital funding. Spanish companies, by contrast, are not permitted to adopt IFRS before 2005. This paper has two purposes: first, it analyses the financial impact of initial IFRS adoption on the statement of changes in equity and the income statement of individual German companies. Second, and taking into account the German experience, it focuses on the expected impacts on a sample of listed Spanish companies in two industrial sectors: chemical-pharmaceutical and fashion. Our analysis of German companies comprised all non-financial DAX groups applying IFRS plus additional listed companies in the two selected industrial sectors identified above. The impact of initial adoption of IFRS on German companies was, both individually and overall, very significant. The analysis suggests that the expected impact on Spanish companies is likely to be significant but to a lesser degree than in respect of the German companies in the study.

Key words: IFRS adoption, Germany, Spain, IFRS adjustments, chemical-pharmaceutical sector, fashion sector.

IFRS ADOPTION IN EUROPE: EXPECTED IMPACT IN SPAIN BASED UPON GERMAN EXPERIENCE

1.INTRODUCTION

With the globalisation of international financial markets, the idea of adopting a common language for financial reporting which allows international comparability has become widely accepted by European corporations. Among the different choices that could be met at the time of implementing a single financial reporting language[2], the adoption of International Financial Reporting Standards (from now on *IFRS,* including old IAS) has been the one selected by Europe[3]. Even before this, a great number of European corporations, especially in Germany and Switzerland where many corporations are listed in different stock exchanges, had already decided to comply with IFRS. These standards are expected to help them to compete for international funds more effectively and make international capital markets more efficient.

Although IFRS adoption is not compulsory in the EU until financial years starting on or after January 2005 and only for consolidated accounts of publicly traded companies, as stated by 1606/2002 European Commission regulation, many German corporations have been using IFRS in their reporting, some of them since 1994 and many since 1998 and 1999[4]. As an example, for 2003, 19 of the 30 companies listed in the German DAX (which means 63%) were already using IFRS; 9 of them (30%) were using US GAAP and, therefore, only 7% were still using local GAAP.

German legislation promoted this early adoption of IFRS At first, the "Capital Raising Promotion Act" (*Kapitalaufnahmeerleichterungsgesetz-KapAEG*) was enacted relating to the beginning of 1998 onwards. As a result, Section 292 of the German Commercial Code (from now on *HGB*) permits listed parent companies to prepare their consolidated accounts according to internationally accepted accounting standards, presumed to mean IFRS or US-GAAP.

---

[2] At the time of implementing a common financial language in Europe, different choices could be met such as designing a new language for European countries, choosing one of the financial languages belonging to a European Country and adopt it for the rest of the countries or just choosing an already existing financial language which could be adopted by all countries. This last option is the one chosen by the European Union.

[3] See European Union (2000).

[4] See Street et al. (1999) for an interesting study of accounting policies and disclosures of a sample of companies claiming to comply with IFRS by the end of 1996.

Objectives

Taking German experience as an example of early adoption of IFRS and considering that in Spain listed corporations are obliged to introduce IFRS in their consolidated accounts from 2005, the objectives of our paper are to assess the main financial impacts from first application of IFRS on German companies (*the IFRS effects*), and then to study the expected impact on Spanish corporations of adoption of IFRS[5].

For this purpose, we considered which was the best basis from which to extrapolate, whether the whole quoted German companies applying IFRS, the individual companies or the industry. We thought that the comparison by company is too dependent on individual features, while the overall comparison is too generic. So we decided that the comparison by industry was the most suitable.

Methodology

The methodology has been the following: we have done a preliminary comparison between IFRS and HGB (see Section 2). Then we have analysed IFRS effects on German companies in the DAX Index[6] (see Section 3). The selection criterion is self- explanatory: companies in the DAX index are the most relevant, with the highest accounting complexity and the most transparency (an indication of transparency is the availability of the English version of the annual accounts). Sections 4 and 5 analyse IFRS effects on German companies belonging to two industries: chemical-pharmaceutical and fashion. A number of companies within those industries belong to the DAX Index and had already been analysed in Section 3. Those industries were selected after considering the existence of sufficient quoted companies applying IFRS and also of enough quoted Spanish companies in the same industry. Section 6 analyses the main differences between HGB and Spanish GAAP, and between Spanish GAAP and IFRS and also contains a summary of the extrapolation from the analysis of the IFRS effects in Germany, in general and by industry. Expected IFRS effects on Spanish industries are put forward in Sections 7 and 8. Section 9 summarises the main conclusions[7].

---

[5] There are already other studies of the expected impact on Spanish companies of IFRS adoption such as, for example, Fundación de Estudios Financieros (2003) or Mazars (2003) but they have not been based on German experience and in the first one different sectors have been chosen while in the second one there is no consideration by sector. There are also interesting studies related to some other countries in Europe in relation to the adoption of IFRS, see for example Dumontier (1998)

[6] We have excluded financial companies because of their special features.

[7] Appendix A lists all the companies analysed, both German and Spanish, together with some key financial data.

2. GERMAN GAAP (HGB) TO IFRS: MAIN DIFFERENCES

As noted earlier, German accounting policies have been traditionally based on the requirements of HGB until companies started to move towards international standards. However, and in relation to consolidated financial statements, companies also consider statements issued by the German Accounting Standards Board.

As one of the main objectives of our paper is to describe and quantify IFRS effects on German companies, we would like to provide a framework in relation to the main differences[8] between IFRS[9] and German GAAP (including HGB). A first rather philosophical difference is that the German accounting model has been traditionally based on tax and conservatism, while the IFRS accounting model has a clear Anglo-Saxon inspiration where the principle of relevance[10] prevails over others (Lamb et al., 1998). That divergence is going to explain many of the issues in following paragraphs. Accounting regulations in Germany are not quite developed and, often, specific applications of this conservatism do not come from HGB, but from a well established practice.

Differences detected may be classified into different categories (Nobes, 2001). Following Nobes classification, we have added some new categories depending on the type of difference we are referring to, as follows:

2.1. Assets and liabilities: Recognition and measurement.

2.2. Consolidation procedures.

2.1. Assets and liabilities: recognition and measurement

The following issues have been found in the recognition and measurement of assets and liabilities, where criteria followed by HGB do not meet with the ones required by IFRS.

[8] We have considered only differences in measurement and valuation, which may lead to differences in equity or net income of the companies. We are not going to refer in this section to differences in disclosure as those are not subject for adjustments and therefore are not a purpose of the paper.

[9] We would like to mention at that point that IRFS considered in this section are those endorsed by the EU at the time this paper has been written, that is, those included in 1725/2003 law, published in the EU official Diary on the 13th of October 2003, plus IAS 32 and 39, since they are likely to be endorsed as well.

[10] See IASB Conceptual Framework (1989).

- Under HGB, trading, available-for-sale and derivative financial assets and trading and derivative liabilities are not marked to market as they are under IFRS.

- Internally-generated intangible assets which are expected to provide ongoing service to the company must not be recognized under HGB, while IFRS state that they should be recognised as long as they are able to generate profit for the company and they can be reliably quantified. In particular, this applies to development costs.

- Under HGB, foreign currency monetary balances are generally translated at the worse of transaction and closing rates so as to avoid the recognition of gains on unsettled balances. Under IFRS, positive and negative exchange differences must be recognized in the income statement although they have not yet been settled..

- Under HGB, impairment tests on fixed assets are based on market replacement costs and much less on their value in use (net cash flow of the corresponding cash generating unit) due to the absence of an accepted methodology at the time of computing that value. Under IFRS, the highest between net realisable value and value in use is considered.

- Leases are normally classified according to tax rules and therefore are seldom considered as finance leases following HGB. IFRS define finance leases widely, including cases where the acquirer finally does not buy the asset..

- Under HGB inventories can be valued at the lowest of cost, net realizable value and replacement cost and they may include attributable portions of general administrative overheads although traditionally they have been including only direct costs. IFRS only refer to cost and realizable value and always include general manufacturing overheads portions in cost.

- Start-up costs may be capitalised and amortised under HGB and that is not possible under IFRS.

- The recognition of provisions under IFRS is much more restrictive than under HGB.

- Under IFRS, pension provisions must be estimated using the projected unit credit method, whereas companies applying HGB use tax determined rates of interest, and do not take into account future salary and pension increases. Actuarial losses are often immediately recognized in Germany while under IFRS they can be deferred.

- Under HGB, German companies do no take into account all temporary differences (they account only for timing differences), nor tax effects of the tax loss-carryforwards for deferred tax computations (unless compensable with recognised deferred tax liabilities) or the effects of the other recoverable differences.

- Recognition of revenues on construction contracts. Under HGB the completed contract method is used while under IFRS the percentage of completion is used.

2.2. Consolidation procedures

In relation to consolidation procedures, the following differences between HGB and IFRS have been detected:

- Under HGB the acquisition date may be identified as the date of first time consolidation of the subsidiary while under IFRS acquisition date is always the date when control becomes effective.

- Certain business combinations may be accounted for as pooling of interests under HGB even though an acquirer can be identified and that is not possible under IFRS. However, in fact this method is used very rarely in Germany.

- Consolidation goodwill can be deducted immediately against equity under HGB while under IFRS it must be recognised as an asset, amortized and tested for impairment when considered necessary.

- Following HGB measurement of assets and liabilities acquired in a business combination at their fair values must not exceed the cost of acquisition, while IFRS state that those values exceeding fair value of the items acquired in a business combination must be recognised as negative goodwill.

- The recognition of provisions in business combinations following IFRS is more restrictive than under HGB.

3. IFRS EFFECT ON GERMAN COMPANIES (DAX SAMPLE)

3.1 SAMPLE DETERMINATION

As indicated, we selected all the German companies included in the DAX Index that apply IFRS, except these in the financial sector (banks and insurance companies). Totals are shown in exhibit 1. In Appendix B there is additional information on the sample.

Exhibit 1. Companies listed in the DAX analysed.

Number of listed companies	30
(financial sector)	(6)
Companies to be analysed	**24**
Number of companies applying IFRS	14
Number of companies analysed	**14**
% analysed	**100**

For the 14 DAX companies in the sample we analysed the IFRS effects at different levels: company, accounting area, and combined for the whole sample.

For each company we analysed the IFRS statements of the first year of IFRS application with a special focus on the reconciliation of retained earnings (RE) and income statement (IS).

The companies analysed started applying IFRS in different years, from 1994 to 2001. During that time IFRS evolved, and we took this into account. To this end, we considered three periods: before 1999, 1999-2000 (revised IAS 17 and 19; new IAS 36 to 38; SIC 8) and 2001 (IAS 39). Exhibit 2 classifies the companies in the sample by year of IFRS adoption.

Exhibit 2. Classification by year of IFRS adoption

Year of IFRS adoption	**Company**

Before 1999	TUI, HENKEL, MAN, LUFTHANSA, ALTANA, BAYER, SHERING, DEUSTCHE POST, ADIDAS
1999-2000	METRO, RWE, WELLA, ESCADA
2001 on	VW, BMW, LINDE, STADA, HUGO BOSS.

We did not take into account the revised and new standards coming into force in 2005 when analysing the German companies, since 2005 falls outside our research. However we considered those standards when we assessed potential IFRS effects in Spain.

SIC 8 deals with first-time application of IFRS as the primary basis of accounting, stating that new IFRS statements *"should be prepared and presented as if the financial statements had always been prepared in accordande with the Standards and Interpretations effective for the period of first-time application"* (paragraph 3). SIC 8 became effective on 1 August 1998. Before SIC 8 there was not specific guidance on first-time application of IFRS. However, IAS 8, paragraphs 46 to 48, referred to changes in accounting policies made on the adoption of an International Accounting Standard. Since SIC 8 uses the same retrospective principle as IAS 8, we understand that all companies in the sample, whether they started appyling IFRS before or after August 1998, followed a similar retroactive basis.

IAS 8, paragraph 49, when defining the benchmark treatment of changes in accounting policies (including changes from an adoption of a new International Accounting Standard) states that any resulting adjustment should be reported as an adjustment to the opening balance of retained earnings. It is generally understood that, in accordance with the retroactive principle, the adjustment is net of tax effects[11]. Consequently we assume that, unless otherwise specified by the companies, the IFRS effects are shown net of taxes.

3.2 ANALYSIS OF THE EFFECTS BY COMPANY

Appendix B summarises the RE and IS reconciliations for the 14 DAX companies, and discloses totals and percentages by reconciling item (or adjustment type) and by company. Totals and percentages shown are not homogeneous. However, as discussed below, the effects of those inconsistencies are minor and, thus, do not affect the conclusions of our analyses.

As shown on Exhibit 2, the companies started applying IFRS in different years, and so impacts were different. For companies adopting IFRS before 1999 or between 1999 and 2000, we reviewed the impact of subsequently applying the new or revised IAS of 2000 and 2001, respectively, in the statement of changes in equity (exceptionally, in IS), and confirmed that those subsequent effects were, in general, minor (see appendices B, C and D). One of the reasons for the effects of application of new or revised IAS being minor is that often there are transitional rules lessening the degree of retroactivity. However, as shown in appendix B, the application of IAS 39 in 2001 had significant effects.

The different starting dates theoretically affect the comparability of the totals by company and adjustment type because of the price changes. However this effect is also considered minor: most companies in the sample started applying IFRS on or after 1998, and, in any case, inflation in Germany has been consistently low. On the other hand, we often measure the IFRS effects in relative terms by reference to RE and IS of the same year without any time factor to consider.

Companies disclose different levels of analysis of the nature and amounts of the reconciling items, and the information is in the form of a reconciling list or in the form of comments in the notes, but never as *"double entries"* disclosing all the financial statements lines affected[12]. So we could only understand the IFRS effects on a piecemeal basis, and often explanations were very scarce and rather cryptic. We tried to grasp the significance of the IFRS adjustments reading the RE and IS reconciliations together with the full financial statements, specially the disclosures in the notes.

<u>Effects on retained earnings (RE)</u>

We comment below on the numerical information regarding the RE reconciliations disclosed in Appendix B:

a) The quantative effects are very different from company to company. There are some visible general patterns, but company-specific factors were predominant.
b) There is no relationship between the size of the IFRS effects and the year of first application. This reinforces observations made above.
c) The categorisation of companies in the sample by the significance of the net effect (either plus or minus) expressed as a percentage on HGB RE is as follows:
    - Eight companies in the sample show percentages below 10 %

[11] See for example PricewaterhouseCoopers (1998), page 12-24.

- Three companies, between 14 and 29 %
- Three companies show percentages above 50 %.

d) However, the analysis must be made also on a gross basis, computing the positive and negative adjustments separately. From that perspective, for example, eight companies had positive effects higher than 30% on RE.

e) The four companies with the highest net effect on RE all disclosed some specific large adjustment, as shown in Exhibit 3. It is worth mentioning that two of the four companies with the highest net effect belong to the automotive industry, and both show a big adjustment for the capitalisation of development costs (IAS 38). The third automobile company in the sample –MAN- did not have such an effect, because it first applied IFRS before IAS 38 went into effect; and, when it adopted it, the effect was minor, either because of circumstantial reasons or because of the transitional provisions of the new standard.

f) Despite the significance of company-specific factors, it is worth considering the combined IFRS effect for the 14 companies. The first application of IFRS by the 14 companies meant a net increase of combined RE by a € 15.2 billion, representing a 26 % increase on HGB RE.

Exhibit 3. Companies with highest* IFRS effects.

* Both in absolute and in % terms. PPE from now on means Property, Plant and Equipment

Company	**Positive adjustments**	**Negative adjustments**
TUI	PPE depreciation	Goodwill
VW	R&D	Deferred taxes
	PPE depreciation	Pensions
	Write-back provisions	
BMW	R&D	Financial instruments
	PPE depreciation	
DEUTSCHE POST	Write-back of provisions	Pensions

[12] For example, part of the adjustment to the provision for pensions might have resulted not in a salary expense, but in an increase in the value of inventories because of the increased labour cost, and this effect is not disclosed separately, but on a net basis.

Effects on IS

In Appendix B there is also an analysis of the IFRS IS reconciliation[13], except in the cases when no information was available and could not be estimated. The information was only given for the first year of IFRS application and not for the comparative year.

Given the very limited amount of information disclosed, it has not been possible to deepen our analyses of the IS reconcilation. Below we make some quantitative remarks at company level, whereas the analysis by adjustment type is presented in the next subsection:

a) By inspection of the Appendix B, we can see that there is no relationship between the IS and the RE adjustments referred to above. Moreover, in about half of the 9 companies disclosing the IS reconciliations, the sign (positive or negative) of the reconciliation is the same as for the RE reconciliation, and in the other half the sign is different.
b) The significance of the reconciling items as measured against the HGB net earnings varies sharply from one company to another (from a –16% to a +25%), but they are not as large as for RE.
c) The distinction between gross/net effects we made in the previous section on RE is valid for IS: all companies disclose a combination of positive and negative IS adjustments.
d) Two companies disclosed a relatively big positive effect: BMW and RWE for reasons summarised in Appendix B.

[13] From our point of view, nature and extent of the reconciling items must come from two related causes: original distance between HGB and IFRS and balance sheet IFRS adjustments. For example: companies might have provided for future maintenance expense for HGB purposes. If so, the provision had to be written back following IFRS. The net IFRS effect on IS would then be an increase in the year expense for not having provided for them before, and a decrease for not providing for the next period. Also the IS adjustments are likely to reflect the net effect of a combination of different IFRS impacts. Again an example: the adjustment in the depreciation expense for the year may reflect concurrently or on a net basis the effects of having fair valued the subsidiaries' PPE following an acquisition, and the change of the useful lifes (versus tax allowed estimates) and/or of the depreciation method.

e) The combined net positive IFRS effect for the nine companies totals € 411 million, representing a combined increase of 10 % on HGB combined net profits.

3.3 ANALYSIS BY TYPE OF ADJUSTMENT

We suggest that, for extrapolation purposes, the analysis by type of adjustment is the most useful. As indicated, the adjustments are supposed to be net of the tax effects. Again we note that there might be cases where the same reconciling item affects both assets and liabilities, although the effects are not separately disclosed in the RE reconciliations:

Below we summarise the numerical content in Appendix B (RE portion):

a) Increase in intangible assets from capitalisation of some development costs by € 6,3 billion, basically traceable to VW and BMW as mentioned in the previous subsection.

b) Decrease in PPE accumulated depreciation by € 6,4 billion: a number of companies had applied accelerated tax depreciation methods or rates for HGB purposes. The main adjustments correpond, once again, to VW and BWM, two heavy industrial groups, but also to TUI, a service company. RWE, on the other hand, shows a negative amount, for undisclosed reasons.

c) Decrease in other provisions by € 4,8 billion. The fact that almost all of the companies share this type of adjustment reflects the traditional philosophy of German companies, fuelled by a generous tax system, toward creating hidden reverves by, among other things, inflating provisions. It is not possible to quantify the incremental factor caused by IAS 38 going into force for 2000 beyond the observation that most (although not all) of the companies that started applying IFRS after 1999 disclose higher effects.

d) Deferred tax also caused a big net effect of € 4,6 billion. This originated from different causes: computing all temporary differences regardless of their recurrence or date of reversion, as well as taking into account tax loss-carryforwards (this is the most frequently quoted reason) and other tax recoverable differences. All the companies have foreign subsidiaries with different tax systems: the specific mix of subsidiaries is one of the key factors in determining the adjustment. On the other hand, assuming that the other IFRS adjustments are shown net of taxes, the item should not incorporate the tax consequences of the conversion to IFRS.

e) Inventories increased by € 2,3 billion, usually for the application of full cost. We included under that heading the effect, much less, of applying the percentage of completion method.

f) Pension liabilities increased by € 10,7 billion, the single most important reconciling item, affecting all companies, except BMW. In relative terms this single item absorbed 18 % of the combined HGB retained earnings. It is not possible to identify the incremental (or decremental) effect of the revision of old IAS 19 that went into effect in 1999. In any case, the reconciliation affects practically all the companies regardless of the year of first application of IFRS. Almost all companies, whether the first application took place before, on or after 1999, adopted the projected unit credit method, changing a number of actuarial assumptions, such as the rate of interest or estimated future increases in salaries and pensions. Companies do not specify whether or not actuarial losses were deferred; however, considering the predominant practice in Germany, we can assume that there was a full recognition of them.

g) Financial instruments: the companies showing effects from applying IAS 39 were, of course, the ones that started applying IFRS in 2001 onwards (D. Post, that started in 1998, is an exception). Appendix B also details the effect from the subsequent application of IAS 39 by the other companies. The IAS 39 effect varies from company to company for three possible reasons: the circumstantial risk exposure (both in absolute and in hedging terms), fair values prevailing at the end of 2001 and transitional provisions of IAS 39.

As per IS effects, the adjustment types are of the same nature as the ones found in the RE reconciliations.

We can summarise our comments in subsections 3.2 and 3.3 as follows:

a) Company-specific factors are predominant when explaining IFRS effects for the 14 DAX companies.

b) However there are a number of relatively common characteristics, as shown in Appendix B:
   - In ten companies the conversion to IFRS meant an increase in RE, and in the remaining four the net negative adjustment is mostly due to an increase in the pension liability. The basic explanation is simple: HGB accounts reflected the prudent philosophy in German accounting. The combined effect is huge.
   - That mentality had created hidden reserves in PPE (excess of depreciation), provisions (overstatements), deferred tax assets (exclusion of tax effects of tax-loss carryforwards), inventories (use of direct cost methods), intangible assets (expensing all development cost most notably in the automotive industry). But also it has been found that pension provisions were understated by a big amount.

- The financial situation, including working capital, improves under IFRS, and is represented on a more solid basis in IFRS accounts, as compared with the HGB accounts.

4. IFRS EFFECTS ON CHEMICAL AND PHARMACEUTICAL INDUSTRY IN GERMANY

As explained in the introductory section, the main criteria for selecting a particular industry for our research was the availability of quoted German companies within the industry that apply IFRS, together with the availability of quoted Spanish companies in the same industry. The chemical and pharmaceutical (*Ch&Ph*) was one of them. This denomination encompasses a broad set of industrial and trade activities: all types of chemical products for manufacturing and agricultural industries, pharmaceutical, cosmetic and other consumer products. Most of the companies in the sample produce and market a wide range of products in separate business lines. The most visible example is Bayer, with its multi-industry strategy.

This breath of products and activities blurs any strong industry feature and makes it less likely that there are major accounting singularities.

<u>The sample</u>

The sample comprises all seven Ch&Ph quoted companies that used IFRS, of which five belong to the DAX index and, so, have been already analysed in Section 3. Only two non-DAX companies –Stada and Wella- that used IFRS were clearly in the Ch&Ph industry, and are new in the sample. Appendix A lists the companies and supplies some numerical information on them. Appendix C discloses the RE and IS reconciliations using the same format as Appendix B, that was the basis for our analysis in the preceding DAX section.

Many observations are similar to the ones arrived at in the preceding section. However, since the companies with the highest reconciling items in the preceding section belong to other industries –automobiles and other- the combined IFRS effects in the Ch&Ph industry are lower than the combined effects in the DAX sample. The net combined effect represents only the 2 % on HGB RE. This effect by company ranges from -6% to 26 %.

A characteristic of the sample is the different years of first application (see *Exhibit 2*). Two companies –Bayer and Schering- pioneered the IFRS application, since 1994. Both disclose the

IFRS effects through IS[14]. The reconciling items for both companies are shown as RE adjustments in Appendices B and C for consistency with the other companies in the sample.

Comments by adjustment type and company

The main effects by adjustment type and company are as follows:

1. Goodwill

Goodwill appears as a RE adjustment in three companies[15]. Two of them –Linde and Altana- explicitly state that, under HGB, goodwill had been written off against reserves on acquisition, and that, under IFRS, they wrote-back it in the balance sheet on a partial retroactive basis for acquisitions made before 1995 (as permitted by the old version of IAS 22). Consequently with the write back of the goodwill as an asset, in a number of companies there is a charge to IS caused by amortisation of goodwill that appears as a reconciling item in the first year of application.

2. Development costs

Only three companies in the sample –Linde, Wella and Stada- started applying IFRS when IAS 38 was already in force. Linde and Stada wrote back as intangible assets some previously expensed development costs (maybe because it referred to a business combination). The remaining companies kept expensing those costs, as permitted then. Altana justifies it with reference to uncertainties in clinical approval procedures.

3. PPE depreciation

Four companies out of the seven disclose that, for IFRS purposes, they changed retroactively the depreciation methods from tax-inspired ones to the straight-line method, although one of them –Linde- does not show any RE reconciling item (probably for reasons of immateriality). The companies disclose different effects on IS, depending –we understand- on the asset mix and their situation regarding their remaining useful life.

4. Pensions

[14] Schering claimed to comply with both HGB and IFRS for all topics except pensions, for which it departed from HGB

[15] Bases for GW amortizations differ from company to company: Henkel (15-20 years), Stada (10 years), Altana (5-10 years), Linde (10-20 years except for a recent acquisition with an estimated useful life of 40 years), Schering (10-15 years).

Only Wella did not mention pensions in the RE reconciliation. All the others revised their pension provision following the application of the projected unit credit method. Linde discloses additionally the preceding method: the age of entry normal method. With one exception, the companies did not disclose the deferral method –if any- of actuarial differences.

5. Deferred taxes

The main reason quoted by the five companies in the sample for creating a deferred asset adjustment is the recognition of the tax effects of tax loss-carryforwards.

6. Provisions

For reasons already explained in the Section 3, most companies in the sample reduce the balance of provisions. Wella increased it for the recognition of some tax risks, not recognised before.

7. Hedge accounting

Henkel, Bayer, Wella and Altana explain in the notes that they hedge risks (usually associated with foreign currency or/and with interest rates) and that they apply some kind of hedging accounting, without supplying further details. Of the two companies –Stada and Linde- that started applying IFRS when IAS 39 was already in force, the second discloses a positive reconciling item in the financial instruments line.

Final remarks

As explained, most companies in the sample show a wide variety of reconciling items. On a combined basis, most have a positive sign: either increase the value of assets (goodwill and other intangible assets, PPE, inventories, financial instruments, deferred taxes) or reduce the balances of provisions. The main exception is, once more, the pension liability amounting to € 0,9 billion, and balancing most of the positive net combined adjustments that total € 1,3 billion.

Although the combined net effect on RE and on IS is minor, individual effects on various items in the balance sheet and the IS are significant: both statements must represent the financial situation and the results in a more meaningful way under IFRS.

The differences in the year of the application (from 1994 to 2001) might have had impacts on the IFRS adjustments, considering that four companies out of the seven started applying IFRS before 1999, when SIC 8 took effect, and considering the fact already mentioned in

section 3 that often the application of a new or of a revised standard for a company already using IFRS is softened by transitional provisions.
All companies except Wella and Schering disclose net positive RE adjustment

As for development costs few companies believe that they meet the conditions for capitalising them for industry- specific reasons.

5. IFRS EFFECTS ON FASHION INDUSTRY IN GERMANY

The fashion industry was selected because there are three German quoted companies applying IFRS and three Spanish quoted companies in the same industry. All companies produce and trade fashion apparel and other goods. Appendix A lists the companies in the sample, and supplies some quantitative information. Appendix D, that has the same structure as Appendices B and C, summarises the RE and IS reconciliations and discloses totals and percentages by company and by adjustment types.

Out of the three German companies, only Adidas belongs to the DAX Index and was, therefore, already analysed in Section 3.

As for the reconciliations disclosed in Appendix D, the following points are worth emphasis:

1. The three companies share few common accounting characteristics. The main common one is that most reconciling items are working capital adjustments, consistent with the industry characteristics. This is the main differentiation from Ch&Ph.
2. H. Boss and Escada disclose moving from a direct cost to a full cost system for inventory valuation, and adopting the projected unit credit method for pension computation.
3. Adidas, the biggest company of the sample, has few reconciling items (see final remarks).
4. Escada, the smallest company, shows a variety of negative adjustments both in IS and in RE reconciliations, as if its conversion to IFRS coincided with a general cleaning exercise.
5. The negative adjustment in H. Boss affecting intangible assets is the net effect of capitalising some past development costs, minus expensing some expansion costs previously classified as intangible assets. The other two companies in the sample do not mention either development cost or expansion expenses.
6. Only Escada discloses a reconciling item regarding goodwill.

7. Companies disclose the following depreciation bases for goodwill:
    a. Adidas: 4 to 20 years
    b. H. Boss: up to 20 years
    c. Escada: 5 years
8. Adidas and H. Boss apply hedge accounting on currency exposure (both companies) and H. Boss does on interest rates exposure.
9. Only H. Boss refers to trademarks amortization (15 years).

<u>Final remarks</u>

As indicated at the beginning of the section, company-specific features exceed common industry characteristics. Adidas, the biggest in the sample, in theory should generate the biggest IFRS adjustments. However, this is not case. It made the conversion back in 1994 when a number of current IAS were not yet in force. Appendix D indicates that subsequent adjustments were not relevant, probably, again, because of the softening factor represented by transitional provisions of new or revised standards. In any case, disregarding the reclassification of minority interest, Adidas and, to a larger extent, H. Boss show positive adjustments to RE for IFRS purposes, in line with our observations on the DAX sample and on the Ch&Ph industry.

6. FROM HGB TO SPANISH GAAP: MAIN DIFFERENCES AND EXTRAPOLATION FACTORS

6.1 HGB TO SPANISH GAAP: MAIN DIFFERENCES

After determining the impact in Germany on DAX companies and particularly on chemical /pharmaceutical and fashion industries, we propose to predict the expected impact in Spain for those two industries. And, following the structure of the paper, we will first provide a framework of differences in accounting policies between Germany and Spain, and afterwards the same for Spanish local GAAP and IRFS[16].

6.1. German GAAP and Spanish GAAP: main differences

Differences between German GAAP and Spanish GAAP can be classified into the following categories (we include only the categories which we have found differences for):

[16] Again we are going to refer only to differences having an IFRS impact on RE or IS.

6.1.1. Assets and liabilities: recognition and measurement.

6.1.2. Consolidation procedures

6.1.1. Assets and liabilities: recognition and measurement.

In general, there are not many differences due to inconsistencies between German and Spanish GAAP. That is because German and Spanish accounting belong to what we can consider as a Continental accounting model, fairly different to those predominant in Anglo-Saxon countries such as UK or USA where IFRS could be included. Although it is not the objective of the paper to go into different accounting models or the history of accounting regulation[17], as we have already mentioned before, IFRS are based on a conceptual framework with a clear Anglo-Saxon inspiration where the concept of utility predominates. That is not the case for German or current Spanish regulations which have been traditionally based on prudence and where tax regulations have had a determining influence over accounting regulation.

However, we can refer to some differences found (often differences in practice, rather than differences in definition), which are the following:

- Sometimes German groups in the past used very large tax-induced depreciation, whereas in Spain is not possible for financial reporting.

- Deferral conditions for start-up and other expenses are more restrictive under HGB than under Spanish GAAP. Development costs are never capitalised under HGB, while Spanish GAAP permits it if conditions are met.

- Spanish GAAP do not allow using direct costing in inventory valuation while under HGB it is permitted.

- In relation to leases that would be classified as financial leases in Spain, under HGB most of them are operating leases.

- Pension accounting is different in HGB and Spain being an area highly influenced by tax regulations.

[17] In Zeff (2000) we can find an interesting study related to the development of conceptual frameworks in Europe and USA, at the moment when accounting regulations needed a theoretical environment which could support the general accounting standards.

- In Spain there have been several regularisation laws (the last one in 1996) allowing companies to adjust the fixed assets to current market values, whereas in Germany that has never been possible.

- HGB permits providing for future maintenance expenses. Spanish GAAP is more restrictive regarding provisions

- Intangible assets: in Germany development costs are never capitalised, while under Spanish GAAP they can be capitalised if certain conditions are met. On the other hand, in Germany only external costs were capitalised as intangible assets, while in Spain all relevant costs, whether internally generated or external, are considered.

6.1.2. Consolidation procedures.

- Consolidation goodwill can be deducted immediately against equity under HGB while under Spanish GAAP it must be recognised as an asset and amortized on a straight-line basis over a maximum of 20 years.

- In Spain, following the VII UE Directive, subsidiaries with activities divergent from the Group's activities can sometimes be excluded from consolidation, whereas in Germany this exclusion is not permitted.

6.2. SPANISH GAAP TO IFRS: MAIN DIFFERENCES

Differences between Spanish GAAP and IFRS are expected to be much more important than those found between Spanish and German GAAP. As mentioned above, accounting models and conceptual frameworks underlying the two regulations are quite different. Although the most recent accounting reform in Spain[18] took into consideration standards issued by the IASC, there is still divergence.

[18] Last accounting regulation reform took place in Spain in the 90s. At that time a new *Plan General de Contabilidad* was issued in order to adapt Spanish accounting regulation to the European Directives, specially to the fourth one. The new writing of the Plan took into consideration IFRS enforced at the moment but many differences between them still prevail.

And following the structure already proposed, in the first place we will refer to the differences due to inconsistencies between regulations.

6.2.1. Assets and liabilities: recognition and measurement

The main differences are the following (Nobes, 2001; Amat, 2004)

- Under Spanish GAAP, trading, available-for-sale and derivative financial assets and trading and derivative liabilities are not marked to market they are under IFRS.

- Following IFRS, some tangible and intangible assets may be recognized at fair value while under Spanish GAAP all fixed assets are carried at acquisition cost or net realisable value (the lower of the two). The same happens with trading and derivative liabilities. The occasional revaluations of fixed assets according to Spanish government rules are not kept up to date.

- In relation to financial lease, part of the presentation by a lessee is to show the total anticipated interest expense as an asset, and to write this off over the lease term under Spanish GAAP while IFRS recognises financial leases as an asset and a liability with the same amount which will be the biggest between fair value and net present cash flows.

- Under Spanish GAAP, unrealized gains on foreign currency monetary balances are generally presented in deferred income, whilst under IFRS are recognised as income.

- Under Spanish GAAP, impairment tests are based on net realizable values, disregarding value in use (net cash flow of the corresponding cash generating unit). Under IFRS, the higher of net realisable value and value in use is considered. And in any case, under Spanish GAAP impairment losses are only accounted for when they are expected to be permanent.

- Share based payments are regulated by IFRS 2, whereas in Spain there are not consistent practices because of a lack of regulation.

- Start-up costs may be capitalised and amortised under Spanish GAAP and that is not possible under IFRS. Development costs may be capitalised under Spanish GAAP is conditions are met; under IFRS they must be capitalized after meeting the conditions.

- Pension accounting is still under-developed in Spanish GAAP as compared with IFRS.

- Provisions recognition is much more restrictive under IFRS than under Spanish GAAP.

- Policy changes or correction of errors must be included by changing the opening balance sheet under IFRS (benchmark treatment). Following Spanish GAAP previous years figures must never be modified.

- Deferred tax accounting under Spanish GAAP is based on timing differences rather than on temporary differences and deferred tax assets are not recognized for unused tax credits (other than loss carryforwards).

- The definition of extraordinary items is wider under Spanish GAAP.

- Own shares are shown as assets under Spanish GAAP while they are included in Equity under IFRS.

6.2.2. Consolidation procedures

Main differences are as follows:

- Under IFRS a company is, generally, an associate when the parent has over 20% of its shares while under Spanish GAAP, although there is a coincidence in the 20%, it is also stated that if the associates are quoted then the percentage goes down to 3%.

- All the net assets of subsidiaries are fair valued under IFRS while under Spanish GAAP this applies only to the percentage that the parent has over the subsidiary.

6.3 EXTRAPOLATION BASES

Our extrapolation process had two main components:

- The identification of the extrapolable factors into Spain of the German experience on first IFRS application.
- The differentiating factors between Spain and Germany. Those factors must be taken into account so that the extrapolation process is applied on a selective basis.

Before referring to the extrapolatable factors, we summarise the main differentiating factors:

a) Different local accounting rules determining different "GAAP distance" between local rules and IFRS, as explained in previous paragraphs.
b) German companies applied IFRS on a voluntary basis, and could choose the starting year (see Exhibit 2, in Section 3). However, in Spain companies have been forbidden to apply IFRS until 2005. Therefore all Spanish companies will make the conversion in the same year using the updated version in 2005 of IFRS.
c) Since there are new standards going into force in 2005 (IFRS 1 to 5, plus a number of revisions of old IAS), there are additional impacts on Spanish companies that did not influence the conversion to IFRS by German companies.
d) We analysed the German experience *ex post*, whereas we *anticipate* the impacts on Spanish companies using the last available financial statements. Those statements will be different in 2005: so the projected IFRS effects are subject to items changes in the financial statements.

Apart from those general factors, there are company-related differentiating factors: the specific composition and significance of account balances for each Spanish company when they start applying IFRS will determine the specific IFRS effects on each company.

In this section then, we will refer to the general extrapolation factors (at DAX and industry level) and in the two following sections we will complete our extrapolation process into Spain taking into account the specific financial statements of each Spanish company sampled within each of the two industries.

<u>Extrapolatable factors</u>

Below we summarise the main IFRS effects in Germany and assess their extrapolation into Spain after taking into account the general differentiating factors, ending with a proposition of potential IFRS effects in Spain. As indicated, in the next two sections, we incorporate the analysis of the financial statements of the Spanish sample companies, ending with a proposition of *expected* IFRS effects in Spain by industry.

For reasons of clarity we first discuss the extrapolatable factors from the German experience in general and then for each of the two selected industries.

Extrapolatable factors from the German experience in general

The main factors derived from the German experience in general are the following:

- Decrease in PPE accumulated depreciation, since German companies had often applied accelerared depreciation methods. Since in Spain accelerated depreciation is not permitted, there should be no impact
- An increase in deferred tax assets. There are no significant differences between Spanish and German GAAP. Therefore it is likely that similar effects will take place in Spain (conceptually speaking, not numericaly, since it will depend on circumstances of each Spanish company. This observation is valid also for the remaining comments).
- An increase in the value of inventories because of the change from a direct to a full costing system. Since in Spain direct costing is not permitted, there should be no impact.
- Increase in pension liabilities following the application of the projected unit cost method. Spanish GAAP on pensions is under-developed. So we can expect some impact, depending on pension commitments. In Spain, defined benefit plans are less frequent than in Germany.
- German companies converting to IFRS after 2000 showed different impacts from the application of IAS 39. Spanish GAAP on financial instruments is under-developed. Some significant impacts can be anticipated.
- Goodwill accounting also led to a number of adjustments in German companies, often associated with a past practice of writing-off the goodwill against reserves on acquisition. In Spanish GAAP this practice is not permitted. However, in 2005 IFRS 3 goes into effect causing probable adjustment in Spanish groups.
- Removal of excess provisions: conditions to recognise provisions are less strict than under IFRS. Therefore some adjustments are likely to occur, although of lower amounts.

The above points originated from observations of German companies. There are other differences between Spanish GAAP and IFRS that might lead to additional IFRS effects in Spain:

- Exchange differences: there are no technical differences between HGB and Spanish GAAP regarding foreign transactions and there were no reconciling items in German companies on that matter. However, since that might have been for immateriality reasons, those circumstances might not be replicated in Spain, since the final effect will depend on the mix of foreign exchange monetary items in the first IFRS balance sheet.
- Asset impairments: the same comment is valid, with one additional remark compared to Germany: fair values of fixed assets have been increasing in Spain for many years.
- New IFRS in force in 2005, that were not applicable in Germany, but will be applicable to Spanish companies in 2005, especially goodwill amortization and share-based payments. The impact from those changes will be more or less softenend depending on the degree of the retroactiveness in their first application, as permitted by IFRS 1.
- Start-up and other deferred expenses: often amortized in Spain, whereas always expensed under IFRS.

Extrapolatable factors from the German chemical and pharmaceutical industry

The key additional points for extrapolation from our analysis of the industry were as follows:

- Significant business combinations activity (indicated by goodwill adjustments).
- Significant development costs, although more often than not they were expensed.
- Significant PPE depreciation, as expected from a manufacturing industry.
- Significant correction of inventory valuation to full cost, for the same reason.
- Significant pension commitments.
- Less frequent adjustments related to financial instruments.

Extrapolatable factors from the German fashion industry

The key additional points for extrapolation from our analysis of the industry were as follows:

- Working capital adjustments were predominant: inventories, accounts receivable/payable, short-term provisions.
- Potential for adjustments to intangible assets: expansion expenses, trademarks, some development cost.

Exhibit 4 summarises the key IFRS efffects in Germany as well as the potential IFRS effects in Spain by industry. As indicated, in this section we propose potential, rather expected effects. In the next two sections we make propositions on expected impacts after analysing the financial statements of the sampled Spanish companies.

Exhibit 4: Extrapolation of IFRS effects in Germany: potential IFRS effects in Spain

Area	**IFRS effects In Germany**	**Potential effects in Spain**	
		Chemical&Pharm	**Fashion**
PPE depreciation	High	Low	Low
Deferred taxation	High	Medium	Medium
Inventories	Medium	Low	Low
Short-term liabilities	High	Low	Low
Goodwill	High	Medium-low	Low
Pension liability	Very High	High	High
Development costs	Medium	Medium	Low
Start-up/deferred expenses	Low	Medium-low	Medium-low
Share-based payments	N/A	Medium-low	Medium-low
Financial instruments	Low	Medium-low	Medium-low
Asset impairments	Low	Low	Low
Forex transactions	Low	Medium-low	Medium-low

7. EXPECTED IFRS EFFECTS IN THE CHEMICAL AND PHARMACEUTICAL INDUSTRY IN SPAIN

As shown in Appendix A the sample comprises five Spanish companies, with turnover ranging from € 18 million to € 232 million. There are two chemical companies –La Seda and Ercros- with a long history that went through different restructuring processes. Ercros went through a receivership several years ago. Faes, Zeltia and Natraceutical are relatively young and successful business mostly in the pharma industry with strong links to several family businesses.

These companies have different percentages of their shares trading in the Spanish capital market. Profitability is very different from one company to another: Faes disclosed a net profit for 2003 of € 19,5 million (representing 16,5 % of turnover), whereas Ercros suffered in 2003 a loss of € 17,8 million (mostly from ordinary activities).

In Exhibit 5 we combine the potential IFRS effects, by industry, from exhibit 4 (except for the areas where the potential impact was considered low), with actual balances (mostly corresponding to 2003) and conclude on expected impacts.

The main conclusions are:

- For most areas overall projected IFRS effects are considered low, because related balances or amounts are relatively low.
- Ercros has important loss-carryforwards, whose tax effect has not been recognised given the loss situation of the Company. In the future there is a potential for a significant IFRS adjustment.
- Zeltia had at December 31, 2003 a significant balance of short-term investments valued at the lower of cost or fair value. We understand that they are available for sale investments. If the same situation repeats in 2005 there is potential for an IFRS adjustment.
- The companies disclose little or no information on pensions, derivatives and share commitments: it is understood that all the items are immaterial. If the balances were important the effect could be very important.

Exhibit 5: Expected impactof IFRS in chemical and pharmaceutical sector

TABLE 5

	Potential impact	---------------------- Significance of Balances			--------------------		Overall
Area	Chemical & Pharm	Ercros	Faes	La Seda (3)	Natraceutical	Zeltia	Projected impact
Deferred taxation	Medium	Low (1)	Low	Low	Low	Low	Low
Goodwill*	Medium-low	Low	Low	Low	Low	Low	Low
Pension liability	High	Low	Low (2)	Low	Low	Low	Low
Development expenses	Medium	Low	Low	Low	Low	Low	Low
Formation/deferred expens	Medium-low	Low	Low	Low	Low	Low	Low
Share-based payments	Medium-low	N/A	N/A	Low	Low	Low	Low
Financial instruments	Medium-low	Low	Low	Low	Medium (4)	Medium/High (5)	Medium
Forex transactions	Medium-low	Low	Low	Low	Low	Low	Low

(1) Ercros has unrecognised deferred assets from high tax loss-carryforwards.However, snce in 2003 it was in a loss situation
the company might not comply in 2005 for an asset recognition
(2) Fully funded in 2003. There might be actuarial differences in 2005 on
(3) Some restructuring provisions, but with little potential for a IFRS adjustment
(4) The company had at december 2003 € 4,8 million in unrecognised derivatives
(5) Zeltia had € 131 million in available for sale investments at lower of cost or NRV

* The new IFRS 3 might have additional impact on 2005

.

8. EXPECTED IMPACT IN THE FASHION INDUSTRY IN SPAIN

The sample comprises three Spanish companies, with turnover ranging from € 126 million to € 3.974 million. The main company of the group is Inditex, which is made up of almost a hundred companies dealing with activities related to textile design, production and distribution. Inditex, with brands such as Zara, Massimo Duti or Pull & Bear has 2.029 stores all around the world. Although Adolfo Dominguez and Cortefiel have not as much international presence as Inditex, both have a strong network of national stores. Inditex also leads the sample profits, with a net profit of € 438 million in 2003.

These companies have different percentages of their shares trading in the Spanish capital market.

As in the analysis of impact in the chemical and pharmaceutical industry, in Exhibit 6 we combine the potential IFRS effects, by industry, from Exhibit 4 and conclude on expected impacts.

The main conclusions are:

- In most areas overall projected IFRS effects are considered low, because related balances or amounts are relatively low.
- Inditex had recognised at December 31, 2003 a significant amount for restructuring provisions, so we expect some impacts in retained earnings when applying IFRS[19].
- Cortefiel had accounted as an intangible asset significant compensation costs related to the acquisition of its stores network. We expect a negative impact in the retained earnings of the company in the 2005 accounts due to this.
- Cortefiel and Inditex account for start-up expenses in the balance sheet that will have to be expensed under IFRS.
- At December 31, 2003 the fashion companies had short-term investments valued at the lower of cost or fair value. These investments were especially significant in Inditex. If this remains in 2005 we expect a positive adjustment due to the transition to IFRS.
- Although Adolfo Dominguez and Inditex used derivatives in 2003, the amount is not disclosed or immaterial and no important impact from the transition to IFRS is

[19] If the additional conditions as required bu IFRS would not be met.

expected. The same applies for the three companies of the sample in relation with pension plans.

Exhibit 6: Expected impact of IFRS in fashion sector

Area	Potential Impact Fashion	----------Significance of Balances---------- Adolfo Domínguez	Cortefiel	Inditex	Overall Projected Impact
Deferred taxation	Medium	Low	Low	Low	Low
Pension Liability	High	Medium-Low (1)	Medium-Low (2)	Medium-Low (1)	Medium-Low
Formation/Deferred expenses	Medium-Low	Low	High (3)	Medium-Low (4)	Medium
Share-Based payments	Medium-Low	N/A	N/A	Medium (5)	Medium
Financial instruments	Medium-Low	Medium (6)	Low	High (7)	High
Forex transactions	Medium-Low	Low	Low	Medium (8)	Medium-Low
Restructuring Provisions	Low	Medium-Low (9)	Low	Medium (10)	Medium-Low

(1) Retirement premium offered.
(2) Pension complement offered.
(3) € 25,7 million compensation expenses plus € 4,3 million of start-up expenses accounted as an intangible asset.
(4) € 0,6 million of start-up expenses accounted as an intangible asset.
(5) Stock Options plan offered.
(6) € 1,3 million of unrecognised derivatives plus € 9,8 million in available for sale investments at lower of cost or NRV.
(7) € 242,3 million in available for sale investments at lower of cost or NRV.
(8) Inditex had at December 31, 2003 € 2,4 million of unrecognised exchange profits.
(9) € 0,8 million overprudent restructuring provisions might be adjusted according to IFRS.
(10) € 18 million overprudent provisions might be adjusted according to IFRS.

9. CONCLUSIONS

Taking German experience as an example of early adoption of IFRS and considering that in Spain listed corporations are obliged to introduce IFRS in their consolidated accounts from 2005, the objective of our paper was to assess the IFRS effects in Germany - at a DAX level and for two main industries: Chemical-Pharmaceutical and Fashion-, in order to forecast the expected IFRS effects on Spanish corporations in the same industries.

The IFRS effects on German Corporations were important and often they meant a significant increase in retained earnings in the first year of adoption of IFRS. The main reason for those effects was the highly conservative philosophy of HGB leading to understatements of some assets (namely PPE, inventories, deferred taxes) and to an overstatement of some provisions. However, most of the German corporations had also understated pension liabilities by a large amount.

The specific analysis of the IFRS effects by industry lead to similar conclusions, with some nuances: in the chemical and pharmaceutical industry effects on non-currrent assets and liabilities were relatively more important, whereas in the fashion industry the effects were mostly on working capital.

After carrying out a selective extrapolation process for a number of Spanish corporations belonging to the same two industries, our conclusion is that there is likely to be some significant IFRS effects in Spain, but to a lesser degree than in Germany. In any case, our forecast is limited to a number of specific Spanish corporations listed in Appendix A; we did not issue any forecast or conclusion on Spanish corporations in general beyond the statement that impacts in Spain are likely to be less than in Germany.

The principal expected financial impacts are likely to come from fair-valuing available for sale investments (resulting in an increase in value in the two industries, with a higher impact in the fashion industry), expensing start-up and other deferred expenses and recognising share-based payments in the two industries (again, with a higher impact in the fashion industry). Also there might be some relatively minor impacts related to pension liabilities (increasing the balance), restructuring provisions (being reduced) and adjusting monetary assets and liabilities using the current rate of exchange.

Our findings and conclusions on the IFRS effects on German corporations and industries are based on actual figures reflecting historical facts. However, our conclusions on expected IFRS impacts in Spain can only be estimates, based on a number of assumptions.

It is expected that quoted Spanish groups will have to disclose, in their 2004 accounts, the estimated IFRS effects on their future 2005 accounts (including comparatives). That information will be of great help to update our conclusions on a more and more reliable basis.

.

REFERENCES

- Amat et.al (2004) *Normas Internacionales de Contabilidad NIC-NIIF*. Gestión 2000.

- Dumontier, P; Raffournier, B. (1998): "Why firms comply voluntarily with IAS: an empirical analysis with Swiss Data". *Journal of International Financial Management and Accounting*. 9:3.

- European Union (2000): *La estrategia de la Unión Europea en materia de información financiera: el camino a seguir*. Comunicación de la Comisión al Consejo y al Parlamento Europeos.

- IASB (1989). Conceptual Framework.

- Fischer, T; Klopefer, E. (2004): Evaluation of International Financial Reporting Standards (IAS/IFRS). Empirical evidence from listed German Companies. EAA conference. Prague.

- Lamb, M. ; Nobes, C.W.; Roberts, A.D. (1998): "International variations in the connections between tax and financial reporting". *Accounting and Business Research*. Summer.

- Mazars. (2003). The impact that changing to IAS-IFRS will have on European companies: somewhere between opportunities and complexity.

- Nobes (2001): GAAP 2001. A survey of National Accounting Rules Benchmarked against International Accounting Standards.

- PricewaterhouseCoopers (1998): *Understanding IAS*. 2nd. Edition. Edited by Bath Press. London.

- Sanchez Fernandez, J.L. (2003). Estudios sobre los efectos de la aplicación de las normas contables del IASB a los sectores cotizados de la bolsa española. Papeles de la fundación nª 3. Fundación de estudios financieros.

- Street, D.; Gray, S; Bryant, S (1999); "Acceptance and Observance of International Accounting Standards: an empirical study of companies claiming to comply with IASs". *The International Journal of Accounting*. Vol. 34, No. 1, pp. 11.48.

- Tua Pereda (2000). *El Marco Conceptual para la información financiera. Análisis y comentarios.* AECA. Madrid.

- Zeff (2000). *La evolución del marco conceptual para las empresas mercantiles en Estados Unidos*. Includo en Tua Pereda (2000), Págs.. 51 a 92.

APPENDIX A

KEY DATA FOR THE GERMAN AND SPANISH COMPANIES ANALYSED (€ million)
Source: 2003 Annual Accounts (1)

Company	DAX	Ch-Ph (2)	Fashion	Equity	Sales	Assets	Net Profit
Adidas	x		x	1.356	6.267	4.188	260
Altana	x	x		1.445	2.735	2.532	345
Bayer	x	x		12.213	28.567	37.445	-1.361
BMW	x			5.254	36.881	19.482	392
Lufthansa	x			2.653	15.957	16.732	-984
Deutsche Post	x			6.106	41.220	155	1.309
Henkel	x	x		3.311	9.436	9.362	530
Linde	x	x		3.851	8.992	11.915	108
Man	x			2.784	15.021	9.955	110
Metro	x			4.161	53.595	26.580	496
RWE	x			7.013	43.875	99.142	953
Schering	x	x		2.902	4.828	5.389	443
TUI	x			2.767	19.215	12.989	275
Volkswagen	x			24.430	87.153	119.136	1.095
Stada		x		613	745	955	44
Wella		x		655	3.312	2.519	122
Hugo Boss			x	399	1.054	755	82
Escada			x	73	621	438	-78
Ercros		x		127	214	354	-18
Faes Farma		x		118	173	198	20
La Seda		x		136	232	404	5
Natraceutical		x		14	18	34	2
Zeltia		x		316	74	431	3
Adolfo Domínguez			x	53	126	91	11
Cortefiel			x	312	921	635	30
Inditex			x	1.761	3.974	3.014	438

(1) 2003 annual accounts have been selected for the whole sample in order to compare financial data at the same date. Subsequent appendices related to German quoted companies show financial data for the year where IFRS have been implemented.
(2) Chemical and Pharmaceutical sector.

APPENDIX B-1

IFRS EFFECTS IN GERMAN DAX COMPANIES (million €) - RETAINED EARNINGS

	ADIDAS	ALTANA	BAYER	BMW	D. POST	HENKEL	LINDE	LUFTHANSA	MAN	METRO	RWE	SCHERING	TUI	VW	TOTAL	% effect on local RE	% effect on total Adjst (negative)	% effect on total Adjst (positive)
Year 1st aplication	*1.994*	*1.998*	*1.994*	*2.001*	*1.998*	*1.997*	*2.001*	*1.998*	*1997 / 8*	*1.999*	*1999 / 00*	*1.994*	*1997 / 8*	*2.001*				
R E per HGB	**422**	**1.302**	**5.205**	**4.896**	**1.671**	**2.360**	**4.276**	**5.339**	**4.058**	**4.133**	**9.453**	**1.884**	**3.135**	**9.811**	**57.945**			
Goodwill		80					12			218			-831		-521	-0,9	4	
Changes in consolidated group								134							134	0,2		0
R & D, and other self devel/format exp				2.054	191		105							3.982	6.332	10,9		23
PPE-gross value		38				173				-301					-90	-0,2		0
Deprec methods			121	669	831					228	-723		1.834	3.483	6.443	11,1		24
Finance leasing (lesse)	3			306				-722		-387					-800	-1,4	7	
Finance leasing (lessor)														1.962	1.962	3,4		7
Inventories			92	691							888			653	2.324	4,0		8
Orders by completion stage							-119		185				271		337	0,6		1
AR, AP, Cash		27		169	-431	-20					274				19	0,0		0
Financial instruments other				-1.074	258		113							897	194	0,3	-2	
Pensions		-74	-274		-3.544	-312	-221	-1.088	-591	-217	-3.250	-65	-358	-633	-10.627	-18,3	87	
Other provisions/deferred income		34	28	673	1.089	5	101	202	185		313		174	2.022	4.826	8,3		18
Deferred taxes		74	17	723	835	217	89	568	347	892	2.282		-92	-1.345	4.607	8,0		17
Translation reserve			32												32	0,1	0	
Other	17			325				63	-6	-117			-92	283	473	0,8		2
Reclassifications of minority interest	-19				-229									-197	-445	-0,8	4	
RE per IFRS	**423**	**1.481**	**5.220**	**9.432**	**671**	**2.423**	**4.356**	**4.496**	**4.178**	**4.449**	**9.237**	**1.819**	**4.041**	**20.918**	**73.144**		100	100
TOTAL EFFECT BY COMPANY	**1**	**179**	**15**	**4.536**	**-1.000**	**63**	**80**	**-843**	**120**	**316**	**-216**	**-65**	**906**	**11.107**	**15.199**			
% EFFECT ON HGB RE	**0**	**14**	**0**	**93**	**-60**	**3**	**2**	**-16**	**3**	**8**	**-2**	**-3**	**29**	**113**	**26**			

Total negative adjustments	**-12.168**
Total positive adjustments	**27.366**
	15.199

Subsequent impacts

	ADIDAS	ALTANA	BAYER	BMW	D. POST	HENKEL	LINDE	LUFTHANSA	MAN	METRO	RWE	SCHERING	TUI	VW	TOTAL
Application of IAS 36 to 38	Immaterial	Immaterial	Immaterial	N/A	Immaterial	Immaterial	N/A	Immaterial	Immaterial	N/A	N/A	Immaterial	Immaterial	N/A	**0**
Application of IAS 39	-1	7	1.434	N/A	393	13	N/A	375	0	-1	-242	96	12	N/A	**2.086**
% EFFECT ON HGB RE (1st apl. year)	0	0	27	N/A	59	1	N/A	8	0	0	-3	5	0	N/A	**3**

APPENDIX B-2

IFRS EFFECTS IN GERMAN DAX COMPANIES (million €) - IS

	ADIDAS	ALTANA	BAYER	BMW	D. POST	HENKEL	LINDE	LUFTHANSA	MAN	METRO	RWE	SCHERING	TUI	VOLKSWAGEN	TOTAL	% effect on local IS	effect on total Adjst (negative)	effect on total Adjst (positive)
	1.994	*1.998*	*1.994*	*2.001*	*1.998*	*1.996*	*2.001*	*1.998*	*1997 / 8*	*1.999*	*1999 / 00*	*1.994*	*1997 / 8*	*2.001*				
Net HGB earnings	**128**	**161**	**N/A**	**1.026**	**N/A**	**263**	**289**	**N/A**	**612**	**365**	**1.130**	**350**	**N/A**	**N/A**	**4.324**			
Goodwill		-10					-6			89					73	2		5
R&D and other intangible assets		33		236			8								277	6		18
Inventories and long term contracts-Cost of sales				69			-33		92		15				143	3		9
Deprec methods PPE		8		198		69	-17			30	411				699	16		46
Finance leasing				242						-1					241	6		16
AR/liabilities - revenue				55					-83						-28	-1	3	
Pensions						-11				-25	-111				-147	-3	13	
Other provisions		11		-485							104				-370	-9	34	
Financial instruments				56											56	1		4
Deferred taxes		-27		-186		-37	-15			-131	-154				-550	-13	50	
Income taxes (tax loss carryforward)									12						12	0		1
Forex adjustments	-5														-5	0	0	
Minority profit share	-3														-3	0	0	
Other	-3			-2			20			-22	20				13	0		1
Net earnings per IFRS	**117**	**176**		**1.209**		**284**	**246**		**633**	**305**	**1.415**	**350**			**4.735**		100	100
Net effect on P&L	**-11**	**15**		**183**		**21**	**-43**		**21**	**-60**	**285**	**0**			**411**			
% of adjustments on net HGB earnings	**-9**	**9**		**18**		**8**	**-15**		**3**	**-16**	**25**	**0**			**10**			

Total negative effects	**-1.103**
Total positive effects	**1.514**
Net effects	**411**

APPENDIX C-1

IFRS EFFECTS IN GERMAN CHEMICAL AND PHARMACEUTICAL QUOTED COMPANIES (million €) -RETAINED EARNINGS

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL	% effect on HGB RE	% effect on total Adjst (negative)	% effect on total Adjst (positive)
Year 1st aplication	*1.998*	*1.994*	*1.997*	*2.001*	*1.994*	*2.001*	*1.999*				
RE per HGB	**1.302**	**5.205**	**2.360**	**4.276**	**1.884**	**202**	**474**	**15.703**			
Goodwill	80			12		40		132	0,8		10
R & D, and other self devel/format exp				105		13		118	0,8		9
Deprec methods	38	121	173					332	2,1		25
Inventories/ Orders by competion stage		92		-119			-1	-28	-0,2	3	
AR, AP, Cash	27		-20			6	-61	-48	-0,3	5	
Financial instruments other				113				113	0,7		8
Pensions	-74	-274	-312	-221	-65	-1		-947	-6,0	91	
Other provisions/deferred income	34	28	5	101			-63	105	0,7		8
Deferred taxes	74	17	217	89		-4	83	476	3,0		36
Conversion reserve		32						32	0,2		2
Other						-1	31	30	0,2		2
Reclassifications of minority interest							-18	-18	-0,1	2	
RE per IFRS	**1.481**	**5.220**	**2.423**	**4.356**	**1.819**	**255**	**445**	**15.999**		100	100

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL
TOTAL EFFECT BY COMPANY	**179**	**15**	**63**	**80**	**-65**	**53**	**-29**	**296**
% EFFECT ON HGB RE	**14**	**0**	**3**	**2**	**-3**	**26**	**-6**	**2**

Total negative adjustments	**-1.042**
Total positive adjustments	**1.337**
Net adjustments	**296**

Subsequent impacts

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL
Application of IAS 36 to 38	Immaterial	Immaterial	Immaterial	N/A	Immaterial	N/A	N/A	**0**
Application of IAS 39	7	1.434	13	N/A	96	N/A	3	**1.553**
% EFFECT ON HGB RE (1st apl. year)	0	27	1	N/A	5	N/A	1	**10**

APPENDIX C-2

IFRS EFFECTS IN GERMAN CHEMICAL AND PHARMACEUTICAL QUOTED COMPANIES (million €) - IS

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL	% effect on local IS	% effect on total Adjst (negative)	% effect on total Adjst (positive)
	1.998	*1.994*	*1.996*	*2.001*	*1.994*	*2.001*	*1.999*				
Net HGB earnings	**161**	**N/A**	**263**	**289**	**350**	**25**	**64**	**1.152**			
Goodwill	-10			-6		-5		-21	-2	15	
R&D and other intangible assets	33			8				41	4		33
Inventories and long term contracts				-33				-33	-3	23	
Deprec methods PPE	8		69	-17		-2		58	5		46
Pensions			-11					-11	-1	8	
Other provisions	11							11	1		9
Deferred taxes	-27		-37	-15				-79	-7	55	
Other				20		-5	1	16	1		13
Net earnings per IFRS	**176**		**284**	**246**	**350**	**13**	**65**	**1.134**		100	100

	ALTANA	BAYER	HENKEL	LINDE	SCHERING	STADA	WELLA	TOTAL
Net effect on P&L	15		21	-43	0	-12	1	-18
% of adjustments on net HGB earnings	9		8	-15	0	-48	2	-2
					Total negative effects			-144
					Total positive effects			126
					Net effects			-18

APPENDIX D-1

IFRS EFFECTS IN GERMAN QUOTED COMPANIES IN FASHION INDUSTRY (million €) -RETAINED EARNINGS

	ADIDAS	ESCADA	H. BOSS	TOTAL	% effect on HGB RE	% effect on total Adjst (negative)	% effect on total Adjst (positive)
Year 1st aplication	*1.994*	*1999/00*	*2.001*				
RE per HGB	**422**	**165**	**305**	**892**			
Goodwill		-2		-2	-0,2	11	
R & D, and other self devel/format exp			-6	-6	-0,6	31	
Deprec methods		1		1	0,1		2
Finance leasing (lesse)	3	-4		-1	-0,1	6	
Inventories		-7	25	18	2,1		39
AR, AP, Cash		-5	7	2	0,3	-14	
Financial instruments other				0	0,0		0
Pensions		-2		-2	-0,2		-4
Other provisions/deferred income		-5	17	12	1,3	-65	
Deferred taxes		10		10	1,1		21
Other	17		2	19	2,2		42
Reclassifications of minority interest	-19	-4		-23	-2,6	131	
RE per IFRS	**423**	**147**	**352**	**922**		100	100

TOTAL EFFECT BY COMPANY	**1**	**-18**	**46**	**29**
% EFFECT ON HGB RE	**0**	**-11**	**15**	**3**
	Total negative adjustments			**-18**
	Total positive adjustments			**47**
	Net adjustments			**29**

Subsequent impacts

Application of IAS 36 to 38	Immaterial	N/A	N/A	**0**
Application of IAS 39	-1	Immaterial (undisclosed)	N/A	**-1**
% EFFECT ON HGB RE (1st apl. year)	0	N/A	N/A	**0**

APPENDIX D-2

IFRS EFFECTS IN GERMAN QUOTED COMPANIES IN FASHION INDUSTRY (million €) - IS

	ADIDAS	ESCADA	H. BOSS	TOTAL	% effect on local IS	% effect on total Adjst (negative)	% effect on total Adjst (positive)
	1.996	*1.999*	*2.001*				
Net HGB earnings	**128**	**2**	**107**	**237**			
Goodwill		-2		-2	-1	5	
Inventories /Cost of sales		-5	8	3	1		19
Deprec methods PPE			3	3	1		19
Pensions/personnel			-1	-1	0	2	
Other provisions		-7		-7	-3	22	
Net financial expenses			-2	-2	-1	7	
Deferred taxes		-1		-1	0	3	
Income taxes			10	10	4		63
Forex adjustments	-5			-5	-2	16	
Minority profit share	-3			-3	-1	10	
Other	-3	-1	-7	-11	-5	35	
Net earnings per IFRS	**117**	**-14**	**118**	**222**		100	100

Net effect on P&L	**-11**	**-16**	**11**	**-15**
% of adjustments on net HGB earnings	**-9**	**-775**	**10**	**-6**
	Total negative effects			**-31**
	Total positive effects			**16**
	Net effects			**-15**

Edicions / Issues:

95/1 *Productividad del trabajo, eficiencia e hipótesis de convergencia en la industria textil-confección europea*
Jordi López Sintas

95/2 *El tamaño de la empresa y la remuneración de los máximos directivos*
Pedro Ortín Ángel

95/3 *Multiple-Sourcing and Specific Investments*
Miguel A. García-Cestona

96/1 *La estructura interna de puestos y salarios en la jerarquía empresarial*
Pedro Ortín Ángel

96/2 *Efficient Privatization Under Incomplete Contracts*
Miguel A. García-Cestona
Vicente Salas-Fumás

96/3 *Institutional Imprinting, Global Cultural Models, and Patterns of Organizational Learning: Evidence from Firms in the Middle-Range Countries*
Mauro F. Guillén (The Wharton School, University of Pennsylvania)

96/4 *The relationship between firm size and innovation activity: a double decision approach*
Ester Martínez-Ros (Universitat Autònoma de Barcelona)
José M. Labeaga (UNED & Universitat Pompeu Fabra)

96/5 *An Approach to Asset-Liability Risk Control Through Asset-Liability Securities*
Joan Montllor i Serrats
María-Antonia Tarrazón Rodón

97/1 *Protección de los administradores ante el mercado de capitales: evidencia empírica en España*
Rafael Crespí i Cladera

97/2 *Determinants of Ownership Structure: A Panel Data Approach to the Spanish Case*
Rafael Crespí i Cladera

97/3 *The Spanish Law of Suspension of Payments: An Economic Analysis From Empirical Evidence*
Esteban van Hemmen Almazor

98/1 *Board Turnover and Firm Performance in Spanish Companies*
Carles Gispert i Pellicer

98/2 *Libre competencia frente a regulación en la distribución de medicamentos: teoría y evidencia empírica para el caso español*
Eva Jansson

98/3 *Firm's Current Performance and Innovative Behavior Are the Main Determinants of Salaries in Small-Medium Enterprises*
Jordi López Sintas y Ester Martínez Ros

98/4 *On The Determinants of Export Internalization: An Empirical Comparison Between Catalan and Spanish (Non-Catalan) Exporting Firms*
Alex Rialp i Criado

98/5 *Modelo de previsión y análisis del equilibrio financiero en la empresa*
Antonio Amorós Mestres

99/1 *Avaluació dinàmica de la productivitat dels hospitals i la seva descomposició en canvi tecnològic i canvi en eficiència tècnica*
Magda Solà

99/2 *Block Transfers: Implications for the Governance of Spanish Corporations*
Rafael Crespí, and Carles Gispert

99/3 *The Asymmetry of IBEX-35 Returns With TAR Models*
M.ª Dolores Márquez, César Villazón

99/4 *Sources and Implications of Asymmetric Competition: An Empirical Study*
Pilar López Belbeze

99/5 *El aprendizaje en los acuerdos de colaboración interempresarial*
Josep Rialp i Criado

00/1 *The Cost of Ownership in the Governance of Interfirm Collaborations*
Josep Rialp i Criado, i Vicente Salas Fumás

00/2 *Reasignación de recursos y resolución de contratos en el sistema concursal español*
Stefan van Hemmen Alamazor

00/3 *A Dynamic Analysis of Intrafirm Diffusion: The ATMs*
Lucio Fuentelsaz, Jaime Gómez, Yolanda Polo

00/4 *La Elección de los Socios: Razones para Cooperar con Centros de Investigación y con Proveedores y Clientes*
Cristina Bayona, Teresa García, Emilio Huerta

00/5 *Inefficient Banks or Inefficient Assets?*
Emili Tortosa-Ausina

01/1 *Collaboration Strategies and Technological Innovation: A Contractual Perspective of the Relationship Between Firms and Technological Centers*
Alex Rialp, Josep Rialp, Lluís Santamaria

01/2 *Modelo para la Identificación de Grupos Estratégicos Basado en el Análisis Envolvente de Datos: Aplicación al Sector Bancario Español*
Diego Prior, Jordi Surroca

01/3 *Seniority-Based Pay: Is It Used As a Motivation Device?*
Alberto Bayo-Moriones

01/4 *Calidad de Servicio en la Enseñanza Universitaria: Desarrollo y Validación de una Escala de Medida.*
Joan-Lluís Capelleras, José M.ª Veciana.

01/5 *Enfoque estructural vs. recursos y capacidades: un estudio empírico de los factores clave de éxito de las agencias de viajes en España.*
Fabiola López-Marín, José M.ª Veciana.

01/6 *Opción de Responsabilidad Limitada y Opción de Abandonar: Una Integración para el Análisis del Coste de Capital.*
Neus Orgaz.

01/7 *Un Modelo de Predicción de la Insolvencia Empresarial Aplicado al Sector Textil y Confección de Barcelona (1994-1997).*
Antonio Somoza López

01/8 *La Gestión del Conocimiento en Pequeñas Empresas de Tecnología de la Información: Una Investigación Exploratoria*.
Laura E. Zapata Cantú.

01/9 *Marco Institucional Formal de Creación de Empresas en Catalunya: Oferta y Demanda de Servicios de Apoyo*
David Urbano y José María Veciana.

02/1 *Access as a Motivational Device: Implications for Human Resource Management*.
Pablo Arocena, Mikel Villanueva.

02/2 *Efficiency and Quality in Local Government. The Case of Spanish Local Authorities*
M.T. Balaguer, D. Prior, J.M. Vela

02/3 *Single Period Markowitz Portfolio Selection, Performance Gauging and Duality: A variation on Luenberger's Shortage Function*
Walter Briec, Kristiaan Kerstens, Jean Baptiste Lesourd.

02/4 *Innovación tecnológica y resultado exportador: un análisis empírico aplicado al sector textil-confección español*
Rossano Eusebio, Àlex Rialp Criado

02/5 *Caracterización de las empresas que colaboran con centros tecnológicos*
Lluís Santamaria, Miguel Ángel García Cestona, Josep Rialp

02/6 *Restricción de crédito bancario en economías emergentes: el caso de la PYME en México*
Esteban van Hemmen Almazor

02/7 *La revelación de información obligatoria y voluntaria (activos intangibles) en las entidades de crédito. Factores determinantes.*
Gonzalo Rodríguez Pérez

02/8 *Measuring Sustained Superior Performance at the Firm Level*
Emili Grifell - Tatjé, Pilar Marquès - Gou

02/9 *Governance Mechanisms in Spanish Financial Intermediaries*
Rafel Crespi, Miguel A. García-Cestona, Vicente Salas

02/10 *Endeudamiento y ciclos políticos presupuestarios: el caso de los ayuntamientos catalanes*
Pedro Escudero Fernández, Diego Prior Jiménez

02/11 *The phenomenon of international new ventures, global start-ups, and born-globals:what do we know after a decade (1993-2002) of exhaustive scientific inquiry?*
Àlex Rialp-Criado, Josep Rialp-Criado, Gary A. Knight

03/1 *A methodology to measure shareholder value orientation and shareholder value creation aimed at providing a research basis to investigate the link between both magnitudes*
Stephan Hecking

03/2 A*ssessing the structural change of strategic mobility. Determinants under hypercompetitive environments*
José Ángel Zúñiga Vicente, José David Vicente Lorente

03/3 *Internal promotion versus external recruitment: evidence in industrial plants*
Alberto Bayo-Moriones, Pedro Ortín-Ángel

03/4 *El empresario digital como determinante del éxito de las empresas puramente digitales: un estudio empírico*
Christian Serarols, José M.ª Veciana

03/5 *La solvencia financiera del asegurador de vida y su relación con el coste de capital*
Jordi Celma Sanz

03/6 *Proceso del desarrollo exportador de las empresas industriales españolas que participan en un consorcio de exportación: un estudio de caso*
Piedad Cristina Martínez Carazo

03/7 *Utilidad de una Medida de la Eficiencia en la Generación de Ventas para la Predicción del Resultado*
María Cristina Abad Navarro

03/8 *Evaluación de fondos de inversión garantizados por medio de portfolio insurance*
Sílvia Bou Ysàs

03/9 *Aplicación del DEA en el Análisis de Beneficios en un Sistema Integrado Verticalmente Hacia Adelante*
Héctor Ruiz Soria

04/1 *Regulación de la Distribución Eléctrica en España: Análisis Económico de una Década, 1987-1997*
Leticia Blázquez Gómez; Emili Grifell-Tatjé

04/2 *The Barcelonnettes: an Example of Network-Entrepreneurs in XIX Century Mexico. An Explanation Based on a Theory of Bounded Rational Choice with Social Embeddedness.*
Gonzalo Castañeda

05/1 *IFRS Adoption in Europe: The Case of Germany.*
Soledad Moya, Jordi Perramon, Anselm Constans