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efficiency: a review

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# IFRS Adoption in the E.U., Accounting Harmonization and Markets Efficiency: A Review\*

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## Abstract

As of 1st January 2005 all European listed companies had to adopt IAS/IFRS in order to prepare their consolidated financial statements. Half a decade later, the paper analyses the advancements in the accounting harmonization process within European countries and between E.U. and the rest of the world, over-viewing the first available evidence on the effects on financial markets efficiency. The paper has three main objectives. It aims at providing a updated description of the process of IFRS adoption in the E.U., pointing out the positive aspects and the main drawbacks. Second, it aims at reviewing the existent literature developed during the last years on this subject. Finally, it aims at identifying some interesting and so far not explored research areas.

JEL Classification: M41.

Keywords: International Financial Accounting Standards; International accounting harmonization; Convergence; European Union.

## 1 Introduction

As of 1st January 2005 all European Union listed companies had to adopt IAS/IFRS<sup>1</sup> in order to prepare their consolidated financial statements.<sup>2</sup> This decision was aimed at enhancing the competitiveness of the European capital markets by establishing a single set of homogeneous, “investor oriented” and internationally recognized accounting standards.

The decision to adopt IFRS in a wide and relevant economic area such as E.U. boosted, in the last decade, a conspicuous research stream concerning international accounting harmonization. This stream of literature had already gained international relevance in the previous decades,<sup>3</sup> with the emergence of

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global markets and with the internationalization of capital markets. Nevertheless, IFRS adoption in E.U. has offered a unique opportunity for researchers, rising by more than 7000 units the companies adopting IFRS at least for consolidation purposes. The first objective of the literature on international accounting harmonization is to provide an in depth analysis of the convergence process, to highlight critical issues that might dampen the positive effects of the new harmonized standards adoption. Then, since the ultimate goal of harmonization is to provide financial markets and investors with high quality and comparable financial information, research on the effects on financial markets performance improvements is undoubtedly important.

The paper has three main objectives.

First, it aims at describing the advancement of the process of IFRS adoption in the E.U.. IFRS adoption has not been homogeneous across Member States<sup>4</sup> and therefore an updated description of the implementation process will be provided, pointing out its positive observable effects and its main drawbacks. Second, the paper aims at reviewing, half a decade after the implementation began, the advancements in the literature developed on this subject. Finally, it aims at identifying some interesting and so far not explored research areas.

The paper proceeds as follows: section 2 analyses the key institutional facts related to IFRS adoption in the E.U.; section 3 reviews the main topics developed by the literature on this subject; section 4 and 5 respectively deal with the effects of this transition on international accounting harmonization and on market efficiency; section 6 provides with some final remarks and identifies some proposals for future research.

## **2 IFRS adoption in the E.U.: key institutional facts**

More than 100 countries worldwide either require or permit the use of IFRS (or are converging towards IFRS).<sup>5</sup> Globalization and increasing cross-border transactions called for the issuance of an homogeneous and universally recognized set of accounting standards.<sup>6</sup>

Three main milestones of the process of development and spread of the IFRS are represented by:

- The foundation, in 1973, of the International Accounting Standard Committee (IASC), with the aim of developing high quality and internationally recognized accounting standards. The IASC (a private organization) was formed by representatives of the accounting profession of nine countries: Australia, Canada, France, Germany, Japan, Mexico, Netherlands, U.K. and U.S.
- The endorsement of the IAS, in 2000, by the International Organization of Securities Commissions (IOSCO) for what concerns cross-border listings

- The foundation, in 2001, of the International Accounting Standards Board (IASB), that replaced the IASC. The aim of the IASB has been to continue the process of development of international standards and to favor accounting harmonization worldwide

By the end of the nineties the IAS were already an internationally recognized set of accounting principles. Nevertheless, a major turning point in the process of IFRS worldwide diffusion has been the approval, in 2002, of the E.U. Regulation No.1606/2002 requiring all listed companies to use them for their consolidated financial statement starting in 2005.<sup>7</sup> For the first time such a large and developed economic area explicitly recognized IFRS as the official standards to provide the financial markets with high quality and homogeneous data. As a result, the number of companies using IFRS for their financial reporting has dramatically increased since 2005.

Though all member states were obliged to require IFRS for the consolidated accounts of publicly traded companies, the options concerning individual accounts and non publicly traded companies have been quite different around the E.U..

#### INSERT TABLE 1

Table 1 summarizes the choices concerning IFRS implementation in the 25 E.U. countries; two observations are worthy to be mentioned.

First, we notice that the implementation choices are, to a large extent, influenced by the accounting traditions of each member State. IFRS are “investor oriented” standards, based on similar principles to the ones of Anglo-Saxon accounting systems. As a consequence, Anglo-Saxon countries opted to allow unlisted companies to choose between IFRS and local Gaap, being the differences between the two standards relatively limited. Countries with “creditor protection oriented” accounting systems have been more cautious, often maintaining local Gaap at least for individual accounts. Moreover, the existence of scarcely sophisticated local Gaap and the need for improving the quality of financial data pushed many former communist countries (Bulgaria, Czech Republic, Estonia, Latvia and Lithuania) to adopt IFRS also for individual accounts of publicly traded companies. The same ratio has led to a particularly extensive adoption (IFRS required for consolidated and individual accounts of both listed and unlisted companies) by Cyprus and Malta.

Second, a tighter link between tax and financial reporting often represented a limit to a full IFRS adoption. IFRS principles have several drawbacks if used for fiscal purposes (Nobes, 2003; Schön, 2004; Gammie et al., 2005; Eberhartinger and Klostermann, 2007) and, therefore, countries with a more strict link between tax and financial reporting have generally preferred to limit IFRS adoption to consolidated accounts. On the other side, countries in which tax reporting historically relies less on financial reporting generally opted for a more extensive implementation of the E.U. Regulation No.1606/2002. In fact, local Gaap are still required for individual accounts in France, Germany and Spain

while the U.K. legislator has allowed, as previously noted, the use of IFRS for the individual accounts of both listed and unlisted companies.<sup>8</sup> Italy represents an exception: notwithstanding a tax reporting system heavily relying on accounting rules, IFRS have been required for individual (and fiscally relevant) accounts and, to a certain extent, have been allowed also for consolidated and individual accounts of unlisted companies.<sup>9</sup> Perhaps the will of acquiring a higher degree of reliability regarding the financial accounting figures pushed the legislator to an extensive adoption of IFRS.

As a consequence of this partial IFRS adoption, in spite of a full, *de jure*, harmonization for what concerns consolidated accounts of listed companies, local Gaap continue to be used in many countries for individual accounts and by unlisted companies, leading to the emergence of a “two standard” system, as described in Larson and Street (2004a and 2004b). By analysing the results of the report “Gaap Convergence 2002”, the authors pointed out that the link between tax and financial reporting, the complicated nature of certain IFRS and the disagreement with some of them would have represented the main obstacles to a full accounting harmonization.

The coexistence of different accounting systems (IFRS and local Gaap) has led to an increase in the compliance costs and has reduced the ability to compare companies performance among different countries and, within each country, between listed and unlisted companies. The inefficiency of a *status quo* in which listed companies must comply with IFRS in preparing their consolidated accounts and with local Gaap in preparing individual accounts has been pointed out in Haller (2002).

Convergence has become, therefore, a critical aspect to assure the effectiveness of the European accounting harmonization and to maximize the benefits of IFRS adoption on market efficiency. It can be achieved (see Tokar, 2005) indirectly, by reforming local Gaap and making them similar to the international standards, or directly, by opting for an extensive IFRS adoption.

#### INSERT TABLE 2

By analysing the convergence facts linked to IFRS adoption in the E.U. (Table 2) three different cases can be distinguished:

- Some countries, such as Belgium, Estonia, France, Spain, Sweden and U.K. are gradually reforming local Gaap making them similar to IFRS principles, so to approach a *de facto* accounting harmonization. The convergence of local Gaap towards IFRS is proceeding gradually in Belgium, France and Sweden while Estonia fully harmonized the two accounting systems; the Spanish Gaap, approved in 2008, are inspired by similar principles as IFRS, so as U.K. local Gaap represent “investor oriented” principle like IFRS
- Some countries, such as most former communist countries (Bulgaria, Czech Republic, Latvia, Lithuania, Slovakia and Slovenia), small countries (Cyprus and Malta) plus Denmark, Finland, Greece, Ireland, Italy, Luxembourg

and Netherlands opted for an extensive implementation of IFRS, allowing in some cases their use also for individual accounts. Harmonization for IFRS adopter is therefore more complete, but a double accounting system still exists to the extent to which certain companies are still using local Gaap

- In Austria, Germany, Hungary, Poland, Portugal and Romania, two accounting systems (IFRS for consolidated accounts of listed companies and local Gaap for individual accounts) are still coexisting

Finally, a critical factor in order to maximize the benefits on market efficiency is the promotion of a worldwide accounting harmonization process.

The decision of the E.U. to adopt IFRS for consolidated financial statements of listed companies enhanced worldwide harmonization in two ways.

On one hand, IFRS acquired a greater international recognition, hence pushing more countries to their adoption. As previously noted, nowadays more than 100 countries either require or allow these standards.

On the other hand, IFRS transition in the E.U. enhanced a convergence program with U.S. Gaap that is on going and that could lead to a better comparability of financial data provided under the two accounting standards. After 2005, convergence appears to have accelerated and in 2008 (Erickson et al., 2009) a road map that would have led U.S. companies to use IFRS by 2010, was approved. Notwithstanding the road map has been considered not binding by the new SEC chair, Mary Schapiro, convergence proceeds and in 2011 the SEC plans to make a final decision on allowing the use of IFRS by U.S. listed companies.

### 3 Literature on IFRS adoption

The increasing integration of financial markets enhanced, in the last decades, the literature on international accounting harmonization. The mandatory adoption of IFRS for the consolidated accounts of E.U. publicly traded companies further increased the relevance of this stream of research.

The following part of the paper reviews the main contributions concerning two significant issues related to the adoption of IFRS in the E.U.: the effects on the accounting harmonization and on markets efficiency.

This first group of contributions (summarized in Table 3) deals with the effects of European IFRS adoption on accounting harmonization, both within E.U. and worldwide.

Concerning within E.U. accounting harmonization, the relationship with local accounting standards and with the national tax rules are key issues, since the coexistence of different tax and financial reporting systems represents one of main impediments to a full convergence. The adoption of IFRS as a starting point for the computation of a common consolidated corporate tax base would contribute to eliminate some of the impediments to a full harmonization, but presents several drawbacks.

Convergence between IFRS and U.S. Gaap is also a central theme, since it would assure a higher degree of comparability among companies using those two internationally recognized accounting standards.

These issues will be analysed in section 4.

INSERT TABLE 3

A second group of contributions (summarized in table 4) discusses the relationship between accounting practices and financial markets efficiency. The main goal of the adoption of a high quality and internationally recognized set of standards should be to make financial markets work better, lowering the cost of capital and increasing access to financing for companies. Contributions on IFRS adoptions and markets efficiency treat issues such as voluntary adoption of the international standards and the effects of the transition on accounting information quality, earnings management and earnings predictability.

Literature on voluntary IFRS adoption, in the years preceding E.U. Regulation 1606/2002, provide little evidence that the majority of companies would have, if not compelled, faced the transition towards IFRS;

The first available evidence concerning the effects of IFRS adoption on earnings management and earnings predictability is not univocal, pointing out that the adoption of a high quality and internationally recognized set of accounting standards is just one of the several factors influencing the quality of financial reporting.

These issues will be analysed in section 5.

INSERT TABLE 4

## **4 IFRS adoption and accounting harmonization**

Has IFRS adoption in the E.U. accelerated the process of harmonization of accounting standards within European countries and worldwide? It has, but with relevant exceptions. Within European countries, IFRS coexist with local Gaap and with tax reporting rules; worldwide, the convergence with U.S. Gaap is clear, but the two standard still survive and maintain their independent lives. In this section the literature on the accounting harmonization process will be discussed and the main impediments to a full convergence of reporting systems will be analysed.

### **4.1 Within E.U. accounting harmonization**

#### **IFRS and local Gaap convergence**

The European accounting convergence process is analysed in several country studies: among others Haller and Eierle (2004), Sucher and Jindrichovska (2004), Vellam (2004), Delvaille et al. (2005), Guerreiro et al. (2008).



Delvaille et al. (2005) describe the developments in France, Germany and Italy. The authors point out that, while listed German companies were allowed, since 1998, to use IFRS for consolidated purposes, in Italy and France full application of IFRS has not become fully effective until 2005. As a consequence, German companies were generally more prepared to IFRS implementation than French and Italian ones. On the other side, perhaps to rapidly acquire international credibility, Italy opted to allow IFRS also for individual accounts. Changes in local Gaap concerning individual accounts have been limited in France and, specially, in Germany. This result is consistent with the findings in Haller and Eierle (2004) that point out that the German government has been considerably reluctant to change recognition and measurement rules for individual entity accounts, focusing on consolidated accounts for the revision of existing rules.

By analysing a sample of Portuguese companies, Guerreiro et al. (2008) point out that larger companies audited by one of the Big-4 accounting firms are generally more prepared to IFRS implementation, while smaller companies appear to be more willing to follow using local Gaap in cases in which IFRS are not mandatory.

Vellam (2004) provides an analysis of the difficulties that companies in a transition economy, such as Poland, have faced in complying with IFRS. Polish companies, used to the legalistic and formal structure of Polish Gaap, faced relevant challenges in applying the “investor oriented” IFRS. The conceptual differences between IFRS, local Gaap and fiscal rules appear to be a main impediment to accounting harmonization in many eastern European countries. An analysis of the issues related to IFRS introduction in another former communist country, Czech Republic, is provided by Sucher and Jindrichovska (2004).

The different accounting traditions of European countries have heavily influenced the convergence process of each Member State.

Ding et al. (2007) analyse the difference between existing local Gaap of thirty countries and IFRS along two dimensions: absence and divergence.<sup>10</sup> Absence measures the extent to which rules regarding a certain issue are missing in local Gaap but are covered in IFRS while divergence measures the difference in the treatment of accounting issues between the two types of standards. The reference year of the analysis was 2001 (some years prior to IFRS adoption in the E.U.). European countries exhibited high scores for what concerns the divergence index: most countries had sophisticated accounting systems which differed on relevant issues from IFRS, and these relevant differences represented a major impediment to a full convergence of accounting principles.

High costs of transition towards IFRS represented another major obstacle to a full IFRS adoption. Jermakowicz (2004), Larson and Street (2004a and 2004b), Sucher and Jindrichovska (2004), Vellam (2004), Jermakowicz and Gornik-Tomaszewski (2006), Christensen et al. (2007), Cascini (2008) and Guerreiro et al. (2008) analyse the issue of costs and benefits of IFRS introduction within the E.U. context. The survey provided by Jermakowicz and Gornik-Tomaszewski (2006) is perhaps the most complete. The authors interviewed the Chief Financial Officer, the Finance Director or the Controller of 112 pub-

licly traded companies listed on the main European Stock Exchanges. They pointed out that tied up resources and the costs related to the transition and to the adaptation of information systems in order to manage the new standards appeared to be within the most relevant drawbacks of the transition to IFRS. According to the the respondents, the complex nature of IFRS and the lack of sufficient implementation guidance were recognized as the major challenges of IFRS implementation.<sup>11</sup> Standards on financial instruments, impairment of assets, income taxes and employee benefits have been considered as the most complicated and critical ones.

Adaptation of IFRS to SMEs represents an important goal in order to allow a wider implementation and to avoid the coexistence of two different accounting systems. Due to the high costs related to IFRS conversion, IFRS implementation has been limited, in most European countries, to listed companies and SMEs have largely remained tied to local Gaap.<sup>12</sup> A specific project has been undertaken by the IASB that has led to the publication, on July 9th, 2009 of a standard specifically designed for smaller, unlisted, companies. Topics considered not relevant for SMEs have been omitted by the standard and, where IFRS allow accounting policy choices, only the easier option was maintained.

Future research should investigate three relevant issues: how many SMEs will adopt the new standard? Will they adopt it on a voluntary or mandatory basis? And, finally, how much will this new standard contribute to a higher comparability of financial reporting information and to a full convergence among European financial reporting systems.

### **IFRS and tax reporting**

As previously noted, the reliance of many European taxation systems on accounting figures (Lamb et al., 1998; Oliveras and Puig, 2007), represents one of the main impediments to a full convergence of European countries accounting systems and limited, in most of the Member States, the adoption of IFRS to consolidated accounts.

Lamb et al. (1998) analyse the link between tax and financial reporting in France, Germany, U.K. and U.S., highlighting that in European continental countries fiscal rules heavily rely on accounting figures, in virtue of a very strong derivation principle. On the other side, in Anglo-Saxon countries tax and financial rules are relatively independent from each other. This is consistent with the conclusions stated in Nobes and Parker (1995). Oliveras and Puig (2007) find that Spain is intermediate between France/Germany and U.S./U.K. in the degree of tax influence on financial reporting. As a consequence, IFRS adoption has been more extensive in Anglo-Saxon countries than in Continental European ones.

The adoption of IFRS as a starting point for the calculation of the fiscal base would partially remove the impediments to a full convergence of European countries accounting systems; this option has been considered within the on going debate on the identification of a common consolidated corporate tax base (CCCTB).

Nevertheless, the calculation of a corporate tax base following IFRS principles would have major drawbacks, since these are principle based standards while fiscal rules need a more detailed set of formal norms for the determination of taxable profits, to limit discretionary power on behalf of companies. Moreover, given the extensive use of fair value valuation, in accordance with IFRS non realized profits and loss should be accounted for, in contrast with the “ability to pay” principle that a tax system should fulfil. Finally, the two systems obey to different purposes. Financial reporting is aimed at providing the market with useful information on the performance of a company while tax reporting is oriented to different goals (revenue raising above all). Aligning tax and financial reporting may lead to a certain degree of tax pollution that would lower the quality of financial data provided to the markets.

The effects on companies tax burden in case of an hypothetical IFRS adoption as a tax base are analysed in Eberhartinger and Klostermann (2007), Haverals (2007) and Kirsch and Olsson (2008). The former paper concentrates on Austria; using a sample of 61 Austrian companies, the authors find that only in a few cases essential differences with the current tax rules would arise, and hence no dramatic change in the tax base would be expected if IFRS were used for fiscal purposes. Vice versa, using the European Tax Analyser,<sup>13</sup> Haverals (2007) shows that the adoption of an IFRS-based corporate tax would have a large effect on the fiscal burden of Belgian companies and that this effect would not be uniform across sectors. Kirsch and Olsson (2008), theoretically compare tax and financial reporting in Germany and in Sweden and analyse the effect of a possible introduction of IFRS as an accounting principle for individual accounts. They compare this effect in two different scenarios: in the case of preservation of the authoritative principle (tax figures relying on accounting ones) and in the case of a further disconnection between tax and financial reporting.

In summary, analysing the few available contributions of the literature on this issue, a few conclusions emerge.

First, the adoption of IFRS as a starting point for the identification of the tax base would lead to an increased cross country comparability of tax reporting and to a decrease in the tax compliance costs for companies operating in different E.U. countries. Nevertheless, given the different existing tax rates among Member States and the different tax incidence among sectors, such a harmonization of the tax base would not lead, alone, to a reduction of tax burden disparities, neither among countries, nor among industries. Second, changes in the fiscal burden due to a transition to IFRS as a starting point for the computation of the tax base (let alone possible adjustments in the tax rates) would have different effects depending, again, on the country and the industry to which a company belongs. Finally, the tightening of the link between tax and financial reporting would probably lead to a certain degree of tax pollution, lowering the quality of financial information.

Therefore, these considerations, together with the already mentioned drawbacks implied by the use of IFRS as a tax base, suggest a high degree of prudence to be taken in considering the use of IFRS for fiscal purposes.

## 4.2 Worldwide accounting harmonization

The decision of the E.U. to adopt IFRS for consolidated financial statements of listed companies enhanced worldwide harmonization, pushing more countries to the adoption of the international standards. Moreover, it enhanced a convergence program with U.S. Gaap that is on going and that could lead to a better comparability of financial data provided under the two accounting standards.

Differences between IFRS and U.S. Gaap are discussed in Ampofoa and Sellani (2005), Haverty (2006), Ragan et al. (2007) and Erickson et al. (2009).

Haverty (2006) is the only one, among the mentioned papers, to deal with a quantitative methodology. In the paper the author analyses the financial statements of Chinese companies listed on the New York Stock Exchange during the period 1996-2002,<sup>14</sup> pointing out major quantitative differences between IFRS and U.S. Gaap (mainly due to revaluation of property and equipment, allowed only by the former standards). Nevertheless, the authors detect an evidence of a certain degree of convergence over time. A trend towards harmonization between the two standards has been detected also by Ampofoa and Sellani (2005) and Ragan et al. (2007).

The analysis in Haverty (2006) was performed using data preceding the adoption of IFRS by U.E. listed companies; after 2005, convergence appears to have accelerated. In 2008 (Erickson et al., 2009) a road map that would have led U.S. companies to use IFRS by 2010, was approved. As previously noticed, this road map has not been considered binding by the new SEC chair, Mary Schapiro; nevertheless, in 2011 the SEC plans to make a final decision on allowing the use of IFRS by U.S. listed companies. Also according to Cascini (2008) U.S. companies will end up using IFRS.

Convergence between the two accounting standards and the consequences of this trend on the quality and international comparability of financial data will represent a promising and interesting stream of analysis for future research.

## 5 IFRS adoption and markets efficiency

The ultimate goal of IFRS adoption and accounting systems harmonization is to provide financial markets with high quality information, improving their efficiency, lowering the cost of capital and increasing the possibility that companies have to access capital. Half a decade after the E.U. Regulation No.1606/2002 became effective, still few contributions have analysed up to what extent IFRS implementation has enhanced capital markets efficiency.

This section will review a series of papers related to two stream of literature. First, some contributions analysing voluntary IFRS adoption<sup>15</sup> will be discussed, to shed some light on the perceived advantages related to the adoption of the international standards. Afterwards, the main issues concerning the quality of financial information will be briefly analysed.

## 5.1 Evidence on voluntary adoption of IFRS

The analysis of voluntary adoption of IFRS is important for two reasons. First, in order to understand which kind of companies were better disposed at adopting the new set of standards. Second, in order to provide information about the perceived benefits deriving from the transition to IFRS.

Evidence on voluntary adoptions of IFRS is provided by El-Gazzar et al. (1999), Ashbaugh (2001), Weißenberger et al. (2004) and Cuijpers and Buijink (2005).

Cuijpers and Buijink (2005) point out that the scarcity of European companies voluntarily drawing their balance sheets according to IFRS or U.S. Gaap (prior to E.U. Regulation No.1606/2002 implementation) represents a sign of the few benefits perceived by companies in using internationally recognized standards. Companies listed on a U.S. stock exchange or in the EASDAQ of Brussels, with international operations and domiciled in countries with lower quality local Gaap<sup>16</sup> appeared to be more inclined to voluntarily abandon local standards. The effects on the quality of financial information is controversial: while IFRS or U.S. Gaap adoption generally improve analyst following, the authors do not find a significant effect on the cost of capital.

Similar results are pointed out in El-Gazzar et al. (1999) and Ashbaugh (2001). According to the former, companies with a high percentage of foreign sales, a lower debt/equity ratio, listed in Europe and in a higher number of foreign exchanges used to be more willing to adopt IFRS. Ashbaugh (2001) points out that companies listed in more equity markets and about to participate in seasoned equity markets have been more willing to disclose financial information according to IFRS or U.S. Gaap, with a preference for IFRS due to the lower compliance costs.

Weißenberger et al. (2004) analyse German companies' choices concerning the adoption of international standards (either IFRS or U.S. Gaap)<sup>17</sup>. The main motivation was represented by the expectation to obtain improved standing on international financial markets, followed by an aim at diversifying the body of investors and at obtaining a greater comparability with industry peers. Nevertheless, an analysis of the results obtained revealed only a partial attainment of the proposed objectives.

Literature on voluntary compliance to IFRS provided, at most, ambiguous results on the willingness of companies to comply with IFRS if not obliged (see also Jermakowicz and Gornik-Tomaszewski, 2006). Nevertheless, mandatory adoption might have improved companies and investors knowledge and ability to deal with IFRS, therefore enhancing the potential positive effects of their adoption.

## 5.2 Quality of financial information

Accounting systems provide markets with information about companies' economic and financial performance. It is not easy to define the concept of "quality" of an accounting system. Roughly, it could be said that a high quality account-

ing system provides timely, detailed and useful information about companies so to allow investors to correctly evaluate and compare different investment opportunities. A high quality accounting system, according to the theory on financial markets, contributes to the lowering of the cost of capital: if investors feel confident about the correctness of financial data they do not need to price protect themselves and will provide capital at a lower cost.

Soderstrom and Jialin Sun (2007) provide an overall review of the literature on the issue of accounting quality. According to the authors, the features of the adopted accounting standards represent only one of the many factors contributing to the quality of an accounting system. Incentives are as important as standards, and they can be influenced by several factors, such as the level of development of the financial markets, the companies' capital and ownership structure, and the interferences of tax systems with financial reporting. Assuring a good system of investor protection and property rights is therefore as important as adopting quality accounting standards. A similar view is proposed by Zeff (2007), according to which different business, accounting, auditing and regulatory cultures may prevent the convergence of accounting systems towards a common, high quality, level.

Mandatory IFRS implementation in the E.U., (see Schipper, 2005) may provide, in the next years, scholars with a useful research setting to test these issues. It will be possible to compare, through cross section analysis, countries with similar accounting systems but different incentives background, and through the analysis of single countries it will be possible to analyse the effects of changing the accounting systems holding incentives fixed. Panel data will allow for an overall analysis of accounting systems and incentives effects on the efficiency of financial markets.

In order to provide some preliminary observation on the effects of IFRS adoption on financial markets efficiency, some contributions of the literature concerning earnings predictability and earnings management will be briefly discussed.

#### INSERT FIGURE 1

Earnings predictability and earnings management represents two key indicators on the quality of information on financial reporting. Accounting standards (and their level of enforcement) influence the quality of financial information provided by the financial statements. The latter is influenced also by other factors, such as the incentives systems faced by the managers, the capital structure of the companies and the level of investors' protection in a certain countries. Earning management might, on the other side, lower the quality of financial information and the usefulness of financial data for investors and analysts, undermining the true and fair representation of a company's financial position and result of operations. Finally, earnings predictability is higher if financial reporting provide investors with reliable and useful information.

## Earnings management

Evidence on earnings management is not univocal. On one side, IFRS should minimize the instances for this kind of behavior, by reducing the amount of reporting discretion relative to many local GAAP (see Jeanjean and Stolowy, 2008); on the other side, without an effective enforcement, their adoption alone does not lead to an immediate improvement in the quality of financial data and accounting policies.

There are two different ways of detecting earnings management instances: by analysing irregularities in the distribution of earnings or by analysing discretionary accruals. The first type of literature usually points out a very low frequency of small losses and a very high frequency of small profits. This irregular distribution of earnings is a signal of an earnings management activity on behalf of the companies' management, that aim at avoiding the negative informational effects of reporting losses and therefore turn them, whenever it is possible, into profits using the discretionary power allowed by the accounting standards adopted.<sup>18</sup> The second stream of literature analyse the amount of discretionary accruals: higher levels of these signal a potential activity of earnings management on behalf of the management of a company.

The issue is discussed, with reference to the adoption of IFRS in the E.U., by van Tendeloo and Vanstraelen (2005) and Jeanjean and Stolowy (2008).

Jeanjean and Stolowy (2008) use the first method and analyse the effects of IFRS adoption on earnings management using a sample of companies from Australia, France and U.K. In this way the authors are able to compare this phenomenon in two European countries (France and U.K.) both regulated by E.U. Regulation No.1606/2002, but with different tradition (code law the former, common law the latter) and in one extra-U.E. country with common law tradition that adopted IFRS in the same period. They use, as a proxy to detect earnings management, the desire for the management of a firm to avoid losses: the emerging result is that IFRS adoption has not reduced earnings management practices (earnings management has indeed increased in France). The authors point out that management incentives and national institutional factors play an important role in framing financial reporting characteristics and therefore they suggest that the IASB, the SEC and the European Commission should devote their efforts to harmonizing incentives and institutional factors in order to increase the quality of financial reporting data.

Analysing a sample of German companies voluntarily complying with IFRS prior than 2005, van Tendeloo and Vanstraelen (2005) discover that IFRS compliance did not pose additional constraints on discretionary accruals and IFRS adopters were more engaged in earnings smoothing<sup>19</sup> policies than companies reporting under German Gaap. IFRS, differently from German Gaap, do not allow the use of hidden reserves,<sup>20</sup> require more disclosures, and have fewer accounting choices. Therefore, IFRS was expected to enhance financial reporting quality constraining earnings management. On the contrary the authors point out that, due to scarce enforcement and investor protection, adopting IFRS seems to have increased the magnitude of discretionary accruals.<sup>21</sup>

Therefore, the few empirical works available up to now show no positive effect of IFRS adoption on earnings management. Vice versa, the literature emphasizes the necessity of improving economic environment, to ensure greater competition and to promote a correct incentives system rather than just concentrating on accounting standards harmonization.

### **Earnings predictability**

The quality of the information provided to the financial markets can be assessed, at first, by observing its usefulness to investors and analysts to predict companies economic performances.

The adoption of IFRS may increase analysts ability to predict earnings in three ways. In some accounting arenas IFRS, as compared to local Gaap, offer less available options, therefore reducing the variability of accounting item measurements across companies. Second, IFRS, compared to most local Gaap, require more detailed disclosures, therefore providing financial markets with in depth information concerning a company's financial position and result of operations. Finally, the adoption of unique, and internationally recognized, accounting standards increases the comparability among companies of different countries, lowering the learning costs that analysts face in analysing financial statements drawn with different standards.

There are, nevertheless, three *caveats*. IFRS adoption can lead to a higher income volatility, therefore lessening earnings predictability. This effect is given by the extensive use of fair value valuations (more aleatory than cost valuations) and the reduced ability of the management to smooth earnings. Second, it could take some time for analysts to get used to the new accounting standards and to acquire the capabilities to correctly interpret all the information provided. Finally, enforcement is as important as adoption, since an incorrect IFRS implementation<sup>22</sup> can lead to misleading information provided to the markets.

The issue of earnings predictability is discussed in Ashbaugh and Pincus (2001), Hope (2003a and 2003b), Cuijpers and Buijink (2005) Hodgdon et al. (2008) and Djatej et al. (2009).

Controlling for firm and country-level factors, Hope (2003a) documents that the accuracy of analysts' earnings forecasts is positively associated with firm-level annual report disclosure quantity. Enforcement plays a role, as well, reducing analysts' uncertainty about managers' accounting choices. Hope (2003b) finds that accounting policy disclosures are useful to analysts above all other annual report disclosures.

Ashbaugh and Pincus (2001) develop an index of different countries disclosure requirements as compared to IFRS ones, assuming that the absolute values of analyst earnings forecast errors are positively associated with greater differences in countries' accounting measurement and disclosure standards relative to IFRS. They find that analysts errors are lower in countries were disclosure are similar to the ones required by IFRS and that IFRS adoption increases earnings predictability.

Hodgdon et al. (2008) add on the the literature in two significant ways. First,



they use a fixed-effects technique allowing for individual analyst forecast, so to incorporate, in their model, possible prediction biases specific to analysts from different countries and to avoid omitted variables problems. Second, they control for the real disclosure compliance of each company, arguing, as previously noted by Hope (2003a) that enforcement and compliance assurance is as important as the adoption of an accounting standard itself. Once accounted for analyst fixed errors and degree of compliance, they find that IFRS adoption increases earning predictability on behalf of analysts.

Cuijpers and Buijink (2005), taking as a sample E.U. companies voluntarily using IFRS or U.S. Gaap in 1999, arrive to a different conclusion with respect to Ashbaugh and Pincus (2001) and Hodgdon et al. (2008), stating that analysts' ability to predict future profits appears lower for companies using one of these internationally recognized accounting standards.

Finally, Djatej et al. (2009) find, in a comparison between eastern and western European countries, that IFRS adoption increases public information (available to all analysts) and decreases private information (accessible only to selected analysts). Eastern European countries, where private information is still predominant, were supposed to gain more by adopting one of the international standards.

Therefore, though there is a quite widespread opinion that the adoption of IFRS contributes to improving the ability of analysts to predict earnings, the results in the literature are not univocal. The choice among different accounting standards is just one of the issue leading to high quality (and useful for investors) accounting data. Future research, as long as data on a sufficient period from the IFRS adoption in the E.U. will be available, should explore to what extent the mandatory adoption of IFRS in such a large economic area will have contributed to improve the ability of analysts to correctly interpret the information contained in the financial statements of European companies.

## 6 Final remarks

A description of IFRS adoption process in the E.U has been provided, together with a preliminary analysis of the effects of this process on international accounting harmonization and on markets efficiency.

In particular, the paper analysed the different options followed by Member States for what concerns the adoption of IFRS for individual accounts of listed companies and consolidated and individual accounts of unlisted ones. The diversity in the adoption choices may be an impediment to an efficient harmonization process. The relevant costs linked to transition towards IFRS are among the reasons that has led to a partial adoption of the international standards: unlisted companies were, in the majority of the countries, allowed or required to continue to use local Gaap in drawing their financial statements. Costs and benefits related to IFRS adoption were therefore analysed through the existent contributions in the literature.

Then, the effects of IFRS adoption on international harmonization and the

relationship among these and the coexisting local Gaap, fiscal rules and U.S. Gaap have been analysed. The harmonization process seems to proceed, but with relevant exceptions.

Finally, the effects on financial markets efficiency have been discussed. Notwithstanding a widespread opinion that the adoption of IFRS would have contributed to improving the quality of the information provided to investors and analysts, the existing evidence in the literature is not fully univocal on whether earnings predictability improves as a consequence of their adoption. Also for what concerns earnings management, the first available evidence highlights that this kind of practice has not been reduced as a consequence of IFRS adoption.

The paper points out that further research on IFRS adoption will be of a fundamental importance.

Mandatory adoption in the E.U. provides researchers with a unique setting to test some of the *tenets* of economic theory on the consequences of the adoption of IFRS on the quality of accounting data.

Consequences on market efficiency, in particular, will deserve further attention. Half a decade after E.U. Regulation No.1606/2002 has become effective, the first data concerning financial markets is becoming available. Investors and analysts, moreover, are becoming more confident with the new standards, so that the effects of the transition might begin to fully reveal themselves.

Future research should, therefore, provide, more exhaustive analysis on the ultimate effects of the accounting revolution that occurred in Europe in the last years.

## Notes

<sup>1</sup>From now on IFRS, which will refer to both International Financial Reporting Standards and to the International Accounting Standards issued before 2001.

<sup>2</sup>The E.U. Regulation No.1606/2002 of the European Parliament and of the Council of 19 July 2002 established that all publicly traded Community companies would have to prepare their financial statements in accordance with IFRS, at the latest by 2005. Exceptions to the rule were established only for those companies publicly traded both in the Community and on a regulated third-country market in which another set of internationally accepted standards was applied as the primary basis for consolidated accounts as well as for companies which had only publicly traded debt securities. Those companies were allowed to defer IFRS adoption until 2007.

<sup>3</sup>For a review on the trends in research on international accounting harmonization between 1965 and 2004 see Baker and Barbu (2007).

<sup>4</sup>Listed companies have been required to adopt IFRS for consolidating purposes. Member States have had the option (E.U. Regulation No.1606/2002) to require or allow the use of IFRS also for individual accounts of listed companies and/or for consolidated/individual accounts of unlisted ones.

<sup>5</sup>Source: International Accounting Standards Board ([www.iasb.org](http://www.iasb.org)).

<sup>6</sup>According to Chua and Taylor (2008), however, social and political factors also contributed to the diffusion of IFRS.

<sup>7</sup>Listed companies have been required to comply with all the standards endorsed by the E.U.. In September 2003 all of the existing IAS were endorsed by the E.U., with the exception of those on financial instruments (IAS 32 and IAS 39).

<sup>8</sup>According to Lamb et al. (1998), U.K. and U.S. have light links between tax and financial reporting, while French and German fiscal rules heavily rely on accounting rules. Oliveras and Puig (2007) state that Spain is in an intermediate position between France/Germany and U.S./U.K. in the degree of tax influence on financial reporting.

<sup>9</sup>Listed companies, banks and other financial institutions are required to adopt IFRS, both for consolidated and individual accounts, while unlisted companies presenting consolidated accounts in accordance with IFRS and all subsidiaries within an IFRS group are permitted to use them for the preparation of their individual accounts.

<sup>10</sup>Using a similar methodology, Ding et al. (2005) state that culture plays a

fundamental role in the determination of the characteristics of local Gaap and on the divergence among these and IFRS.

<sup>11</sup>Similar results emerge from the survey on large companies analysed in Larson and Street (2004a and 2004b).

<sup>12</sup>Notice that many small and medium enterprises prepare financial statement mainly for fiscal purposes, and the informational aspects are often less significant.

<sup>13</sup>The European Tax Analyser (ETA) is a micro-simulation forward-looking computer-based model designed for measuring the tax burdens of partnerships and corporations (including their shareholders) located in different countries (Haverals, 2007).

<sup>14</sup>Chinese companies listed on the New York Stock Exchange were compelled to prepare financial statements according to IFRS and to fill a U.S. Gaap reconciliation form, thus allowing scholars to analyse the main differences between the two standards.

<sup>15</sup>Concerning extra-E.U. companies or European ones prior to the approval of E.U. Regulation No.1606/2002.

<sup>16</sup>Companies domiciled in countries with a less developed local Gaap can signal, through the adoption of internationally recognized standards, the willing of providing the markets with high quality financial information.

<sup>17</sup>German companies were allowed to adopt IFRS or U.S. Gaap since 1998, therefore permitting researchers to observe the types and objectives of companies opting for abandoning local Gaap.

<sup>18</sup>Earnings management may also be finalized at influencing contractual outcomes that depend on accounting figures.

<sup>19</sup>Earnings smoothing is a particular form of earnings management aiming at reducing excessively high taxable profits (on one side) while avoiding reporting losses (on the other side).

<sup>20</sup>Special types of reserves allowed under German GAAP to manage earnings

<sup>21</sup>If hidden reserves are accounted for, the behavior of IFRS adopters do not differ significantly with respect to the one of companies reporting under German GAAP.

<sup>22</sup>Several studies highlighted, prior to IFRS adoption by the E.U., a significant non compliance level also by companies claiming to issue IFRS financial statements and disclosures.

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Figure 1: Accounting standards, earning management and earning predictability

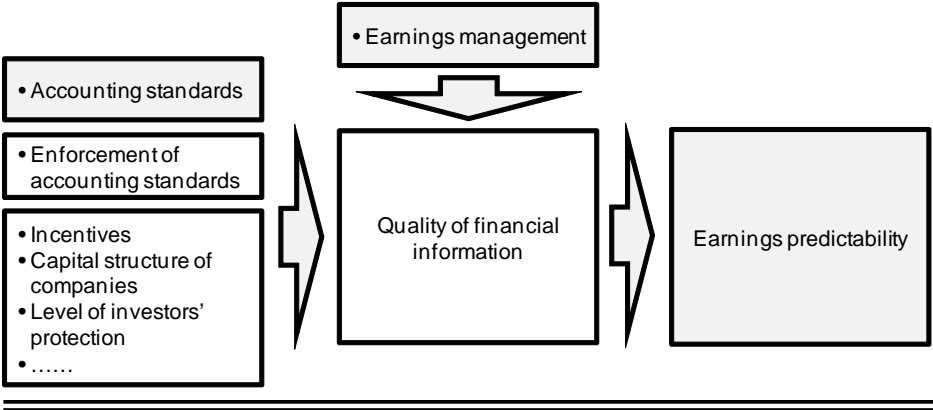


Table 1: IFRS adoption in the E.U.

	Publicly traded companies		Non publicly traded companies	
	Consolidated accounts	Individual accounts	Consolidated accounts	Individual accounts
<b>Austria</b>	Required	Not allowed	Allowed	Not allowed
<b>Belgium</b>	Required	Not allowed	Allowed (required for credit institutions, insurance companies and real estate investment trusts)	Not allowed
<b>Bulgaria</b>	Required	Required	Required (allowed for SME)	Required (allowed for SME)
<b>Cyprus</b>	Required	Required	Required	Required
<b>Czech Rep.</b>	Required	Required	Allowed	Not allowed
<b>Denmark</b>	Required	Required	Allowed	Allowed
<b>Estonia</b>	Required	Required	Allowed (required for credit institutions, financial, investment and insurance companies)	Allowed (required for credit institutions, financial, investment and insurance companies)
<b>Finland</b>	Required	Allowed (not allowed for insurance companies)	Allowed	Allowed (not allowed for insurance companies)
<b>France</b>	Required	Not allowed	Allowed	Not allowed
<b>Germany</b>	Required	Not allowed (allowed only for informational purposes in addition to mandatory local Gaap)	Allowed	Not allowed (allowed only for informational purposes in addition to mandatory local Gaap)
<b>Greece</b>	Required	Required	Allowed (allowed for audited companies)	Allowed (allowed for audited companies)
<b>Hungary</b>	Required	Not allowed (allowed only for informational purposes in addition to mandatory local Gaap)	Allowed (for companies within the scope of the Act of Accounting)	Not allowed (allowed only for informational purposes in addition to mandatory local Gaap)
<b>Ireland</b>	Required	Allowed	Allowed	Allowed
<b>Italy</b>	Required	Required	Allowed (allowed for companies belonging to IFRS compliant groups, mandatory for insurance companies and not allowed for small sized companies )	Allowed (allowed for companies belonging to IFRS compliant groups; not allowed for small sized and for insurance companies)
<b>Latvia</b>	Required	Required	Allowed (required for banks, insurance companies and financial institutions)	Not allowed (required for banks, insurance companies and financial institutions)
<b>Lithuania</b>	Required	Required	Allowed (except for insurance companies; required for banks and financial institutions)	Allowed (except for insurance companies; required for banks and financial institutions)
<b>Luxembourg</b>	Required	Allowed	Allowed	Allowed
<b>Malta</b>	Required	Required	Required	Required
<b>Netherlands</b>	Required	Allowed	Allowed	Allowed
<b>Poland</b>	Required	Allowed	Not allowed (required for banks; allowed for companies belonging to IFRS compliant groups)	Not allowed (allowed for companies belonging to IFRS compliant groups)
<b>Portugal</b>	Required	Allowed (banks, insurances and other financial institutions shall use IFRS additionally to still required local Gaap)	Allowed (required for banks and other financial institutions)	Not allowed (allowed only for companies belonging to IFRS compliant groups)
<b>Romania</b>	Required	Allowed (for purposes of information only)	Allowed (required for credit institutions)	Allowed (for purposes of information only)
<b>Slovakia</b>	Required	Allowed (required for companies of public interest)	Required	Allowed (required for companies of public interest)
<b>Slovenia</b>	Required	Allowed (required for banks and insurance companies)	Allowed (required for banks and insurance companies)	Allowed (required for banks and insurance companies)
<b>Spain</b>	Required	Not allowed	Allowed	Not allowed
<b>Sweden</b>	Required	Not allowed	Allowed	Not allowed
<b>U.K.</b>	Required	Allowed	Allowed	Allowed

Sources: Commission of the European Communities, European Committee of Central Balance Sheet Data Office and www.iasplus.com

Table 2: Convergence of accounting principles in the E.U.

Country	Convergence facts	Country	Convergence facts
<b>Austria</b>	<ul style="list-style-type: none"> <li>• Austrian Gaap are still required for individual accounts and therefore three sets of reporting rules are currently used by listed companies: tax rules (for tax reporting), IFRS (for consolidated accounts) and Austrian commercial code (for individual accounts)</li> </ul>	<b>Ireland</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation (IFRS allowed for almost all companies both for consolidated and for individual accounts)</li> <li>• From 2012 Irish Gaap is expected to be replaced by the IFRS for SME</li> </ul>
<b>Belgium</b>	<ul style="list-style-type: none"> <li>• The main difference between Belgian Gaap and IFRS is represented by the prudence principle</li> <li>• Link between tax and financial reporting represents a limit to IFRS adoption</li> <li>• Working groups have been established to analyze possible reforms of Belgian Gaap in order to approach IAS principles</li> </ul>	<b>Italy</b>	<ul style="list-style-type: none"> <li>• Extensive adoption of IFRS principles, also for what concerns individual accounts</li> <li>• Strong links between tax and financial reporting</li> <li>• IFRS were not given fiscal relevance until 2008; after 2008 IFRS principles of recognition, qualification and classification have been recognized for fiscal purposes</li> <li>• Local Gaaps still based on formal events and prudence principle</li> </ul>
<b>Bulgaria</b>	<ul style="list-style-type: none"> <li>• Full IFRS adoption (partial exception only for what concerns SME)</li> </ul>	<b>Latvia</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> </ul>
<b>Cyprus</b>	<ul style="list-style-type: none"> <li>• Full IFRS adoption</li> </ul>	<b>Lithuania</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed for non listed companies)</li> <li>• The Law on Financial Statements of Entities was amended on 26 June 2008 to permit unlisted companies to choose to prepare their financial statements using IFRS</li> </ul>
<b>Czech Rep.</b>	<ul style="list-style-type: none"> <li>• IFRS are required both for consolidated and individual accounts of listed companies but local Gaap are still required for individual accounts of non listed ones</li> </ul>	<b>Luxembourg</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> </ul>
<b>Denmark</b>	<ul style="list-style-type: none"> <li>• All listed companies that are already using IFRS in their consolidated financial statements started to prepare individual accounts in accordance with IFRS in 2009</li> </ul>	<b>Malta</b>	<ul style="list-style-type: none"> <li>• Full IFRS adoption</li> <li>• In March 2009 Companies Act has been amended to adopt General Accounting Principles for Smaller Entities (GAPSE)</li> </ul>
<b>Estonia</b>	<ul style="list-style-type: none"> <li>• First European country to allow IFRS also for statutory purposes</li> <li>• Link between tax and financial reporting is light since the corporate tax is charged on dividends, not on profit; therefore this link did not represent a limit to full IFRS adoption</li> <li>• Local Gaap have been fully harmonized with IFRS (though less disclosures are required by the former); any difference in the local standards compared to IFRS must be explained and justified</li> </ul>	<b>Netherlands</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> </ul>
<b>Finland</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> </ul>	<b>Poland</b>	<ul style="list-style-type: none"> <li>• Local Gaap still required for non listed companies and allowed for individual accounts of listed companies</li> </ul>
<b>France</b>	<ul style="list-style-type: none"> <li>• Concerning individual accounts, the national accounting body (CNC) has been in favour of a progressive endorsement of IFRS through a selective approach</li> <li>• IAS 16, 36, 37 and 38 have been partially incorporated in local Gaap</li> </ul>	<b>Portugal</b>	<ul style="list-style-type: none"> <li>• Individual accounts can be drawn according to IFRS only for listed companies or for companies belonging to IFRS compliant groups</li> <li>• Companies that use IFRS for individual accounts should keep their books also according to national requirements for fiscal purposes</li> </ul>
<b>Germany</b>	<ul style="list-style-type: none"> <li>• Three sets of reporting rules are currently used by listed companies: tax rules (for tax reporting), IFRS (for consolidated accounts) and German Gaap (for individual accounts)</li> <li>• A very strong link between tax and financial reporting represents a limit to IFRS adoption</li> <li>• Low degree of harmonization of local Gaap to IFRS</li> <li>• The Act to Modernise Accounting Law has been approved in 2009, with the aim of reducing the financial reporting burden</li> <li>• The accounting requirements under the Act are described as an alternative to IFRS for SME that do not participate in capital markets</li> </ul>	<b>Romania</b>	<ul style="list-style-type: none"> <li>• Concerning individual accounts IFRS are admitted only for informational purposes</li> </ul>
<b>Greece</b>	<ul style="list-style-type: none"> <li>• Extensive implementation of IFRS (required for listed companies and allowed for non listed ones) both in consolidated and individual accounts</li> <li>• In Greece, there is no official standard setting body and changes to local Gaap result from either changes in Company or Tax Laws, or from Capital Markets Committee regulations (for listed companies). Therefore harmonization of local Gaap to IFRS principles cannot be driven by a standard setting body</li> </ul>	<b>Slovakia</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed for individual accounts</li> </ul>
<b>Hungary</b>	<ul style="list-style-type: none"> <li>• IFRS implementation limited to consolidated accounts (allowed only for informational purposes concerning individual accounts)</li> </ul>	<b>Slovenia</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> </ul>
		<b>Spain</b>	<ul style="list-style-type: none"> <li>• A new Plan General de Contabilidad (Spanish GAAP) has become effective for years beginning on or after 1 January 2008 for individual accounts and consolidated accounts of non listed groups</li> <li>• The new Spanish GAAP are inspired by similar principles as IFRS, though the two standards are not equivalent</li> </ul>
		<b>Sweden</b>	<ul style="list-style-type: none"> <li>• Local Gaap still required for individual accounts</li> <li>• Some steps to approximate Swedish Gaaps to IFRS have been taken.</li> </ul>
		<b>U.K.</b>	<ul style="list-style-type: none"> <li>• Extensive IFRS implementation, but local Gaap still allowed (except for consolidated accounts of listed companies)</li> <li>• The ASB issued accounting principles based on IFRS concerning various accounting issues</li> </ul>

Sources: Commission of the European Communities, European Committee of Central Balance Sheet Data Office and www.iasplus.com

Table 3: IFRS adoption and accounting harmonization

References	Countries/sample analyzed	Topic
<b>IFRS and European country local Gaap convergence</b>		
Haller (2002)	European Union	Accounting developments in the E.U. since the Fourth and Seventh Directives.
Haller and Heitrie (2004)	Germany	Government's accounting strategy as a consequence of IFRS adoption in the E.U..
Jermakowicz (2004)	Belgium (BEL-20 Companies)	Costs and benefits of IFRS adoption by BEL-20 companies in Belgium.
Larson and Street (2004a and 2004b)	E.U. countries, European Economic Area and Switzerland	Barriers to convergence.
Sucher and Jindrichovska (2004)	Czech Republic (9 companies plus 4 accounting professional interviewed)	Issues related to IFRS adoption in a transition country.
Vellam (2004)	Poland	Difficulties that Poland, as an example of a transition economy, has in complying with the underlying principles of IFRS.
Brown and Tarca (2005)	E.U. (focus on France, Germany, the Netherlands and U.K.)	IFRS enforcement strategies and developing of adequate enforcing bodies.
Delville <i>et al.</i> (2005)	France, Germany and Italy	Reforms of national accounting rules as a consequence of IFRS adoption in the E.U..
Whittington (2005)	European Union	IASB's process of developing accounting standards to be used within the E.U., structure and role of the IASB as a global standard setter.
Jermakowicz and Gornik-Tomaszewski (2006)	EU-listed companies in 2004	Costs and benefits due to IFRS implementation and extent of IFRS application.
Christensen <i>et al.</i> (2007)	U.K. listed companies (German companies used to estimate a counter-factual proxy)	Economic consequences for UK firms of the European Union's decision to impose mandatory IFRS.
Guerreiro <i>et al.</i> (2008)	Portuguese listed companies in 2003	State of preparedness of Portuguese companies to adopt IFRS
<b>IFRS and tax reporting</b>		
Lamb <i>et al.</i> (1998)	France, Germany, U.K. and U.S.	Links between tax and financial reporting.
Nobes (2003)	European Union	Proposals for a tax framework and tax rules.
Gammie <i>et al.</i> (2005)	European Union	Analysis of the extent to which IFRS could represent a starting point for achieving a CCCTB in Europe.
Eberhartinger and Klostermann (2007)	Austria	Effects of a transition towards an IFRS based fiscal system.
Haverals (2007)	Belgium	Effects of a transition to a IFRS based fiscal system.
Oliveras and Puig (2007)	Spain	Links between tax and financial reporting.
Kirsch and Olsson (2008)	Germany and Sweden	Comparison of tax and financial reporting in Germany and Sweden.
<b>Worldwide accounting harmonization</b>		
Ampofo and Sellani (2005)	U.E./U.S.	Pattern in the harmonization of accounting standards, with focus on IFRS – U.S. Gaap convergence.
Haverty (2006)	Chinese companies listed on NYSE	Analysis of the quantitative differences between IFRS and U.S..
Ragan <i>et al.</i> (2007)	U.E./U.S.	Differences between IFRS and U.S. Gaap and convergence perspectives.
Caschi (2008)	E.U./U.S.	History of IFRS development and discussion about a possible adoption by U.S. companies.
Erickson <i>et al.</i> (2009)	Worldwide	Differences between IFRS and U.S. Gaap and convergence perspectives.

Table 4: IFRS adoption and markets efficiency

References	Countries/sample analyzed	Topic
<b>Voluntary IFRS adoption</b>		
El-Gazzar <i>et al.</i> (1999)	IAS compliant companies worldwide at the end of the nineties	Motivations and characteristics of companies voluntarily complying with IAS.
Ashbaugh (2001)	Non U.S. companies listed on the L.S.E. in 1993	Motivations and characteristics of companies voluntarily complying with IAS or U.S. GAAP.
Weißberger <i>et al.</i> (2004)	German listed companies	Motivations and characteristics of companies voluntarily complying with IAS or U.S. GAAP.
Cuijpers and Buijink (2005)	E.U. listed companies	Determinants and consequences of voluntary adoption of non-local GAAP by companies listed in the E.U.
<b>Earnings management</b>		
Van Tendeloo and Vanstraelen (2005)	German companies voluntarily complying with IFRS prior to 2005	Earning management comparison (IFRS versus German GAAP).
Jeanjean and Stolowy (2008)	Listed companies from Australia, France and the UK.	Effect of the mandatory introduction of IFRS standards on earnings quality.
<b>Earnings predictability</b>		
Ashbaugh and Pincus (2001)	Non-U.S. companies using IAS by 1993	Impacts of variation in accounting standards relative to IAS on the ability to forecast earnings.
Hope (2003a and 2003b)	Worldwide	Enforcement and earning predictability.
Cuijpers and Buijink (2005)	E.U. listed companies	IAS/U.S. GAAP adoption determinants and effects on the levels of information asymmetry.
Hodgdon <i>et al.</i> (2008)	Companies complying with IFRS in 1999 and 2000	Effects of degree of compliance to IFRS disclosures on earnings predictability.
Djatej <i>et al.</i> (2009)	European countries	Effects of IFRS adoption on public and private information