CONSERVADURISMO DEL RESULTADO BAJO LAS NORMAS INTERNACIONALES DE CONTABILIDAD: UN ESTUDIO COMPARADO

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Resumen

El presente trabajo muestra que la adopción de la normativa del IASB en los países europeos ha contribuido a aumentar el conservadurismo del resultado de las empresas que las implantaron antes de ser obligatorias en 2005, acercando las medidas de conservadurismo a los niveles estadounidenses. Este no es el caso de las empresas de países menos desarrollados que han adoptado la normativa internacional. Para estas empresas, pese a la adopción de las NIC, el conservadurismo no ha aumentado. De hecho, no hay indicios de asimetría en el reconocimiento de noticias en el resultado. Además, parte del aumento en el conservadurismo observado en las empresas europeas desaparece si se controla de manera adecuada por sus características específicas.

1. INTRODUCCIÓN

En este trabajo contrastamos si la adopción de las normas de contabilidad emitidas por el IASB (IAS) afecta de manera significativa al conservadurismo del resultado, entendido como la mayor oportunidad en el reflejo de pérdidas que en el reconocimiento de beneficios. Ball *et al.* (2000), Ball *et al.* (2003), García Lara *et al.* (2005) y Bushman y Piotroski (2006), entre otros, argumentan que las diferencias en el conservadurismo del resultado entre países son atribuibles a diferencias en los factores institucionales propios de cada entorno (como, por ejemplo, el riesgo de litigio asumido por directivos y auditores), y que el empleo de un único conjunto de normas no contribuirá a reducir las diferencias en las propiedades del resultado si las diferencias entre tales factores permanecen. En el actual contexto de normalización contable a escala global, Ball *et al.* (2003) concluyen que la adopción de normas contables de alta calidad no garantiza por si misma la publicación de una información financiera de calidad si ello no se acompaña de los oportunos mecanismos de control.

En el contexto europeo, y a escala global, el éxito en la implantación de las IAS dependerá fundamentalmente de su efecto final sobre las cualidades de la información financiera publicada por las empresas, en términos de comparabilidad, relevancia y fiabilidad. En este trabajo analizamos si tales normas son capaces de mejorar el conservadurismo del resultado, como propiedad o atributo de la información financiera que muestra una mayor variación entre diferentes países o entornos institucionales. En concreto, analizamos si las diferencias en la oportunidad asimétrica del resultado en 58 países, comparando el conservadurismo del resultado publicado bajo las normas nacionales e internacionales de contabilidad.

La evidencia hallada muestra que, en línea con la evidencia previa, el conservadurismo del resultado es significativamente más pronunciado en los países con sistemas legales basados en el *derecho común*, frente a los países con tradición legislativa inspirada en el derecho romano. Por otra parte, la adopción de las IAS ha contribuido a mejorar de manera significativa la prudencia o conservadurismo del resultado en los países europeos, pero no ha sido así en otros países caracterizados como emergentes o en vías de desarrollo.

La segunda parte de nuestro estudio se centra en Alemania, con objeto de controlar el efecto de los factores institucionales en el país donde es mayor el número de empresas que vienen aplicando las IAS-IFRS. Para ello, construimos dos muestras de empresas que utilizan las normas nacionales e internacionales, comparables en términos de sector económico y tamaño en cada año. En relación con ambas muestras, no se aprecia una diferencia significativa en el conservadurismo del resultado.

En conjunto, la evidencia hallada sugiere que la normalización contable basada en la adopción de un mismo sistema de normas contables en distintos países no es suficiente para conseguir la homogeneidad en las propiedades del resultado publicado. Más bien, ello exigiría eliminar las diferencias en los factores institucionales propios de cada entorno. Estos factores son, en última instancia, los que condicionan los incentivos de los responsables de elaborar (y auditar) la información financiera para optar por prácticas más o menos conservadoras en el reconocimiento de pérdidas y beneficios. De hecho, los resultados obtenidos con referencia a las empresas europeas, apuntan que la utilización de las IAS en cada país tiende a mejorar la prudencia del resultado, pero esta mejora no es evidente con respecto a las empresas de similares características económicas.

El resto del trabajo se organiza en cuatro secciones. La sección segunda analiza las razones que justifican la normalización contable basada en la adopción de las IAS, y expone su efecto esperado sobre el conservadurismo del resultado. En la sección tercera se describen las hipótesis y el diseño de la investigación. Por último, los aspectos más relevantes del trabajo se resumen en la sección quinta a modo de conclusión.

2. INTERNATIONAL ADOPTION OF IASB STANDARDS AND ITS EFFECTS OVER CONSERVATISM IN EARNINGS

The implementation of the IAS in different countries responds to different regulatory incentives. In the European Union, IAS are compulsory for listed firms, to prepare their consolidated financial statements, from 2005 onwards. In the EU case, the adoption of the international standards responds to the interest of the European Commission of improving the comparability of accounting information in Europe. The comparability of accounting information is a basic requisite to improve the allocation of rents among competing firms/projects and to improve the efficiency of the internal financial markets. While in the EU comparability is the main objective of introducing international standards, in developing economies the basic interest of using IASB standards is to ensure a certain degree of quality of the information provided, both in terms of relevance and reliability. In both cases, EU and developing countries, another incentive to adopt the IAS relates to the fact that the SEC (Securities and Exchange Commission, the financial market regulatory body in the US and a member of IOSCO) was expected to accept IASB-compliant financial statements for the purpose of cross-listing in US financial markets.

Looking at the European case, prior evidence suggests that some of the differences in the properties of accounting numbers across European countries are attributable to differential institutional settings that give managers different incentives to reflect in a different way the same economic events in the financial statements. This is especially relevant in the case of conservatism. Differences in the ownership structure, litigation exposure of managers and auditors, shareholder protection mechanisms, etc… lead to pronounced differences in earnings conservatism across countries that the use of a single set of standards will not be able to eliminate if the differences in the institutional context remain and managers' incentives continue to differ.

As earnings conservatism has been pointed out as one of the main source of differences in the properties of earnings across countries, in this study we focus on whether differences in earnings conservatism exist across firms using their own local GAAP or using the IAS.

2.1. Conservatism in earnings

Conservatism in earnings is a temporary question, and does not imply understating earnings consistently, as the very same accrual principle would prevent this. Basu (1997) defines conservatism in earnings as the asymmetric treatment of gains and losses in the profit and loss account. Losses are recognised on a timelier basis than gains. As Givoly and Hayn (2000) point out, conservatism in the profit and loss account is a question of the timing and sequencing of earnings relative to their associated cash-flows. They argue that, under a steady state, and over a sufficiently long period, accounting based measures of performance will converge to the true economic performance. This argument is similar to the error-cancelling argument in Zhang (2000), where he shows that if there is no growth, accounting earnings asymptotically

equal economic earnings[i]. Even assuming growth, conservatism in earnings will only affect (decrease) the book value of shareholders' equity temporarily (the lags described in Beaver and Ryan, 2000), until the reversal of the accruals.

2.2. Effects of the adoption of IASB standards over conservatism in earnings

As pointed out in the IASB's conceptual framework (IASC, 1989), the objective of financial statements is to provide information about the financial position, performance and about the changes in the financial position of an enterprise that is useful to a wide range of decision makers in making economic decisions. The IASB's framework describes four qualitative characteristics that accounting information should have to be useful to this wide range of users (investors, lenders, employees, government, etc.): i) understandability, ii) relevance, iii) reliability and iv) comparability.

While most developed countries (all EU countries) have accounting systems based on Generally Accepted Accounting Principles similar to the ones stated by the IASB, which lead to relevant and reliable information, firms in developing countries have shifted towards IAS in an attempt to improve the quality of their accounting information. As we already pointed out, the objective of EU countries with the adoption of the IASB standards is to improve comparability. Either in developing countries, or in the European Union, one might expect that given that IAS are closer to common-law countries' accounting standards, the adoption of IAS would lead to accounting earnings characteristics, like conservatism, being closer to common-law earnings. However, analysing prior literature (for example, García Lara *et al.*, 2005 for European countries or Ball *et al.*, 2003 for Asian countries) the expectation could be that given that differences in the institutional context do not change and that enforcement (especially in Asian countries) is low, the properties of earnings will not change by using IAS.

Looking at the European Union case, the use of 25 different accounting standards was an obvious barrier to the comparability of accounting information, making it difficult to allocate capital in an efficient way among EU firms. Most local investors used to invest in local firms just because they knew their accounting standards. This situation was undermining the efficiency of the allocation of economic resources and was constraining the range of investment choices of EU citizens. However, prior literature that analyses the international differences in earnings conservatism points out that differences will not disappear just using a set of common standards, as the differences arise because of the different institutional settings. Most of this literature compares common-law accounting regimes (Anglo-Saxon regimes: US, UK, Ireland) with code-law based countries (all European continental countries[ii]).

The different role of financial statements in countries with common-law and code-law accounting systems lead to international differences in conservatism (See Ball *et al.*, 2000). In common-law countries (typical examples are the US and the UK), the ownership of the firm is very widespread, and firms seek capital funds directly from small investors through the capital markets. Investors in these countries demand very informative accounting information, and financial statements are the only source of information about the financial affairs of the firm that most of these small investors have. This demand for information is especially important for investors in the case of bad news, as we can assume that they are risk averse. Investors will be willing and able to sue managers and auditors if they fail to disclose bad news on a very timely basis. This enhances the asymmetry in the recognition of good and bad news that the accounting system, per se, already has.

This demand for an asymmetric recognition of good and bad news in earnings (earnings conservatism) is not so important in code-law based countries. In code-law based countries the main providers of capital funds (even through the capital markets) are financial institutions. These financial institutions have other timelier sources of information about the firm than financial statements. They are even represented in the board of directors. Consequently, the demand for earnings conservatism in these countries is lower than in common-law based countries. Banks in code-law based countries demand conservative valuation of assets (balance sheet conservatism), and this more pronounced balance sheet conservative behaviour leads to less asymmetry in the recognition of good and bad news in earnings, that is, to less pronounced earnings conservatism practices (see Pope and Walker, 2003; and Beaver and Ryan, 2005). Other institutional features, for example, the demand for smoothed income streams (see Ball *et al.*, 2000; and Bao and Bao, 2004) will also contribute to less pronounced earnings conservatism in code-law based countries.

Consistent with this explanation of the difference in the demand for earnings conservatism across code and common-law based countries, Ball *et al.* (2000) and Bushman and Piotroski (2006) find the US more conservative than code-law based countries. In Europe, García Lara *et al.* (2005) show that the UK is more conservative from a profit and loss account perspective than France and Germany (typical code-law based countries). They show that prior findings of similar levels of earnings conservatism between the UK and European code-law based countries are severely influenced by earnings management practices in Continental European countries.

Bearing in mind this more pronounced earnings conservatism in common-law countries found in prior literature (Ball *et al.*, 2000; García Lara *et al.*, 2005, Bushman and Piotroski, 2006), one might think that by using IASB standards, which are closer to common-law countries' standards (closer to US or UK GAAP), earnings conservatism should increase in code-law based European firms. However, the factors explaining why code-law based firms are more conservative in earnings than common-law based firms relate directly to institutional features in each country (litigation risk, smoothing of earnings due to taxation and dividend policy), and this will not change by using a common set of accounting standards.

Our main objective is, thus, analysing whether the use of the IAS will have an effect over earnings conservatism of adopting firms, or if the institutional factors will dominate and determine the properties of earnings regardless of the set of standards that firms use. Our results are consistent with the latter explanation: earnings conservatism is not largely influenced by the regulatory change.

3. RESEARCH DESIGN

Given the effects that the use of the IASB standards could have over the properties of earnings in general and over earnings conservatism in particular, we test the following two hypotheses:

H1: Effects of IAS implementation in countries with low quality local standards (for example East Asian countries) vs effects of IAS implementation in countries with high quality local standards (for example continental European countries).

Given the low relevance and reliability of accounting information from developing countries, for example, East-Asian countries, the use of the IAS by firms in these countries is expected to contribute to make their accounting information more similar to the one reported by firms in common-law countries. When analysing conservatism, this

expectation of increased quality in earnings numbers by using IASB standards should translate into more conservative accounting numbers, that is, a more pronounced asymmetry in earnings caused by bad news being recognised in a timelier basis. However, and as pointed out by Ball *et al.* (2003), the absence of enforcement mechanisms, together with the use of different and ad-hoc versions of the IAS, lead to a decrease in the relevance and reliability of accounting numbers in these countries, which would be making accounting information not timely at all. On the other hand, in countries where a set of high quality accounting standards exist, the use of IAS is expected to maintain a high level of earnings conservatism. This is the case of continental European countries, where earnings conservatism is even expected to increase (from a regulatory point of view) given that most continental European accounting regulations are more conservative from a balance sheet perspective, forcing earnings conservatism measures downwards (see an analysis of the relation between earnings and balance sheet conservatism in Pope and Walker, 2003, and Beaver and Ryan, 2005).

To test this hypothesis we just compare samples of firms using and not using IAS, coming from several country sets: i) common-law countries, ii) code-law countries, iii) European code-law countries, iv) emerging countries, v) firms using IA worldwide, and vi) firms using IAS in Europe. The objective is to see whether there are significant differences in conservatism across the different country sets. We are aware that these sets of countries/firms are very heterogeneous, and that the results are obviously affected by differences in the sample composition. However, we take this analysis as just a description of differences between accounting regimes, and in the next set of analyses, we run a more formal set of tests to see the impact of the use of the IASB standards in one country (Germany), using two samples of firms, matched by economic characteristics, that use respectively IAS and local GAAP, and see whether the use of different standards for similar firms affect their accounting numbers.

H2: Impact of IAS use in German firms (a matched sample analysis).

Given that the differences across European code-law and common-law countries in earnings attributes in general, and in earnings conservatism in particular, are attributable to differences in the institutional context (i.e. differences in ownership structure, litigation risk and earnings management incentives), we expect that even using the international accounting standards, earnings conservatism will not be significantly affected by the use of IAS, and its level will be similar between firms using local GAAP and firms using IAS.

If we focus on the changes that the IASB standards introduce in conservative accounting choices, the IASB standards are in general less balance sheet conservative than local European continental standards. For example, IAS 16 permits the use of fair value accounting for tangible assets, consequently allowing the use of revaluations for assets. However, German GAAP does not allow the use of revaluations at all. This means that German GAAP is more balance sheet conservative, leading to an under-recognition and understatement of assets that translates into lower measures of earnings conservatism (see Beaver and Ryan, 2005). In this situation, the first order regulatory effect of using IAS would lead to increased measures of earnings conservatism.

However, and as pointed out by Ball *et al.* (2000), the differences in earnings conservatism between common-law countries and European continental countries are due to differences in the institutional context. Litigation risk is one of main triggers of earnings conservatism in common-law countries. However, litigation risk is practically inexistent in Germany (as in other European continental countries): the main providers

of finance have timelier sources of information about the firm other than the financial statements, and in addition, even if investors would be willing to sue managers or auditors, the mechanisms in place for shareholder protection would probably lead to a costly and unsuccessful judicial process. Also, Ball *et al.* (2000) explain the difference between German firms and common-law firms in the timelier recognition of bad news in earnings looking at smoothing. Earnings smoothing is much more pronounced in Germany than in common-law countries (see also Leuz *et al.*, 2003; Bao and Bao, 2004; Gassen *et al.*, 2005; García Lara *et al.*, 2006). In civil-law based countries, like Germany, ownership is very concentrated, even in listed firms. Banks hold large direct or indirect ownership blocks and dominate voting rights. Ball *et al.* (2000) argue that bank leverage regulations penalise volatility in bank income. Consequently, banks have incentives to reduce the volatility of earnings streams from their investments, and as they are represented in the board of directors they pressure their participated firms for smooth streams of earnings and dividends. At the same time, the tax authorities pressure both firms and financial institutions to reduce the volatility of earnings to reduce the volatility of tax receipts. Related to this, Van Tendeloo and Vanstraelen (2005) argue that smoothing of earnings in Germany will increase with the implementation of the IASB standards.

These differential institutional factors (absence of litigation risk, more pronounced smoothing of earnings) will not disappear with the implementation of the IASB standards, and as they are the main drivers of the earnings conservatism, we expect that the level of earnings conservatism will be similar in German firms using local GAAP and IASB standards[iii].

The sample

The initial sample ('IAS sample') to test our first set of analyses consists of 874 firms from 58 countries that adopted voluntarily the IASB standards for financial reporting purposes over the period 1994-2003. The sample is drawn from Compustat Global, and we identify whether the firm is using IAS through the variable "standard note". For comparative purposes, we also use a sample of firms from 20 developed or emerging countries, which used domestic GAAP during the same period, with a total of 12,057 firms, and 79,052 firm-year observations. We will compare the earnings attributes of firms using IAS with the earnings attributes of groups of firms from common-law, code-law and emerging countries. Table 1 provides a description of the sample composition per country, and Table 2 provides sample descriptive statistics. We group firms according to whether they are domiciled in a common-law, code-law or emerging country, and according to whether the firm uses IAS or local GAAP. The descriptive statistics are consistent with the existence of earnings conservatism in all groups of firms, that is, earnings is negatively skewed in all groups (medians exceed means). Also, we can see that the standard deviation of returns is always larger than the standard deviation of earnings, consistent with the intrinsic characteristics of accounting numbers, less affected by news. These descriptive statistics are consistent with prior research.

Regarding our second set of tests, where we concentrate on Germany and use a matched sample of firms using IASB standards and local GAAP, we download all available observations for German firms in Compustat Global for the period 1994-2004[iv]. We exclude financial firms, and firms with missing data to estimate the different conservatism models. We identify firms using local GAAP and IASB standards using the "standard note" variable. We match every observation from the sample of German firms using IASB standards with an observation of the sample of German firms using local GAAP. To do the matching we select, for any given firm-year observation using

IAS all observations from the local-GAAP sample from the same year and US-SIC 2 digit code[v], and then we choose as a match the one that minimises the difference in total assets. Table 3 shows the descriptive statistics from this sample. Again consistent with prior research, earnings is negative skewed in both samples and returns are more volatile than earnings.

Conservatism tests

To measure the level of earnings conservatism we use stock returns as a proxy for news, and estimate the model proposed by Basu (1997):

$$X_{it} = \beta_0 + \beta_1 RD_{it} + \beta_2 R_{it} + \beta_3 R_{it} RD_{it} + \varepsilon_{it} \qquad [1]$$

where: X is earnings per share deflated by share price at the beginning of the fiscal year t, R is the rate of return (inclusive of dividends) over the fiscal year t, and RD is a dummy variable that takes value 1 in case of bad news (negative or zero rate of return), and 0 otherwise. We use different definitions of earnings (before and after extraordinary and special items); and returns (measured using a 12 month window over the fiscal year, over a 12 month window finishing 3 months after the balance sheet date, and using 15 month windows covering the fiscal year plus 3 months).

For our first set of tests, we estimate equation [1] for each accounting system from a pooled cross-section (across firms) and time-series (fiscal years) regression. The coefficient β_2 measures the average contemporaneous sensitivity of accounting earnings reported by firms in each group to positive changes in market value of equity (economic gains). The coefficient β_3 measures the incremental response of accounting earnings to negative changes in market value of equity (economic losses). The total response or sensitivity of accounting earnings to negative changes in market value of equity is measured by ($\beta_2+\beta_3$). Following Giner and Rees (2001), we estimate whether the conservatism coefficient (β_3) is significantly different across the different groups as:

$$\left[\phi_1 - \phi_2 \Big/ \sqrt{\sigma_1^2 + \sigma_2^2} \right] \quad t \qquad [2]$$

where θ_i is the estimated coefficient and σ_i the standard error for variable i.

For our second set of tests, we apply model 1 to the two matched samples of German firms using local GAAP and IASB standards, and analyse whether differences between the two groups are significant using the test described in equation [2].

4. RESULTS

Table 4 presents the results of running Equation [1] for six different groups:
  (i) Firms in common-law countries using their own local GAAP (Australia, Canada, New Zealand, South Africa, United Kingdom and United States).
  (ii) Firms in code-law countries using their own local GAAP (Austria, Belgium, France, Germany, Italy, Japan, Spain and Switzerland)[vi].
  (iii) As in (ii) but excluding Japan. That is, only European code-law firms.
  (iv) Firms in emerging countries using local GAAP (Hong Kong, Malaysia, Singapore, Taiwan and Thailand).
  (v) All firms using IAS identified in Compustat Global (58 countries).
  (vi) Firms using IAS in our European main sample (Austria, Belgium, France, Germany, Italy, Spain and Switzerland).

The results show that for the common-law group (group i) results are consistent with prior research. Conservatism exists -earnings are clearly asymmetric, β_3 equals 0.30- and the good news coefficient (β_2) is close to zero.[vii] The intercept is positive and significant, showing the effect of prior period good news. If we focus on the code-law group (ii), we see that results are dominated by Japanese firms. As in Ball *et al.* (2000) Japan is much less conservative than common-law countries. In our sample, the conservatism coefficient β_3 for the code-law sample including Japan is 0.08, and the difference with the β_3 coefficient from common-law countries is significantly different (*t*-stat: 20.55). If we drop Japan from the code-law sample (group iii), we see that the β_3 coefficient rises to 0.24. This is consistent with prior evidence on European countries (Giner and Rees, 2001, García Lara and Mora, 2004, Bushman and Piotroski, 2006), but we should note that the difference with the common-law firms is still significant (*t*-stat 2.93). García Lara *et al.* (2005) argue that the measures of conservatism in European code-law based countries are inflated due to earnings management practices that purposefully decrease earnings for tax and dividend policy reasons. For the two code-law samples the good news coefficient is positive and close to zero, and the intercepts are significant.

Looking at the emerging countries using their own local GAAP (sample iv), the results show that these firms are also significantly (*t*-stat 6.40) less conservative than firms in common-law based countries. The very low coefficient of determination may also be pointing at a very low relevance of accounting numbers in these countries, which is consistent with the results in Ball *et al.* (2003).

Finally, with regards to the two IAS samples, sample (v) for all countries, and sample (vii) for European countries, we find the following. When we use all firms using IASB standards, results are difficult to interpret due to the tremendous firm heterogeneity, although given that we find a significant β_3 coefficient we might think that the lack of enforcement in most countries does not lead to low relevance and low reliability of accounting information. If we focus on European firms using IAS the interpretation is much clearer. We observe a significant increase in the β_3 coefficient (*t*-stat: 4.50) with respect to firms from the same seven countries using local GAAP. This increase could be attributable to IASB standards (IAS 16) being less balance sheet conservative than local European continental GAAPs and, consequently, leading to more conservative earnings numbers (see Beaver and Ryan, 2005). Also, European firms using IAS might be listed in other markets, more widely held, and subject to pressures other than those from the European continental institutional context (see Raonic *et al.* 2004).

In addition, we test if the conservative measures derived from model [1] for the IAS sample are significantly different before and after the adoption of the IAS, by running the following regression:

$$X_{it} = \beta_0 + \beta_{0D}DI_{it} + \beta_1 RD_{it} + \beta_{1D}RD_{it}DI_{it} + \beta_2 R_{it} + \\ + \beta_{2D}R_{it}DI_{it} + \beta_3 R_{it}RD_{it} + \beta_{3D}R_{it}RD_{it}DI_{it} + \varepsilon_{it} \qquad [3]$$

where DI_{it} = 1 when accounting earnings of firm *i* in fiscal year *t* is reported under IAS, and DI_{it} = 0 when domestic GAAP were used. Model [3] is separately estimated over the IAS subsample formed by retaining firms from the seven continental European (code-law) countries, and over the IAS subsample that puts together firms from the rest of the world. Table 5 displays the results obtained. While for the European sample we observe that the β_{3D} coefficient of 0.17 (*t*=2.78) confirms a significant increase in the contemporaneous earnings response to bad news when the IASB standards are adopted, when we look at firms from other countries we see that the β_{3D} coefficient is

not significant. Therefore, we cannot conclude that the adoption of IAS in non-European (code-law based) countries over our sample period implied a significant increase in earnings conservatism.

To avoid our results being driven by differences in the sample composition in each group, and to study more deeply the effect of the use of IASB standards on conservatism, in our next set of analyses we focus on Germany and match firms using local GAAP and IASB standards by industry and size, and analyse whether there are significant differences between the two groups. We choose Germany as it is the only country where, given the sample size, we can undertake this analysis.

Table 6 shows the results of this analysis. We can see that the earnings conservatism coefficient (β_3) for firms using local GAAP is 0.27 (income before extraordinary items), and 0.32 for firms using IAS. As expected, the effect of the use of IASB standards should contribute to an increase in earnings conservatism. However, and due to the existence of institutional features in Germany that predetermine conservatism, we expect that the effect of IASB standards would be very limited. The difference between the local GAAP group and the IASB group is not significant (*t*-stat: 0.46), consistent with institutional factors shaping earnings attributes regardless of the set of standards used by the firms. The inferences do not change when we use earnings after extraordinary items, as the difference between the two groups in the β_3 coefficient is still not significant (*t*-stat: 0.86).

To confirm the robustness of this result we run model [3] for the matched samples of German firms using local GAAP and the IAS. Running this model we check whether the total bad news effect in earnings of local GAAP firms ($\beta_2 + \beta_3$) significantly differs from the total bad news effect in earnings of IASB firms ($\beta_2 + \beta_{2D} + \beta_3 + \beta_{3D}$). With the results in Table 7 we cannot reject the hypothesis that ($\beta_2 + \beta_3$) = ($\beta_2 + \beta_{2D} + \beta_3 + \beta_{3D}$). That is, there is no significant difference in earnings conservatism between the matched samples of firms using German local GAAP and IASB standards.

Sensitivity tests

To ensure the robustness of our results we replicate our main results using different definitions of returns. In our main tests we calculate returns over the fiscal year. We also calculate them over a 12-month-window finishing 3 months after the fiscal year end, and over a 15 month window finishing 3 months after the fiscal year. Results are not sensitive to these different definitions of returns.

In our main tests we use earnings before extraordinary and special items. However, and following Pope and Walker (1999), we replicate our tests with bottom-line earnings, as managers might use extraordinary and special items differently in different accounting regimes, especially to avoid capturing bad news in the profit and loss account through ordinary earnings. Using bottom-line earnings our results do not change qualitatively.

We also use Fama and MacBeth (1973) mean annual regressions to avoid our results being driven by cross-sectional dependence problems. Although the results are similar to the ones reported with the pooled samples, we choose to report the pooled results as we have serious concerns about the robustness of mean annual regressions for our samples. The number of observations in the early years of most of our samples (especially the IAS ones) is very limited, which prevents running robust regressions. Having this in mind, for most of the samples (for example, for the matched German samples) we only have 7 years of data to run the Basu tests, which puts into question the assumption of normality of the parameters of Fama and MacBeth (1973). Also, and

as pointed out by Basu (1999), Fama and MacBeth regressions assume stationary parameters, and as we know, some of the accounting regimes under study have changed significantly over the last years. Thus, assuming that the parameters are stationary is questionable.

For our first set of tests (comparing the six groups of firms) we also control for differences in the market to book ratio and size, as a first control for differences in economic characteristics and sample composition across the different groups. The results of these tests are consistent with prior research. As expected, firms with high market to book ratios (firms that understate more assets, with more balance sheet conservatism) are less conservative in earnings. Also, small firms are more earnings conservative than large firms. This is consistent with prior research, but relatively surprising. Basu (2001) explains this surprising result on the grounds of smaller firms being riskier and facing larger litigation risk. García Lara *et al.* (2005) also argue that smaller firms in continental European countries engage more in income decreasing earnings management that increase the measures of earnings conservatism. Results of comparisons of conservatism between groups of firms using or not IAS across subsamples of size and the market to book ratio are consistent with the results described for the full sample.

Finally, and for the matched sample tests, we use several versions of the non-market based variant of the Basu (1997) model proposed by Ball and Shivakumar (2005). The results of these tests (tests of persistence in earnings changes) are always consistent with IASB standards not increasing the measures of conservatism over the conservatism shown by matched firms using local GAAP.

5. SUMMARY AND CONCLUSIONS

In this study we analyse whether the use of IASB standards affects the conservatism of earnings of the firms that adopt them. Using a matched sample of German firms that use local GAAP and IAS respectively, we show that the use of IASB standards has a very reduced effect over the earnings conservatism measures. In fact, the conservatism of the two matched groups is not significantly different. This shows that institutional factors such as the reduced litigation risk in Germany, the more pronounced smoothing of earnings, etc. will prevail and drive the attributes of earnings. Also, and in a more descriptive set of tests, we compare the conservatism of firms by groups of firms/countries using or not IAS. Our results show that the use of IAS in non-European countries does not yield timely accounting numbers (untimely good and bad news recognition in earnings). In line with Ball *et al.* (2003), our opinion is that such countries (emerging countries) should improve their enforcement mechanisms.

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NOTES:

[i] See analytical demonstration in Zhang (2000, p. 132).

[ii] Being The Netherlands a distinctive case in between common-law and code-law based countries.

[iii] Although if any, the effect of the use of IASB standards should be an increase in the earnings conservatism measures, due to a decrease in balance sheet conservatism that the use of IAS 16 could introduce.

[iv] We extend the German sample to 2004 so that we have all available observations before 2005, as this is the year when IASB standards become compulsory for listed firms to prepare their consolidated financial statements in the European Union.

[v] Alford (1992) and Liu *et al.* (2002) show that, for valuation purposes, the best way to select comparable firms is by matching by industry sector, and that other more sophisticated matching techniques do not contribute to selecting a more comparable firm.

[vi] In a sensitivity test we replicate this analysis including The Netherlands in the code-law based group. The Netherlands can be considered as a hybrid accounting system in between code-law and common-law systems. It is based on the microeconomic theory and although traditionally considered as closer to common-law regimes (see Nobes, 1983), results from prior international studies on earnings conservatism for Dutch firms describe them as closer to code-law firms' countries (see for example García Lara and Mora, 2004).

[vii] The β_2 coefficient is, as expected, very close to zero. However, it is surprisingly negative. This is due to the existence of extreme observations that are not discarded with the typical outlier removal of the top and bottom percentile of each variable. We replicate this test removing more outliers (2%, 5%) and the β_2 coefficient becomes positive.

TABLE 1: Composition of total sample

Country	Classification	Local-GAAP		IAS	
		Firms	**Observations**	**Firms**	**Observations**
Australia	Common-Law	376	2,035	3	5
Austria	Code-Law	28	150	42	141
Belgium	Code-Law	104	567	16	57
Canada	Common-Law	468	3,472		
France	Code-Law	586	2,973	33	227
Germany	Code-Law	341	1,664	263	746
Hong Kong	Emerging	238	1,470	1	
Italy	Code-Law	163	672	85	372
Japan	Code-Law	3,458	24,709		
Malaysia	Emerging	821	4,254	3	5
Netherlands	?	147	1,008	11	29
New Zealand	Common-Law	66	322	1	4
Singapore	Emerging	447	1,976	2	3
South Africa	Common-Law	88	516	18	59
Spain	Code-Law	132	802	2	6
Switzerland	Code-Law	108	491	129	646
Taiwan	Emerging	234	1,061		
Thailand	Emerging	361	2,051	1	4
United Kingdom	Common-Law	1,145	6,889	4	9
United States	Common-Law	2,746	21,970		
Other countries (38)				260	737
TOTAL		12,057	79,052	874	3,050

TABLE 2: Descriptive statistics: Total sample

	Local-GAAP			IAS
	Code-Law	**Common-Law**	**Emerging**	
X_{it}				
Mean	0.02	0.03	-0.02	0.01
Median	0.03	0.05	0.04	0.04
St. Deviation	0.11	0.19	0.34	0.23
Number Obs	31,415	34,664	10,663	2,998
R_{it}				
Mean	-0.01	0.16	0.10	0.13
Median	-0.06	0.07	-0.03	0.05
St. Deviation	0.38	0.63	0.67	0.60
Number Obs	33,105	37,360	11,971	3,238

Notes:
For each firm *i* and fiscal year *t*, X_{it} denotes annual earnings per share before extraordinary items deflated by beginning of fiscal year price; R_{it} denotes security return over the fiscal year. The top and bottom percentiles of X_{it} and R_{it} are excluded, as well as observations with missing values.

TABLE 3: Descriptive statistics: Matched samples of German firms using local GAAP and IASB standards

Statistics	German GAAP		IAS	
	X_{it}	R_{it}	X_{it}	R_{it}
Mean	0.00	0.08	-0.02	0.02
Median	0.05	0.03	0.04	-0.03
Max.	0.70	3.17	0.53	2.25
Min.	-1.32	-0.79	-1.36	-0.87
St. Deviation	0.25	0.50	0.25	0.57
Number Obs.	537		537	

Notes:

For each firm *i* and fiscal year *t*, X_{it} is earnings before extraordinary and special items per share deflated by share price at the beginning of fiscal year, and R_{it} is the rate of return of the firm over the fiscal year, inclusive of dividends.

TABLE 4: Comparison of earnings conservatism across groups of firms coming from different accounting regimes and using different accounting standards

Sample	β_0	β_1	β_2	β_3	Adj. R^2 (%)	N
Common-Law	0.05 (33.53)	-0.00 (-1.66)	-0.02 (-8.05)	0.30 (33.92)	9.54	33,927
Code-Law	0.04 (27.82)	-0.01 (-4.54)	0.03 (8.69)	0.08 (13.27)	6.31	30,817
Code-Law excluding Japan	0.06 (23.18)	-0.00 (-0.63)	0.01 (1.67)	0.24 (15.43)	13.02	6,828
Emerging countries	0.02 (4.05)	-0.03 (-3.18)	0.03 (2.81)	0.15 (6.91)	3.75	10,455
IAS	0.06 (8.49)	-0.00 (-0.18)	-0.00 (-0.01)	0.33 (10.06)	11.41	2,931
IAS-Europe	0.05 (6.28)	-0.01 (-0.42)	-0.02 (-1.11)	0.38 (9.80)	12.95	2,115

Notes:

Sample: Firms adopting IAS during the period 1994-2003 are aggregated into the 'IAS' sample. The 'IAS-Europe' subsample only includes firms from Austria, Belgium, France, Germany, Italy, Spain, and Switzerland.

Firms from countries adopting their domestic standards during the same period are included into three benchmark accounting systems: (a) 'Common-Law' (Australia, Canada, New Zealand, South Africa, UK, and USA); (b) 'Code-Law' (Austria, Belgium, France, Germany, Italy, Japan, Spain, and Switzerland); and (c) 'Emerging' (Hong Kong, Malaysia, Singapore, Taiwan, and Thailand).

Model:

$$X_{it} = \beta_0 + \beta_1 RD_{it} + \beta_2 R_{it} + \beta_3 R_{it} RD_{it} + \varepsilon_{it}$$

For each firm *i* and fiscal year *t*: X_{it} denotes annual earnings per share before extraordinary items deflated by beginning of fiscal year price; R_{it} denotes security return over the fiscal year; and RD_{it} =1 if R_{it}<0 (market value decrease over the fiscal year) and =0 otherwise (market value increase).

N denotes the number of firm-year observations available for each accounting system. The first and 100th percentiles of X_{it} and R_{it} are excluded.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm-year observations for each sample. Reported *t*-statistics between parentheses are White (1980) adjusted.

TABLE 5: Comparative asymmetry in the contemporaneous association between earnings and returns before and after the IAS adoption

	β_2	β_{2D}	β_3	β_{3D}	Adj. R^2 (%)	N
European countries	0.04 (2.47)	-0.06 (-2.41)	0.21 (4.18)	0.17 (2.78)	14.65	2,892
Other Countries	-0.00 (-0.01)	0.04 (0.60)	0.25 (2.62)	-0.07 (-0.67)	6.45	1,349

Notes:

Sample: Firms adopting IAS during the period 1994-2003 are aggregated into two subsamples: firms from 7 continental European countries (Austria, Belgium, France, Germany, Italy, Spain, and Switzerland), and firms from other countries.

Model:

$$X_{it} = \beta_0 + \beta_{0D}DI_{it} + \beta_1 RD_{it} + \beta_{1D}RD_{it}DI_{it} + \beta_2 R_{it} +$$
$$+ \beta_{2D}R_{it}DI_{it} + \beta_3 R_{it}RD_{it} + \beta_{3D}R_{it}RD_{it}DI_{it} + \varepsilon_{it}$$

For each firm *i* and fiscal year *t*: X_{it} denotes annual earnings per share before extraordinary items deflated by beginning of fiscal year price, R_{it} denotes security return over the fiscal year; RD_{it} =1 if R_{it}<0 (market value decrease over the fiscal year) and =0 otherwise (market value increase); and DI_{it} = 1 when accounting earnings is reported under the IAS and = 0 under domestic GAAP.

N denotes the number of firm-year observations available. The first and 100th percentiles of X_{it} and R_{it} are excluded, as well as observations with missing values.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm-year observations for each subsample. Results are not reported for the intercepts. Reported *t*-statistics in brackets follow White (1980).

TABLE 6: Earnings conservatism: Matched samples (by year, industry and size) of German firms using local German GAAP and IASB standards.

Earnings Measure (X_{it})	Coefficients (t-statistics)				Adj. R^2%	N
	β_0	β_1	β_2	β_3		
Panel A: German GAAP						
Income Before Extraordinary and Special Items	0.05 (2.74)	-0.04 (-1.23)	0.03 (0.89)	0.27 (3.32)	0.10	537
Net Income (Bottom-line)	0.05 (2.61)	-0.03 (-0.93)	0.06 (1.34)	0.26 (2.63)	0.11	535
Panel B: IASB standards						
Income Before Extraordinary and Special Items	0.05 (2.88)	-0.02 (-0.75)	-0.02 (-0.45)	0.32 (4.47)	0.12	537
Net Income (Bottom-line)	0.05 (2.07)	-0.03 (-0.77)	-0.02 (-0.42)	0.37 (4.62)	0.12	535

Notes:

Sample: Firms from Germany adopting the IASB standards during the period 1994-2004 are matched (by year, industry and size) with German firms using their domestic standards (German GAAP).

Model:

$$X_{it} = \beta_0 + \beta_1 RD_{it} + \beta_2 R_{it} + \beta_3 R_{it} RD_{it} + \varepsilon_{it}$$

For each firm *i* and fiscal year *t*: X_{it} denotes annual earnings per share deflated by beginning of fiscal year price; R_{it} denotes security return over the fiscal year; and RD_{it} =1 if R_{it}<=0 (market value decrease over the fiscal year) and 0 otherwise (market value increase). *N* denotes the number of firm-year observations available.

The reported t-statistics are based on Huber-White standard errors, which are robust to heteroscedasticity and serial correlation (Rogers, 1993).

TABLE 7: Earnings conservatism: Matched samples (by year, industry and size) of German firms using local German GAAP and IASB standards.

Earnings Measure (X_{it})	Coefficients (t-statistics)								Adj. R^2%	N
	β_0	β_{0D}	β_1	β_{1D}	β_2	β_{2D}	β_3	β_{3D}		
Income Before Extraordinary and Special Items	0.05 (2.74)	0.01 (0.29)	-0.04 (1.23)	0.02 (0.35)	0.03 (0.89)	-0.05 (-0.87)	0.27 (3.32)	0.06 (0.51)	0.11	1,074
Net Income (Bottom-line)	0.05 (2.61)	0.00 (-0.15)	-0.03 (-0.93)	0.01 (0.11)	0.06 (1.34)	-0.08 (-1.19)	0.26 (2.63)	0.11 (0.90)	0.12	1,070

Notes:

Sample: Firms from Germany adopting the IASB standards during the period 1994-2004 are matched (by year, industry and size) with German firms using their domestic standards (German GAAP).

Model:

$$X_{it} = \beta_0 + \beta_{0D}DI_{it} + \beta_1 RD_{it} + \beta_{1D}RD_{it}DI_{it} + \beta_2 R_{it} +$$
$$+ \beta_{2D}R_{it}DI_{it} + \beta_3 R_{it}RD_{it} + \beta_{3D}R_{it}RD_{it}DI_{it} + \varepsilon_{it}$$

Where

X_{it} is earnings per share deflated by share price at the beginning of the period,

R_{it} is the rate of return of the firm over the fiscal year inclusive of dividends,

RD_{it} is a dummy variable that takes the value 1 in the case of bad news (negative or zero returns) and 0 in the case of good news,

DI_{it} is a dummy variable that takes the value 1 when firm i uses IAS and 0 when firm i uses German GAAP,

N is the number of observations.

The reported t-statistics are based on Huber-White standard errors, which are robust to heteroscedasticity and serial correlation (Rogers, 1993)