

The Impact of IFRS Adoption on Stock Price Informativeness

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Abstract

We examine the effects of mandatory and voluntary adoption of International Financial Reporting Standards (IFRS) on stock price informativeness. Using a sample of 3,994 firms from 30 countries, we document an increase in stock price informativeness for voluntary IFRS adopters, which suggests that the benefits associated with IFRS adoption accrue more to those firms that are more likely to have incentives to improve their reporting quality. Most of the benefits associated with IFRS adoption accrue to firms from European Union countries, although there is evidence that the benefits extend beyond EU countries for voluntary adopters. Finally, we document an increase in stock price informativeness for mandatory adopters in countries with stronger public enforcement. Our results are robust to alternate proxies for stock price informativeness and voluntary IFRS adopters.

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1. Introduction

More efficient capital markets incorporate information into stock prices quickly and accurately. Given that stock variation occurs because of informed investors trading on private information, firm-specific return can be a measure of the rate at which markets incorporate private information into prices (Grossman and Stiglitz 1980; French and Roll 1986; Roll 1988). A growing literature has provided evidence on the link between firm-specific return variation and stock price informativeness. High levels of firm-specific return variation have been associated with more efficient capital allocation (Wurgler 2000; Durnev *et al.* 2004; Chen *et al.* 2007) and stock prices that are more informative about future earnings (Durnev *et al.* 2003). In addition, evidence points to higher firm-specific return variation (more stock price informativeness) in more developed countries, with stronger protection rights and more transparency (Morck *et al.* 2000; Jin and Myers 2006). Finally, another strand of literature studies how changes in firms' information environment can affect stock price informativeness (Fernandes and Ferreira 2008; Haggard *et al.* 2008). Our study contributes to the latter by examining how the adoption of International Financial Reporting Standards (IFRS) affects stock price informativeness.

International Financial Reporting Standards were designed primarily to provide more accurate, comprehensive, and timely financial statement information, and to reduce international differences in accounting standards by standardizing reporting formats. Existing literature documents that IFRS require greater disclosure and are more comprehensive than local accounting standards (Ashbaugh and Pincus 2001; Ding *et al.* 2007) and improve the comparability of firms across markets, which improves capital allocation efficiency (Covrig *et al.* 2007; Armstrong *et al.* 2010). Improved disclosure should reduce information asymmetry, enhance liquidity and reduce the cost of capital (Diamond and Verrecchia 1991; Easley and O'Hara 2004). Consistent with this view, several studies document reductions in cost of capital associated with both mandatory and voluntary IFRS adoption (Leuz and Verrecchia 2000; Daske *et al.* 2008; Li 2010; Daske *et al.* 2011). These studies emphasize the importance of both enforcement and firms' reporting incentives on the impact of IFRS adoption.

While the plausible benefits from IFRS are obvious, there are concerns as to whether these benefits will be achieved. As explained by Ball (2006), there are many factors that will affect the outcome of IFRS adoption. There is substantial discretion given to managers in applying IFRS standards, which could lead to inconsistent implementation of IFRS across firms, and even more so across nations. Local political and economic forces will certainly influence actual reporting practice even after IFRS adoption. The resulting financial reporting quality will thus depend largely on both firms' reporting incentives and the quality of countries' enforcement regimes. In line with this view, some evidence points to a limited role of accounting standards in determining reporting quality (Leuz 2003; Ball and Shivakumar 2005; Burghstahler *et al.* 2006). Holthausen (2009) also emphasizes the importance of enforcement in explaining the financial reporting outcomes of IFRS adoption, and further advocates the use of better measures of enforcement that include both private and public measures of enforcement, as argued by Coffee (2007).

If the benefits from IFRS adoption are realized, investors will face lower costs of obtaining information. The resulting increased comparability of financial statements may reduce the need for adjustments to financial statements prepared using different standards. This will decrease costs and increase the speed at which information can be processed. This potential decrease in the cost of private information should reduce comovement and increase stock price informativeness, consistent with the predictions of Grossman and Stiglitz (1980) and Veldkamp (2006). In addition, if IFRS adoption indeed improves the transparency of financial statements, this should also increase firm-specific return variation by reducing capture by insiders, consistent with the predictions of Jin and Myers (2006). The potential benefits from IFRS adoption will be achieved only if they affect the resulting financial reporting quality; this will largely depend on firms' reporting incentives and the quality of private and public enforcement (Ball 2006; Holthausen 2009). With this in mind, we examine the impact of IFRS adoption on stock price informativeness accounting for differences in firms' incentives by exploring differences between voluntary (those adopting IFRS prior to the year of mandatory adoption) and mandatory adopters. In

addition, we examine how differences in the quality of public enforcement affect the impact of IFRS adoption on stock price informativeness of mandatory adopters.

The adoption of IFRS provides a natural experiment to examine the impact of changes in the information environment on stock price informativeness. We compare and contrast the impact of mandatory and voluntary IFRS adoption on stock price informativeness by including firms from countries that have adopted IFRS (e.g. Australia, countries in the European Union) and those from countries that plan to adopt IFRS, but already allow firms to use IFRS (e.g. Brazil; Jordan). If the adoption of IFRS leads to a reduction in the costs of obtaining information and increases transparency, as its proponents argue, we should observe significant improvement in stock price informativeness following IFRS adoption. On the other hand, given that accounting standards grant managers considerable discretion, the benefits from IFRS may not be fully achieved because of inconsistent implementation and enforcement across firms and across countries; stock price informativeness may not be affected in this case.²

In this paper we test whether stock price informativeness increases after a firm adopts IFRS. More importantly, we compare and contrast the effect of IFRS adoption on voluntary (arguably, the more serious adopters)³ and mandatory adopters.⁴ Since the level of firm commitment to IFRS may vary across firms, we hypothesize that voluntary IFRS adopters are more likely to observe an improvement in their information environment than mandatory adopters. Voluntary adopters are more likely to comply with the requirements of IFRS reporting, given that they are not forced to adopt these accounting standards. Similarly, we also conjecture that the impact of IFRS adoption on stock price informativeness should be stronger for mandatory adopters from countries with better public enforcement. We examine our

² Ball (2006) provides a good discussion of the pros and cons of IFRS adoption.

³ While some voluntary adopters may not be committed to improving their transparency and may be classified as label adopters (Daske *et al.* 2011), the inclusion of such firms in our sample of voluntary adopters would bias our results against finding any benefits associated with voluntary IFRS adoption.

⁴ Our focus differs and our results complement the findings of other papers that examine the impact of IFRS adoption on stock price informativeness on mandatory (Beuselinck *et al.* 2010) and voluntary adopters (Kim and Shi 2010).

hypotheses using a sample of firms from 30 countries from 1999 through 2010.⁵ The main measure of stock price informativeness is the firm-specific return variation, computed as in Morck *et al.* (2000). We find a declining trend in stock price informativeness over time (Figure 1). To mitigate problems associated with the downward trend in stock price informativeness and to more accurately measure (and to some degree isolate) the impact of IFRS adoption, we measure the change in stock price informativeness for each firm from the last year before adoption to the first year of adoption. In line with our hypotheses, we document that voluntary IFRS adopters experience an increase in stock price informativeness following IFRS adoption. In addition, we document the importance of enforcement on the outcomes of IFRS adoption. Mandatory adopters in countries with better enforcement experience an increase in stock price informativeness following IFRS adoption. The results still hold after a variety of robustness tests, including alternative measures for stock price informativeness and IFRS adoption.

Our study contributes to the literature in several ways. We add to the literature on the impact of IFRS adoption by exploring its impact on another important outcome measure, stock price informativeness. More importantly, we also contribute to the debate as to whether the benefits from IFRS adoption accrue more to voluntary or mandatory adopters. Examining differences between voluntary and mandatory adopters allows us to disentangle (albeit not perfectly) the level of firms' commitment to improvements in transparency and disclosure that could certainly affect the outcome of IFRS adoption- arguably, voluntary adoption of IFRS may be driven by a firm's commitment to increase disclosure (Daske *et al.* 2011). As Daske *et al.* (2011) point out some of the voluntary adopters may only adopt the IFRS label and thus may not be committed to improving disclosure. While we acknowledge this, the potential inclusion of some of these "label" adopters as part of our voluntary adopters would bias our results against finding any effects of voluntary adoption on stock price informativeness. In addition, we provide further evidence on the importance of enforcement in determining the effects of mandatory IFRS adoption. Finally, we also contribute to the literature on stock price informativeness (Morck *et al.* 2000; Jin and Myers 2006;

⁵ The 30 countries include 24 countries that adopted IFRS as of 2005. It also includes countries that have yet to adopt IFRS, but allow firms to use IFRS.

Fernandes and Ferreira 2008) by providing further evidence of the extent to which improved disclosure and transparency affects stock price informativeness.

The rest of the paper is organized as follows. In section 2 we review the related literature and develop our hypotheses; in section 3 we describe our data and the methodology used in our analyses; in section 4 we present our main findings on the impact of IFRS adoption on stock price informativeness; in section 5 we discuss several robustness tests, and we conclude in section 6.

2. Literature Review and Hypotheses Development

2.1. Stock Price Informativeness

Early work by Grossman and Stiglitz (1980) suggests that because information is costly, stock prices reflect only a subset of all relevant information. As the cost of private information declines, informed trading increases, which leads to more informative pricing. More trading by informed investors results in increased stock return variation; as Roll (1988) documents, it follows that firm-specific return variation could be associated with trading based on private information. Following these studies, a growing body of literature documents a link between firm-specific return variation and stock price informativeness (Morck *et al.* 2000; Durnev *et al.* 2003).

More recent theoretical work on stock price informativeness seeks to explain the extent of comovement in asset prices. Jin and Myers (2006) develop a model that predicts that R^2 s should be higher in countries with more opaque (less transparent) firms, and that crashes should be more common in more opaque countries. Extending the work of Grossman and Stiglitz (1980), Veldkamp (2006) develops a model that predicts higher stock price comovement in markets in which information is costly. These

models thus predict more stock price informativeness in countries where firms are more transparent and where the cost of private information is lower.⁶

Empirical evidence on stock price informativeness is consistent with the view that more transparent environments, with better investor protection and lower cost of private information have more informative stock prices (Morck *et al.* 2000; Jin and Myers 2006). In addition, more stock price informativeness facilitates corporate investment (Durnev *et al.* 2004), is associated with better capital allocation (Wurgler 2000), and is positively correlated with the sensitivity of investment to stock prices (Chen *et al.* 2007). A more closely related strand of literature examines how changes in the information environment affect stock price informativeness. Most of these studies focus on changes in the information environment associated with cross-listing in US markets and document improvements in stock price informativeness following cross-listings (Fernandes and Ferreira 2008) and more sensitivity of investment to stock prices for cross-listed firms (Foucault and Gehrig 2008). Finally, Fernandes and Ferreira (2009) study the impact of enforcement on stock price informativeness and document that enforcement of trading laws improves stock price informativeness, but only in developed markets. If the adoption of IFRS indeed improves the information environment and reduces the costs associated with obtaining information, we would expect that IFRS adoption would have a positive impact on stock price informativeness.

2.2. The impact of IFRS adoption

A growing body of literature examines the consequences of IFRS adoption. Supporters of IFRS adoption emphasize the potential benefits associated with accounting standards that provide more accurate, comprehensive, and timely financial statement information, and reduce international differences in accounting standards by standardizing reporting formats. This optimistic view is backed by evidence documenting that IFRS require greater disclosure than local accounting standards and are associated with higher accounting quality (Ashbaugh and Pincus 2001; Ding *et al.* 2007; Barth *et al.* 2008). Skeptics, on

⁶ Dasgupta, Gan, and Gao (2010) develop a model that predicts that increased transparency leads to lower stock price synchronicity (R^2) in the short-term, but higher stock price synchronicity in the long-term as transparency improves the informativeness of stock prices about future events.

the other hand, point to the many obstacles that will mitigate the impact of IFRS adoption on reporting quality (Ball 2006). Skeptics' views are supported by evidence documenting the limited role of accounting standards in determining reporting quality (Ball and Shivakumar 2005; Burghstahler *et al.* 2006). Enforcement will thus play a critical role in the implementation and likely outcome from IFRS adoption (Ball 2006; Holthausen 2009).

Empirical evidence points to positive consequences associated with the mandatory adoption of IFRS. Armstrong *et al.* (2010) document incrementally positive reactions associated with events related to IFRS adoption for firms with lower pre-adoption information quality and higher information asymmetry, which suggests that investors perceive that IFRS will lead to improvements in information quality. Other studies show that mandatory IFRS adoption improves market liquidity and lowers firms' cost of capital (Daske *et al.* 2008; Li 2010). In addition, a large body of work documents the impact of voluntary IFRS adoption. Daske *et al.* (2011) document a significant increase in market liquidity and a decrease in cost of capital for serious IFRS adopters. Leuz and Verrecchia (2000), and Barth *et al.* (2008) also provide evidence of a reduction in cost of equity capital for voluntary adopters. These results are in line with the information asymmetry literature documenting that increased disclosure reduces the cost of equity capital by mitigating adverse selection problems and enhancing liquidity (Diamond and Verrecchia 1991; Easley and O'Hara 2004).

Two closely related papers examine the impact of IFRS adoption on stock price informativeness. Beuselinck *et al.* (2010) examine the impact of mandatory IFRS adoption on stock price informativeness across EU countries, while Kim and Shi (2010) examine the consequences of voluntary IFRS adoption for firms in 34 countries. Beuselinck *et al.* (2010) document a decrease in stock price synchronicity around IFRS adoption, and a subsequent increase in stock price synchronicity post IFRS adoption; they interpret their results as consistent with IFRS disclosures revealing new firm-specific information in the adoption period, but subsequently lowering the surprise of future disclosures. Kim and Shi (2010) find that stock price synchronicity decreases following voluntary IFRS adoption, especially for firms with high analyst

coverage in countries with weak institutional structures. We expand on these studies by examining the differential impact of IFRS adoption across voluntary and mandatory adopters and by examining how enforcement affects the impact of mandatory IFRS adoption on stock price informativeness. Examining differences between voluntary and mandatory adopters allows us to differentiate (albeit not perfectly) between the level of firms' commitment to improvements in transparency and disclosure that could certainly affect the outcome of IFRS adoption. We thus fill a gap in this literature by comparing and contrasting the benefits of IFRS adoption between mandatory and voluntary adopters. In doing so, we contribute to the debate as to the benefits of IFRS adoption for voluntary and mandatory adopters. Finally, we also document how public enforcement of financial regulation affects the outcome of IFRS adoption.

Based on the above discussions, we will test three hypotheses related to the impact of IFRS adoption on stock price informativeness. Given the plausible benefits associated with IFRS adoption but acknowledging that the effects will vary across firms depending on their level of commitment to improved disclosure, we first will test the following hypothesis:

H1: the increase in stock price informativeness following IFRS adoption will be more pronounced for voluntary adopters.

Voluntary adopters are likely to have stronger incentives to improve disclosure and transparency and thus should be more inclined to make a stronger commitment to IFRS. The benefits from IFRS adoption should accrue more to these more "serious" adopters.

We then test whether the benefits from IFRS adoption on stock price informativeness come from countries in the European Union. Some studies document that the capital market effects associated with IFRS adoption come primarily from these countries (Daske *et al.* 2008). Thus, we test the following hypothesis:

H2: Improvements in stock price informativeness associated with IFRS adoption stem primarily from firms in countries within the European Union

Given the composition of our sample of countries, evidence in favor of the above hypothesis could signal that the benefits associated with IFRS adoption stem from countries with better enforcement. To more directly test this, we examine how the quality of enforcement mechanisms in a country impacts the effects of IFRS adoption on mandatory adopters. We thus test the following hypothesis:

H3: Mandatory IFRS adoption should lead to improvements in stock price informativeness in countries with stronger enforcement.

Without an underlying incentive to improve disclosure, mandatory adopters may only accrue the benefits from IFRS adoption if they are forced to comply; this is more likely to happen in countries with stronger enforcement.

3. Data and Methodology

We examine the impact of IFRS adoption on stock price informativeness and test the above hypotheses using a sample of firms from 30 countries from 1999-2010. We include countries that have adopted IFRS and those committed to adopt IFRS that allow firms to use IFRS. We obtain dates of actual and planned IFRS adoption for each country from Deloitte's IAS Plus and verify these dates using various other sources.⁷ Our initial sample consists of all stocks listed in each country's major stock exchange that are covered in Thomson Financial's DataStream database. We begin with the list of stocks in DataStream country lists (including dead stocks), and apply various filters recommended in prior studies to ensure that our final sample contains only common stocks (Ince and Porter 2006; Griffin *et al.* 2010). As in Fernandes and Ferreira (2008), we only consider stocks with available weekly return data for every week of the year. We obtain all stock price data from DataStream and financial data from

⁷ <http://www.IASplus.com/country/useIAS.htm>. We also cross-check dates from other sources including the European Corporate Governance Institute and PWC website.

WorldScope. In some robustness tests, we use accounting data from Compustat Global. We proceed with our data screening by eliminating financial and utilities firms and those firms with missing leverage and ROE. Moreover, to make firms more comparable across countries, we further eliminate those with negative sales or total assets lower than \$10 million. In addition, we require each firm to have data available in the year prior to IFRS adoption and in the year of adoption. This screening process leads to a final sample of 3,994 firms from 30 countries.

Our primary measure of stock price informativeness is firm-specific return variation for each stock, following Morck *et al.* (2000). We estimate firm-specific return variation from the following two-factor model, as in Fernandes and Ferreira (2008), using US dollar-denominated weekly returns:

$$\mathbf{R}_{it} = \alpha_i + \beta_{1i}\mathbf{R}_{mt} + \beta_{2i}\mathbf{R}_{ust} + \varepsilon_{it} \quad (1)$$

where \mathbf{R}_{it} represents stock i 's return in week t in excess of the risk-free rate; \mathbf{R}_{mt} is the value-weighted excess local market return, and \mathbf{R}_{ust} is the value weighted excess US market return. Stock price returns and market index returns are obtained from DataStream using the total return index, while the risk-free rate was obtained from Kenneth French's website.

Following prior literature (Morck *et al.* 2000; Jin and Myers 2006; Fernandes and Ferreira 2008), our primary measure of firm-specific return variation, Ψ_i , is a logistic transformation of the ratio of idiosyncratic volatility-to-total volatility ($1-R^2$) that measures firm-specific return variation relative to market-wide variation:

$$\Psi_i = \mathbf{log} \frac{(1-R^2)}{R^2} \quad (2)$$

To mitigate the impact of extreme outliers, we winsorize observations in the top and bottom 1% of the distribution of individual firm-specific return variation across the full sample period. To mitigate the impact of the downward trend in stock price informativeness (Ψ_i ,) over our sample period (Figure 1)

and to attempt to isolate the effect of IFRS adoption on each firm, in our regressions we use the change in Ψ_i from the year prior to the adoption of IFRS to the year of IFRS adoption.

The main hypotheses tested in this paper predict a different impact of IFRS adoption on stock price informativeness for voluntary versus mandatory adopters. To identify firms in each country that voluntarily adopt IFRS prior to the mandatory adoption year, we use the “Accounting Standards Followed” variable (WorldScope item WC07536).⁸ Thus, we classify a firm as a voluntary adopter if the firm reports financial statements according to IFRS (or similar) prior to the mandatory adoption year in the country (e.g. 2005 for European Union members). Throughout the paper we use the broader definition of IFRS adopters proposed by Daske *et al.* (2011) in which firms following international standards, or local standards with EU and IASC guidelines are also coded as IFRS adopters.⁹ Later we test the robustness of our results against two alternative classifications of IFRS adopters: (1) a stricter classification that considers only firms for which the reported WorldScope accounting standards equal “IFRS”, and (2) a classification based on the accounting standards variable from Compustat Global, also used by Li (2010).¹⁰

Table 1 shows the mean firm-specific stock return variation ($\sigma_\varepsilon^2/\sigma^2$) by country in the year before adoption (pre-IFRS) and in the year of adoption (post-IFRS) for mandatory and voluntary adopters. There is a considerable dispersion in terms of the number of firms per country (N_{firms}). U.K. firms represent about 20% of the sample, followed by Australia (11%), France (11%) and Germany (9%). Our sample is also fairly geographically diverse, with several countries from Asia, North and South America, and Africa. In terms of firm-specific stock return variation, there is also considerable variation across countries pre- and post-IFRS adoption for both voluntary and mandatory adopters. According to our

⁸ We also use this variable (WC07536) to identify those firms that are not required (and thus do not report) under IFRS after the mandate in the country, following Christensen *et al.* (2012).

⁹ The precise classifications are described in Table A1 of Daske *et al.* (2011) and replicated in Appendix B.

¹⁰ Li (2010) classifies a firm as IFRS adopter if the firm’s accounting standards (variable ASTD) = “DI”. In our case, we complement this approach with the one proposed by Daske *et al.* (2011) and consider not only “DI”, but also “DA”, or “DT” prior to 2005 to classify a firm as a voluntary IFRS adopter.

hypotheses, firm-specific return variation ($\sigma_\epsilon^2/\sigma^2$) should increase after the adoption of IFRS, reflecting more firm-specific information incorporated in the stock prices, in particular, for voluntary adopters. However, taking the entire sample, the overall mean ($\sigma_\epsilon^2/\sigma^2$) is larger pre-IFRS (0.817) than post-IFRS (0.766). The same happens for the subsamples of voluntary and mandatory IFRS adopters, although the magnitude of the difference is larger for mandatory (6.2 percentage points) than voluntary adopters (2.0 percentage points). The decline in stock price informativeness post-IFRS is primarily a result of a downward trend in stock price informativeness since 1999, as shown by the graph in Figure 1. Given the large heterogeneity of the firms in the sample, we cannot draw any conclusions from this analysis since we are not controlling for any type of firm or country characteristics. However, the results do show that while mandatory adopters experience a significant unconditional decline in stock price informativeness post-IFRS, voluntary IFRS adopters do not (the difference in stock informativeness pre and post-IFRS is statistically insignificant for voluntary adopters).

Table 2 shows the descriptive statistics of the main variables used in this study for the subsamples of voluntary and mandatory IFRS adopters.¹¹ The main proxies for stock price informativeness – $\sigma_\epsilon^2/\sigma^2$ and Ψ - show higher means and medians for the group of voluntary relative to mandatory adopters. The mean (median) Ψ is 1.62 (1.54) for voluntary adopters and 1.55 (1.37) for mandatory IFRS adopters, respectively.¹² The results could point to a plausible selection bias that may affect our results. If voluntary adopters, by their nature, tend to have higher stock price informativeness, finding higher stock price informativeness for voluntary adopters relative to their mandatory counterparts post-IFRS may not necessarily stem from IFRS adoption, but plausibly from unobserved differences in characteristics between voluntary and mandatory adopters. Our methodology circumvents this potential problem by examining the change in stock price informativeness for each firm before and after IFRS adoption. While voluntary adopters may have higher stock price informativeness than their peers, it is not obvious that the

¹¹ Appendix A explains in detail all the variable definitions.

¹² Difference in means is insignificant, but the difference in medians is significant at the 10% level.

change in stock price informativeness following IFRS adoption should be larger for these firms simply because of their characteristics.

Table 2 also shows the summary statistics for a set of firm-specific and country-specific control variables. For instance, firm size, measured by the firm's total assets, shows considerable dispersion in both groups of voluntary and mandatory IFRS adopters, with a median of \$219.1 million and \$135.7 million, respectively. We also use other standard firm-specific controls frequently used in the literature such as leverage (long-term debt to total assets), return on equity (ROE), and market-to-book – these variables have comparable means and medians in both subsamples.

Additionally, we include other firm-level controls motivated by prior literature on stock price informativeness. For instance, we control for the potential effects of analyst activity on the information flow incorporated into stock prices using the total number of analysts (collected from I/B/E/S) that follow a firm in each year. On average, over the entire sample period, voluntary IFRS adopters are followed by 17 analysts and mandatory adopters are followed by 13. To control for the effect of ownership concentration, we use the fraction of closely-held shares to the total shares outstanding obtained from WorldScope.¹³ On average, the fraction of equity that is closely-held is higher for voluntary IFRS adopters (54.5%) than for mandatory adopters (43.4%). Turnover is the ratio of stocks traded to the total shares outstanding and it is used to account for the impact of changes in the trading environment on stock price informativeness. As in previous studies (Lang *et al.* 2003; Leuz *et al.* 2003; Fernandes and Ferreira 2008) we use earnings management, based on total accruals, as a measure of the quality of the firms' accounting. We follow Fernandes and Ferreira (2008) and define earnings management as the absolute value of firms' accruals divided by the absolute value of cash flow from operations. This ratio is assumed to be positively related with earnings management activities implemented by firm managers. In our sample the mean values of earnings management for voluntary and mandatory IFRS adopters are 2.00 and

¹³ This variable includes shares held by insiders (senior corporate officers and directors and their immediate families), shares held in trusts or by another corporation, excluding nominees, shares held by pension/benefit plans, and shares held by individuals who hold more than 5% of the total shares outstanding. Whenever a firm has more than one class of shares, "closely held shares" are based on the total number of shares.

1.52, respectively. The firm Herfindahl index measures the market share concentration (based on individual annual sales) for each firm in each country per year. Additionally, as suggested by Fernandes and Ferreira (2008), we also control for industry concentration using the industry Herfindahl index, computed from the total annual sales per industry (2-digit SIC codes) for each country-year. Finally, we include in our multivariate analyses two more firm-specific variables to account for aspects that can be seen as substitutes for IFRS adoption, namely cross-listing in a U.S. stock exchange and reporting financial statements in compliance with U.S. GAAP. We identify every year firms that are cross-listed in a U.S. stock exchange using the comprehensive Citibank ADRs database and cross-check that data with direct information from the stock exchanges. As for compliance with U.S. GAAP, we use the WorldScope variable “Accounting Standards Followed” and apply Daske *et al.* (2011) coding procedure.¹⁴

At the country-level, we use the following controls: stock market capitalization – a proxy for the size of the stock market scaled by GDP from Beck *et al.* (2010); GDP per capita from World Bank World Development Indicators database to proxy for economic development; and the past three-year variance of the GDP per capita growth rate to proxy for variations in economic growth.

Finally, to test the hypothesis that improvements in stock price informativeness after mandatory IFRS adoption are more pronounced in countries with better law enforcement, we use two measures of public enforcement: the public enforcement index from Djankov *et al.* (2008) and a resource-based measure of enforcement from Jackson and Roe (2009), the 2005 securities' regulators' budget divided by the country's GDP. In Table 3, we show the correlation matrix for all variables used in the study. Multicollinearity does not appear to be a problem, as the highest correlation (excluding the correlation between the proxies for stock price informativeness) is 0.538 - between total assets and analyst coverage.

¹⁴ A firm is considered to report financial statements according to U.S. GAAP in a given year if the WorldScope variable, WC07536, states “US standards (GAAP)”, “US standards – inconsistency problems”, or “US GAAP reclassification from local standards”.

4. Results

4.1. Voluntary versus mandatory IFRS adopters

We begin our analysis by examining the impact of IFRS adoption on stock price informativeness of voluntary and mandatory adopters. We first examine our first hypothesis by estimating the following cross-sectional regressions:

$$\Delta\Psi_i = \alpha + \beta_1 VOL + \Phi_i + X_c + \gamma_j + \varepsilon_i \quad (3)$$

where $\Delta\Psi_i$ is the change in firm i 's relative firm-specific return variation from the year prior to IFRS adoption to the first year of full IFRS adoption (whether IFRS adoption was voluntary or mandatory); VOL is an indicator variable equal to one if the firm adopts IFRS prior to the mandatory adoption date in its country, and 0 otherwise. Φ_i is a vector of firm-level controls that includes: the log of total assets; leverage (long-term debt-to-total assets); return on equity (ROE); market-to-book value; analyst coverage - total number of analysts covering the firm each year; the percentage of closely-held shares; turnover; a measure of earnings management - the absolute value of accruals-to-cash flow from operations; a firm Herfindahl index; an indicator variable equal to one if the firm follows US GAAP, and an indicator variable that equals one if the firm has shares cross-listed in the US market in a given year. X_c is a vector of country level controls that includes the log of GDP per capita; stock market capitalization to GDP; an industry level Herfindahl index, and the variance of GDP per capita using a three-year rolling window. The right-hand side variables are measured as of the fiscal year end of the first year of IFRS adoption. Industry fixed effects and country fixed (or random) effects are included in all regressions.

The main variable of interest is β_1 , which accounts for the differential impact from IFRS adoption for voluntary and mandatory adopters. In line with our first hypothesis, if a firm voluntarily adopts IFRS as part of a commitment to increased transparency and disclosure, the impact of such adoption on stock price informativeness could be more pronounced than for firms who are forced to adopt it, and may only adopt the IFRS label (Daske *et al.* 2011). H1 thus predicts β_1 to be positive and significant if this is the case.

Table 4 shows results from the above regressions using various specifications. Column 1 shows results from the basic specification using industry and country fixed effects. Consistent with H1, the results show that the change in stock price informativeness associated with IFRS adoption is higher for voluntary adopters. The VOL coefficient in model 1 is +0.32, and is significant at the 1% level. Thus, for voluntary adopters, the change in stock price informativeness in the year of IFRS adoption is 0.32 higher than for mandatory adopters (representing about 20% of the mean of Ψ for the entire sample), which is both a statistically and economically significant result. Depending on the specification, the coefficient on VOL varies from a low of 0.28 to a high of 0.34. Thus, the increase in Ψ following IFRS adoption is significantly larger for voluntary adopters. These results are consistent with the view that voluntary adopters are more serious adopters of IFRS, committed to more disclosure and support H1.

The results also show that larger and more profitable firms experience a decline in stock price informativeness following IFRS adoption. On the other hand, firms with more analyst coverage and higher turnover have a positive change in stock price informativeness following IFRS adoption. These results are consistent with the argument that IFRS adoption increases comparability and informativeness of financial statements. Firms with more analyst coverage and firms that actively trade would then reap more benefits from improving the information environment by adopting IFRS; the results are in line with this explanation. In addition, the results in Table 4 show that firms in countries with more concentrated industries experience a decline in Ψ following IFRS adoption, while cross-listed firms experience a significant increase in firm-specific return variation.

In columns 3 through 5 of Table 4, we run various specifications of the basic regression model in equation 3. In column 3 we incorporate other firm and country-level variables that have been shown to affect stock price informativeness; in column 4 we use country random effects; in column 5 we add an indicator variable, financial crisis, to examine differences in stock price informativeness in years of crisis and find no significant effect in periods of crisis; finally, in column 6 we run regressions excluding firms that are cross-listed in the US. The impact of IFRS on stock price informativeness is robust to the various

specifications in Table 4. Overall, results show that there is a more significant improvement in stock price informativeness (Ψ) for voluntary adopters than for mandatory adopters following IFRS adoption, supporting our first hypothesis.

In Panel B of Table 4 we show results from regressions in which we differentiate between EU and non-EU countries to test our second hypothesis. As documented in prior studies showing positive capital market effects associated with IFRS adoption in EU countries, we expect to find more benefits from IFRS adoption in European Union member countries. To test for differences across EU & non-EU member countries, we interact the voluntary indicator variable with an indicator variable for EU countries. Using these interactions, we run similar regressions as in Panel A of Table 4. The results in Panel B show that as expected, most of the benefits from IFRS adoption for voluntary adopters stem from voluntary adopters in EU-member countries. The magnitude of the coefficients on the interaction term *Voluntary*EU* ranges from 0.274 to 0.375. Thus, voluntary adopters in EU member countries experience a larger increase in stock price informativeness relative to mandatory adopters. There is only weak evidence that voluntary adopters in non-EU countries experience a larger increase in stock price informativeness relative to their peers (the coefficient on the interaction term *Voluntary*non-EU* is positive in all specifications, but only significant in model 1). The results are thus consistent with H2, and support the findings in prior studies (Daske *et al.* 2008). A plausible explanation for our lack of significant results for voluntary adopters in non-EU countries could be lack of power in our tests, given that firms from EU-member countries make up the bulk of our sample. Thus, we cannot conclude that the benefits from IFRS adoption accrue only to firms in European countries.

The results thus far show a stronger impact of IFRS adoption on stock price informativeness for voluntary adopters, especially those in the European Union. For IFRS adoption to have an impact on stock price informativeness, the transparency and accounting quality of the adopters should improve. Our findings support the view that the potential benefits from IFRS adoption (increased disclosure, transparency, and comparability of financial statements) may accrue primarily to voluntary (more serious)

adopters. In the next section, we explore the role of enforcement on the impact of mandatory IFRS adoption.

4.2. Public enforcement

As Ball (2006) points out, the impact of IFRS adoption on financial reporting quality will depend largely on firms' reporting incentives and on the quality of countries' enforcement regimes. In the previous section, we attempt to capture differences in firms' reporting incentives by differentiating between voluntary and mandatory adopters. In this section, we will test our third hypothesis and explore how enforcement can influence the impact of mandatory IFRS adoption on stock price informativeness. We test this hypothesis using the following regression framework:

$$\Delta\Psi_i = \alpha + \beta_1 VOL + \beta_2 ENF_c + \beta_3 VOL \times ENF_c + \beta_4 MAN \times ENF_c + \Phi_i + X_c + \gamma_j + \varepsilon_i \quad (4)$$

where $\Delta\Psi_i$ is the change in firm i 's relative firm-specific return variation from the year prior to IFRS adoption to the year following IFRS adoption; VOL is an indicator variable equal to one if the firm adopts IFRS prior to the mandatory adoption date in its country, and 0 otherwise; MAN is an indicator variable for mandatory adopters of IFRS (those who adopted IFRS on the year of mandatory adoption); ENF_c refers to the measures of public enforcement, and Φ_i and X_c refer to the firm and country-level controls defined previously. We include industry and country fixed effects in all regressions.

The results are shown in Table 5. We show results using Djankov *et al.*'s (2008) measure of public enforcement and a resource-based measure of enforcement, regulatory budget per US\$ billion in GDP from Jackson and Roe (2009). Consistent with our hypothesis and the predictions from Ball (2006) and Holthausen (2009), enforcement appears to be an important determinant of stock price informativeness. The results show that mandatory adopters in countries with better enforcement exhibit a more significant increase in stock price informativeness following IFRS adoption. These results are both statistically and economically significant. In model 1, for mandatory adopters, a one standard deviation increase in the

public enforcement index (0.392) is associated with an 8.8 percentage point increase in $\Delta\Psi$ for mandatory adopters, which constitutes about 7.2% of its standard deviation. The results using the regulatory budget variable confirm our findings. As expected, public enforcement does not appear to have a significant impact on stock price informativeness for voluntary adopters, although as before, voluntary adopters do exhibit a more significant increase in Ψ relative to mandatory adopters. Voluntary adopters may adopt IFRS in a concerted effort to improve their transparency and information environment. As such, these firms do not need to have strong public enforcement to ensure that they adopt and implement the provisions of IFRS.

The results in Table 5 corroborate our prior findings with respect to the relationship between firm-specific return variation and other firm-level and country level controls. More profitable (higher ROE) firms and firms with higher turnover experience a decline in $\Delta\Psi$, while cross-listed firms experience an increase in $\Delta\Psi$. In addition, there is a positive change in Ψ for firms from less developed countries, with more concentrated industries and with more volatile economic conditions (variance of GDP growth).

Overall, our results are consistent with our third hypothesis and support the view that enforcement has a positive impact on stock price informativeness for mandatory adopters. As expected, mandatory adopters in countries with better enforcement experience an increase in firm-specific return variation following IFRS adoption.

5. Robustness Tests

5.1. Alternative measures of voluntary adopters of IFRS

There are several possible alternatives to code voluntary IFRS adopters. The main results of this paper are obtained using a broad classification following Daske *et al.* (2011) (indicated as “base-case” in Appendix B). This classification includes not only firms that prepare their financial statements in compliance with IFRS, but also those that, in addition to using local accounting standards, follow international rules, such as EU, IASC, or OECD guidelines, which are similar to IFRS in many aspects.

In this section, we test the robustness of our main results using two alternative coding procedures to identify voluntary IFRS adopters. First, we use a stricter classification based, as before, on the WorldScope variable “*Accounting Standards Followed*.” In this case, we classify a firm as a voluntary adopter only if the aforementioned variable equals “IFRS” prior to the year in which its country mandates the use of IFRS. Under this approach, all firms that prepare their financial statements using local accounting standards are not classified as voluntary adopters, even if they follow international guidelines. Second, because of potential misclassifications associated with the WorldScope variable, we also classify voluntary IFRS adopters using the accounting standards variable (*ASTD*) from Compustat Global, also used by Li (2010) and Daske *et al.* (2011). We classify a firm as a voluntary IFRS adopter whenever this variable equals “DA”, “DI”, or “DT” (meaning that the firm’s financial statements are in accordance with IASC and/ or OECD guidelines) prior to the year of mandatory IFRS adoption.

Table 6 shows the estimation results of the two main regression equations from Table 4 using the alternative definitions of voluntary IFRS adopters. The conclusions do not change when voluntary adopters are classified using different methodologies. The coefficient on *Voluntary* is positive and statistically significant in all model specifications suggesting that the adoption of IFRS has a more positive impact on firm-specific return variation for voluntary adopters. The magnitude of the coefficients are also comparable and in some cases larger than what we find using the base-case IFRS classification. Moreover, the results are virtually the same for any alternative specification of the regression equation presented in Table 4.

Overall, our main results are robust to the use of alternative methods of classifying voluntary IFRS adopters. Our evidence still supports our main hypothesis; voluntary adopters experience a significant improvement in stock price informativeness following IFRS adoption.

5.2. *Alternative measure of stock price informativeness*

In the previous sections we use a proxy for stock price informativeness that is widely used in the literature, based on firm-specific stock return variation. However, other alternative measures have been proposed. In Table 7, we use the bid-ask spread as an additional measure of stock price informativeness. We compute the bid-ask spread as the yearly median of the daily quoted bid-ask spread (difference between the bid and ask prices divided the midpoint). We then compute the difference in the yearly median bid-ask spreads from the year prior to IFRS adoption to the first year of IFRS adoption and use this as our dependent variable. A larger bid-ask spread could signal more information asymmetry. The adoption of IFRS could lead to improvements in the information environment that can lead to reductions in information asymmetry and thus lower bid-ask spreads, especially for the more serious (voluntary) adopters. Consistent with this view, the results Table 7 show a more significant decline in bid-ask spreads for voluntary adopters, which corroborate our earlier findings.

From this evidence we conclude that alternative measures of stock price informativeness lead to the same results and corroborate the idea that potential improvements in the quality of financial information incorporated in stock prices due to the adoption of IFRS accrue primarily to voluntary (i.e. committed) adopters.

6. Conclusion

In this paper, we examine how the adoption of International Financial Reporting Standards across 30 countries affects stock price informativeness. The potential benefits from IFRS adoption (e.g. increased transparency and comparability of financial statement information across countries) would suggest that the adoption of IFRS could lead to an improvement in the information environment that would have a positive impact on stock price informativeness. On the other hand, the implementation of IFRS is likely to be inconsistent across firms, and even more so across nations, which may lead to a reduction in the comparability of the resulting financial statement information. As such, IFRS may not have any impact, or potentially an adverse impact on stock price informativeness.

We test three hypotheses related to the impact of IFRS adoption on stock price informativeness. First, we examine whether the increase in stock price informativeness following IFRS adoption is more pronounced for voluntary (i.e. the more serious) adopters. Second, given recent findings in the IFRS literature, we examine whether the benefits from IFRS adoption accrue primarily to firms in EU countries. Finally, we examine how the quality of enforcement mechanisms in a country impacts the effects of mandatory IFRS adoption.

Consistent with our first two hypotheses, we find that the adoption of IFRS is associated with a significant increase in stock price informativeness for voluntary adopters relative to mandatory adopters. In addition, we document that this result is more pronounced for voluntary adopters in EU-member countries. We find weak evidence of benefits from IFRS adoption for voluntary adopters in non-European countries and acknowledge that lack of power in our tests because of the small number of firms from non-EU countries in our sample may prevent us from finding more robust results. Finally, we find that enforcement plays a critical role on the impact of mandatory IFRS adoption. Mandatory adopters in countries with better enforcement experience a larger increase in stock price informativeness relative to those firms in countries with weaker enforcement. This finding underscores the importance of strong enforcement for firms that may not necessarily have strong incentives to commit to higher levels of transparency and disclosure.

Our results are robust to various specifications and controls and to alternate measures of stock price informativeness. In an effort to isolate the effects of IFRS adoption, our tests focus on the short-term effects of IFRS adoption on stock price informativeness. Exploring the long-term consequences of IFRS adoption may yield further insights as to its overall impact, but given that many countries only recently adopted IFRS, time needs to pass before these can be adequately examined. Nonetheless, the evidence presented here does point to significant benefits associated with IFRS adoption accruing primarily to more serious (voluntary) adopters.

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APPENDIX A

List of variables

- σ_e^2/σ^2 : Relative firm-specific stock return variation, estimated from a two-factor model using US\$-denominated weekly excess returns (winsorized at the 1% and 99% levels). Source: DataStream.
- Ψ : Annual firm-specific return variation measure ($\log(1-R^2/R^2)$), estimated from a two-factor model using US\$-denominated weekly excess returns (winsorized at the 1% and 99% levels). Source: DataStream.
- **Anti-director Index**: The revised anti-director's rights index of La Porta *et al.* (1998).
- **Bid-ask spread**: Yearly median of the daily quoted bid-ask spread (difference between bid and ask price divided by the midpoint).
- **Budget**: The 2005 securities' regulators' budget divided by the country's GDP. A resource-based public enforcement measure from Jackson and Roe (2009) (for scaling purposes this variable is divided by 1000 in the regressions).
- **Closely Held**: Closely-held shares divided by total shares outstanding; WorldScope item: WC08021.
- **Cross-list**: dummy variable that equals 1 if the firm is cross-listed in year t and zero otherwise. Sources: Citibank ADRs and data collected from the U.S. stock exchanges.
- **Diff. in Ψ** : difference in Ψ between the first year of adoption (t) and the previous year ($t-1$).
- **Earnings Mgmt**: Earnings management measure corresponding to the absolute value of accruals scaled by absolute value of cash flow from operations, as defined by Fernandes and Ferreira (2008).
- **EU**: dummy variable that equals 1 for EU countries and zero otherwise.
- **Financial crisis**: dummy variable that equals 1 from year 2007 on and zero otherwise.
- **GDP per capita**: GDP per capita in US\$ reflecting 2000 constant prices. Source: World Bank WDI Database.
- **Herfindahl (firm)**: Herfindahl index measuring the firm concentration at the country level, per year, based on the annual net sales (WC01001) of each firm. Source: WorldScope.
- **Herfindahl (industry)**: Herfindahl index measuring the industrial concentration at the country level, per year, based on the annual net sales (item WC01001) of each industry (2-digit SIC codes). Source: WorldScope.
- **Industry**: 2-digit SIC code for major segment (Datastream - SIC code 1).
- **Leverage**: Long-term debt in US\$ 000 (WC03251) divided by total assets in US\$ 000 (WC02999). Source: WorldScope.
- **MTB**: Market-to-book (item MTBV). Source: DataStream.
- **Public Enforcement**: Index of public enforcement from Djankov *et al.* (2008).
- **ROE**: Return on equity (item WC08301). Source: WorldScope.
- **Stock Mkt Cap**: Country-level variable that measures the stock market capitalization to the GDP. Source: Beck, Demirgüç-Kunt, and Levine (2002).
- **Total Analysts**: Total number of analysts following a firm by year. Source: I/B/E/S.
- **Total Assets**: Total assets (in US\$ 000, reflecting 2010 prices). WorldScope item WC02999.
- **Turnover**: Turnover ratio (%) – stocks traded divided by the number of shares outstanding. Source: DataStream.

- **USGAAP:** Dummy variable that equals 1 if the firm's accounting standards follow the U.S. GAAP in a given year, and zero otherwise (item WC07536). Source: WorldScope.
- **Var. GDP per capita:** Variance of the GDP per capita using a three-year rolling window.
- **Voluntary:** dummy variable that equals 1 if the firm adopts IFRS rules prior to the year of mandatory adoption in its country, and zero otherwise. Adopters of IFRS prior to the year of mandatory adoption are identified as in Daske *et al.* (2011) using the WorldScope definition of "Accounting Standards Followed" (WC07536). In robustness tests we use two alternative classifications: (1) a stricter classification that considers only firms for which the WorldScope accounting standards variable states "IFRS", prior to the year of mandatory adoption in the country; and (2) a classification based on Compustat Global, where prior adopters of IFRS rules are coded whenever the variable "ASTD" equals "DA", "DI", or "DT", prior to the mandatory adoption year.

APPENDIX B

Classification of IFRS adopters

We use the same coding proposed by Daske *et al.* (2011) based on WorldScope “Accounting Standards Followed” (WC07536) and Compustat Global “Accounting Standard” (ASTD). Panels A and B replicate part of Table A1 of Daske *et al.* (2011) and show how the variable IFRS was coded for each firm-year observation prior to the mandatory adoption year. The “base-case” is the classification that we use throughout the paper for most of the analyses and the “alternative” classifications are used in the section of robustness tests.

Panel A: Coding based on WorldScope “Accounting Standards Followed” (WC07536)

<i>WS code</i>	<i>WS Description</i>	
02	International standards	IFRS (base-case)
06	International standards and some EU guidelines	IFRS (base-case)
08	Local standards with EU and IASC guidelines	IFRS (base-case)
12	International standards - inconsistency problems	IFRS (base-case)
16	International standards and some EU guidelines - inconsistency problems	IFRS (base-case)
18	Local standards with some IASC guidelines	IFRS (base-case)
19	Local standards with OECD and IASC guidelines	IFRS (base-case)
23	IFRS	IFRS (base-case)/ Alternative (stricter) IFRS classification

Panel B: Coding based on Compustat Global “Accounting Standards” (ASTD)

<i>CG code</i>	<i>CG Description</i>	
DA	Domestic standards generally in accordance with IASC and OECD guidelines	Alternative IFRS classification based on Compustat Global
DI	Domestic standards generally in accordance with IASC guidelines	Alternative IFRS classification based on Compustat Global
DT	Domestic standards in accordance with principles generally accepted in the U. S. and generally in accordance with IASC and OECD guidelines	Alternative IFRS classification based on Compustat Global

Table 1. Mean relative firm-specific stock return variation by country pre- and post-IFRS adoption

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The table reports the mean relative firm-specific stock return variation (σ_e^2/σ^2), by country, pre- and post-IFRS adoption, i.e., the year prior to IFRS adoption and the first year of adoption; σ_e^2/σ^2 is estimated from a two-factor model using US\$-denominated weekly excess returns and then winsorized at the 1% and 99% levels. Voluntary adopters are those firms that adopt IFRS prior to the year of mandatory adoption in their country.

Country	Mandatory IFRS year	All firms: Mean (s_e^2/s^2)			Voluntary adopters: Mean (s_e^2/s^2)			Mandatory adopters: Mean (s_e^2/s^2)		
		N_{firms}	Pre-IFRS	Post-IFRS	N_{firms}	Pre-IFRS	Post-IFRS	N_{firms}	Pre-IFRS	Post-IFRS
Australia	2005	441	0.775	0.8	4	0.729	0.726	437	0.775	0.801
Austria	2005	34	0.802	0.801	18	0.739	0.759	16	0.868	0.848
Belgium	2005	82	0.792	0.728	14	0.772	0.781	68	0.796	0.717
Bosnia-Herzegovina	2007	5	0.841	0.844				5	0.841	0.844
Brazil	2010	60	0.666	0.643	3	0.586	0.603	57	0.67	0.646
Czech Republic	2005	8	0.856	0.814				8	0.856	0.814
Denmark	2005	84	0.822	0.773	14	0.847	0.792	70	0.817	0.769
Finland	2005	93	0.877	0.778	11	0.878	0.789	82	0.877	0.777
France	2005	432	0.847	0.764	27	0.729	0.653	405	0.854	0.772
Germany	2005	346	0.845	0.814	137	0.835	0.826	209	0.851	0.806
Greece	2005	222	0.787	0.843				222	0.787	0.843
Hungary	2005	6	0.865	0.826	2	0.734	0.83	4	0.897	0.824
India		1	0.53	0.323	1	0.53	0.323			
Ireland	2005	31	0.827	0.796	1	0.725	0.835	30	0.831	0.795
Israel	2008	221	0.796	0.768	28	0.795	0.695	193	0.796	0.779
Italy	2005	174	0.788	0.714	1	0.855	0.797	173	0.787	0.714
Jordan	2010	62	0.935	0.929				62	0.935	0.929
Luxembourg	2005	5	0.743	0.591	1	0.928	0.627	4	0.697	0.581
Netherlands	2005	88	0.772	0.717	5	0.643	0.625	83	0.779	0.722
Norway	2005	106	0.836	0.686	4	0.918	0.923	102	0.833	0.676
Philippines	2005	66	0.887	0.873	34	0.862	0.877	32	0.913	0.868
Poland	2005	20	0.869	0.753	7	0.745	0.797	13	0.923	0.73
Portugal	2005	35	0.739	0.729	8	0.65	0.643	27	0.76	0.755
South Africa	2005	154	0.739	0.721	20	0.736	0.74	134	0.739	0.718
Spain	2005	82	0.691	0.623	1	0.513	0.62	81	0.693	0.623
Sweden	2005	139	0.922	0.915	4	0.933	0.837	135	0.922	0.917
Switzerland	2005	90	0.834	0.739	24	0.809	0.831	66	0.843	0.706
Turkey	2006	125	0.663	0.523	26	0.506	0.517	99	0.700	0.525
United Kingdom	2005	770	0.853	0.762	3	0.621	0.574	767	0.854	0.763
Venezuela	2005	12	0.754	0.597	1	0.853	0.835	11	0.746	0.575
<i>Total</i>		<i>3,994</i>	<i>0.817</i>	<i>0.766</i>	<i>399</i>	<i>0.782</i>	<i>0.766</i>	<i>3,595</i>	<i>0.820</i>	<i>0.766</i>

Table 2. Descriptive statistics

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The numbers are computed for the first year of IFRS adoption. All variables are defined in **Appendix A**. Panels A and B show the summary statistics for voluntary and mandatory IFRS adopters. Voluntary adopters are those firms that adopt IFRS prior to the year of mandatory adoption in their country.

Panel A: Voluntary IFRS adopters

Variable	N _{firms}	Mean	Median	Std. Dev.
$\sigma_\varepsilon^2/\sigma^2$	578	0.780	0.823	0.167
Ψ	578	1.619	1.535	1.238
Total Assets (US\$ Thous)	578	2,615,881	219,050	10,900,000
Leverage	578	0.107	0.067	0.122
ROE	578	0.030	0.083	0.374
MTB	578	2.843	1.665	3.799
Total Analysts	439	16.674	9.000	18.287
Closely Held	419	0.545	0.580	0.257
Turnover (%)	578	88.952	83.598	43.330
Earnings Mgmt	563	2.004	0.751	8.618
Herfindahl (firm)	578	0.036	0.024	0.030
Herfindahl (industry)	578	11.177	2.456	47.909
Stock Mkt Cap	577	81.195	56.677	71.976
GDP per capita	577	20,492.6	23,256.4	9,768.3
Public Enforcement	578	0.697	1.000	0.407

Panel B: Mandatory IFRS adopters

Variable	N _{firms}	Mean	Median	Std. Dev.
$\sigma_\varepsilon^2/\sigma^2$	4,065	0.771	0.797	0.160
Ψ	4,065	1.546	1.366	1.218
Total Assets (US\$ Thous)	4,065	1,807,117	135,745	9,999,026
Leverage	4,065	0.138	0.088	0.155
ROE	4,065	0.046	0.099	0.459
MTB	4,065	2.430	1.660	3.135
Total Analysts	2,529	12.546	6.000	15.770
Closely Held	3,075	0.434	0.436	0.255
Turnover (%)	4,065	102.812	100.117	40.102
Earnings Mgmt	3,890	1.517	0.636	3.745
Herfindahl (firm)	4,065	0.034	0.026	0.039
Herfindahl (industry)	4,065	7.927	2.943	36.451
Stock Mkt Cap	3,937	98.270	92.863	47.570
GDP per capita	3,937	22,891.7	23,914.7	8,129.8
Public Enforcement	4,057	0.410	0.500	0.392

Table 3. Correlation matrix

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The sample is a cross-section as of the first year of IFRS adoption. All variables are defined in **Appendix A**.

	σ_e^2/σ^2	Ψ	Total Assets	Leverage	ROE	MTB	Total Analysts	Closely Held	Turnover	Earnings Mgmt	Herfindahl (firm)	Herfindahl (industry)	Stock Mkt Cap	GDP per capita	Public Enforcement
σ_e^2/σ^2	1														
Ψ	0.926	1													
Total Assets	-0.288	-0.228	1												
Leverage	-0.132	-0.126	0.070	1											
ROE	-0.261	-0.285	0.061	0.009	1										
MTB	-0.039	-0.050	-0.021	0.025	0.114	1									
Total Analysts	-0.399	-0.346	0.538	0.156	0.132	0.063	1								
Closely Held	0.074	0.075	-0.100	-0.050	0.047	-0.020	-0.191	1							
Turnover	-0.008	-0.005	0.041	-0.026	-0.085	-0.029	0.071	-0.210	1						
Earnings Mgmt	0.029	0.017	-0.023	-0.018	-0.049	-0.037	-0.033	0.025	0.041	1					
Herfindahl (firm)	-0.139	-0.126	-0.016	0.105	0.086	-0.027	0.104	0.118	-0.317	0.005	1				
Herfindahl (industry)	0.005	0.003	-0.004	0.034	0.026	-0.008	0.004	0.041	-0.264	-0.017	0.238	1			
Stock Mkt Cap	0.034	0.036	-0.058	-0.066	0.010	0.060	-0.131	-0.215	-0.069	-0.060	-0.310	-0.081	1		
GDP per capita	0.175	0.152	0.005	0.078	-0.080	0.037	0.063	-0.271	0.336	-0.033	-0.094	0.005	0.136	1	
Public Enforcement	0.057	0.077	0.033	0.058	0.003	0.026	0.135	0.188	-0.277	-0.003	0.238	0.048	-0.348	0.133	1

Table 4. IFRS adoptions and firm-specific stock return variation

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The regressions use cross-sectional data as of the first year of IFRS adoption. The dependent variable is the difference of the proxy for stock price informativeness, Ψ , between the first year of IFRS adoption (t) and the previous year ($t-1$). All variables are defined in **Appendix A**. To identify IFRS voluntary adopters, we follow Daske et al. (2009). White-robust t-stats (absolute value) are shown in parentheses. *, **, *** stand for statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A:

	(1)	(2)	(3)	(4)	(5)	Excl. ADRs (6)
Voluntary	0.322*** (4.05)	0.298*** (2.64)	0.308** (2.38)	0.283*** (3.19)	0.301** (2.30)	0.342** (2.55)
Log total assets	-0.010 (0.76)	-0.058** (2.41)	-0.056** (2.27)	-0.056* (1.87)	-0.056** (2.25)	-0.061** (2.36)
Leverage	-0.149 (0.94)	-0.072 (0.39)	-0.082 (0.43)	-0.033 (0.15)	-0.079 (0.42)	-0.116 (0.60)
ROE	-0.311*** (2.96)	-0.518*** (4.94)	-0.524*** (4.92)	-0.507*** (5.44)	-0.524*** (4.91)	-0.521*** (4.85)
MTB	-0.007 (0.88)	-0.009 (1.12)	-0.010 (1.14)	-0.012 (1.44)	-0.010 (1.15)	-0.007 (0.72)
Log total analysts		0.099*** (2.75)	0.097*** (2.60)	0.086** (2.26)	0.096*** (2.59)	0.093** (2.48)
Closely held		0.126 (0.98)	0.136 (1.05)	0.049 (0.33)	0.137 (1.06)	0.090 (0.67)
Turnover		0.012*** (2.79)	0.010** (2.02)	-0.003 (1.27)	0.010** (2.06)	0.011** (2.11)
Earnings Mgmt		0.003 (1.03)	0.004 (1.10)	0.003 (0.63)	0.004 (1.07)	0.005 (1.25)
Herfindahl (firm)		-8.314 (1.05)	-8.455 (0.84)	-0.673 (0.26)	-7.793 (0.82)	-10.637 (1.07)
Herfindahl (industry)		-0.074** (2.11)	-0.064* (1.77)	0.100*** (2.70)	-0.064* (1.76)	-0.069* (1.83)
Cross-list		0.504*** (4.42)	0.475*** (3.70)	0.480*** (4.44)	0.473*** (3.67)	
USGAAP			0.068 (0.31)	0.076 (0.46)	0.063 (0.29)	0.169 (0.43)
Log GDP per capita			1.094 (0.33)	-0.196* (1.77)	0.528 (0.16)	2.320 (0.64)
Stock mkt Cap			-0.005 (1.40)	-0.001 (1.25)	-0.005 (1.27)	-0.006 (1.36)
Var. GDP per capita			0.003 (0.18)	0.024 (1.19)	0.000 (0.00)	0.009 (0.46)
Financial Crisis					0.234 (0.44)	
Constant	0.438*** (2.63)	1.016 (1.64)	-9.387 (0.28)	-25.132** (2.57)	-3.759 (0.11)	-21.501 (0.59)
Industry fixed-effects	yes	yes	yes	yes	yes	yes
Country fixed-effects	yes	yes	yes		yes	yes
Country random-effects				yes		
White robust std. err.	yes	yes	yes	yes	yes	yes
Observations	3994	2223	2180	2180	2180	2062
R-squared	0.14	0.17	0.17	0.12	0.17	0.17

Panel B:

	(1)	(2)	(3)	(4)	(5)	Excl. ADRs (6)
Voluntary * EU	0.274*** (2.75)	0.354** (2.44)	0.356** (2.37)	0.366*** (3.86)	0.352** (2.34)	0.375** (2.34)
Voluntary * non EU	0.407*** (3.12)	0.211 (1.22)	0.212 (1.01)	0.105 (0.65)	0.192 (0.91)	0.276 (1.34)
Log total assets	-0.010 (0.75)	-0.060** (2.45)	-0.057** (2.30)	-0.057* (1.90)	-0.057** (2.30)	-0.062** (2.38)
Leverage	-0.151 (0.95)	-0.069 (0.38)	-0.079 (0.42)	-0.026 (0.11)	-0.076 (0.40)	-0.115 (0.59)
ROE	-0.313*** (2.97)	-0.517*** (4.94)	-0.523*** (4.91)	-0.505*** (5.48)	-0.522*** (4.90)	-0.520*** (4.85)
MTB	-0.007 (0.90)	-0.009 (1.12)	-0.010 (1.14)	-0.012 (1.43)	-0.010 (1.14)	-0.007 (0.72)
Log total analysts		0.101*** (2.79)	0.099*** (2.64)	0.087** (2.26)	0.098*** (2.63)	0.095** (2.50)
Closely held		0.130 (1.02)	0.139 (1.07)	0.059 (0.41)	0.140 (1.08)	0.091 (0.69)
Turnover		0.013*** (2.85)	0.011** (2.15)	-0.003 (1.22)	0.011** (2.21)	0.011** (2.15)
Earnings Mgmt		0.004 (1.07)	0.004 (1.11)	0.004 (0.76)	0.004 (1.08)	0.005 (1.26)
Herfindahl (firm)		-8.046 (1.01)	-7.882 (0.75)	-0.532 (0.20)	-6.984 (0.70)	-10.259 (1.00)
Herfindahl (industry)		-0.070** (1.99)	-0.059 (1.58)	0.101*** (2.74)	-0.058 (1.56)	-0.065* (1.70)
Cross-list			0.504*** (4.42)	0.476*** (3.72)	0.482*** (4.44)	0.473*** (3.69)
USGAAP				0.066 (0.30)	0.086 (0.53)	0.060 (0.27)
Log GDP per capita				0.615 (0.17)	-0.218** (1.96)	-0.152 (0.04)
Stock mkt Cap				-0.005 (1.37)	-0.001 (1.00)	-0.005 (1.22)
Var. GDP per capita				0.001 (0.08)	0.027 (1.34)	-0.003 (0.16)
Financial Crisis					0.294 (0.54)	
Constant	0.438*** (2.63)	0.903 (1.43)	-4.711 (0.13)	-25.309** (2.60)	2.898 (0.08)	-18.619 (0.49)
Industry fixed-effects	yes	yes	yes	yes	yes	yes
Country fixed-effects	yes	yes	yes		yes	yes
Country random-effects				yes		
White robust std. err.	yes	yes	yes	yes	yes	yes
Observations	3994	2223	2180	2180	2180	2062
R-squared	0.14	0.17	0.17	0.12	0.17	0.17

Table 5. Public enforcement and IFRS adoption

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The regressions use cross-sectional data as of the first year of IFRS adoption. The dependent variable is the difference of the proxy for stock price informativeness, Ψ , between the first year of IFRS adoption (t) and the previous year ($t-1$). We use two enforcement variables: the public enforcement index from Djankov *et al.* (2008) and the regulatory budget (Budget) per US\$ billion in GDP from Jackson and Roe (2009). All variables are defined in **Appendix A**. White-robust t-stats (absolute value) are shown in parentheses. *, **, *** stand for statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)
Log total assets	-0.036 (1.41)	-0.030 (1.18)
Leverage	-0.062 (0.31)	-0.050 (0.26)
ROE	-0.619*** (5.52)	-0.632*** (5.61)
MTB	-0.006 (0.71)	-0.005 (0.62)
Log total analysts	0.051 (1.36)	0.058 (1.55)
Closely held	0.049 (0.38)	0.126 (0.99)
Turnover	-0.002* (1.80)	-0.003*** (2.87)
Earnings Mgmt	0.003 (0.58)	0.003 (0.58)
Herfindahl (firm)	-0.736 (0.53)	0.033 (0.02)
Herfindahl (industry)	0.096*** (6.37)	0.092*** (6.14)
Cross-list	0.512*** (3.92)	0.463*** (3.60)
Log GDP per capita	-0.049 (0.23)	0.028 (0.13)
Stock mkt Cap	0.363* (1.89)	0.565*** (3.81)
Var. GDP per capita	-0.252*** (4.54)	-0.202*** (3.70)
USGAAP	-0.001 (0.82)	-0.001* (1.87)
Voluntary	0.014* (1.80)	0.017** (2.29)
Voluntary*Public Enforcement	0.161 (0.65)	
Mandatory*Public Enforcement	0.227** (2.37)	
Voluntary*Budget		-0.003 (1.48)
Mandatory*Budget		0.002* (1.84)
Constant	1.907*** (3.03)	1.428** (2.29)
Industry fixed-effects	yes	
White-robust std. err.	yes	
Observations	2064	2064
R-squared	0.14	0.14

Table 6. Alternative measures of voluntary IFRS adopters

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The regressions use cross-sectional data as of the first year of IFRS adoption. The dependent variable is the difference of the proxy for stock price informativeness, Ψ , between the first year of IFRS adoption (t) and the previous year ($t-1$). In regressions (1) and (2) we use a stricter definition of voluntary IFRS adopters that includes only firms reported by WorldScope (variable WC07536) to follow IFRS standards prior to the year of mandatory adoption in their country. In regressions (3) and (4) we use another definition of voluntary IFRS adopters based on the accounting standards information obtained from Compustat Global following the procedure of Daske *et al.* (2009). All variables are defined in **Appendix A**. White-robust t-stats (absolute value) are shown in parentheses. *, **, *** stand for statistical significance at the 10%, 5%, and 1% levels, respectively.

	Stricter definition of IFRS based on Worldscope		IFRS definition based on Compustat Global accounting standards	
	(1)	(2)	(3)	(4)
Voluntary	0.640*** (5.00)	0.670*** (2.98)	0.476*** (2.95)	0.411** (2.17)
Log total assets	-0.060*** (2.59)	-0.059** (2.48)	-0.053** (2.21)	-0.050** (2.04)
Leverage	-0.046 (0.25)	-0.079 (0.43)	-0.035 (0.19)	-0.050 (0.27)
ROE	-0.435*** (4.09)	-0.429*** (4.01)	-0.412*** (3.74)	-0.422*** (3.83)
MTB	-0.020** (2.34)	-0.022** (2.45)	-0.013 (1.55)	-0.014* (1.65)
Log total analysts	0.109*** (3.06)	0.106*** (2.89)	0.099*** (2.75)	0.094** (2.50)
Closely held	0.060 (0.51)	0.071 (0.59)	0.134 (1.08)	0.142 (1.12)
Turnover	0.017*** (3.11)	0.021*** (2.88)	0.009** (2.03)	0.010 (1.61)
Earnings Mgmt	0.003 (0.79)	0.002 (0.58)	-0.002 (0.19)	-0.001 (0.14)
Herfindahl (firm)	7.374 (0.66)	8.269 (0.68)	-1.477 (0.09)	-6.525 (0.38)
Herfindahl (industry)	-0.069 (1.45)	-0.058 (1.20)	-0.045* (1.77)	-0.047* (1.75)
Cross-list	0.520*** (5.02)	0.534*** (4.64)	0.527*** (4.98)	0.555*** (4.72)
USGAAP		-0.070 (0.34)		-0.086 (0.43)
Log GDP per capita		-0.404 (0.08)		-2.220 (1.12)
Stock mkt Cap		-0.004 (0.92)		0.001 (0.36)
Var. GDP per capita		-0.021* (1.65)		-0.013 (0.94)
Constant	0.219 (0.28)	4.324 (0.08)	0.592 (0.74)	22.950 (1.13)
Industry fixed-effects	yes	yes	yes	yes
Country fixed-effects	yes	yes	yes	yes
White-robust std. err.	yes	yes	yes	yes
Observations	2361	2317	2222	2167
R-squared	0.18	0.18	0.17	0.17

Table 7. Alternative measure of stock price informativeness

The sample is comprised of firms from countries that adopted IFRS, or have committed to adopt IFRS and allow firms to report financial statements in accordance with IFRS. The regressions use cross-sectional data as of the first year of IFRS adoption. The dependent variable is the difference in the yearly median of the daily quoted bid-ask spreads between the year of IFRS adoption (t) and the previous year ($t-1$). All variables are defined in **Appendix A**. White-robust t-stats (absolute value) are shown in parentheses. *, **, *** stand for statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)
Voluntary	-0.009*** (3.02)	-0.021** (2.56)
Log total assets	0.001 (0.95)	0.001 (0.91)
Leverage	0.003 (0.44)	0.003 (0.44)
ROE	-0.012** (2.06)	-0.012** (2.02)
MTB	-0.000 (1.33)	-0.000 (1.41)
Log total analysts	0.003*** (3.24)	0.003*** (3.21)
Closely held	-0.001 (0.34)	-0.001 (0.42)
Turnover	-0.000*** (3.79)	-0.000*** (3.97)
Earnings Mgmt	0.000** (2.25)	0.000** (2.21)
Herfindahl (firm)	0.612 (0.91)	0.761 (1.06)
Herfindahl (industry)	0.000 (0.70)	0.000 (0.57)
Cross-list	-0.000 (0.05)	-0.000 (0.09)
USGAAP		-0.001 (0.33)
Log GDP per capita		-0.170* (1.90)
Stock mkt Cap		-0.000** (1.97)
Var. GDP per capita		0.000 (0.16)
Constant	-0.011 (0.47)	1.721* (1.92)
Industry fixed-effects	yes	yes
Country fixed-effects	yes	yes
White-robust std. err.	yes	yes
Observations	1995	1994
R-squared	0.06	0.06

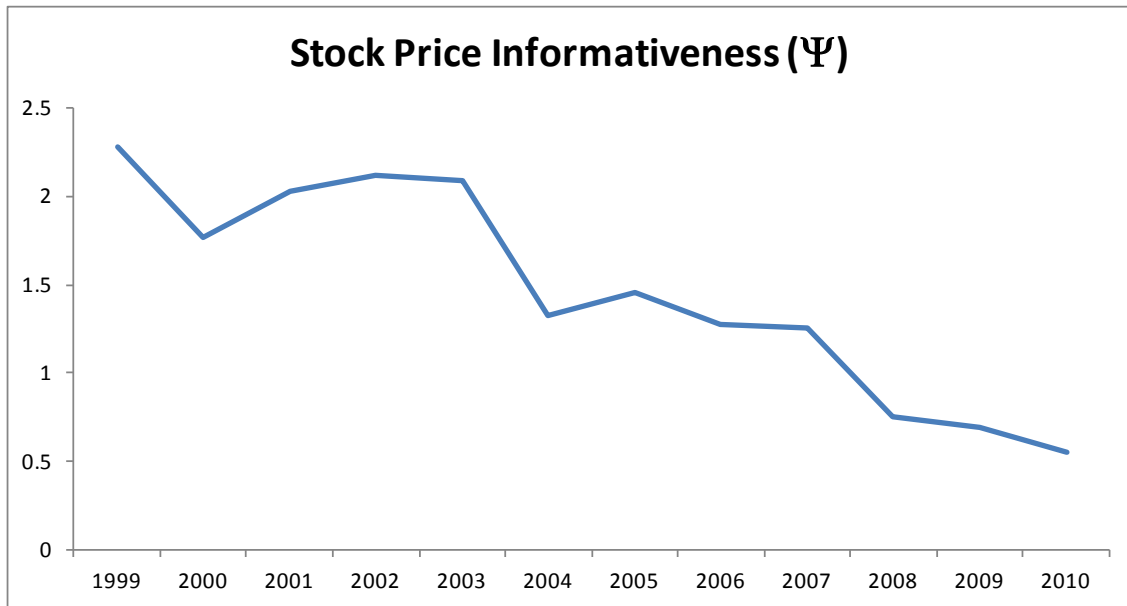


Figure 1 – The graph shows the trend in the measure of stock price informativeness, Ψ , defined as $\log[(1-R^2)/R^2]$ from the following model of weekly excess returns: $R_{it} = \alpha_i + \beta_{1i}R_{mt} + \beta_{2i}R_{UST} + \varepsilon_{it}$. R_{it} refers to firm i 's weekly stock return in excess of the risk-free rate; R_{mt} is the local excess market return, and R_{UST} is the weekly US market excess return.