Mandatory Disclosure Reform, Monitoring, and Executive Compensation[*]

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Abstract: Theory suggests that improved corporate disclosure facilitates shareholder and board monitoring and adversely affects executives, who in turn demand and receive higher explicit compensation. We use the mandatory adoption of International Financial Reporting Standards (IFRS) to examine whether a mandatory disclosure reform affects executive compensation through improved monitoring. Using a difference-in-differences approach and multiple control groups, we find results consistent with executive pay increasing significantly after IFRS adoption. We also find cross-sectional evidence suggesting the increase in executive pay is directly related to the ability of the board and shareholders to improve monitoring under IFRS.

Keywords: Mandatory Disclosure Reform, IFRS, Executive Compensation, Monitoring

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1. Introduction

Corporate disclosure reforms could have two, potentially opposite, effects on the *level* of executive compensation. First, increased transparency improves the ability of shareholders and boards to monitor managers and thus reduces managers' informational advantage and opportunities for private benefits. As a result, executives would seek increased *explicit* compensation to substitute for the reduced *implicit* compensation under the more transparent regime (Hermalin and Weisbach, 2012). We label this as the *Improved Monitoring* hypothesis. Alternatively, better disclosure reduces uncertainty about firms' information environment and allows shareholders to better observe managers' true effort and evaluate their ability. Under the more transparent regime, managers face lower idiosyncratic information risk and ask for lower risk premium, thus leading to lower compensation (Diamond and Verrecchia, 1982). We label this effect as the *Reduced Information Risk* hypothesis.

We use the mandatory adoption of International Financial Reporting Standards (IFRS) in a wide range of countries to test the above hypotheses. This setting has several appealing features. First, IFRS adoption is a mandatory reform targeted at improving corporate disclosure. Since the initial adoption of IFRS by the European Union (EU) in 2005, a large literature in accounting has documented evidence consistent with improved transparency and information environment under IFRS. Second, the staggered adoption process across a large number of countries enables us to use a difference-in-differences methodology to tease out the adoption effect. Third, the wide-range of countries studied in our sample makes our results more generalizable than studies using disclosure reforms within a single country.

We compile a large sample of executive compensation data for CEOs and CFOs between 2001 and 2012 from 45 countries (28 IFRS-adopting and 17 non-

adopting). We focus on CEOs and CFOs since both assume responsibility and exercise control over firms' financial reports. We focus on executive cash compensation because it is consistently used and disclosed across our sample countries during our sample period. Employing a difference-in-differences methodology that controls for other determinants of compensation as well as various fixed effects, we document a significant increase in executive cash compensation after mandatory IFRS adoption for mandatory adopters domiciled in IFRS-adopting countries (treatment) relative to non-adopters domiciled in non-adopting countries (control). To address the concern about the comparability of firms in the treatment and control groups, we conduct analysis using two alternative control groups. First, we use firms domiciled in IFRS-adopting countries that did not adopt IFRS in the required year as an alternative control group. This alternative control group includes those that voluntarily adopted IFRS early as well as those that delayed adoption. Second, we use other executives of mandatory adopters domiciled in IFRS-adopting countries as another alternative control group. We expect non-CEO and non-CFO executives to be less affected by the change in financial reporting standards, as they are not directly responsible for financial reporting and thus face lower losses in informational advantage under the more transparent regime. Since executives in these alternative control groups are from the same countries and firms as those in the treatment group, the comparability concern should be mitigated. We continue to find that CEOs and CFOs of our treatment sample receive incrementally larger pay increases relative to the alternative control groups after IFRS adoption. Collectively, we regard the above results as being consistent with the *Improved Monitoring* hypothesis, and that CEOs and CFOs receive higher explicit pay to compensate for the loss of informational rents and private benefits.

We further test whether it is indeed the monitoring channel that drives our results. We expect foreign, especially US, institutional investors, and outside board members to benefit most from the improved disclosure under IFRS regime because they face higher information asymmetry than domestic investors and inside board members. Thus, we expect executives of firms with higher US institutional holdings and more outside directors to face larger increases in monitoring after IFRS adoption and thus receive larger pay increases. Consistent with this prediction, in cross-sectional analysis, we find the increase in executive pay more pronounced among firms with higher US institutional ownership and a higher proportion of outside directors on board under IFRS.

Next, we explore alternative channels through which mandatory IFRS adoption could explain the increase in executive compensation. The first channel is the effect of IFRS adoption on pay-performance sensitivity (PPS) and relative performance evaluation (RPE). Prior research documents improved quality and comparability of accounting numbers associated with mandatory IFRS adoption (e.g. Landsman, Maydew, and Thornock, 2012; Barth, Landsman, Lang, and Williams, 2012; Yip and Young, 2012; Wang, 2014). Using a group of top executives from Continental Europe, Ozkan, Singer, and Yu (2012) find that executive compensation is more closely tied to accounting-based performance measures of the firm itself and its peers after mandatory IFRS adoption. However, recent literature finds that IFRS adoption is also associated with more earnings management (Ahmed, Neel, and Wang, 2013) and lower usefulness of accounting numbers in debt contracts (Ball, Li, and Shivakumar, 2015) due to the increased usage of fair-value accounting and greater managerial discretion under IFRS. Consistent with this argument, Voulgaris, Stathopoulos, and Walker (2014) document a decrease in the usage of earnings-based

performance measures in compensation contracts after mandatory IFRS adoption for a sample of UK CEOs. Therefore, it is unclear *ex ante* whether IFRS adoption has any impact on the pay-performance, especially the pay-accounting-performance, relation. It is also unclear how the change in PPS or RPE is going to affect the *level* of compensation that we are primarily interested in. An increase in PPS or RPE could be a result of more informative performance measures, leading to lower information risk and lower executive compensation (*Reduced Information Risk* hypothesis). An increase in PPS or RPE could also be a result of tighter shareholder monitoring, leading to the loss of quasi-rents and higher explicit compensation (*Improved Monitoring* hypothesis). In contrast, a decrease in the usefulness and contractibility of accounting-performance measures may lead to shareholders to contract using other non-accounting measures, such as stock market returns and cash flows that have a higher "signal-to-noise" ratio (e.g. Lambert and Larcker, 1987; Banker and Datar, 1989; Engel et al., 2003; Banker, Huang, and Natarajan, 2009; Ball et al., 2015). Nevertheless, we examine the effect of IFRS adoption on PPS and RPE in our analysis but fail to find evidence suggesting IFRS adoption has any effect on PPS or RPE. More importantly, our main finding of improved monitoring leading to higher compensation after IFRS adoption remains unchanged after taking into account the possible effect of IFRS adoption on PPS or RPE.

Next, the increased workload during the transition period as well as under the more complex reporting regime could explain the increased compensation. This argument predicts an increase in executive pay, especially CFO pay, during the preparation period prior to the actual adoption, when the workload starts to rise. We find some weak evidence suggesting that CFO pay started to increase two years before the adoption date and increased further after the actual adoption. We also use

the amount of auditor fees to proxy for workload associated with financial reporting. The increased workload argument predicts a larger increase in executive pay among firms experiencing a larger increase in audit fees during the post-adoption period. We fail to find evidence supporting the above prediction.

Lastly, changes in compensation disclosure and regulation during our sample period may explain the observed increase in executive cash pay. To address this concern, we limit our treatment sample to firms domiciled in Canada, which mandated IFRS in 2011, and the control sample to the US, as these two countries have similar institutional structures and business and investment environments. We further restrict the sample period to a shorter window (2009-2012) to ensure comparable compensation disclosures and data coverage. We continue to observe larger increase in executive cash pay for Canadian firms relative to US firms after the mandatory IFRS adoption. We expand our analysis to equity-based compensation but do not observe equity-based compensation to differ across our treatment and control groups. We also explore the effect of say-on-pay regulation on our results. We continue to find higher executive cash pay after IFRS adoption after controlling for potential effect of say-on-pay on executive pay levels during our sample period.

This paper contributes to the literature in three ways. First, it contributes to studies on the association between disclosure and executive compensation. In the absence of an exogenous change in disclosure, it is difficult to draw causality between these two constructs, as good managers often choose more transparent disclosure policy and receive higher compensation at the same time. IFRS adoption provides us with a valid instrument to test causality, allowing us to show that more disclosure leads to higher compensation.

Second, this paper contributes to the literature by providing large-sample

evidence on executive compensation for international firms. Our finding that disclosure regulation leads to higher executive pay could help explain the observed pay gap between US and non-US executives. For example, Abowd and Kaplan (1999) and Murphy (1999) find that US executives receive significantly higher pay than their foreign counterparts. Conyon, Core, and Guay (2011) find that half of the pay gap between US and non-UK European CEOs remains unexplained even after controlling for the risk premium paid to US CEOs for holding greater equity incentives. Our finding suggests that the more stringent disclosure regulations in the US relative to other countries could potentially explain higher US executive pay.[2] In addition, Fernandes, Ferreira, Matos, and Murphy (2013, Table 8) observe that the pay gap between US and non-US CEOs fell over the 2003-2008 period, in particular after 2005. Such a convergence in CEO pay between US and non-US firms could be explained by the mandatory adoption of IFRS during that time period.[3]

Third, this paper contributes to the literature studying the economic consequences of mandatory IFRS adoption. A large literature has been devoted to examining the capital market consequences of IFRS adoption, while there is still limited evidence on the role of IFRS adoption on the stewardship and corporate governance (see De George, Li, and Shivakumar (2015) for a review). This paper fills the gap by examining the effect of IFRS adoption on executive compensation.

[2] For example, Leuz, Nanda, and Wysocki (2003) show that US GAAP displays less earnings management and is thus higher quality, than most other countries' domestic GAAP before the adoption of IFRS.

[3] Prior literature finds that accounting numbers reported under US GAAP are more similar to those reported under IFRS than to many countries' local GAAP (Barth, Landsman, Lang, and Williams, 2012). Our findings suggest that the improved comparability of accounting among US and non-US firms after IFRS adoption could potentially explain the convergence in executive pay.

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. Section 5 concludes the paper.

2. Literature review and hypothesis development

As discussed above, corporate disclosure reforms could have two potentially opposing effects on the *level* of executive compensation. On the one hand, increased disclosure improves the ability of shareholders and boards to monitor managers, reducing managers' informational advantage and private benefits of control. Managers thus ask for higher *explicit* compensation to substitute for the loss of *implicit* compensation. The substitution effect between implicit and explicit compensation has been supported by studies examining the association between insider trading and executive compensation. For example, Baiman and Verrecchia (1995) argue that when managers' informational advantage over outsiders' decreases, they receive lower profits from trading in the firms' securities. Roulstone (2003) and Denis and Xu (2013) document evidence consistent with this argument – executives receive higher compensation after insider-trading restrictions are imposed.

Hermalin and Weisbach (2012) formally model the impact of mandated disclosure reform on the level of executive compensation. They argue that disclosure reform improves monitoring and shareholder value. If executives have bargaining power, they can capture some of the benefits via asking for greater compensation. Further, they posit that even absent bargaining power, managerial compensation will rise because better monitoring tends to affect managers adversely and raises their reservation wage. Shareholders thus have to pay managers higher to keep them in the job. In both situations, the level of executive compensation should increase following the disclosure reform. We label this effect as the *Improved Monitoring* hypothesis.

On the other hand, theories on optimal incentive contracts suggest that managers should be compensated for the risks they bear. One type of risk comes from the uncertainty about a firm's information environment, i.e. how well the realization of a firm's output reflects its manager's effort or ability, or information risk. Diamond and Verrecchia (1982) argue that such idiosyncratic risk should be reflected in the design of incentive contract and managers bearing higher such risk should receive higher compensation. Therefore, a disclosure reform that improves the information environment will reduce the information risk that managers bear. As a result, managers would ask for lower risk premium and accept lower compensation subsequent to the reform. We label this as *Reduced Information Risk* hypothesis.

The mandatory adoption of IFRS offers an exogenously imposed setting to test the above hypotheses. There is considerable evidence suggesting that IFRS adoption leads to larger *quantity* of disclosure and higher transparency. Besides different measurement and recognition rules, IFRS also has much more extensive disclosure requirements compared with prior domestic GAAP, such as disclosures on related party transactions (IAS 24), segment information (IAS 14, IFRS 8), interests in other entities (IFRS 12), and cash flow statements (IAS 7). The disclosure of above information was often absent in adopting countries' prior domestic GAAP (Nobes, 2001; Bae, Tan, Welker, 2008). The detailed information about the estimates used to measure fair values of financial instruments (IAS 32, IFRS 7), investment properties (IAS 40), and asset impairments (IAS 36) are also additional required disclosure under IFRS. Such disclosure, however noisy, provides incremental information useful to shareholders (Muller, Riedl, and Sellhorn, 2011). Not surprisingly, Lang and Stice-Lawrence (2015) document an increase in disclosure quantity in terms of the length of adopting firms' annual reports after mandatory IFRS adoption.

We caution that we do not assume IFRS adoption improves the *quality* of accounting information or earnings.[4] Rather, we argue that IFRS adoption increases the *quantity* of information available. As argued by Holmstrom (1979), any additional information about an agent's action or the state of nature, albeit imperfect, allows the principal to make a more accurate judgment of the agent's performance. This leads to better contracts and improves the welfare of both the principal and the agent. In our context, improved monitoring could be achieved as long as IFRS provides incremental information to shareholders. Prior studies also provide suggest improved shareholder monitoring after mandatory IFRS adoption as a result of improved transparency. For example, Hong (2013) finds that mandatory IFRS adoption reduces the voting premium for dual-class shares, suggesting lower private benefits of control under IFRS. Chen, Young, and Zhuang (2013) and Shroff, Verdi, and Yu (2014) document higher investment efficiency associated with IFRS adoption and they attribute the finding to the fact that IFRS adoption improves the external information environment which leads to better shareholder monitoring of managerial investment actions.

Given the evidence on the improved disclosure associated with mandatory adoption, we formally state our two hypotheses as follows:

H1a (Improved Monitoring): Mandatory IFRS adoption leads to higher executive compensation.

H1b (Reduced Information Risk): Mandatory IFRS adoption leads to lower executive compensation.

There are at least three scenarios where we may not observe any change in the

[4] The literature has not achieved consensus on whether IFRS adoption increases or decreases earnings quality. See De George, Li, and Shivakumar (2015) for a review of the literature.

level executive compensation after IFRS adoption. First, the increase in explicit compensation as a result of the improved monitoring may be offset by the reduced information risk premium, leaving the executives' reservation wage unchanged. Second, the improved monitoring hypothesis assumes that managers prefer less disclosure while shareholders prefer more. This may not always be the case. Signaling theory suggests that good managers may prefer a better-quality reporting regime. The reason is that good managers could not creditably reveal their type in the pre-IFRS adoption period if earnings were a poor indicator of performance.[6] As a result of pooling equilibrium, both good and bad managers were compensated as if they were of average quality. After mandatory IFRS adoption, good managers could credibly signal their type by reporting high earnings. As a result of this separating equilibrium, good managers would receive an upward pay-adjustment and bad managers would face a downward pay-adjustment, with the average effect being zero.

Third, because the adoption of IFRS is mandated across a large number of countries, many firms were affected simultaneously. Thus executives' outside options (assuming that their outside option is to work for another company) are unaffected. As a result, executives may not be able to bargain for higher compensation as working for another company would involve similar disclosure compliance.[7]

3. Data and sample selection

There has been little research on executive compensation internationally due

[6] For example, as the pre-IFRS information environment was opaque, bad managers could manipulate earnings and adopt aggressive reporting practice to boost firm performance. Investors could not differentiate whether good firm performance was a result of good management or earnings manipulation.

[7] In theory, executives could always move to a non-IFRS adopting country or retire early if the compensation does not meet their reservation wage. However, cross-country movement among executives is quite rare in our sample.

to limited compensation disclosures. However, compensation disclosure requirements have improved during the past two decades. For example, 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; see Fernandes et al. (2013) for a detailed discussion on the improvements in executive compensation disclosures. Benefiting from the improved compensation disclosure, this paper uses a new dataset – Capital IQ People Intelligence, which provides historical information on executive compensation for a large sample of non-US firms.[8] Its coverage starts in 1998 but was expanded in the early 2000's. Capital IQ collects executive compensation information from both public and private sources and reports individual compensation components when available.

Our analysis uses compensation data for both CEOs and CFOs, since both the principle executive and financial officers assume responsibility and exercise control over firms' financial reports[9] and prior literature on executive compensation focuses on the CEO and more recently, the CFO as well.[10] We start our sample selection process by including all firm-years with non-zero CEO or CFO compensation data available on Capital IQ (non-US firms) or ExecuComp (US firms).[11] In Capital IQ,

[8] An alternative database that provides information on executive compensation for international firms is BoardEx. However, BoardEx mainly covers directors and has very limited coverage on CEOs and CFOs. For example, based on data from BoardEx, only less than 14% of Ozkan et al.'s (2012) sample are CEOs. We compare the data coverage of Capital IQ and BoardEx for our sample period and countries and find that the former provides much better coverage.

[9] In the US the Sarbanes-Oxley Act of 2002 required the CEO and CFO to certify financial statements. Similarly, in the EU around 2005, many countries started to require both CEO and CFO co-sign firms' financial statements.

[10] Examples of this literature include Mian (2001), Balsam, Afshad, and Yin (2012), Core, Holthausen, and Larcker (1999), Conyon et al. (2011), Feng, Ge, Luo, and Shevlin (2012), Gaver and Gaver (1993, 1995), Gore, Matsunaga, and Yeung (2011), and Grinstein and Hribar (2004).

[11] As in Fernandes et al. (2013) we use ExecuComp as the data source for US firms to maintain comparability with prior compensation literature. In addition, because Capital IQ covers a larger number of US firms with relatively small firm size compared with ExecuComp, using it as our data

we identify an executive as a CEO if the field "ProFunctionName" is labeled as "Chief Executive Officer" or "Co-Chief Executive Officer". We identify an executive as a CFO if the field "ProFunctionName" is labeled as "Chief Accounting Officer", "Chief Financial Officer", "Co-Chief Financial Officer", "Controller", or "Treasurer". In ExecuComp, we identify an executive as a CEO if the field "CEOANN" is labeled as "CEO". We identify an executive as a CFO if the field "TITLEANN" indicates the executive has financial responsibility, such as chief financial/finance/accounting officer, principal financial/finance/accounting officer, treasurer, or controller. This latter identification method is consistent with prior literature using ExecuComp data (e.g. Carter, Lynch, and Zechman, 2009; Wang, 2010). If there are multiple executives identified as CEO/CFO in a given firm-year, we keep the executive with the highest compensation. For non US firms, we merge compensation data from Capital IQ with accounting and stock price data from Compustat Global using Gvkey as company identifier and fill in missing values with data from WorldScope using ISIN as company identifier.[12] For US firms, we merge compensation data from ExecuComp with accounting and stock price data available from Compustat North America using Gvkey as company identifier. We obtain equity ownership data from the FactSet Ownership database (previously known as LionShares) and follow the approach in Ferreira and Matos (2008) to calculate firm-level institutional ownership. We use ISIN and Sedol as firm identifiers to merge this ownership data with other databases.

source creates a more unbalanced control group towards US firms. However, we get robust results by using Capital IQ as the data source for US executives.

[12] When we collect information on accounting standards used by a firm-year, we use WorldScope first, filling in missing values using Compustat Global, as Daske, Hail, Leuz, and Verdi (2013) suggest that information on accounting standards collected by Compustat Global is less accurate than that that collected by WorldScope. See Daske et al. (2013) Appendix for the detailed coding on accounting standards for these two databases.

As compensation data is relatively sparse in Capital IQ before 2001, we start our sample period in 2001 and end it in 2012. We include countries that mandated IFRS adoption during this window as the treatment sample and use countries that did not mandate IFRS during the sample period as the control sample. We require each firm-year observation to have enough data to calculate the variables used in our regressions. As IFRS is allowed, but not mandated in some of our control countries, we exclude observations from the control sample if the firm-year is using IFRS. We also exclude observations in the IFRS-adopting countries that used IFRS or US GAAP before the mandatory adoption date or did not use IFRS after the mandatory adoption date. We exclude firm-years without information on reported accounting standards. We further exclude 12,933 CEO-year observations and 11,157 CFO-year observations where the executive is in his/her first or last year with the firm to avoid data anomalies as a result of partial-year compensation, signing bonuses, or severance packages.[13] Lastly, to mitigate the concern that the sample composition may change over time, we require each firm in IFRS-adopting country to have at least two CEO-year observations or two CFO-year observations (one in the pre-adoption and one in the post-adoption period). We also require each firm in non-adopting countries to have at least two CEO-year observations or two CFO-year observations during the sample period. Imposing this data restriction also ensures that we have enough degrees of freedom to include firm fixed effects in the regression models.

Our final sample consists of 70,691 executive-year observations, including 30,586 (18,345 CEO-years and 12,241 CFO-years) from 28 IFRS-adopting countries and 40,105 observations (24,621 CEO-years and 15,484 CFO-years) from 17 non-IFRS-adopting countries.

[13] Our results are not sensitive to this data requirement.

Table 1 presents our sample composition by country. Australia, Canada, and the UK dominate the treatment sample, while the US constitutes almost 70 percent of the observations in our control sample. Table 2 reports the sample composition by year. We observe a steady growth in sample size for both IFRS and non-IFRS countries in the early 2000's, potentially due to the expanded coverage of the databases and/or improved disclosure requirements for executive compensation in our sample countries.[14] The proportion of CEOs and CFOs in our sample stays relatively stable over time.[15]

When we compare characteristics of our final sample with those of the WorldScope/Compustat Global population, we observe that our sample firms are larger, with better performance, and higher institutional ownership. This suggests that Capital IQ tends to cover larger and better-performing firms, as well as those more popular among institutional investors.

4. Empirical Analysis

We use the following difference-in-differences model to examine the change in executive pay levels around mandatory IFRS adoption:

$$Log\ (Executive\ Pay) = \beta_1\ Post\_IFRS + Control\ Variables + Fixed\ Effects \quad (1)$$

where *Post_IFRS* is defined as one for firms in IFRS-adopting countries with fiscal years ending on or after the mandatory adoption date as reported in Table 1, and zero

[14] For example, in the US prior to 2006 firms had to disclose CEO compensation plus that of the four highest paid executive officers, one of whom could be, but did not have to be, the CFO. Starting in 2006 CFO compensation had to be disclosed regardless of where he/she ranked.

[15] We investigate the cases when a firm-year has only CFO but not CEO data. First, since we remove from our sample the first and last year CEOs and CFOs, it is possible that a firm-year has CEO turnover but not CFO turnover. Second, since we remove from our sample observations where the CEO or CFO received zero cash compensation. There are some cases when the CEO receives zero cash compensation but the CFO receives non-zero cash compensation in a particular year. Therefore, only the CFO observation is kept for that particular firm-year.

otherwise. *Executive Pay* is an executive's annual cash compensation, including salary and bonus. Salary is as reported by the databases. Bonus includes both bonus as reported and non-equity incentive plan compensation. We convert all compensation denominated in local currencies into US dollars using the exchange rate at the corresponding fiscal year end. To adjust for inflation, we further convert the executive pay into 2005 constant US dollars using Consumer Price Index obtained from Compustat Global Economy database. We focus on cash compensation because it is the most commonly used and consistently disclosed form of compensation and therefore provides a reliable and coherent measure for executive pay across both countries and time.[16] Given the skewness of compensation, we use its natural logarithm as our dependent variable (e.g., Wang, 2010; Conyon et al., 2011). The estimated coefficient β_1 therefore measures the *percentage* change in executive compensation for the treatment group relative to the control group. The *Improved Monitoring* hypothesis (H1a) predicts a positive β_1 while the *Reduced Information Risk* hypothesis (H1b) predicts a negative β_1.

We control for the impact of a wide range of firm- and country-level variables on executive compensation as shown in the prior literature (see for example Core et al., 1999). We control for firm size (natural logarithm of total sales, converted to 2005 US dollars), growth (market to book value of equity), leverage (long-term debt plus debt in current liabilities divided by total assets), risk (monthly stock return volatility

[16] Capital IQ treats an executive as having zero equity-based compensation if the information is missing. Therefore, it is difficult for the researchers to judge whether a zero value suggests zero equity compensation or a missing data point. To illustrate, Balsam (2013) using Capital IQ finds that only about one percent of Indian firms reported granting equity compensation to their CEOs. This despite the fact that survey evidence suggests "more than half of respondents use or were planning to use equity incentives." We confirm this and note that Capital IQ only picks up equity compensation for a small percentage of European firms. Further, researchers do not know whether the amounts of equity-based compensation are measured consistently across countries, especially in the pre-IFRS period. Focusing on cash compensation is also consistent with prior literature on international executive compensation (Ozkan et al., 2012).

over the fiscal year), and executive tenure (the number of years the executive has been working in his/her current position). We also control for firm performance, measured as the change in return on assets (earnings before extraordinary items divided by total assets), and stock returns (annual buy-and-hold stock return adjusted for stock splits and dividends). We also interact both performance measures with *Post_IFRS* dummy to examine whether IFRS adoption has any impact on the pay-performance relation. Both performance measures are de-meaned in the regressions to make the interpretation of the main variable of interest *Post_IFRS* easier. It is unclear *ex ante* whether and how IFRS adoption would affect PPS as the prior literature provides mixed results. Ozkan et al. (2012) find weak evidence suggesting that executive compensation is more tied to accounting-based performance measures after mandatory IFRS adoption. In contrast, Voulgaris et al. (2014) find a decrease in the usage of earnings-based performance measures after the mandatory IFRS adoption for a sample of UK CEO compensation contracts.

We also control for institutional ownership (the percentage of shares held by institutions), as well as insider ownership, as Fernandes et al. (2013) find that the level of CEO pay is positively associated with institutional ownership and negatively associated with insider ownership. We include a firm-level indictor ADR for firms that have American Depository Receipts (ADRs) traded in the US, as Fernandes et al. (2013) find that firms cross-listed in the US pay higher CEO compensation. Lastly, we include an indicator for CEOs, who likely receive higher compensation than CFOs.

We also control for country-level macroeconomic factors, including the level of GDP per capita and the exchange rate used to convert local currencies into US dollars. To mitigate the impact of outliers, all continuous variables are Winsorized at

1 and 99 percentiles. We cluster standard errors by country to address the potential correlations in error terms for observations within the same country. Our model includes fixed effects for country, industry, and year to control for unobserved country-, industry-, and year-specific effects that could affect executive pay. Throughout all of our analysis, we also report results using an alternative specification where we replace country and industry fixed effects with firm fixed effects to control for unknown firm characteristics that could potentially affect the level of executive compensation. Consequently we do not include an indicator for IFRS countries as it is subsumed by the country or firm fixed effects.

4.1. Sample statistics

Table 3 reports the summary statistics for the regression variables used in Equation (1). In Panel A, we report separately these statistics in the pre-adoption and post-adoption periods for our treatment sample. In the last two columns, we also compare the sample mean of these variables across two sub-periods using a *t*-test. We observe that the mean CEO (CFO) cash pay increased from $658,000 ($350,000) in the pre-adoption period to $865,000 ($509,000) in the post-adoption period, i.e. an increase of 31 (46) percent. These increases are statistically significant, providing preliminary evidence supporting the *Improved Monitoring* hypothesis (H1a) that executive compensation increases after mandatory IFRS adoption. Panel B reports the summary statistics for the control sample where all firms from non-IFRS adopting countries are included. We observe that executive cash pay is higher in the control sample relative to the treatment sample, potentially due to the large proportion of US firms. Due to the fact that our treatment countries adopted IFRS in a staggered process, we are unable to assign pre- and post-adoption periods to our control group,

and therefore unable to conduct difference-in-differences univariate analysis.

4.2. Difference-in-differences analysis

Table 4 reports the multivariate regression results of Equation (1) using all non-adopters from non-IFRS countries as the control group. The coefficients on *Post_IFRS* are positive and statistically significant in all model specifications, which differ only in the type of fixed effects utilized. The coefficients on *Post_IFRS* are also economically significant. Depending on the model, the increase in executive pay due to IFRS adoption is estimated to be between 9.7% and 15.5%. Further, we find that replacing country and industry fixed effects in Column (3) with firm fixed effects in Column (4) increases the adjusted R-squares from 77% to 89%, suggesting that unknown firm characteristics are an important determinant of executive compensation. However, the coefficient on *Post_IFRS* only decreases slightly. These findings are consistent with the *Improved Monitoring* hypothesis (H1a) that executive compensation increases after mandatory IFRS adoption.

For the control variables, consistent with prior literature, we find that compensation is positively correlated with firm size, firm stock performance, growth opportunities, institutional ownership, and executive tenure, and negatively correlated with stock return volatility, and insider ownership (e.g., Hill and Phan, 1991; Smith and Watts, 1992; Gaver and Gaver, 1993, 1995; Fernandes et al., 2013). Executives of ADR firms are paid higher, consistent with findings in Fernandes et al. (2013). We find executive pay to be only weakly associated with firms' accounting performance and such association decreased after IFRS adoption. This is consistent with the argument that IFRS reduces the contracting usefulness of earnings (Ball et al.,

2015).[17] The positive coefficients on exchange rate suggest that the compensation level is higher when local currencies are stronger relative to US dollars, although we note that the significance of the coefficient varies depending on the fixed effects used. Similarly, the positive coefficients on GDP suggest that compensation is positively associated with a country's economic development, but again the significance of the coefficient varies.

4.3. Alternative control groups

One concern about the difference-in-differences analysis using firms from non-IFRS adopting countries as control is their comparability with the treatment firms. In this section, we use two alternative control groups to address this concern.

First, we use firms that are domiciled in IFRS-adopting countries but did not adopt IFRS on the mandatory adoption date as our control group. This group includes firms that voluntarily adopted IFRS before their countries' mandatory adoption dates (voluntary adopters) and those that did not adopt IFRS during our sample period or delayed the adoption (non-adopters).[18] These firms were initially excluded from our treatment sample. We also delete the years when voluntary adopters were not using IFRS and the years after non-adopters adopted IFRS. The remaining firms are those that adopted IFRS on their countries' mandatory adoption dates, and are thus labeled as mandatory adopters. Since voluntary adopters, non-adopters, and mandatory adopters are from the same countries, this analysis mitigates the concern that executives from different countries likely face different institutional incentives. We

[17] Note that Ozkan et al. (2012) use the change rather than the level of compensation as dependent variable and use a different sample of countries (continental European countries only) without a control group and a different sample period 2002-2008. Therefore, our results are not necessarily inconsistent with those in Ozkan et al. (2012).

[18] For example, Pownall and Wieczynska (2012) document that about 17% of EU firms had not adopted IFRS by 2009.

expect executives of voluntary adopters and non-adopters to receive no increase in compensation after their countries' mandatory adoption dates. The results are reported in Table 5. We create separate firm-level indicator variables for mandatory adopters (*Mandatory*), voluntary adopters (*Voluntary*), and non-adopters (*Non-adopter*), and interact these indicators with the *Post_IFRS* dummy. We include only firms from IFRS-adopting countries in this analysis. We observe a positive and significant coefficient on *Mandatory*×*Post_IFRS* across both model specifications, suggesting that executives of mandatory adopters receive higher cash compensation after IFRS adoption. *F*-tests comparing the coefficients on *Mandatory*×*Post_IFRS* with *Voluntary*×*Post_IFRS* and *Non-adopter*×*Post_IFRS* suggest that mandatory adopters receive incrementally higher pay increase relative to non-adopters, although not significantly higher than the voluntary adopters. Consistent with our expectation, we do not find mandatory IFRS adoption has any effect on executive pay of voluntary adopters. Interestingly, we find that executives of non-adopters receive lower pay after the mandatory adoption date. This finding is consistent with the improved monitoring argument proposed in Hermlin and Weisbach's (2012) model, an executive of a non-adopting firm he/she enjoys lower monitoring and higher private benefits by staying at the non-adopting firm and is thus willing to accept a lower explicit pay.

Second, we use other executives from IFRS-adopting countries as another alternative control group. We expect other non-CEO and non-CFO executives to be less affected by a major change in financial reporting standards, as they are not directly responsible for financial reporting. Since executives in this alternative control group are from the same countries and even the same firms as those in the treatment group, the comparability concern should be mitigated. The results are reported in

Table 6. We create separate firm-level indicator variables for CEOs and CFOS (*CEO/CFO*) and other executives (*Other*), and interact these indicators with the *Post_IFRS* dummy. We include only firms from IFRS-adopting countries in this analysis. We observe a positive and significant coefficient on *CEO/CFO×Post_IFRS* across both model specifications, suggesting that CEOs and CFOs receive higher cash compensation after IFRS adoption. *F*-tests comparing the coefficients on *CEO/CFO×Post_IFRS* with *Other×Post_IFRS* suggest that such increase in pay is significantly higher for CEOs and CFOs than for other executives. We also find the pay of other executives in IFRS-adopting countries is lower after IFRS adoption, although such negative effect disappears after we additionally include non-IFRS countries in the sample (untabulated), suggesting that the pay of other executives in IFRS-adopting countries does not change relative to the rest of the world.

To sum up, results so far are consistent with the *Improved Monitoring* hypothesis that mandatory IFRS adoption leads to higher executive compensation.

4.4. Testing the improved monitoring hypothesis

To provide further assurance on the *Improved Monitoring* hypothesis, we identify executives of firms that are more likely to face improved monitoring after the IFRS adoption. We expect foreign, especially US, institutional investors and outside board members to face higher information asymmetry than domestic investors and inside board members and thus are more likely to rely on public disclosure to exercise monitoring. Meanwhile, they are also characterized by prior literature as active

monitors.[19] Thus, we expect firms with higher US institutional holdings[20] and more outside directors on board to experience larger improvements in monitoring efficiency after IFRS adoption. We obtain the information on board structure from BoardEx and the information on US institutional ownership from FactSet.

We use the following equation to test the improved monitoring argument:

$$\begin{aligned} Log\ (Executive\ Pay) = {} & \beta_1\, Post\_IFRS + \beta_2\, Post\_IFRS_{Monitoring} \\ & + Control\ Variables + Fixed\ Effects, \end{aligned} \tag{2}$$

where *Post_IFRS* is defined as in Equation (1) and $Post\_IFRS_{Monitoring}$ is defined as one if *Post_IFRS* is one and for firm-years in the IFRS regime with equal to or above the median value of US institutional holdings or percentage of outside directors on board. The estimated coefficient β_2 thus captures the *incremental* effect of IFRS adoption on executive compensation among firm with the potential for larger improvements in shareholder monitoring after IFRS adoption. Table 7 Columns (1) to (4) report the regression results for Equation (2). The coefficient on $Post\_IFRS_{Monitoring}$ is positive and significant in all cases, further supporting H1a that the ability of the board and shareholders to improve monitoring after IFRS adoption leads to higher executive compensation.

We argue that mandatory IFRS adoption improves shareholder monitoring because it increases the *quantity* of public information available to monitors. Compared with foreign institutional investors, domestic institutional investors have better access to alternative information channels and are more familiar with domestic accounting standards (DeFond, Hu, Hung, and Li, 2011). Similarly, insiders have access to private information and are also unlikely be active monitors. Therefore, we

[19] For example, Fernandes et al. (2013) use institutional ownership and board independence as proxies for strong shareholder monitoring and good corporate governance. Aggarwal, Erel, Ferreira, and Matos (2011) find that US institutional investors promote good corporate governance among non-US firms.
[20] We find similar results using foreign institutional ownership to replace US institutional ownership.

expect domestic institutional investors and insiders to experience low or no improvements in monitoring efficiency after IFRS adoption. To test the above conjecture, we redefine $Post\_IFRS_{Monitoring}$ as one if *Post_IFRS* is one and for firm-years in the IFRS regime with equal to or above the median value of domestic institutional holdings or insider ownership. The results are reported in Columns (5) to (8) of Table 7. We do not find the coefficients $Post\_IFRS_{Monitoring}$ to be statistically significant, suggesting that the executive pay increase does not vary across firms with different levels of domestic institutional ownership or insider ownership. These results are consistent with the conjecture that IFRS adoption does not improve the monitoring of domestic institutional investors or insiders.

4.5. Testing alternative channels

4.5.1. Reliance on peer performance

Prior literature finds that mandatory IFRS adoption improves the comparability of accounting among adopting firms (e.g., Yip and Young, 2012; Wang, 2014). Consistent with this argument, Ozkan et al. (2012) find that executive compensation contracts rely more on peers' accounting performance after IFRS adoption. To examine the effect of IFRS adoption on RPE and to control for its potential effect on the level of compensation, we use an approach similar to that in Ozkan et al. (2012) to identify a firm's peer groups. A sample firm's domestic peers are up to eight companies from the same industry (3-digit SIC), country, and year, and with their size (measured as total sales) closest to the sample firm. Similarly, a sample firm's foreign peers are up to eight non-domestic companies in the same industry and year, and with firm size closest to the sample firm. We also require each foreign peer to be from a country with the same IFRS adoption status as the sample firm's

country.[21] This requirement ensures that our sample firms and their foreign peers are from countries reporting under the same accounting standard group (either IFRS or non-IFRS). Lastly, we require each peer's size to be no more than three times and no less than one third of the size of the sample firm. We use the mean change in accounting performance and the mean market performance of domestic and foreign peer groups to measure relative performance (*ΔROA_DPeer*, *Return_DPeer*, *ΔROA_FPeer*, and *Return_FPeer*). We add these variables as well as their interactions with *Post_IFRS* to Equation (2). A negative coefficient on *ΔROA_FPeer×Post_IFRS* indicates an increase in reliance on peers' accounting performance after IFRS adoption.

Table 8 reports the results. We find the effect of IFRS adoption on accounting-based RPE is largely mixed and sensitive to model specification. In particular, we find the coefficient on *ΔROA_FPeer×Post_IFRS* is only negative and significant in one out of four specifications. Our results are different from those in Ozkan et al. (2012) potentially due to different sample compositions. Ozkan et al. use a sample of firms from Continental Europe, where foreign firms are more likely to be used as peer groups in RPE. However, in our sample, the foreign peer group of IFRS-adopting firms includes firms from other IFRS-adopting countries, such as Australia, Canada, and South Africa. In practice, these firms may be less likely to be used as benchmarks for firms in Europe and vice versa.

Despite these mixed findings, we continue to find strong support for the improved monitoring argument: the coefficient on $Post\_IFRS_{Monitoring}$ is positive and

[21] For example, for firm-years from IFRS-adoption countries during post-adoption period, their foreign peers are from countries that have mandated IFRS in that particular year. For firm-years from IFRS-adoption countries during pre-adoption period and firm-years from non-IFRS-adoption countries, their foreign peers are from other non-IFRS-adoption countries and IFRS-adoption countries that have not yet started the mandate in that particular year.

significant across all model specifications even after taking into account the possible effect of IFRS adoption on RPE.

4.5.2. Increased workload

Another potential explanation for increased executive compensation relates to the increased workload under IFRS. Adopting a new set of accounting standards requires significant effort from top executives during the transitional period. Compared with adopting-countries' prior domestic GAAP, IFRS is often more complex. To apply the more complex accounting rules and to keep up with the changes in IFRS standards require increased and continued effort from top executives. Therefore, executives may ask for higher pay to compensate for the increased workload. The above argument predicts that the increase in executive pay is positively related with the increased workload associated with implementing IFRS. To test this prediction, we measure the increase in workload using changes in audit fees as audit effort is likely to be positively associated with executives' workload. Kim, Liu, and Zheng (2012) find that audit fees increased following the mandatory adoption of IFRS and attribute this increase to the increased auditing effort under IFRS. We use the average audit fees in post-adoption period minus pre-adoption average for each IFRS-adopting firm to measure the change in executive workload associated with IFRS adoption. $Post\_IFRS_{Audit\_Fee}$ is defined as one when *Post_IFRS* is one and for firms in the treatment sample that experience equal to or above the median change in audit fees. We add $Post\_IFRS_{Audit\_Fee}$ to Equation (2) to examine the incremental effect of IFRS adoption on executive pay as a result of increased workload. In untabulated results, the coefficient on $Post\_IFRS_{Audit\_Fee}$ is positive but insignificant in all models, although the coefficient on $Post\_IFRS_{Monitoring}$ remains positive and significant.

In addition, the increased workload argument also predicts that executive pay should start increasing during the preparation period before the actual adoption when the workload is expected to be higher, especially for CFOs, who are primarily responsible for financial reporting. However, the increased monitoring argument predicts an increase only after the actual adoption when transparency improves. To disentangle these two arguments and assess the timing of the executive pay increase, we repeat Equation (1) by replacing the *Post_IFRS* indicator with three separate event window indicators, including the two years leading up to the adoption ($Pre\_IFRS_{t-2,t-1}$), the first two years after the adoption ($Post\_IFRS_{t,t+1}$), and the remaining years ($Post\_IFRS_{>=t+2}$). $Pre\_IFRS_{t-2,t-1}$ is thus defined as one for observations from the IFRS countries and with fiscal years ending on or after Month -24 (relative to the IFRS adoption date) and before Month 0.[22] $Post\_IFRS_{t,t+1}$ is defined as one for observations from the IFRS countries and with fiscal years ending on or after Month 0 and before Month +24. $Post\_IFRS_{>=t+2}$ is defined as one for observations from the IFRS countries and with fiscal years ending on or after Month +24. The results are reported in Table 9, Columns (1) and (2). We find positive coefficients on all three event window indicators, with only those on $Post\_IFRS_{t,t+1}$ and $Post\_IFRS_{>=t+2}$ being significant in all models. In Column (1), the coefficient on $Pre\_IFRS_{t-2,t-1}$ is significant at 5% level, suggesting an increase in executive pay during the preparation effect. However, this effect goes away after we control for firm fixed effects in Column (2). We also find that in almost all models the coefficients on $Post\_IFRS_{t,t+1}$

[22] For example, if a firm's fiscal year ends in December and the firm is domiciled in a country adopting IFRS in December 2005, $Pre\_IFRS_{t-2,t-1}$ is defined as one for fiscal years 2003 and 2004, $Post\_IFRS_{t,t+1}$ is defined as one for fiscal years 2005 and 2006, and $Post\_IFRS_{t>=+2}$ is defined as one for fiscal years 2007 and after. Using two years leading up to the adoption as the pre-event window is also consistent with the fact that most IFRS-adopting countries in our sample announced the mandatory adoption decision two to three years in advance. For example, the European Union and Australia announced in 2002, South Africa and the Philippines announced in 2003, Hong Kong announced in 2004, and Canada announced in 2008. It is reasonable to expect preparation to start after announcement of adoption.

and *Post_IFRS*$_{>=t+2}$ are significantly larger than those on *Pre_IFRS*$_{t-2,t-1}$. This finding suggests that executives receive incrementally higher pay when IFRS was actually adopted, consistent with the improved monitoring under IFRS regime. We also find the coefficient on *Post_IFRS*$_{>=t+2}$ is mostly larger than that on *Post_IFRS*$_{t,t+1}$. This finding suggests a gradual adjustment in compensation levels after the adoption. This gradual adjustment could be due to the stickiness of executives' compensation contracts and therefore it takes time for executives to negotiate for higher pay under the IFRS regime.

In summary, results in this section provide weak support for the increased workload argument for CFOs, and continue to provide strong support for the *Improved Monitoring* hypothesis.

4.5.3. Limiting Sample to Canada and US

Lastly, we limit our analysis to two countries, Canada (treatment) and the US (control), where compensation disclosures are relatively comparable and firms face similar business and investment environments (Baginski, Hassell, and Kimbrough, 2002). We also limit our sample period to 2009-2012, i.e. two years before and two years after the mandatory adoption date in Canada. Focusing on Canada and US and using a shorter event window have several advantages. First, this sample period starts after financial crisis and therefore mitigates the concern that executive compensation package may be negotiated in a different way when the market conditions are extreme. Second, as discussed above, the reason to focus on cash-based compensation in our analysis is its consistent usage and disclosure across our sample countries and sample period. However, a concern of examining only cash compensation is that the expanded disclosures on other types of compensation, i.e. equity-based compensation,

may make cash compensation more attractive to managers. In other words, a structural change from equity compensation towards more cash compensation during our sample period may explain our results.[23] Focusing on Canada and US also allows us to manually check the compensation disclosure rules to make sure there are no substantial rule changes during this event window.[24] We also investigate the availability of equity-based compensation data and find that about 69% of Canadian executives in our sample have none-zero equity pay (relative to 91% of US executives), a much higher rate than other non-US countries. As a result, we are able to expand our analysis to equity compensation. Lastly, we are also able to investigate the country-specific IFRS adoption features and exemptions. For example, we find out that the mandatory adoption of IFRS for investment companies and rate-regulated entities in Canada was postponed until 2014 and 2015, respectively.[25] Therefore, we exclude firms operating in financial industries (SIC between 6000 and 6999) and utilities industries (two-digit SIC 49) from our analysis to make sure that Canadian firms remaining in our sample are mandatory adopters.

Although the comparison between Canada and US gives us a relatively clean setting, a concern is the extent to which IFRS adoption has affected Canadian firms' information environment. Canadian firms already faced highly transparent disclosure requirements before IFRS adoption. Therefore, IFRS adoption could have limited impact on transparency and thus executive compensation. On the other hand, the improved monitoring argument relies on the increased quantity of disclosure instead

[23] However, this alternative explanation is not consistent with our finding that mandatory adopters receive larger increase in cash pay relative to non-adopters and voluntary adopters, who are from the same countries and thus should be subject to the same compensation disclosure requirements.
[24] By speaking to executive compensation professionals, we learn that compensation disclosure rules in Canada are similar to those in the US. However, Canada often applies rule changes following the US and with a lag of one or two years.
[25] See http://www.iasplus.com/en/jurisdictions/americas/canada.

of improvements in accounting measurements. A recent study by Blanchette, Racicot, and Sedzro (2013) finds that although IFRS adoption does not change the central values that describe the financial position and performance of Canadian firms at the aggregate level, the fair value accounting under IFRS creates significant differences in values of investment properties, financial instruments, and consolidation and strategic investments. To comply with fair value accounting rules, firms need to provide additional disclosures, such as fair values of assets and liabilities and assumptions and models used to estimate these fair values, which prove to be incrementally useful to shareholders (Muller et al., 2011). To examine whether IFRS adoption has any material impact on the quantity of information provided by Canadian firms, we hand-collect a small sample of Canadian firms' financial statements and find that the annual reports prepared under IFRS are much longer compared with those prepared under Canadian GAAP. This observation suggests that the quantity of information is indeed larger under IFRS relative to Canadian GAAP. In addition, adoption allows shareholders to better compare executives of Canadian firms against those from other countries using IFRS and thus improves monitoring. Therefore, *ex ante*, it is unclear whether and to what extent IFRS adoption will have any effect on executive compensation among Canadian firms.

We repeat the analysis for Equation (1) using the Canada and US sample. The results are reported in Table 10, Columns (1) and (2). Since we only have two sample countries, standard errors are now clustered at the firm level. When cash compensation is the dependent variable we continue to observe positive coefficients on *Post_IFRS*, although the coefficient is only significant when we include firm fixed effects (columns 2). The magnitudes of the coefficient are also much smaller than those reported in Table 4. This finding is consistent with Canadian GAAP being

closer to IFRS compared with local GAAP in other treatment countries (Bae, Tan, and Walker, 2008). In Columns (3) and (4), we replace cash compensation with equity-based compensation. We also find a positive coefficient on *Post_IFRS*, although the coefficient becomes insignificant when firm fixed effects are used in the model. Findings in this table suggest that the observed increase in executive cash pay after IFRS adoption is unlikely to be explained by a structural change in compensation components after IFRS adoption.

4.5.4 *Change in compensation disclosure and regulation*

During our sample period, many countries adopted say on pay (SoP) laws, which may have an effect on executive compensation. Correa and Lel (2014) collect data on the passage of say on pay laws across 38 countries from 2001 to 2012 and find that the CEO pay growth rate decreased and the sensitivity of CEO pay to firm performance increased after the passage of SoP laws in their sample countries. To control for the potential confounding effect of SoP laws on executive compensation in our sample, we add an additional indicator variable *Post_SoP* in Equation (1). *Post_SoP* is defined as one for country-years that adopted SoP laws according to Table 1 of Correa and Lel (2014). In untabulated results, we do not find the coefficient on *Post_SoP* to be significant. More importantly, the coefficient on *Post_IFRS* remains positive and significant. This result suggests that the observed pay increase after IFRS adoption is unlikely to be driven by the passage of SoP laws during our sample period.

5. Conclusions

We examine how mandatory disclosure reforms affect executive compensation. Extant theory provides two competing arguments. On one hand,

managers facing improved monitoring under the more transparent regime will lose informational advantage and opportunities for private benefits, leading them to request higher explicit compensation. Alternatively, better disclosure reduces uncertainty about a firm's information environment and thus reduces the information risk faced by managers. Facing reduced idiosyncratic risk under the more transparent regime, managers are willing to accept lower compensation. We use the mandatory adoption of IFRS across 28 countries to test these competing arguments. We find consistent results suggesting that executives receive higher pay after the mandatory adoption of IFRS and that the pay increase is positively associated with firm specific characteristics that proxy for the ability of the board and shareholders to improve monitoring in response to IFRS. These results provide evidence supporting the *Improved Monitoring* hypothesis. We hasten to note that our results are not necessarily inconsistent with the *Reduced Information Risk* hypothesis, as our empirical evidence only documents an average *net* effect of IFRS adoption on the level of executive compensation.

Our findings contribute to the literature on the determinants of executive compensation and to the literature on the economic consequences of mandatory IFRS adoption. Our finding that executive pay increases after IFRS adoption also helps explain the decline of the pay gap between US and non-US executives documented in recent literature.

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Table 1: Sample composition by country

This table reports the number of CEO-years, CFO-years, and unique firm-years by country in our sample. *Adoption Date* is the date when each country adopted IFRS.

Country	# CEO-Years	# CFO-Years	# Unique Firms	Adoption Date	Country	# CEO-Years	# CFO-Years	# Unique Firms
IFRS countries					*Non-IFRS countries*			
Australia	4,488	2,745	818	12/31/05	Argentina	3	3	1
Austria	7	9	1	12/31/05	Bermuda	279	202	54
Belgium	20	0	4	12/31/05	China	1,094	457	279
Canada	4,105	3,440	682	12/31/11	Egypt	3	0	1
Cyprus	8	0	1	12/31/05	India	6,390	960	1,628
Denmark	16	7	5	12/31/05	Indonesia	2	4	1
Finland	193	0	39	12/31/05	Japan	287	14	123
France	869	224	128	12/31/05	Kazakhstan	8	5	1
Germany	80	38	15	12/31/05	Macao	9	9	1
Greece	2	0	1	12/31/05	Malaysia	305	34	72
Hong Kong	10	25	8	12/31/05	Panama	3	2	1
Ireland	247	170	34	12/31/05	Puerto Rico	0	4	1
Israel	22	16	5	12/31/08	Russia	0	3	1
Italy	92	9	13	12/31/05	Saudi Arabia	7	0	2
Luxembourg	25	13	3	12/31/05	Thailand	2	2	1
Netherlands	604	310	84	12/31/05	United States	16,227	13,785	2,405
New Zealand	122	15	24	12/31/07	Vietnam	2	0	1
Norway	302	13	55	12/31/05				
Philippines	29	28	8	12/31/05				
Poland	76	22	12	12/31/05				
Portugal	8	0	1	12/31/05				
Singapore	3	0	1	12/31/03				
Slovenia	7	2	2	12/31/05				
South Africa	1,227	793	183	12/31/05				

Spain	39	10	5	12/31/05				
Sweden	592	0	97	12/31/05				
Switzerland	44	23	6	12/31/05				
United Kingdom	5,108	4,329	754	12/31/05				
Total	*18,345*	*12,241*	*2,989*		*Total*	*24,621*	*15,484*	*4,573*

Table 2: Sample by year

This table reports the number of CEO-years, CFO-years, and unique firm-years by calendar year in our sample.

IFRS countries			
Year	**# CEO-Years**	**# CFO-Years**	**# Unique Firms**
2001	481	359	567
2002	899	688	1,045
2003	1,392	986	1,599
2004	1,924	1,238	2,195
2005	1,924	1,263	2,200
2006	1,747	1,149	2,023
2007	1,701	1,101	2,000
2008	1,663	1,067	1,953
2009	1,684	1,083	1,967
2010	1,702	1,097	1,968
2011	1,658	1,120	1,928
2012	1,570	1,090	1,820
Non-IFRS countries			
Year	**# CEO-Years**	**# CFO-Years**	**# Unique Firms**
2001	1,194	777	1,334
2002	1,303	878	1,437
2003	1,423	990	1,597
2004	1,556	1,041	1,752
2005	1,662	1,120	1,872
2006	1,893	1,320	2,149
2007	2,316	1,450	2,601
2008	2,472	1,438	2,727
2009	2,669	1,634	2,931
2010	2,761	1,664	3,029
2011	2,810	1,615	3,098
2012	2,562	1,557	2,854

Table 3: Summary statistics

Panels A and B report the summary statistics of variables used in executive pay regressions for the IFRS and non-IFRS samples, respectively. In Panel A, we separately report the statistics in pre-adoption and post-adoption periods. We also report the *t*-statistics by comparing sample means in two periods using *t*-test. *Cash Pay* is annual cash compensation including salary and bonus (in $million) at year *t*. *Sales* is the total sales of the firm at the fiscal year end (in billion, 2005 US dollars). *ΔROA* is calculated as the change in earnings before extraordinary items divided by total assets at the fiscal year end. *Return* is annual buy-and-hold stock return, adjusted for stock splits and stock dividends. *MTB* is the market value of equity divided by book value of equity at the fiscal year end. *Leverage* is total debt (long-term debt plus debt in current liabilities) divided by total assets at the fiscal year end. *Return Vol.* is standard deviation of monthly stock returns over the fiscal year. *Foreign Inst. Own%* is the institutional ownership by foreign institutions as a percentage of market capitalization. *Inst. Own%* is the institutional ownership as a percentage of market capitalization. *Insider Own%* is the number of closely held shares by insiders as a proportion of the number of shares outstanding. *ADR* is a firm-level indicator variable suggesting that the firm has ADR traded in the US. *Tenure* is the number of years that the executive has served the current firm under the current title. *Exchange Rate* is the exchange rate of converting a country's local currency to US dollars at the fiscal year end. *GDP* is a country's annual GDP per capital as denoted in constant 2005 US dollars (in $thousand). It is obtained from World Bank database. All continuous variables are Winsorized at the 1st and 99th percentiles.

Panel A: IFRS countries

	Pre-adoption Period				**Post-adoption Period**				**Diff (Post-Pre)**	
Variable	N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	Mean	*t*-stat
CEO Cash Pay ($million)	8,180	0.658	0.383	0.812	10,165	0.865	0.530	0.949	0.207	15.91
CFO Cash Pay ($million)	5,975	0.350	0.244	0.345	6,266	0.509	0.349	0.476	0.160	21.31
Sales ($billion)	14,155	1.718	0.153	5.720	16,431	2.470	0.227	7.467	0.752	9.95
MTB	14,155	2.488	1.772	2.590	16,431	2.471	1.654	2.715	-0.017	-0.54
ΔROA	14,155	0.008	0.002	0.147	16,431	0.000	0.000	0.139	-0.008	-5.06
Return	14,155	0.352	0.241	0.736	16,431	0.159	0.083	0.619	-0.193	-24.65
Leverage	14,155	0.190	0.158	0.176	16,431	0.187	0.163	0.170	-0.003	-1.52
Return Vol.	14,155	0.123	0.099	0.082	16,431	0.116	0.095	0.076	-0.007	-7.90
Inst. Own%	14,155	0.153	0.095	0.178	16,431	0.172	0.123	0.171	0.019	9.27
Insider Own%	14,155	0.248	0.183	0.249	16,431	0.307	0.269	0.257	0.059	20.32
Tenure	14,155	3.500	3.000	2.616	16,431	5.418	5.000	2.697	1.917	63.00

Panel B: Non-IFRS countries

Variable	N	Mean	Median	Std Dev
CEO Cash Pay ($million)	24,621	1.200	0.796	1.369
CFO Cash Pay ($million)	15,484	0.649	0.521	0.504
Sales ($billion)	40,105	3.463	0.760	8.157
MTB	40,105	2.626	1.867	2.649
ΔROA	40,105	-0.002	0.000	0.092
Return	40,105	0.190	0.088	0.653
Leverage	40,105	0.224	0.204	0.185
Return Vol.	40,105	0.124	0.105	0.076
Inst. Own%	40,105	0.570	0.706	0.376
Insider Own%	40,105	0.228	0.151	0.232
Tenure	40,105	4.992	4.000	3.149

Table 4: Effects of IFRS on executive compensation

This reports our difference-in-differences results on natural logarithm of executive cash pay (in 2005 US dollars) where non-adopting firms from non-IFRS mandating countries are used as the control group. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. *CEO Indicator* is a dummy variable indicating that the observation is a CEO. Other control variables are as defined in Table 3. Standard errors are clustered at the country level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	*All non-adopters from non-IFRS countries*			
	(1)	**(2)**	**(3)**	**(4)**
Post_IFRS	**0.152*** **	**0.155*** **	**0.104** **	**0.097** **
	(2.99)	**(3.12)**	**(2.32)**	**(2.45)**
IFRS Indicator	-0.077	-0.045		
	(-0.61)	(-0.38)		
Log(Sales)	0.258***	0.272***	0.272***	0.185***
	(26.02)	(26.56)	(37.17)	(8.75)
MTB	0.022***	0.020***	0.019***	0.011***
	(3.35)	(3.21)	(3.06)	(5.78)
ΔROA	0.165	0.158	0.148	0.176*
	(1.59)	(1.45)	(1.33)	(2.00)
ΔROA × Post_IFRS	-0.196*	-0.186	-0.157	-0.191*
	(-1.81)	(-1.65)	(-1.38)	(-1.73)
Return	0.067**	0.063**	0.060**	0.055*
	(2.43)	(2.16)	(2.06)	(1.84)
Return × Post_IFRS	0.000	0.001	-0.009	-0.007
	(0.01)	(0.03)	(-0.29)	(-0.20)
Leverage	-0.022	-0.082	-0.059	-0.243***
	(-0.15)	(-0.69)	(-0.53)	(-4.40)
Return Vol.	-0.987***	-0.762***	-0.644***	-0.554***
	(-5.88)	(-4.70)	(-5.90)	(-5.22)
Inst. Own%	0.289*	0.384**	0.274***	0.147***
	(1.68)	(2.56)	(3.66)	(5.16)
Insider Own%	-0.227***	-0.201***	-0.187***	-0.069**
	(-3.36)	(-3.62)	(-3.82)	(-2.49)
ADR	0.233***	0.198***	0.180***	
	(5.12)	(4.06)	(3.33)	
Tenure	0.015***	0.016***	0.016***	0.016***
	(3.52)	(4.10)	(3.74)	(6.56)
CEO Indicator	0.638***	0.638***	0.654***	0.660***
	(11.45)	(11.44)	(12.29)	(11.88)
Exchange Rate	0.130	0.130	0.332***	0.646***
	(1.30)	(1.31)	(4.24)	(4.32)
Log(GDP)	0.422***	0.390***	0.503	0.834***
	(10.00)	(9.49)	(1.26)	(3.36)
Year Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	N	Y	Y	N
Country Fixed Effects	N	N	Y	N
Firm Fixed Effects	N	N	N	Y
N	70,691	70,691	70,691	70,691
Adj. R-squared	73.8%	75.3%	76.5%	89.3%

Table 5: Voluntary adopters and non-adopters

This table presents regression results on natural logarithm of executive cash pay (in 2005 US dollars) using firms in IFRS countries that did not mandatorily adopt IFRS as the control groups. Such firms include those that voluntarily adopted IFRS before their countries' mandatory adoption dates (voluntary adopters) and those that did not adopt IFRS during our sample period or delayed adoption (non-adopters). *Voluntary* is a firm-level indicator for voluntary adopters, *Non-adopters* is a firm-level indicators for non-adopters or late-adopters, and *Mandatory* is a firm-level indicator for mandatory adopters, i.e. those switched to IFRS at their countries' mandatory adoption dates. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. *CEO Indicator* is a dummy variable indicating that the observation is a CEO. Other control variables are as defined in Table 3. Standard errors are clustered at the country level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***Voluntary adopters and non-adopters from IFRS countries***	
	(1)	**(2)**
Mandatory × Post_IFRS	**0.042****	**0.051****
	(2.06)	**(2.40)**
Voluntary × Post_IFRS	**-0.009**	**-0.017**
	(-0.24)	**(-0.50)**
Non-adopter × Post_IFRS	**-0.070****	**-0.097*****
	(-2.14)	**(-3.01)**
Voluntary Adopter Indicator	0.066	
	(0.93)	
Non-adopter Indicator	0.032	
	(0.60)	
Log(Sales)	0.249***	0.147***
	(33.81)	(11.70)
MTB	0.019***	0.006***
	(9.00)	(3.27)
ΔROA	-0.069*	-0.008
	(-1.82)	(-0.32)
ΔROA × Mandatory × Post_IFRS	0.047	0.007
	(0.77)	(0.12)
Return	0.043***	0.033***
	(5.39)	(5.19)
Return × Mandatory × Post_IFRS	0.008	0.013
	(0.59)	(1.23)
Leverage	-0.230***	-0.183***
	(-5.35)	(-3.50)
Return Vol.	-0.540***	-0.403***
	(-4.65)	(-4.67)
Inst. Own%	0.604***	0.261***
	(5.65)	(3.66)
Insider Own%	-0.207***	-0.075***
	(-3.87)	(-3.45)
ADR	0.222***	
	(5.22)	
Tenure	0.016***	0.018***
	(6.87)	(7.76)
CEO Indicator	0.565***	0.579***
	(16.75)	(14.20)
Exchange Rate	0.295***	0.626***
	(3.84)	(4.48)
Log(GDP)	0.594	0.349
	(1.27)	(0.76)
F-test [p-value]:		
Mandatory ×Post_IFRS= Voluntary × Post_IFRS	**[0.18]**	**[0.14]**
Mandatory ×Post_IFRS= Nonadopter × Post_IFRS	**[0.00]**	**[0.00]**
Year Fixed Effects	Y	Y
Industry Fixed Effects	Y	N
Country Fixed Effects	Y	N
Firm Fixed Effects	N	Y
N	36,817	36,817
Adj. R-squared	66%	85%

Table 6: Other executives

This table presents regression results on natural logarithm of executive cash pay (in 2005 US dollars) using other non-CEO and non-CFO executives from IFRS-adopting countries as the control groups. *CEO/CFO* is defined as one for CEOs and CFOs, and zero otherwise. *Other* is defined as one for other executives, and zero otherwise. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. *CEO Indicator* is a dummy variable indicating that the observation is a CEO. Other control variables are as defined in Table 3. Standard errors are clustered at the country level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***Other executives from IFRS countries***	
	(1)	**(2)**
CEO/CFO × Post_IFRS	**0.054*** **	**0.054*** **
	(3.50)	**(3.02)**
Other × Post_IFRS	**-0.047** **	**-0.034***
	(-2.63)	**(-1.74)**
Other Indicator	0.044	0.020
	(1.59)	(0.80)
Log(Sales)	0.233***	0.153***
	(27.57)	(8.73)
MTB	0.017***	0.005**
	(6.75)	(2.42)
ΔROA	-0.016	-0.001
	(-1.12)	(-0.04)
ΔROA × CEO/CFO × Post_IFRS	-0.000	-0.009
	(-0.01)	(-0.20)
ΔROA × Other × Post_IFRS	0.053*	0.020
	(1.71)	(0.69)
Return	0.039***	0.042***
	(4.71)	(5.16)
Return × CEO/CFO × Post_IFRS	0.018*	0.017
	(1.72)	(1.35)
Return × Other × Post_IFRS	-0.004	0.006
	(-0.44)	(0.41)
Leverage	-0.209***	-0.133***
	(-4.43)	(-3.64)
Return Vol.	-0.414***	-0.441***
	(-12.40)	(-7.50)
Inst. Own%	0.458***	0.249***
	(6.22)	(3.60)
Insider Own%	-0.156***	-0.055***
	(-3.55)	(-3.63)
ADR	0.233***	
	(5.83)	
Tenure	0.020***	0.023***
	(7.92)	(6.06)
CEO Indicator	0.551***	0.558***
	(14.90)	(14.59)
Exchange Rate	0.343***	0.518***
	(3.91)	(5.05)
Log(GDP)	1.169**	0.970*
	(2.76)	(1.92)
F-test [p-value]: **CEO/CFO ×Post_IFRS= Other × Post_IFRS**	**[0.00]**	**[0.00]**
Year Fixed Effects	Y	Y
Industry Fixed Effects	Y	N
Country Fixed Effects	Y	N
Firm Fixed Effects	N	Y
N	67,773	67,773
Adj. R-squared	65.1%	78.7%

Table 7: Testing improved monitoring argument

This table presents OLS regression results on executive cash pay using all non-adopters from non-IFRS countries as the control group. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. $Post\_IFRS_{Mornitoring}$ is defined as one when *Post_IFRS* is one and for firm-years having equal to or above the median value of the percentage of US institutional ownership, the percentage of outside directors on board, the percentage of domestic institutional ownership, or the percentage of insider ownership during the post-IFRS adoption period, respectively. Control variables are as defined in Table 3 and coefficients are omitted for brevity. Standard errors are clustered at the country level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***All non-adopters from non-IFRS countries***							
	US Inst. Own%		*Outside Director%*		*Domestic Inst. Own%*		*Insider Own%*	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Post_IFRS	0.034	0.077*	0.060	0.088**	0.098*	0.110**	0.114***	0.097***
	(0.69)	(1.89)	(1.19)	(2.16)	(1.85)	(2.40)	(2.72)	(2.74)
$Post\_IFRS_{Monitoring}$	**0.142*** **	**0.039*** **	**0.151*** **	**0.053** **	**0.012**	**-0.023**	**-0.021**	**0.001**
	(4.23)	**(3.12)**	**(4.82)**	**(2.48)**	**(0.34)**	**(-1.01)**	**(-0.87)**	**(0.04)**
			All controls included				All controls included	
Year Fixed Effects	Y	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	Y	N	Y	N	Y	N
Country Fixed Effects	Y	N	Y	N	Y	N	Y	N
Firm Fixed Effects	N	Y	N	Y	N	Y	N	Y
N	70,691	70,691	65,002	65,002	70,691	70,691	70,691	70,691
Adj. R-squared	76.5%	89.3%	77.0%	89.4%	76.5%	89.3%	76.5%	89.3%

Table 8: Controlling for relative performance evaluation

This table presents OLS regression results on executive cash pay using all non-adopters from non-IFRS countries as the control group. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. $Post\_IFRS_{Mornitoring}$ is defined as one when *Post_IFRS* is one and for firm-years having equal to or above the median value of the percentage of US institutional ownership or the percentage of outside directors on board during the post-IFRS adoption period, respectively. *ΔROA(Return)_DPeer* and *ΔROA(Return)_FPeer* are the average *ROA* (*Return*) of domestic and foreign peers. A sample firm's domestic peers are up to eight companies from the same industry (3-digit SIC), country, and year and with firm size (total assets) closest to the sample firm. Similarly, a sample firm's foreign peers are up to eight companies from a foreign country and the same industry and year and with firm size closest to the sample firm. We also require each foreign peer from a country with the same IFRS adoption status as the sample firm's country. *ΔROA(Return)*, *ΔROA(Return)_DPeer*, and *ΔROA(Return)_FPeer* are de-meaned. Control variables are as defined in Table 3 and their coefficients are omitted for brevity. Standard errors are clustered at the country level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***All non-adopters from non-IFRS countries***			
	US Inst. Own%		*Outside Director%*	
	(1)	**(2)**	**(3)**	**(4)**
Post_IFRS	0.046	0.082**	0.062	0.095***
	(0.99)	(2.36)	(1.32)	(2.77)
Post_IFRS$_{Monitoring}$	**0.128*** **	**0.038*** **	**0.147*** **	**0.056** **
	(3.13)	**(3.38)**	**(4.49)**	**(2.46)**
ΔROA_DPeer	0.024	0.045	0.029	0.052
	(0.62)	(1.52)	(0.59)	(1.38)
ΔROA_FPeer	0.018	0.030	0.027	0.028
	(0.31)	(0.75)	(0.49)	(0.74)
Return_DPeer	-0.009	-0.017**	-0.008	-0.014**
	(-0.66)	(-2.64)	(-0.64)	(-2.24)
Return_FPeer	0.018	-0.005	0.016	-0.005
	(1.07)	(-1.28)	(0.99)	(-1.29)
ΔROA_DPeer × Post_IFRS	**-0.022**	**-0.032**	**-0.105**	**-0.092**
	(-0.38)	**(-0.63)**	**(-1.26)**	**(-1.28)**
ΔROA_FPeer × Post_IFRS	**-0.071**	**-0.087****	**0.033**	**0.017**
	(-1.11)	**(-2.05)**	**(0.31)**	**(0.47)**
Return_DPeer × Post_IFRS	**0.031***	**0.015**	**0.012**	**0.007**
	(2.01)	**(1.53)**	**(0.95)**	**(0.89)**
Return_FPeer × Post_IFRS	**-0.040**	**-0.005**	**-0.028**	**-0.012**
	(-1.41)	**(-0.41)**	**(-0.80)**	**(-1.23)**
ΔROA	0.138	0.176**	0.159	0.196**
	(1.38)	(2.20)	(1.48)	(2.17)
ΔROA × **Post_IFRS**	**-0.157**	**-0.202****	**-0.134**	**-0.174**
	(-1.41)	**(-2.08)**	**(-1.24)**	**(-1.66)**
Return	0.058*	0.057*	0.060*	0.059**
	(1.78)	(1.95)	(1.88)	(2.04)
Return × **Post_IFRS**	**-0.018**	**-0.014**	**0.008**	**0.004**
	(-0.56)	**(-0.40)**	**(0.27)**	**(0.12)**
Year Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	N	Y	N
Country Fixed Effects	Y	N	Y	N
Firm Fixed Effects	N	Y	N	Y
N	56,389	56,389	52,217	52,217
Adj. R-squared	76.2%	89.2%	76.7%	89.4%

Table 9: Assessing event window

This table presents OLS regression results on executive cash pay using all non-adopters from non-IFRS countries as the control group. We split the treatment effect into different event windows. We replace the *Post_IFRS* indicator in Equation (1) using three separate indicator variables, including the two years leading up to the event (years $t-2$ and $t-1$), the first two years after the event (years t and $t+1$), and the remaining years ($>=t+2$). $Pre\_IFRS_{t-2,t-1}$ is defined as one for observations from the IFRS countries and with fiscal year ends between years $t-2$ (>=Month -24) and $t-1$ (<Month 0). $Post\_IFRS_{t,t+1}$ is defined as one for observations from the IFRS countries and with fiscal year ends between year t (>=Month 0) and year $t+1$ (<Month +24). $Post\_IFRS_{>=t+2}$ is defined as one for observations from the IFRS countries and with fiscal year ends in or after year $t+2$ (>= Month 24). Month 0 is defined as the calendar month of the mandatory adoption date. Control variables are as defined Table 3 and coefficients are omitted for brevity. This panel also reports *p*-values of comparing coefficients on event window indicators. Standard errors are clustered at the country level. Year and firm fixed effects are included in all regressions. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***All non-adopters from non-IFRS countries***					
	CEO&CFO	**CEO&CFO**	**CEO**	**CEO**	**CFO**	**CFO**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
$Pre\_IFRS_{t-2,\ t-1}$	0.050**	0.032	0.033	0.024	0.069**	0.035
	(2.05)	(1.06)	(1.25)	(0.60)	(2.05)	(1.60)
$Post\_IFRS_{t,\ t+1}$	0.107**	0.091**	0.090**	0.084*	0.127**	0.097***
	(2.59)	(2.44)	(2.23)	(1.91)	(2.53)	(2.83)
$Post\_IFRS_{>=t+2}$	0.170***	0.158***	0.150**	0.144**	0.201***	0.160***
	(3.14)	(3.14)	(2.30)	(2.34)	(4.32)	(3.92)
F-test [p-value]:						
$Post\_IFRS_{t,\ t+1}=Pre\_IFRS_{t-2,\ t-1}$	[0.09]	[0.03]	[0.08]	[0.02]	[0.11]	[0.03]
$Post\_IFRS_{t,t+1}=Post\_IFRS_{t>=2}$	[0.16]	[0.02]	[0.22]	[0.08]	[0.08]	[0.00]
$Post\_IFRS_{>=t+2}=Pre\_IFRS_{t-2,t-1}$	[0.04]	[0.01]	[0.06]	[0.02]	[0.02]	[0.00]
Year Fixed Effects	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	Y	N	Y	N
Country Fixed Effects	Y	N	Y	N	Y	N
Firm Fixed Effects	N	Y	N	Y	N	Y
N	70,691	70,691	42,966	42,966	27,725	27,725
Adj. R-squared	76.5%	89.3%	76.9%	91.7%	75.5%	89.5%

Table 10: Canada vs. US executives

This table reports our difference-in-differences results on natural logarithm of executive cash pay and one plus equity pay using Canadian firms as the treatment and US firms as the control. Equity pay includes restricted stock grants and stock options. All compensation measures are in 2005 constant US dollars. We exclude financial firms (SIC 6000-6999) and utilities firms (two-digit SIC 49). We also limit the sample period to 2009-2012. *Post_IFRS* is defined as one for observations from the IFRS countries and with fiscal year ends on or after mandatory adoption date, and zero otherwise. Control variables are as defined in Table 3. Standard errors are clustered at the firm level. All continuous variables are Winsorized at the 1st and 99th percentiles. ***, **, and * indicate significance (two-sided) at 1%, 5%, and 10% levels, respectively.

Benchmark =	***Canada vs. US (2009-2012) Ex. financial and utilities firms***			
Dep. Var.=	***Log(Cash Pay)***		***Log(1+Equity Pay)***	
	(1)	**(2)**	**(3)**	**(4)**
Post_IFRS	**0.031**	**0.062*** **	**0.515** **	**0.355**
	(1.26)	**(2.79)**	**(1.97)**	**(1.32)**
Log(Sales)	0.273***	0.185***	0.636***	0.166
	(34.84)	(6.59)	(12.65)	(0.65)
MTB	0.007*	0.004	0.098***	0.088***
	(1.78)	(1.32)	(3.98)	(2.74)
ΔROA	0.338***	0.314***	-0.492	-0.383
	(6.27)	(7.03)	(-1.06)	(-0.78)
ΔROA × Post_IFRS	-0.273*	-0.364***	2.266*	2.687*
	(-1.82)	(-3.96)	(1.70)	(1.76)
Return	0.084***	0.068***	0.105	-0.079
	(8.21)	(7.41)	(1.07)	(-0.71)
Return × Post_IFRS	0.012	0.037	-0.012	0.271
	(0.28)	(1.02)	(-0.03)	(0.68)
Leverage	0.084	-0.211***	0.659	-1.313
	(1.30)	(-2.62)	(1.33)	(-1.51)
Return Vol.	-0.536***	-0.508***	0.267	0.628
	(-4.66)	(-5.09)	(0.28)	(0.51)
Inst. Own%	0.295***	0.162**	3.827***	1.563*
	(5.75)	(2.13)	(9.04)	(1.92)
Insider Own%	-0.170***	-0.073**	-2.895***	-0.111
	(-3.65)	(-2.09)	(-6.22)	(-0.21)
Tenure	0.005**	0.010***	-0.041**	-0.011
	(2.03)	(3.68)	(-2.10)	(-0.54)
CEO Indicator	0.713***	0.711***	0.665***	0.615***
	(62.42)	(58.72)	(9.06)	(8.69)
Exchange Rate	0.110	0.178	4.400	1.374
	(0.30)	(0.61)	(1.05)	(0.31)
Log(GDP)	-3.340**	-1.182	21.133	8.273
	(-1.98)	(-0.81)	(1.09)	(0.40)
Year Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	N	Y	N
Country Fixed Effects	Y	N	Y	N
Firm Fixed Effects	N	Y	N	Y
N	11,243	11,243	11,243	11,243
Adj. R-squared	72.7%	86.9%	30.8%	57.9%