



**Value Relevance of Discretionary Accruals in France and the UK:
The Incidence of IFRS**

Denis Cormier*
ESG UQAM

Marie-Josée Ledoux
ESG UQAM

Guy Villeneuve
ESG UQAM

Chaire d'information financière et organisationnelle (CIFO)
ESG UQAM

May 2011

We acknowledge financial support from l'Autorité des marchés financiers (Québec) and PWC. All usual caveats apply.

*Corresponding author.
P.O. Box 8888, downtown station
Montréal, Québec, Canada H3C 2P8

Value Relevance of Discretionary Accruals in France and the UK: The Incidence of IFRS

Abstract:

The aim of this paper is to investigate the impact of IFRS and the country's legal regime on the value relevance of discretionary accruals given environmental uncertainty. We show that IFRS improve the value relevance of discretionary accruals to a larger extent in France than in the UK. Under local GAAP, discretionary accruals are more valued in the UK than in France while under IFRS no significant differences are observed. In a situation of high negative sales variability, discretionary accruals are less valued under IFRS than local GAAP, suggesting that opportunistic earnings management is easier to detect under IFRS. In a situation of high positive sales variability, discretionary accruals, which are likely to provide a credible signal about future cash flows, are more value relevant under IFRS than under French GAAP. In that regard, no significant difference is observed between IFRS and UK.

Key words: Earnings management, environmental uncertainty, legal regime, IFRS.

Résumé :

Le but de cet article est d'étudier l'impact des normes IFRS et du régime juridique du pays sur le contenu informationnel des accruals discrétionnaires dans un contexte d'incertitude organisationnelle. Nous montrons que les IFRS améliorent le contenu informationnel des accruals discrétionnaires dans une plus large mesure en France qu'au Royaume-Uni. En vertu de normes locales, les accruals discrétionnaires sont plus valorisés au Royaume-Uni qu'en France alors que selon les normes IFRS aucune différence significative n'est observée. Dans une situation de forte variabilité négative des ventes, les accruals discrétionnaires sont moins valorisés selon les normes IFRS que les normes locales, ce qui laisse croire qu'une gestion opportuniste des résultats est plus facile à détecter en vertu des IFRS. Dans une situation de forte variabilité positive des ventes, les accruals discrétionnaires, qui sont susceptibles de fournir un signal crédible à propos des flux de trésorerie futurs, ont un contenu informationnel supérieur selon les IFRS que selon les normes françaises. À cet égard, aucune différence significative n'est observée entre les IFRS et les normes britanniques.

Mots clés : Gestion du résultat, incertitude organisationnelle, régime légal, IFRS.

Introduction

In this paper, focusing on a context of environmental uncertainty (sales variability), we investigate the impact of IFRS on the value relevance of accruals for two different legal systems, France and the UK. The theory of the firm (e.g. Child, 1972; Williamson, 1975) recognizes that environmental uncertainty places considerable constraints on firms, affecting strategy and decision-making. However, managers do have opportunities to respond strategically to uncertainty. Earnings management is an illustration of these opportunities (Ghosh and Olsen, 2009). Hence, it is in a firm's interests to reduce the variability of reported earnings and, consequently, information asymmetry between managers and investors (Gul *et al.*, 2003; Ghosh and Olsen, 2009).

Subramanyam (1996) supports the view that managers exercise their discretion to improve the ability of earnings to reflect fundamental value. In this case, earnings management may be beneficial because it improves the value relevance of earnings by conveying private information to investors. However, other studies argue in favor of the opportunistic use of earnings management (among others, see Healy and Palepu, 1993; Holthausen *et al.*, 1995; DeAngelo, 1988; Teoh *et al.*, 1998a and 1998b; Erikson and Wong, 1999). Misalignment of managers' and shareholders' incentives could induce CEOs to use the flexibility provided by accounting standards to manage earnings opportunistically (Jiraporn *et al.*, 2008).

The extent of opportunistic earnings management is likely to be greater in a context of high asymmetry (Dye, 1988; Trueman and Titman, 1988). Moreover, earnings management may increase the uncertainty about a firm's future cash flows, which also creates asymmetry in the stock market (Bhattacharya *et al.*, 2006).

In an uncertain environment characterized by sales or earnings variability, it is assumed that earnings management is more difficult to detect because of a lack of stability in accounting figures, which could affect its information content for investors. In such a context, investors would have difficulty to infer whether earnings management reflects corporate fundamental value or opportunistic behavior. Accounting standards, including International Financial Reporting Standards (IFRS), provide a degree of flexibility that gives opportunistic discretion to managers in reporting earnings in an attempt to reduce the variability in reported earnings via accrual management (*e.g.* Bannister and Newman, 1996). However, IFRS are generally considered more stringent and detailed than the domestic accounting standards they replace, allowing stock market participants to better assess earnings quality in an uncertain context.

LaPorta *et al.* (1997, 1998) document that legal rules protecting investors vary systematically among legal traditions or origins, common law countries (originating in English law) being more protective of outside investors and having less government ownership and regulation than civil law countries (originating in Roman law) and especially French civil law countries. Over the years, the UK developed accounting standards focusing primarily on the needs of shareholders and investors while in France, accounting rules have been largely influenced by taxation laws. Hence, we posit that a country's legal system may affect the level of earnings management and its value relevance for investors, especially in an uncertain environment.

Therefore, we expect the relationship between discretionary accruals and stock market value to be influenced by sales variability, the legal regime as well as the accounting framework, *i.e.* domestic GAAP versus IFRS.

Our main findings are the following. First, IFRS improve the value relevance of discretionary accruals to a larger extent in France in comparison to the UK. Second, the

country's legal regime affects the value relevance of discretionary accruals. Under local GAAP (pre IFRS), discretionary accruals are more valued in the UK than in France while under IFRS, stock market valuation of discretionary accruals does not statistically differ in France and the UK. Third, in a situation of high negative sales variability relative to the industry, discretionary accruals are less valued under IFRS than local GAAP, consistent with the argument that opportunistic earnings management would be more detected under IFRS. Third, our results suggest that in a context of high positive sales variability, discretionary accruals under IFRS are more likely to be value relevant in France, thus providing a more credible signal about future cash flows under IFRS than under French GAAP. This result is consistent with the argument that earnings management may be beneficial because it improves the value relevance of earnings by conveying private information to investors. In that regard, no significant difference is observed between IFRS and UK GAAP. However, in such a context, discretionary accruals were already highly valued under UK GAAP.

To the best of our knowledge, this study is the first to investigate how IFRS affect the value relevance of earnings management both in an uncertain environment and in different legal systems.

The remainder of the paper is organized as follows. Section 2 presents the theoretical background and the development of research propositions. The method is described in section 3. Results are presented in section 4. Finally, section 5 provides a conclusion and a discussion of the potential implications of the results.

2. Background and Research Propositions

2.1 *Value relevance of Discretionary Accruals: The Impact of IFRS and the Country's Legal Regime*

There is some evidence that a switch from domestic GAAP to IFRS has a modest positive impact on market liquidity and on the cost of equity capital. Such improvement results from a reduction in information asymmetry between managers and investors following the adoption of IFRS. Based on a sample of 18 European countries that adopted IFRS, Li (2010) finds that the reduction in the cost of equity capital following the adoption of IFRS is present only in countries with strong legal enforcement. This reduction in asymmetry results from higher quality financial reporting, higher analyst following and greater oversight by auditors and directors from the use of a common reference in accounting (Daske *et al.*, 2008; Bruggerman *et al.*, 2009; Li, 2010). For example, in the UK, at the transition to IFRS, firms reporting IFRS earnings lower than earnings computed according to UK GAAP were penalized by the stock market (Horton and Serafeim, 2007).

In the French context, Cormier *et al.* (2009) show IFRS mandatory equity adjustments at the adoption date are more valued than French GAAP equity, suggesting that the first-time adoption of IFRS by French firms is perceived as a signal of increase in the quality of their financial statements. Jeanjean and Stolowy (2008) find that the pervasiveness of earnings management increased in France after the introduction of IFRS. Finally, in the case of earnings reconciliation adjustment following IFRS adoption, Platikanova (2009) shows that the bid/ask spread has decreased in France, but not in Germany, Sweden and in the UK.

Armstrong *et al.* (2010) examine European stock market reactions to specific events associated with the adoption of IFRS by 18 countries. Based on a three-day market-adjusted

return centered on 16 events, they find an incrementally positive reaction for firms with lower pre-adoption accounting disclosure quality, and with higher pre-adoption information asymmetry. This is consistent with investors expecting net information quality benefits from IFRS adoption. They also find an incrementally negative reaction for firms in code law countries, consistent with investors' concerns over enforcement of IFRS in those countries.

A few studies investigate accounting choices at the transition to IFRS. Basically, these studies looked at determinants of optional choices at the IFRS adoption (Cazavan-Jeny and Jeanjean, 2007; Cormier *et al.*, 2009). These optional choices are essentially determined by factors such as leverage, profitability, firm size, foreign listing, ownership, stock options, and industry membership. Concerning stock market valuation of IFRS transition adjustments, Cormier *et al.* (2009) show IFRS mandatory equity adjustments are more valued than French GAAP equity, suggesting that the first-time adoption of IFRS by French firms is perceived as a signal of increase in the quality of their financial statements. Moreover, the value-relevance of optional IFRS equity adjustments depends on whether or not these adjustments reveal new information to market participants.

IFRS confer accounting discretion in financial reporting, especially with the introduction of fair value accounting. Jeanjean and Stolowy (2008) analyze the effect of the mandatory introduction of IFRS standards on earnings management for three countries: Australia, France, and the UK. They find that the pervasiveness of earnings management did not decline after the introduction of IFRS, and in fact increased in France. Their findings suggest that management incentives and national institutional factors play an important role in framing financial reporting characteristics.

Several studies document that investors systematically overreact to accrual-based accounting information, especially in US markets (*e.g.* Pincus *et al.*, 2007; Soares and Stark,

2009).¹ Kaserer and Klingler (2008) address the question as to what extent this accrual anomaly is related to different accounting standards. They provide empirical evidence that the accrual anomaly is also present in Germany. However, this anomaly seems mainly to be driven by firms presenting their financial statements under IFRS or US GAAP, while the anomaly is unlikely to exist for those firms complying with German GAAP. Kaserer and Klingler (2008) argue that introducing true and fair view accounting, like IFRS or US GAAP, which relies on difficult-to-verify information, may not be suitable to improve accounting information quality, especially when the corporate governance system is weak.²

Regarding the information impact of IFRS reconciliations for UK firms, Christensen *et al.* (2009) argue that because the British capital market is well developed, regulated, and dominated by equity-based financing, and because the disclosure quality of UK GAAP is arguably comparable to that of IFRS, it is unlikely that translating UK GAAP to IFRS earnings will in itself convey information about future operating cash flows. However, because accounting information is used in debt covenants, technical changes to how earnings are calculated may affect the distribution of wealth between lenders and shareholders. As expected, the authors find that (1) stock prices respond to IFRS reconciliation announcements, and (2) these market reactions are more pronounced among firms with a greater likelihood, and higher costs, of covenant violation.

¹ Pincus *et al.* (2007) find that stock prices tend to overweigh the role of accruals persistence, especially discretionary accruals. They observe negative abnormal returns in year $t+1$ for countries having common law traditions such as Australia, Canada, the UK and the US. Soares and Stark (2009) reach the same conclusion for a British sample (1989-2004) since they find that average annual abnormal returns generally decline as prior period accruals move from low to high. This outcome can be interpreted as consistent with the accruals anomaly since investors overweigh the persistence of accruals and underweigh the persistence of cash flows in predicting the next period's earnings.

² In the same vein, Chan *et al.* (2009) observe, in the UK context, a significant reduction in the negative return predictability of accruals among firms with poorer accounting information quality following the introduction of the UK standard Financial Reporting Standard No. 3: Reporting Financial Performance (FRS3). Their findings suggest that regulatory interventions seeking to improve accounting information quality can in themselves reduce the mispricing of securities in the capital market.

Landsman *et al.* (2009) investigate whether the information content of earnings announcements increases after mandatory IFRS adoption based on observations from 27 countries from 2000 to 2007 (16 countries' adoption of IFRS and 11 countries' remaining adoption of domestic accounting standards). Abnormal return volatility and abnormal trading volume are used as proxies for the information content of earnings announcements. The authors find that information content increased in IFRS-adopting countries, but this happens only when they use abnormal return volatility (not abnormal trading volume) as a proxy for information content. Moreover, they find that increases in abnormal return volatility are concentrated in code law countries.

Chen *et al.* (2009) compare the accounting quality of publicly listed firms in 15 member states of the European Union before and after the full adoption of IFRS in 2005. They use five indicators as proxies for accounting quality, namely, earnings smoothing, earnings management toward targets, the magnitude of absolute discretionary accruals, accruals quality, and timely loss recognition. Their results are mixed. They find that the majority of accounting quality indicators improved after IFRS adoption in the European Union. However, they find that firms engage in more earnings smoothing and recognize large losses in a less timely manner in post-IFRS periods.

Moreover, Hail *et al.* (2010) suggest that the direct effect of IFRS adoption on the quality of U.S. financial reporting is likely to be small because US GAAP are of high quality. UK GAAP are much more in harmony with US GAAP than French GAAP (Ding *et al.*, 2007). However, Healy and Whalen (1999) assert that if financial statements are to convey managers' information, accounting standards should allow managers to exercise their judgment and discretion in financial reporting. Indeed, IFRS provide a degree of flexibility that provides opportunities for managers to use discretion in reporting earnings with attempts to reduce the variability in reported earnings via the accrual process. In addition, managers

may also use their discretion over accruals to enhance earnings informativeness (*e.g.* Goel and Thakor, 2003).

Horton *et al.* (2008) for a European sample and Tan *et al.* (2009) for an international sample find an improvement in the information environment during the mandatory transition period to IFRS. More specifically, investors can be better at detecting earnings management as a result as a change in the information environment following IFRS adoption, *i.e.* more financial analysts following a firm and lower forecast errors.

Prior findings in the UK suggest that IFRS adoption has increased the level of information available to investors but at the same time has created more uncertainty among financial analysts about earnings forecasts. In this vein, Iatridis (2010) shows that due to the fair value orientation of IFRS, the transition to IFRS appears to introduce volatility in British income statement figures. Moreover, we must keep in mind that earnings and their related components (normal and discretionary accruals) were already value relevant under UK GAAP, much more than under French GAAP. Overall, based on prior findings, we expect IFRS to have a larger impact on value relevance in France than in the UK.

It is interesting to note that firms that voluntarily adopt IFRS ahead of the mandated year of adoption experience a stronger improvement in the liquidity of their stock and in their cost of capital than firms that only adopt IFRS at the required date. Therefore, it is unlikely that mandatory adoption of IFRS alone drives the improvement in financial reporting. Other regulatory or institutional factors probably take precedence. Hence, in the case of the UK, the high level of market oversight regulation prior to IFRS adoption should restrain its impact on the information environment (Christensen *et al.*, 2009).

The UK is a common law country with accounting standards focusing primarily on the needs of shareholders while France has a legal system based on civil law with accounting rules largely influenced by taxation laws. Ding *et al.* (2007) analyze determinants and effects

of differences between domestic accounting standards and IFRS, so-called missing standards. Their findings show that missing standards are mainly determined by the importance of stock market and ownership concentration. The authors argue that a higher level of missing standards implies more opportunities for earnings management. In their results, France is ranked as having 21 missing standards while the UK is ranked as having zero missing standards. For the UK, most of the extra disclosure mandated by IFRS is in a narrative form (ICAS, 2008).

Leuz *et al.* (2003) show that opportunities for earnings management are more a matter of investor protection and that earnings management is expected to decrease in countries with high investor protection such as the UK since strong protection limits an insider's ability to acquire private control benefits through a masking of real performance. Hence, countries' institutional factors such as the high level of market oversight regulation may explain market valuation differences (Christensen *et al.*, 2009).

This gives rise to the two following propositions:

Proposition 1: IFRS affect the value relevance of discretionary accruals to a larger extent in France in comparison to the UK (IFRS effect).

Proposition 2: The country's legal regime affects the value relevance of discretionary accruals (country's effect).

2.2 Value Relevance of Discretionary Accruals under High Uncertainty: The Impact of IFRS and the Country's Legal Regime

Pfeffer and Salancik (1978) define environmental uncertainty as the degree to which future events and states cannot be anticipated or predicted. Environmental uncertainty is likely to lead to more earnings management. Ghosh and Olsen (2009) show that managers

use discretionary accruals to reduce the variability in reported earnings for firms with high sales volatility.

Moreover, market assessment of earnings management is likely to be influenced by environmental uncertainty. In our view, in a situation of high sales volatility, it is more difficult for investors to assess earnings quality. In an uncertain environment characterized by sales or earnings variability, earnings management is assumed to be more difficult to detect because of a lack of stability in accounting figures.

Sales variability is likely to affect reported earnings and therefore may induce CEOs to opportunistically manage earnings for several reasons. Healy (1985) and Holthausen *et al.* (1995) find evidence that executives manage earnings downwards when their bonuses are at their maximum. Incentives to manipulate earnings also exist when the managers are faced with a possibility of losing their jobs especially in a context of poor performance. DeAngelo (1988) reports that, during a proxy contest, incumbent managers use their accounting discretion to show a favorable picture of their own performance. Firms may also manage earnings to meet capital market expectations. In this regard, Teoh *et al.* (1998a) report that earnings increasing abnormal accruals can be identified prior to initial public offerings. Similar evidence is also found in seasoned equity offerings (Teoh *et al.*, 1998b). In this vein, DeGeorge *et al.* (1999) find clear support for earnings management to exceed each of the three thresholds, i.e. positive profits, sustain-recent-performance, and meet-market-expectations. Finally, in the context of mergers and acquisitions, Erikson and Wong (1999) report that, in quarters surrounding the merger, acquiring firms manage earnings upward in an attempt to increase their stock prices. Misalignment of managers' and shareholders' incentives inducing opportunistic earnings management is more likely to be an issue in a context of sales decreasing.

In a context of sales increasing, earnings management, especially earnings increasing accruals may signal future prospects to investors. Concerning beneficial earnings management, Louis (2003) examines the signaling function of discretionary accruals around stock splits. He finds evidence suggesting that managers use accruals in conjunction with stock splits to signal favorable performance. Louis's (2003) findings based on abnormal returns around stock splits also imply that the signal offered by discretionary accruals is deemed credible for investors.

We argue that the market assessment of earnings management under environmental uncertainty is likely to differ between domestic GAAP and IFRS. Accounting standards, including IFRS, provide a degree of flexibility that gives opportunistic discretion to managers in reporting earnings in an attempt to reduce the variability in reported earnings via accrual management (*e.g.* Bannister and Newman, 1996). However, IFRS are generally considered more stringent and detailed than the domestic accounting standards they replace, allowing stock market participants to better assess earnings quality in an uncertain context.

Burgstahler *et al.* (2006) find that both public and private firms exhibit more earnings management in countries with weak legal enforcement. Out of 13 countries, they show that the lowest earnings management score in the UK while France is ranked at the fifth highest score. In the same vein, in a comparative study Canada /US, Tinaikar (2009) find that firm-level governance mechanisms such as outside directors and country-level litigation environment act as governance substitutes in determining unbiased forecasts. Over the years, the UK developed accounting standards focusing primarily on the needs of shareholders and investors while in France, accounting rules have been largely influenced by taxation laws. These differences in France and the UK legal systems may affect the level of earnings management and its value relevance for investors, especially in an uncertain environment.

Therefore, we expect the relationship between discretionary accruals and stock market value to be influenced by sales variability. We also expect the relationship between discretionary accruals and stock market value in a situation of high sales variability to be affected by accounting standards, *i.e.* domestic GAAP versus IFRS, and by the legal regime.

Given the lack of prior evidence, we do not make any directional prediction as to how IFRS will affect the value relevance of earnings management in an uncertain context. Hence, our third and fourth research propositions:

Proposition 3: IFRS affect the value relevance of discretionary accruals in a context of high sales variability (IFRS effect).

Proposition 4: The country legal regime affects the value relevance of discretionary accruals in a context of high sales variability (country's effect).

3. Method

3.1 Sample

Our sample is based on non-financial firms listed on the SBF250 in France and FTSE 100 and FTSE250 in the UK from 1997 to 2008. This gives a starting sample of 2,604 observations (217 firms) for France and 2,796 observations (233 firms) for the UK. We exclude 5 firms (60 observations) that already comply with IFRS or US GAAP before 2005 in France and 3 firms (36 observations) in the UK. This gives 212 firms for 2,544 observations for France and 214 firms for 2,568 observations for the UK. Since we use a lag variable for computing discretionary accruals, we lose one year of observations. Considering missing data and firms listed after 1997, this gives 2,387 firm-year observations for France

and 2,527 for the UK. Due to missing data in the Compustat database, our sample is reduced to 1,847 for the French sample and 2,040 for the British sample. Stock markets suffered from a major downturn in 2008 (44% for the French sample and 36% for the UK sample). We decided to withdraw the year 2008 from our regression analyses.

This leaves us with 1,657 firm-year observations for France, and 1,874 firm-year observations for the UK. Table 1 shows the details of our samples.³

[Insert table 1]

3.2 *Stock Market Valuation of Discretionary Accruals*

The first model tests the impact of IFRS on stock market valuation of discretionary accruals in France and in the UK.

(1) Stock market value =

$$\beta_0 + \beta_1 \text{Equity}_{it} + \beta_2 \text{Cash flow from operations}_{it} + \beta_3 \text{Normal accruals}_{it} + \beta_4 \text{Discretionary accruals}_{it} + \beta_5 \text{Discretionary accruals} * \text{IFRS}_{it} + \beta_6 \text{IFRS}_{it} + \varepsilon$$

The second model tests the impact of IFRS on stock market valuation of discretionary accruals in a context of high sales variability, in France and in the UK.

³ For firms having fiscal year-end different from December 31st, local GAAP apply for the year 2005 and not IFRS (European Parliament, Regulation 1606/2002, March 2002, Official Journal of the European Communities). However, for firms with fiscal year-end ranging between January 31st and April 30th, in Compustat database, 2005 data correspond to 2006 financial statements. 25 French firms and 38 UK firms are classified as local GAAP in 2005.

(2) Stock market value =

$$\begin{aligned} & \beta_0 + \beta_1 \text{Equity}_{it} + \beta_2 \text{Cash flow from operations}_{it} + \beta_3 \text{Normal accruals}_{it} + \\ & \beta_4 \text{Discretionary accruals}_{it} + \beta_5 \text{Discretionary accruals} * \text{IFRS}_{it} + \\ & \beta_6 \text{Discretionary accruals} * \text{High sales variability}_{it} + \\ & \beta_7 \text{Discretionary accruals} * \text{High sales variability} * \text{IFRS}_{it} + \\ & \beta_8 \text{High sales variability}_{it} + \beta_9 \text{High sales variability} * \text{IFRS}_{it} + \beta_{10} \text{IFRS}_{it} + \varepsilon \end{aligned}$$

The third model tests the impact of the country's legal regime on stock market valuation of discretionary accruals for the periods pre versus post IFRS.

(3) Stock market value =

$$\begin{aligned} & \beta_0 + \beta_1 \text{Equity}_{it} + \beta_2 \text{Cash flow from operations}_{it} + \beta_3 \text{Normal accruals}_{it} + \\ & \beta_4 \text{Discretionary accruals}_{it} + \beta_5 \text{Discretionary accruals} * \text{UK}_{it} + \beta_6 \text{UK}_{it} + \varepsilon \end{aligned}$$

The fourth model tests the impact of the country's legal regime on stock market valuation of discretionary accruals, in a context of high sales variability, for the periods pre versus post IFRS.

(4) Stock market value =

$$\begin{aligned} & \beta_0 + \beta_1 \text{Equity}_{it} + \beta_2 \text{Cash flow from operations}_{it} + \\ & \beta_3 \text{Normal accruals}_{it} + \beta_4 \text{Discretionary accruals}_{it} + \\ & \beta_5 \text{Discretionary accruals} * \text{UK}_{it} + \\ & \beta_6 \text{Discretionary accruals} * \text{High sales variability}_{it} + \\ & \beta_7 \text{Discretionary accruals} * \text{High sales variability} * \text{UK}_{it} + \\ & \beta_8 \text{High sales variability}_{it} + \beta_9 \text{High sales variability} * \text{UK}_{it} + \beta_{10} \text{UK}_{it} + \varepsilon \end{aligned}$$

Variables are deflated by the number of shares outstanding at year-end. Interaction terms serve to assess how environmental uncertainty, IFRS, and the country's legal regime affect stock market valuation of discretionary accruals. Variables *Sales variability*, *IFRS* and *UK* are binary variables.

Environmental Uncertainty

Dechow (1994) asserts that change in sales between two consecutive years is a good proxy for a firm's uncertainty. Hence, environmental uncertainty is proxied by a firm's yearly sales variability. We measure sales variability by the percentage change in sales from period t to period $t-1$. To mitigate industry effects, the firm-specific measure is normalized by subtracting the uncertainty measure for firm's two-digit SIC code for the same time period yielding the net of industry proxy for environmental uncertainty. We compute net of industry sales variability that we use in absolute value (Abs Sales variability). We think that sales variability at firm level must take into consideration the uncertainty that faces the whole industry in which the firm operates (Ghosh and Olsen, 2009).

The interaction term *Discretionary accruals*High sales variability* is introduced. *High sales variability* is a binary variable that takes the value of one if the absolute value of net of industry sales variability is greater than or equal to the sample median.

Discretionary Accruals

The estimation of a discretionary accruals determination model requires the specification of potential sources of normal accruals. From the literature, it appears that three key variables are closely linked with normal accruals: (1) underlying performance, (2) level of depreciable fixed assets, (3) current or lagged cash flow from operations (*e.g.* Dechow *et al.* 1995; Dechow and Dichev, 2002) or lagged accruals (Beneish, 1997; Defond and Park,

1997). First, a firm's underlying performance is expected to influence its level of normal accruals, with good performance implying higher accruals than poor performance (*e.g.* receivables or inventories). A comprehensive measure of a firm's underlying performance is the year-to-year change in sales (*e.g.* Jones, 1991). Second, the variable Property, plant and equipment (PPE) is included in order to control for systematic accruals resulting from depreciation, *i.e.* the normal part of depreciation (Jones, 1991). Third, Lagged cash flow from operations (*i.e.*, cash from last period) is assumed to systematically determine current period normal accruals since changes in cash flow and in accruals are correlated over time (Dechow, 1994).

We measure total accruals as the difference between net earnings and cash flow from operations. Hribar and Collins (2002) argue that the difference between net income and cash flow from operations is the correct measure of total accruals and that the use of a balance sheet approach may lead to a systematic bias in discretionary accruals estimation. They show that balance sheet accruals estimates are predictably biased in studies where the partitioning event is correlated with mergers and acquisitions or discontinued operations. The authors demonstrate that tests of market mispricing of accruals will be under-stated due to erroneous classification of "extreme" accruals firms.⁴ While a firm's total accruals are easily accessible from its financial statements, normal and discretionary accruals are not directly observable and must be inferred through an estimation model. Normal accruals reflect a firm's economic environment or its underlying level of activity, independent of managerial incentives. For a given firm (*i*), current period (*t*) total normal accruals are modeled in the following manner:

$$\text{Total accruals}_{it} = \alpha_1 \text{Change in sales}_{it} + \alpha_2 \text{Operating Cash flow}_{it-1} + \alpha_3 \text{PPE}_{it} + \varepsilon_{it}$$

⁴ The balance sheet method of accruals may create bias in the estimation of normal accruals when the firm is involved in mergers and acquisitions. Hence, the change in working capital accounts can be affected by the operation of mergers and acquisitions without any earnings management intention.

Our estimation of normal accruals is cross-sectional based on industry and year specific observations (9 industries for 12 years, from 1997 to 2008). The industry model removes variation in the normal accruals that is common across firms in the same industry (Dechow *et al.*, 1995).

Observations vary substantially among industries: from 60 for utilities to 560 for consumer discretionary in France, and from 39 for telecom to 763 for industrials in the UK. Results are not affected when we estimate normal accruals without telecommunications and utilities for which there are few observations.

4. Results

4.1 Descriptive Statistics

From table 2a and 2b, we observe that sales variability remains quite similar prior and post IFRS adoption (2005 to 2008 versus 1997 to 2004) with a mean score of 0.18 (median 0.10) prior IFRS and 0.17 (median 0.09) post IFRS in France and a mean score of 0.14 (median 0.09) prior IFRS and 0.14 (median 0.10) post IFRS in the UK. Moreover, there is no difference in sales variability prior/post IFRS both in France and the UK when we split among low and high sales variability.

[Insert table 2a and table 2b]

Table 3a and 3b present earnings components in domestic GAAP and according to IFRS. We observe much more discretionary accruals under IFRS compared with French GAAP (median of 0.23 € per share for IFRS versus 0.06 € per share for French GAAP). However, a switch from UK GAAP to IFRS does not generate a large difference in discretionary accruals levels (median of 0.02 € per share under IFRS versus -0.02 € per share

for UK GAAP). Quite similar results are reached when we scale discretionary accruals by lag assets. Moreover, these results hold in a context of high uncertainty (Abs Sales variability net of industry \geq median) and for both positive and negative sales variability relative to firms' industry.⁵

[Insert table 3a and 3b]

4.2 *Multivariate Results*

We use the Hausman specification test to decide on the use of a random or fixed effects' model. We obtain a Chi2 statistic of 12.77 ($p < 0.174$), for the French sample and a Chi2 statistic of 14.03 ($p < 0.121$), for the UK sample. This suggests that the random effects' model is the most appropriate. We estimate regressions using random effect feasible GLS (GLS regression with correlated disturbance). This technique allows estimation in the presence autocorrelation within panels and cross-sectional correlation and/or heteroscedasticity across panels. The test of Breusch-Pagan/Cook-Weisberg shows the presence of heteroscedasticity (Chi2: 11,823.9; $p < 0.000$ for the French sample, and Chi2: 2,020.5; $p < 0.000$ for the UK sample). Hence, the error structure among panels is presumed to be heteroscedastic. In addition, we exclude from regressions all observations with standardized residuals exceeding two.

⁵ However, we observe (results not reported) large earnings smoothing under French GAAP (5.14 small profits compared to one small loss) compared with IFRS (2.43 profits for one loss). More specifically, under negative sales variability, there is an attempt by French firms to avoid losses since we observe a proportion of near 14 small profits (ROA) compared to one small loss for French GAAP versus 5.50 for IFRS. Earnings smoothing is not observed in the UK (2.90 small profits compared to one small loss for UK GAAP compared to 2.27 under IFRS). Consistent with Leuz *et al.* (2003), small losses are defined to be in the range [-0.01, 0.00] and small profits are defined to be in the range [0.00, 0.01].

4.2.1 Valuation of Discretionary Accruals: The Impact of IFRS

Results from GLS cross-sectional regressions on stock market valuation of earnings components are reported in table 4a (model 1). In France, we observe more discretionary accruals under IFRS (refer to table 3a) and these accruals are value relevant since the coefficient on the interaction term *Discretionary accruals*IFRS* is positive and significant (1.14; $p < 0.01$ two-tailed).

In the UK, results presented in table 4b do not show a significant change in earnings management practices following the adoption of IFRS (refer to table 3b), and discretionary accruals do not seem to be valued differently according to UK GAAP and IFRS since the coefficient on the interaction term *Discretionary accruals*IFRS* is not significant at a conventional level (coefficient = 0.45; $p < 0.329$ two-tailed). These results are consistent with proposition 1, i.e. IFRS affect the value relevance of discretionary accruals to a larger extent in France in comparison to the UK.

[Insert table 4a and table 4b]

Kothari *et al.* (2005) suggest that Jones model adding profitability yields erratic performance improvements. As a sensitivity analysis, for a given firm (i), current period (t) total normal accruals are modeled in the following manner (scaled by number of shares outstanding):

$$\text{Total accruals}_{it} = \alpha_1 + \alpha_2 \text{Change in Sales}_{it} + \alpha_3 \text{PPE}_{it} + \alpha_4 \text{Lag Earnings}_{it}$$

Results (not reported) provide quite similar results. For France, coefficients on *Discretionary accruals* (2.37 versus 2.75) and on the interaction term *Discretionary accruals*IFRS* (1.09 versus 1.14) are quite similar. Moreover, we still observe higher earnings increasing discretionary accruals under IFRS with quite similar means of Discretionary accruals for both models (0.23 € per share for Kothari *et al.*'s model versus

0.24 € per share). The similarity is also observed under French GAAP (-0.17 € per share versus -0.16 € per share).

As for the UK, the coefficient on *Discretionary accruals* is slightly lower with Kothari *et al.*'s (2005) model (1.40 versus 1.82). Moreover, we still observe similar levels of discretionary accruals under IFRS (0.05 € per share for Kothari *et al.*'s model versus 0.06 € per share) and a slight difference under UK GAAP (-0.02 € per share Kothari *et al.* versus -0.03 € per share).

4.2.3 Valuation of Discretionary Accruals under High Uncertainty: The Impact of IFRS

France

In table 4a, we present results for the French context, relying on GLS cross-sectional regressions on stock market valuation of earnings components considering sales variability. Prior evidence suggests that the value relevance of earnings under French GAAP is quite low compared with Anglo-Saxon countries. This result is consistent with Cormier *et al.* (2001) findings based on a comparative study involving France, Switzerland and the United States. Their result show that association between earnings and explain stock returns is much lower for French firms compared with US firms or even Swiss firms (R^2 of 3.3% for France, 4.3% for Switzerland and 28.2% for the United States).

Our results (model 2) show that environmental uncertainty affects the relationship between earnings management and stock market value. In a situation of high negative sales variability, results reported in table 4a show that discretionary accruals are valued at 1.50 (1.56+2.14-2.20) under IFRS versus 3.70 (1.56+2.14) for low negative sales variability. This is consistent with proposition 3. In a context of high negative sales variability, discretionary accruals are less valued under IFRS since the coefficient on *Discretionary accruals*High*

*sales variability*IFRS* is negative (-2.20; $p < 0.05$). Furthermore, Student t-test for the difference between coefficients on *Discretionary accruals*IFRS* (2.14) and *Discretionary accruals*High sales variability*IFRS* (-2.20) is not statistically different from zero ($t=0.01$; $p < 0.934$), suggesting that in a context of high negative sales variability, discretionary accruals are not value relevant under IFRS.

This suggests that opportunistic earnings management would be detected under IFRS but not under French GAAP. This result is consistent with the view that investors are in a better position to detect opportunistic earnings management under IFRS.

As a sensitivity analysis, we investigate whether our results differ when focusing either on highly positive abnormal accruals (75-100% quartile) or highly negative abnormal accruals (0-25% quartile). In the context of high negative sales variability, results (not reported) show that for earnings increasing abnormal accruals, the coefficient on *Discretionary accruals*High sales variability* is positive and significant (10.12; $p < 0.01$) and *Discretionary accruals*High sales variability*IFRS* is negative and significant (-8.82; $p < 0.05$). Student t-test for the difference between the two coefficients is not statistically different from zero ($t=1.02$; $p < 0.313$).

For earnings decreasing abnormal accruals, the coefficient on *Discretionary accruals*High sales variability* is positive and significant (2.21; $p < 0.05$) while the coefficient on *Discretionary accruals*High sales variability*IFRS* is negative and significant (-2.59; $p < 0.05$). Student t-test for the difference between the two coefficient is not statistically different from zero at a conventional level ($t=2.27$; $p < 0.132$). Positive (negative) abnormal accruals are positively (negatively) associated with share price under French GAAP while this relationship does not hold under IFRS. Therefore, it appears that under IFRS, opportunistic earnings increasing and decreasing abnormal accruals (e.g. big bath behavior) are detected by stock market participants and are not value relevant. Hence, in the context of

high negative sales variability, under IFRS, earnings management (either earnings increasing or earnings decreasing) does not appear to be value relevant.

In a situation of high positive sales variability, results presented in table 4a show that discretionary accruals are valued at 5.75 (4.95-2.22+3.02) under IFRS versus 2.73 (4.95-2.22) under French GAAP. This is consistent with proposition 3. IFRS is more value relevant than French GAAP since the coefficient on the variable *Discretionary accruals*High sales variability* is negative (-2.22; $p < 0.01$) while the coefficient on the variable *Discretionary accruals*High sales variability*IFRS* is positive (3.02; $p < 0.01$) suggesting that discretionary accruals are more valued under IFRS. This is confirmed by the Student t-test for the difference between coefficients on variable *Discretionary accruals*IFRS* and *Discretionary accruals*High sales variability*IFRS* that shows they are different from zero (3.32; $p < 0.068$). Moreover, coefficients on *Discretionary accruals* High sales variability* (-2.22) and *Discretionary accruals*High sales variability*IFRS* (3.02) are not statistically different from zero ($t=0.57$; $p < 0.451$), suggesting that in a context of high positive sales variability, discretionary accruals are valued at 4.95 under IFRS compared to 2.73 (4.95-2.22).

In a context of high positive sales variability, earnings management would be informative about future cash flows. Our results may indicate that accruals under IFRS provide a more credible signal of future cash flows than under French GAAP. In such a positive context, IFRS provide more relevant information to market participants to assess the value relevance of earnings. As such, it appears that IFRS contribute to the detection and valuation of earnings management.

As a sensitivity analysis, we estimate our model for highly positive abnormal accruals (75-100% quartile) and highly negative abnormal accruals (0-25% quartile). In a context of high positive sales variability, results (not reported) show that for earnings increasing

abnormal accruals, the coefficient on *Discretionary accruals*High sales variability* is not significant (-1.11; $p < 0.857$) while *Discretionary accruals*High sales variability*IFRS* is positive and significant (13.90; $p < 0.05$). Consistent with results presented in table 4a, positive abnormal accruals would be informative about future cash flows under IFRS.

For earnings decreasing abnormal accruals, coefficients on *Discretionary accruals*High sales variability* (-1.79; $p < 0.21$) and *Discretionary accruals*High sales variability*IFRS* (1.73; $p < 0.67$) are not significant. This suggests that earnings decreasing abnormal accruals in a context of high positive sales variability are not value relevant both under French GAAP and IFRS.

The UK

Table 4b reports results for the British sample (model 2), relying on GLS cross-sectional regressions on stock market valuation of earnings components, taking into account sales variability. Discretionary accruals are less valued under IFRS than UK GAAP in a situation of high negative sales variability ($5.76+2.31-5.03=3.04$ under IFRS versus 5.76 under UK GAAP). This finding is consistent with the view that British investors are in a better position to detect opportunistic earnings management under IFRS. Earnings management in a context of sales decreasing is likely to be opportunistic while earnings management in a context of sales increasing may signal future cash flows to investors. Student t-test for the difference between the two coefficients *Discretionary accruals*IFRS* (2.31) and *Discretionary accruals*High sales variability*IFRS* (-5.03) confirms this result since coefficients are statistically different from zero ($t=2.82$; $p < 0.093$).

Once again, as a sensitivity analysis, we investigate whether our results differ when focusing either on highly positive abnormal accruals (75-100% quartile) or highly negative abnormal accruals (0-25% quartile). In the context of high negative sales variability, for

earnings increasing abnormal accruals, results (not reported) show that the coefficient on *Discretionary accruals*High sales variability* is positive and significant (6.21; $p < 0.01$) while the coefficient on *Discretionary accruals*High sales variability*IFRS* is negative and significant (-9.08; $p < 0.01$). Student t-test for the difference between the two coefficient is not statistically different from zero at a conventional level ($t=0.77$; $p < 0.379$). For earnings decreasing abnormal accruals, the coefficient on *Discretionary accruals*High sales variability* is positive and significant (10.09; $p < 0.01$) and the coefficient on *Discretionary accruals*High sales variability*IFRS* is negative and significant (-8.82; $p < 0.01$). Student t-test for the difference between the two coefficient is not statistically different from zero at a conventional level ($t=2.06$; $p < 0.151$). Therefore, as it seems to be the case in France, it appears that under IFRS, opportunistic earnings increasing and decreasing abnormal accruals by UK firms are detected by stock market participants and are not value relevant.

In a context of high positive sales variability, discretionary accruals are more valued under IFRS than under UK GAAP ($0.77+3.25-3.06=0.96$ versus 0.77). However, Student t-test for the difference between the two coefficients *Discretionary accruals*IFRS* (3.25) and *Discretionary accruals*High sales variability*IFRS* (-3.06) is not different from zero ($t=0.90$; $p < 0.344$), suggesting that under high positive sales variability, UK GAAP and IFRS do not differ in the valuation of Discretionary accruals.

As a sensitivity analysis, we estimate our model for highly positive abnormal accruals (75-100% quartile) and highly negative abnormal accruals (0-25% quartile). In the context of high positive sales variability, results (not reported) show that for positive abnormal accruals, the coefficient on *Discretionary accruals*High sales variability* is positive and significant (3.91; $p < 0.05$) while the coefficient on *Discretionary accruals*High sales variability*IFRS* is not significant (-1.60; $p < 0.48$). This finding is consistent with those presented in table 4b.

Positive abnormal accruals would be informative about future cash flows both under UK GAAP and IFRS.

In a situation of high positive negative sales variability, the coefficient on *Discretionary accruals*High sales variability* is positive and significant (6.98; $p < 0.01$) while the coefficient on *Discretionary accruals*High sales variability*IFRS* is negative and significant (-8.95; $p < 0.01$). Student t-test for the difference between the two coefficient is not statistically different from zero at a conventional level ($t=1.30$; $p < 0.254$). Negative abnormal accruals in a context of high positive sales variability are negatively valued under UK GAAP but not valued under IFRS. In other words, under IFRS, market participants would not consider earnings decreasing accruals in a context of high positive sales variability.

In summary, under IFRS, the French market reacts negatively (positively) to high negative (positive) sales variability. Our results suggest that IFRS play an important role in the market assessment of earnings quality in France especially in a context on high sales variability, no matter the sense of the variability. In the UK, discretionary accruals are less valued for high negative sales variability firms under IFRS while under high positive sales variability, UK GAAP and IFRS do not differ in the stock market valuation of Discretionary accruals. Moreover, the higher market valuation under IFRS of discretionary accruals for firms with high positive sales variability may indicate that accruals under IFRS provide a more credible signal of future cash flows than under French GAAP. In that regard, no significant difference is observed between IFRS and UK GAAP.

4.2.2 Valuation of Discretionary Accruals: The Impact of the Country's Legal Regime

The interaction term *Discretionary accruals*UK* allows to test differences between France and the UK in stock market valuation of discretionary accruals pre and post IFRS.

Results reported in table 5 (model 2) suggest that under local GAAP (pre IFRS), discretionary accruals are more valued in the UK than in France ($2.23+0.84=3.07$ versus 2.23). Furthermore, Student t-test for the difference between coefficients on *Discretionary accruals* (2.23) and *Discretionary accruals*UK* (0.84) is statistically different from zero ($t=4.13$; $p < 0.042$).

Under IFRS, stock market valuation of discretionary accruals does not statistically differ in France and the UK since the coefficient on *Discretionary accruals*UK* is not statistically significant at a conventional level (0.40; $p < 0.412$). Our results also suggest that IFRS did not change significantly market valuation of discretionary accruals in the UK ($2.23+0.84=3.07$ pre IFRS versus 3.79 post IFRS). Hence, consistent with proposition 2, our results suggest that the country legal regime affects the value relevance of discretionary accruals.

Table 5 also reports stock market valuation of discretionary accruals given sales variability for the period pre versus post IFRS (model 4). In panel A, we report results for negative sales variability. In pre IFRS, discretionary accruals are less valued in the UK under high uncertainty ($2.48+1.74-2.11=2.11$) than low uncertainty ($2.48 + 1.74 = 4.22$). In France, no difference is observed between high and low uncertainty. Discretionary accruals were already much less valued under UK GAAP in high negative sales variability (2.11) versus low variability (4.22). In post IFRS period, discretionary accruals are less valued under high variability both in France ($5.50-2.69= 2.81$) and in the UK ($5.50+3.59-2.69-2.87=3.53$) than under low variability (5.50 in France versus 9.09 ($5.50+3.59$) in the UK).

In panel B, we report results for positive sales variability. In pre IFRS period, discretionary accruals are more valued in the UK under high sales variability ($4.89-3.38-4.73+8.05=4.83$) than low sales increasing ($4.89-4.73=0.16$). Surprisingly, the opposite result is observed in France ($4.89-3.38=1.51$ for high sales variability versus 4.89 for low sales

variability). In post IFRS period, the valuation of discretionary accruals is not related to sales variability. Our results are consistent with proposition 4 suggesting that the country's legal regime affects the value relevance of discretionary accruals in a context of high sales variability.

Overall, these results suggest that IFRS has a larger impact in France for stock market valuation but the IASB's goal of facilitating international harmonization and comparability of financial statements is reached to some extent.

[Insert table 5]

5. Conclusion

The aim of this paper was to investigate the impact of IFRS on the value relevance of discretionary accruals given environmental uncertainty for two different legal regimes, *i.e.* France and the UK.

Our findings show that the level of earnings management increased substantially in France following the adoption of IFRS while it remained quite stable in the UK. Second, IFRS appears to improve the value relevance of earnings management to a larger extent in France in comparison to the UK. Third, the country's legal regime affects the value relevance of discretionary accruals. Under local GAAP (pre IFRS), discretionary accruals are more valued in the UK than in France while under IFRS, stock market valuation of discretionary accruals does not statistically differ in France and the UK. Fourth, in a situation of high negative sales variability, discretionary accruals are generally less valued under IFRS than local GAAP, consistent with the argument that opportunistic earnings management would be detected more under IFRS. Fourth, earnings management in a context of high positive sales variability may signal future cash flows to investors. Our results suggest that, in such a context, discretionary accruals under IFRS are more likely to be value relevant in France,

thus providing a more credible signal about future cash flows than under French GAAP. This result is consistent with the argument that earnings management may improve the value relevance of earnings by conveying private information to investors. In that regard, no significant difference is observed between IFRS and UK GAAP. Finally, the country's legal regime affects the value relevance of discretionary accruals in a context of high sales variability.

Pincus *et al.* (2007) find that stock prices tend to overweigh the role of accruals persistence, especially discretionary accruals. They observe negative future discretionary returns for countries having common law traditions. Soares and Stark (2009) reach the same conclusion for a British sample since they find that average annual abnormal returns generally decline as prior period accruals move from low to high. In this paper, we provide some empirical evidence related to the likelihood of the accruals anomaly in the French and UK stock markets, especially under low sales variability since the coefficient on discretionary accruals is significant both for French and UK samples. However, this anomaly does not appear to exist in a context of high sales variability, at least concerning negative sales variability.

Our results suggest that IFRS allows market participants to better detect earnings management in contexts of high sales variability. Hence, discretionary accruals are less valued by the stock market in a context of high negative sales variability for earnings computed according to IFRS compared with domestic GAAP. As such, it appears that IFRS contribute to the detection and valuation of earnings management. Earnings in a context of high negative sales variability are likely to be opportunistically managed while earnings management in a context of high positive sales variability may signal future cash flows to investors. Our results may suggest that IFRS allow for the detection of discretionary accruals to a larger extent than local GAAP when they are produced opportunistically while,

especially in France, providing a more credible signal about future cash flows than under local GAAP in a context of positive sales variability.

Considering that we can assume that investors are more concerned with a sales decreasing environment than a sales increasing environment, our results suggest that IFRS play an important role in assessing earnings quality.

In our view, this study contributes to our understanding of earnings management in the following manner. We extend prior literature (*e.g.* Ghosh, 2009) suggesting that managers use discretionary accruals to reduce the variability in reported earnings more when firms operate in a context of sales uncertainty. Our contribution is threefold. First, we assess the impact of environmental uncertainty on the value relevance of discretionary accruals for two different legal systems, *i.e.* code law and common law. Second, we investigate the role played by the adoption of an international accounting framework in this process. Third, we investigate the impact of environmental uncertainty on investors' assessment of discretionary accruals, not only referring to a global measure of uncertainty, but also for sales increasing and sales decreasing situations. To the best of our knowledge, this study is the first to investigate how IFRS affect the value relevance of accruals in a context of environmental uncertainty, and in two different legal systems.

The results of this study should be interpreted with caution for at least the following reason. As in all earnings management studies, the current paper relies on specific measures of discretionary accruals that may not completely capture the underlying phenomenon. However, we feel that relying on industry-specific estimations over a twelve-year period provides more confidence in the results. Moreover, using an alternative estimation model of discretionary accruals does not alter our results.

Future research may extend analyses to other countries to better assess the role of a country level governance context. Such an approach would allow for a better investigation of

how differences between domestic GAAP and IFRS the value relevance of earnings in a context of environmental uncertainty.

Table 1
Sample
Firm-year observations

	France	UK
Initial sample	2,604	2,796
Firms listed after 1997	-407	-356
Firms complying with IFRS or US GAAP before 2005	-60	-36
Missing data lag cash flow for operations	-212	-233
Other missing data	<u>-78</u>	<u>-131</u>
Total sample	1,847	2,040
Year 2008	-190	-192
Final sample	1,657	1,848

Tableau 2a
Descriptive statistics
Sales variability
(France)

<i>Panel A- Total sample</i> (N: 1,657)	Min.	Max.	Mean	Median	Std dev.
French GAAP (N:1,104)					
Abs sales variability	0	11	0.18	0.10	0.43
IFRS (N:553)					
Abs sales variability	0	3	0.17	0.09	0.43
Panel B- Abs Sales variability					
<i>< median</i>					
<i>(Low sales variability)</i>					
French GAAP					
Abs sales variability	0	0.10	0.05	0.05	0.03
IFRS					
Abs sales variability	0	0.10	0.04	0.04	0.03
Panel C - Abs Sales variability					
<i>≥ median</i>					
<i>(High sales variability)</i>					
French GAAP					
Abs sales variability	0	11	0.32	0.20	0.58
IFRS					
Abs sales variability	0	3	0.32	0.19	0.44

Tableau 2b
Descriptive statistics
Sales variability
(The UK)

<i>Panel A- Total sample</i> (N: 1,848)	Min.	Max.	Mean	Median	Std dev.
UK GAAP (N: 1,248)					
Abs sales variability	0	9	0.14	0.09	0.31
IFRS (N: 600)					
Abs sales variability	0	1.41	0.14	0.10	0.15
<i>Panel B- Abs Sales variability</i> <i>< median</i> <i>(Low sales variability)</i>					
UK GAAP					
Sales variability	0	0.09	0.04	0.04	0.03
IFRS					
Sales variability	0	0.09	0.04	0.04	0.03
<i>Panel C - Abs Sales variability</i> <i>≥ median</i> <i>(High sales variability)</i>					
UK GAAP					
Sales variability	0.09	9	0.26	0.19	0.42
IFRS					
Sales variability	0.09	1.41	0.23	0.19	0.16

Table 3a
Descriptive statistics
Earnings components and sales variability
(France)

	In € per share					Scaled by
	Min.	Max.	Mean	Median	Std dev.	lag Assets Median
Panel A- Total sample (N: 1,657)						
French GAAP (N: 1,104)						
Cash flow from operations	-21	76	3.42	2.35	4.46	0.069
Normal accruals	-36	3	-1.88	-1.22	2.26	-0.045
Discretionary accruals	-8	3	-0.16	0.06	1.00	-0.002
IFRS (N: 553)						
Cash flow from operations	-5	660	6.01	3.34	28.30	0.088
Normal accruals	-630	0.98	-3.42	-1.44	26.83	-0.044
Discretionary accruals	-8	8	0.24	0.23	1.42	0.004
Panel B - Abs Sales variability < median <i>(Low sales variability)</i>						
French GAAP						
Discretionary accruals (Sales variability < 0)	-8	2	-0.12	0.05	0.97	-0.001
Discretionary accruals (Sales variability ≥ 0)	-6	2	-0.13	0.09	0.96	-0.002
IFRS						
Discretionary accruals (Sales variability < 0)	-5	8	0.49	0.37	1.36	0.008
Discretionary accruals (Sales variability ≥ 0)	-8	4	0.16	0.23	1.39	0.004
Panel C - Abs Sales variability ≥ median <i>(High sales variability)</i>						
French GAAP						
Discretionary accruals (Sales variability < 0)	-4	3	-0.22	-0.09	0.97	-0.002
Discretionary accruals (Sales variability ≥ 0)	-8	2	-0.18	0.08	1.11	-0.003
IFRS						
Discretionary accruals (Sales variability < 0)	-6	7	0.07	0.18	1.77	0.003
Discretionary accruals (Sales variability ≥ 0)	-4	5	0.13	0.20	1.04	0.001

Table 3b
Descriptive statistics
Earnings components and sales variability
(The UK)

	In € per share					Scaled by lag Assets
	Min.	Max.	Mean	Median	Std dev.	Median
Panel A- Total sample (N: 1,848)						
UK GAAP (N: 1,248)						
Cash flow from operations	-5	8	0.49	0.32	0.71	0.104
Normal accruals	-2	1.40	-0.20	-0.12	0.28	-0.037
Discretionary accruals	-2	1	-0.03	-0.02	0.18	-0.005
IFRS (N: 600)						
Cash flow from operations	-2	16	0.83	0.46	1.58	0.098
Normal accruals	-9	0.32	-0.32	-0.15	0.77	-0.034
Discretionary accruals	-3	4	0.06	0.02	0.37	0.003
Panel B - Abs Sales variability < median (Low sales variability)						
UK GAAP						
Discretionary accruals (Sales variability < 0)	-1	1	-0.04	-0.03	0.14	-0.010
Discretionary accruals (Sales variability ≥ 0)	-1	1	-0.03	-0.02	0.18	-0.005
IFRS						
Discretionary accruals (Sales variability < 0)	-2	1	0.05	0.03	0.23	0.005
Discretionary accruals (Sales variability ≥ 0)	-3	1	0.05	0.02	0.34	0.005
Panel C - Abs Sales variability ≥ median (High sales variability)						
UK GAAP						
Discretionary accruals (Sales variability < 0)	-2	1	-0.05	-0.03	0.24	-0.006
Discretionary accruals (Sales variability ≥ 0)	-1	1	-0.01	-0.01	0.15	-0.001
IFRS						
Discretionary accruals (Sales variability < 0)	-2	4	0.13	0.00	0.68	0.002
Discretionary accruals (Sales variability ≥ 0)	-7	1	0.04	0.01	0.20	0.001

Table 4a
GLS Cross-Sectional Regressions on Stock Market Valuation
of Discretionary Accruals (Effect of IFRS in France)

Stock market value = $\beta_0 + \beta_1$ Equity _{it} + β_2 Cash flow from operations _{it} + β_3 Normal accruals _{it} + β_4 Discretionary accruals _{it} + β_5 Discretionary accruals*IFRS _{it} + β_6 Discretionary accruals*High sales variability _{it} + β_7 Discretionary accruals*High sales variability*IFRS _{it} + β_8 High sales variability _{it} + β_9 High sales variability*IFRS _{it} + β_{10} IFRS _{it} + ε				
		Model 1	Model 2	
		Total sample	Sales variability<0	Sales variability≥0
Equity	+	***0.90	***0.92	***0.97
Cash flow from operations	+	***2.65	***1.95	***3.50
Normal accruals	+	***2.41	***1.69	***3.71
Discretionary accruals	+	***2.75	***1.56	***4.95
Discretionary accruals*IFRS	+/-	***1.14	***2.14	-0.35
Discretionary accruals*High sales variability	+/-		0.78	***-2.22
Discretionary accruals*High sales variability*IFRS	+/-		**-2.20	***3.02
High sales variability	+/-		*-1.02	***3.74
High sales variability*IFRS	+/-		*1.03	0.69
IFRS	+/-	***6.35	***6.50	***4.23
N		1,634	977	650
Wald test		3,595(0.00)	6,161(0.00)	2,279(0.00)
		23 outliers	13 outliers	17 outliers
Test of coefficient difference				
$\beta_5 + \beta_7 = 0$			0.01(0.934)	
$\beta_5 - \beta_7 = 0$				3.32(0.068)

*: p < 0.10; **: p < 0.05; ***: p < 0.01. One-tailed if directional prediction, two-tailed otherwise.

Table 4b
GLS Cross-Sectional Regressions on Stock Market Valuation
of Discretionary Accruals and Sales Variability
(Effect of IFRS in the UK)

Stock market value = $\beta_0 + \beta_1$ Equity _{it} + β_2 Cash flow from operations _{it} + β_3 Normal accruals _{it} + β_4 Discretionary accruals _{it} + β_5 Discretionary accruals*IFRS _{it} + β_6 Discretionary accruals*High sales variability _{it} + β_7 Discretionary accruals*High sales variability*IFRS _{it} + β_8 High sales variability _{it} + β_9 High sales variability*IFRS _{it} + β_{10} IFRS _{it} + ε				
		Model 1	Model 2	
		Total sample	Sales variability<0	Sales variability≥0
Equity	+	***0.62	***0.81	***0.28
Cash flow from operations	+	***4.96	***5.37	***6.47
Normal accruals	+	***1.53	***5.21	**1.10
Discretionary accruals	+	***1.82	***5.76	*0.77
Discretionary accruals*IFRS	+/-	0.45	**2.31	***3.25
Discretionary accruals*High sales variability	+/-		-0.46	0.95
Discretionary accruals*High sales variability*IFRS	+/-		***-5.03	***-3.06
High sales variability	+/-		0.27	0.15
High sales variability*IFRS	+/-		***-1.19	0.11
IFRS	+/-	***0.89	***0.99	***1.02
N		1,771	842	996
Wald test		6,770(0.00) 77 outliers	2,504(0.00) 0 outlier	5,934(0.00) 10 outliers
Test of coefficient difference				
$\beta_5 + \beta_7 = 0$			2.82(0.093)	0.90(0.344)

*: p < 0.10; **: p < 0.05; ***: p < 0.01. One-tailed if directional prediction, two-tailed otherwise.

Table 5
GLS Cross-Sectional Regressions on Stock Market Valuation of Discretionary Accruals
(France and the UK combined - Country's effect)

Stock market value = $\beta_0 + \beta_1$ Equity _{it} + β_2 Cash flow from operations _{it} + β_3 Normal accruals _{it} + β_4 Discretionary accruals _{it} + β_5 Discretionary accruals*UK _{it} + β_6 Discretionary accruals*High sales variability _{it} + β_7 Discretionary accruals*High sales variability*UK _{it} + β_8 High sales variability _{it} + β_9 High sales variability*UK _{it} + β_{10} UK _{it} + ε				
		Model 3	Model 4	
Panel A		Pre IFRS		
		Total sample	Sales variability <0	Sales variability ≥0
Equity	+	***0.74	***0.80	***0.91
Cash flow from operations	+	***2.27	***1.88	***2.99
Normal accruals	+	***1.35	***1.10	***2.58
Discretionary accruals	+	***2.23	***2.48	***4.89
Discretionary accruals*UK	+/-	**0.84	***1.74	***-4.73
Discretionary accruals*High sales variability	+/-		-0.26	***-3.38
Discretionary accruals*High sales variability*UK	+/-		**-2.11	***8.05
High sales variability	+/-		-0.04	***4.78
High sales variability*UK	+/-		-0.42	***-5.22
UK	+/-	***-8.34	***-7.32	***-4.42
N		2,308	1,208	1,048
Wald test		1,108(0.00)	2,268(0.00)	1,875(0.00)
		44 outliers	47 outliers	49 outliers
Test of coefficient difference				
$\beta_4 - \beta_5 = 0$		4.13(0.042)		
Panel B		Post IFRS		
		Total sample	Sales variability <0	Sales variability ≥0
Equity	+	***0.97	***0.77	***1.12
Cash flow from operations	+	***4.14	***4.32	***3.81
Normal accruals	+	***3.99	***4.13	***1.83
Discretionary accruals	+	***3.79	***5.50	***4.36
Discretionary accruals*UK	+/-	0.40	***3.59	-0.55
Discretionary accruals*High sales variability	+/-		***-2.69	***1.85
Discretionary accruals*High sales variability*UK	+/-		***-2.87	-0.47
High sales variability	+/-		-0.27	***4.25
High sales variability*UK	+/-		-0.70	***-4.33
UK	+/-	***-9.55	***-11.15	***-4.41
N		1,140	547	561
Wald test		3,303(0.00)	7,271(0.00)	7,271(0.00)
		13 outliers	30 outliers	15 outliers

*: p < 0.10; **: p < 0.05; ***: p < 0.01. One-tailed if directional prediction, two-tailed otherwise.

References

- Armstrong, C.S., Barth, M.E. and E.J. Riedl. 2010. Market Reaction to the Adoption of IFRS in Europe. *The Accounting Review* 85 (1): 31-61.
- Ashbaugh, H. and M. Pincus. 2001. Domestic Accounting Standards, International Accounting Standards, and the Predictability of Earnings. *Journal of Accounting Research* 39 (4): 417–434.
- Atwood, T.J., Drake, M.S., Myers, J.N. and L.A. Myers. 2010. Do Earnings Reported under IFRS Tell Us More About Future Earnings and Cash Flows? SSRN: <http://ssrn.com/abstract=1557406>
- Bannister, J. W. and H.A. Newman. 1996. Accrual Usage to Manage Earnings toward Financial Forecasts. *Review of Quantitative Finance and Accounting* 7 (November): 259–278.
- Barth, M. E., Landsman, W. and M. Lang. 2008. International Accounting Standards and Accounting Quality. *Journal of Accounting Research* 46 (1): 1–32.
- Bartov, E., Goldberg, S.R. and M. Kim. 2005. Comparative Value Relevance among German, U.S., and International Accounting Standards: A German Stock Market Perspective. *Journal of Accounting, Auditing & Finance* 20 (1): 95–119.
- Beneish, M.D. 1997. Detecting GAAP Violation: Implications for Assessing Earnings Management among Firms with Extreme Financial Performance. *Journal of Accounting and Public Policy* 16 (3): 271-309.
- Bhattacharya, N., Desai, H. and K. Venkataraman. 2009. Earnings Quality and Information Asymmetry. Working paper, Edwin L. Cox School of Business, Southern Methodist University.

- Bruggemann, U., Daske, H., Homberg, C. and P.F. Pope. 2009. How Do Individual Investors React to Global IFRS Adoption? SSRN: <http://ssrn.com/abstract=1437542>
- Burgstahler, D.C., Hail, L. and C. Leuz. 2006. The Importance of Reporting Incentives: Earnings Management in European Private and Public. *The Accounting Review* 81 (5): 983-1016.
- Cazavan-Jeny, A. and T. Jeanjean. 2007. Accounting Choices under IFRS 1: Analysis and Determinants. Accounting in Europe. 3rd annual Workshop, September.
- Chan, A.L.C, Lee, E. and S. Lin. 2009. The Impact of Accounting Information Quality on the Pricing of Accruals: The Case of FRS/ in the UK. *Journal of Accounting and Public Policy* 28 (3): 189-2006.
- Chen, H., Tang, Q., Jiang, Y. and Z. Lin. 2009. International Financial Reporting Standards and Accounting Quality: Evidence from the European Union. SSRN: <http://ssrn.com/abstract=1330352>
- Child, J. 1972. Organizational Structure, Environment, and Performance: The Role of Strategic Choice. *Sociology: The journal of the British Sociological Association* 6 (1): 1-22.
- Christensen, H.B., Lee, E. and M. Walker. 2009. Do IFRS Reconciliations Convey Information? The Effect of Debt Contracting. *Journal of Accounting Research* 47 (5): 1167-1199.
- Cormier, D., Demaria, S., Lapointe-Antunes, P. and R. Teller. 2009. First-Time Adoption of IFRS, Managerial Incentives and Value-Relevance: Some French Evidence. *Journal of International Accounting Research* 8 (2): 20-22.
- Cormier, D., Magnan, M. and D. Zéghal. 2001. La pertinence et l'utilité prédictive des mesures de performance financière : une comparaison France, États-Unis et Suisse. *Comptabilité-Contrôle-Audit* 6 (1): 77-105.

- Daske, H., Hail, L., Leuz, C. and R. Verdi. 2008. Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research* 46 (5): 1085-1143.
- DeAngelo, L.E. 1988. Managerial Competition, Information Costs, and Corporate Governance: The Use of Accounting Performance Measures in Proxy Contests. *Journal of Accounting and Economics* 10 (1): 3–36.
- Dechow P.M. and I.D. Dichev. 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review* 77 (1): 35-59.
- Dechow, P. 1994. Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals. *Journal of Accounting and Economics* 18 (1), 3-42.
- Dechow, P., Sloan, R. and A. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review* 70 (2): 193-226
- Defond, M.L. and C.W. Park. 1997. Smoothing Income in Anticipation of Future Earnings. *Journal of Accounting and Economics* 23 (1): 115-139.
- Degeorge, F., Patel, J. and R. Zeckhauser. 1999. Earnings Management to Exceed Thresholds. *Journal of Business* 72 (1): 1-33.
- Ding, Y., Hope, O.K., Jeanjean, T. and H. Stolowy. 2007. Differences between Domestic Accounting Standards and IAS: Measurement, Determinants and Implications. *Journal of Accounting and Public Policy* 26 (1): 1-38.
- Dye, R. 1988. Earnings Management in an Overlapping Generations Model. *Journal of Accounting Research* 26 (2): 325-1360.
- Erickson, M. and S. Wong. (1999). Earnings Management by Acquiring Firms in Stock for Stock Mergers. *Journal of Accounting and Economics* 25 (2):149–176.
- Hribar, P. and D.W. Collins. 2002. Errors in Estimating Accruals: Implications for Empirical Research. *Journal of Accounting Research* 40 (1): 105-134.

- Ghosh, D. and L. Olsen. 2009. Environmental Uncertainty and Managers' Use of Discretionary Accruals. *Accounting, Organizations and Society* 34 (2): 188-205.
- Goel, M.A. and A.V. Thakor. 2003. Why do Firms Smooth Earnings? *Journal of Business* 76 (1): 151–193.
- Gul, F., Chen, C. and J. Tsui. 2003. Discretionary Accounting Accruals, Managers' Incentives, and Audit Fees. *Contemporary Accounting Research* 20 (3): 441–464.
- Hail, L., Leuz, C. and P. Wysocki. 2010. Global Accounting Convergence and the Potential Adoption of IFRS by the U.S. (Part I): Conceptual Underpinnings and Economic Analysis. *Accounting Horizons* 24 (3): 355-394.
- Healy, P. 1985. The Impact of Bonus Schemes on the Selection of Accounting Principles. *Journal of Accounting and Economics*, 7 (1): 85–107.
- Healy, P. M. and K. G. Palepu. 1993. The Effect of Firms' Financial Disclosure Policies on Stock Prices. *Accounting Horizons* 7 (1): 1-11.
- Healy, P.M. and J.M. Whalen. 1999. A Review of the Earnings Management Literature and its Implications for Standard Setting. *Accounting Horizons* 13 (4): 365–384.
- Holthausen, R. W., D. Larker, and R. Sloan. 1995. Annual Bonus Schemes and the Manipulation of earnings. *Journal of Accounting and Economics* 19 (1): 29-74.
- Horton, J. and G. Serafeim. 2007. Market Reaction & Valuation of IFRS Reconciliation Adjustments: First Evidence from the UK. Working Paper, London School of Economics and Political Science and Harvard University.
- Horton, J., Serafeim, G. and I. Serafeim. 2008. Does Mandatory IFRS Adoption Improve the Information Environment? Harvard Business School Working Paper No. 1264101. Available at SSRN: <http://ssrn.com/abstract=1264101>

- Iatridis, G. 2010. IFRS Adoption and Financial Statement Effects: The UK Case. *International Research Journal of Finance and Economics* 38 (April): 165-172.
- ICAS. 2008. *The Implementation of IFRS in the UK, Italy and Ireland*. The Institute of Chartered Accountants of Scotland. Edinburgh.
- Jeanjean T. and H. Stolowy. 2008. Do Accounting Standards Matter? An Exploratory Analysis of Earnings Management before and after IFRS Adoption *Journal of Accounting and Public Policy* 27 (6): 480-494.
- Jiraporn, P., Miller, G. Yoon, S.S. and K. Young Sang. 2008. Is Earnings Management Opportunistic or Beneficial? An Agency Theory Perspective. *International Review of Financial Analysis* 17 (1), 622-634.
- Jones, J. 1991. Earnings Management during Import Relief Investigations, *Journal of Accounting Research* 29 (2): 193-228.
- Kaserer, C. and C. Klingler. 2008. The Accrual Anomaly under Different Accounting Standards – Lessons Learned from the German Experiment. *Journal of Business Finance & Accounting* 35 (7/8): 837-859.
- Kothari, S.P., Leone, A.J. and C.E. Wasley. 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics* 39 (1): 163-197.
- Landsman, W.R., Maydew, E.L. and J.R. Thornock. 2009. The Information Content of Annual Earnings Announcements and Mandatory Adoption of IFRS. SSRN: <http://ssrn.com/abstract=1337567>
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and R. Vishny. 1997. Legal Determinants of External Finance. *Journal of Finance* 52 (3): 1131-50.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and R. Vishny. 1998. Law and finance. *Journal of Political Economy* 106 (6): 1113-55.

- Leuz, C., Nanda, D. and P.D. Wysocki. 2003. Earnings Management and Investor Protection: An International Comparison. *Journal of Financial Economics* 69 (3): 505-527.
- Li, S. 2010. Does Mandatory Adoption of International Financial Reporting Standards in the European Union reduce the Cost of equity Capital? *The Accounting Review* 85 (2): 607-636.
- Louis, H. 2003. Do Managers Credibly Use Accruals to Signal Private Information? Evidence from the Pricing of Discretionary Accruals around Stock Splits. Working paper: Pennsylvania State University.
- Pfeffer, J. and G.R. Salancik. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. New York, NY. Harper and Row.
- Pincus, M., Rajgopal, S. and M. Venkatachalam. 2007. The Accrual Anomaly: International Evidence. *The Accounting review* 82 (1): 169-203.
- Platikanova, P. 2009. Market Liquidity Effects of the IFRS Introduction in Europe. SSRN: <http://ssrn.com/abstract=1005364>
- Soares, N. and A.W. Stark. 2009. The accruals anomaly – Can Implementable Portfolio Strategies be Developed that are Profitable Net of Transaction Costs in the UK? *Accounting and Business Research* 39 (4): 321-345.
- Subramanyam, K. R. 1996. The Pricing of Discretionary Accruals. *Journal of Accounting and Economics* 22 (1-3): 249-281.
- Tan, H., Wang, S. and M. Welker. 2009. Foreign Analyst Following and Forecast Accuracy around Mandated IFRS Adoptions. Working Paper. <http://accounting.uwaterloo.ca/seminars/09-10papers>
- Teoh, S. H., Welch, I. and T.J. Wong. 1998a. Earnings Management and the Long-Run Market Performance of Initial Public Offerings. *Journal of Finance* 53 (6): 1935–1974.

- Teoh, S. H., Welch, I. and T.J. Wong. 1998b. Earnings Management and the Long-Run Market Performance of Seasoned Equity Offerings. *Journal of Financial Economics* 50 (1): 63–90.
- Trueman B. and S. Titman. 1988. An Explanation for Accounting Income Smoothing. *Journal of Accounting Research* 26 (supplement): 127–139.
- Tinaikar S. 2009. Outside Directors, Litigation Environment and Management Earnings Forecasts. AAA 2009 Financial Accounting and Reporting Section (FARS) Paper. Available at SSRN: <http://ssrn.com/abstract=1259266>
- Williamson, O. 1975. *Markets and Hierarchies, Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*. Free Press, New York.