

**SECRECY AND MANDATORY IFRS ADOPTION ON  
EARNINGS QUALITY**

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Noor Houqe, Reza M. Monem &  
Mohammad Tareq, Tony van Zijl

Correspondence to: Noor Houqe  
Email: Noor.Houqe @vuw.ac.nz

*Centre for Accounting, Governance and Taxation Research  
School of Accounting and Commercial Law  
Victoria University of Wellington  
PO Box 600, Wellington, NEW ZEALAND*

**Tel:** + 64 4 463 5078  
**Fax:** + 64 4 463 5076  
**Website:** <http://www.victoria.ac.nz/sacl/cagtr/>

# **Secrecy and Mandatory IFRS Adoption on Earnings Quality**

**Muhammad Nurul Houqe**

Victoria Business School

Victoria University of Wellington, New Zealand

**Reza M. Monem**

Griffith Business School

Griffith University, Australia

**Mohammad Tareq**

School of Accounting

RMIT University, Australia

**Tony van Zijl**

Victoria Business School

Victoria University of Wellington, New Zealand

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## Secrecy and Mandatory IFRS Adoption on Earnings Quality

### Abstract

This study examines the effect of mandatory IFRS adoption on earnings quality in countries which exhibit high financial secrecy. Earnings quality is proxied by signed abnormal accruals and earnings conservatism. Using 19,324 firm-years from 14 countries over the period 1998-2011, we find that firms in a high-secrecy country tend to report higher abnormal accruals and earnings conservatism, which results in lower earnings quality. On the other hand, we find that mandatory IFRS adoption improves earnings quality by decreasing abnormal accruals and earnings conservatism. Our study provides evidence of the interaction between national culture, as indicated by secrecy, and IFRS adoption and helps to explain differences in earnings quality across different jurisdictions following IFRS adoption.

**Key Words:** *Earnings quality; national culture; secrecy; mandatory IFRS adoption; signed abnormal accruals; earnings conservatism*

## **Secrecy and Mandatory IFRS Adoption on Earnings Quality**

### **1. Introduction**

As of November 2014, over 120 jurisdictions/countries around the world have adopted International Financial Reporting Standards (IFRS) in one form or another (Delloite, 2014). Obviously, all these countries/jurisdictions have different cultures and institutional settings. Ball, Robin and Wu (2003) and Ball (2006) suggest that differences in institutional environments are likely to lead to differences in quality of financial reporting even though the same accounting standards were applied to all countries. Specifically, there is mixed evidence on the quality of financial reporting following IFRS adoption. While several studies document improved earnings quality following IFRS adoption (e.g., Barth, Landsman and Lang, 2008; Leuz, Dhananjay and Wysocki, 2003), others provide evidence of either no improvement or decline in earnings quality (e.g., Gebhardt and Novotny-Farkas, 2011; Jeanjean and Stowlowy, 2008).

In this paper, we investigate the effect of national culture, as indicated by secrecy, on earnings quality following IFRS adoption. In particular, we explore whether mandatory IFRS adoption has any impact on earnings quality in countries with high financial secrecy. Our study is motivated by strong evidence that culture plays an important role in financial reporting choices and quality (Callen, Morel and Richardson, 2010; Desender, Castro and Leon, 2011; Douppnik and Perera, 2009; Feleaga, Dragomir and Fleaga, 2010; Gray and Vint, 1995; Salter and Niswander, 1995). Given the vast majority of the countries that have adopted IFRS have diverse national cultures (in addition to other institutional differences), it is likely IFRS adoption will not have the same effect on earnings quality across all the adopting countries. We are also motivated by lack of any evidence on the interaction between national culture and IFRS adoption. Our study is likely to inform the debate why earnings quality varies across countries that have adopted IFRS.

We analyse 19,324 observations across 14 countries over the period 1998-2011. We measure earning quality in two ways: magnitude of abnormal accruals and earnings conservatism. Our measure of financial secrecy is based on the financial secrecy index (FSI) of National Tax Justice Network (2011). In signed abnormal accruals analysis, we find that signed abnormal accruals are higher in countries with high financial secrecy suggesting higher earnings management. However, the interaction between mandatory IFRS adoption and financial secrecy is negative. This result suggests that the effect of financial secrecy on earnings quality is mediated by mandatory IFRS adoption. We find similar results in earnings conservatism analysis. The relation between secrecy and earnings conservatism is positive while the relation between mandatory IFRS adoption and earnings conservatism is negative. Moreover, the interaction between IFRS adoption and financial secrecy suggests that mandatory IFRS adoption improves earnings conservatism. Our results are robust to several sensitivity tests, including alternative measures of secrecy, alternative measures of investor protection and alternative sample compositions.

Our study makes a single but important contribution to the cross-country literature on IFRS adoption. Specifically, our study provides evidence of how IFRS adoption can have differential impact on earnings quality depending on national culture, as indicated by the level of financial secrecy. Although the differential impact of IFRS adoption on earnings quality due to differences in institutional environments such as investor protection and enforcement of accounting standards have been documented, our study is the first one to document an interaction between IFRS adoption and national culture.

The remainder of our paper is organized as follows. We set out the theoretical framework and background in section 2 and hypothesis development in section 3. In section 4, we present research design and sample selection process and results in section 5. Finally, our conclusion is in section 6

## **2. Theoretical framework and hypotheses**

Many researchers have addressed issues related to the importance of macro level factors and their impact on economic activity. Macro level factors include investor protection, taxation system, judiciary independence and the legal system, the financing system and national culture. Several studies report that the legal regime of a country can influence the financial disclosures or accounting quality (Ball, Kothari and Robin, 2000; Jaggi and Low, 2000). Investor protection regime is also a factor influencing on earnings quality because lower earnings quality is less likely to occur in countries with stronger investor protection. For example, Hung (2000), using 17,743 firm year observations across 21 countries, finds that there is a negative relation between accrual accounting and the value relevance of financial statements in countries with weak investor protection regime. In addition, Leuz, Nanda and Wysocki (2003) using data from 31 countries show that countries with ‘arm’s length’ institutional features have lower levels of earnings management than do countries with ‘insider’ institutional characteristics.

Teets (2002) argues that earnings quality is a multidimensional concept affected by at least three sets of decisions: decisions made by standard setters, choices made by management by which accounting methods should be chosen, and judgments and estimates made by management to implement the chosen alternatives. In order to evaluate earnings quality, prior studies consider factors such as the magnitude of signed abnormal accruals (Francis and Wang, 2008; Houque et al. 2012 and earnings conservatism (Givoly and Hayn, 2000; Artiach and Clarkson, 2012). Therefore, in this study we use two proxies for earnings quality, namely signed abnormal accruals and earnings conservatism. DeFond and Park use abnormal accruals measure and find a higher earnings response coefficient when abnormal accruals suppress the magnitude of earnings surprises, and lower earnings response coefficient when abnormal accruals exaggerate the magnitude of earnings surprise. Francis

and Wang (2008) also use signed abnormal accruals analysis to detect the relation between investor protection and earning quality. Jeter and Shivakumar (1999) investigate the effectiveness of using estimating abnormal accruals in detecting event-specific earnings management. They find that the power of accruals models in detecting event-specific management varies across quarters depending on managerial incentives and opportunities for earnings management. In addition, earnings conservatism is a good indicator for earnings quality. LaFond and Watts (2007) argue that information asymmetry between inside and outside investors creates conservatism in financial statements. Moreover information asymmetry is significantly positively associated with conservatism after controlling for other demands for conservatism. Thus, conservatism reduces manager's incentives to manipulate accounting numbers and reduces information asymmetry, which increases earnings quality.

### **2.1. Culture and earnings quality**

National culture is considered to be a factor that influences the accounting system of a country. Hofstede (1980) found four cultural dimensions that can be used to describe the similarities and differences in cultures: individualism, power distance, uncertainty avoidance and masculinity. Based on Hofstede's cultural dimensions, Gray (1988) defined four widely recognized accounting values; these are professionalism, uniformity, conservatism and secrecy. He developed a model about the relation between Hofstede's cultural dimensions and accounting sub-culture and argued that there is a relationship between culture and accounting values.

Several studies have examined Gray's model and the relationship between Hofstede's culture value and national accounting systems. Salter and Niswander (1995) tested Gray's model and found it best at explaining actual financial reporting practices but weak in explaining legal and professional structures. Furthermore, they showed that the development of financial markets and levels of taxation enhance the explanations offered by Gray (1988).

Sudarwan and Fogarty (1996) showed that there is a relation between change in culture values and change in accounting. In addition, Gray and Vint (1995) tested the effect of culture on accounting information disclosure and found strong relations between societies' culture value (uncertainty avoidance and individualism) and accounting information disclosure.

Desender et al. (2011) hypothesize that countries with higher levels of individualism or egalitarianism have lower levels of earnings quality; they also test the other cultural dimensions as part of the robustness analysis. They find evidence that various cultural groups have significant differences in earnings management. In particular, they find that individualism is highly significant and negatively related with earnings management whereas egalitarianism correlates positively with lower corruption and greater transparency in financial markets.

Accounting is clearly affected by organizational and national culture (Asiyaban and Abdoli, 2012). For example, Jaggi and Low (2000) research the impact of culture, market forces, and legal system on financial disclosures. They find that the relationship between the cultural value of individualism and financial disclosures is significant for code law countries but that uncertainty avoidance and power distance have insignificant effects on financial disclosure in both common law and code law countries. Given that the level of financial disclosure by firms in common law countries is higher than that in code law countries the influence of cultural values on financial disclosures by firms will be less important in common law countries. A few cross-country studies investigate the relation between culture and earnings quality as well as earnings management. Callen et al. (2011) use cross-country data to research the impact of culture and religion on earnings management. They find that earnings management is negatively and significantly related to individualism and positively related to uncertainty avoidance. This is consistent with the research of Richardson (2008).

Based on data from 47 countries and after controlling for economic development, Richardson indicates that the higher the level of uncertainty avoidance and the lower level of the individualism, the higher is the level of tax evasion across countries. In addition, Tsakumis, Curatola and Porcano (2007) investigate the relation between national cultural dimensions and tax evasion across 50 countries and find that uncertainty avoidance is positively associated with tax evasion levels. Higher individualism is associated with lower tax evasion across countries.

However, the impact of culture on earnings quality is still debatable because of mixed empirical evidence. Han, Kang, Slater and Yoo (2010) observe that earnings management decreases (increases) with uncertainty avoidance in weak (strong) investor protection countries. Furthermore, there is evidence that there is more earning management in individualistic societies than in collective societies; individualism has greater influence on earnings management in strong investor protection regimes, which is in contrast to the results of Callen et al. (2011). Guan and Pourjalali (2010) examine the possible impact of cross-country differences in culture on earnings management in 27 countries. The results indicate that uncertainty avoidance affects the direction of earnings management downwards; the higher the values of individualism, the higher the magnitude of earnings management. The mixed findings documented by studies highlight that the effect of national culture on earnings quality can vary across different countries.

## **2.2. IFRS adoption and earnings quality**

The aim of the International Accounting Standards Board (IASB) is to develop a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles (IASB, 2012). Armstrong, Barth, Jagolinzer and Riedl (2010) investigate the equity market reaction to adoption of IFRS in Europe. The

results show that European investors and firms reacted positively to the adoption of IFRS and information quality improved with lower information asymmetry in the post-adoption period.

The adoption of a common set of accounting standards improves earnings quality because IFRS reporting increases transparency. Additionally, financial statement comparability helps investors to evaluate potential investment in foreign capital market more easily and, therefore, risk is reduced (Doupnik & Perera, 2009, p.71). One set of global accounting standards would reduce the cost of preparing worldwide consolidated financial statements and the cost of reconciliation between different standards (Doupnik & Perera, 2009, p.71). Horton, Serafeim and Serafeim (2010) test for differences in forecast errors before and after the IFRS mandatory compliance. They find that IFRS improves the information environment. Specifically, after mandatory IFRS adoption, forecast accuracy and other measures of the information environment increase significantly. Similarly, for voluntary adoption. Another advantage of IFRS adoption is to increase market liquidity and decrease cost of capital for firms (Daske, Hail, Leuz and Verdi, 2008). However, Daske et al. (2008) point out that the capital- market benefits occur only in countries with strong enforcement regimes and in countries where the institutional environment provides strong incentives to firms to be transparent. Although the adoption of IFRS eliminates national accounting differences in these countries, the earnings quality remain different in each country (Houque et al. 2012). This is so because culture, legal system and other factors can lead to different interpretations of standards and different levels of compliance across countries, leading to the incompatibility in financial statements (Doupnik and Perera, 2009, p.105).

Research by Liu, Yao, Hu and Liu (2011) considers the impact of IFRS on accounting quality in China. China is a special case where the markets are disciplined mainly by the regulators rather than market mechanisms. Using a sample of 870 firms over the 2005 to

2008 period, Liu et al. (2011) find that accounting quality is improved after the mandatory adoption of IFRS-convergent standards in China with decreased level of earnings management and earnings smoothing and increased value relevance to stock price and return. Chua, Cheong and Gould (2012) examine the impact of IFRS adoption on accounting quality in the context of the Australian capital market by focusing on earnings management, timely loss recognition and value relevance. Chua et al. (2012) find that the mandatory adoption of IFRS has generally enhanced earnings quality, especially in the form of less earnings smoothing behaviour. In addition, there is a higher probability that larger losses are reported in the post-adoption period than in the pre-adoption period; the value relevance of accounting data improved after IFRS adoption. All of the results support that there is an improvement in accounting quality after Australian listed companies moved from Australian GAAP to IFRS.

After the adoption of IFRS, the quality of earnings reported by Malaysian companies is relatively higher than before the adoption (Wan Ismail, Kamarrudin, van Zijl & Dunstan, 2012). Using 4010 observations over total six years, the results show that adoption of IFRS increases earnings quality. Specially, the absolute value of abnormal accrual is lower and the value-relevance of firm's earnings is higher after the adoption of IFRS. Evans, Houston, Peters and Pratt (2012) asked experienced financial officers from the U.S, Europe and Asia to participate in a web-based case exercise to compare allowable earnings management under GAAP and IFRS. They find that financial officers under IFRS receive more allowable reporting discretion than those under GAAP but there is no evidence that IFRS leads to a greater likelihood of earnings management relative to GAAP. Thus reporting regulatory environments allowing high levels of reporting discretion do not lead to more earning management but allow management to substitute accounting earning management for real earnings management (Evans et al. 2012). Contrary to above studies, Jeanjean and Stolowy (2008) analyse the effect of the mandatory introduction of IFRS on earnings management in

three first time adopters: France, Australia and the UK. Surprisingly, the pervasiveness of earnings management did not decline after the introduction of IFRS, in fact went up in France. They explain that management incentives and national institutional factors play an important role in framing financial reporting characteristics, probably more important than accounting standards alone.

### **3. Hypothesis development**

Secrecy versus transparency reflects “a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open, and publicly accountable approach” (Doupnik and Perera, 2009, p.41). Gray (1988) argues that the accounting values of secrecy and conservatism have the greatest relevance for information disclosure in financial statements. In addition, he hypothesizes that a preference for secrecy is consistent with high level of uncertainty avoidance and power distance and the low level of individualism and masculinity. Doupnik and Perera (2009) suggest that secrecy and conservatism have a strong positive relation. Specifically, countries with high secrecy are expected to more strictly adhere to the notion of conservatism (high conservatism) in the measurement of assets and liabilities (Doupnik & Perera, 2009, p.43). Thus we draw on the relation between cultural dimensions such as power distance, uncertainty avoidance, individualism and masculinity and earning management to hypothesize the relation between secrecy and earnings quality.

The relationship between cultural values and earnings management is a significant topic in accounting literature although it is unclear whether the relationship between them is positive or negative. Nabar and Boonlert-U-Thai (2007) show that earnings management is relatively high in countries with high uncertainty avoidance scores and relatively low in countries where English is the primary language. They conclude that culture is an important

determinant of accounting choice and should be considered by standards setters enacting and enforcing international financial reporting rules.

Moreover, Callen et al. (2010) use a cross-country data set, the updated values of the Hofstede (1980, 1991) and cultural variables developed by Tang and Koveos (2008) to find that earnings management is negatively related to the updated Hofstede (1980) cultural variable of individualism and positively related to uncertainty avoidance.

Kang, Lee, Jeffrey NG and Tay (2004) examine the relation between culture and accounting conservatism and show that managers from more conservative cultural environments tend to report lower estimates for future cash flows, which means managers tend to create more conservative accounting choices. Moreover, cultural conservatism has more influence on managers' conservative accounting choices in code law countries where accounting is less conservative than in common law countries. Kang et al. (2004) suggest that culture and legal regimes can largely be viewed as substitutes in explaining managers' conservative accounting choices. Similarly, Feleaga, Dragomir and Feleaga (2010) indicate that companies in 'conservative' countries do assign a significantly higher degree of uncertainty to their total amount of liabilities. This means that managers in 'conservative' countries do produce more conservative accounting. Countries with high conservatism are expected to have high secrecy (Doupnik and Perera, 2009) thus the above results can be interpreted as firms in high secrecy countries have more accounting conservatism.

The above discussion leads to the following hypothesis:

***Hypothesis 1.*** *There is negative relationship between secrecy and earnings quality.*

Prior studies on IFRS adoption try to understand the relation between mandatory IFRS adoption and earnings quality (Armstrong et al. 2010; Horton et al. 2010; Liu et al. 2011; Chua et al. 2012). Arguments suggest that the adoption of mandatory IFRS has small or negligible effects on earning quality. Houque et al. (2012) find that IFRS adoption per se

does not lead to increased earnings quality. However, there is evidence that earnings quality increase with IFRS adoption in countries with strong investor protection regimes via less earnings management, greater value relevance and greater earnings conservatism. Soderstrom and Sun (2008) review the impact of widespread IFRS adoption in the European Union on accounting quality. They argue that cross- country differences in accounting quality are likely to remain following IFRS adoption because accounting quality is a function of the firm's institutional setting, including the legal and political system of the country in which the firm resides.

Tendeloo and Vanstraelen (2005) use 636 firm year observations for the period 1999-2001 in Germany to investigate whether there are changes in earnings management between IFRS adopters and the companies reporting under German GAAP. The results suggest that IFRS does not impose a significant constraint on earnings management. Interestingly, without the possibility of using hidden reserves to manage earnings, companies adopting IFRS engage more in earnings smoothing but this effect reduces if the company has a Big 4 auditor. However, taking into account hidden reserve, IFRS adopters show no difference in earnings management behaviour compared to others. Tendeloo and Vanstraelen (2005) conclude that the adoption of high quality standards is not a sufficient condition for acquiring high quality information in code law countries with a low investor protection regime such as Germany. Callao, Jarne and Lainez (2007) investigate the effects of IFRS on comparability and the relevance of financial statements in Spain by comparing financial information under Spanish and IFRS rules. The analysis reveals that Spanish firms applying IFRS continue to provide conservative financial information; local comparability is adversely influenced if both IFRS and local accounting standards are applied at the same time. This study found no improvement in value relevance after IFRS adoption.

In contrast with the above studies, Barth, Landsman and Lang (2008) compare accounting quality metrics for firms applying IFRS to those applying non-US domestic standards in the post-adoption period. The results show that firms applying IFRS have less earnings management, more timely loss recognition, and more value relevance of accounting amounts than firms not applying IFRS. Moreover, the firms applying IFRS have higher accounting quality in the post-adoption period than they do in the pre- adoption period.

Piot, Dumontier and Janin (2011) use a database of more than 5000 IFRS adopters from 22 Europe (EU) countries over the period 2001- 2008 to measure IFRS consequences on accounting conservatism within EU. They find that conditional conservatism decreased under IFRS for mandatory adopters as proxied by the asymmetric timeliness of earnings while unconditional conservatism is higher under IFRS in the presence of a Big 4 auditor. Lu (2012) investigated how accounting conservatism changes after mandatory IFRS adoption. Accounting conservatism will decrease if investors expect higher financial reporting quality under mandatory IFRS adoption but accounting conservatism will increase if investors expect accounting numbers to be less verifiable. To maintain financial reporting as a source of reliable information, firms improve the level of accounting conservatism. The study finds that the level of accounting conservatism decreases after mandatory IFRS adoption.

Although the results are mixed we posit the following hypothesis:

***Hypothesis 2.*** *There is a positive relationship between IFRS adoption and earnings quality.*

Some researchers argue that accounting does not operate in a vacuum: it is ‘a product of its environment’ (Armstrong et al. 2010). One important factor in the environment is culture and thus differences in culture can have a significant impact on financial disclosures. Therefore, this study argues that culture and mandatory IFRS adoption will have a joint effect on earning quality. For example, Douppnik and Riccio (2006) suggest that national cultural values can affect accountants’ interpretation of probability expressions used in IFRS, and as a

result, differences in cultural values across countries could lead to differences in recognition and disclosure decisions based on those interpretations. They obtain strong support for that. Through culture's influence on the accounting value of secrecy, culture affects the interpretation of verbal probability expressions used to establish the threshold for when disclosures should be made

Many researchers question the success of IFRS when there are several factors such as investor protection, securities regulation and culture affecting financial report preparers' incentives. Narktabtee and Patpanichchot (2011) examine the impact of country- level and firm- level factors on the effectiveness of IFRS adoption by evaluating the change in value relevance of earnings and book value of equity during pre- and post- IFRS adoption. The result indicates that the adoption of IFRS improves value relevance in all cases except the case where investor protection is weak and firms have characteristics which allow managers to use managerial discretion. Therefore, there is evidence that country- level and firm- level have effect on the effectiveness of IFRS adoption. In this study, we argue that the effect of IFRS adoption on earnings quality depends on culture, as indicated by the secrecy level.

In the view of prior studies, our expectation is that a high level of secrecy discourages managers to share information with outside investors and creates information asymmetry. However, the adoption of high-quality standards mitigates the negative effect of secrecy and improves earnings quality. We develop the following hypothesis to test the joint effect of secrecy and IFRS adoption on earnings quality:

***Hypothesis 3.** Earnings quality improves following IFRS adoption in high-secrecy countries compared to other countries.*

#### **4. Research design**

##### **4.1 Macro- level variables**

Instead of applying Hofstede–Gray’s model, we use a different proxy for secrecy- the Financial Secrecy Index (FSI) obtained from the U.S. Tax Justice Network (2011). The index was introduced in an effort to understand global financial secrecy, corruption and illicit financial flows. FSI is a comprehensive indicator of secrecy which comprises of both qualitative and quantitative measurements. Instead of combining only three dimensions as in Gray’s model, the qualitative side of FSI considers laws, regulations, cooperation with information exchange process, and other verifiable data sources (Tax Justice Network, 2011). Quantitatively, a global score of secrecy is computed based on each jurisdiction’s share of offshore financial services. Countries are then classified as either a High Secrecy country or a Low Secrecy country based on their Secrecy Score. Countries with a Secrecy Score above 50 are said to be in a High Secrecy jurisdiction. And those with scores equal and below 50 are categorized as a Low Secrecy jurisdiction.

Our study examines whether the quality of reported earnings is influenced by the degree of secrecy. Earnings quality is lower in countries with a high secrecy level because disclosure level is low and the secrecy level impacts the interpretation of probability expressions used in IFRS and thus leads to more accounting conservatism. In a cross-country study, the macro level factors also need to be considered because culture and accounting quality depend on these factors.

We use the World Economic Forum (2011) data for all measures of macro-level variables. We use five country-level variables; these are judiciary independence, protection of minority shareholders’ interests, regulation of securities exchange, irregular payments and bribes and financing through local equity market. Judicial independence is the idea that the judiciary needs to be kept separate from and independent of influences by other branches of government, citizens, or firms (World Economic Forum, 2012). Our measure of judicial independence ranges from 1 to 7, where 1 signifies heavily influenced and 7 signifies entirely

independent. Strong judicial independence is an indicator for competitive advantage of a country. However, it does not guarantee that a country with strong judicial independence has effective enforcement of accounting regulation. In prior research, Houque et al. (2010) use judicial independence to examine the investor protection environment. The legal rules create features of a country's structure of corporate ownership and finance (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1998). If a country with low judicial independence chose to have only bank financing of firms then the country will adjust its laws accordingly to give better protection to banks potentially at the expense of shareholders' interest (La Porta et al, 1998). In this case, the disclosure requirements can be limited leading to lower quality of accounting information.

The second country-level variable is protection of minority shareholders' interests. In particular, it measures the extent to which there is protection for the rights of outside investors against errant and manipulative management of inside investors through corporate law. More protection of minority shareholders' interest eliminates the opportunistic behaviour of managers and owners; therefore, the quality of accounting disclosure will be improved. Prior research shows that countries with strong protection of minority shareholders' rights limits insiders' ability to acquire private benefits and reduces incentives to corrupt accounting practices (Leuz et al. 2003; Francis and Wang, 2008). Boonlert-U-Thai, Meek and Nabar (2006) find that earnings are less smooth in countries whose institutional characteristics are strong. Moreover, Francis, Khurana and Pereira (2003) document that financial disclosure are more transparent and national accounting standards require timelier reporting in a country with stronger investor protection. They also find evidence that higher quality standards and the enforcement of these standards is more likely exist in countries with strong investor protection. Therefore, strong protection of minority shareholders' interests is associated with high quality accounting information (Hung, 2001).

Regulation of securities exchange measures the ability of investors to assess the regulation and supervision of securities exchanges in countries (World Economic Forum, 2012). Hail and Leuz (2006) show that the effectiveness of securities regulation has negative effects on the cost of equity capital. Effective security regulation requires firms to have certain disclosure levels and thus information asymmetries are limited (Hail and Leuz, 2006). Securities regulation can be measured by the disclosure requirement index and enforcement (La Porta, Lopez- de-Silanes and Shleifer, 2006). Specifically, disclosure requirements reveal disclosure in the areas of prospectus, compensation, shareholders, inside ownership, contracts irregular and transactions (La Porta et al, 2006). Public enforcement indicates the market supervisor power, rule- making power and investigative power (La Porta et al, 2006). In our research we use the measure of World Economic Forum. The index is scaled from 1 to 7 where 1 indicates that regulation of securities exchange is ineffective and 7 indicates that the regulation is effective.

Irregular payments and bribes is the idea of how common it is for firms in a country to make undocumented extra payments or bribes connected with (1) imports and exports, (2) annual tax payments, (3) public utilities, (4) awarding of public contracts and licenses, (5) obtaining favourable judicial decisions (World Economic Forum, 2012). The final macro-level variable that is considered in the research is financing through the local equity market which indicates the extent to which a company can raise money by issuing shares on the stock market; it is an indicator of the efficiency of the financial market. Other indicators include availability of financial services, affordability of financial services, ease of access to loans and venture capital availability. The development of financial markets creates opportunity for companies to raise funds but it also has certain requirements, restrictions and guidelines to maintain the integrity of the financial system. Francis et al. (2003) find that

higher quality accounting and auditing are positively related with financial development in countries whose legal systems support protection of investors.

#### **4.2 Sample selection.**

Company financial data for the period 1998 to 2011 was obtained from the Bloomberg Database. We excluded firm-year observations with missing values on dependent and independent variables. In addition, following prior research (Jaggi and Low, 2011; Francis and Wang, 2008) we delete financial institutions such as banks and insurance companies (Standard Industrial Classification (SIC) 6000- 6999). We also exclude observations with any variables registering in the top or bottom 0.5% of the range of the variables in order to mitigate the effect of outliers. Finally, we drop observations with the absolute value of studentized residuals greater than 3 in the abnormal accruals analysis and in the accounting conservatism analysis. As a result of this selection process our sample consists of 19,324 firm year observations from 14 countries for the period 1998- 2011. The sample selection process is summarized in table 1.

**[Insert Table 1 here]**

#### **4.3 Signed abnormal accruals analysis**

Larger unexpected abnormal accruals imply greater management earnings and lower earnings quality; thus, abnormal accruals are a good indicator of earning quality of financial reporting. Several studies have used signed abnormal earnings as the measure of earnings quality (Houqe et al. 2012; Francis and Wang, 2008). In this research we use signed abnormal accruals rather than absolute abnormal accruals for two reasons. Firstly, the use of managerial manipulation to increase reported earnings is the main focus of the research. In addition, there is evidence that signed abnormal accruals give a better measure of earnings quality than the unsigned value of abnormal accruals (Hribar and Nichols, 2007).

Jones (1991) explains working capital accruals and depreciation as a function of sales growth and property, plant and equipment but her model only explains about 10% of the variation in accruals (Dechow, Ge and Schrand, 2010). Dechow, Sloan and Sweeney (1995) modify the Jones model to adjust for growth in credit sales, increasing the power of the model to yield a residual that is uncorrelated with expected revenue accruals and detecting revenue manipulation (Dechow, Ge and Schrand, 2010). However, the modified model still contains the same limitations as the Jones model. In order to avoid that problem, Francis and Wang (2008) suggest applying a linear expectation model adapted from DeFond and Park (2001) that uses a firm's own prior year accruals in calculating the expectation benchmark. This model has several advantages. Firstly, the model limits cross-country differences in accounting principles by using a firm as its own control to identify abnormal accruals. Moreover, the model performs reliably in international settings (Francis and Wang, 2008). Thus, using the DeFond and Park (2001) model, our predicted accruals are measured as follows:

Predicted accruals=

$$\frac{\left[ \text{Sales year } t \times \left( \frac{\text{current accruals in year } t-1}{\text{sales in year } t-1} \right) \right] - \left[ \text{gross PPE in year } t \times \left( \frac{\text{depreciation in year } t-1}{\text{gross PPE in year } t-1} \right) \right]}{\text{total assets year } t-1} \quad (1)$$

Total accruals = (Earnings before extraordinary items- operating cash flows)/ total assets

Abnormal accruals then are calculated as the firm's actual total accruals in year  $t$  minus predicted total accruals for year  $t$ .

Model (2) below tests whether signed abnormal accruals are affected by financial secrecy and IFRS adoption after accounting for a set of firm-level controls that may affect accruals.

$$Ab\_Accruals_{it} = \beta_0 + \beta_1 SEC + \beta_2 IFRS + \beta_3 SEC * IFRS + \beta_4 INV + \beta_5 LN\_SALES_{it} + \beta_6 F\_LEV_{it} + \beta_7 S\_GWTH_{it} + \beta_8 \Delta PPE_{it} + \beta_9 CFO_{it} + \beta_{10} LAGLOSS_{it} + \text{fixed effects}$$

Where,

$Ab\_Accruals$  = is the signed abnormal accruals of firm  $i$  in year  $t$

<i>SEC</i>	= is the Financial Secrecy Index from Tax Justice Network (2011).
<i>IFRS</i>	= takes the value of 1 for a given firm <i>i</i> in year <i>t</i> adopted IFRS mandatory basis and 0, otherwise.
<i>INV</i>	= is the investor protection measured by five proxies
(i) <i>JUD</i>	= is the judicial independence scores from World Economic Forum (2011)
(ii) <i>MIN</i>	= is the protection of minority shareholders' interest scores from World Economic Forum (2011)
(iii) <i>RSE</i>	= is the regulation of securities laws scores from World Economic Forum (2011)
(iv) <i>IIPB</i>	= is the irregular payment and bribes scores from World Economic Forum (2011)
(v) <i>FTEM</i>	= is the financing through local equity market scores from World Economic Forum (2011)
<i>LN_SALES</i>	= is natural logarithm of total sales of firm <i>i</i> in year <i>t</i> .
<i>F_LEV</i>	= total long term debt divided by shareholders' equity of firm <i>i</i> in year <i>t</i> .
<i>S_GWTH</i>	= is the sales growth rate, defined as the sales in year <i>t</i> minus sales in year <i>t-1</i> and divided by sales year <i>t-1</i>
<i>ΔPPE</i>	is the growth rate of gross PPE, defined as the gross PPE in year <i>t</i> minus the gross PPE in year <i>t-1</i> and scaled by the gross PPE in year <i>t-1</i>
<i>CFO</i>	= is the operating cash flows for firm <i>i</i> in year <i>t</i> scaled by total assets.
<i>LOSS</i>	= takes the value of 1 if firm <i>i</i> in year <i>t</i> reports negative income before extraordinary items and 0 otherwise.
Fixed effects are	
(i) Industry dummies	= a vector of dummy variables indicating industry sector membership.
(ii) Year dummies	= a vector of dummy variables indicating year.

The coefficients of primary interest are:  $\beta_1$ ,  $\beta_2$  and  $\beta_3$ . The secrecy variable captures the effect of secrecy level on firms; the IFRS variable shows the relation between IFRS adoption and signed abnormal accruals. Moreover,  $\beta_3$ , the coefficient on the interaction term measures the joint effect of secrecy and IFRS adoption on accruals. If  $\beta_3$  is negative and significant, there is evidence that IFRS adopters have higher earnings quality than non-IFRS adopters in country with high level of secrecy.

The control variables are included based on prior research (Houque et al. 2012; Francis and Wang, 2008). Company size (*LN\_SALES*) is controlled because it has negative relation with accruals (Klein, 2002). Dechow and Dichev (2002) show accruals as a function of

current, past and future cash flows and find that smaller firms have more volatile cash flows, accruals and earnings and are likely to report a loss. Klein (2002) points out that leverage ( $F\_LEV$ ) is positively related to accruals thus we control the variable for leverage. Following the prior studies (Francis, LaFond, Olsson and Schipper, 2005; McNichols, 2002; Houque et al. 2012), we add growth in sales and PPE to the model of normal accruals. These variables can affect yearly accruals if the association between accruals and the accruals drivers (sales and gross PPE) is nonlinear (Francis and Wang, 2008).

#### **4.4 Earnings conservatism**

Conservatism is an important convention in accounting but it is difficult to measure. Givoly and Hayn (2000) argue that conservatism is a selection criterion between accounting principles that leads to the minimization of cumulative reported earnings by deferring revenue recognition, recognizing all probable expenses, lower asset valuation and higher liability valuation. They thus suggest using the sign and magnitude of accumulated accruals as an empirical measure to gauge the degree of accounting conservatism. Moreover, the rate of accumulation of net negative accruals is an indication of the shift in the degree conservative accounting (Givoly and Hayn, 2000). In our research, we examine the level of accounting conservatism resulting from both mandatory and discretionary policy choices before and after IFRS adoption. Therefore, in our view, the Artiach and Clarkson (2011) measure is the most suitable proxy to capture discretionary conservatism. We focus on non-operating accruals because non-operating accruals consist of accruals arising from managerial action resulting from accounting regulations and accruals arising from managerial discretion in the timing and amount of accounting policy choice and accounting estimates (Artiach and Clarkson, 2011).

In addition, non-operating accruals are not likely to exhibit economic characteristics unrelated to conservatism (Givoly and Hayn, 2000). The accumulation of non-operating

accruals must be measured over a sufficiently long period to reveal persistence in accumulated accruals thus we use a six- year accumulation period which consistent with Ahmed et al. (2002), Artiach and Clarkson (2011) and Houqe, Kerr and Monem (2013). Similar to the Artiach and Clarkson (2011) model, our conservatism proxy is the average over a six year period of the ratios of non- operating accruals to total asset; the result is multiplied by -1 to produce an increasing measure of conservatism. Thus our measure is

$$CONS = -1 \times \left[ \frac{1}{6} \sum_{t=1}^6 \frac{NOPAC_{it}}{TA_{it}} \right]$$

where,  $NOPAC_{it}$  is non- operating accruals and  $TA_{it}$  is total assets, both for firms  $i$  at fiscal year-end  $t$ . We use this proxy to investigate the relationship between culture and earnings quality as well as the relationship between IFRS adoption and earnings quality. The model is used to test hypotheses one, two and three. We employ the following econometric model:

$$Ear\_Cons_{it} = \beta_0 + \beta_1 SEC + \beta_2 IFRS + \beta_3 SEC * IFRS + \beta_4 INV + \beta_5 LN\_SALES_{it} + \beta_6 F\_LEV_{it} + \beta_7 MB_{it} + fixed\ effects$$

where,

$Ear\_Cons$  = is the earnings conservatism of firm  $i$  in year  $t$   
 $MB$  = is the market to book ratio for firm  $i$  in year  $t$

The other variables were defined above.

Obviously, our variables of interest are SEC, IFRS and SEC\*IFRS. The sign of  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  shows the relation between secrecy, IFRS adoption and the joint effect on earnings quality.

## 5. Empirical results

### 5.1. Descriptive statistics

**[Insert Table 2 here]**

Table 2 represents the number of firm and the number of firm- year observations for each country and descriptive statistics for the macro- level variables. Most of the firm year observations come from the United Kingdom with 7856 observations (40.65%) while about

15% of the total sample comes from Singapore and 11.7% comes from Germany. Ireland and Portugal have the lowest representation with 1.1%, followed by Israel and Belgium with approximate 1.6% of the total firm-year observations. In a robustness test we exclude the larger countries.

The level of secrecy, the financial secrecy index (SEC), and investor protection are reported in table 2. SEC has a wide range from 34 for Spain to 78 for Switzerland. Table 2 shows that Spain and Portugal have the lowest score for the judicial independence (JUD) while Denmark has the highest score of 6.6. The higher JUD, the higher independence of judiciary from other branches of governments, citizens or firms is. The value of the protection of minority shareholders (MIN) ranges from 3.7 for Italy to 5.6 for Singapore. It is clear that Singapore has the high protection for minority shareholders among countries. Another indicator of macro-level variables is the regulation of securities laws (RSE); Singapore again has the highest score of 6 for RSE while Spain has the lowest score of 3.7. When considering the irregular payment and bribes (IIPB) the score ranges from 4.1 for Italy to 6.7 for Singapore and Denmark. Finally, countries such as Hong Kong and Singapore have high financing through local equity market while Spain has poor performance in this category. As evident from table 2, Singapore and Hong Kong have strong investor protection.

**[Insert Table 3 here]**

Descriptive statistics for firm- level variables are reported in table 3. The mean of *Ab\_Accruals* is -0.012. The minimum value of *Ab\_Accruals* is -0.0001 while the maximum value is 0.00562. In the sample, the mean of *Ear\_Cons* is 0.00011 and the minimum and maximum values are 0.0002 and 0.00578 respectively. Approximately 59% of observations adopted IFRS, 42% reports a net loss. *LN\_SALES*, measured by the natural logarithm of total sales, has a mean of 5.1254 and standard deviation of 2.1045. Financial leverage (*F\_LEV*) is

49.21%, the sales growth rate ( $S\_GWTH$ ) is 14.56%, and the growth rate of gross PPE ( $\Delta PPE$ ) is 15.68%.

Descriptive statistics for the sub-sample for low secrecy countries (Panel B) shows that the mean of  $Ab\_Accruals$  is -0.0013,  $Ear\_Cons$  is 0.00010,  $LN\_SALES$  is 5.125,  $F\_LEV$  is 49.2%, and  $S\_GWTH$  is 14.50%. 62% of the observations are for IFRS, and 42% of the observations include a net loss. Descriptive statistics for the high secrecy sub-samples (Panel C) indicate that the mean of  $Ab\_Accruals$  is -0.0010,  $Ear\_Cons$  is 0.0009,  $LN\_SALES$  is 5.1224,  $F\_LEV$  is 49.11%, and  $S\_GWTH$  is 14.16%. These values are lower than those of firms in low secrecy countries. Approximately 57% of the observations adopted IFRS and 35% reports a net loss.

**[Insert Table 4 here]**

Table 4, panel A, shows that  $SEC$  is positively related to signed abnormal accruals ( $Ab\_Accruals$ ) while IFRS is negatively related to  $Ab\_Accruals$ .  $Ab\_Accruals$  is a good indicator for earnings management. The higher level of  $Ab\_Accruals$ , the higher level of earnings management is. Therefore, the result of the Pearson Correlation matrix is consistent with our hypotheses 1 and 2. There is a negative relationship between secrecy and earnings quality and positive relationship between IFRS and earnings quality. Table 4 panel B shows the Pearson correlation matrix for the  $Ear\_Cons$  sample (19,324 observations). The results indicate that there is positive association between  $Ear\_Cons$  and  $SEC$  while there is negative association between  $Ear\_Cons$  and IFRS. This suggests that  $Ear\_Cons$  is higher in countries with low level of secrecy or with mandatory IFRS adoption. This result is in line with our hypotheses, suggesting that earnings quality is negatively associated with secrecy and positively related to IFRS adoption.

## **5.2 Main results**

### **5.2.1. Signed abnormal accruals**

The signed abnormal accruals analysis is represented in table 5. Each investor protection variable is tested once thus we have five regression models. All models are significant with adjusted  $R^2$  greater than 16% and the significance levels on the individual coefficients are reported as two- tailed p-values.

The secrecy variable by itself represents the effect on accruals of firms as the level of secrecy is higher. The secrecy variable is significant ( $p < 0.01$ ) in all estimations. The positive sign of the coefficient on secrecy indicates that abnormal accruals in high secrecy countries are higher than those in low secrecy country. This result suggests that the secrecy level of a country has a negative effect on earnings quality.

The IFRS variable measures the effect of IFRS adoption on abnormal accruals. As can be seen from table 4, the *IFRS* variable has negative coefficient and is significant in all models thus suggesting that adoption of IFRS reduces abnormal accruals in firms.

The interaction of secrecy with the IFRS variable measures the joint effect of secrecy and IFRS. The interaction term has a negative coefficient and is significant ( $p < 0.01$ ) in all models. A negative sign indicates that the abnormal accruals in IFRS adopters are relatively smaller compared to the accruals of non IFRS adopters in a high secrecy country.

The conjunction of these results reveals that abnormal accruals are higher as a country's secrecy level is high. However this effect is mediated by the IFRS adoption; it turns out that abnormal accruals in high secrecy country are smaller when that country adopts IFRS.

**[Insert Table 5 here]**

### **5.2.2. Earnings conservatism**

The earnings conservatism analysis is reported in table 5 with five logistic regression models. All models are significant with adjusted  $R^2$ s of around 21 percent. The significance levels of individual coefficients is based on two- tailed p- values for asymptotic z-statistics.

The *SEC* variable captures the effect of secrecy on earnings conservatism. The coefficients are positive and significant ( $p < 0.01$ ) in all models. From these results we conclude that earnings conservatism is higher in high secrecy countries than low secrecy countries.

The IFRS variable tests whether firms with IFRS adoption are more likely to report less earnings conservatism than non IFRS adopters. Overall, the evidence indicates that firms adopting IFRS report less earnings conservatism than non- adopting firms.

The interaction of IFRS with secrecy variable measures the joint effect of IFRS and secrecy on earnings conservatism. The coefficients are negative and significant in all models ( $p < 0.01$ ). On the basis of these results we conclude that the evidence consistently shows IFRS adoption reduces earnings conservatism in countries with high level of secrecy.

**[Insert Table 6 here]**

Overall, we observe the similar results across both signed abnormal accrual and earnings conservatism test. Earnings quality is lower in country with high secrecy level while earnings quality is higher in country with mandatory IFRS adoption. Signed abnormal accruals become smaller and earnings conservatism decreases following adoption of IFRS. IFRS adopters are required to follow the applicable accounting principles therefore firms have incentive to share information with outside investors. This eliminates effect of secrecy and enhances earnings quality.

### **5.3 Robustness tests**

#### **5.3.1. Alternative proxy for secrecy scores**

We examine the robustness of our results through an alternative measure for secrecy using Hofstede scores (1980) consistent with those used by Hope et al. (2008). Gray (1988) argues that the higher a country ranks in uncertainty avoidance level and power distance, the more likely it is to rank highly in secrecy. In addition, a preference for secrecy is consistent with

low level of individualism (Gray, 1988). Therefore, secrecy score is calculated as the sum of uncertainty avoidance (UA) and power distance (PD) scores less the individualism (IND) score (Hope et al. 2008). We take UA, PD and IND scores from Hofstede (1980). Our results (untabulated) based on this alternative measure for secrecy are qualitatively similar to those reported above in tables 5 and 6.

**[Insert Tables 7 & 8 here]**

### **5.3.2. Alternative proxy for investor protection**

Many prior studies, such as Francis and Wang, 2008 and Leuz et al, 2003, have applied the anti- director rights index developed by La Porta et al. (1998). However, this index has been criticized for its ad hoc nature and for several conceptual ambiguities and mistakes in coding (Djankov, La Porta, Lopez-de-Silances, and Shleifer, 2008). Therefore, Djankov et al. (2008) introduce a revised and updated anti- director rights index based on laws and regulation applicable to publicly traded firms in May 2003. The revised index relies on the same basic dimensions of corporate law but has greater precision (Djankov et al. 2008).

We thus test the robustness of our results using the revised anti-director rights index from Djankov et al. (2008). Our results (untabulated) based on the use of this index are qualitatively similar to those reported above in tables 5 and 6. In both signed abnormal accruals and earnings conservatism tests, the coefficient of SEC is positive and significant, which indicates that there is negative relation between SEC and earnings quality. The results also show no change for IFRS variable with a negative and significant coefficient. Moreover, the use of the revised anti- director rights index has resulted no change in the coefficient of the interaction of secrecy with IFRS. The interaction term has negative coefficient and is significant in all tests ( $p < 0.01$ ).

### **5.3.3. Subsamples (2003 vs 2011)**

We re-estimated all of the models reported in Tables 5 and 6 by considering observations for 2003 and 2011. The results (un-tabulated) were qualitatively similar to the results reported in Tables 5 and 6.

#### **5.3.4. Deleting United Kingdom (UK), Singapore and Germany.**

In order to have assurance that the larger countries with many observations do not drive the results, we retested the signed abnormal accruals and earnings conservatism for 11 countries excluding United Kingdom, Singapore and Germany. For the resulting sample of 6358 firm-years, we find qualitatively similar results to those in Tables 5 and 6 in terms of sign and statistical significance for the test variables of interest (results un-tabulated). We thus conclude that UK, Singapore and Germany do not drive the results.

### **6. Conclusion**

We hypothesize that culture influences financial reporting quality. Specifically, we test whether the extent of secrecy in a country negatively impacts on earnings quality. Using 19,324 firm year observations from 14 countries, we find evidence that there is a negative relation between secrecy and earnings quality. This finding is consistent with findings in other cross- country studies. Hope et al. (2008) indicates that firms in more secretive cultures are less likely to hire a Big 4 auditor; the reason is financial reporting quality of those firms is often low. Our study is in line with the findings in other cross-country studies that mandatory IFRS adoption improves earnings quality. For example, Barth, Landsman and Lang (2008) find that firms applying IFRS evidence less earnings management, more timely loss recognition, and more value relevance of accounting amount than non-adopters. The results highlight the importance of high quality accounting standards in promoting earnings quality.

This study adds to the discussion of the effects of mandatory IFRS adoption across countries. The results indicate that there is a significant positive association between the joint effect of IFRS adoption and secrecy on earnings quality. Specifically, signed abnormal

accruals and earnings conservatism decrease in a high secrecy country after IFRS adoption. IFRS encourages managers to apply high quality accounting standards, share information with outside investors, improving earnings quality. We conclude that the negative effect of secrecy on earnings quality is mediated by mandatory IFRS adoption.

Our earnings quality study has certain limitations which reflect the aggregated cross-country research design. Firstly, our analyses may not have considered the impact of other important macro level variables or investor protection variables on earnings quality. Secondly, the samples are taken from all developed countries and thus the variety in the samples is limited. Thirdly, the secrecy and investor protection are categorical in nature and difficult to measure. Finally, our study is based on only a short period following adoption of IFRS and the long term impact may be different.

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**Table 1**

Sample selection process

	# Firm-years
No. of observations with no missing values on dependent and independent variables	20,625
-No. of financial institutions(SIC 6000-6999)	(324)
-No. of Observations with any variables registering in the top or bottom 0.5%	(752)
- No. of observations with $  \text{Studentized residuals}   > 3$	(225)
<b>Study sample</b>	<b>19,324</b>

**Table 2**

Number of firm-years and Descriptive statistics for macro-level variables

Country	No. of firm	No. of Firm-Years	Secrecy	SEC	Investor Protection (INV)				
					JUD	MIN	RSE	IIPB	FTEM
Austria	72	368	High	66	5.5	4.8	4.7	5.8	3.6
Belgium	89	318	High	59	5.3	5.0	5.0	5.7	3.9
Denmark	159	812	Low	40	6.6	5.5	5.5	6.7	4.2
Germany	752	2254	High	57	6.3	4.8	4.5	5.9	4.0
Hong Kong	178	898	High	73	6.1	5.0	5.6	6.2	5.4
Ireland	49	216	Low	44	6.3	4.5	3.9	6.1	2.9
Israel	59	316	High	58	6.2	5.2	5.5	5.7	4.6
Italy	156	385	Low	49	4.0	3.7	4.3	4.1	3.6
Netherlands	201	1285	Low	49	6.3	5.2	5.2	6.2	4.1
Portugal	56	217	High	51	3.9	4.5	4.9	5.1	3.4
Singapore	496	2856	High	71	5.6	5.6	6.0	6.7	5.0
Spain	149	645	Low	34	3.9	4.3	3.7	5.0	3.3
Switzerland	154	898	High	78	6.4	4.9	5.6	6.3	4.6
United Kingdom	1287	7856	Low	45	6.2	5.2	5.1	5.9	4.6
	<b>3857</b>	<b>19324</b>							

*SEC* is the Financial Secrecy Index from Tax Justice Network (2011). Investor Protection (*INV*) is the investor protection measured by five proxies (1) *JUD* is the judicial independence scores from World Economic Forum (2011), (2) *MIN* is the protection of minority shareholders' interest scores from World Economic Forum (2011), (3) *RSE* is the regulation of securities laws scores from World Economic Forum (2011), (4) *IIPB* is the irregular payment and bribes scores from World Economic Forum (2011), and (5) *FTEM* is the financing through local equity market scores from World Economic Forum (2011).

**Table 3**

Descriptive statistics for firm-level variables

Variable	Mean	Median	S.D	Minimum	Maximum
<b>Panel A: Full Sample (n=19,324)</b>					
<i>Ab_Accruals</i>	-0.0012	-0.0010	0.0114	-0.0001	0.00562
<i>Ear_Cons</i>	0.00011	-0.0009	0.0110	0.0002	0.00578
<i>IFRS</i>	0.59	1	0.4561	0	1
<i>LN_SALES</i>	5.1254	5.8970	2.1045	4.3678	7.5624
<i>F_LEV</i>	0.4921	0.5124	0.2695	0.1259	0.6594
<i>S_GWTH</i>	0.1456	0.1652	0.1132	0.0895	0.8765
<i>MB</i>	4.1520	4.9875	2.1342	2.1458	6.8795
<i>ΔPPE</i>	0.15680	0.17856	0.11245	0.10254	0.25789
<i>CFO</i>	0.14523	0.13254	0.10254	0.08974	0.21031
<i>LOSS</i>	0.42	1	0.24513	0	1
<b>Panel B: Low- Secrecy sub-samples</b>					
<i>Ab_Accruals</i>	-0.0013	-0.0011	0.0113	-0.0001	0.00560
<i>Ear_Cons</i>	0.00010	-0.0008	0.0111	0.0001	0.00570
<i>IFRS</i>	0.62	1	0.4560	0	1
<i>LN_SALES</i>	5.1250	5.8901	2.1040	4.3670	7.5620
<i>F_LEV</i>	0.4920	0.5120	0.2690	0.1250	0.6590
<i>S_GWTH</i>	0.1450	0.1650	0.1130	0.0890	0.8760
<i>MB</i>	4.1521	4.9870	2.1340	2.1450	6.8790
<i>ΔPPE</i>	0.15681	0.17850	0.11240	0.10250	0.25780
<i>CFO</i>	0.14658	0.14253	0.10254	0.10245	0.20194
<i>LOSS</i>	0.42	1	0.24510	0	1
<b>Panel C: High- Secrecy sub-samples</b>					
<i>Ab_Accruals</i>	-0.0010	-0.0009	0.0104	-0.0000	0.00501
<i>Ear_Cons</i>	0.0009	-0.0008	0.0101	0.0001	0.00538
<i>IFRS</i>	0.57	1	0.4510	0	1
<i>LN_SALES</i>	5.1224	5.887	2.1045	4.3698	7.5614
<i>F_LEV</i>	0.4911	0.5114	0.2615	0.1249	0.6544
<i>S_GWTH</i>	0.1416	0.1622	0.1112	0.0815	0.8565
<i>MB</i>	4.1220	4.9475	2.1142	2.1258	6.8695
<i>ΔPPE</i>	0.15280	0.17156	0.11215	0.10154	0.25189
<i>CFO</i>	0.12245	0.12453	0.10245	0.0987	0.21032
<i>LOSS</i>	0.35	1	0.21233	0	1

*Ab\_Accruals* is the signed abnormal accruals of firm  $i$  in year  $t$  under DeFond and Park (2001) model (Francis and Wang 2008 and Houque *et al.*, 2012). *Ear\_Cons* is based alternatively on the Givoly and Hayn (2000) and Artiach and Clarkson (2012) accruals based measure of conservatism. *IFRS* takes the value of 1 for a given firm  $i$  in year  $t$  adopted IFRS mandatory basis and 0, otherwise. *LN\_SALES* is natural logarithm of total sales of firm  $i$  in year  $t$ . *F\_LEV* is the end of year total long term debt divided by end of year shareholders' equity of firm  $i$  in year  $t$ . *S\_GWTH* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm  $i$  in year  $t$ .  $\Delta PPE$  is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm  $i$  in year  $t$ . *CFO* is the operating cash flows for firm  $i$  in year  $t$  scaled by total assets. *LOSS* takes the value of 1 if firm  $i$  in year  $t$  reports negative income before extraordinary items and 0 otherwise.

**Table 4**

## Parsons Correlation Matrix

Panel A: Abs- accruals sample (N= 19,324)

	<i>Ab_Accruals</i>	<i>SEC</i>	<i>IFRS</i>
<i>Ab_Accruals</i>	<b>1</b>		
<i>SEC</i>	<b>0.4010<sup>***</sup></b> <b>(0.000)</b>	<b>1</b>	
<i>IFRS</i>	<b>-0.2045<sup>***</sup></b> <b>(0.000)</b>	<b>-0.3012<sup>***</sup></b> <b>(0.000)</b>	<b>1</b>

Panel B: Ear\_Cons sample (N= 19,324)

	<i>Ear_Cons</i>	<i>SEC</i>	<i>IFRS</i>
<i>Ear_Cons</i>	<b>1</b>		
<i>SEC</i>	<b>0.3510<sup>***</sup></b> <b>(0.000)</b>	<b>1</b>	
<i>IFRS</i>	<b>-0.125<sup>***</sup></b> <b>(0.000)</b>	<b>-0.2010<sup>***</sup></b> <b>(0.000)</b>	<b>1</b>

**Note:** Coefficient p-values applied two-tail

*Ab\_Accruals* is the signed abnormal accruals of firm *i* in year *t* under DeFond and Park (2001) model (Francis and Wang 2008 and Houqe *et al.*, 2012). *Ear\_Cons* is based alternatively on the Givoly and Hayn (2000) and Artiach and Clarkson (2012) accruals based measure of conservatism. *SEC* is the Financial Secrecy Index from Tax Justice Network (2011). *IFRS* takes the value of 1 for a given firm *i* in year *t* adopted IFRS mandatory basis and 0, otherwise.

**Table 5**

$$Ab\_Accruals_{it} = \beta_0 + \beta_1 SEC + \beta_2 IFRS + \beta_3 SEC * IFRS + \beta_4 INV + \beta_5 LN\_SALES_{it} + \beta_6 F\_LEV_{it} + \beta_7 S\_GWTH_{it} + \beta_8 \Delta PPE_{it} + \beta_9 CFO_{it} + \beta_{10} LAGLOSS_{it} + fixed\ effects$$

Independent variables	INV = JUD	INV = MIN	INV = RSE	INV = IIPB	INV = FTEM
	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)
SEC	0.0012*** (0.000)	0.0011*** (0.001)	0.0013*** (0.004)	0.0010*** (0.005)	0.0011*** (0.001)
IFRS	-0.0001* (0.054)	-0.0001** (0.034)	-0.0000* (0.074)	-0.0001** (0.044)	-0.0001* (0.084)
SEC*IFRS	-0.0017*** (0.000)	-0.0016*** (0.001)	-0.0014*** (0.001)	-0.0013*** (0.000)	-0.0015*** (0.000)
INV	-0.0080*** (0.002)	-0.0079*** (0.002)	-0.0081*** (0.000)	0.0084*** (0.000)	-0.0080*** (0.000)
LN_SALES	-0.0091** (0.068)	-0.0090** (0.060)	-0.0089** (0.058)	-0.0090** (0.060)	-0.0092** (0.058)
F_LEV	0.0015* (0.056)	0.0014* (0.057)	0.0013* (0.059)	0.0014* (0.054)	0.0013* (0.052)
S_GWTH	-0.0013* (0.084)	-0.0011* (0.094)	-0.0014* (0.064)	-0.0013* (0.074)	-0.0013* (0.064)
ΔPPE	-0.0012 (0.258)	-0.0010 (0.216)	-0.0010 (0.202)	-0.0010 (0.251)	-0.0011 (0.234)
CFO	-0.0045*** (0.002)	-0.0042*** (0.004)	-0.0046*** (0.000)	-0.0049*** (0.001)	-0.0042*** (0.002)
LOSS	0.0014* (0.065)	0.0012* (0.045)	0.0011* (0.075)	0.0013* (0.069)	0.0011* (0.060)
Intercept	0.0034*** (0.004)	0.0036*** (0.003)	0.0038*** (0.001)	0.0037*** (0.002)	0.0030*** (0.006)
Fixed effects	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.1689	0.1725	0.1625	0.1714	0.1658
N	19,324	19,324	19,324	19,324	19,324

**Note:** Coefficient p-values applied two-tail and based on asymptotic Z-statistic robust to heteroscedasticity and country clustering effects using the method in Rogers (1993).

*Ab\_Accruals* is the signed abnormal accruals of firm *i* in year *t* under DeFond and Park (2001) model (Francis and Wang 2008 and Houque *et al.*, 2012). *SEC* is the Financial Secrecy Index from Tax Justice Network (2011). *IFRS* takes the value of 1 for a given firm *i* in year *t* adopted *IFRS* mandatory basis and 0, otherwise. *INV* is the investor protection measured by five proxies (1) *JUD* is the judicial independence scores from World Economic Forum (2011), (2) *MIN* is the protection of minority shareholders' interest scores from World Economic Forum (2011), (3) *RSE* is the regulation of securities laws scores from World Economic Forum (2011), (4) *IIPB* is the irregular payment and bribes scores from World Economic Forum (2011), and (5) *FTEM* is the financing through local equity market scores from World Economic Forum (2011). *LN\_SALES* is natural logarithm of total sales of firm *i* in year *t*. *F\_LEV* is the end of year total long term debt divided by end of year shareholders' equity of firm *i* in year *t*. *S\_GWTH* is the sales growth rate, defined as the sales in current year minus sales in prior year and divided by sales in prior year for firm *i* in year *t*.  $\Delta PPE$  is the growth rate of gross PPE, defined as the gross PPE in current year minus the gross PPE in prior year and divided by the gross PPE in prior year for firm *i* in year *t*. *CFO* is the operating cash flows for firm *i* in year *t* scaled by total assets. *LOSS* takes the value of 1 if firm *i* in year *t* reports negative income before extraordinary items and 0 otherwise. *Fixed effects* are (i) *Industry dummies*, a vector of dummy variables indicating industry sector membership. (ii) *Year dummies*, a vector of dummy variables indicating Year.

**Table 6**

$Ear\_Cons_{it} = \beta_0 + \beta_1 SEC + \beta_2 IFRS + \beta_3 SEC * IFRS + \beta_4 INV + \beta_5 LN\_SALES_{it} + \beta_6 F\_LEV_{it} + \beta_7 MB_{it} + fixed\ effects$

Independent variables	INV = JUD	INV = MIN	INV = RSE	INV = IIPB	INV = FTEM
	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)
SEC	0.0014*** (0.001)	0.0018*** (0.000)	0.0019*** (0.003)	0.0020*** (0.000)	0.0021*** (0.000)
IFRS	-0.0000* (0.064)	-0.0001** (0.034)	-0.0000* (0.094)	-0.0001* (0.084)	-0.0000* (0.094)
SEC*IFRS	-0.0024*** (0.000)	-0.0025*** (0.001)	-0.0023*** (0.001)	-0.0022*** (0.001)	-0.0025*** (0.000)
INV	0.0090*** (0.002)	0.0089*** (0.002)	0.0091*** (0.001)	-0.0095*** (0.001)	0.0078*** (0.004)
LN_SALES	-0.0082** (0.058)	-0.0085** (0.078)	-0.0086** (0.054)	-0.0089** (0.062)	-0.0090** (0.051)
F_LEV	0.0010* (0.066)	0.0012* (0.067)	0.0011* (0.069)	0.0012* (0.074)	0.0014* (0.062)
MB	-0.0010* (0.094)	-0.0012* (0.092)	-0.0013* (0.074)	-0.0012* (0.064)	-0.0012* (0.074)
Intercept	0.0044*** (0.003)	0.0046*** (0.000)	0.0048*** (0.000)	0.0047*** (0.000)	0.0050*** (0.000)
Fixed effects	Yes	Yes	Yes	Yes	Yes
Adjusted R <sup>2</sup>	0.2213	0.2145	0.2125	0.2214	0.2014
N	19,324	19,324	19,324	19,324	19,324

**Note:** Coefficient p-values applied two-tail and based on asymptotic Z-statistic robust to heteroscedasticity and country clustering effects using the method in Rogers (1993).

*Ear\_Cons* is based alternatively on the Givoly and Hayn (2000) and Artiach and Clarkson (2012) accruals based measure of conservatism. *SEC* is the Financial Secrecy Index from Tax Justice Network (2011). *IFRS* takes the value of 1 for a given firm *i* in year *t* adopted *IFRS* mandatory basis and 0, otherwise. *INV* is the investor protection measured by five proxies (1) *JUD* is the judicial independence scores from World Economic Forum (2011), (2) *MIN* is the protection of minority shareholders' interest scores from World Economic Forum (2011), (3) *RSE* is the regulation of securities laws scores from World Economic Forum (2011), (4) *IIPB* is the irregular payment and bribes scores from World Economic Forum (2011), and (5) *FTEM* is the financing through local equity market scores from World Economic Forum (2011). *LN\_SALES* is natural logarithm of total sales of firm *i* in year *t*. *F\_LEV* is the end of year total long term debt divided by end of year shareholders' equity of firm *i* in year *t*. *MB* is the market to book ratio for firm *i* in year *t*. *Fixed effects* are (i) *Industry dummies*, a vector of dummy variables indicating industry sector membership. (ii) *Year dummies*, a vector of dummy variables indicating Year.