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Proprietary Costs Of Financial Reporting, Country-Level Attributes, And Financial Statement Comparability

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PROPRIETARY COSTS OF FINANCIAL REPORTING, COUNTRY-LEVEL ATTRIBUTES, AND FINANCIAL STATEMENT COMPARABILITY

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Dedication

Thanks to my Grandfather, Grandmother, Father, Mother, Wife, and My Brother. Especially, my mother has been dedicated to support and to help me financially and emotionally. My all achievements are attributed to my mother.

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ABSTRACT

This study investigates the impact of country-level attributes on the relationship between proprietary costs of financial reporting and financial statement comparability. Given that managers use discretion in financial reporting, proprietary costs of financial reporting and country-level attributes could play a role in shaping managers' financial reporting behavior, which, in turn, could have an impact on financial statement comparability. For international study, I use four country-level latent factors, suggested by Isidro et al. (2019), that categorize most country-level features that affect financial reporting practices. I find that the negative relationship between proprietary costs and comparability is stronger in countries with relatively poorer financial reporting environments. This result indicates that managers are more concerned about proprietary costs and enjoy more discretion allowed by poorer financial reporting environments. Further, I find that strong protection of investor rights and better developed capital markets are most effective in restricting managers' use of discretion in financial reporting. This study provides guidance for standard setters in countries with poor financial reporting environments. Regulators should emphasize strong protection of investor rights and further develop capital markets in order to enhance firms' financial reporting quality.

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CHAPTER 1

INTRODUCTION

This study investigates the impact of country-level attributes on the relationship between proprietary costs of financial reporting and financial statement comparability. Countries differ in a variety of ways which include differences in legal systems, regulatory enforcement, social and organizational culture, and economic and social environments. Given that managers use discretion in financial reporting, proprietary costs of financial reporting and country-level attributes could play a role in shaping their financial reporting behavior, which, in turn, could have an impact on financial statement comparability. For example, in countries with strong financial reporting environments, managers might have incentive to use discretion in a way that decreases comparability in order to protect proprietary information from competitors. In contrast, in countries with weak financial reporting environments, managers might want to enhance comparability in order to attract investors or capital suppliers. Since country-level attributes are associated with financial reporting environments, this study uses an international setting to examine the extent to which managers' use of discretion varies by country, due to the aforementioned country-level attributes. Therefore, I examine (1) how proprietary costs affect comparability across countries, and (2) which country-level attributes most influence managers' financial reporting discretion.

Unlike other qualitative characteristics, such as faithful representation, relevance, or timeliness, comparability increases an accounting information user's ability to infer one firm's performance or fundamentals against its competitors' by enabling better identification of similarities and differences (IASB 2010; FASB 2013). De Franco et al. (2011) argue that financial statement comparability measures the similarity of accounting function for individual firm. Accounting function reflects how economic events (i.e., Return) are reflected in accounting income (i.e., Earnings). Although financial reporting is controlled and monitored by accounting standards and regulations, latitude in financial reporting choice still exists within accounting standards. Discretion in financial reporting choices by managers includes estimates for

bad debt expenses, loan loss provisions, deferred tax asset valuation allowances, impairment losses, pension expense, and warranty expenses. This discretion afforded to managers can significantly affect investors' ability to compare operating performance across firms (Imhof et al. 2018). Financial statement comparability can be negatively influenced by discretion used by managers, since the accounting function would be different after discretion is added. For example, if managers in competitive industries have incentives to use more discretion into financial statements, a financial statement comparability is more likely to be reduced.

Managers consider the proprietary costs of financial reporting during disclosure. According to proprietary costs theory, as managers in competitive industries judge that the cost of disclosing proprietary information outweighs the benefit, they withhold the information by using their discretion (Verrecchia 1983). Likewise, these managers may decide the extent to which they use discretion, after considering the proprietary costs and benefits of comparability. In fact, comparable financial statements can lower the cost of capital (Imhof et al. 2017). On the other hand, comparable financial reporting can reveal proprietary information to peers, increasing threats to firms from competitors (Young and Zeng 2015; Choi et al. 2019). Collectively, proprietary costs theory predicts a competitive industry would affect financial statement comparability. Also, the main finding of Imhof et al. (2018) that competition incentivizes managers to use financial reporting discretion in a way that reduces financial statement comparability supports this theory.

In this study, using a sample that includes firms from 47 countries, I investigate whether the effect of proprietary costs on comparability varies across countries based on financial reporting environment. The moderating impact of international differences on the relationship between proprietary costs and financial statement comparability is not obvious ex ante. Previous literature has focused on the effect of proprietary costs and on the only part of international factors. By using a comprehensive set of country-level attributes, I can observe the moderating effect of most of international differences. For example, in countries with poor financial reporting environments, management is less likely to be monitored or disciplined, and

investors are not well-protected. Thus, managers are more likely to have incentive to use discretion to report larger earnings than competitors', reducing comparability much more. However, in countries with strong financial reporting environments, financial statement information is already used as an important investment decision tool (Ball et al. 2000). Since managers' financial reporting practices are well monitored or disciplined, managers are less likely to have incentive to use discretion, reducing financial statement comparability lesser. Imhof et al. (2017) suggest that a higher level of comparability mitigates investors' information risks and, thus, lowers their required rates of return. Although investor protections in a strong financial reporting environment are valued by investors, comparable financial reporting can also lower information-processing costs and increase revelation of proprietary information to competitors. In this case, financial statement comparability could be attenuated by managers. Hence, I expect the effects of proprietary costs on comparability to vary across countries with different financial reporting environments.

Little research exists on how the relationship between proprietary costs and financial statement comparability varies across country-specific financial reporting environments. The majority of prior international accounting studies regarding the determinants of comparability have focused on the role of accounting standards (e.g. IFRS, US GAAP, and local GAAP) and have ignored unique country-level legal, cultural, and societal factors (Barth et al., 2013; Lang et al., 2010). Barth et al. (2013) suggests that the adoption of global accounting standards is necessary but not sufficient to explain accounting comparability. This motivates the study of how country-level attributes affect the relationship between proprietary costs and financial statement comparability. This study sheds light on how country-level financial reporting environments play a role in shaping firms' financial statement comparability. I propose that the role of proprietary costs in determining financial reporting choice depends on various aspects of each country's financial reporting environment, such as legal and governance systems, protection of investors' rights, political transparency, culture and social factors, and openness of society to external investors.

The international accounting and finance literature has provided a multitude of country-level attributes with cross-country variation in financial reporting quality, which include geographic features, legal institutions, religious affiliation, cultural development and even economic factors. However, the fact that most country-level factors are correlated with each other presents a challenge to empirical research (Isidro et al. 2019). Thus, Isidro et al. (2019) construct four principal component factors that categorize most country-level features which affect financial reporting practices. I use these four country-level latent factors. Factor one (***Corporate Environment***) is comprised of a mix of measures related to a country's legal and governance systems, economic welfare, legal rights, and social attributes representing more informal institutions. Factor two (***Investor Protection***) captures variables such as creditor and investor rights, securities regulation, capital market size, and legal origin. Further, factor three (***Governance Environment***) includes the number of analysts, domestic institutional holdings, and firm structure such as hierarchy and independence that can play a role in governance. Finally, factor four (***External Investors***) captures the openness of society particularly in relation to external investors. This factor is characterized by US institutional holdings, US cross-listing, audit spending, English proficiency, long-term orientation, and Buddhism. A score less than (greater than) the median in each factor group indicates a poor (strong) financial reporting environment.

I document two important findings in this paper. First, I find that the negative relationship between proprietary costs and comparability is stronger in countries with poor financial reporting environments, because an outcome of t-test between coefficients of proxies for proprietary costs in countries with poor FRE and in those with strong FRE is significantly negative. In countries with less developed financial reporting environments, managers are less likely to be monitored and disciplined in their financial reporting behavior. Despite arguments that managers could provide comparable financial statements to attract investors or to finance capital, the results in this study support the view that managers use more discretion to make financial statements less comparable. These results indicate that managers are more concerned

about proprietary costs and enjoy the increased discretion allowed by poor financial reporting environments. Secondly, I find that, among the country-level attributes, ***Investor Protection*** has the largest impact on the relationship between proprietary costs and comparability. The ***Investor Protection*** variable is associated with stronger protections of investor rights and more developed capital markets. Therefore, this study provides evidence that strong protection of investor rights and better developed capital markets are effective in restricting managers' use of discretion in financial reporting.

This international study contributes to existing literature in two ways. First, it extends the findings conducted by Imhof et al. (2018) on U.S. firms to an international setting. This highlights the differential effects played by proprietary costs of financial reporting on accounting comparability across countries with different financial reporting environments. The negative relationship between proprietary costs and comparabilty in the U.S. may not apply to other countries due to differences in financial reporting environments. The United States has a unique financial reporting environment that may affect the generalizability of the relationship (Leuz et al. 2003). Specifically, in countries with poor financial reporting environments, managers may reduce comparability in competitive industries, because poorer financial reporting environments do not discipline financial reporting quality. In contrast, managers may use less discretion and enhance comparability in order to attract investors, who are unwilling to rely on opaque financial information. Hence, the results might be useful for stakeholders, particularly investors, in analyzing firms' financial statements, especially in countries with poor financial reporting environments.

Secondly, this international study demonstrates the differing impact of various country-level attributes on the relationship between proprietary costs and comparability. Instead of using a comprehensive set of 72 country-level attributes, I use four latent factors (***Corporate Environment, Investor Protection, Governance Environment, External Investors***) proposed by Isidro et al. (2019) in order to effectively investigate the effect of these country-level attributes on the relationship. Specifically, since the differential impact of each of the four factors is not observable in a within-country study, I use an international setting

to test how variation in the four factors across countries affect the relationship between proprietary costs of financial reporting and financial statement comparability. Among these four factors, ***Investor Protection*** has the highest impact on the negative relationship, suggesting that strong protection of investor rights and developed capital markets restrict managers' incentives to use discretion in financial reporting. This study also contains some policy implications for standard setters in countries with poor financial reporting environment, as they should first emphasize the strong protection of investor rights, and attempt to develop capital markets to enhance firms' financial reporting quality.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

According to proprietary costs theory (Verrechia 1983), managers' financial reporting discretion afforded by accounting standards could negatively affect comparability in competitive industries. Managers consider benefits and costs of comparable financial statements in financial disclosure. Comparable financial statements can decrease information asymmetry, lowering cost of capital (Imhof et al. 2017). On the other hand, comparable financial reporting can be exploited by peer firms, and thus increase threats to firms from competitors (Young and Zeng 2015; Choi et al. 2019). This leads to costly proprietary information disclosure, since managers in competitive environments are more likely to think of comparable financial reporting as costly. Thus, I expect a negative relationship between proprietary costs of financial reporting and financial statement comparability. In addition, the financial reporting environment affects managers' use of financial reporting discretion, in terms of informal institutions, investor protection, corporate governance, and openness to external investors. An international setting enables me to investigate whether the negative relation found in countries with strong financial reporting environments applies to other countries, especially in those with poor financial reporting environments. In the setting, I first examine a comparability within industry for each country and do cross-country study by comparing this comparability of each country. Also, I measure proprietary costs of each industry in two ways. Thus, I can test how each country's factors differentiate the relation between proprietary costs and comparability. By using four latent factors provided by Isidro et al. (2019), I examine the impact of the country-level attributes on the relationship between proprietary costs and financial statement comparability.

2.1. The Effects of Financial Reporting Environments

Financial statement comparability can improve informativeness in that it enables comparison of financial statements across firms. This comparison helps competitors to interpret proprietary information and evaluate investment opportunities. The importance of comparability of financial statements is underscored in the Financial Accounting Standards Board's (FASB) accounting concepts statements. Specifically, FASB (1980) states that "investing and lending decisions essentially involve evaluations of alternative opportunities, and they cannot be made rationally if comparative information is not available". Also, according to the FASB, one of the most important roles of accounting standards is to facilitate comparability between firms (FASB 2010). According to the International Accounting Standards Board (IASB 2010), comparability is a qualitative characteristic that enables users to identify and understand similarities in, and differences among, items. Both the FASB and IASB emphasize that comparability enhances the usefulness of financial information for decision makers (IASB 2010; FASB 2013). Many studies have documented various benefits of comparability. For example, a higher level of comparability improves analyst forecast accuracy and reduces information asymmetry (De Franco et al. 2011), thereby improving information processing capabilities (Kim et al. 2013). Reduced information asymmetry resulting from higher comparability produces other benefits as well, such as a lower cost of capital (Shane et al. 2014), efficient capital allocation (Barth 2013; Chen et al. 2014), availability of more firm-specific information (Choi et al. 2019), and higher firm value (Neel 2017).

On the other hand, comparable financial statements can also impose costs on managers. When competitors are able to compare operating performance across firms, it is easier to find proprietary information concealed in financial statements. Comparable financial statements allow competitors to better evaluate their competitive advantage or disadvantage (Young and Zeng 2015). Moreover, comparable financial statements facilitate inferences regarding future earnings (Choi et al. 2019). When an economic event occurs, firms can more accurately expect future earnings by analyzing peers' earnings after similar

economic events. Therefore, in competitive industries, managers use discretion to reduce the comparability of financial statements, because of the increased proprietary costs of financial reporting. In other words, less comparable financial statements can protect a firm's competitive advantage from competitors.

The proprietary costs theory argues that, as managers in competitive industries judge that the cost of disclosing proprietary information outweighs the benefit of it, they will use their discretion (Verrecchia 1983). Likewise, as proprietary costs of financial reporting outweigh the benefits of comparability, managers are more likely to use discretion to decrease comparability. Verrecchia (1983) argues that managers in highly competitive industries prefer less informative disclosures to conceal proprietary information, leading to an opaque information environment in order to reduce threats from rivals. Harris (1998) reports a lower likelihood of separate segment disclosures when competition is high. Verrecchia and Weber (2006) suggest that competitive pressures compel managers to withhold proprietary information because disclosure can result in loss of market share. Ali et al. (2014) argue that low quality disclosure by firms in concentrated industries can be attributed to the proprietary costs of financial reporting in industries facing stiff competition. These prior findings show that managers weigh the risk of disclosing proprietary information through financial reporting in a competitive environment. Hence, as compeition increases in intensity, managers' financial reporting may differ, depending on proprietary costs of financial reporting and benefits of comparability.

Although Imhof et al. (2018) find a negative association between the proprietary costs of financial reporting and financial statement comparability in the U.S, there is a need for further investigation of the relationship between proprietary costs and comparability outside the U.S. The United States has a unique financial reporting environment with large stock markets, dispersed ownership, strong investor rights, and strong legal enforcement (Leuz et al. 2003). Prior research documents that country-level attributes affect the financial reporting environment and managers' financial reporting behavior. For example, code law accounting income is less timely, particularly in incorporating economic losses (Ball et al. 2000). Leuz et

al. (2003) find that earnings management decreases in countries with strong legal protections, such as high quality of minority shareholder rights and legal enforcement. Behn et al. (2013) provide evidence that classification shifting is more common in weak investor protection countries. Haw et al. (2015) find evidence that product market competition is positively associated with accounting conservatism in countries with strong legal institutions, but not in countries with weak legal institutions. As country-level attributes affect financial reporting environment, I can expect that these attributes may also influence managers' incentives to use discretion in financial reporting practice.

In countries with strong financial reporting environments, strong and well-enforced investor protection mitigates insiders' incentives to obfuscate accounting information because outsiders will likely take disciplinary actions against them (Leuz et al. 2003). According to the proprietary costs theory (Verrechia 1983), managers in competitive industries might conceal proprietary information to protect their competitive advantage. For instance, competitors use disclosing firms' financial reporting as a benchmark to evaluate their relative status and performance. Thus, managers might have incentives to use discretion to hamper competitors from setting up threatening business strategy. This is because when financial statements are comparable, comparability enhances the usefulness of financial information for decision makers (FASB, 2013). Further, comparability can help directors make hiring/firing and compensation decisions by facilitating the evaluation of managers relative to their industry peers. Investors benefit from comparability by being better able to distinguish between alternative investment opportunities (Imhof et al. 2018). Therefore, in these countries, managers may have less incentive to use discretion in financial reporting because they are well monitored and disciplined to protect external investors and because they need to attract external investors for capital needs, who normally do not rely on opaque accounting information. However, since financial reporting environments in these countries already mitigated information asymmetry and secured investor protection, industry peers or external investors tend to depend

on accounting information much. In these countries, managers may have more incentive to use discretion in financial reporting in a way that reduces comparability.

On the other hand, in countries with poor financial reporting environment, since managers are less monitored, accounting information in these countries has less transparency, lower disclosure, and lower quality (Bushman et al. 2004; DeFond et al. 2007; Haw et al. 2012). For example, Ball et al. (2000) suggest that code-law countries give greater discretion to managers in deciding when economic gains and losses are incorporated in accounting income. In these regimes, since investors are not well-protected and face greater information asymmetry, they might require higher cost of capital and more transparent accounting information. In other words, when the benefits of comparable financial reporting outweigh the proprietary costs of financial reporting, managers may have less incentive to use discretion. In turn, financial statement comparability, which is a qualitative aspect of the financial reporting environment, could be expected to increase. However, since poor financial reporting environment generally cannot limit this incentive, managers may have incentives to use more discretion to compete with industry peers to show higher performance to investors. Also, in competitive environment, proprietary costs of financial reporting tend to be costly, managers can have incentive to use more discretion in a way that reduces comparability.

Given the possible relationship between proprietary costs and comparability, I first test whether financial reporting environments affect the relationship between proprietary costs of financial reporting and finanacial statement comparability. Since strong financial reporting environments already protect investors and reduce information asymmetry, I expect that proprietary costs of financial reporting outweigh the benefits of comparability under strong financial reporting environments (negative relationship). I also test whether this negative relationship applies to countries outside the U.S., especially where there are poor financial reporting environments. Contrary to strong financial reporting regimes such as the U.S., countries with poor financial reporting environment may encourage different managers' financial reporting behaviors. For example, since management is less likely to be monitored, meaning that investors are not well-protected,

managers in countries with poor financial reporting environments are more likely to enhance comparability to attract external investors by showing better financing conditions, such as a lower cost of capital. Meanwhile, managers might be able to use more discretion to conceal proprietary information, because poor financial reporting environment allows more leeway in financial reporting practice. Collectively, I predict that managers in countries with poor financial reporting environment and those in countries with strong financial reporting environment may act differently in their financial reporting practice. This argument leads to my first testable hypothesis (Figure 1):

Hypothesis 1 (H1): The negative relationship between proprietary costs of financial reporting and financial statement comparability is stronger in countries with poor financial reporting environments.

2.2. The Impact of Country-level Attributes of Financial Reporting Environments

While previous hypothesis predicts effect of financial reporting environments on relationship between proprietary costs and comparability, some studies reveal that many factors are contained in financial reporting environments. Among these factors, I focus on country-level attributes in this study, which shape the managers' incentive to use discretion in financial reporting. Prior literature has linked these country-level attributes to the financial reporting practice, such as differences in regulation enforcement, legal systems, social factor, and cultural factor. For example, Leuz et al. (2003) argue that earnings quality is positively related to the quality of minority shareholder rights and legal enforcement, since when investor protection is strong, insiders enjoy fewer private control benefits and consequently fewer incentives to mask firm performance. Doupnik and Tsakumis (2004) suggest that Gray's (1998) model links Hofstede's (1980) societal values to a system of accounting values leading to accounting outcomes. They argue that societal values influence managers' accounting techniques. Han et al. (2010) document that both national culture and institutional structure are important factors that explain corporate managers' earnings discretion

practices around the world. They provide evidence that individualism (uncertainty avoidance) is positively (negatively) related to the magnitude of earnings discretion.

Based on the previous findings, I delve into the effects of a country's financial reporting environment on the relationship between proprietary costs of financial reporting and financial statement comparability. An investigation of variations in financial reporting environments between countries requires scrutiny of features specific to each country, since these country-specific features, which form the financial reporting environment, influence financial reporting practices differently. Managers may consider proprietary costs of financial reporting and country-level attributes that belong to financial reporting environments when they disclose financial information. If they put more weight on their capital needs, the benefit of comparability could be relatively high. However, they aim to outperform their industry peers, then they may have incentives to use as much discretion as possible. Therefore, varying financial reporting environments could influence financial statement comparability. This leads to my second hypothesis, stated in the null form (Figure 1):

Hypothesis 2. (H2): Country-level differences do not affect the relation between proprietary costs and comparability.

According to previous international accounting studies, determinants of country-level financial reporting environments include geographic features (e.g. country latitude), legal institutions (e.g. legal origin), religious affiliation (e.g. percentage Catholic, religiosity), cultural development (e.g. masculinity, societal trust) and economic outcomes (e.g. per capita GDP, market capitalization, stock market participation). Therefore, my empirical research considers these country-level factors. The main challenge for empirical tests examining the impact of country-level attributes, however, is the long list of country-level factors. Isidro et al. (2019) describe a way to efficiently and accurately overcome these challenges. They investigate a comprehensive set of 72 country-level variables proposed in extant literature to explain international variation in economic outcomes. They find most country-level factors are correlated which

presents a challenge to empirical research. Thus, they construct four principal component factors to categorize most of the country-level features that affect financial reporting practices. They find that these four factors collectively explain over 70% of the cross-country variation in financial reporting practices. Therefore, I use the four factors (***Corporate Environment, Investor Protection***, ***Governance Environment, External Investors***) as country-level attributes to test my second hypothesis.

Specifically, ***Corporate Environment*** (Isidro et al. (2019)'s factor one) mainly captures informal institutions, such as cultural values and norms that affect human behavior (Crossland and Hambrick 2011). Managers' financial reporting practices include a certain amount of their discretion, which is derived from the external environment (Finkelstein et al. 2009). Finkelstein et al. (2009) suggest that a manager might have multiple possible courses of action in a given situation, and the manager's discretion is in part a function of his or her own cognitive limit. This cognitive limit is influenced by the external environment. The external environment is divided into formal institutions and informal institutions (North 1990). Formal institutions are explicit rules, structures and outcomes in society, such as legal systems and regulatory conditions. Prior international accounting research has shown that a country's formal institutions affect financial reporting quality. On the other hand, informal institutions are largely uncodified systems of meaning present in customs, values, and unwritten codes of conduct (Deephouse et al. 2016). In this study, ***Corporate Environment*** captures informal institutions, which influence formal institutions (Helmke and Leevitsky 2004). Even if formal institutions are not well developed, informal institutions substitute for formal institutions (North 1990). Previous researchers suggest that country-level informal institutions elicit shared cognitive and normative frameworks among economic agents (Abdi and Aulakh 2012).

Managers' incentives to use discretion in financial reporting is affected by the values, norms, and beliefs, which are associated with informal instititutions. Culture defines what is legitimate, right and desirable in a given society (Deephouse et al. 2016). Therefore, it influence managers' financial reporting behavior regarding amount of discretion (Han et al. 2010). Corruption is also included in informal

institutions, as it is rooted in societal beliefs and norms (Judge et al. 2008), and thus might affect managers' financial reporting behavior. Managers use judgment in financial reporting for desired accounting numbers (Han et al. 2010). Thus, managers in a regime where individualism (uncertainty avoidance) is prevalent, are more (less) likely to use earnings discretion. Malagueno et al. (2010) find evidence that accounting quality is significantly negatively related to the level of perceived corruption in a country. Thus, in countries where informal institutions are well-developed, social norms and beliefs may not tolerate managers' incentives to exercise a large amount of discretion. In other words, in countries where ***Corporate Environment*** is poor, managers' discretion in financial reporting can be viewed as legitimate. As proprietary cost of financial reporting are high, managers are more likely to have higher incentives to use discretion to hide proprietary information or to mask their performance, resulting in less comparable financial statements. However, if countries have strong informal institutions, social norms and beliefs may reduce managers' incentives to use discretion relatively. Therefore, I predict that the negative relationship between proprietary costs and comparability is stronger in countries with poor ***Corporate Environment***, because in these countries managers enjoy greater private control benefits and hence have stronger incentives to use discretion in financial reporting. This leads to one of the subsets of the second hypothesis, which is the following (Figure 1):

Hypothesis 2.a. (H2a): The negative association between proprietary costs of financial reporting and financial statement comparability is more pronounced in countries with poor Corporate Environment.

Investor Protection (Isidro et al. (2019)'s factor two) mainly captures the type of legal system, the strength of regulation enforcement, and self-dealing controls exist normally for investor protection. Managers have incentives to conceal their private control benefits from outsiders because, if these benefits are detected, outsiders will likely take disciplinary actions against them (Shleifer and Vishny 1997). Accordingly, managers have incentives to use discretion in order to mask firm performance and to conceal costly proprietary information in competitive industries. In turn, managers may reduce financial statement

comparability by using financial reporting discretion. Further, legal systems protect investors by conferring on them the rights to discipline insiders (e.g., to replace managers), as well as to limit managers' private control benefits (La Porta et al. 1998). Thus, legal systems effectively control managers' incentives to use discretion in competitive industries. For example, Ball et al. (2000) suggest that code-law accounting standards give greater discretion to managers in deciding when economic gains and losses are incorporated in accounting income. Leuz et al. (2003) find increasing earnings management as countries move from economies with large stock markets, strong investor rights and stronger legal enforcement policies to economies with weaker legal enforcement. Therefore, I predict that the negative relationship between proprietary costs and comparability is stronger in countries with poor ***Investor Protection***, because in these countries managers enjoy greater private control benefits and hence have stronger incentives to use discretion in financial reporting. This leads to another subset of the second hypothesis, which is the following (Figure 1):

Hypothesis 2.b. (H2b): The negative association between proprietary costs of financial reporting and financial statement comparability is more pronounced in countries with poor Investor Protection.

Governance Environment (Isidro et al. (2019)'s factor three) in this empirical test is mainly related to the number of analysts, domestic institutional holdings, and firm structure such as hierarchy and independence that can play a role in governance. Corporate governance is typically defined as the set of mechanisms designed to mitigate agency problems that arise between shareholders and managers because of the separation of ownership and control (Jensen 1993). Information asymmetry between these parties is the main reason of agency problems, implying that a firm's information environment is a crucial input that affects the design of its corporate governance mechanisms that are implemented to monitor managers. In competitive industries, managers have incentives to hide proprietary information from peers or investors in order to protect their competitive advantages. In addition, they attempt to mask their poor performance to meet market expectations, which give harsh punishments in competitive environments when they

underperform (Karuna 2007). In competitive industries, a strong governance environment can mitigate managers' incentives to use financial reporting discretion, and improves financial reporting quality. For example, several financial reporting frauds such as Enron and Worldcom resulted from governance problems. Previous research finds a positive association between weaker governance environment and poor financial reporting quality, increased earnings manipulation, and financial statement fraud (Dechow et al. 1996; Beasley 1996; Krishnan 2001). Given the effect of poor corporate governance on managerial discretion and financial reporting practices, there has been an emphasis on the need to improve corporate governance over the financial reporting practice. Degeorge et al. (2013) document that financial analysts play a monitoring role, resulting in less earnings management. In countries with strong governance environment, managers may use less discretion and thus enhance financial statement comparability, because in these countries managers are more likely to have their financial reporting practices monitored. Therefore, I predict that the negative relationship between proprietary costs and comparability is stronger in countries with weak ***Governance Environment***. This leads to the third subset of the second hypothesis, which is the following (Figure 1):

Hypothesis 2.c. (H2c): The negative association between proprietary costs of financial reporting and financial statement comparability is more pronounced in countries with poor Governance Environment.

Lastly, ***External Investors*** (Isidro et al. (2019)'s factor four) mainly represents openness of society to external investment. External investors rely heavily on accounting information, and thus require high quality of accounting information, in order to remove barriers for investment. This is because information asymmetry and agency problems may hinder external investors from interpreting accounting information. Consequently, external investors will rely more on financial reports when accounting information is transparent, and when other sources of information are lacking (Bagnoli and Watts 2010). Accounting information helps managers to communicate information to external investors. More precise and transparent accounting information may mitigate information asymmetry and agency problems. The purpose of

financial statements is to provide useful information for investment decisions (IASC 2001). For example, Brennan and Cao (1997) suggest that foreign investors are less informed than locals and thus react more slowly to market developments. This information asymmetry between foreign and domestic investors can lead to lower foreign investments because of the foreign investor's disadvantage. Meanwhile, Stulz and Williamson (2003) suggest that the openness serves as a proxy for the benefits from letting markets work unimpeded. They also document a positive relationship between openness and investor rights. In competitive industries, managers have incentives to hide proprietary information from peers in order to protect their competitive advantages. Moreover, they attempt to use discretion to bring positive reactions from external investors. But this may fail, since external investors request high quality of accounting information and high degree of financial transparency, constraining managers' incentives to use discretion in financial reporting. Therefore, I predict that the negative relationship between proprietary costs and comparability is stronger in countries with less ***External Investors***. This leads to the fourth subset of the second hypothesis, which is the following (Figure 1):

Hypothesis 2.d. (H2d): The negative association between proprietary costs of financial reporting and financial statement comparability is more pronounced in countries with less External Investors.

In sum, each of the four country-level attributes likely affects the relationship between proprietary costs and comparability, respectively. As each factor has a lower score, the financial reporting environment is poor. Poor financial reporting environment allows managers to exercise more discretion in financial reporting practice, and in competitive industries managers attempt to use more discretion to hide proprietary information from competitors, reducing financial statement comparability. Although, managers might have less incentive use discretion to enhance comparability when they want to attract investors for capital needs, poor financial reporting environments allow more discretion to outperform competitors. Meanwhile, although strong financial reporting environments tend to constrain managers' incentive to use discretion in financial reporting, this effect could not be great, because strong financial reporting environments already

protect investors and reduce information asymmetry. Consequently, managers normally consider these proprietary costs of financial reporting, country-level attributes, and benefits of comparability in financial disclosure. Therefore, I expect that the negative relationship between proprietary cost and comparability is stronger in countries with poorer financial reporting environment with a low score for each factor.

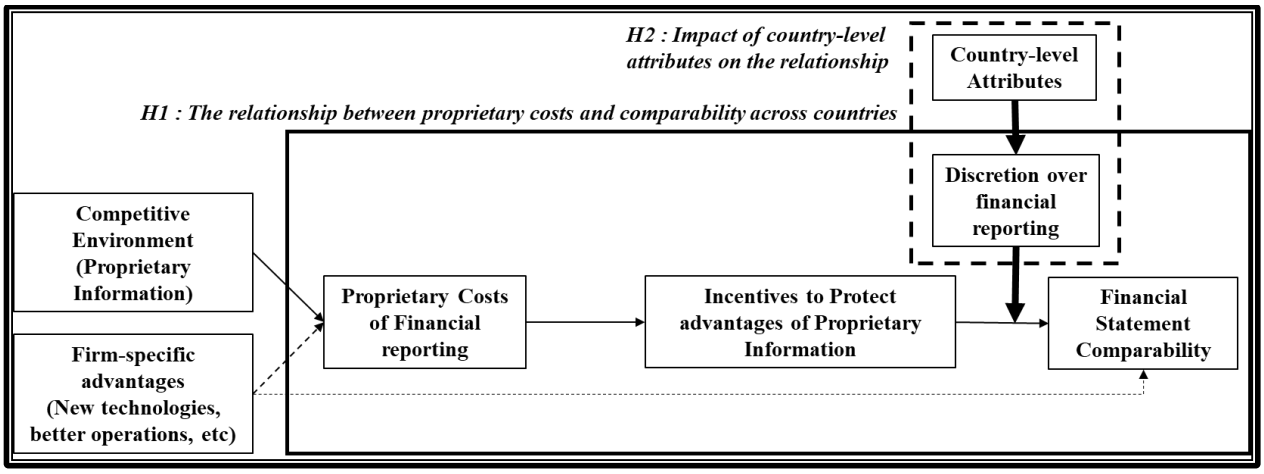

Figure 1. Hypotheses Development.

CHAPTER 3

RESEARCH DESIGN

3.1. Sample Selection

My sample consists of all listed companies for the period from 2000 to 2018. The sample consists of data from 47 countries. The sample is obtained from the COMPUSTAT Global, CRSP, and I/B/E/S databases. Following previous research, Financial firms (SIC 6000-6999) are excluded from the initial sample. Accounting income and other financial data are from the COMPUSTAT Global files. Stock price data are drawn from the CRSP. I exclude firm-year observations with missing values to compute dependent and independent variables. I keep only those observations in countries with country-level attributes measures for the 47 countries proposed by Isidro et al. (2019). To mitigate the influence of outliers, I winsorize each firm-level variable at the 1st and 99th percentile values. The final sample contains 78,937 firm-year observations.

3.2. Main Variables

3.2.1. Measures of Proprietary Costs of Financial Reporting

One of the challenging tasks in my empirical study is to find proper proxies for proprietary costs of financial reporting. In fact, proprietary costs mainly result either from the competitive environment or from firm-specific advantages. Firm-specific advantages normally include new technologies, better operations, and even a larger firm size. The crucial problem of using proxies associated with firm-specific advantages is that the firms with these advantages have less comparable financial statement with peers' financial statements, because firm-specific features themselves can bring about real differences in business structure, and financial reporting as well. Imhof et al. (2018) use ***Competitive Strategy***, grouped as

Defender and ***Prospector***, which is closely associated with comparability. In other words, ***Prospector*** and ***Defender*** have different business structures and thus different financial reporting practices as well, regardless of the managers' discretion over financial reporting. While, as competitive environment intensifies, the need to protect proprietary information from competitors increases (Imhof et al. 2018). Therefore, I find other proxies that are not closely associated with financial statement comparability – ***The Speed of Positive Abnormal Profit Adjustment*** and ***Industry Follower***.[1]

The Speed of Positive Abnormal Profit Adjustment

Many theoretical researchers have studied managers' incentives to disclose information to outside parties. Verrecchia (1983) allows for the existence of proprietary costs of disclosure in his model of discretionary disclosure and arrives at an equilibrium, in which some firms do not disclose all value-relevant information. Specifically, he shows that capital market participants will provide firms that have higher proprietary costs of disclosure more discretion in their disclosure practices and that these firms consequently disclose less than firms with lower proprietary costs of disclosure. Proprietary costs are higher when disclosed information is more useful to the firm's product market rivals. It is also higher when these rivals can take greater advantage of the information at the expense of the disclosing firm. Verrecchia (1990) and Clinch and Verrecchia (1997) argue that there is less disclosure in industries more intense competition among incumbents exists, because proprietary costs of disclosure are greater in such industries. In these industries, a disclosing firm's rivals are likely to take more aggressive actions in response to the disclosures. Given that rivals acquire proprietary information on industry demand through peers' disclosures and revise

[1] To address endogenous issue, I first consider a Heckman two-stage model instead of developing my proxies in this study. However, a Heckman two-stage model is only appropriate in unique setting (Bascle 2008). For example, Wolfolds and Siegel (2019) illustrate that Heckman model often provides less reliable outcomes than OLS model, without the assumptions being met. Next, I attempt to use instrumental variable (IV) methods, which are commonly used in accounting research. However, there are challenges that limit the use of IV methods. For instance, Larcker and Rusticus (2010) identify conditions under which IV methods are preferred to OLS estimates. Therefore, in order to use the IV methods, several fundamental requirements must be met. Since this study has difficulties in using the above methods to address endogeneity, I rather develop my proxies for more reliable results.

their strategies to the detriment of the disclosing firm, the abnormal positive profits from this demand will disappear more quickly for firms in more competitive industries.

In this study, to meaure proprietary costs of financial reporting, I use Harris' (1998) speed of profit adjustment metric to measure the competitive environment. It captures the speed with which those industry participants with above-average profits have their positive abnormal profitability revert to the industry mean. For example, Harris (1998) argues that firms disclose less information about their operation in less competitive environment to protect the abnormal profits of these operations. Also, Harris (1998) notes that this measure provides an indicator of the persistence of abnormal profits away from the industry mean. The proxy for speed of adjustment, ***ADJ_SPEED***, calculated separately for each industry j. As with industry concentration variables, a higher value of ***ADJ_SPEED*** implies less competition and less proprietary costs. I estimate Harris' (1998) measure of the speed of positive abnormal profit adjustment with the following regression:

$$X_{ijkt} = \beta_{ojk} + \beta_{1jk}(D_n X_{ijkt-1}) + \boldsymbol{\beta_{2jk}}(D_p X_{ijkt-1}) + e_{ijkt}$$

, *where* X_{ijkt} = the difference between firm i's return on assets and the mean return on assets for its industry j and country k, in year t;

D_n = 1 if X_{ijkt-1} is less than or equal to 0, and 0 otherwise; and

D_p = 1 if X_{ijkt-1} is greater than 0, and 0 otherwise.

The equation above is estimated separately for each three-digit SIC code industry using pooled cross-sectional time-series data for all firms in each industry and country. The coefficient $\boldsymbol{\beta_{2jk}}$ reflects the persistence of return on assets above the mean in industry j and in country k. A significant positive coefficient indicates that firms with above average profit rates are able to maintain this profit advantage over time, suggesting less competition. The speed of profit adjustment reflects competition for abnormal

profits over time. Note that this measure is capable of capturing competition among a few large firms in a concentrated industry while the concentration ratios are not. Therefore, higher ***ADJ_SPEED*** is related to higher proprietary costs.

Industry Follower (Market Share)

Many empirical studies have explored inter-industry differences in financial reporting behavior. However, firms within the same industry are likely to face different levels of competition depending on their market position. Studies have used several firm-specific proxies of proprietary costs, such as market share. The intensity of competition can be perceived differently by industry leader and follower, which are categorized by market share. Thus, the effects of competition on managers' financial reporting behavior are different for industry leaders and followers. Nickell (1996) documents that industry followers face greater competitive pressures than industry leaders. Moreover, industry followers also face greater competitive pressures because of predation risk. Therefore, industry leaders, compared to industry followers, are less vulnerable to the threats posed by competitive pressure. Li (2010) suggests that the effect of competitive pressure on disclosure quality is less pronounced for industry leader. This paper documents that the effect of competitive pressure in reducing profit forecast optimism and investment forecast pessimism is stronger for industry followers. Dhaliwal et al. (2014) also suggest that industry followers recognize bad news earlier than good news, as industry followers face greater competitive pressures. As with the above previous empirical research findings, market share is likely able to proxy for proprietary costs of financial reporting.

Proprietary costs of disclosure can be low for firms with high market share within the industry. Market share, defined as company sales divided by the sales for all firms in the industry, measures percentage of industry sales controlled by the firm. High market share indicates a position of market power, which refers to the ability of the firm to take unilateral action in its product market without serious competitive consequences (Landes and Posner 1981). Some studies suggest that high-market-power firms (***Leader***) may have lower disclosure costs because their price-setting ability allows them to pass demand

shocks on to customers by changing prices (Peress 2010). Wagenhofer (1990) argues that market power insulates ***Leader*** from competitors' counteractions. Further, firms with high market share want to highlight their strong margins to investors by disclosing sales forecasts to accompany their earnings forecasts (Acito et al. 2019). Consequently, the threshold level of disclosure can be low for firms with high market share, leading to more frequent disclosures and disclosures with a weaker good news bias. In my empirical analysis, firms within the same industry are sorted into quartiles according to their market shares, and those in the top quartile are identified as ***Leader,*** otherwise ***Follower***. ***Follower*** is associated with costly proprietary information.

3.2.2. Financial Statement Comparability Measure

I employ an earnings-based measure of financial statement comparability suggested by De Franco et al. (2011), which considers accounting systems to be a mapping of information from economic events into financial statements. Earlier papers on accounting comparability were based on the comparability of financial reporting inputs (input-based approach), such as the accounting rules and the choice of reporting methods. Most of these studies derive comparability by counting and weighing differences in accounting method choices over time or across firms. However, recent research has mostly focused on the comparability of the outputs of the financial reporting process (output-based approach), most notably of earnings. For example, one of the most widely used output-based measures of comparability is based on the similarity with which accounting data react to economic events. There are several reasons for which I use the measurement derived by De Franco et al. (2011) rather than the input-based approach : 1) it is more relevant for accounting information users because their focus is on the output; 2) it is more objective as it does not require the selection and weighting of the inputs; 3) it is easier to implement in practical terms due to the widely available data sources; and 4) it is potentially more accurate in measuring accounting comparability because it allows researchers to control for the similarity of economic events.

De Franco et al. (2011) suggest a comparability measure that is very popular and widely used. I use this comparability measure. First, I estimate the following firm-year equation over the most recent four year period, including the current year and previous three years:

$$Earnings_{it} = \alpha_i + \beta_i Return_{it} + \varepsilon_{it},$$

where $Earnings_{it}$ is earnings before extraordinary items scaled by market value of equity nine months prior to the fiscal year-end. $Return_{it}$ is the buy-and-hold percentage stock return from nine months prior to the fiscal year-end to three months after the fiscal year-end. I require each firm to have available data for the entire sample period (2000-2018) and winsorize the top and bottom one percent of the distributions of Earnings and Return to reduce the influence of outliers. The coefficients α_i and β_i are the estimates of the accounting function for firm i during the four years included in each regressioin and reflect how economic events (i.e., *Return*) are reflected in accounting income (i.e., *Earnings*). Similarly, the accounting function for firm j is reflected by α_i and β_i, estimated using the earnings and return for firm j.

The similarity of the functions for firm i and firm j represents the comparability of their accounting. To estimate the similarity in functions, I predict firm i's earnings using its own function and firm j's function, but assuming the same economic income (i.e., *Return*). Specifically, I calculate:

$$E(Earnings)_{iit} = \hat{\alpha}_i + \hat{\beta}_i Returns_{it},$$

$$E(Earnings)_{ijt} = \hat{\alpha}_j + \hat{\beta}_j Returns_{it},$$

where $E(Earnings)_{iit}$ is the predicted earnings of firm i using firm i's function and firm i's return in period t, and $E(Earnings)_{ijt}$ is the predicted earnings of firm i using firm j's function and firm i's return in period t. The firm i and firm j are in the same industry. Using the same return to compute both predicted earnings holds constant economic income. Next, I compute the accounting comparability between firm i and firm j as the negative value of the average absolute difference between the predicted earnings using firm i's and

firm j's accounting functions. I require that firm i and j be in the same three-digit SIC code, share the same fiscal year-end date, and be from same country:

$$Comp_{ijt} = (-\frac{1}{4}) \times \sum_{t-3}^{t} \left| E(Earnings)_{iit} - E(Earnings)_{ijt} \right|.$$

I compute a firm-level measure of accounting comparability by aggregating over all of the firm i – firm j combinations for each industry. The comparability between firm i's and firm j's accounting systems is estimated as the absolute difference between the predicted earnings using firm i's and firm j's accounting functions multiplied by -1. The comparability measure has non-positive values. The comparability between firm i and firm j, in a given industry and country, is higher when the comparability measure has higher values because it represents a smaller absolute difference. I measure comparability $\boldsymbol{Comp_{ijt}}$, which is the median of all of the comparability scores of firm *i* and j in period *t* in the same industry. Further, I compare this measure across countries.

3.2.3. Country-level attributes

Previous international accounting research has used multiple country characteristics influencing financial reporting quality. These country-level variables include geographic features (e.g. country latitude), legal institutions (e.g. legal origin), religious affiliation (e.g. percentage catholic, religiosity), cultural development (e.g. masculinity, societal trust) and economic outcomes (e.g. per capita GDP, market capitalization, stock market participation), and so on. These country-level factors are associated with the financial reporting environment, which has control over managers' exercising of financial reporting discretion. Therefore, my empirical research needs to consider these country-level factors. The main challenge for an empirical test examining the impact of country-level attributes, however, is a long list of country-level factors. Isidro et al. (2019) describe a way to efficiently and accurately use these country-level factors and thereby overcome such issues, by developing standardized scores of country factors for 47 countries.

To capture the country-level attributes previously used in the literature, I use the four latent factors proposed by Isidro et al. (2019) in building my empirical model. The international financial reporting literature identifies 72 country-level attributes that explain financial reporting differences around the world. Isidro et al. (2019) suggest that these country-level attributes can be categorized as four underlying factors that explain most of the variation in these attributes across countries. Among these four factors, ***Corporate Environment*** is associated with the institutional and governance system, and economic and social welfare, ***Investor Protection*** is associated with investor rights protection and capital markets development, ***Governance Environment*** is associated with political transparency and accounting enforcement, and ***External Investors*** is associated with the openness of society to external investors. They use factor analysis, which takes into account the correlation patterns among the country-level attributes. The factor analysis significantly reduces the number of possible country-level attributes that explain variation in financial reporting. These four factors explain about 58% of total variation, with the first two factors alone explaining a significant portion (80%) of that variation[2]. Since I use the standardized scores of four factors presented by Isidro et al. (2019) on 72 country variables for 47 countries, a concern that my study does not consider weights of each factor can be addressed. Thus, country-level attributes are categorized as four latent factors that are 1) associated with institutions and culture, and economic and social welfare (***Corporate Environment***), 2) associated with strong protection of investors' rights and capital markets development (***Investor Protection***), 3) associated with political transparency, and tax and accounting enforcement (***Governance Environment***), and 4) associated with openness of society to external investors (***External Investors***). Although these four factors cannot explain country-level financial reporting differences fully, they enable me to observe the effects of almost all of country-level factors. Each factor score is publicly available in Isidro et al. (2019). Therefore, by using these four latent factors instead of almost of all country-

[2] Isidro et al. (2019) provide weights of the four factors. ***Corporate Environment*** (Factor 1) has weight of 0.531, ***Investor Protection*** (Factor 2) has 0.259, ***Governance Environment*** (Factor 3) has 0.120, and ***External Investors*** (Factor 4) has 0.088.

level attributes, I efficiently test how these four latent country-level factors affect managerial discretion in financial reporting.

3.3. REGRESSION MODELS

3.3.1. Test of Hypothesis I

To test the relationship between proprietary costs of financial reporting and financial statement comparability across countries, I use the regression model developed by Imhof et al. (2018). I employ the following model to examine how proprietary costs of financial reporting and managers' discretion affect financial statement comparability across countries where financial reporting environments vary considerably. Given the conflict regarding the association between proprietary costs and comparability, this international setting can provide a more acceptable relationship.

(1) $\mathbf{Comp_{ijt} = \alpha_0 + \alpha_1 Proprietary\ costs_{it} + \alpha_2 Controls_{it} + Fixed\ Effects + \varepsilon_{it}}$**,**

(2) $\mathbf{Comp_{ijt} = \alpha_0 + \alpha_1 Proprietary\ costs_{it} + \alpha_2 Controls_{it} + Fixed\ Effects + \varepsilon_{it}}$ **(partitioned by strong / poor financial reporting environment),**

where $\mathbf{Comp_{ijt}}$ represents measure of comparability of De Franco et al. (2011), which is firm-level variable, and $\mathbf{Proprietary\ costs_{it}}$ is measured by (1) **Follower**, which is determined by market share, and (2) **ADJ_SPEED**. For the first proxy (**Follower**), industry follower is set equal to 1, 0 otherwise. All variables in the model are firm-level variables. In regression model (2), I group the entire sample by sum of weighted score of a factor one, two, three, and four proposed by Isidro et al. (2019). If the total score of each country is beyond the median of total scores, the country is grouped as a strong financial reporting regime, otherwise the country is classified as a poor financial reporting regime. Following previous studies, I control for the determinants of financial statement comparability. I control for size and book-to-market ratio (Lang et al.,

2010), leverage ratio, cash flows from operations, the variance of cash flows, sales and growth in sales, and stock returns (Francis et al., 2013). Also, I control for accrual quality (Kothari et al., 2005), since the absolute value of discretionary accruals lowers financial statement comparability. In addition, I control for country-level using all four latent factors, since they include almost all factors that affect the financial reporting outcomes in a country (Isidro et al. 2019). Thus, I include firm- and year-, and industry-fixed effects, respectively. Industry fixed effects are based on three-digit SIC codes. Moreover, because both proxies of proprietary costs vary by firm over time, this empirical test requires firm-fixed effects, to mitigate the bias in the coefficients of this empirical model. Further, I include year dummies for year-fixed effects. If the coefficient of $\mathbf{Proprietary\ costs_{it}}$ in the regression model (1) is significantly negative, it disputes that, in competitive industries, managers use discretion for comparable financial statements. If the result supports H1, in the regression model (2), the coefficient of $\mathbf{Proprietary\ costs_{it}}$ in countries with poor financial reporting environment has a larger absolute value than the coefficient in countries with strong financial reporting environment. To test for differences in the coefficient of $\mathbf{Proprietary\ costs_{it}}$ under sample of countries with strong financial environment and poor financial reporting environment, I use a t-test[3].

3.3.2. Test of Hypothesis II

Models (3) and (4) test the impact of country-level attributes on the association between proprietary costs and financial statement comparability. First, I regress model (3) separately for two subsamples partitioned by median weighted score of each country-level attribute, and then compare the coefficients between the two groups. The high score group includes observations with country-level attribute scores above median across countries, while the low score group contains observations with scores below the median. Thus, a higher score of each factor indicates better financial reporting environment. In addition,

[3] T-test is most useful in determining if there is a statistically significant difference between two independent sample groups

the regression (4) includes an interaction term of country-level attributes and proprietary costs to investigate the joint effect of country-level attributes. For easier interpretation, I use the low score group as the country-level attributes in the interaction term (***Corp_Env_low***, ***Inv_Prot_low, Gov_Env_low, Ext_Invest_low*)**. Each attribute in this empirical test is the score of ***Corp_Env***, ***Inv_Prot***, ***Gov_Env***, and ***Ext_Invest,*** respectively.

(3) $\mathbf{Comp_{ijt} = \alpha_0 + \alpha_1 Proprietary\ costs_{it} + \alpha_2 Controls_{it} + Fixed\ Effects + \varepsilon_{it}}$ **(partitioned based on each country-level attribute),**

(4) $\mathbf{Comp_{ijt} = \alpha_0 + \alpha_1 Proprietary\ costs_{it} + \alpha_2 Country\ attributes_{it} + \alpha_3 Proprietary\ costs_{it} \times Country\ attributes_{it} + \alpha_4 Controls_{it} + Fixed\ Effects + \varepsilon_{it}}$**,**

where $\boldsymbol{Comp_{ijt}}$ represents the measure of comparability from De Franco et al. (2011), and $\mathbf{Proprietary\ costs_{it}}$ is measured by (1) ***Follower***, which is grouped by market share, and (2) ***ADJ_SPEED***. For the variable of ***Follower***, industry follower is set equal to 1, 0 otherwise. For country-level attributes in the interaction term, group of low score of each factor equals to 1, otherwise 0. The low score group (***Corp_Env_low***, ***Inv_Prot_low, Gov_Env_low, Ext_Invest_low*)** consists of scores less than the median. Given H2, in the model (3), I expect that the absolute value of the coefficient of $\mathbf{Proprietary\ costs_{it}}$ in the high score group would be smaller than in the low score group. The relationship between the proprietary costs of financial reporting and financial statement comparability is more negative in countries with poor Corporate Environments, due to increased exercised discretion. In model (4), I expect the coefficient of the interaction term to be significantly negative. Since I use low score group as the country-level attribute, the absolute value of the coefficient of the interaction term is expected to be larger than the absolute value of the coefficient of the proprietary costs variable. Following previous studies, I control for the determinants of financial statement comparability. I control for size and book-to-market ratio (Lang et al., 2010), leverage ratio, cash flows from operations, the variance of cash flows, sales

and growth in sales, and stock returns (Francis et al., 2014). Also, I control for accrual quality (Kothari et al., 2005), since the absolute value of discretionary accruals lowers financial statement comparability. Thus, I include firm- and year-, and industry-fixed effects, respectively. I also include year dummies for year-fixed effects.

CHAPTER 4

RESULTS

4.1. Descriptive Statistics

Descriptive statistics by country-level, and firm-level are shown in Table 1. Table 2 provides the Pearson correlation matrix among the variables used in my empirical tests. In Table 1, Panel A reports the mean values of each variable for each country. The '**OBS**' column of Panel A shows that the sizes of the country samples range from 11 observations for Canada to 14,950 observations for Japan. Since I multiply absolute value of Financial statement comparability (***COMP***) by -1, all values are negative. Argentina (-0.088), Austria (-0.092), Canada (-0.092), Mexico (-0.091), Taiwan (-0.092), and USA (-0.093) show higher level of accounting comparability, while Chile (-0.493), Greece (-0.237), Indonesia (-2.233), and Italy (-0.461) present lower level of comparability. Proprietary costs of financial reporting variables (***ADJ_SPEED, Follower***) also show variation across countries. For ***ADJ_SPEED***, Norway shows the highest proprietary costs among these countries. Also, Panel A reports percentage of industry followers in each country. In total, Czech Republic, Finland, Germany, Belgium likely have larger portion of followers, compared to other countries. Followers are more likely to have higher proprietary costs of financial reporting, since predation risk brings higher competitive environment. Panel B of Table 1 reports the descriptive statistics for firm-level variables used in the empirical tests. The mean and median of ***ADJ_SPEED*** (***Follower***) are 0.283 (0.626) and 0.187 (1), respectively. Most of the control variables' means and medians are close to those reported by Haw et al. (2015).

Table 2 reports the correlation matrix among the firm-level regression variables. Consistent with literature, financial statement comparability (***COMP***) is negatively correlated with ***ADJ_SPEED***, ***follower***, suggesting that both have negative effects on financial statement comparability. In addition, financial statement comparability (***COMP***) is positively associated with accrual quality, indicating that less use of

managerial financial reporting discretion likely brings about better financial statement comparability. Also, Comparability is positively related to leverage ratio and size, and market-to-book ratio. However, these correlation results should be interpreted with caution, because this pairwise correlation may suffer from the correlated omitted variables problem, which is controlled for in the following regression analyses.

Table 1. Summary Statistics

Panel A. Country-level Statistics

COUNTRY	OBS.	COMP	ADJ_SPEED	FOLLOWER	CORP_ENV	INV_PROT	GOV_ENV	EXT_INVEST
ARG	104	-0.088	-0.038	0.520	-0.517	-1.15	-0.783	1.786
AUS	3,741	-0.143	-0.127	0.495	0.624	1.197	1.192	0.258
AUT	398	-0.092	-0.156	0.673	1.382	-1.199	-0.512	0.762
BEL	665	-0.134	-0.187	0.711	0.837	-0.729	-0.333	-0.284
BRA	828	-0.092	-0.147	0.413	-0.651	-1.19	0.374	0.949
CAN	11	-0.092	0.198	0.154	0.517	1.243	1.933	0.203
CHE	1,400	-0.094	-0.155	0.695	1.459	0.096	0.101	-0.344
CHL	333	-0.493	-0.031	0.548	0.26	-0.036	-1.716	1.452
CHN	11,772	-0.096	-0.050	0.361	-0.58	-0.055	-0.744	-1.828
COL	50	-0.094	0.106	0.185	-0.962	-0.501	-0.391	1.211
CZE	60	-0.093	-0.060	0.810	0.12	-0.51	-0.368	-0.409
DEU	3,535	-0.093	-0.145	0.611	1.171	-1.14	0.741	-0.813
DNK	590	-0.119	-0.130	0.583	1.319	0.109	0.681	0.269
ESP	667	-0.130	-0.135	0.682	0.401	-0.586	0.087	0.122
FIN	1,165	-0.097	-0.152	0.772	1.555	-0.215	-0.335	0.172
FRA	3,489	-0.095	-0.139	0.639	0.729	-0.564	0.169	-0.92
GBR	7,361	-0.114	-0.157	0.495	0.696	1.56	0.905	-0.424
GRC	472	-0.237	-0.173	0.671	0.104	-1.398	-0.756	-0.392
HKG	2,305	-0.099	-0.155	0.491	0.662	2.822	-1.827	0.419
IDN	762	-2.233	-0.059	0.495	-1.647	-0.196	-0.746	-1.114
IND	3,633	-0.114	-0.127	0.353	-1.256	0.674	0.839	-0.026
IRL	260	-0.192	-0.120	0.528	0.99	1.081	-0.716	2.12
ISR	318	-0.096	-0.113	0.472	0.064	0.789	-0.207	1.456
ITA	1,268	-0.461	-0.166	0.627	0.335	-0.926	0.099	-0.621
JPN	14,950	-0.098	-0.096	0.665	0.88	-0.541	-0.765	-2.617
KEN	70	-0.093	-0.104	0.200	-1.37	-0.274	1.413	0.219
KOR	2,166	-0.094	-0.102	0.306	0.046	-0.421	-0.797	-1.562

MEX	494	-0.091	-0.077	0.571	-0.53	-1.115	-0.871	1.784
MYS	2,518	-0.094	-0.185	0.442	-1.077	1.856	-1.054	-0.949
NGA	94	-0.093	0.066	0.117	-1.781	0.003	1.795	-0.099
NLD	815	-0.157	-0.151	0.543	1.176	-0.256	0.738	0.424
NOR	1,102	-0.112	-0.236	0.500	1.373	-0.67	1.489	-0.306
NZL	621	-0.095	-0.113	0.601	0.792	0.986	0.582	0.684
PAK	277	-0.091	0.029	0.373	-1.848	0.038	1.123	-0.024
PER	117	-0.176	0.032	0.454	-1.053	-0.424	-0.625	1.539
PHL	365	-0.098	-0.038	0.472	-1.591	-0.138	0.248	0.319
POL	675	-0.092	-0.066	0.324	0.045	-0.8	-0.415	0.178
PRT	271	-0.138	-0.207	0.746	0.471	-1.053	-0.846	0.591
RUS	322	-0.109	0.036	0.177	-0.589	-0.519	-1.012	-0.631
SGP	1,183	-0.109	-0.174	0.402	0.159	2.804	-1.859	0.015
SWE	1,416	-0.092	-0.080	0.499	1.405	-0.443	0.937	-0.164
THA	1,004	-0.093	-0.152	0.441	-1.136	0.612	-1.075	-1.441
TUR	558	-0.189	-0.147	0.539	-0.82	-0.925	-0.419	-0.263
TWN	3,598	-0.092	-0.003	0.405	-0.093	0.128	-0.562	-1.934
USA	73	-0.093	-0.154	0.415	0.315	1.152	2.267	-0.288
ZAF	1,037	-0.100	-0.143	0.584	-0.791	0.84	0.95	0.315
ZWE	24	-0.094	0.108	0.056	-1.595	-0.019	1.071	0.21
	78,937							

Panel B. Descriptive Statistics

VARIABLE	MEAN	MEDIAN	STD.DEV	Q1	Q3
COMP	-0.0917	-0.0938	0.0085	-0.0956	-0.0910
ADJ_SPEED	0.283	0.187	0.292	0.0430	0.626
FOLLOWER	0.626	1	0.484	0	1
ACCRUAL QUALITY	0.0192	0.0135	0.0174	0.0064	0.0280
LEV	0.395	0.385	0.283	0.085	0.730
SIZE	8.776	8.657	3.020	6.614	10.92
OPERATING CASH FLOW	0.0786	0.0752	0.0567	0.0359	0.120
STD_CASHFLOW	0.288	0.291	0.0283	0.272	0.306
STD_SALE	0.298	0.300	0.0361	0.275	0.317
STD_SALE GROWTH	0.162	0.157	0.0325	0.147	0.174
STOCK RETURN	0.0033	0.0003	0.300	-0.349	0.357
MTB	1.923	1.639	0.991	0.963	2.923

Note: Panel A of Table 1 presents the country-level summary statistics for the research variables for 78,937 observations over the 2000–2018 period. The mean values of each variable are calculated and reported for each sample country. Panel B presents the mean, median, and standard deviation statistics for the firm-level variables. See Appendix A for variable descriptions.

Table2. Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12
1 : Comp	1											
2 : ADJ_SPEED	**-0.0099**	1										
3 : Follower	**-0.0266**	**0.0359**	1									
4 : Accrual Quality	**0.0164**	**-0.0976**	**-0.0882**	1								
5 : LEV	**0.0168**	**-0.1093**	-0.0003	**0.1435**	1							
6 : Size	**0.0265**	**-0.0897**	**0.0990**	**0.1664**	**0.1708**	1						
7 : Operating Cash Flow	**0.0443**	**-0.0496**	**-0.0446**	**0.1207**	**0.0578**	**0.4476**	1					
8 : Std_cashflow	**-0.0103**	**0.0324**	**0.0368**	**-0.0446**	**-0.0074**	**0.0259**	**-0.0820**	1				
9 : Std_sale	**-0.0156**	**0.1303**	0.0017	**-0.0134**	**-0.0395**	0.0015	**-0.0553**	**0.6773**	1			
10 : Std_sale growth	**-0.0212**	**0.0648**	**0.0467**	**-0.0992**	**-0.0495**	**0.0373**	**-0.0215**	**0.0956**	**0.2013**	1		
11 : Stock return	**-0.1155**	**0.0246**	**0.1639**	**0.0506**	**-0.0331**	**0.0476**	**-0.0199**	**0.0214**	**0.0123**	**0.0398**	1	
12 : MTB	0.0035	**0.0398**	**-0.0149**	**-0.0703**	**-0.1087**	**0.1285**	**0.0450**	**-0.0201**	**-0.0538**	**0.0163**	-0.0025	1

Note: The correlation coefficients in bold are significant at the 1 percent level. Panel E presents Pearson correlation matrix for the firm-level variables for 78,937 observations over the 2000-2018 period. See Appendix A for variable definitions.

4.2. Empirical Findings

4.2.1. Regression results regarding Hypothesis I

Table 3 shows the basic regression results that test the effect of proprietary costs of financial reporting on financial statement comparability. It reports the coefficients and significance levels for the entire sample, with column (1) measuring proprietary costs with speed of profit adjustment(***ADJ_SPEED***), which is an indicator of the speed of abnormal profits away from the industry mean and with column (2) measuring proprietary costs with ***Follower***, which is a dichotomous variable. Firms within the same industry are sorted into quartiles according to their market shares, and those in the top quartile are identified as ***Leader,*** otherwise ***Follower***. ***Follower*** is set equal to 1, 0 otherwise. Each column also includes the coefficients of control variables identified in previous chapter. In column (3), I include both proxies for proprietary costs of financial reporting.

As shown in Table 3, the coefficients on proprietary costs are significantly negative in both columns (1) and (2), indicating the negative impact of high proprietary costs of financial reporting on financial statement comparability in my cross-country sample (-0.0378, with p-value < 0.01 in column (1) ; -0.0200, with p-value < 0.01 in column (2); in column (3), the coefficient on ***ADJ_SPEED (Follower)*** is -0.0356, p-value < 0.01 (-0.0200, p-value < 0.01)). The significantly negative coefficient on ***ADJ_SPEED*** in column (1) indicates that higher proprietary costs are associated with less comparable financial statements. The speed with which those industry participants with above-average profits have their positive abnormal profitability revert to the industry mean is fast in competitive industries. The significantly negative coefficient on ***Follower*** also indicates that higher proprietary costs are related to less comparable financial reporting. Industry followers face greater competitive pressures because of predation risk. These results are consistent with the results found by Imhof et al. (2018), refuting the argument that managers use discretion for comparable financial statements and that competitive environments play a governance role in management. Hence, the empirical results in Table 3 show that the proprietary costs of financial reporting

are negatively associated with financial statement comparability across countries, no matter which proxy of proprietary costs identified in previous section are used in the test. Further, in panel D, the results of the t-test indicate that the negative relation is stronger in countries with poor financial reporting environment.

Table 3. Results regarding the relationship between proprietary costs of financial reporting and financial statement comparability

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		Column (1)	**Column (2)**	**Column (3)**
		Panel A. Entire Countries		
ADJ_SPEED	**(−)**	-0.0378***		-0.0356***
		(0.0037)		(0.0036)
Follower	**(−)**		-0.0200***	-0.0200***
			(0.0006)	(0.0006)
Observations		78,937	78,937	78,937
R-squared		0.682	0.686	0.686
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y
		Panel B. Countries with Strong Financial Reporting Environment		
ADJ_SPEED	**(−)**	-0.0273***		-0.0257***
		(0.0052)		(0.0051)
Follower	**(−)**		-0.0020*	-0.0020***
			(0.0001)	(0.0001)
Observations		39,815	39,815	39,815
R-squared		0.699	0.764	0.764
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y
		Panel C. Countries with Poor Financial Reporting Environment		
ADJ_SPEED	**(−)**	-0.0505***		-0.0484***
		(0.0057)		(0.0057)
Follower	**(−)**		-0.0198***	-0.0198***
			(0.0007)	(0.0007)
Observations		39,122	39,122	39,122
R-squared		0.641	0.638	0.638
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y
		Panel D. T-Test: Poor FRE - Strong FRE		
ADJ_SPEED	**(−)**	-0.0232***		-0.0227***
Follower	**(−)**		-0.0178***	-0.0178***

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 3 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***ADJ_SPEED*** measures the speed with which abnormal profits adjust to the industry mean. ***Follower*** is set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise. I partition entire sample, based on total

financial reporting environment score, which is sum of weighted factor one, two, three, and four, according to Isidro et al. (2019). I include firm- and year-, and industry-fixed effects, respectively. Industry fixed effects are based on three-digit SIC codes. See Appendix A for detailed variable definitions.

4.2.2. Regression results regarding Hypothesis II

In this section, I report the results for the tests of my main research question, which examines the effects of country-level attributes on the relationship between proprietary costs of financial reporting and financial statement comparability. I compute the effects of proprietary costs of financial reporting across countries based on the four latent factors proposed by Isidro et al. (2019). The results of hypothesis 2 are shown in Tables 4, 5, 6, and 7. Panel A presents the results using speed of profit adjustment (***ADJ_SPEED)*** as proprietary costs, and Panel B shows results using ***Follower*** as proprietary costs proxy.

As shown in Table 4, Panel A, the coefficient on ***ADJ_SPEED*** is significantly negative in countries with high score of **Corp_Env** (-0.0185, with p-value < 0.01), and also significantly negative in countries with low score of **Corp_Env** (-0.0852, with p-value < 0.01). When comparing the two coefficients, the negative relationship between proprietary costs and comparability is stronger in countries with a lower score of **Corp_Env**. In addition to result of **Corp_Env**, in table 5, 6, and 7, the coefficients on ***ADJ_SPEED*** are significantly negative in countries with high score of **Inv_Prot**, **Gov_Env**, and **Ext_Invest** (-0.0329, with p-value < 0.01; -0.0227, with p-value < 0.01; -0.0191, with p-value < 0.01). The negative coefficients do appear in results in countries with low score of **Inv_Prot**, **Gov_Env**, and **Ext_Invest** (-0.0711, with p-value < 0.01; -0.0342, with p-value < 0.01; -0.0452, with p-value < 0.01), but these coefficients are smaller than those of the high score group. It indicates that the negative relationship between proprietary costs and comparability is stronger in countries with lower score of **Inv_Prot**, **Gov_Env**, and **Ext_Invest**. In the interaction column, I find that the absolute value of the coefficient of interaction variable is larger than the absolute value of the coefficient of the proprietary costs variable. This finding indicates that in countries with poorer financial reporting environment, the negative relationship

between proprietary costs and comparability is more pronounced. Taken together, my results imply that the effect of proprietary costs of financial reporting on financial statement comparability depends on the country-level institutional, cultural, investor protection, and even economic factors. Moreover, the impact of country-level attributes on the negative relation is the largest for **Inv_Prot**, while **Gov_Env** has the lowest impact on the relationship (Impact: **Inv_Prot > Corp_Env > Ext_Invest > Gov_Env)**. To put it another way, poor financial reporting environments allow managers to use more discretion, intensifying the negative association between proprietary costs and comparability.

In panel B of table 4, 5, 6, and 7, I use the ***Follower*** dummy variable as a proxy for proprietary costs of financial reporting. After controlling for firm-, industry-, and country-level variables, the coefficients on ***Follower*** are significantly negative in countries with high score of **Corp_Env**, **Inv_Prot**, **Gov_Env**, and **Ext_Invest** (-0.0154, with p-value < 0.01; -0.0197, with p-value < 0.01; -0.0163, with p-value < 0.01; -0.0218, with p-value < 0.01), consistent with the results in panel A. Comparing the high score and low score columns, I find that the coefficients in countries with low score of **Corp_Env**, **Inv_Prot**, **Gov_Env**, and **Ext_Invest** (-0.0230, with p-value < 0.01; -0.1935, with p-value < 0.01; -0.0241, with p-value < 0.01; -0.1758, with p-value < 0.01) have smaller value than in countries with a high score (above median). As panel A reveals, I find that the absolute value of the coefficient of the interaction variable is larger than that of the main interest variable in panel B. This finding indicates that in countries with poorer financial reporting environment, comparability is reduced further, as proprietary costs increase. Taken together, the results highlight the effects of country-level attributes on controlling managers' financial reporting discretion. This, in turn, intensifies the negative relationship between proprietary costs of financial reporting and financial statement comparability. Like panel A, the joint effect of **Inv_Prot** on the negative relation is the largest, while **Gov_Env** has the lowest impact on the relationship, in panel B (Impact: **Inv_Prot > Ext_Invest > Corp_Env> Gov_Env)**.

Table 4. Results regarding Hypothesis 2 (a)

Panel A. The speed of profit adjustment measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Corp_Env)	**Low score (Corp_Env)**	**Interaction term**
ADJ_SPEED	**(−)**	-0.0185***	-0.0852***	-0.0378***
		(0.0041)	(0.0075)	(0.0037)
Corp_Env	**(+)**	0.0991***	0.0114**	0.0174***
		(0.0111)	(0.0054)	(0.0081)
ADJ_SPEED× Corp_Env_low	**(−)**			-0.0087**
				(0.0032)
Accrual Quality		0.0223***	0.0180***	0.0243***
		(0.0032)	(0.0029)	(0.0022)
LEV		0.0324***	0.0279***	0.0287***
		(0.005)	(0.0026)	(0.0030)
Size		0.0113***	0.0202***	0.0165***
		(0.0007)	(0.0007)	(0.0005)
Operating Cash Flow		0.0725***	0.0615**	0.0625**
		(0.0144)	(0.0321)	(0.0462)
Std_cashflow		-0.0259***	-0.0265***	-0.0264***
		(0.0073)	(0.0028)	(0.0035)
Std_sale		-0.1084**	0.0010	-0.0331***
		(0.0077)	(0.0031)	(0.0038)
Std_sale growth		-0.0194***	0.0007	-0.0084**
		(0.0041)	(0.0015)	(0.0019)
Stock return		-0.0430***	-0.0708***	-0.0593***
		(0.0065)	(0.0031)	(0.0035)
MTB		0.0161***	0.0002	0.0110***
		(0.0039)	(0.0016)	(0.0019)
Constant		-0.0862***	-0.113***	-0.101***
		(0.0010)	(0.0008)	(0.0006)
Observations		35,120	43,817	78,937
R-squared		0.745	0.626	0.682
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 4 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***ADJ_SPEED*** measures the speed with which abnormal profits adjust to the industry mean. I separate two subsamples partitioned by median of weighted score of ***Corp_Env***. High score group includes observations with ***Corp_Env*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Corp_Env_low*** equals to 1, otherwise 0. The low score group of ***Corp_Env_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Panel B. Industry Follower measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Corp_Env)	**Low score (Corp_Env)**	**Interaction term**
Follower	**(−)**	-0.0154***	-0.0230***	-0.0232***
		(0.0009)	(0.0009)	(0.0010)
Corp_Env	**(+)**	0.0098*	0.0008*	0.0017**
		(0.0060)	(0.0007)	(0.0007)
Follower× Corp_Env_low	**(−)**			-0.0067***
				(0.0011)
Accrual Quality		0.0181***	0.0155***	0.0210***
		(0.0032)	(0.0029)	(0.0022)
LEV		0.1140***	0.0079	0.0431***
		(0.016)	(0.0067)	(0.0080)
Size		0.0832***	0.0381***	0.0424***
		(0.0240)	(0.0121)	(0.0130)
Operating Cash Flow		0.0053***	0.0025**	0.0052***
		(0.0004)	(0.0002)	(0.0004)
Std_cashflow		-0.1940**	-0.0307	-0.0790**
		(0.0724)	(0.0279)	(0.0345)
Std_sale		-0.1610**	0.0022	-0.0661*
		(0.0760)	(0.0307)	(0.0371)
Std_sale growth		-0.1820***	-0.0002	-0.0811***
		(0.0390)	(0.0142)	(0.0179)
Stock return		-0.0574***	-0.0726***	-0.0674***
		(0.0066)	(0.0032)	(0.0035)
MTB		0.0136***	0.0017***	0.0100***
		(0.0039)	(0.0003)	(0.0019)
Constant		-0.0834***	-0.1100***	-0.0959***
		(0.0010)	(0.0008)	(0.0006)
Observations		35,113	43,797	78,910
R-squared		0.750	0.631	0.687
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 4 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***Follower*** is set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise. I separate two subsamples partitioned median of weighted score of ***Corp_Env***. High score group includes observations ***Corp_Env*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Corp_Env_low*** equals to 1, otherwise 0. The low score group of ***Corp_Env_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Table 5. Results regarding Hypothesis 2 (b)

Panel A. The speed of profit adjustment measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Inv_Prot)	**Low score (Inv_Prot)**	**Interaction term**
ADJ_SPEED	**(−)**	-0.0329***	-0.0711***	-0.0378***
		(0.0040)	(0.0082)	(0.0037)
Inv_Prot	**(+)**	0.0016**	0.0001**	0.0006**
		(0.0005)	(0.0000)	(0.0002)
ADJ_SPEED× Inv_Prot_low	**(−)**			-0.0131***
				(0.0034)
Accrual Quality		0.0165***	0.0253***	0.0244***
		(0.0037)	(0.0027)	(0.0022)
LEV		0.150***	0.0151**	0.0399***
		(0.0206)	(0.00668)	(0.0081)
Size		0.0916***	0.0549***	0.0366***
		(0.0287)	(0.0109)	(0.0122)
Operating Cash Flow		0.0011**	0.0003*	0.0003*
		(0.0005)	(0.0002)	(0.0002)
Std_cashflow		-0.0212**	-0.0432	-0.0557**
		(0.0086)	(0.0287)	(0.0144)
Std_sale		-0.0198**	0.0412	0.0301*
		(0.0089)	(0.0315)	(0.0156)
Std_sale growth		-0.0160***	-0.0391***	-0.0177**
		(0.0047)	(0.0146)	(0.0784)
Stock return		-0.0319***	-0.0774***	-0.0594***
		(0.0074)	(0.0032)	(0.0035)
MTB		0.0224***	0.0010	0.0110***
		(0.0045)	(0.0017)	(0.0019)
Constant		-0.0927***	-0.104***	-0.101***
		(0.0011)	(0.0007)	(0.0006)
Observations		27,627	51,310	78,937
R-squared		0.768	0.620	0.682
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 5 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***ADJ_SPEED*** measures the speed with which abnormal profits adjust to the industry mean. I separate two subsamples partitioned median of weighted score of ***Inv_Prot***. High score group includes observations with ***Inv_Prot*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Inv_Prot_low*** equals to 1, otherwise 0. The low score group of ***Inv_Prot_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Panel B. Industry Follower measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Inv_Prot)	**Low score (Inv_Prot)**	**Interaction term**
Follower	**(−)**	-0.0197***	-0.1935***	-0.0248***
		(0.0008)	(0.0103)	(0.0009)
Inv_Prot	**(+)**	0.0229***	0.0006**	0.0079***
		(0.0052)	(0.0003)	(0.0027)
Follower× Inv_Prot_low	**(−)**			-0.0086***
				(0.0011)
Accrual Quality		0.0125***	0.0222***	0.0209***
		(0.0037)	(0.0026)	(0.00217)
LEV		0.1600***	0.0156**	0.0425***
		(0.0206)	(0.0067)	(0.0081)
Size		0.1023***	0.0079***	0.0430***
		(0.0302)	(0.0115)	(0.0130)
Operating Cash Flow		0.0376***	0.0068***	0.0050***
		(0.0051)	(0.0020)	(0.0019)
Std_cashflow		-0.2070**	-0.0452	-0.0786**
		(0.0856)	(0.0287)	(0.0345)
Std_sale		-0.0230***	0.0413	-0.0066*
		(0.0089)	(0.0315)	(0.0037)
Std_sale growth		-0.1550***	-0.0399***	-0.0808***
		(0.047)	(0.0146)	(0.0179)
Stock return		-0.0447***	-0.0807***	-0.0675***
		(0.0074)	(0.0032)	(0.0035)
MTB		0.0204***	0.0018***	0.0101***
		(0.0045)	(0.0004)	(0.0019)
Constant		-0.0899***	-0.0999***	-0.0963***
		(0.0011)	(0.0008)	(0.0006)
Observations		27,620	51,290	78,910
R-squared		0.771	0.625	0.687
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 5 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***Follower*** is set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise. I separate two subsamples partitioned median of weighted score of ***Inv_Prot***. High score group includes observations ***Inv_Prot*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Inv_Prot_low*** equals to 1, otherwise 0. The low score group of ***Inv_Prot_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Table 6. Results regarding Hypothesis 2 (c)

Panel A. The speed of profit adjustment measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Gov_Env)	**Low score (Gov_Env)**	**Interaction term**
ADJ_SPEED	**(−)**	-0.0227***	-0.0342***	-0.0379***
		(0.0085)	(0.0045)	(0.0037)
Gov_Env	**(+)**	0.0162***	0.0011**	0.0069**
		(0.0026)	(0.0007)	(0.0033)
ADJ_SPEED× Gov_Env_low	**(−)**			-0.0011***
				(0.0003)
Accrual Quality		0.0294***	0.0175***	0.0245***
		(0.0031)	(0.0030)	(0.0022)
LEV		0.1160***	0.0112	0.0400***
		(0.0157)	(0.0071)	(0.0081)
Size		0.6730***	0.0639***	0.3660***
		(0.0219)	(0.0115)	(0.0122)
Operating Cash Flow		0.0123***	0.0048**	0.0053***
		(0.0044)	(0.0022)	(0.0019)
Std_cashflow		-0.1010	-0.0360	-0.0780**
		(0.0624)	(0.0317)	(0.0345)
Std_sale		-0.125*	0.0130	-0.0599
		(0.0666)	(0.0345)	(0.0372)
Std_sale growth		-0.128***	-0.0244	-0.0829***
		(0.0314)	(0.0170)	(0.0179)
Stock return		-0.0580***	-0.0589***	-0.0593***
		(0.0066)	(0.0031)	(0.0035)
MTB		0.0238***	0.0029*	0.0110***
		(0.0036)	(0.0017)	(0.0019)
Constant		-0.0940***	-0.105***	-0.101***
		(0.0010)	(0.0008)	(0.0006)
Observations		39,033	39,904	78,937
R-squared		0.720	0.655	0.682
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 6 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***ADJ_SPEED*** measures the speed with which abnormal profits adjust to the industry mean. I separate two subsamples partitioned median of weighted score of ***Gov_Env***. High score group includes observations with ***Gov_Env*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Gov_Env_low*** equals to 1, otherwise 0. The low score group of ***Gov_Env_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Panel B. Industry Follower measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Gov_Env)	**Low score (Gov_Env)**	**Interaction term**
Follower	**(−)**	-0.0163***	-0.0241***	-0.0239***
		(0.0015)	(0.0009)	(0.0019)
Gov_Env	**(+)**	0.0196***	-0.0004	0.0029***
		(0.0027)	(0.0008)	(0.0005)
Follower× Gov_Env_low	**(−)**			-0.0053***
				(0.0011)
Accrual Quality		0.0249***	0.0145***	0.0211***
		(0.0031)	(0.0030)	(0.0022)
LEV		0.120***	0.0118*	0.0422***
		(0.0157)	(0.0071)	(0.0081)
Size		0.778***	0.0852***	0.430***
		(0.0233)	(0.0123)	(0.0130)
Operating Cash Flow		0.0413***	0.0249***	0.0314***
		(0.0053)	(0.0253)	(0.0056)
Std_cashflow		-0.0989	-0.0373	-0.0794**
		(0.0622)	(0.0317)	(0.0345)
Std_sale		-0.143**	0.0123	-0.0659*
		(0.0664)	(0.0346)	(0.0371)
Std_sale growth		-0.124***	-0.0241	-0.0812***
		(0.0313)	(0.0170)	(0.0179)
Stock return		-0.0717***	-0.0615***	-0.0675***
		(0.0067)	(0.0031)	(0.0035)
MTB		0.0221***	0.00315*	0.0101***
		(0.0036)	(0.0017)	(0.0019)
Constant		-0.0867***	-0.102***	-0.0960***
		(0.0009)	(0.0009)	(0.0006)
Observations		39,029	39,881	78,910
R-squared		0.726	0.659	0.687
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 6 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***Follower*** is set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise. I separate two subsamples partitioned median of weighted score of ***Gov_Env***. High score group includes observations ***Gov_Env*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Gov_Env_low*** equals to 1, otherwise 0. The low score group of ***Gov_Env_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Table 7. Results regarding Hypothesis 2 (d)

Panel A. The speed of profit adjustment measure

VARIABLES	**Predicted sign**	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Ext_Invest)	**Low score (Ext_Invest)**	**Interaction term**
ADJ_SPEED	**(−)**	-0.0191***	-0.0452***	-0.0378***
		(0.0072)	(0.0049)	(0.0037)
Ext_Invest	**(+)**	0.0235**	-0.0055***	0.0037*
		(0.0112)	(0.0008)	(0.0027)
ADJ_SPEED× Ext_Invest_low	**(−)**			-0.0079**
				(0.0031)
Accrual Quality		0.0172***	0.0256***	0.0245***
		(0.0027)	(0.0032)	(0.0022)
LEV		0.115***	0.0172**	0.0400***
		(0.0146)	(0.0084)	(0.0081)
Size		0.840***	0.0390***	0.366***
		(0.0216)	(0.0132)	(0.0122)
Operating Cash Flow		0.018***	0.008***	0.0175***
		(0.0002)	(0.0002)	(0.0002)
Std_cashflow		-0.0803	-0.0549	-0.0776**
		(0.0588)	(0.0375)	(0.0345)
Std_sale		-0.1770***	0.0508	-0.0599
		(0.0629)	(0.0408)	(0.0372)
Std_sale growth		-0.1120***	-0.0538**	-0.0827***
		(0.0296)	(0.0201)	(0.0179)
Stock return		-0.0357***	-0.0746***	-0.0593***
		(0.0065)	(0.0036)	(0.0035)
MTB		0.0385***	0.0022***	0.0110***
		(0.0036)	(0.0005)	(0.0019)
Constant		-0.0962***	-0.103***	-0.101***
		(0.0008)	(0.0009)	(0.0006)
Observations		40,259	38,678	78,937
R-squared		0.787	0.618	0.682
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 7 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***ADJ_SPEED*** measures the speed with which abnormal profits adjust to the industry mean. I separate two subsamples partitioned median of weighted score of ***Ext_Invest***. High score group includes observations with ***Ext_Invest*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Ext_Invest_low*** equals to 1, otherwise 0. The low score group of ***Ext_Invest_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

Panel B. Industry Follower measure

VARIABLES	Predicted sign	**Dependent Variable** = Financial Statement Comparability (***Comp***)		
		High score (Ext_Invest)	**Low score (Ext_Invest)**	**Interaction term**
Follower	**(−)**	-0.0218***	-0.1758***	-0.0236***
		(0.0011)	(0.0072)	(0.0009)
Ext_Invest	**(+)**	0.0361***	-0.0005***	0.0056*
		(0.0113)	(0.0001)	(0.0038)
Follower× Ext_Invest_low	**(−)**			-0.0069**
				(0.0011)
Accrual Quality		0.0138***	0.0217***	0.0211***
		(0.0027)	(0.0032)	(0.0022)
LEV		0.122***	0.0178**	0.0422***
		(0.0146)	(0.0084)	(0.0081)
Size		0.955***	0.0649***	0.430***
		(0.0229)	(0.0141)	(0.0130)
Operating Cash Flow		0.0693**	0.0083***	0.0265***
		(0.0345)	(0.0025)	(0.0019)
Std_cashflow		-0.0716	-0.0572	-0.0794**
		(0.0586)	(0.0375)	(0.0345)
Std_sale		-0.1990***	0.0504	-0.0659*
		(0.0627)	(0.0408)	(0.0371)
Std_sale growth		-0.1090***	-0.0531***	-0.0812***
		(0.0295)	(0.0201)	(0.0179)
Stock return		-0.0503***	-0.0780***	-0.0675***
		(0.0065)	(0.0036)	(0.0035)
MTB		0.0364***	0.0025	0.0101***
		(0.0036)	(0.0019)	(0.0019)
Constant		-0.0907***	-0.0991***	-0.0960***
		(0.0008)	(0.0009)	(0.0006)
Observations		40,255	38,655	78,910
R-squared		0.791	0.624	0.687
Fixed Effects (Firm, Year, and Industry)		Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 7 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***Follower*** is set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise. I separate two subsamples partitioned median of weighted score of ***Ext_Invest***. High score group includes observations ***Ext_Invest*** scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Ext_Invest_low*** equals to 1, otherwise 0. The low score group of ***Ext_Invest_low*** consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See Appendix A for detailed variable definitions.

CHAPTER 5

ROBUSTNESS CHECK

Alternative Measure of Proprietary Costs of Financial Reporting

In this empirical research, I use two proxies for proprietary costs of financial reporting. The first is ***ADJ_SPEED***, which is the speed of abnormal profits away from the industry mean (Harris 1998). The second proxy is the dichotomous variable of ***Follower***. It is categorized by market share in an industry. Li (2010) suggests that competitive pressure is more pronounced for industry follower. Meanwhile, Imhof et al. (2018) use ***Competitive Strategy – Prospector,*** and ***Defender.*** Miles and Snow (1978) suggest that there are three types of sustainable firms: Prospectors, Defenders, and Analyzers. Defenders focus on production efficiencies rather than on new product development. At the opposite end of the spectrum are Prospectors. Prospectors operate across multiple product domains and are constantly finding and exploring new product and market opportunities (Miles & Snow 1978). Prospectors generate the highest levels of proprietary information and are most vulnerable to competition. However, the problem of this proxy is that the ***Competitive Strategy*** (***Prospector***) is a firm-specific feature and different firm-specific features can bring different financial reporting outcomes. Since this variable can be directly associated with financial statement comparability, the ***Competitive Strategy*** (***Prospector***) variable may bias in favor of hypotheses. In order to control for the effect of firm-specific advantages, I use other proxies - ***ADJ_SPEED*** and ***Follower.*** For robustness check, I investigate whether my results are consistent with the outcomes with proxy used in Imhof et al. (2018).

In Table 8, I report the results from empirical test using ***Prospector*** variable. Collectively, the results support my previous findings that as proprietary costs increase, financial statement comparability decreases. The coefficients on the proxy of ***Prospector*** are consistent with the coefficients on my previous two proxies, strengthening my previous results. In addition, the coefficients in Table 8 support the previous

results that as country-level financial reporting environment is weaker, the negative relation between proprietary costs and comparability is more pronounced.

Table 8. Alternative proxy of proprietary costs proposed by Imhof et al. (2018)

VARIABLES	**Dependent Variable** = Financial Statement Comparability (***Comp***)			
	Entire sample	**High Score** (country-level factors)	**Low Score** (country-level factors)	**Interaction term**
Prospector	-0.0897***	-0.0027***	-0.0858***	-0.0270***
	(0.0251)	(0.0005)	(0.0042)	(0.0039)
Prospector× Corp_Env_low				-0.0312***
				(0.0051)
Observations	78,910	43,797	35,113	78,910
R-squared	0.045	0.029	0.0841	0.046
Prospector	-0.0897***	0.0179***	-0.240***	-0.0334***
	(0.0251)	(0.0043)	(0.0589)	(0.0043)
Prospector× Inv_Prot _low				-0.0372***
				(0.0053)
Observations	78,910	51,290	27,620	78,910
R-squared	0.045	0.021	0.121	0.046
Prospector	-0.0896***	0.0089***	-0.188***	-0.0221***
	(0.0251)	(0.0023)	(0.0459)	(0.0037)
Prospector× Gov_Env_low				-0.0244***
				(0.0050)
Observations	78,910	39,881	39,029	78,910
R-squared	0.045	0.033	0.073	0.045
Prospector	-0.0896***	0.0070***	-0.173***	-0.0217***
	(0.0251)	(0.0027)	(0.0421)	(0.0037)
Prospector× Ext_Invest_low				-0.0236***
				(0.0050)
Observations	78,910	38,655	40,255	78,910
R-squared	0.045	0.029	0.090	0.045
Fixed Effectss (Firm, Year, and Industry)	Y	Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. The dependent variable in Table 8 is ***Comp***, which is financial statement comparability, calculated as the within industry mean of earnings-returns co-movement for all firm pairs in an industry as in De Franco, Kothari, and Verdi (2011). ***Prospector*** is coded 1 if firm strategy score is between 24 and 30, 0 otherwise. Bentley et al. (2013) compute strategy score with six firm-level measures on a rolling five-year average, with each measure representing a different aspect of firm strategy. The six measures include research and development expenses deflated by sales, the ratio of selling, general, and administrative expenses to sales, the annual percentage change in sales, the number of employees to sales, property, plant, and equipment deflated by sales, and the standard deviation of the number of employees. I separate two subsamples partitioned by median of weighted score of each country-level factor(***Corp_Env***, ***Inv_Prot***, ***Gov_Env***, and ***Ext_Invest)***. High score group includes observations country-level factor scores above median, while low score group contains observations with scores below the median. In the interaction term, group of low score of ***Corp_Env_low, Inv_Prot_low, Gov_Env_low, Ext_Invest_low*** equals

to 1, otherwise 0. The low score group of country-level factors consists of scores less than median. I include firm- and year-, and industry-fixed effects, respectively. See APPENDIX for detailed variable definitions.

Cross-listed in the U.S.

Previous empirical research suggests that firms decide to cross-list in the U.S. capital market. Cross-listing in the U.S. brings signal of firm's commitment to protect shareholder interests and provide higher quality disclosures. It builds on the advantages of the U.S. regulatory system with its superior disclosure regime and greater scrutiny from regulators, market intermediaries, and investors (Stulz, 1999; Coffee, 1999). Intermediaries, such as international audit firms, rating agencies, and underwriters, will put more pressure on managers, thereby limiting their ability to expropriate resources though actions like overinvestment, fraud, or strategic defaults. Overall, a credible commitment to more transparency and market scrutiny stemming from cross-listing in the U.S. should facilitate access to capital markets (Hart, 1995; Ball et al., 2018). Thus, since I expect ADR (American Depository Receipts) firms to face higher accounting quality from investors, I add ADR indicator variable that equals 1 if a firm is cross-listed in the U.S., using ADR data from BNY Mellon website (https://www.adrbnymellon.com/directory/dr-directory), and 0 otherwise. In order to examine whether cross-listing in the U.S. capital market affects my empirical results, I test for sub-samples of firms whose equity is not cross-listed in the US and of those whose equity is.

In Table 9, I report the results from empirical test for sub-samples, which are non cross-listing firms and cross-listing firms. In sum, the results support my previous findings that as proprietary costs increase, financial statement comparability decreases. The coefficients of ***ADJ_SPEED*** and ***Follower*** are consistent with the coefficients on my previous tests in table 3,4,5,6, and 7. In addition, the coefficients in Table 9 show that the negative relation between proprietary costs and comparability is more pronounced in non cross-listing firms. It indicates that firms that are cross listed in the U.S. capital market are more monitored and are regulated to provide transparent financial reporting.

Table 9. Firms cross-listed in the U.S. vs. Firms not cross-listed in the U.S.

Variables	**Dependent Variable** = Financial Statement Comparability (***Comp***)			
	Strong FRE		**Poor FRE**	
Proprietary costs	**Non cross-listing**	**Cross-listing**	**Non cross-listing**	**Cross-listing**
	Robustness check in Table 3			
ADJ_SPEED	-0.0260***	-0.0245***	-0.0985***	-0.0366***
	(0.0094)	(0.0069)	(0.0172)	(0.0062)
Follower	-0.0022	-0.0018	-0.0019	-0.0020
	(0.0003)	(0.0001)	(0.0002)	(0.0001)
Observations	20,925	7,168	41,378	9,469
R-squared (ADJ_SPEED)	0.3929	0.5628	0.6693	0.5367
R-squared (Follower)	0.4651	0.6003	0.5724	0.4759
	Robustness check in Table 4			
ADJ_SPEED	-0.0202***	-0.0174***	-0.1164***	-0.0747***
	(0.0050)	(0.0071)	(0.0175)	(0.0083)
Follower	-0.0019***	-0.0014***	-0.0023***	-0.0023***
	(0.0002)	(0.0001)	(0.0001)	(0.0003)
Observations	32,346	11,467	29,957	5,170
R-squared (ADJ_SPEED)	0.2316	0.3184	0.6434	0.5378
R-squared (Follower)	0.4236	0.3125	0.5511	0.4813
	Robustness check in Table 5			
ADJ_SPEED	-0.0362***	-0.0257***	-0.1314***	-0.0536***
	(0.0050)	(0.0069)	(0.02135)	(0.0087)
Follower	-0.0021***	-0.0019***	-0.0021***	-0.0019***
	(0.0002)	(0.0001)	(0.0004)	(0.0001)
Observations	38309	12,998	23,994	3,639
R-squared (ADJ_SPEED)	0.4829	0.4825	0.7589	0.5460
R-squared (Follower)	0.5701	0.5694	0.7238	0.5035
	Robustness check in Table 6			
ADJ_SPEED	-0.03706***	-0.0269***	-0.1300***	-0.0769***
	(0.0055)	(0.0076)	(0.0085)	(0.0276)
Follower	-0.0017***	-0.0016***	-0.0028***	-0.0022***
	(0.0001)	(0.0002)	(0.0003)	(0.0001)
Observations	30,314	9,591	31,989	7,046
R-squared (ADJ_SPEED)	0.5166	0.6006	0.6964	0.5073
R-squared (Follower)	0.5738	0.6337	0.6104	0.4396
	Robustness check in Table 7			
ADJ_SPEED	-0.0475***	-0.0382***	-0.1358*	-0.0600***
	(0.0060)	(0.0086)	(0.0074)	(0.0231)
Follower	-0.0017***	-0.0013***	-0.0024***	-0.0021***
	(0.0001)	(0.0002)	(0.0002)	(0.0001)
Observations	28,395	10,283	33,908	6,354
R-squared (ADJ_SPEED)	0.5333	0.5596	0.7868	0.5264
R-squared (Follower)	0.5670	0.5887	0.7462	0.4885
Fixed Effectss (Firm, Year, and Industry)	Y	Y	Y	Y

Note: ***, **, * denote statistical significance at the 1 percent, 5 percent, and 10 percent levels, respectively. The standard errors are reported in parentheses. I add ADR indicator variable that equals 1 if a firm is cross listed in the U.S., using ADR data from BNY Mellon website (https://www.adrbnymellon.com/directory/dr-directory), and 0 otherwise. In order to examine whether cross-listing in the U.S. capital market affects my empirical results, I test again for sub-samples of firms whose equity is not cross-listed in the US and of those whose equity is, from table 3 to table 7. I include firm- and year-, and industry-fixed effects, respectively.

CHAPTER 6

CONCLUSIONS

In this study, I investigate the effects of country-level attributes on the association between proprietary costs of financial reporting and financial statement comparability. I document two important findings in this paper. I find that the negative relationship between proprietary costs and comparability is stronger in countries with poor financial reporting environments. In addition, I find that, among the country-level attributes, ***Investor Protection*** has the largest impact on the relationship between proprietary costs and comparability. This international study contributes to the literature in two ways. First, it extends the findings conducted by Imhof et al. (2018) on U.S. firms to an international setting. This highlights the differential effects played by proprietary costs of financial reporting on accounting comparability across countries with different financial reporting environments. Second, this international study demonstrates the different impact of various country-level attributes, which are four latent factors (***Corporate Environment, Investor Protection, Governance Environment, External Investors***) proposed by Isidro et al. (2019), on the relationship between proprietary costs and comparability. Specifically, since the differential impact of each of the four factors is not observable in a within-country study, the international setting enables me to examine how variation in the four factors across countries affect the relationship between proprietary costs of financial reporting and financial statement comparability. This study may provide implications for policy makers in countries with poor financial reporting environments that they should emphasize strong protection of investor rights and attempt to develop capital markets in order to enhance firms' financial reporting quality. Further, the results might be useful for stakeholders, or investors, in analyzing firms' financial statements, especially in countries with poor financial reporting environments.

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APPENDIX

Variable Definitions

Accrual Quality	Absolute value of discretionary accruals calculated using the Jones (1991) model, as modified by Kothari et al. (2005).
ADJ_SPEED	An estimate of the speed of abnormal profit adjustment in the firm's three-digit industry. Harris (1998) measures the speed with which abnormal profits adjust to the industry mean. Specifically, she estimates: $X_{ijkt} = \beta_{ojk} + \beta_{1jk}(D_n X_{ijkt-1}) + \beta_{2jk}(D_p X_{ijkt-1}) + e_{ijkt}$,where X_{ijkt} is the difference between firm i's return on assets and the mean return on assets for its industry j (three-digit SIC code) and country k, in year t; D_n=1 if X_{ijkt-1} is less than or equal to zero, and 0 otherwise; and D_p=1 if X_{ijkt-1} is greater than zero, and 0 otherwise. The coefficient $\boldsymbol{\beta_{2jk}}$ captures the persistence of abnormally high ROA in industry j, where a low value of $\boldsymbol{\beta_{2jk}}$ is assumed to indicate intense competition.
ADR	ADR indicator variable that equals 1 if a firm is cross listed in the U.S., using ADR data from BNY Mellon website (https://www.adrbnymellon.com/directory/dr-directory), and 0 otherwise.
Corp_Env	Standardized scores of country factor one in Isidro et al. (2019). It is associated with good institutional and governance systems, and economic and social welfare. The high score of ***Corp_Env*** indicates better Corporate Environment.
Comp	I compute the accounting comparability between firm i and firm j as the negative value of the average absolute difference between the predicted

	earnings using firm i's and firm j's accounting functions. I require that firm i and j be in the same three-digit SIC code, share the same fiscal year-end date, and be from same country. I measure comparability ***Comp***, which is the median of all comparability scores of firm i in period t in the same industry, as in De Franco, Kothari, and Verdi (2011).
Gov_Env	Standardized scores of country factor three in Isidro et al. (2019) It is associated with political transparency, and tax and accounting enforcement. The high score of ***Gov_Env*** indicates better corporate governance.
Ext_Invest	Standardized scores of country factor four in Isidro et al. (2019). The high score of ***Ext_Invest*** captures openness of society to external investment.
Follower	Set equal to 1 for a firm-year classified as industry follower if its market share is lower than median of an industry based on three-digit SIC code and 0 otherwise
Inv_Prot	Standardized scores of country factor two in Isidro et al. (2019). It is associated with strong protection of investors' rights and capital markets development. The high score of ***Inv_Prot*** indicates better investor protection.
LEV	Leverage is the total debt deflated by the average total assets.
MTB	Market value of equity divided by book value of equity.
Operating Cash Flow	Operating cash flow, deflated by beginning of period prices. These data are drawn from COMPUSTAT Global files.
Prospector	Bentley et al. (2013) compute this proxy based on a rolling five-year average of six firm-level measures, each measure representing a different aspect of firm strategy. These include research and development expenses

	deflated by sales, the ratio of selling, general, and administrative expenses to sales, the annual percentage change in sales, the number of employees to sales, property, plant, and equipment deflated by sales, and the standard deviation of the number of employees. Each five-year average is then ranked into quintiles by 2-digit SIC industry-year, and I assigned a score of 5 if the value falls in the highest quintile, 4 in the second-highest quintile, 3 in the middle quintile, 2 in the second-lowest quintile and 1 in the lowest quintile. Individual scores are summed across the six variables by year, so that each firm receives a total score between 6 and 30. Firms with total scores between 6-12 are considered Defenders, between 13-23, Analyzers, and between 24-30, Prospectors.
Size	Firm size is the natural logarithm of the total assets (in millions of U.S. dollars) at the end of fiscal year t.
Std_cashflow	Standard deviation in quarterly cash flows from operations, scaled by total assets for preceding four years.
Std_sale	Standard deviation of preceding four years' sales, scaled by total assets.
Std_sale growth	Standard deviation of growth in quarterly sales for preceding four years.
Stock return	12-month stock return for the current fiscal year.

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