Mandatory Disclosure Reform and Executive Compensation: Is CFO Pay Higher After the Mandatory Adoption of IFRS?[a]

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ABSTRACT

We find that CFOs receive higher compensation following the mandatory adoption of International Financial Reporting Standards (IFRS). We propose two potential explanations: improved monitoring and increased responsibility. Consistent with improved monitoring, we find that the increase is positively associated with the loss of private benefits and is negatively associated with existing shareholder monitoring. Consistent with increased responsibility, we find compensation started to increase after the announcement of adoption and increased further after actual adoption. The fact that these increases in compensation are not found for other non-CEO/CFO executives provides assurance that they are related to IFRS adoption.

Keywords: Mandatory Disclosure Reform, IFRS Adoption, CFO, Executive Compensation

JEL classification: M41, K22, J33

1. Introduction

Using a sample of 16 countries that mandated the adoption of International Financial Reporting Standards (IFRS) in 2005, we examine the impact of disclosure reform on the level of CFO compensation.[1] IFRS and its predecessor International Accounting Standards (IAS) are a set of accounting standards developed to provide a global framework for reporting and disclosing financial information in financial statements.[2] In the early 2000's, numerous countries, including those in the European Union, Australia, Hong Kong, and South Africa, announced they would require listed companies to prepare financial statements under IFRS from 2005 onwards. Relative to a country's prior domestic Generally Accepted Accounting Principles (GAAP), IFRS generally increased disclosure and changed measurement and recognition requirements in a way that improved the transparency of financial reporting.

In a recent theoretical paper, Hermalin and Weisbach (2012) show that increases in mandated disclosure lead to higher executive compensation, as improved disclosure facilitates shareholder monitoring which adversely affects executives causing compensation to rise in response. Since IFRS generally has more extensive recognition and disclosure requirements than prior domestic GAAP (Nobes 2001; Bae et al. 2008), this improved financial reporting transparency and informativeness exposes CFOs to greater scrutiny, which could potentially increase their risk of termination and reduce their opportunities for private benefits. As a result, CFOs would seek increased explicit compensation following the

[1] We focus on the CFO as s/he is the top executive primarily responsible for financial reporting.

[2] The standards issued by international accounting standards setter through 2001 are called International Accounting Standards (IAS). When international standards setting organization was restructured in 2001, the names of the standards were changed. When the International Accounting Standards Board (IASB) replaced the International Accounting Standards Committee (IASC) in 2001, the new standards issued by the IASB were called International Financial Reporting Standards (IFRS). The IAS standards issued by the IASC continued to be authoritative. Now both IAS and IFRS standards are authoritative and generally referred to as international financial reporting standards. IFRS are promulgated by an independent, not-for-profit organization called the International Accounting Standards Board (IASB), based in London. The objective of IFRS is to provide financial information about a company that is useful to external users, including existing and potential investors, lenders, and other creditors in making decisions about providing resources to the company (from the IASB's Conceptual Framework for Financial Reporting, paragraph OB2).

adoption of IFRS. In addition, as the mandatory adoption of IFRS is a dramatic shift in external financial reporting, the move from domestic GAAP to IFRS increased CFO responsibility, including extra workload during the transition period and increased effort and judgment required to comply with the more complicated accounting standards. As a result, CFOs pay may rise to compensate for the increase in responsibility.

However, there are at least two reasons why we may not observe an increase in CFO compensation after the mandatory adoption of IFRS. First, as the pre-IFRS financial statements are of lower transparency, managers have more leeway to manipulate accounting numbers, which may lead to higher compensation under the old accounting standards.[3] Second, since the adoption of IFRS is mandated across firms in many countries at the same time, CFOs face limited outside options (assuming that a CFO's outside option is to work for another company). As a result, CFOs may not be able to bargain for a higher compensation as working for another company also faces similar increases in disclosures.

Using a unique dataset that provides time-variant information on top executive compensation for a large sample of firms across 21 countries (16 adopting, five non-adopting), we employ a difference-in-difference methodology to examine the change in CFO compensation following the mandatory adoption of IFRS. This methodology contrasts CFOs from countries that adopted IFRS to those in countries that did not, as well as contrasting compensation before and after 2005. We find that CFO compensation is higher after the mandatory adoption of IFRS in 2005. Because each country is moving from its unique domestic GAAP to IFRS and consequently experience different levels of change, we exploit the cross-county variation by showing that the compensation increase post-adoption is positively associated with the differences between prior domestic GAAP and IFRS. Each country also differs in its legal environment. Our belief is that the impact of IFRS will be

[3] For example, Barth et al. (2008) find that firms reporting under domestic GAAP have higher earnings management compared with those reporting under IAS.

greater when law enforcement is stronger. In fact our results show that the increase in CFO compensation post IFRS adoption increases with the strength of legal enforcement.

We continue to probe the Hermalin and Weisbach (2012) line of reasoning and examine the improved monitoring explanation. We find that a country's propensity for private benefits prior to the adoption, which IFRS would reduce, is associated with higher compensation increase post-adoption. This finding suggests that the increase in executive pay is at least partially to compensate for the loss of private benefits, i.e., increase in explicit compensation to offset a decrease in implicit compensation. In addition, we find that the strength of a country's shareholder monitoring imbedded in its legal system, measured by the anti-director rights index, is negatively associated with the compensation increase post-adoption. This finding suggests that disclosure reform improved shareholder monitoring and complements a country's existing shareholder monitoring system.

An alternative explanation for higher compensation under IFRS is that CFOs are compensated for increased responsibility, including extra workload during the transition period and increased effort to apply the more complicated accounting rules under the new accounting regime. Consistent with this argument, we find that CFO compensation increased immediately after the announcement of IFRS adoption and increased further after the actual adoption. As evidence that this increase is driven by IFRS, while we find an increase in compensation for the CFO and the CEO, we do not find an increase for other non-CFO/CEO executives. This finding is consistent CFOs' role as financial stewards of their companies and supports the argument that they face higher responsibility for the implementation of new accounting and disclosure standards after the IFRS adoption.

Together these findings suggest that the observed increase in CFO compensation after the mandatory IFRS adoption is at least partially attributable to the improved shareholder monitoring and increased CFO responsibility. The mandatory adoption of IFRS is a

compelling setting to examine the effect of improved disclosure and the complexity of accounting standards on executive compensation because it was an exogenously imposed event and was unlikely to be affected by a firm's endogenous choices. The large scale of adoption, i.e., many companies and countries adopting at the same time, and dramatic change in financial reporting enhances the setting as we are able to exploit the variation in differences between prior domestic GAAP and IFRS across countries to investigate the association between pay and new accounting standards and their complexity. Such a setting cannot be replicated by studies examining the change of executive compensation following disclosure reforms within a single country, such as the passage of Sarbanes-Oxley Act in the United States in 2002. Without the cross-sectional variation in the degrees of changes and enforcement, it is difficult to disentangle the effect of the disclosure reform from other concurrent changes in corporate governance and a general time trend.[4]

This paper contributes to two streams of literature: executive compensation and IFRS adoption. It contributes to the literature on the determinants of executive compensation by examining the impact of changes in disclosure and financial reporting. As an exogenous event, the mandatory adoption provides us with a before-and-after setting to investigate whether changes in executive compensation are related to changes in financial reporting. In absence of such an exogenous event, it is difficult to draw causality between executive compensation and financial reporting, as good managers often use high quality financial and receive high compensation at the same time. The finding that executive pay is positively associated with mandated disclosure could also help explain the large differences in executive compensation observed across different countries and during different time periods. For example, Abowd and Kaplan (1999) and Murphy (1999) find that US executives receive

[4] Sarbanes-Oxley Act of 2002 in the United States not only imposed reforms in financial reporting but also contained provisions limiting insider trading and improving board independence, which could have direct impacts on executive compensation.

significantly higher pay relative to their foreign counterparts. Such a pay gap could be potentially explained by the more stringent disclosure regulations in the US.[5] Fernandes et al. (2012) document a decrease in the compensation gap between US and non-US CEOs between 2003 and 2008, especially after 2005. This convergence could be partially attributed to the 2005 IFRS adoption, which led a convergence in financial reporting of US and non-US firms.[6]

This paper also contributes to the executive compensation literature by providing large-sample evidence on executive compensation for international firms. So far, the majority of the compensation studies are based on US data. Due to data limitation, most of the prior studies examining executive compensation for international firms are often based on one country or one year's data and are constrained to CEOs only (see Fernandes et al. (2012) for a review), which largely limits the generalizability of the results. The time-series compensation information that Capital IQ provides allows us to conduct both cross-sectional and time-series analysis on the changes in compensation over a long period. In addition, to the best of our knowledge, this is the first paper examining the CFO compensation for international firms.

This paper also contributes to the literature studying economic consequences of IFRS adoption, or similar disclosure reforms. A number of studies provide evidence showing that the adoption of IFRS is beneficial to shareholders and capital markets as a whole, as it improves firm value, information environment, and market liquidity (e.g., Daske et al., 2008; Byard et al., 2011; Landsman et al., 2012). However, as Hermalin and Weisbach (2012) argue, disclosure reforms should be viewed as a two-edged sword that provide benefits and entail costs. By documenting that IFRS adoption increases executive compensation, we provide direct evidence supporting their arguments. By identifying the previously

[5] For example, Leuz et al., (2003) show that US GAAP displays less earnings management and thus higher quality than most other countries' domestic GAAP.

[6] For example, Barth et al. (2011) find that after the mandatory adoption of IFRS in 2005, firms using IFRS produced accounting numbers that are more comparable to those produced by firms using US GAAP.

unmeasured cost of IFRS, we also call for more caution from regulators from countries that are currently contemplating the mandatory adoption of IFRS in the near future (e.g., Japan, China, and the United States).

The remainder of the paper is organized as follows. In Section 2, we review the literature and develop testable hypotheses. In Section 3, we describe the data and sample selection. We discuss our results in Section 4 and potential explanations in Section 5. Section 6 concludes the paper.

2. Literature review and hypothesis development

In this section, we provide two distinct arguments on why we except executive compensation to increase following mandatory IFRS adoption.

2.1. Improved monitoring

The common view in the literature is that increased disclosure improves the ability of shareholders and boards to monitor managers, and thus decreases agency problems and costs. In a recent theoretical paper modeling the impact of mandated disclosure reform, Hermalin and Weisbach (2012) argue that better disclosure also carries costs. They explain that if executives have bargaining power, then they can capture some of the benefits from increased disclosure and better monitoring through higher compensation. Further, they posit that even absent bargaining power, managerial compensation will rise as a compensating differential because better monitoring tends to affect managers adversely. This expectation is consistent with increased transparency and monitoring increasing executives' risk of termination and decreasing their informational advantage and private benefits. An implication of Hermalin and Weisbach (2012) is that executive compensation should increase following an exogenously imposed increase in disclosure quantity and/or quality.

The mandatory adoption of IFRS offers an exogenously imposed setting to investigate the association between increases in disclosure and executive compensation. Compared with

prior domestic GAAP, IFRS generally has more extensive disclosure requirements. For example, disclosures on related party transactions, segment information, and cash flow statements that are required under IFRS were often absent in domestic accounting standards (Nobes, 2001; Bae et al. , 2008). With improved transparency, executives are less likely to extract rents from informational advantage, such as profiting from insider trading and related party transactions. In addition, IFRS also produces better quality accounting information and more informative performance measures. For example, Landsman et al. (2012) find that IFRS adoption increases the information content of firms' earnings announcements; Barth et al. (2008) document that the adoption of IAS is associated with lower earnings management, more timely loss recognition, and more value relevance of accounting amounts; Ozkan et al. (2012) find that accounting information is more useful for contractual purpose after the mandatory adoption of IFRS. When the performance measures used to incentivize executives become more precise, shareholders can adjust the compensation plan and executives suffer a loss of quasi-rents (Hermalin and Weisbach, 2012). We, therefore, expect that executive pay to be higher following the mandatory adoption of IFRS as a compensation for the adverse effect on executives.

2.2. Increased responsibility

A separate argument for increased compensation relates to the increased responsibility from the increased effort and higher personal risk under the new accounting regime. First, adopting a new set of accounting standards requires significant effort from executives during the transition period. Many countries that mandated IFRS in 2005 had domestic GAAP drastically different from IFRS. Executives that were educated and trained using domestic GAAP had to develop new technical accounting knowledge of IFRS, co-ordinate with auditors and other experts, train staff, and consider tax implications. In addition, during the year of adoption firms were not only required to prepare contemporaneous statements under

IFRS, they were also required to recast the prior year's financial statements under IFRS. Contracts, such as debt covenants or employee compensation contracts, which were written using the old accounting terms, may also need to be re-drafted. Due to the increased workload of top executives, especially those who are responsible of financial reporting, during the transition period, they are likely to receive extra compensation.[7]

Second, compared with many adopting countries' prior domestic GAAP, IFRS is often more complex. For example, IFRS has detailed rules on measurement and recognition of financial assets and liabilities (IAS 39), while most countries' domestic GAAP did not include any description of the reporting of financial instruments; IFRS requires accounting for employee benefits (IAS 19) and impairment of assets (IAS 36), which were often absent in many countries' domestic standards; in addition, capitalization of research and development costs and accounting for deferred tax were also quite different in domestic standards (e.g., Bae at al., 2008; Armstrong et al., 2010).

Third, adopting IFRS may also increase executives' personal risk associated with financial reporting. Any time there is a major change in accounting standards there is the chance of error. Executives who are responsible for financial reporting are often held personally accountable for these errors.[8] In addition, IFRS is often quoted by accounting practitioners and academicians as "principle-based" and "fair-value oriented", as it provides a broad set of principles that are subjective to managerial interpretation and judgment. For example, under IFRS, firms are given many choices with regard to the recognition and measurement of assets and liabilities and managers need to exercise discretion in determining

[7] For example, Grinstein and Hribar (2004) find that CEOs receive one-time cash bonuses after big corporate events, such as M&A deals.

[8] For example, Desai et al. (2006) and Collins et al. (2009) find that top executives of firms that restated earnings face severe reputational penalties, including higher turnover rates and subsequent ex- post settling up in managerial labor market.

which method is best for the firm.[9] IFRS also contains little guidance on implementation or examples based on the standards. Estimating the fair value of assets and liabilities also involves a significant amount of managerial judgement and discretion (Ball, 2006). In cases where those judgments turn out to be incorrect ex-post, managers in charge may be held liable.[10]

Consistent with these arguments, Kim et al. (2012) find that audit fees increased following the mandatory adoption of IFRS and attribute this increase to the increased auditing effort under more complex, principle-based and fair-value oriented new accounting standards.

3. Data and sample selection

This paper uses a new dataset – Capital IQ People Intelligence, which provides historical information on executive compensation for a large sample of global firms. The coverage for global firms starts in 1998 but was expanded in early 2000's. Capital IQ collects executive compensation information from both public and private sources and reports detailed compensation components, such as salary, bonus, stock awards, stock grants, long term incentive plan, and other annual compensation. Capital IQ also provides company identifiers, such as Gvkey and ISIN, which allow for easy merge with other databases, such as Compustat and WorldScope.

Although the compensation information is available for all top executives, we only focus on CFOs in our main analysis due to their role as the financial stewards of their companies, with their primary charge being to assemble and present financial statements.

[9] For example, IFRS allow firms to choose between the historical-cost and fair-value methods to recognize their property, plant, and equipment, intangible assets, and investment properties (IAS 16, 38, and 40), while domestic GAAP often only allowed for one method. Under UK GAAP, firms are required to recognize investment properties at fair value, while under German GAAP, firms must use historical cost.

[10] For example, Donelson et al. (2012) find that rule-based standards in the US, in contrast to principle-based standards under IFRS, are associated with a lower incidence of litigation.

There is a growing literature on the roles of the CFO that explores the differences in executive's responsibilities related to accounting and reporting outcomes (e.g., Balsam et al., 2012; Gore et al., 2010; Jiang et al., 2010). In our setting, the adoption of IFRS is a major change in a company's financial reporting, which falls into CFOs' duties with regards to changes in and implementation of new accounting standards. Focusing on CFO compensation also allows us to use other executives as benchmark and test the argument on increased responsibility.

We start our sample selection process by including all firm-years with CFO compensation data available on Capital IQ and with accounting and stock price data available from Compustat Global or WorldScope. As the compensation data is relatively sparse before 2000, our sample period starts from 2000 and ends at 2007.[11] We include countries that require IFRS adoption in 2005 as the treatment sample and use countries that retained domestic accounting standards during the sample period as the control sample. We exclude US firms from our control sample because there were several disclosure reforms in the US during the sample period, such as Regulation Fair Disclosure in 2000 and the Sarbanes-Oxley Act (SOX) in 2002, both of which may have material impacts on executive compensation. In addition, Fernandes et al. (2012) document a time-trend of convergence in compensation between US and non-US executives. Using US CFOs as the control would bias us towards finding a higher CFO pay post-IFRS adoption. As IFRS is allowed, but not mandated in some of our control countries, we exclude firm-years from the control sample if the firm is using international accounting standards (IAS or IFRS). We also exclude firm-years in the treatment countries that did not use IFRS for fiscal years ending in or after December 2005 or

[11] While in theory we could extend our post period past 2007, we elect to end it with 2007 because the potential effect of the worldwide financial crisis on both firm performance and executive compensation could dominate that of IFRS. Also, disclosure requirements on compensation components in certain countries changed in 2008. For example, in Canada, all bonuses have been classified as non-equity incentive in 2008 (see FORM 51-102F6 STATEMENT OF EXECUTIVE COMPENSATION in respect of financial years ending on or after December 31, 2008). Nevertheless, our results remain unchanged if we expand the sample period to 2010.

did not use local accounting standards before the adoption date.[12] Next, we delete firm-year observations that do not disclose the accounting standards used in their financial statements and that do not have enough data to calculate the variables used in our regressions. Lastly, we require that each sample country have at least one observation from both the pre- and post-IFRS adoption periods. The detailed sample selection process is presented in Table 1 Panel A. The final sample consists of 13,697 firm-year observations from 21 countries, including 9,883 observations from 15 IFRS-adoption countries and 3,814 from six non-IFRS countries.[13] Table 1 Panel B reports the sample composition by year. We observe a steady growth in the sample size for both IFRS and non-IFRS countries over our sample period. Panel C presents the sample composition by country. Australia and the United Kingdom dominate the treatment sample, and Canada constitutes the greater part of the control sample. The observed time-series and cross-sectional variation in sample size reflects the increased coverage of Capital IQ and different disclosure requirements for executive compensation in our sample countries.[14]

4. Effect of IFRS on CFO compensation

We examine the impact of mandatory IFRS adoption on CFO compensation by comparing the average CFO pay in the post-adoption period with that in the pre-adoption period. A concern about this approach is that the observed change in the post-adoption period could reflect a general time trend. To address this concern, we follow prior literature (e.g.,

[12] Firms in our treatment countries that do not use IFRS after the mandatory adoption date might be those being exempted from the mandatory adoption, such as firms within the EU but not listed in the EU regulated markets, firms reporting using non-consolidated financial statements, and firms reporting under US GAAP (Pownall and Wieczynska, 2012). These observations are removed in our analysis to create a cleaner comparison between local GAAP in pre-adoption period and IFRS in post-adoption period.

[13] We require that each firm-year have one CFO. In cases where there are multiple CFOs in a certain firm-year (e.g. interim CFOs), we keep the one with the highest total compensation.

[14] US-style executive compensation disclosures were mandated in Canada in 1993, in UK in 1995, in Ireland and South Africa in 2000, and in Australia in 2004. Similar disclosure requirements were mandated in several other EU countries between 2003 and 2006 (Fernandes et al., 2012).

Landsman et al., 2012; Becker and Strömberg, 2012) and employ a difference-in-difference method, in which we use the countries that did not mandate IFRS adoption during the entire sample period as the benchmark.

We use two compensation variables, total cash and total compensation, to measure the aggregate compensation level. Total cash is calculated as the sum of bonus, salary, other annual compensation, non-equity incentive plan, and long-term incentive plan. Total compensation includes cash compensation, equity-based compensation, and all other compensation. Due to different disclosure requirements on equity compensation across our sample countries during the sample period (see Footnote 15), total cash compensation provides a more reliable and coherent measure for CFO pay in cross section. In addition, as equity-based compensation only became more popular among some of our sample countries in recent years due to globalization, focusing on cash compensation also improves the comparability of CFO pay over time (e.g., Fernandes et al., 2012). However, a concern about focusing only on cash pay is that it ignores any potential changes in the pay structure during our sample period, especially the trend of using more equity compensation to replace cash compensation in recent years. As a result, we use both total cash and total compensation including equity-based compensation through all our analyses.

We control for a wide range of firm-level and country-level variables as shown in the prior literature (see for example Core et al. 1999). We use accounting return (net income divided by total assets), stock return (annual buy-and-hold stock return, adjusted for stock splits and dividends), stock return volatility (standard deviation of monthly stock returns measured over the fiscal year), firm size (natural logarithm of total assets), book-to-market (book value of equity divided by market value of equity), an indicator for exposure to the US capital markets (availability of SEC filings), and CFO tenure (the number of years the CFO has been working as the CFO for the current firm) as control variables. As the majority of our

treatment countries are from the European Union, we convert all non-Euro denominated compensation and non-ratio firm-level variables from local currencies to Euros using the exchange rate at the fiscal year end.[15] We also control for country-level macroeconomic factors, including real GDP growth, the exchange rate used for the conversion and the inflation rate.

Table 2 reports the summary statistics of regression variables in the pre- and post-IFRS adoption periods for the treatment and control samples, respectively. For CFOs in our treatment sample, the average cash compensation increased by €87,500 or 28.4% and the average total compensation increased by €129,200 or 38.2% in the post-adoption period compared to the pre-adoption period, and these increases are statistically significant. For CFOs in the control group, the average cash compensation only increased by €12,500 or 8.9% and the average total compensation only increased by €40,600 or 21.6% in the post-adoption period. The last two columns report the mean difference-in-difference and *t* statistics. Both *Total Cash* and *Total Comp* have positive and significant difference-in-difference means, suggesting that relative to the control group, CFOs in our treatment group receive larger compensation increases in the post-adoption period. This table also reports summary statistics for three major compensation components, bonus, salary, and equity compensation. We observe that CFOs in our treatment sample receive larger increases in bonus and salary but lower increase in equity compensation in the post-adoption periods relative to those in our control group. This table also suggests that firms in our treatment sample experience larger increases in accounting return, stock return, firm size, growth opportunities, and US exposure, as well as larger decreases in return volatility in the post-adoption period relative to the control group, which may partially explain their higher pay increase.

[15] We find very similar results if we use local currencies to denominate compensation and firm-level measures.

4.1. Baseline analysis

We use the following multivariate difference-in-difference model to examine the compensation change following IFRS adoption:

$$Log(1+Compensation) = \beta_1 Post + \beta_2 IFRS + \beta_3 Post \times IFRS + Control\ Variables + Industry\ Dummies \quad (1)$$

where *IFRS* is defined as one if the firm is from a country that mandated IFRS adoption in 2005 (treatment sample) and zero otherwise (control sample) and *Post* is defined as one if the fiscal year ends in or after December 2005 (mandated IFRS adoption date). Given the skewness of the compensation variables, we use their natural logarithmic transformations as dependent variables in all our regression models (e.g., Wang, 2010; ; Conyon et al., 2011).[16] β_3 measures the change of CFO compensation in the post-adoption period relative to the control group and is expected to be positive. We do not have any predictions on the sign of β_1 or β_2. To control for industry specific characteristics that may potentially influence the compensation level, we include industry (2-digit SIC) fixed effects. To mitigate the impact of outliers, all continuous variables are winsorized at 1 and 99 percentage levels. All standard errors are clustered at the firm level to address the potential correlations in error terms for the same firm across time.

The regression results are reported in Table 3. In the first two columns, we use *Total Cash* and *Total Comp* as the dependent variables. Consistent with our expectation, the coefficients on *Post×IFRS* are positive and statistically significant at 1% level for both regressions. The estimates suggest that holding all other variables constant CFOs receive 30.0% (10.2%) higher cash (total) compensation in the post-adoption period in the treatment countries relative to those in the control group. The positive coefficients on *IFRS* suggest that CFOs in IFRS countries are generally receive higher pay prior to the adoption compared with

[16] We use one plus the compensation measure, as certain compensation components, such as bonus and equity compensation could be zero. This approach is consistent with prior studies using compensation components as dependant variables (e.g., Wang, 2010).

those in the control group. The negative coefficients on *Post* suggest that after controlling for performance, firm characteristics, and macroeconomic factors, CFOs in our control group experience pay reduction in the post-adoption period. The coefficients on the control variables are generally consistent with prior literature. For example, we find that both cash and total compensation are positively correlated with firm size, growth opportunities, and CFO tenure (e.g., Hill and Phan, 1991; Smith and Watts, 1992; Gaver and Gaver, 1993, 1995). The positive coefficients on exchange rate suggest that the compensation level is higher when local currencies are stronger relative to Euros. In addition, cash compensation is negatively associated with stock return volatility, suggesting that CFOs are penalized when the performance of a company's stock is more volatile.[17]

Although we focus on *Total Cash* and *Total Comp* as main compensation measures, we report the results using *Bonus, Salary* and *Equity Comp* as the dependent variables for completeness. The results are reported in the last three columns of Table 3. The coefficients on *Post×IFRS* are positive and statistically significant for all three compensation components. The *Bonus* regression has the largest coefficient on *Post×IFRS*, an average of 256.6% increase in bonus for CFOs in the treatment group relative to the control group. This finding suggest that a large part of CFO pay increase post-adoption is coming from higher bonuses, consistent with the argument that executives may receive one-time bonus following big corporate event (e.g., Grinstein and Hribar, 2004). We observe that the coefficients on *ROA* and *Return* are positive and significant in the regression on *Bonus*, consistent with the traditional view that bonuses are often explicitly tied to performance (e.g., Murphy, 1985, 1999). We also observe that CFOs of firms with US exposures receive higher bonuses, higher equity-based compensation, but lower salaries, consistent with findings in Fernandes et al. (2012) that "Americanized" firms offer US-style compensation packages (higher total and

[17] This finding is consistent with that in Fernandes et al. (2012), who argue that the relation between executive compensation and stock return volatility is theoretically ambiguous.

equity compensation) to their top executives to attract US investors. In addition, real GDP growth and inflation have positive coefficients in the regression on *Salary* but negative ones in the regressions on *Bonus* and *Equity Comp*, implying that CFO salaries are keeping pace with macroeconomic indicators while other compensation components seem to lag behind the economic growth. The above findings potentially explain the opposite coefficients on *US Exposure*, *Inflation* and *Real GDP Growth* found in the regressions on *Total Cash* and *Total Comp*.

The adjusted R-squares of our models range between 22.8% and 59.5%, with the highest value from the model of *Total Comp*, suggesting that our model explains a substantial amount of the variation in total CFO compensation.

4.2. Robustness analysis

In Table 4, we address the robustness of our main results from several different aspects. First, consistent with previous studies that adopt difference-in-difference methodology, year fixed effects are not included in the regression models due to potential multicollinearity between *Post* indicator and year dummies (Wang, 2010; Landsman et al., 2012; Daske et al., 2008). Similarly, due to potential multicollinearity between *IFRS* indicator and country dummies, we do not include country fixed effects. To address the concern that potentially correlated-omitted country and year characteristics might bias our estimates, we repeat our analysis by including year and country fixed effects and omitting *IFRS* and *Post* indicators. The coefficients on *Post×IFRS* continue to be positive and significant for both cash and total compensation regressions (see columns labelled "Fixed Effects").

Second, to address the concern that our results might be driven by different sample compositions in the pre- and post-adoption periods, we create a constant sample where each firm is required to exist in both pre- and post-adoption periods. Although the magnitudes of coefficients on *Post×IFRS* are attenuated, as this specification tilts the sample towards larger

and more stable firms (Daske et al., 2008), these coefficients continue to be positive and significant (see columns labelled "Constant Sample").

Third, to address the concern that our results might be driven by the volatile exchange rates between Euros and local currencies during our sample period, we repeat our analysis using compensation measures and non-ratio accounting variables denominated in local currencies and get very similar results (see columns labelled "Local Currency").

Fourth, as discussed in Section 3, we have so far excluded US firms from our analysis due to regulatory changes in the US during our sample period and a time-trend of convergence of executive pay between US and non-US firms documented in prior literature. However, to create an alternative control group, we use a random sample of US CFOs with the same number of observations as our treatment sample (i.e. 9,883).[18] The results are reported under columns labelled "Random US Sample". We observe that CFOs in our treatment sample receive 4.8% greater increase in cash compensation and 10.6% greater increase in total compensation than their US counterparts.

In untabulated analysis, to address the concern that our results might be driven by the Australian and U.K. firms, who numerically dominate our sample, we exclude Australia or U. K. from our treatment sample and get qualitatively similar results.

4.3. Cross-sectional analysis on GAAP distance and enforcement

Findings in Sections 4.1 and 4.2 suggest an average positive effect of IFRS on CFO compensation. Although all the countries in our treatment sample mandated IFRS at the same time, it is unlikely that the mandatory adoption has uniform effects on CFO compensation across all sample countries. First, prior to IFRS adoption, each country has drastically different local accounting standards. The change in financial reporting is likely to be small if

[18] Following the same sample selection process, we obtain 34,002 observations from the US. We get very similar results if we use the whole sample instead of the random sample of US CFOs as the control group.

a country's prior domestic accounting standards were similar to IFRS. Second, due to differences in enforcement strength and the legal environment, the implementation of IFRS is likely to differ across different sample countries, which may lead to different financial reporting practices even under the same set of accounting standards. Consistent with this view, several prior studies present evidence showing that the positive impacts of IFRS on firms' information environment and capital markets only exist in countries with substantially different prior domestic GAAP and/or strong legal enforcement (e.g., Daske et al., 2008; Byard, et al., 2011; Landsman et al., 2012). Following prior literature, in this section, we explore the heterogeneity in the treatment effects due to differences in prior domestic GAAP and the strength of enforcement. In particular, we expect the increase in CFO compensation to be more pronounced when the differences between IFRS and domestic GAAP are greater and the legal enforcement is stronger,

Following Bae et al. (2008) we use a country-level GAAP distance index to measure the difference between prior domestic accounting standards and IFRS. Based on the Nobes (2001) GAAP Survey, Bae et al. (2008) construct a score *gaapdiff1* to measure the distance between domestic GAAP and IAS by examining a list of 21 key accounting items and assigning a score of 1 for each item that does not conform to IAS. The variable *gaapdiff1* is the aggregate score, with a higher value indicating a larger difference between prior domestic GAAP and IAS. We label this variable *GAAP Distance*.

We measure enforcement from two dimensions, in time series and in cross section. In March 2007, the EU legislature enacted the Transparency Directive (TPD), which stipulates that a supervisory authority assume responsibility for monitoring compliance with the provisions of the directive in each member state and that this authority examine firms' regulated disclosures (e.g., financial statements prepared under IFRS). Such a review process did not exist in many countries and was introduced (or expanded) following the TPD. The

TPD also requires that the authority be given appropriate enforcement tools, including the power to carry out on-site inspections. Therefore, the TPD's primary role is to clarify and harmonize existing disclosure regulation and to improve the enforcement of IFRS (Christensen et al., 2012). We expect the enforcement of IFRS to be stronger after the enactment of TPD. To measure the cross-sectional differences in enforcement, we follow prior literature (e.g., Daske et al., 2008; Byard et al., 2011) and use the country-level rule of law index of 2005 obtained from Kaufmann et al. (2009).

Table 1 Panel C reports *GAAP Distance* index, the date when TPD came into force, and *Rule of Law* index for each country in the treatment sample. *GAAP Distance* ranges from 0 to 16 with a sample median of 10. Higher values of *GAAP Distance* indicate larger difference between prior domestic GAAP and IFRS. The date when TPD came into force for each EU country is obtained from Christensen et al. (2011) and is reported under column "T. D. Date". As the amount of time it takes for each country to implement the directive varies, the entry-into-force date of TPD also differs across country. The date ranges from January 2007 (Germany and the United Kingdom) to April 2009 (Italy) with the majority of sample countries in 2007. The rule of law index ranges from -0.37 (Philippines) to 1.95 (Denmark) with a sample median of 1.59. Higher values indicate stronger enforcement.

We use the following regression model to examine whether the increases in CFO compensation vary with GAAP difference:

$$Log(1+Compensation) = \beta_1 Post + \beta_2 HighDistance + \beta_3 Post \times HighDistance + Control\ Variables + Industry\ Dummies \quad (2)$$

where *HighDistance* is a dummy variable equal to one for countries with *GAAP Distance* value equal to or higher than sample median and zero otherwise, and other variables are defined in the same way as those in Equation (1). As we are only interested in the variation of

the treatment effect, Equation (2) is estimated for the treatment sample only.[19] β_3 still measures the mean difference-in-difference where the countries with low GAAP difference is used as the control group. We expect β_3 to be positive.

We use the following two regression models to examine whether the increases in CFO compensation varies with GAAP difference *and* enforcement:

$$\begin{aligned} Log(1+Compensation) = {} & \beta_1 Post + \beta_2 HighDistance + \beta_3 Post \times HighDistance \\ & + \beta_4 PostTPD + \beta_5 PostTPD \times HighDistance \\ & + Control\ Variables + Industry\ Dummies \end{aligned} \quad (3)$$

$$\begin{aligned} Log(1+Compensation) = {} & \beta_1 Post + \beta_2 HighDistance + \beta_3 Post \times HighDistance \\ & + \beta_4 HighLaw + \beta_5 Post \times HighLaw \\ & + \beta_6 Post \times HighLaw \times HighDistance \\ & + Control\ Variables + Industry\ Dummies \end{aligned} \quad (4)$$

where *PostTPD* is a dummy variable equal to one for fiscal years ending after the date when TPD came into force and zero otherwise,[20] *HighLaw* is a dummy variable equal to one for countries with *Rule of Law* value equal to or higher than the sample median and zero otherwise, and other variables are defined the same as before. Similar to Equation (2), Equations (3) and (4) are estimated for the treatment sample only.

Table 5 reports the regression results. In the first two columns, we report the coefficients for Equation (2). The positive and significant coefficients on *Post*×*HighDistance* suggest that the increase in CFO cash (total) compensation is 51.9% (51.9%) higher in countries where prior local GAAP differ substantially from IFRS, independent of enforcement. The negative coefficients on *HighDistance* suggest that CFOs in countries with high GAAP difference received lower compensation in pre-adoption period relative to those in countries with low GAAP difference. The small negative coefficient on *Post* in the

[19] We get very similar results if we include countries in the control group and set their GAAP distance variable to be zero.

[20] TPD is defined as zero for all firm-years in countries without TPD, i.e. countries outside the European Union, as these countries face a constant level of enforcement throughout the sample period. Including them in the sample, we could also control for a general time trend in CFO compensation among our treatment countries.

regression of *Total Cash* and the insignificant coefficient on *Post* in the regression of *Total Comp* suggests that CFOs in countries with low GAAP difference experience a slight decrease in cash compensation but no significant change in total compensation post IFRS-adoption.

The last four columns of Table 5 report the regression coefficients for Equations (3) and (4). For results on Equation (3), both *Post*×*HighDistance* and *PostTPD*×*HighDistance* have positive and significant coefficients, suggesting that for countries with large GAAP distance CFO compensation increased immediately after IFRS adoption and increased even further after the enforcement was strengthened. For results on Equation (4), the positive and significant coefficients on *Post*×*HighLaw*×*HighDistance* suggest that the increase in CFO compensation after IFRS adoption is more pronounced in countries with large GAAP distance *and* strong enforcement.

The coefficients on the control variables and the reported adjusted R-squares are largely comparable to those reported in Table 3, suggesting that the association between firm characteristics and CFO compensation is similar across our treatment and control samples.

To summarize, the cross-sectional results in this section suggest that the increase in CFO compensation varies with the difference between prior local GAAP and IFRS and the strength of enforcement. The cross-sectional analysis on the treatment sample also provides additional support to findings in the baseline analysis in Section 4.1 and suggests that mandatory IFRS adoption *causes* the increase in CFO compensation. A concern about the difference-in-difference method using countries without IFRS adoption as the control is that other concurrent events unrelated to IFRS within our treatment countries might be driving our results. By showing that the increase in CFO compensation varies with GAAP difference and enforcement, we mitigate this concern. If it were other concurrent events driving this finding, we would not observe such a cross-sectional variation in the treatment effect. In addition,

focusing only on the treatment sample also helps alleviate the concern about the choice of the control group.

5. Potential explanations for the increase of compensation

In Section 4, we provide evidence suggesting that CFO compensation increased after mandatory IFRS adoption in 2005. In Section 2, we provide two alternative explanations for such increase: improved monitoring and increased responsibility. We conduct empirical analysis to test these explanations in this section.

5.1 Improved monitoring

Hermalin and Weisbach (2012) argue that disclosure reforms could increase executive compensation, as improved monitoring under more transparent reporting regimes tends to affect managers adversely. We take two approaches to examine this explanation. First, a direct adverse effect of improved monitoring on managers is the loss of private benefits. Therefore, we expect the increase in compensation to be more pronounced in countries where the prior private benefits of control were higher. Second, we also expect the increase of compensation to be positively associated with the change of monitoring level. In other words, if managers were already facing a high level of shareholder monitoring, they are less likely to be adversely affected by the disclosure reform.

Dyck and Zingales (2004) construct a measure for private benefits of control using the price premium for control blocks. A higher price premium paid for the control block indicates higher private benefits associated with control rights. They identify 393 controlling blocks sales in 39 countries between 1990 and 2000. Consistent with prior literature (e.g., La Porta et al., 2006), we use their country median as the measure for private benefits at the country level. La Porta et al. (1998) construct an anti-director rights index measuring how strongly a country's legal system protects minority shareholders against managers or dominant

shareholders in the corporate decision-making process, including the easiness for shareholders to vote and the power given to the votes of minority shareholders. A higher value for anti-director rights index indicates stronger legal protection for minority shareholders. Djankov et al. (2008) revise this index using laws and regulations applicable to publicly traded firms in May 2003. We use the revised anti-director index to measure the effectiveness of monitoring from outside shareholders.

The private benefits and the anti-director rights indices are reported in Table 1, Panel C. *Private Benefits* index ranges from 0 (United Kingdom and South Africa) to 0.38 (Austria) with a sample median of 0.03.[21] *Anti-director Rights* index ranges from 2 to 5 with a sample median of 3.8. These two indices have a Pearson correlation coefficient of -0.58 (not tabulated), indicating that managers have higher private benefits of control in countries that give less power to minority shareholders. We use the following regression model to examine whether the increases in CFO compensation varies with levels of private benefits and shareholder monitoring in the pre-adoption period:

$$Log(1+Compensation) = \beta_1 Post + \beta_2 HighIndex + \beta_3 Post \times HighIndex + Control\ Variables + Industry\ Dummies \quad (5)$$

where *HighIndex* is a dummy variable equal to one for countries with *Private Benefits* index or *Anti-director Rights* index equal to or higher than the sample median and zero otherwise, and other variables are defined in the same way as before. Similar to the argument in Equation (2), we estimate this equation for the treatment sample only and countries with low private benefits or anti-director rights serve as the control group. The improved monitoring argument suggests a positive β_3 in the regression using private benefits index and a negative β_3 in the regression using anti-director index.

[21] The private benefits index is missing for Ireland, observations from which are therefore removed from the analysis.

Regression results are reported in Table 6. Consistent with the improved monitoring argument, we observe that firms in countries with high private benefits receive 32.2% (37.4%) higher cash (total) compensation in the post-adoption period relative to those in countries with low private benefits. We also observe that firms in countries with high anti-director rights receive 24.3% (29.4%) lower cash (total) compensation in the post-adoption period relative to those in countries with low anti-director rights.

Results in this section suggest that the increase in CFO compensation following IFRS adoption is at least partially attributable to the improved shareholder monitoring following the IFRS adoption.

5.2 Increased responsibility

Another explanation for the increase of CFO compensation after mandatory IFRS adoption is the increased responsibility, including extra work load during the transition period, the continued effort needed for more complex accounting rules and higher personal risk entailed for more judgment under the new accounting regime. We take two approaches to examine this explanation. First, the majority of our treatment countries announced their decisions on adopting IFRS three years before the actual adoption date. Due to the large amount of preparation required for the adoption, CFOs are likely to face higher workload after the announcement. If the increase in CFO pay is to compensate for the extra workload during the transition, we expect the pay also to start increasing after a country *announced* the adoption of IFRS. Second, while other non-CFO executives may face improved monitoring and decreased private benefits associated with IFRS adoption, they are less likely to be affected by the increase in effort and personal risk, as it is the CFO who bears primary responsibility for the financial reporting. If the increase in CFO compensation after IFRS adoption reflects the increased responsibility, we expect the increase of compensation to be higher for CFOs than for others.

Table 1, Panel C reports the announcement dates for our treatment countries. All countries in our treatment sample except Hong Kong and Philippines made the announcements in mid- to late-2002. To be able to conduct a difference-in-difference test, we exclude these two countries from our analysis. We use the following two equations to examine the announcement effect:

$$\begin{aligned} Log(1+Compensation) = {} & \beta_1 PostAnn + \beta_2 Post + \beta_3 IFRS \\ & + \beta_4 PostAnn \times IFRS + \beta_5 Post \times IFRS \\ & + Control\ Variables + Industry\ Dummies \end{aligned} \quad (6)$$

$$\begin{aligned} Log(1+Compensation) = {} & \beta_1 PostAnn + \beta_2 Post + \beta_3 HighDistance \\ & + \beta_4 PostAnn \times HighDistance + \beta_5 Post \times HighDistance \\ & + Control\ Variables + Industry\ Dummies \end{aligned} \quad (7)$$

where *PostAnn* is a dummy variable equal to one for fiscal years ending in or after December 2002,[22] and other variables are defined in the same way as before. Equation (6) includes both treatment and control samples and Equation (7) includes only the treatment sample and the countries with low GAAP distance are used as the control group. In Table 7 Panel A, columns on the left report the results for Equation (6).[23] The positive and significant coefficients on *PostAnn*×*IFRS* in the regression on *Total Cas*h (*Total Comp*) suggest that CFOs in IFRS-adoption countries receive 43.0% (10.7%) higher cash (total) compensation after the announcement of IFRS adoption relative to those in the control group. The positive and significant coefficients on *Post*×*IFRS* suggest CFO cash (total) compensation increased by another 24.0% (8.9%) after the actual adoption of IFRS. Columns on the right report the results for Equation (7). We find that CFOs in countries where prior local GAAP differed substantially from IFRS received 50.9% (51.8%) higher cash (total) compensation following the announcement and received another 32.6% (37.1%) increase following the actual

[22] Although countries made announcements at different times during the year, as the majority of our sample firms have a December fiscal year end, we use the December 2002 as the cut-off month. However, our results are unchanged if we use June 2002 as the cut-off month.

[23] Table 7 includes only results for main variables for brevity. The results for control variables are similar to those presented in prior analyses.

adoption relative to those in countries with low GAAP difference.

To compare CFO compensation increase relative to others, we collect the compensation data for other top executives for firms in our treatment and control samples. We use the following equation to estimate the incremental compensation increase for CFOs:

$$\begin{aligned} Log(1+Compensation) = {} & \beta_1 CFO + \beta_2 Post + \beta_3 Post \times CFO + \beta_4 IFRS \\ & + \beta_5 Post \times IFRS + \beta_6 IFRS \times CFO + \beta_7 Post \times IFRS \times CFO \\ & + Control\ Variables + Industry\ Dummies \end{aligned} \quad (8)$$

where *CFO* is a dummy variable equal to one if the executive is CFO and zero for other executives and other variables are defined in the same way as before. This equation includes both the treatment and control samples. Table 7 Panel B reports the results. In the first two columns, we compare CFOs with non-CFO/CEO executives and find that CFOs in IFRS countries receive higher compensation increase post-adoption, suggested by the positive and significant coefficients on *Post×IFRS×CFO* in the first two columns. The coefficients on *Post×IFRS* are positive but not significantly different from zero, suggesting that there is no significant increase in compensation for non-CFOs. In the last two columns, we compare CFOs with CEOs. The coefficients on *Post×IFRS* become positive and significant, indicating that CEOs in IFRS countries also received higher compensation following the adoption. However, the coefficients *Post×IFRS×CFO* are not significantly different from zero, suggesting that the increase in compensation following IFRS adoption is comparable for CEOs and CFOs. This finding could be due to two reasons. First, although CFOs are mainly responsible for financial reporting, CEOs also face increased effort following IFRS adoption, as they need to learn to interpret and make decisions using financial statements prepared under the new accounting regime. Second, as CEOs supervise firms' operations from all aspects, including financial reporting, they also face increased personal risk associated with financial reporting. For example, Prior studies find that CEOs of firms that restated earnings experience higher turnover rates (Desai et al., 2006; Collins et al., 2009; Hennes et al., 2008).

Results in this section suggest that the increase in CFO compensation following IFRS adoption is at least partially attributable to the increased responsibility following the IFRS adoption.

6. Conclusions

In this paper, we examine the change in CFO compensation around mandatory IFRS adoption in 2005. We find that post adoption, CFOs in countries which mandated IFRS receive higher compensation than CFOs in countries where IFRS was not mandated. To further attribute the increase in CFO compensation to the IFRS adoption, we examine the cross-sectional variance in this increase within the countries that mandated IFRS. We find a greater increase in countries where the distance between prior domestic GAAP and IFRS is larger and the legal enforcement is stronger. We propose two potential explanations for the documented increase in CFO compensation: improved monitoring and increased responsibility. Consistent with the improved monitoring argument, we find that the pay increase is larger in countries where the private benefits of control were higher prior to the adoption, suggesting that the pay increase is to partially compensate for the loss of private benefits under the more transparent accounting regime. We also find that the pay increase is larger in countries with weaker anti-director rights, suggesting that disclosure reform complements other shareholder monitoring mechanism. Consistent with the increased responsibility argument, we find that the pay started to increase following the announcement of IFRS adoption and increased further after the actual adoption date, suggesting that the pay increase is at least partially to compensate for the increased work load during the transition period. We also find that CFOs in countries with IFRS adoption received higher pay rise post-adoption relative to non-CFO/CEO executives, suggesting that the pay increase is also partially to compensate for the increased responsibility associated with financial reporting.

Our findings contribute to the literature on the economic consequences of IFRS adoption by suggesting that higher executive compensation might be a hidden cost for countries transforming to a more transparent accounting regime. Our findings also shed light on the economic determinants of executive compensation by suggesting that a major regime shift has direct impact on top executives who are most responsible for implementing the change. Our findings have implications for standard-setters, especially for those currently contemplating the mandatory adoption of IFRS, as improved disclosure also entails costs.

References

Abowd, J. M., and D. S. Kaplan. 1999. Executive compensation: six questions that need answering. *Journal of Economic Perspectives* 13, 145-168.

Armstrong, C. S., M. E. Barth, A. D. Jagolinzer, and E. J. Riedl. 2010. Market Reaction to the Adoption of IFRS in Europe. *The Accounting Review 85*(1): 31-61.

Ball, R. 2006. International Financial Reporting Standards (IFRS): pros and cons for investors. *Accounting and Business Research* 36, 5-27.

Balsam, S., A. Irani, and J. Yin. 2012. Impact of Job Complexity and Performance on CFO Compensation. *Accounting Horizons*.

Bae, K. H., H. Tan, and M. Welker. 2008. International GAAP Differences: The Impact on Foreign Analysts. *The Accounting Review* 83 (3):593-628.

Banker, R. D., and S. M. Datar. 1989. Sensitivity, Precision, and Linear Aggregation of Signals for Performance Evaluation. *Journal of Accounting Research* 27 (1):21-39.

Barth, M., W. Landsman, M. Lang, and C. Williams. 2012. Are IFRS-based and U.S. GAAP-based accounting amounts comparable? *Journal of Accounting and Economics* 54(1): 68-93.

Barth, M., W. R. Landsman, and M. H. Lang. 2008. International Accounting Standards and Accounting Quality. *Journal of Accounting Research* 46 (3):467-498.

Becker, B., and P. Strömberg, 2012. Fiduciary duties and equity-debtholder conflicts. *Review of Financial Studies* 25, 1931-1969.

Byard, D., Y. Li, and Y. Yu. 2011. The effect of mandatory IFRS adoption on financial analysts' information environment. *Journal of Accounting Research* 49, 69-96.

Christensen, H., L. Hail, and C. Leuz. 2012. Capital-market effects of securities regulation: hysteresis, implementation, and enforcement. *Working Paper*.

Collins, D., A. Masli, A. Reitenga, and J. M. Sanchez. 2009. Earnings restatements, the Sarbanes-Oxley Act, and the disciplining of chief financial officers. *Journal of Accounting, Auditing and Finance* 24 (1): 1-34.

Conyon, M. J., J. E. Core, and W. R. Guay. 2011 Are U.S. CEOs paid more than U. K. CEOs? Inferences from risk-adjusted pay. *Review of Financial Studies* 24 (2): 402-438.

Core, J. E., R. W. Holthausen, and D. F. Larcker. 1999. Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics* 51:371-406.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research* 46 (5):1085-1142.

Desai, H., C. Hogan, and M. Wilkins. 2006. The reputational penalty for aggressive accounting: earnings restatements and managerial turnover. *The Accounting Review* 81 (1): 83–112.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer. 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88, 430-465.

Donelson, D. C., J. McInnes and R. D. Mergenthaler. 2012. Rules-based accounting standards and litigation. *The Accounting Review* 87(4): 1247-1279.

Dyck, A., and L. Zingales. 2004. Private benefits of control: an international comparison. *Journal of Finance* 59: 537-600.

Fernandes, N., M.A. Ferreira, P. Matos, and K.J. Murphy. 2012. Are US CEOs Paid More? New International Evidence. *Working Paper.*

Gaver, J. J., and K. M. Gaver. 1993. Additional evidence on the association between the investment opportunity set and corporate financing, dividend and compensation policies, Journal of Accounting and Economics 16(1-3): 125-160.
Gaver, J. J., and K. M. Gaver. 1995. Compensation policy and the investment opportunity set, Financial Management 24(1): 19-32.
Gore, A. K., S. Matsunaga, and P. E. Yeung. 2010. The role of technical expertise in firm governance structure: Evidence from chief financial officer contractual incentives. *Strategic Management Journal* 32 (7):771-786.
Grinstein, Y., and P. Hribar. 2004. CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics* 73:119-143.
Hennes, K., A. Leone, and B. Miller. 2008. The importance of distinguishing errors from irregularities in restatement research: The case of restatements and CEO/CFO turnover. *The Accounting Review* 83(6): 1487-1519.
Hermalin, B. E., and M. S. Weisbach. 2012. Information Disclosure and Corporate Governance. *The Journal of Finance* 67 (1):195-233.
Hill, C. and P. Phan, 1991. CEO tenure as a determinant of CEO pay. Academy of Management Journal 34:707-717.
International Accounting Standards Board (IASB), 2010, Conceptual Framework for Financial Reporting. London: IASB.
Jiang, J., K. R. Petroni, and I. Y. Wang. 2010. CFOs and CEOs: Who have the most influence on earnings management? *Journal of Financial Economics* 96:513-526.
Kaufmann, D., A. Kraay, and M. Mastruzzi. 2009. Governance matters VIII: governance indicators for 1996–2008. *World Bank Policy Research*, Washington, D.C.
Kim, J., X. Liu, and L. Zhang. 2012. The impact of mandatory IFRS adoption on audit fees: theory and evidence. *The Accounting Review* Forthcoming.
La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. Law and finance. *Journal of Political Economy* 106, 1113–1155.
La Porta, R., F. Lopez-de Silanes, and A. Shleifer. 2006. What works in securities laws? *Journal of Finance* 61: 1-32.
Landsman, W. R., E. L. Maydew, and J. R.Thornock. 2012. The information content of annual earnings announcements and mandatory adoption of IFRS. *Journal of Accounting and Economics* 53, 34-54.
Leuz, C., D. Nanda, and P. Wysocki. 2003. "Earnings management and investor protection: an international comparison." *Journal of Financial Economics* 69, 505-527.
Mehran, H. 1995. Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics* 38:163-184.
Murphy, K. J. 1985. Corporate performance and managerial remuneration. *Journal of Accounting and Economics* 7:11-42.
Murphy, K. J. 1999. Executive Compensation, in Orley Ashenfelter, and David Card, eds.: *Handbook of Labor Economics* (North Holland).
Nobes, C. 2001. GAAP 2001 — A survey of national accounting rules benchmarked against international accounting standards. *International Forum on Accountancy Development (IFAD)*.
Ozkan, N., Z. Singer, and H. You. 2012. Mandatory IFRS adoption and the contractual usefulness of accounting information in executive compensation. *Journal of Accounting Research* 50, 1077-1107
Pownall, G., and M. Wieczynska. 2012. Deviations from the mandatory adoption of IFRS in the European Union: implementation, enforcement, incentives, and compliance. *Emory Univeristy Working Paper*.

Wang, X. 2010. Increased Disclosure Requirements and Corporate Governance Decisions: Evidence from Chief Financial Officers in the Pre- and Post–Sarbanes-Oxley Periods. *Journal of Accounting Research* 48 (4):885-920.

Wu, J. S., and I. X. Zhang. 2011. Accounting Integration and Comparability: Evidence from Relative Performance Evaluation around IFRS Adoption. *Working Paper*.

Appendix

Variable Name	Definition
Ann. Date	The date when each country announced the mandatory adoption of IFRS. It is obtained from Daske et al. (2008).
Anti-director Rights	The revised anti-director rights index from Djankov et al. (2008).
Bonus	The total amount paid as bonus for the fiscal year (in Euros).
BTM	Book value of equity divided by market value of equity at the fiscal year-end.
Equity Comp	Total equity compensation for the fiscal year, including stocks and stock options (in Euros).
Exchange rate	The exchange rate of converting a country's local currency to Euros at the fiscal year end.
GAAP Distance	A country-level measure for the distance between prior local GAAP and IFRS. It is *gappdiff1* from Bae et al. (2008). A higher value indicates larger distance.
HighLaw	A dummy variable equal to one if the country's rule of law index is above the sample median.
IFRS	Dummy variable indicating that the borrower is from a country that had mandatory. IFRS adoption in 2005 (treatment sample), and 0 otherwise (control sample).
Inflation	A country's annual inflation rate.
Post	A dummy variable indicating post-adoption period. It is equal to one for fiscal years ending in or after December 2005, and zero otherwise.
PostAnn	A dummy variable indicating post-announcement period. It is equal to one for fiscal years ending in or after December 2002, and zero otherwise. It is only available for countries with announcement date in 2002.
PostTPD	A dummy variable indicating post Transparency Directive period. It is equal to one for fiscal years ending after Transparency Directive date. It is set as zero for countries without Transparency Directive.
Private Benefits	A measure for private benefits of control, i.e. the block premia. It is calculated as the difference between the price per share paid for the control block and the exchange price two days after the announcement of the control transaction, dividing by the exchange price and multiplying by the ratio of the proportion of cash flow rights represented in the controlling block. We use the country median and the data source is La Porta et al. (2006) and Dyck and Zingales (2004).
Real GDP Growth	A country's percentage growth of GDP in real terms.
Return	Annual buy-and-hold stock return, adjusted for stock splits and stock dividends.
RetVol	Stock return volatility, calculated as the standard deviation of monthly stock returns over the fiscal year.
ROA	Net income divided by total assets.
Rule of Law	A measure for the quality of a country's legal and enforcement environment for 2005 obtained from Kaufmann et al. (2009).
Salary	The total amount paid as salary for the fiscal year (in Euros).
Size	Logarithm of total assets (in million Euros).
Tenure	The number of years that the CFO has been working for the current firm as its CFO.
Total Cash	Total cash compensation for the fiscal year, including bonus, salary, other annual compensation, non-equity incentive plan, and long-term incentive plan (in Euros).
Total Comp	Total compensation for the fiscal year, including cash compensation, equity compensation, and all other compensation (in Euros).
T. D. Date	The date when Transparency Directive came into force for each EU country. It is obtained from Christensen et al. (2011).
US Exposure	A dummy variable indicating that the firm has exposure to US capital markets, i.e. the availability of SEC filings.

Tables

Table 1: Sample description

This table reports the sample selection process and the sample composite by country and year. The treatment sample includes all countries that mandated IFRS in 2005. The control sample includes countries that did not have major change in accounting regime during the sample period (2000-2007).

Panel A: Sample selection

	#Firm-years
CFO compensation data available	17,088
After removing observations not using local GAAP before 2005 in treatment sample	16,776
After removing non-IFRS adopters after 2005 in treatment sample	15,373
After removing IFRS adopters in control sample	15,328
After removing observations without data on accounting standards	15,266
After removing observations without data on control variables	13,741
After removing countries without data in both pre- and post-IFRS adoption periods	13,697

Panel B: Sample composition by year

	IFRS countries	Non-IFRS countries
Year	#Firm-years	#Firm-years
2000	85	17
2001	455	170
2002	876	311
2003	1,245	453
2004	1,577	546
2005	1,775	654
2006	1,818	803
2007	2,052	860

Panel C: Sample composition by country

Country	#Firm -years	#Unique firms	#Unique CFOs	Ann. Date	T. D. Date	GAAP Distance		Rule of Law		Private Benefits		Anti-director Rights	
IFRS countries (treatment sample)													
Australia	2,714	958	1,126	Jul-2002	n.a.	4	(0)	1.71	(1)	0.01	(0)	4.0	(1)
Austria	28	12	11	Jun-2002	Apr-2007	12	(1)	1.86	(1)	0.38	(1)	2.5	(0)
Denmark	31	15	14	Jun-2002	Jun-2007	11	(1)	1.95	(1)	0.04	(1)	4.0	(1)
France	222	85	93	Jun-2002	Dec-2007	12	(1)	1.40	(0)	0.01	(0)	3.5	(0)
Germany	410	208	234	Jun-2002	Jan-2007	11	(1)	1.65	(1)	0.11	(1)	3.5	(0)
Hong Kong	105	67	69	Sep-2004	n.a.	3	(0)	1.60	(1)	0.02	(0)	5.0	(1)
Ireland	179	42	51	Jun-2002	Jul-2007	1	(0)	1.57	(0)	n.a.		5.0	(1)
Italy	50	31	31	Jun-2002	Apr-2009	12	(1)	0.46	(0)	0.16	(1)	2.0	(0)
Netherlands	315	91	111	Jun-2002	Jan-2009	4	(0)	1.75	(1)	0.03	(1)	2.5	(0)
Norway	239	132	153	Jun-2002	Jan-2008	7	(0)	1.91	(1)	0.01	(0)	3.5	(0)
Philippines	55	16	18	Oct-2003	n.a.	10	(1)	-0.37	(0)	0.08	(1)	4.0	(1)
Poland	27	14	15	Jun-2002	Mar-2009	12	(1)	0.42	(0)	0.12	(1)	2.0	(0)
South Africa	678	197	231	May-2002	n.a.	0	(0)	0.13	(0)	0.00	(0)	5.0	(1)
Spain	13	3	4	Jun-2002	Dec-2007	16	(1)	1.10	(0)	0.02	(0)	5.0	(1)
Sweden	28	20	21	Jun-2002	Jul-2007	10	(1)	1.78	(1)	0.03	(1)	3.5	(0)
U.K.	4,789	1,325	1,558	Jun-2002	Jan-2007	1	(0)	1.55	(0)	0.00	(0)	5.0	(1)
Total/Median	9,883	3,216	3,740			10		1.59		0.03		3.8	
Non-IFRS countries (control sample)													
Canada	3,444	1,007	1,244										
China	28	19	19										
India	330	156	170										
Taiwan	6	5	5										
Thailand	6	5	5										
Total	3,814	1,192	1,443										

Table 2: Summary statistics

This table reports summary statistics of regression variables. The treatment sample includes firm-years from countries that mandated IFRS adoption in 2005 (Panel A). The control sample includes firm-years from countries that did not have major change in accounting regime during the sample period, i.e. 2000-2007 (Panel B). In column "Difference", we compare the mean values between pre- and post-adoption periods separately for IFRS and non-IFRS countries by using *t*-test. In column "Diff-in-diff", we compare the mean pre-post changes across IFRS and non-IFRS countries by using *t*-test. All continuous variables are winsorized at the 1st and 99th percentiles. *Total Cash* and *Total Comp* are reported in thousand Euros. Variable definitions are included in Appendix.

	Pre-IFRS adoption (Post=0)						**Post-IFRS adoption (Post=1)**						**Difference (Post-Pre)**		**Diff-in-diff (IFRS-Non)**	
Variable	N	Mean	Q1	Median	Q3	Std Dev	N	Mean	Q1	Median	Q3	Std Dev	Mean	t	Mean	t
Panel A: IFRS countries (treatment sample, i.e. IFRS=1)																
Total Cash	5,371	307.9	114.7	215.6	387.1	302.6	4,512	395.3	115.2	248.4	518.6	413.3	87.5	11.80	75.0	8.39
Total Comp	5,371	338.0	127.1	230.1	413.3	348.6	4,512	467.2	136.9	287.8	605.3	495.8	129.2	14.71	88.5	7.79
Bonus	5,371	76.8	0.0	9.7	85.6	155.0	4,512	154.3	0.0	48.0	193.4	243.6	77.5	18.46	74.7	14.69
Salary	5,371	204.8	95.4	164.5	275.0	155.8	4,512	226.7	98.7	181.8	307.3	174.7	21.9	6.53	16.6	4.14
Equity Comp	5,371	9.6	0.0	0.0	0.0	52.1	4,512	13.8	0.0	0.0	0.0	66.5	4.2	3.41	-8.3	-2.74
ROA	5,371	-0.039	-0.029	0.032	0.072	0.267	4,512	-0.001	0.003	0.045	0.086	0.229	0.038	7.67	0.024	2.35
Return	5,371	0.203	-0.200	0.110	0.438	0.685	4,512	0.273	-0.094	0.164	0.467	0.662	0.070	5.16	0.071	2.45
Size	5,371	0.691	3.493	4.958	6.680	2.326	4,512	5.647	3.919	5.493	7.225	2.481	0.518	10.64	0.238	2.97
BTM	5,371	0.280	0.317	0.545	0.891	0.611	4,512	0.544	0.251	0.416	0.684	0.510	-0.147	-13.06	-0.058	-2.66
US Exposure	5,371	0.128	0.000	0.000	1.000	0.449	4,512	0.329	0.000	0.000	1.000	0.470	0.049	5.24	0.068	4.10
RetVol	5,371	1.077	0.073	0.106	0.159	0.079	4,512	0.108	0.063	0.089	0.127	0.070	-0.020	-13.37	-0.015	-4.33
Tenure	5,371	1.077	0.000	1.000	2.000	1.149	4,512	1.955	0.000	2.000	3.000	1.737	0.877	29.01	-0.019	-0.34
Panel B: Non-IFRS countries(control sample, i.e. IFRS=0)																
Total Cash	1,718	188.0	70.4	112.7	175.1	133.3	2,096	152.9	54.2	118.0	185.1	175.0	12.5	2.49		
Total Comp	1,718	37.2	94.4	146.1	225.7	183.8	2,096	228.7	92.5	163.4	263.6	260.6	40.6	5.63		
Bonus	1,718	97.4	0.0	12.6	44.0	77.1	2,096	39.9	0.0	0.0	41.3	100.2	2.8	0.97		
Salary	1,718	35.7	61.8	92.1	125.7	61.0	2,096	102.8	49.3	102.0	138.7	73.6	5.4	2.47		
Equity Comp	1,718	-0.059	0.0	2.7	36.0	73.2	2,096	48.1	0.0	0.0	52.0	97.5	12.4	4.50		
ROA	1,718	0.282	-0.058	0.026	0.069	0.289	2,096	-0.045	-0.061	0.022	0.073	0.271	0.014	1.52		

140.5

Return	1,718	4.274	-0.163	0.132	0.479	0.782	2,096	0.281	-0.208	0.104	0.527	0.781	-0.001	-0.02
Size	1,718	0.696	2.899	4.196	5.585	1.974	2,096	4.555	3.252	4.564	5.779	1.922	0.280	4.41
BTM	1,718	0.238	0.323	0.573	0.887	0.618	2,096	0.607	0.288	0.497	0.791	0.503	-0.090	-4.84
US Exposure	1,718	0.145	0.000	0.000	0.000	0.426	2,096	0.219	0.000	0.000	0.000	0.414	-0.019	-1.39
RetVol	1,718	1.186	0.073	0.120	0.187	0.098	2,096	0.139	0.082	0.116	0.172	0.085	-0.006	-1.84
Tenure	1,718		0.000	1.000	2.000	1.137	2,096	2.083	1.000	2.000	3.000	1.760	0.896	18.98

Table 3: Effect of IFRS on CFO compensation

This table presents OLS regression results on the natural logarithm of one plus CFO compensation measures, i.e. *Total Cash*, *Total Comp*, *Bonus*, *Salary*, and *Equity Comp*. In Panel B, in the "Fixed Effects" models, country, year and industry fixed effects are included. In the "Constant Sample" models, only firms which exist in both pre- and post-adoption periods are used in the regressions. In "Local Currency" models, compensation measures and firm-level controls are converted into local currencies. In "Random US Sample" models, we use a random sample of 9,883 US firms as the control sample. The table reports regression coefficients and *t*-statistics (in parentheses) based on standard errors clustered at the firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Variable definitions are included in Appendix.

	IFRS & Non-IFRS countries				
	Total Cash	Total Comp	Bonus	Salary	Equity Comp
Post	-0.412***	-0.049*	-1.663***	-0.407***	-0.415**
	(-5.00)	(-1.87)	(-9.69)	(-4.56)	(-2.31)
IFRS	0.422***	0.062**	-1.497***	0.436***	-4.189***
	(5.75)	(2.04)	(-8.43)	(5.20)	(-24.01)
Post×IFRS	**0.300*** **	**0.102*** **	**2.566*** **	**0.296*** **	**0.347***
	(3.57)	**(3.49)**	**(12.98)**	**(3.23)**	**(1.84)**
ROA	0.200*	-0.048	1.533***	0.128	-0.365**
	(1.65)	(-1.26)	(7.89)	(1.02)	(-2.03)
Return	-0.031	-0.001	0.636***	-0.064*	0.208***
	(-1.01)	(-0.10)	(9.26)	(-1.93)	(3.64)
Size	0.361***	0.288***	0.869***	0.311***	0.180***
	(25.02)	(48.32)	(25.35)	(19.01)	(5.58)
BTM	-0.108***	-0.133***	-0.596***	-0.109**	-0.309***
	(-2.78)	(-7.06)	(-5.92)	(-2.20)	(-4.30)
US Exposure	-0.103*	0.121***	0.485***	-0.194***	0.416***
	(-1.70)	(4.94)	(3.40)	(-2.74)	(3.14)
RetVol	-0.880**	0.066	-7.876***	-0.846**	0.404
	(-2.51)	(0.53)	(-10.76)	(-2.19)	(0.68)
Tenure	0.122***	0.113***	0.391***	0.111***	-0.058**
	(9.40)	(22.44)	(11.76)	(7.72)	(-2.16)
Real GDP growth	1.871	-4.394***	-32.672***	5.508**	-35.218***
	(1.02)	(-4.49)	(-6.45)	(2.47)	(-11.01)
Log (Exchange rate)	0.296***	0.233***	0.222**	0.335***	-0.008
	(7.67)	(13.06)	(2.23)	(6.90)	(-0.15)
Inflation	1.786	-3.623***	-4.061	4.173**	-2.783
	(1.20)	(-4.12)	(-0.76)	(2.07)	(-0.81)
Fixed effects	Industry	Industry	Industry	Industry	Industry
N	13,697	13,697	13,697	13,697	13,697
Adj. R-squared	33.5%	59.5%	31.3%	25.3%	22.8%

Table 4: Robustness analysis: effect of IFRS on CFO compensation

In the "Fixed Effects" models, country, year and industry fixed effects are included. In the "Constant Sample" models, only firms which exist in both pre- and post-adoption periods are used in the regressions. In "Local Currency" models, compensation measures and firm-level controls are converted into local currencies. In "Random US Sample" models, we use a random sample of 9,883 US firms as the control sample. The table reports regression coefficients and *t*-statistics (in parentheses) based on standard errors clustered at the firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Variable definitions are included in Appendix.

	IFRS & Non-IFRS countries							
	Fixed Effects		Constant Sample		Local Currency		Random US Sample	
	Total Cash	Total Comp	Total Cash	Total Comp	Total Cash	Total Comp	Total Cash	Total Comp
Post			-0.271***	-0.031	-0.420***	-0.049*	-0.058***	-0.041***
			(-3.24)	(-1.11)	(-4.93)	(-1.83)	(-3.70)	(-2.75)
IFRS			0.401***	0.079**	0.424***	0.049	0.043*	-0.127***
			(4.95)	(2.14)	(5.50)	(1.49)	(1.71)	(-5.31)
Post×IFRS	**0.205*** **	**0.042* **	**0.197** **	**0.088*** **	**0.305*** **	**0.110*** **	**0.048** **	**0.106*** **
	(3.25)	**(1.76)**	**(2.37)**	**(3.06)**	**(3.51)**	**(3.71)**	**(2.30)**	**(5.57)**
Fixed effects	Country, year, industry	Country, year, industry	Industry	Industry	Industry	Industry	Industry	Industry
N	13,697	13,697	9,100	9,100	13,697	13,697	19,766	19,766
Adj. R-squared	34.5%	61.7%	36.6%	63.5%	33.2%	63.5%	57.6%	61.9%

Table 5: Cross-sectional analysis on GAAP distance and enforcement

This table presents OLS regression results on the natural logarithm of one plus CFO compensation measures, i.e. *Total Cash* and *Total Comp*. Only observations from the treatment sample are used in the regressions. *PostTPD* is a dummy variable indicating fiscal years ending after the Transparency Directive date. *HighLaw* is a dummy variable indicating that the country has a rule of law index is at or above the sample median. The table reports regression coefficients and *t*-statistics (in parentheses) based on standard errors clustered at the firm level. All continuous variables are winsorized at the1st and 99th percentiles. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Variable definitions are included in Appendix.

	IFRS countries only					
	GAAP Distance		GAAP Distance& Transparency Directive		GAAP Distance& Rule of Law	
	Total Cash	Total Comp	Total Cash	Total Comp	Total Cash	Total Comp
Post	-0.060***	0.004	-0.093***	-0.032*	0.024	0.087***
	(-2.96)	(0.22)	(-4.37)	(-1.70)	(0.98)	(4.06)
HighDistance	-0.530***	-0.505***	-0.551***	-0.526***	-0.607***	-0.557***
	(-4.96)	(-5.73)	(-5.15)	(-5.96)	(-5.53)	(-6.19)
Post×HighDistance	**0.519*** **	**0.519*** **	0.449***	0.468***	-0.138	-0.025
	(5.32)	**(6.29)**	(4.65)	(5.72)	(-1.32)	(-0.30)
PostTPD			0.162***	0.176***		
			(5.31)	(6.59)		
PostTPD×HighDistance			**0.243*** **	**0.172*** **		
			(3.28)	**(2.80)**		
HighLaw					-0.176***	-0.104***
					(-5.96)	(-3.78)
Post×HighLaw					-0.148***	-0.157***
					(-4.31)	(-5.20)
Post×HighLaw×HighDistance					**1.205*** **	**0.974*** **
					(12.07)	**(12.11)**

ROA	0.030	-0.032	0.024	-0.038	-0.001	-0.054
	(0.58)	(-0.74)	(0.48)	(-0.87)	(-0.02)	(-1.29)
Return	0.007	0.006	0.017	0.016	0.020	0.016
	(0.50)	(0.48)	(1.24)	(1.35)	(1.46)	(1.30)
Size	0.307***	0.300***	0.306***	0.300***	0.299***	0.294***
	(40.44)	(45.34)	(40.78)	(45.73)	(40.44)	(45.27)
BTM	-0.146***	-0.148***	-0.147***	-0.149***	-0.147***	-0.148***
	(-5.73)	(-6.43)	(-5.84)	(-6.57)	(-6.23)	(-6.89)
US Exposure	0.100***	0.135***	0.100***	0.136***	0.104***	0.137***
	(3.33)	(5.07)	(3.36)	(5.10)	(3.59)	(5.21)
RetVol	-0.322*	-0.374**	-0.331**	-0.382**	-0.390**	-0.409***
	(-1.94)	(-2.50)	(-2.01)	(-2.58)	(-2.44)	(-2.85)
Tenure	0.112***	0.119***	0.111***	0.118***	0.105***	0.114***
	(15.94)	(19.48)	(15.88)	(19.39)	(15.69)	(19.57)
Real GDP growth	-1.827	-2.601***	-3.104**	-3.884***	-3.700***	-4.014***
	(-1.58)	(-2.68)	(-2.56)	(-3.82)	(-3.24)	(-4.16)
Log (Exchange rate)	0.227***	0.191***	0.204***	0.167***	0.166***	0.146***
	(12.61)	(12.07)	(10.99)	(10.32)	(8.90)	(8.80)
Inflation	-4.586***	-3.943***	-5.156***	-4.476***	-5.088***	-4.577***
	(-4.59)	(-4.40)	(-5.09)	(-4.94)	(-5.23)	(-5.22)
Fixed effects	Industry	Industry	Industry	Industry	Industry	Industry
N	9,883	9,883	9,883	9,883	9,883	9,883
Adj. R-squared	58.9%	64.4%	59.2%	64.7%	60.6%	65.6%

Table 6: Test improved monitoring explanation

This table presents OLS regression results on the natural logarithm of one plus CFO compensation measures, i.e. *Total Cash* and *Total Comp*. Only observations from the treatment sample are used in the regressions. *HighIndex* takes the value of one if the country's *Private Benefits* or *Anti-Director Rights* indices are at or above the sample median. The table reports regression coefficients and *t*-statistics (in parentheses) based on standard errors clustered at the firm level. All continuous variables are winsorized at the1st and 99th percentiles. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Variable definitions are included in Appendix.

	IFRS countries only			
	Private Benefits		Anti-director Rights	
	Total Cash	Total Comp	Total Cash	Total Comp
Post	-0.067***	-0.014	0.179***	0.286***
	(-3.17)	(-0.75)	(2.77)	(5.28)
HighIndex	-0.266***	-0.234***	0.210***	0.223***
	(-2.62)	(-2.75)	(3.33)	(4.07)
Post×HighIndex	**0.322*** **	**0.374*** **	**-0.243*** **	**-0.294*** **
	(3.55)	**(4.90)**	**(-3.62)**	**(-5.17)**
ROA	0.023	-0.037	0.029	-0.032
	(0.44)	(-0.85)	(0.57)	(-0.74)
Return	0.007	0.006	0.007	0.006
	(0.50)	(0.52)	(0.49)	(0.50)
Size	0.305***	0.297***	0.306***	0.299***
	(39.20)	(43.87)	(39.86)	(44.63)
BTM	-0.149***	-0.152***	-0.151***	-0.152***
	(-5.63)	(-6.34)	(-5.60)	(-6.29)
US Exposure	0.098***	0.133***	0.099***	0.135***
	(3.22)	(4.95)	(3.30)	(5.06)
RetVol	-0.327*	-0.385**	-0.317*	-0.363**
	(-1.92)	(-2.51)	(-1.86)	(-2.37)
Tenure	0.116***	0.123***	0.114***	0.122***
	(16.25)	(19.81)	(16.42)	(19.98)
Real GDP growth	-2.061	-2.664**	-1.460	-2.161**
	(-1.49)	(-2.34)	(-1.34)	(-2.34)
Log (Exchange rate)	0.226***	0.193***	0.240***	0.206***
	(12.00)	(11.86)	(12.71)	(12.38)
Inflation	-5.066***	-3.981***	-4.403***	-3.449***
	(-4.57)	(-4.05)	(-4.09)	(-3.57)
Fixed effects	Industry	Industry	Industry	Industry
N	9,704	9,704	9,883	9,883
Adj. R-squared	58.5%	64.3%	58.7%	64.2%

Table 7: Test increased responsibility explanation

Panel A presents OLS regression results on the natural logarithm of one plus CFO compensation measures, i.e. *Total Cash* and *Total Comp*. *PostAnn* is a dummy variable indicating fiscal years ending in or after the December 2002. In Panel B, the sample includes both CFO and other top executives. *CFO* is a dummy variable indicating that the observation is CFO. The table reports regression coefficients and *t*-statistics (in parentheses) based on standard errors clustered at the firm level. Coefficients on control variables are omitted for brevity. All continuous variables are winsorized at the1st and 99th percentiles. ***, **, and * indicate significance at 1%, 5%, and 10% levels, respectively. Variable definitions are included in Appendix.

Panel A: Analysis on announcement effect

	IFRS & Non-IFRS countries			**IFRS countries only**	
	Total Cash	Total Comp		Total Cash	Total Comp
PostAnn	-0.390***	-0.112***	PostAnn	-0.046	-0.017
	(-3.54)	(-2.65)		(-1.62)	(-0.70)
Post	-0.351***	-0.033	Post	-0.059***	0.004
	(-4.32)	(-1.28)		(-3.22)	(0.25)
IFRS	0.108	-0.000	HighDistance	-0.761***	-0.811***
	(0.92)	(-0.00)		(-4.80)	(-5.38)
PostAnn×IFRS	**0.430*** **	**0.107** **	**PostAnn×HighDistance**	**0.509*** **	**0.518*** **
	(3.73)	**(2.23)**		**(3.11)**	**(3.43)**
Post×IFRS	**0.240*** **	**0.089*** **	**Post×HighDistance**	**0.326*** **	**0.371*** **
	(2.88)	**(3.11)**		**(4.12)**	**(5.67)**
Fixed effects	Industry	Industry	Fixed effects	Industry	Industry
N	13,537	13,537	N	9,723	9,723
Adj. R-squared	33.5%	59.5%	Adj. R-squared	59.8%	65.0%

Panel B: CFO versus other executives

	IFRS & Non-IFRS countries			
	CFO vs. Non-CEO		CFO vs. CEO	
	Total Cash	Total Comp	Total Cash	Total Comp
CFO	-0.168*	-0.029	-0.463***	-0.602***
	(-1.93)	(-0.69)	(-6.37)	(-24.20)
Post	-0.230**	-0.007	-0.345***	-0.027
	(-2.44)	(-0.15)	(-4.11)	(-0.84)
Post×CFO	-0.184*	-0.048	-0.049	-0.013
	(-1.72)	(-1.11)	(-0.62)	(-0.48)
IFRS	0.286***	0.067	0.543***	0.053
	(3.23)	(1.17)	(6.10)	(1.50)
Post×IFRS	0.059	-0.020	0.208**	0.076**
	(0.61)	(-0.40)	(2.41)	(2.25)
IFRS×CFO	0.166*	0.013	-0.133*	0.004
	(1.82)	(0.28)	(-1.77)	(0.14)
Post×IFRS×CFO	**0.259****	**0.122****	**0.089**	**0.024**
	(2.30)	**(2.51)**	**(1.07)**	**(0.81)**
Fixed effects	Industry	Industry	Industry	Industry
N	25,854	25,854	26,096	26,096
Adj. R-squared	30.4%	55.5%	33.0%	62.5%