DETERMINANTS AND EFFECT OF ACCOUNTING COMPARABILITY: INSIGHTS FROM MANDATORY IFRS ADOPTION IN AUSTRALIA AND THE EU

YI LIN CHUA

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ABSTRACT

This thesis examines the determinants and associations of accounting comparability in the context of the mandatory adoption of International Financial Reporting Standards (IFRS) as of 2005 in Australia and the European Union (EU). Comparability is an important attribute of financial reporting that is desirable because it enhances the usefulness of financial accounting information. This thesis examines the relative importance of accounting standards, firms' reporting incentives and institutional features in determining cross-country accounting comparability. As capital market participants are expected to benefit from enhanced comparability, this thesis also investigates the role of cross-country accounting comparability in influencing a firm's information environment in the capital market.

The first empirical study examines the impact of mandatory IFRS adoption on cross-country accounting comparability. Using a sample of matched firm-pairs from Australia and the EU, the results show that mandatory IFRS adoption improves cross-country accounting comparability. This is evidenced by the extent to which economically similar events and transactions are reflected similarly without any discernible impact on economically dissimilar events and transactions. The results also reveal that the comparability benefit of mandatory IFRS adoption is more pronounced for matched firm-pairs with different legal origins. The findings of this empirical study suggest that adopting a uniform set of accounting standards is crucial in achieving comparability.

The second empirical study explores the interaction of firms' reporting incentives, country-level institutional factors and mandatory IFRS adoption on cross-country accounting comparability. The results show that the improvement in cross-country accounting

comparability resulting from mandatory IFRS adoption persists even after controlling for the dissimilarity of firms' reporting incentives and institutional differences between similar firms. This is despite findings demonstrating that cross-country accounting comparability is diminished by greater dissimilarity in reporting incentives and institutional differences between similar firms and after mandatory adoption of IFRS. Nevertheless, the results further show that the comparability improvement following mandatory IFRS adoption for similar firms when some EU countries concurrently made substantive enforcement changes is pronounced only after the dissimilarity of firms' reporting incentives is considered. The findings suggest that cross-country accounting comparability is partly determined by the alignment of firm-specific and country-level factors even when a common set of accounting standards is in place.

The third study examines the impact of accounting comparability on the information content of stock prices. Using stock return synchronicity as a proxy, the results reveal that accounting comparability decreases stock return synchronicity and that this relation is weakened by mandatory IFRS adoption. The findings suggest that the usefulness of accounting comparability in facilitating the incorporation of firm-specific information into stock prices is reduced by a greater amount of marketwide information becoming available via mandatory IFRS adoption. The study finds that this is likely because of increased analyst coverage encouraging the production of marketwide information for firms with greater comparability after adopting IFRS.

DECLARATION

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LIST OF ACRONYMS

ADRs	-	American Depository Receipts
EEA	-	European Economic Area
EU	-	European Union
FASB	-	Financial Accounting Standards Board
FRC	-	Financial Reporting Council
GAAP	-	Generally Accepted Accounting Principles
GDP	-	Gross Domestic Product
IAS	-	International Accounting Standards
IASB	-	International Accounting Standards Board
IASC	-	International Accounting Standards Committee
IFRS	-	International Financial Reporting Standards
IOSCO	-	International Organization of Securities Commission
MoU	-	Memorandum of Understanding
R^2	-	Coefficient of Determination from the Market Model
S&P	-	Standard and Poor
SEC	-	US Securities and Exchange Commission
SEO	-	Seasoned Equity Offerings

CHAPTER ONE:

INTRODUCTION

1.1 Overview

Accounting comparability is a unique attribute that is deemed to be desirable for enhancing the quality of financial accounting information for investment decisions (FASB, 2010; IFRS Foundation, 2010).[1] Its importance in financial reporting has also brought this attribute to the forefront of international accounting standard-setting. Explicitly, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) list comparability among the desirable qualitative characteristics of financial accounting information in their Conceptual Framework (FASB, 2010; IFRS Foundation, 2010). According to the Conceptual Framework, the concept of 'comparability' is described as "…the qualitative characteristic that enables users to identify and understand similarities in, and differences among items. Unlike the other qualitative characteristics, comparability does not relate to a single item. A comparison requires at least two items" (FASB, 2010, QC21; IFRS Foundation, 2010, A21).

This thesis explores the determinants and associations of accounting comparability in the context of the mandatory adoption of International Financial Reporting Standards (IFRS) as of 2005 in Australia and the European Union (EU). In particular, this thesis examines the relative

[1] The term 'accounting comparability' is used throughout this thesis to describe the comparability of numbers in financial statements and the comparability of accounting systems in which economic events are translated into these accounting numbers. Therefore, it broadly covers the concept of 'financial statement comparability', which is often used in the existing literature that emphasizes only the former.

importance of accounting standards, firms' reporting incentives and institutional features in determining cross-country accounting comparability. Widespread mandatory IFRS adoption is perhaps the largest regulatory change in financial reporting. This global phenomenon has rapidly gathered pace since Australia and the EU began to implement the mandate as of 2005, and comparability improvement is its desired outcome. As the expectation of mandatory IFRS adoption is for capital market participants to benefit from enhanced comparability, this thesis also investigates the role of cross-country accounting comparability in influencing a firm's information environment in the capital market.

Adopting the novel comparability measurement developed by De Franco, Kothari and Verdi (2011), this thesis assesses cross-country accounting comparability for matched firm-pairs from Australia and the EU that mandatorily adopted IFRS as of 2005. The implementation of a mandatory IFRS reporting regime in these jurisdictions introduced a simultaneous exogenous shock to the financial reporting system. This provides a natural research setting for this thesis to focus on those firms that switched from non-US local accounting standards in the pre-adoption period (2000–2004) to IFRS in the post-adoption period (2007–2011). Chapter Three presents the first empirical study, examining the role of mandatory IFRS adoption in determining cross-country accounting comparability. The second empirical study, in Chapter Four, investigates the interplay of IFRS adoption, dissimilarity in firm-level reporting incentives and country-level institutional differences as determinants of cross-country accounting comparability. The last empirical chapter, Chapter Five, examines the association between accounting comparability and the information content of stock prices.

1.2 Research Objectives and Motivation

The main objective of this thesis is to examine the determinants and associations of accounting comparability around mandatory adoption of IFRS in Australia and the EU. The ongoing globalization and rapid integration of major capital markets have undoubtedly changed the ways in which businesses operate across borders. This in turn influences how accounting information is required for investment decisions and consequently is accompanied by an increase in the demand for internationally comparable accounting information. Despite the historical importance of comparability in financial reporting, there is limited understanding and empirical evidence for the way in which comparable accounting information can be achieved and its implications for a firm's information environment.

Accounting comparability is based on the notion that when a firm's accounting system maps economic transactions and events onto accounting results, economically similar transactions and events will be reflected similarly in financial statements across firms and countries, and economically dissimilar transactions and events will be reflected differently. It is presumed that financial accounting information sets on economic transactions and events are comparable to one another only if they are collected and transformed by applying a common set of accounting standards (Barth, 2013; Cairns, 1994). This is because accounting standards stipulate the ways in which accounting amounts are recognized and disclosed in financial statements. When accounting standards vary substantially across countries, the question therefore arises as to the international comparability of financial accounting information. This is especially made the case by the IASB's success in promoting the use of IFRS over the past decade, which is grounded on the premise that comparability improvement is an expected benefit of switching to a uniform set of internationally recognized accounting standards (Barth, 2006, 2013; Durocher & Gendron, 2011).

Considering the importance of IFRS, underscored by the IASB, a bulk of studies has examined the benefits and implications of IFRS adoption for the capital market. In particular, earlier research was motivated by voluntary adoption of IFRS in a handful of countries (such as Germany) and provided initial evidence to support the benefits of adopting IFRS (e.g. Barth, Landsman & Lang, 2008; Kim & Shi, 2012). However, questions have been raised as to whether the findings from earlier research will hold in the mandatory adoption environment due to a self-selection bias that is inherent in the voluntary adoption setting (De George, Li & Shivakumar, 2016). Consequently, this has resulted in a shift in the demand for empirical evidence, from that based on voluntary adoption to that based on mandatory adoption, to correspond with the increasing trend of mandatory IFRS adoption since 2005.

In respond to this, many IFRS studies began to focus on mandatory IFRS adoption and predominantly used the EU's mandatory IFRS adoption as the research setting. This is because of EU Regulation 1606/2002 that requires EU listed firms to prepare their consolidated financial statements in accordance with IFRS as of 2005 (EC, 2002). It involves 28 countries and this most likely represents the largest scale for a regulatory change to IFRS (Communication Department of the European Commission, n.d.; Pope & McLeay, 2011).[2] This alone provides a rich setting to examine various IFRS-related issues, including the comparability benefit, although the influence of other initiatives exclusive to the EU is a concern. For example, the EU member countries are considerably integrated as a result of the Single Market Program implemented in 1992 (Beuselinck, Joos & Van der Meulen, 2007), and their financial reporting practices were influenced by continuous accounting harmonization efforts to improve the information environment within the EU (Pope & McLeay, 2011; Soderstrom & Sun, 2007).[3]

[2] By 2005, EU Regulation 1606/2002 was applicable to 25 member countries and three additional countries of the European Economic Area (EEA). This number has increased post-2005 as more countries subsequently joined the EU.

[3] The most relevant European Commission (EC) Directives on financial reporting were the Fourth Directive and the Seventh Directive (see Soderstrom and Sun (2007) for more details).

This potentially limits the generalization of findings driven by EU observations to other non-EU adopting countries, and this is evident in how some studies document capital market benefits that are more pronounced among the EU adopting firms (e.g. Christensen, Hail & Leuz, 2013; Daske et al., 2013). Therefore, the simultaneous implementation of mandatory IFRS reporting regime in 2005 by forerunner countries such as Australia and the EU provides a suitable research setting to extend cross-country IFRS studies beyond the EU-specific context.

Even with the growing number of studies examining various issues related to mandatory IFRS adoption, empirical evidence supporting the benefits of IFRS on comparability and transparency of financial statements is less conclusive than that on capital market outcomes (Brüggemann, Hitz & Sellhorn, 2013; De George et al., 2016). Moreover, existing studies on the 'first-order' impact of mandatory IFRS adoption also tend to focus on earnings attributes (such as relevance, timeliness and conservatism) (e.g. Aharony, Barniv & Falk, 2010; Chua, Cheong & Gould, 2012; Jeanjean & Stolowy, 2008; and others) that are distinctly different from the concept of comparability (IFRS Foundation, 2010). As a result, there has been little attention given to exploring the comparability outcome around mandatory IFRS adoption, despite it being commonly used to justify the link between IFRS adoption and capital market benefits (e.g. Brochet, Jagolinzer & Riedl, 2013; Byard, Li & Yu, 2011; Chen, Young & Zhuang, 2013; DeFond et al., 2011). This motivates the first empirical chapter of this thesis to examine the association between mandatory IFRS adoption and accounting comparability across countries.

In addition to adopting the same set of accounting standards, the degree of comparability also depends on similarity in firms' operating environments and the similarity of their financial reporting behavior and other firms' (Zhang, 2018). To the extent that firms in the same industry are assumed to face common economic factors in a similar way (Zhang, 2018), the alignment of firms' incentives, arising from similarities in firms' operating characteristics and institutional

environments, is expected to influence the level of accounting comparability. This line of reasoning is consistent with prior studies which emphasize that the properties of accounting numbers are sensitive to firms' reporting incentives, which are determined by the interplay between market and political forces (Ball, Kothari & Robin, 2000; Ball, Robin & Wu, 2003). Even under a common accounting standard like IFRS, prior studies also commonly document heterogeneous capital market outcomes across firms and countries due to differences in reporting incentives and institutional environment (e.g. Christensen, Lee & Walker, 2007; Daske et al., 2013). Thus, the second empirical chapter extends the scope of the first empirical study by examining the role of dissimilarity in firms' reporting incentives and institutional differences in determining cross-country accounting comparability around the time of mandatory IFRS adoption.

From the perspective of the consequences of accounting comparability, comparability benefit has been widely discussed at the conceptual level (Barth, 2013) and empirically examined in various settings by emerging studies (e.g. De Franco et al., 2011; Neel, 2017; Shane, Smith & Zhang, 2014). Prior research generally supports the association between comparability and capital market benefits, although most of the empirical findings are drawn from the US setting alone (e.g. De Franco et al., 2011; Shane et al., 2014).[4] For the handful of comparability studies related to IFRS adoption, the existing studies tend to link the benefits of comparability with the attendant capital market consequences of IFRS adoption (e.g. DeFond et al., 2011; Neel, 2017; Young & Zeng, 2015). Even though a firm's information structure is crucial in determining asset pricing (Easley & O'Hara, 2004; Lambert, Leuz & Verrecchia, 2007), the influence of comparability on a firm's information environment is still under-researched in the IFRS environment. Existing comparability literature generally proxies a firm's information

[4] Refer to Gross and Perotti (2017), who provide a discussion on the determinants and consequences of comparability.

environment based on the properties of analysts' forecasts (e.g. André, Dionysiou & Tsalavoutas, 2012; Horton, Serafeim & Serafeim, 2013), but it is still far from clear on the information usefulness of comparable accounting information in the capital market. Given that Choi et al. (2019) find that comparable accounting information enhances the informativeness of stock prices in the US setting, the third empirical chapter examines the association between accounting comparability and the information content of stock prices upon the introduction of mandatory IFRS reporting.

To conduct the analyses in Chapters Three to Five, this thesis chooses to focus on the mandatory implementation of IFRS in Australia and the EU. Mandatory adoption of IFRS in the EU provides a large-scale research setting, and Australia is a non-EU adopting country suitable for establishing a comparability relation. In line with the EU's decision, Australia mandated IFRS adoption from 2005 at a national level (AGFRC, 2002) and this offers sufficient comparable firms and an equivalently long information window for the investigation. Moreover, Australia also prohibited any voluntary adoption of IFRS prior to 2005 and exceptions to delaying adoption of IFRS post-2005 (Chua et al., 2012; De George et al., 2016). This provides a unique research setting for concentrating on mandatory IFRS adopters only while allowing comparisons with many EU countries that are characterized by diverse forms of adoption experience. In addition, Australia is a non-EU country with a common-law tradition that has historically been well-regarded for strong investor protection and enforcement (La Porta et al., 1998; Kaufmann, Kraay & Mastruzzi, 2014). Consistent with prior literature, this should provide a relatively stable environment for the implementation of IFRS, in which the information quality is less likely to be compromised. This reduces the possibility that factors other than the change in comparability confound the inferences made.

1.3 Summary of Major Findings and Implications

To address the research objective of this thesis, Chapters Three and Four empirically examine mandatory IFRS adoption, firms' reporting incentives and institutional features as determinants of cross-country accounting comparability. To explore the consequences of accounting comparability, Chapter Five investigates this based on its impact on a firm's information environment.

Chapter Three explicitly examines the association between mandatory IFRS adoption and accounting comparability. Specifically, the study addresses the similarity facet and the difference facet of comparability based on a sample of matched firm-pairs between mandatory adopters from Australia and the EU. The results show that the similarity facet of cross-country accounting comparability is higher in the post-adoption period (2007–2011) than in the pre-adoption period (2000–2004). At the same time, this is accompanied by no significant change in the difference facet of accounting comparability across the pre-adoption and the post-adoption periods. The results are also robust to using an alternative accounting comparability measurement. In line with the definition of 'comparability' as stated in the Conceptual Framework of the IASB (IFRS Foundation, 2010), the findings suggest that mandatory IFRS adoption improves cross-country accounting comparability. Further analysis also indicates that the impact of mandatory IFRS adoption on cross-country comparability is more pronounced for similar firms domiciled in countries with different legal origins. Therefore, the findings provide empirical support for the crucial role of adopting a uniform set of accounting standards for narrowing accounting diversity across countries in achieving the desired comparability benefit.

In Chapter Four, the purpose of the study is to investigate the interaction of accounting standards, firms' reporting incentives and institutional features in determining accounting

comparability. By focusing on the pairwise comparability between mandatory adopters in Australia and the EU, empirical results reveal that cross-country accounting comparability has increased post-IFRS adoption, even after controlling for the dissimilarity of firms' reporting incentives between similar firms. However, the results show that cross-country comparability is lower when similar firms exhibit greater dissimilarity in reporting incentives (as proxied by growth opportunities, capital dependence or audit quality). Furthermore, the enhancing role of mandatory IFRS adoption on accounting comparability also appears to be moderated by the pairwise dissimilarity of firms' reporting incentives when similar firms exhibit larger differences in profitability, growth opportunities and capital dependence.

In addition, the findings in Chapter Four also show that the comparability improvement post-IFRS adoption remains significant after controlling for institutional differences between similar firms. As a country's institutional setting is defined by a myriad of elements, the results reveal that the diminishing role of different aspects of institutional differences is interdependent on the presence of other institutional characteristics. Despite that, similar firms in countries with differences in legal origins and strength of investor protection appear to have lower accounting comparability after the adoption of IFRS. This is also supported by the findings of the supplemental analysis, in which similar firms have institutional differences due to some EU countries concurrently making substantive enforcement changes while others did not. In particular, there is little evidence of a comparability benefit from mandatory IFRS adoption for similar firms with such institutional differences when dissimilarity in firm-level reporting incentives is not controlled for. Hence, empirical evidence suggests that accounting comparability is determined based on the interdependence of accounting standards, firms' reporting incentives and institutional features.

Turning to the consequences of accounting comparability, Chapter Five examines the association between cross-country accounting comparability and the information content of stock prices upon the introduction of mandatory IFRS reporting regimes in Australia and the EU. Using stock return synchronicity as a proxy for the information content of stock prices, the empirical results show that accounting comparability decreases stock return synchronicity by facilitating the incorporation of firm-specific information (relative to marketwide information) into stock prices. However, the findings also indicate that this negative association between accounting comparability and synchronicity is moderated when firms with greater comparability adopt IFRS mandatorily, and this results in more marketwide information being impounded into stock prices post-IFRS adoption. Further testing reveals that analyst coverage plays a significant role in influencing the relation between accounting comparability and stock return synchronicity. Specifically, greater analyst coverage in the post-adoption period encourages firms with greater comparability to impound relatively more marketwide information into stock prices.

1.4 Contributions

This thesis contributes to the literature in the following ways. First, comparability has always been the core interest of regulators and practitioners, but it remains an under-researched topic. In particular, the diversity of accounting standards across countries prior to IFRS adoption and the lack of a more objective output-based comparability measurement have hindered the progress of comparability studies. Moreover, earlier comparability studies which focused on the harmony of accounting policy choices and within-country comparability also become less relevant to the current global environment as the meaning and measurement of comparability have evolved over time (Gross & Perotti, 2017). To satisfy the growing interest in comparability, especially given the trending adoption of IFRS, this thesis adds to the limited

stream of comparability research by exploring the determinants and consequences of accounting comparability across countries.

Second, this thesis enriches the understanding of the comparability issues surrounding mandatory IFRS adoption. Even though the importance of comparability has been underscored by the IASB when promoting IFRS adoption, the 'first-order' impact of mandatory IFRS adoption on comparability has not been well-researched (De George et al., 2016). IFRS studies that conclude by finding capital market benefits coinciding with the IFRS mandate tend to infer their results to be driven by comparability improvement. Yet empirical evidence of the overall comparability benefit of mandatory IFRS adoption using direct measures appears to be at odds with the EU setting and the larger cross-country setting that is dominated by EU observations (e.g. Cascino & Gassen, 2015; Yip & Young, 2012). This thesis contributes empirical evidence that the introduction of a mandatory IFRS reporting regime in Australia and the EU enhanced cross-border comparability improvement as expected. In line with the recent call by Gross and Perotti (2017) for a deeper understanding of the impeding sources on comparability benefit of IFRS adoption, this thesis also generates new evidence that cross-country comparability improvement is compromised when firms are more dissimilar in their reporting incentives and institutional environment. This remains prevalent even when comparable accounting information is produced under a common set of accounting standards like IFRS. Furthermore, this thesis is the first to examine the association between comparability and the information content of stock prices in the context of mandatory IFRS adoption.

Third, this thesis extends the scope of the existing output-based comparability research by conducting an investigation based on the pairwise relation between Australian and EU mandatory adopting firms. The recent growing body of comparability research is inspired by the development of a novel output-based comparability measurement by De Franco et al.

(2011), and much empirical work of this kind is analogous to De Franco et al. (2011) by confining its examinations to the US setting (e.g. Choi et al., 2019; Sohn, 2016). Due to the distinct differences in the financial reporting and institutional environments in the US and the rest of the world, it is unclear whether the findings for the US setting will hold in the non-US setting. Moreover, reporting externality gains vary across within-country and cross-country comparability settings, and this influences the generalization of findings for country-specific studies. Even though some IFRS studies extend their research on comparability to a cross-country setting, the (average) findings are predominantly driven by pairwise EU observations (e.g. Cascino & Gassen, 2015; Yip & Young, 2012). Therefore, this thesis provides clearer evidence of cross-border comparability by disentangling the pairwise comparability exclusively for firms in the EU and Australia (non-EU) that similarly adopted IFRS mandatorily as of 2005. This should offer some useful insights to EU regulators who tout the importance of IFRS adoption in enhancing cross-border accounting comparability beyond the EU boundary (EC, 2000). In addition, the findings also have relevant implications for the increasing number of non-EU countries that have mandated IFRS adoption or are considering adoption.

Fourth, this thesis also contributes additional evidence of the implications of mandating accounting standards change. Early studies on accounting standards change typically focused on firm-level decisions to adopt IFRS voluntarily, and the majority provide evidence to support IFRS bringing significant capital market benefits (De George et al., 2016; Soderstrom & Sun, 2007). However, the problem of self-selection bias remains a concern for any studies of voluntary adoption due to the inherent reporting incentives for firms making such a choice. In the context of mandatory IFRS adoption, the decision to change accounting standards is at the country-level, and so this ameliorates the bias. Nonetheless, Brüggemann et al. (2013) observe that evidence for the impact of mandatory IFRS adoption on comparability and transparency of financial reporting standards remains ambivalent compared to that on capital market outcomes.

To the extent that subsequent IFRS studies suggest that mandatory IFRS adoption leads to a wide range of capital market benefits, it is also clear that those benefits are not evenly distributed across all capital market participants (Christensen et al., 2015; Pope & McLeay, 2011). Therefore, this thesis contributes to the debate about the interplay of reporting incentives, institutional factors and the characteristics of the accounting systems in shaping accounting comparability. Moreover, this thesis extends the literature on the capital market consequences of mandatory IFRS adoption by examining the specific channel of accounting comparability. In particular, this thesis provides systematic evidence on the interaction of accounting comparability and mandatory IFRS adoption in determining the information content of stock prices to complement existing IFRS studies on its adoption impacts associated with a firm's information environment.

1.5 Thesis Structure

The remainder of this thesis is organized as follows: Chapter Two reviews the literature and details some institutional background concerning accounting comparability and IFRS adoption. Chapter Three presents the first empirical study, which examines the impact of mandatory IFRS adoption on cross-country accounting comparability between Australia and the EU. The second empirical study is detailed in Chapter Four, which investigates the interaction of IFRS adoption, firm-level and country-level determinants in determining cross-country accounting comparability around mandatory IFRS adoption in Australia and the EU. In Chapter Five, the empirical study examines the association between accounting comparability and the information content of stock prices upon the mandatory IFRS adoption in Australia and the EU. Finally, Chapter Six provides the summary and conclusion of this thesis.

CHAPTER TWO:

LITERATURE REVIEW AND INSTITUTIONAL BACKGROUND

2.1 Introduction

The objective of this chapter is to provide a broad review of the literature related to two strands of research: (i) accounting comparability, and (ii) IFRS adoption. It aims to offer an overview and develop a deeper understanding of the concept of accounting comparability, which has become topical due to increasing international accounting harmonization efforts which include the adoption of IFRS. By examining the determinants of accounting comparability and its impact on a firm's information environment and various economic outcomes, this chapter provides some background as to why enhancing accounting comparability has become the underlying goal in promoting widespread IFRS adoption. Although a large body of literature investigates the implications of IFRS adoption in various settings, direct evidence of the relation between comparability and IFRS adoption is relatively scarce, let alone of the role of firm- and country-level determinants in determining this association. While many studies analytically and empirically use the comparability argument to justify the link between IFRS adoption and various economic consequences, there is, however, limited evidence of how this relation is directly associated with changes in a firm's information environment.

This chapter first introduces the concept of accounting comparability and describes the various measurements of accounting comparability adopted in previous comparability studies in Section 2.2.1. In Section 2.2.2, prior research related to the determinants of accounting

comparability is reviewed and analyzed. Then this is followed by a discussion in Section 2.2.3 of the literature that examines the impact of accounting comparability on information quality and economic outcomes. Turning to IFRS adoption, this chapter provides in Section 2.3.1 some institutional background on the development of IFRS in general, and in Section 2.3.2 the background specifically on the mandatory adoption of IFRS in Australia and the EU. In Section 2.3.3, the focus is on addressing the economic consequences of IFRS adoption that have been analytically and empirically considered in prior literature. This includes a review of evidence from voluntary IFRS adoption and later evidence based on mandatory IFRS adoption. Finally, the last section summarizes the literature review with a discussion about the scope and limitations of existing research work.

2.2 Accounting Comparability

2.2.1 The Concept and Measurement of Accounting Comparability

In financial accounting, comparability is a qualitative characteristic that is deemed highly desirable in attaining high quality financial reporting. The Conceptual Framework of the IASB (IFRS Foundation, 2010) identifies comparability as one of the four qualitative characteristics that enhance "the usefulness of information that is relevant and faithfully represented" (QC19), and specifies that this characteristic of financial reporting information "enables users to identify and understand similarities in, and differences among, items" (QC21).[5] Moreover, it emphasizes that "[u]nlike the other qualitative characteristics, comparability does not relate to a single item. A comparison requires at least two items" (IFRS Foundation, 2010, QC21). According to the Conceptual Framework, comparability is crucial because "the information can

[5] The fundamental qualitative characteristics of financial reporting information are relevance and faithful representation. The four enhancing qualitative characteristics are comparability, verifiability, timeliness and understandability (IFRS Foundation, 2010).

be compared to similar information about other entities and with similar information about the same entity for another period or another date" (IFRS Foundation, 2010, QC20). The expectation is that this should enable that information to achieve the objective of financial reporting, which is to provide investors, lenders and other creditors with useful information that helps them in making their capital allocation decisions (IFRS Foundation, 2010).

Given the desirability of comparability as a qualitative attribute of financial reporting, comparability has been widely emphasized by practitioners, regulators and researchers, and has a long-standing history in standard-setting in many countries (De George et al., 2016; Durocher & Gendron, 2011; Zeff, 2007). However, prior work on attempting to measure comparability empirically has proven this to be somewhat difficult because it is an elusive concept (De Franco et al., 2011; Zeff, 2007). In particular, there are different views on how comparability can be achieved in financial reporting, including through similar inputs of a reporting system (i.e. accounting methods, transaction structures, business models), by reporting similar accounting numbers (e.g. earnings, assets or liabilities), and/or by having similar reporting structures and disclosures (De George et al., 2016). Consequently, this has resulted in a variety of constructs being developed and applied to empirically measure comparability from these different perspectives over time.

Early studies on comparability have predominantly focused on similarity in accounting policy choices as a measure of comparability. Specifically, different indices of harmony, such as the H, C, I, T, and other variants to these indices, have been developed (see Archer, Delvaille & McLeay, 1995; Taplin, 2004, 2013; Van der Tas, 1988), as prior studies assume that financial statements between firms are comparable when there is harmony achieved through applying the same accounting policies (Taplin, 2011). For instance, Cairns et al. (2011) applied the T-index and found that the mandatory requirements of fair value measurement for financial

instruments and share-based payments have overall improved within- and between-country comparability post-IFRS adoption in Australia and the UK. While this paper provides some empirical evidence to address the relation between comparability and IFRS adoption, the drawbacks for research of this kind are that the findings are limited to the authors' accounting policy choices of interest and their hand-collected small samples, together with their neglect of the actual reported amounts and the similarity of economic events between comparable firms (Gross & Perotti, 2017).

Equivalently, some earlier research focuses on similarity in levels of financial or valuation ratios as a proxy for comparability (e.g. Joos & Lang, 1994; Land & Lang, 2002; Liao, Sellhorn & Skaife, 2012). Unlike those studies that subjectively examine the extent to which the accounting methods chosen are consistently applied, using the actual accounting amounts reported at a single point in time (such as price-earnings ratios, profitability ratios and returns on equity) is arguably a more objective approach to assessing comparability (Liao et al., 2012). For example, Joos and Lang (1994) evaluate comparability across France, Germany and the UK based on profitability ratios and value relevance measures. They find that variations in country-specific accounting practices significantly influence these accounting-based measures. Even under the same accounting regime of IFRS, Liao et al. (2012) also find that the comparability between French and German firms varies post-adoption. Using the valuation usefulness of earnings and book values as their comparability measures, the authors find that accounting comparability is higher in the year subsequent to IFRS adoption but becomes less in the years that follow. Although these papers assume that their findings are not driven by variations in economic effects across countries, this approach of relying on direct comparison of cross-sectional levels of reported amounts does not account for differences in economic events across the sample firms.

In recent years, more and more studies are shifting their focus towards an output-based comparability measurement that is motivated by the work of De Franco et al. (2011). In their paper, a comparability construct is developed based on the premise that "two firms have comparable accounting systems if, for a given set of economic events, they produce similar financial statements" (De Franco et al., 2011, p.899). By relying on stock returns and earnings as proxies for economic events and financial statements output respectively, the authors assess comparability based on the extent to which two firms' accounting functions map economic events onto financial statements similarly. That is, the authors estimate an earnings-return regression using earnings and stock returns to obtain the model parameters for the investigated firm and its peer firms, respectively. Using the two sets of model parameters obtained, earnings are predicted separately but based on the same stock returns. The negative value of the average absolute difference between the predicted earnings thus represents the comparability score. Even though the comparability measurement by De Franco et al. (2011) is limited exclusively to *earnings* as the financial statements output, this dynamic output-based measure is considered novel. It captures similarities over time, and that comparability can also be evaluated by associating the outputs of financial reporting with the accounting system of a firm, which can be determined by accounting rules and policy choices, a firm's reporting incentives and its institutional environment.

Following the study by De Franco et al. (2011), subsequent studies also modified the comparability measurement used by De Franco et al. (2011) in several ways to suit their unique research designs. For example, Barth et al. (2012) reverse the earnings-return regression adopted by De Franco et al. (2011) to examine the comparability between IFRS-based and US GAAP-based accounting amounts. As their comparability measure is estimated based on similarity in the mapping between accounting amounts and economic outcomes, they also select stock prices and cash flows, on top of stock returns, as proxies of economic outcomes, together

with various combinations of net income and equity book value as accounting amounts. While these additional variables expand the model used by De Franco et al. (2011), an assumption of a linear relationship between earnings and proxies of economic events is still required as before. Moreover, Barth et al. (2012) employ a matching procedure based on size in their sample selection before calculating the pairwise comparability score. This differs from the methodology of De Franco et al. (2011), which only uses two composite comparability measures based on the four most comparable firms and the median of all comparability scores for the investigated firm.

In a concurrent study by Yip and Young (2012), the authors also build on the comparability measurement of De Franco et al. (2011) to examine the association between comparability and mandatory IFRS adoption in the EU based on two facets: (i) the similarity facet and (ii) the difference facet. Relying on the same assumption as De Franco et al. (2011) that firms in the same industry are *similar*, Yip and Young (2012) vary the model of De Franco et al. (2011) by implementing the matching procedure described in Barth et al. (2012) for firms both within the same industry and from different industries. The notion is that the similarity and difference facets of comparability are equally important but mutually exclusive. So this study infers comparability to be the extent to which *similar firms* (from within the same industry) report similar accounting amounts while *dissimilar firms* (from different industries) report dissimilar accounting amounts.

As in other related studies, Cascino and Gassen (2015) also adapt the comparability measurement used by De Franco et al. (2011) in their paper to enable an examination of the association between accounting comparability and mandatory IFRS adoption in a cross-country

setting using annual data.[6] In addition, they introduce an additional comparability model based on the mapping between cash flow and accruals to complement the comparability measurement developed by De Franco et al. (2011). The advantage of using this accounting-based approach is that the accrual model better reflects the key role of the accounting recognition process (Hung, 2001). Moreover, the reliance on cash flows as a proxy for economic activities also alleviates the concerns about differences in market efficiency that is inherent in any market-based approach (Cascino & Gassen, 2015).

Thus far, comparability studies based on disclosures and textual similarities have received the least attention (De George et al., 2016; Lang & Stice-Lawrence, 2015). Although this line of research provides an interesting aspect to assessing the comparability of financial statements beyond the reported numbers, it is inherently difficult to operationalize the research design because it often requires data to be hand-collected and manually coded. Consequently, studies using this approach are limited by small samples and inherent subjectivity, which restrict the generalization of their findings. For example, Cascino and Gassen (2015) hand-collected accounting measurement and disclosure compliance data from the 2006 financial reports of a sample of German and Italian firms that had adopted IFRS for their additional comparability analysis. Despite their small sample size, they found that there are significant differences in the level of IFRS compliance and that the difference is systematically due to variations in firm-, region-, and country-level determinants.

To overcome the limitation of small sample size, a few disclosure studies have also evaluated comparability based on a cosine measure that is extracted from the textual descriptions contained in the firms' financial statements (e.g. Lang & Stice-Lawrence, 2015; Peterson,

[6] The original comparability measurement used by De Franco et al. (2011) is based on 16 consecutive quarterly data in a single country setting (the U.S.).

Schmardebeck & Wilks, 2015). That is, the measure captures the similarities of words used in two documents, with a score bounded between 0 and 1, where 0 indicates documents with no overlapping words and 1 indicates documents with identical proportions of words. For instance, Lang and Stice-Lawrence (2015) calculate the cosine similarity to assess comparability among non-US firms and between US and non-US firms, while Peterson et al. (2015) use the Vector Space Model to obtain the cosine measure for comparing consistency in accounting policy footnotes disclosed in 10-K filings across time and across firms in the US. Although this input-based measure of comparability has the advantage of comparing disclosures for a larger sample of firms than those with hand-collected data, the caveats are that this approach is insensitive to semantics and is only limited to English-language documents (Lang & Stice-Lawrence, 2015; Peterson et al., 2015).[7]

Apart from these direct measures of comparability, there is also another line of research that draws inferences about the comparability of financial statement information based on several indirect approaches, such as intra-industry information transfers, peer-based valuation models and debt valuation (e.g. Kim, Kraft & Ryan, 2013; Wang, 2014; Yip & Young, 2012; Young and Zeng, 2015). For example, a few recent studies examine changes in information transfers upon IFRS adoption in different settings. Overall, they find that accounting harmonization facilitates intra-industry and transnational information transfers between IFRS adopters, from which they infer that accounting comparability is a driver for the externality outcome (Wang, 2014; Yip & Young, 2012). In addition, Young and Zeng (2015) also adopt the 'warranted multiple method' proposed by Bhojraj and Lee (2002), which is based on valuation theory to demonstrate how better accounting comparability leads to improved peer-based valuation performance. Based on a series of identification tests, their findings suggest that the observed

[7] In this context, the limitation arises when different words with similar meanings are recognized as non-matches. This is even more problematic when phrases are deconstructed into their separate words, resulting in them losing their inherent meaning and thereby being recognized as non-matches (Peterson et al., 2015).

improvement in valuation performance is the consequence of higher cross-border accounting comparability, and that this is largely attributable to enhanced peer selection. In the context of debt contracting, Kim et al. (2016) present alternative comparability measures that are based on the variability of Moody's adjustments to financial statements in 'Financial Metrics', in which they interpret a smaller (larger) number of adjustments in a peer group as indicative of higher (lower) comparability.

In summary, there is a long-standing desideratum for achieving comparability in financial reporting to enhance the quality of financial accounting information. This has prompted the development and application of different comparability measurements to meet the research objectives of the growing empirical studies on comparability.

2.2.2 Determinants of Accounting Comparability

The importance of accounting comparability as a qualitative characteristic of financial reporting has long been recognized by practitioners, researchers and standard-setters. However, prior literature on the factors that give rise to this desired characteristic is still relatively scattered. Although this is in part due to the inherent difficulty in empirical measurement of accounting comparability, the prevalent diversity in accounting standards prior to IFRS adoption has also been an impediment.

2.2.2.1 Accounting Standards and IFRS Adoption

In the ongoing debate about comparability, the long-time absence of uniformity in accounting methods used by firms has been considered as a major obstacle to achieving comparability (Barlev & Haddad, 2007; Laínez & Callao, 2000; Zeff, 2007). This is because the use of different accounting methods directly influences various accounting amounts (e.g. earnings,

return on assets, book value, price to earnings ratio, etc.), and thus many assume that comparability equates to firms using the same accounting methods (Cole, Branson & Breesch, 2012; Krisement, 1997; Zeff, 2007). This assumption is even extended to having the same accounting rules in an international context (Barth, 2006, 2013; Cole et al., 2012), which has prompted increasing efforts towards international accounting harmonization. The goal of international accounting harmonization is to reduce international differences in accounting principles that vary considerably from country to country, which should lead to higher global comparability of accounting information (Barlev & Haddad, 2007). [8]

Building on the notion that accounting standards play a significant role in determining accounting comparability, recent studies have begun to examine the comparability outcome of the trending widespread adoption of IFRS (e.g. Barth et al., 2012; Cascino & Gassen, 2015; Jones & Finley, 2011; Liao et al., 2012; Wang, 2014; Yip & Young, 2012). These IFRS studies differ from earlier studies on comparability, as most research which predates IFRS adoption generally focuses on the extent to which accounting standards are harmonized (i.e. *de jure* comparability) (e.g. Garrido, Leon & Zorio, 2002; Rahman, Perea & Ganeshanandam, 1996; Street, 2002) and on the extent to which firms apply the same accounting methods (i.e. *de facto* comparability) (e.g. Bradshaw & Miller, 2008; DeFond & Hung, 2003; Emenyonu & Gray, 1992, 1996; Jaafar & McLeay, 2007; Joos & Lang, 1994; Van der Tas, 1988).[9] While anecdotal evidence suggests that accounting practices vary considerably across countries due to differences in accounting standards (Archer et al., 1995; Emenyonu & Gray, 1992, 1996; Joos & Lang, 1994; Van der Tas, 1988), accounting practice harmony is found to be positively associated with accounting regulation harmony (Rahman, Perera & Ganesh, 2002).

[8] The common definitions of international accounting harmonization are detailed by Barlev and Haddad (2007), while Baker and Barbu (2007) presents a thorough review of research on international accounting harmonization during the period 1965 through 2004.

[9] According to Tay and Parker (1990), *de jure* refers to "harmony or uniformity of accounting regulations (which may be contained in the law and/or professional accounting standards)" (p.73), and *de facto* refers to the actual accounting practices applied by the firm.

Accordingly, the expectation is that adopting a common set of globally applicable accounting standards (such as IFRS) should improve financial statement comparability and thereby enable capital market participants to make better investment decisions, which echoes the goal of the IASB in developing IFRS.[10]

In the context of voluntary IFRS adoption, Barth et al. (2018) examine whether accounting amounts for voluntary IFRS adopters are more comparable to those firms that already adopted IFRS before them ('adopted' firms) and less comparable to those firms that did not adopt IFRS ('non-adopting' firms). Relying on two constructs to proxy for accounting systems and value relevance comparability, the authors document empirical evidence consistent with their predictions. Although their findings suggest that switching to IFRS enables firms to be more comparable with those peer firms that use the same accounting standards than those that do not, their analyses are subject to a self-selection bias due to the inherent incentives among voluntary IFRS adopters.

Motivated by the mandatory adoption of IFRS which took place in Australia and the EU as of 1 January 2005, several studies also examine its association with accounting comparability but document mixed results (e.g. André et al., 2012; Caban-Garcia & He, 2013; Jones & Finley, 2011; Liao et al., 2012; Yip & Young, 2012). While some studies find that mandatory IFRS adoption in Australia and the EU has led to lower financial reporting diversity (Bayerlein & Al Farooque, 2012; Cairns et al., 2011; Jones & Finley, 2011) and higher comparable financial statements (André et al., 2012; Brochet et al., 2013; Caban-Garcia & He, 2013; Yip & Young, 2012), others document contradicting evidences on the comparability benefit of IFRS adoption (Beuselinck et al., 2007; Callao, Jarne & Laínez, 2007; Liao et al., 2012). To the extent that the

[10] This is discussed in more detail in Section 2.3.1.

research design of these studies differs in terms of their research methodologies, sample periods and sample firms, most of them nonetheless mainly focus on the mandatory adoption of IFRS as required by the EU Parliament (e.g. André et al., 2012; Beuselinck et al., 2007; Brochet et al., 2013; Caban-Garcia & He, 2013; Callao et al., 2007; Jayaraman & Verdi, 2014; Liao et al., 2012; Yip & Young, 2012). In particular, a few studies concentrating on the EU adoption argue that other concurrent events in the region, such as stock exchange consolidation in the Scandinavian countries (Caban-Garcia & He, 2013) and economic integration through the adoption of the common Euro currency (Jayaraman & Verdi, 2014), conjointly influence the association between comparability and mandatory IFRS adoption in the EU. Although those findings based solely on the mandatory adoption in the EU provide some valuable insights into the impact of adoption on comparability in a large-scale setting, the generalization of evidence from these EU studies could be problematic. Caution needs to be exercised, as these contemporaneous influences on the observed comparability changes are not necessarily applicable to firms in many of the non-EU adopting countries.

Nevertheless, empirical evidence showing that comparability benefit results from mandatory IFRS adoption also appears to be inconsistent, even in an international setting. Wang (2014) finds that there is greater transnational information transfer between firms in a mandatory IFRS adoption environment when both firms adopt the same accounting standards such as IFRS. The author draws inferences that are indicative of firms benefiting from harmonization of accounting standards in terms of enhanced comparability of financial statements. Conversely, Lang, Maffett and Owens (2010) find that although mandatory IFRS adopters exhibit an increase in earnings comovement (as measured by the adjusted R^2 from the regression of a firm's earnings on a matched peer firm's earnings) after switching to IFRS, they exhibit a decrease in earnings comparability relative to a control sample of non-adopters. Similarly, Cascino and Gassen (2015) find that there is only a weak association between mandatory IFRS

adoption and the expected comparability improvement for a sample of adopting firms across 14 countries relative to matched non-IFRS adopters in 15 countries. They subsequently demonstrate it to have resulted from a lack of incentives to comply with accounting rules among mandatory adopters.

From the viewpoint of comparability between IFRS and US GAAP, Barth et al. (2012) assess the change in comparability for a sample of non-US firms that switched from their non-US GAAP local accounting standards to IFRS between 1995 and 2006 and matched US firms that applied US GAAP. They find that the comparability between non-US firms and US firms increases after the adoption of IFRS, and that the comparability improvement is also greater for mandatory adopters, common-law firms and firms in countries with high enforcement. Similarly, Eng, Sun, and Vichitsarawong (2014) examine the comparability of accounting amounts reported under IFRS and US GAAP by firms cross-listed in the US (American Depository Receipts (ADRs)) in terms of value relevance, timeliness, accrual quality, and predictive power with the numbers reported, which they also corroboratively conclude shows no significant difference in accounting quality. Taken together, these results suggest that there is a comparability benefit associated with the increasing use of IFRS, and with the efforts of the IASB and the FASB to converge IFRS and US GAAP.

Overall, a body of literature has attempted to examine the implications of accounting standards on accounting comparability. This is especially so in the context of mandatory adoption of IFRS, in which the same accounting standards are required across firms with the objective of promoting comparability. While some studies provide evidence that is consistent with the expectation of enhanced comparability, others only document weak, if not contradictory, evidence on the association. Consequently, this raises doubts about the effectiveness of simply harmonizing accounting standards in achieving 'genuine' comparability. This leads to the

suggestion that comparability is also determined by a variety of factors in addition to accounting standards, including firms' reporting incentives and other institutional features.

2.2.2.2 Firms' Incentives

Prior research provides unequivocal evidence that preparers' incentives have an important influence on financial reporting outcomes (e.g. Ball et al., 2003; Byard et al., 2011; Christensen et al., 2015; Daske et al, 2013; Doukakis, 2014; Holthausen, 2009; Isidro & Raonic, 2012; Leuz, Nanda & Wysocki, 2003). More importantly, a large body of literature emphasizes that the quality of accounting information is not determined by accounting standards alone, but is also dependent upon the condition in which a firm operates, which shapes preparers' incentives (Ball et al., 2003; Gao & Sidhu, 2018; Holthausen, 2009; Isidro & Raonic, 2012; Lang, Raedy & Wilson, 2006; Schipper, 2005; Soderstrom & Sun, 2007).[11] The underlying reason for this is that the application of accounting standards requires firms to exercise judgment, and so this offers firms an opportunity to have discretion over the financial information they provide to capital markets based on their inherent incentives (Capkun, Collins & Jeanjean, 2016; Doukakis, 2014; Leuz, 2006; Schultz Jr. & Lopez, 2001).

Consistent with this premise, prior studies have examined the association between firms' incentives and financial reporting outcomes in different contexts (e.g. Burgstahler, Hail & Leuz, 2006; Francis, Khurana & Pereira , 2005; Gaio, 2010; Gao & Sidhu, 2018; Isidro & Raonic, 2012). These studies generally assume that firms' incentives correlate with firm characteristics, such as firm profitability (Meek, Roberts & Gray, 1995), foreign listings (Ashbaugh, 2001; Lang et al., 2006), capital structure (Meek et al., 1995; Missonier-Piera, 2004), ownership

[11] As Holthausen (2009) emphasizes, "… the effect of accounting standards alone may be weak relative to the effects of forces such as managers' incentives, auditor quality and incentives, regulation, enforcement, ownership structure, and other institutional features of the economy in determining the outcome of the financial reporting process" (p. 448).

structure (Burgstahler et al., 2006; Leuz, 2006; Warfield, Wild & Wild, 1995), the quality of corporate governance (Dahya, Dimitrov & McConnell, 2008; Durnev & Kim, 2005; Klapper & Love, 2004), and audit quality (Becker et al., 1998; Francis, Maydew & Sparks, 1999). However, most of the existing studies are concerned with firm-specific earnings attributes (such as relevance, timeliness and conservatism) other than comparability as the financial reporting outcomes. Consequently, there is a lack of empirical evidence on the significance of firms' incentives in determining accounting comparability, although some inferences can be drawn from the earlier work.

In a handful of prior studies that directly examine firm-level determinants of comparability, Fang, Maffett and Zhang (2015) show that foreign mutual ownership is an important factor in producing comparable financial statements, but only for firms domiciled in emerging markets. In addition, they also find that non-US firms with greater US institutional ownership are more likely to switch to a Big 4 auditor, and this switch subsequently enhances the comparability between non-US firms and their US peers. Their findings suggest that US institutional investment changes firms' reporting incentives and thereby serves as a mechanism for improving accounting comparability. Alternatively, Lee et al. (2016) examine the role of related-party transactions in determining comparability among South Korean firms. They find that comparability is tempered with the use of related-party transactions as a means of exercising management discretion. In the context of mandatory IFRS adoption, Cascino and Gassen (2015) find that the comparability of accounting information under the same set of accounting rules across different countries is also conditioned upon firms' compliance incentives. They show that these incentives vary across firms, regions and countries and systematically shape the degree of compliance with IFRS standards. This corroborates with the findings of Beuselinck et al. (2007), which provide evidence that reporting incentives that arise from the capital market, debt market and labor pressures significantly influence the reporting

behavior of the accrual accounting system across a sample of EU firms. This relation did not disappear even after the EU's mandatory IFRS adoption as of 2005 and therefore reduces the extent of comparability. In the same way, a survey conducted by Cole et al. (2012) also documents that auditors, analysts and other users of European IFRS financial statements considered that accounting methods used, along with judgments exercised by preparers and interpretation differences, are important factors for determining the comparability of financial statements.

In sum, despite the scarcity of empirical evidence directly examining the importance of firms' incentives in determining accounting comparability, the general thrust of prior research is that firms' incentives provide the necessity condition to achieve high quality financial reporting outcomes.

2.2.2.3 Institutional Environment and Other Country-Level Factors

An extensive body of literature has emphasized the importance of institutional factors on financial reporting practice (e.g. Ball et al., 2000; Ball et al., 2003; Christensen et al., 2013; Holthausen, 2003, 2009; Houqe et al., 2012; Soderstrom & Sun, 2007; Wysocki, 2011). This is particularly so given that incentives are a function of institutional variables, and thus it makes intuitive sense that the institutional environment in which the firm operates also influences the quality of financial reporting outcomes (Pope & McLeay, 2011). For this reason, prior research has observed that strong institutional factors are positively correlated with higher quality financial reporting attributes and various capital market benefits, such as more timely recognition of losses (Ball et al., 2000; 2003), less earnings management (Han et al., 2010; Lang et al., 2006; Leuz et al., 2003), improved earnings quality (Houqe et al., 2012), better corporate disclosures and transparency (Archambault & Archambault, 2003; Bushman,

Piotroski & Smith, 2004; Hope, 2003b; Jaggi & Low, 2000), higher value relevance of earnings (Cahan, Emanuel & Sun, 2009), lower cost of capital (Chu et al., 2014; Hail & Leuz, 2006), higher firm valuations (La Porta et al., 2002), increased informativeness of stock prices (Wang & Yu, 2015), and improved forecasting activities (Barniv, Myring & Thomas, 2005; Hope, 2003a).

Drawing inferences from past studies with respect to institutional influences on financial reporting, there is a wide range of institutional factors that potentially impede achieving global comparability. In particular, Zeff (2007) points out that some obstacles to global comparability could arise from four country-level differences in cultures, which are (i) the business and financial culture, (ii) the accounting culture, (iii) the auditing culture, and (iv) the regulatory culture. While to some extent these obstacles have been conceptually discussed by Zeff (2007) and others (e.g. Kvaal & Nobes, 2012; Nobes, 2004, 2006; Theunisse, 1994) and prior accounting research has also employed a myriad of variables to proxy for these institutional differences, there is relatively little empirical evidence of the direct link between institutional factors and cross-country comparability of financial statements.

In earlier studies on comparability, Schultz Jr. and Lopez (2001) find that judgments made by accountants in France, Germany and the US appear to be significantly inconsistent despite them being provided with similar facts and rules. The authors attribute national culture as the underlying reason explaining their behavioral variances. Likewise, Jaafar and McLeay (2007) document that country differences outweigh sector differences in determining firms' policy choices, after controlling for firm characteristics such as listing status and size. Several studies further show that, after firms adopt IFRS, there are significant heterogeneity in firms' application of accounting standards. In particular, they consistently show that despite adopting a common set of IFRS, firms' accounting policy choices continue to be influenced by their

national practices prior to IFRS adoption (Haller & Wehrfritz, 2013; Kvaal & Nobes, 2010, 2012; Stadler & Nobes, 2014; Wehrfritz & Haller, 2014).

Among the recent comparability studies that relied on using an output-based comparability measurement, Neel (2011) finds that the comparability improvement engendered by mandatory IFRS adoption is only prevalent for firms in countries that have stronger institutional structures or have large domestic GAAP-IFRS differences. This finding corresponds with the results of Beuselinck et al. (2007), which show that the influence of firm-level incentives on cross-country differences in accounting accrual under the EU's mandatory IFRS adoption is intensified by a country's institutional framework, such as stock market development, a country's reliance on debt financing and the dominance of union membership. In a similar EU setting to Beuselinck et al. (2007), Yip and Young (2012) also find that comparability improvement for firms in the same industry is more prevalent when similar firms are from countries with the same legal origin than when they are from countries with different legal origins (common-law vs. civil-law). Nevertheless, Jayaraman and Verdi (2013) show that economic integration (based on the adoption of the common Euro currency) also plays a significant role in determining accounting comparability. They show that reporting incentives arising from similarity in economic environments complements the enhancing role of mandatory IFRS adoption on accounting comparability across the EU adopting firms. Taken together, these findings suggest that country-level factors significantly influence firms' reporting incentives. This in turn influences their reporting behavior and policy choices that consequently determine the extent of achieving accounting comparability.

In summary, considerable research has examined the role of institutional factors in shaping financial reporting. In contrast, empirical evidence for the direct association between institutional variables and accounting comparability is scant. Given that achieving accounting

comparability is central to the objective of financial reporting and to promoting IFRS adoption, the importance of institutional conditions for determining accounting comparability globally, beyond changing accounting standards, is not to be overlooked.

2.2.2.4 Other Determinants

Apart from the interplay of accounting standards, firms' incentives and institutional environment in determining accounting comparability, prior studies also suggest that there are other factors that relate to the comparability of financial information.

In a study by Francis, Pinnuck and Watanabe (2014), the authors argue that each Big 4 audit firm has its own *audit style* when implementing auditing standards and enforcing accounting standards among its clientele. Based on this proposition, the authors find that the comparability of reported earnings within a Big 4 auditor's clientele for a sample of US firms is higher when these firms are subject to the same audit style. In addition, they also document that the impact on comparability is greater for Big 4 auditors than for non-Big 4 auditors. The results thus provide evidence that to some extent auditing plays a significant role in determining the quality of financial reporting, and auditors' characteristics also influence the way in which accounting standards are enforced, which ultimately determines the extent of comparability.

Furthermore, Zeff (2007) also expresses concern about the problem of language as a barrier to achieve comparability. This is especially relevant for IFRS adoption, in which the use of IFRS in languages other than English potentially introduces heterogeneity in applying accounting standards due to translation differences, and more importantly, dissimilarities in understanding of the concept (Zeff, 2007). Consistent with Zeff's (2007) assertion, Huerta, Petrides and Braun (2013) produce empirical evidence to show that translation differences arise when IFRS are

translated from English to Spanish by Mexican accountants. Specifically, the authors find that translation of accounting-specific phrases have fewer variations than translations of generic phrases. Since the interpretation of accounting standards encompasses accounting and generic phrases, the finding is indicative of the translation problem in hindering accounting comparability.

2.2.3 Effects of Accounting Comparability

The desirability of comparability as a qualitative characteristic of financial reporting stems from the expectation that it brings numerous economic benefits to the capital market participants. This expectation relies on the assumption that comparable financial information provides users with a larger information sets with which to facilitate comparisons and ultimately make better capital allocation decisions. In line with this premise, a body of literature has examined the implications of comparable financial information for a firm's information environment, along with its associated economic consequences.

2.2.3.1 The Impact of Accounting Comparability on Information Environments

Prior studies examining the consequences of comparable accounting information find that comparability of accounting information significantly influences the quantity and quality of a firm's information environment (e.g. Choi et al., 2019; De Franco et al., 2011; Peterson et al., 2015; Sohn, 2016). To the extent that comparable accounting information is expected to reduce the cost of acquiring and processing information, these comparability studies test their predictions based on its impact on various earnings attributes, stock return synchronicity and analysts' forecasting activities.

Focusing on the comparability of accounting policies as disclosed by US firms in their 10-K filings, Peterson et al. (2015) demonstrate that accounting consistency over time and across firms are positively related to the quality of a firm's earnings attributes. In particular, the authors find that higher time-series accounting consistency results in more persistent and predictable earnings, as proxied by earnings persistence, predictability, accrual quality and absolute discretionary accruals, while low cross-section accounting consistency is associated with lower earnings quality as proxied by larger absolute accrual model residuals. Moreover, the findings of this study show that accounting consistency benefits capital market participants by improving their information processing ability through better information sets, which is evidenced by enhanced analysts' forecast properties (analyst coverage, forecast errors and dispersion), lower information asymmetry (as proxied by bid-ask spreads and illiquidity) and higher stock return synchronicity.

Turning to the comparability of accounting numbers based on the similarity of accounting functions, De Franco et al. (2011) employ their output-based comparability measure to explore earnings attributes, analysts' firm selection behaviors and their forecast properties among the US firms. Consistent with the results of Peterson et al. (2015), the authors find that the degree to which firms are comparable with other firms corresponds to similarities in earnings properties, such as accrual quality, predictability, smoothness, and whether the firm reports a loss. In addition, the authors show that analysts are more likely to choose benchmark peers that are more comparable, after controlling for economic similarity, and that their coverage is also conditional on cross-sectional comparability. In terms of analysts' forecast properties, De Franco et al. (2011) also produce empirical evidence to support the notion that accounting comparability is positively associated with greater analyst coverage, higher forecast accuracy and lower forecast dispersion. Taken together, these results suggest that comparable accounting information reflects better quality of financial reporting, together with an enhanced information

environment for analysts due to the information advantage for firms that have higher comparability with its peers.

Consistent with De Franco et al. (2011), André et al. (2012) and Horton et al. (2013) also examine the role of accounting comparability in driving the changes in a firm's information environment for financial analysts, but in a mandatory IFRS adoption context. Focusing on the mandatory adoption of IFRS in the EU, André et al. (2012) find that IFRS application leads to convergence in firms' accounting practices (input comparability) and improved output comparability as proxied by De Franco et al.'s (2011) measures. However, their further analysis shows that it is output comparability that reduces forecast errors by making accruals more comparable in relation to industry peers. Using forecast accuracy and other measures of analysts' forecast properties as proxies, Horton et al. (2013) also find analogous results: that the mandatory transition to IFRS significantly improves the quality of information intermediation by analysts. While the findings of Horton et al. (2013) suggest that the observed improvement is driven by higher accounting comparability post-IFRS adoption, their evidence show that higher quality information similarly contributes to the enhanced information intermediation.

Using the comparability measure proposed by De Franco et al. (2011), Sohn (2016) examines whether accounting comparability changes managers' opportunistic earnings management behavior. Based on a sample of US firms, the author finds that accruals-based earnings management decreases when accounting comparability is higher, but at the same time this leads to increased real earnings management. Even though the findings show that firms with higher comparability with other firms have incentives to employ different earnings management strategies due to changes in their information environment, the study finds that this

'substitution' behavior is mitigated when firms are faced with better information environment and/or audit quality.

Similarly, in a US setting, Choi et al. (2019) investigate whether accounting comparability is associated with the informativeness of stock prices about future earnings. Relying on the comparability measurement developed by De Franco et al. (2011), the authors document evidence to support their assertion that accounting comparability enhances the ability of current period stock prices to reflect future earnings, and also allows stock prices to better reflect firm-specific future earnings as opposed to market/industry-level future earnings. This corroborates their finding that accounting comparability is associated with lower stock return synchronicity, which implies that comparable accounting information increases the relative amount of firm-specific information impounded into stock prices.

Overall, previous research examining the direct impact of comparable accounting information on a firm's information environment has focused on the comparability of accounting policies and accounting amounts in country-specific research settings, particularly of the US. This limited evidence also generally supports the conjecture that there is an increase in the quantity and quality of the information environment for firms that are associated with higher comparability. To the extent that prior studies have consistently documented comparability benefits to financial analysts, the implications of comparability for the information environment from the point of view of investors are still under-researched.

2.2.3.2 The Impact of Accounting Comparability on Economic Consequences

Prior studies strongly claim that comparability is a significant determinant of economic consequences.[12] They conjecture that comparable accounting information facilitates information acquisition and processing across firms and jurisdictions. This in turn decreases information asymmetry between market participants and decreases information barriers for foreign investors. In line with this reasoning, several studies have examined the attendant consequences of comparability for cross-border investment flows, capital market outcomes and corporate decisions.

Recognizing the potential beneficial role of comparability in influencing cross-border investment, DeFond et al. (2011) investigate the changes in foreign mutual fund investment among mandatory IFRS adopters in 14 EU countries between 2003 and 2007. Consistent with their prediction, the authors find that investment by foreign mutual funds following mandatory IFRS adoption increases for firms in countries with strong implementation credibility that experience relatively greater accounting uniformity.[13] In contrast, they find no significant improvement for mandatory adopters in countries with weak implementation credibility, nor for firms with small increases in uniformity. The authors conclude that while improved comparability under the IFRS mandate encourages cross-border institutional investment, credible implementation and increased accounting uniformity are the underlying factors leading to higher comparability. Consistent with DeFond et al. (2011), Chauhan and Kumar (2019) also

[12] Consistent with prior studies, the concept of economic consequences generally refers to the impact of financial reporting on the decision-making behavior of firms and their stakeholders, including on firm values and on the wealth of those who make or are impacted by those decisions (Brüggemann et al., 2013; Holthausen & Leftwich, 1983; Zeff, 1978).

[13] DeFond et al. (2011) proxy for implementation credibility based on the earnings quality score from Leuz et al. (2003). Accounting uniformity is measured by DeFond et al. (2011) for each industry in each country as the number of firms in that industry and country using IFRS in the post-adoption period, divided by the number of firms in that industry and country using local GAAP in the pre-adoption period.

find that firms with greater accounting comparability in India attract higher foreign equity investments.

Similarly, Young and Zeng (2015) examine the benefits of comparability by finding that the valuation performance of pricing multiples using foreign peers' multiples significantly improved following the mandatory adoption of IFRS by firms in 15 EU countries over the 1997–2011 period. Specifically, their additional analysis supports the view that the increased pricing accuracy is a result of comparability improvement beyond any general effect associated with increased economic integration. That is, firms that had the greatest reporting differences relative to IFRS exhibit a larger increase in pricing accuracy relative to those firms that had greater alignment between local GAAP and IFRS. Hence, their findings offer evidence that IFRS results in higher comparability, which enhances investors' equity valuation through improved peer selection.

Relatedly, Neel (2017) also examines the implications of accounting comparability for the economic outcomes of mandatory IFRS adoption, as proxied by a firm's Tobin's Q, stock liquidity, analyst forecast accuracy and analyst forecast agreement. Based on a sample of first-time mandatory IFRS adopters in 23 countries, the author finds that comparability is positively associated with all four economic outcomes following adoption. More importantly, the finding provides evidence that the improvements in reporting quality resulted from IFRS adoption have only a marginal impact on the observed economic outcomes. The findings therefore imply that comparability has a first-order impact, over reporting quality, in a mandatory IFRS adoption setting in determining a firm's economic consequences. This somewhat contradicts those of Horton et al. (2013) who find that the reporting quality and comparability benefits of mandatory IFRS adoption are the reasons for better analyst forecasts. Nevertheless, Ortega (2012) finds

that mandatory adoption of IFRS results in a trade-off of representational faithfulness with higher cross-country and within-country comparability.

From the perspective of reporting externalities, Chen et al. (2013) examine the cross-border spillover effect of financial information on investment efficiency in 17 European countries. Using the ROA difference between the firm and its peer to proxy for the information on the peers' investment performance, they find this to be positively associated with improved investment efficiency and they attribute their results to the comparability improvement in the post-adoption period. However, based on a sample of voluntary adopters from 22 countries which subsequently mandated IFRS, Gao and Sidhu (2016) find that the switch to IFRS reduces the probability of inefficient investment by voluntary adopters. Taken together, these two studies suggest that enhanced comparability from the mandatory adoption of IFRS provides positive externalities for the efficiency of a firm's investment performance.

In addition, Shane et al. (2014) also examine the economic consequence of accounting comparability for firms participating in seasoned equity offerings (SEO). Using a sample of US firms seeking entrance to the SEO market, the authors find that SEO firms that are more comparable with their industry peers benefit from a lower cost of raising seasoned equity capital. Moreover, their findings also show that comparability is associated with better long-run equity performance in terms of attenuating managers' ability to sell overpriced equity. Therefore, their findings are indicative of the enhanced decision making usefulness of comparable accounting information, which in turn facilitates investors' capital allocation.

In the context of mergers and acquisitions, Louis and Urcan (2014) and Chen et al. (2016) also document empirical evidences supporting the benefits of comparability for acquisition

decisions. Focusing on the mandatory adoption of IFRS as of 2005, Louis and Urcan (2014) find that the likelihood of cross-border acquisitions of listed firms from IFRS adopting countries is higher in the post-adoption period, and that this relation is not driven by the concurrent changes in enforcement in IFRS adopting countries. Rather, the authors attribute the increased cross-border investment flow to improved comparability resulting from IFRS adoption, Analogous to the findings of Neel (2017), Louis and Urcan (2014) also demonstrate that comparability is relatively more significant than reporting quality in influencing cross-border acquisition decisions. In the US setting Chen et al. (2016) examine the efficiency of acquisition decisions and similarly find that acquirers make more profitable acquisition decisions when target firms exhibit higher comparability with industry peer firms.

All in all, previous research reaches the same conclusion: that comparability is a pivotal qualitative characteristic of financial reporting that determines a firm's economic consequences and its decision making. In particular, most of these studies have focused on the mandatory adoption of IFRS that equally points towards the importance of comparability in driving the observed positive economic outcomes following IFRS adoption.

2.3 IFRS Adoption

2.3.1 Institutional Background on the Development and Adoption of IFRS

The development of IFRS began as early as 1973, when the previously known 'International Accounting Standards (IAS)' were issued by the International Accounting Standards Committee (IASC) (Zeff, 2012). Subsequent to a restructure of the IASC on 1 April 2001, the IASB was formed to take over the role of international standard-setting body (Whittington,

2005).[14] With its establishment, the IAS were revised and incorporated into a uniform set of IFRS issued by the IASB, which eventually reshaped the landscape of financial reporting at the global stage as more and more countries began to adopt/converge with IFRS.[15]

In accordance with Article 2 of the IFRS Foundation Constitution, effective as of 1 March 2010, the objectives of the IASB are outlined as follows (IASC Foundation, 2010):

(a) to develop, in the public interest, a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles. These standards should require high quality, transparent and comparable information in financial statements and other financial reporting to help investors, other participants in the world's capital markets and other users of financial information make economic decisions.

(b) to promote the use and rigorous application of those standards.

(c) in fulfilling the objectives associated with (a) and (b), to take account of, as appropriate, the needs of a range of sizes and types of entities in diverse economic settings.

(d) to promote and facilitate adoption of the IFRS Standards, being the Standards and IFRIC Interpretations issued by the Board, through the convergence of national accounting standards and IFRS Standards.

Most developed and developing countries around the world have required or permitted the adoption of IFRS for domestic reporting.[16] This initiative is in response to the demand for a

[14] See Whittington (2005), Pope and McLeay (2011) and Zeff (2012) for detailed background on the history of the IASC and its subsequent evolution into the IASB.

[15] The term 'IFRS' is used throughout this study for parsimony, which is consistent with the definition of IFRS stated in IAS 1.11 to include old and new versions of international accounting standards (including IAS) (Deloitte, 2009c).

[16] Refer to http://www.ifrs.org/use-around-the-world/ for analyses of the use of IFRS by countries around the world (IFRS Foundation, n.d.).

common set of accounting language arising from increasing globalization and the rapid integration of major capital markets (Whittington, 2005). In particular, the endorsement of the International Organization of Securities Commission (IOSCO) in May 2000 contributed to the popularity of voluntary adoption of IFRS in its early days, in which companies were permitted to prepare IFRS-based accounts for cross-border offerings and listings in major capital markets (Deloitte, 2009a; Haller, 2002; Whittington, 2005).[17]

Nevertheless, there seems to be a shift away from voluntary adoption at the firm-level, towards mandatory adoption and formal convergence at the country-level in recent years. Specifically, Australia and member states of the EU have mandated the use of IFRS as of 1 January 2005, and this has become the initial impetus for broader acceptance of IFRS worldwide (Brown, 2013). Several countries, such as Canada, Malaysia, New Zealand and Taiwan, also similarly committed to mandate adoption after January 2005,[18] whereas other countries, like China, India and Indonesia, took steps to converge their local GAAP with IFRS.

In December 2007, the US Securities and Exchange Commission (SEC) also agreed to allow non-US firms listed on the US stock exchanges to prepare accounts using IFRS without the need to prepare additional reconciliation to US generally accepted accounting principles (US GAAP) (Street, 2012). While there is still no formalization of IFRS adoption in the US, the IASB and the FASB have made significant progress in their joint efforts to converge both global accounting standards (IFRS and US GAAP) since having signed a Memorandum of Understanding (MoU) known as the Norwalk Agreement in September 2002 (Street, 2012).

[17] See Zeff (2012) which provides some background on the impact of IOSCO on the IASC.
[18] Mandatory IFRS adoption for Canada (2011), Malaysia (2012), New Zealand (2007) and Taiwan (2013) (Deloitte, 2009b).

2.3.2 Mandatory Adoption of IFRS in Australia and the EU

The era of mandatory IFRS adoption began as of 1 January 2005 when a mandate was first made effective by Australia and the EU. From that date, all listed EU firms were required to prepare consolidated financial statements under IFRS in accordance with EU Regulation 1606/2002. This so-called 'IAS Regulation', which followed on from the intention of the European Commission expressed in June 2000 was passed by the EU Parliament on 19 July 2002, and is applicable to the full members of the EU and the three additional members of the European Economic Area (EEA) (Iceland, Liechtenstein and Norway) (Deloitte, 2017; Haller, 2002).[19] To the extent that the IAS Regulation was the culmination of the ongoing harmonization efforts under numerous Accounting Directives introduced in the EU, this decision to switch to IFRS mandatorily still impacted as many as 5,323 listed EU firms (CESR, 2007).[20] The aim of the IAS Regulation is expressed as follows (EC, 2002, Art. 1):

> This Regulation has as its objective the adoption and use of international accounting standards in the Community with a view to harmonizing the financial information presented by the companies … in order to ensure a high degree of transparency and comparability of financial statements and hence an efficient functioning of the Community capital market and of the Internal Market.

In the case of Australia, the decision to introduce the mandatory IFRS reporting regime for the reporting period beginning on or after 1 January 2005 was announced by the Financial

[19] There were 25 full EU members by 2005: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and the United Kingdom. Three countries, including Bulgaria, Croatia and Romania, joined the EU after 2005 (Deloitte, 2017).

[20] The EU's harmonization program began in the 1970s. Among the many Accounting Directives being issued, the most relevant ones are the Fourth Directive and the Seventh Directive. The Fourth Directive requires that all limited liability companies prepare annual financial statements, and the Seventh Directive requires the preparation of consolidated financial statements by a parent company (Haller, 2002).

Reporting Council (FRC) on 3 July 2002.[21] This decision implied that all reporting entities governed by the *Corporations Act 2001* would be obligated to implement IFRS and to issue audit reports which refer to compliance with the IASB standards from that date (AGFRC, 2002).[22] According to a media statement by the Chairman of the FRC, Mr Jeffrey Lucy, the Australian decision with respect to the adoption timing was determined based on the EU's decision and that "Australia certainly cannot afford to lag Europe in this regard". Moreover, the FRC also "fully supports the Government's view that a single set of high-quality accounting standards … will greatly facilitate cross-border comparisons by investors, reduce the cost of capital, and assist Australian companies wishing to raise capital or list overseas" (AGFRC, 2002). Therefore, the Australian decision to adopt IFRS was cognizant of the adoption timing of the EU, and at the same time the objectives stated were also in some ways consistent with those of the EU.

Despite the similarities between Australia and the EU in being the forerunners in simultaneously mandating IFRS adoption from 2005, there are institutional differences between them. Prior to 2005, there was no single set of accounting standards within the EU. Instead, there were different local accounting standards that reflected the individual member countries' traditions and institutional characteristics (Whittington, 2005). For example, accounting for Anglo-Saxon European countries (e.g. Denmark, Ireland, the Netherlands and the UK) was considered shareholder-oriented and commercially driven, while accounting for the Continental European countries (e.g. Austria, Belgium, Italy, Spain and Germany) had traditionally been much state-driven and tax-dominated (Joos & Lang, 1994). The accounting diversity was

[21] The FRC is an Australian government body that is charged with the responsibility of providing broad oversight for the Australian standard-setting process. It followed the recommendation of the Australian Government under the Corporate Law Economic Reform Program (CLERP 9: Corporate Disclosure – Strengthening the Financial Reporting Framework) by mandating IFRS adoption in Australia (Australian Government, 2002). Refer to their website www.frc.org.au for further details.

[22] The Australian adoption applies to all listed and unlisted reporting entities, both defined under the *Corporations Act 2001*.

further exacerbated given that voluntary use of IFRS or US GAAP was also permitted by some EU countries such as Austria, Belgium and Germany (Haller, 2002). Consequently, mandatory adoption of IFRS became part of the EU Commission's strategy to expand its accounting harmonization within the EU (EC, 2002). Regulators expected this to increase the transparency and comparability of financial information, which were assumed to lead to enhanced competitiveness of EU firms within and outside the EU capital markets (EC, 2002).

Yet for Australia, the decision to have a wholesale adoption of IFRS was still regarded as different from the EU in several ways. Firstly, there was only one set of local accounting standards being used in Australia prior to 2005, and that Australian GAAP was long recognized as being a set of high quality national accounting standards (Cheung, Evans & Wright, 2010). Secondly, the requirement to apply IFRS extended to all reporting entities in Australia (Chua et al., 2012) rather than to only listed firms as in the EU (Whittington, 2005). Thirdly, the adoption requirement in Australia also applied for consolidated and individual financial reports (Chua et al., 2012), whereas this requirement was limited to consolidated financial reports in the EU (Whittington, 2005). Lastly and most importantly, Australia also prohibited an early adoption of IFRS before 2005, although some EU countries already permitted voluntary adoption of IFRS to some extent (Jeanjean & Stolowy, 2008).

2.3.3 Consequences of IFRS Adoption

The significance of IFRS adoption in changing the global financial reporting landscape has sparked a huge interest among academic researchers in examining the consequences of IFRS adoption. From voluntary IFRS adoption in the early days to the current widespread mandatory adoption, a vast literature has focused on understanding the consequences of IFRS adoption for various capital markets participants. While the studied capital market consequences are to a

large extent unlikely to be homogeneous across firms and across countries, there are also distinctions in the adoption impacts for voluntary and mandatory adopters due to their underlying adoption incentives.

2.3.3.1 Consequences of Voluntary IFRS Adoption

Until recently, early studies of the capital market consequences of IFRS adoption typically focused on firms in a handful of European countries that permitted voluntary adoption of either IAS or US GAAP over domestic standards. These studies generally assume that the voluntary change in accounting regime at the firm-level influences the quality of accounting information and this in turn has a significant impact on economic consequences.

In examining the impact of voluntary IFRS adoption, many studies rely on German firms as the country-specific research setting because voluntary adoption was found to be more common among them (Brown, 2013). Although they hold institutional variables constant, prior studies provide somewhat mixed evidence of the capital market implications for those German firms that voluntarily switched from German GAAP to either IAS or US GAAP. Among them, Bartov, Goldberg and Kim (2005) find that the value relevance is higher for firms reporting under IAS or US GAAP relative to those reporting under German GAAP. However, other studies suggest that firms switching from German GAAP to IAS exhibit no significant improvement in value relevance or timeliness of reported accounting numbers (Hung & Subramanyam, 2007), or in various earnings management attributes (Van Tendeloo & Vanstraelen, 2005). In terms of economic consequences, similar inconsistencies are also documented, as empirical results show that firms reporting under IAS or US GAAP exhibit lower bid-ask spreads and higher share turnovers (Leuz & Verrecchia, 2000) but also higher cost of capital (Daske, 2006) than those reporting under German GAAP. Nonetheless, Leuz and

Verrecchia (2000) demonstrate, along with the findings of Leuz (2003), that the capital market benefits are not marginally different between those German firms applying IAS and US GAAP.

Extending beyond country-specific settings, capital market consequences following a voluntary IFRS adoption appear to be more consistent and positive. Barth et al. (2008) examine the association between IFRS adoption and accounting quality based on a sample of firms from 21 countries that voluntarily switched from non-US local accounting standards to IFRS. Compared to those matched sample firms applying non-US local accounting standards, Barth et al. (2008) find that these voluntary adopting firms are of higher accounting quality, exhibiting: (1) less earnings management, (2) more timely loss recognition, and (3) a greater value relevance of accounting income. Furthermore, these adopting firms also show an improvement in accounting quality after moving from their local accounting standards to IFRS voluntarily. Supporting the findings of Barth et al. (2008), a study by Karamanou and Nishiotis (2009) finds that investors reacted positively to the announcement of voluntary IFRS adoption between 1988 and 2002 by a sample of international firms. Their empirical results show that there are positive abnormal returns around the time of adoption announcement, along with subsequent significant decrease in long-run returns in the two-year period post-adoption announcement. Similarly, Barth et al. (2018) also document increased comparability for voluntary IFRS adopters with those firms that previously adopted IFRS. In line with these results, the findings of other studies also document capital market benefits as expected from voluntary adoption of IFRS, which include higher analyst forecast accuracy (Ashbaugh & Pincus, 2001; Kim & Shi, 2012), increased analyst following (Cuijpers & Buijink, 2005; Kim & Shi, 2012), lower stock return synchronicity (Barth et al., 2018; Kim & Shi, 2012; Wang & Yu, 2015), higher stock liquidity and turnover (Barth et al., 2018) and the benefit of attracting cross-border investment by reducing home bias among foreign investors (Covrig, DeFond & Hung, 2007). This is despite that Daske et al.'s (2013) caution about attributing the observed capital market benefits solely

to the change in accounting standards, as their findings suggest that changes in firms' reporting incentives play a more dominant role in determining the capital market outcomes.

In sum, the findings on the capital market consequences of voluntary IFRS adoption remain inconclusive for country-specific settings that are largely based on German firms. Nonetheless, the generalization of evidences from these studies could be problematic, as the underlying institutional and economic factors are held constant. While evidence based on large international samples generally supports the assertion that firms gain economic benefits from voluntarily committing to IFRS, there are also concerns about self-selection bias that potentially remain inherent in any voluntary adoption setting.

2.3.3.2 Consequences of Mandatory IFRS Adoption

As mandatory adoption of IFRS has gained momentum in many countries since it took place in Australia and the EU in 2005, the number of studies examining the capital market consequences in a mandatory adoption environment has increased rapidly. This is especially because the required change of accounting standards to IFRS at the country level by mandatory adopters is viewed as differing vastly from those voluntary adopters, and thus so are the expected capital market consequences arising from IFRS adoption.

Using a sample of EU firms traded on European stock exchanges, Armstrong et al. (2010) provide some early evidence of investors' perceptions of mandatory IFRS adoption. By examining the short-window market reactions pertaining to 16 events between 2002 and 2005 that increased the likelihood of the EU adoption, the authors show that investors do not react equally to firms adopting IFRS mandatorily. In particular, they find that investors react favorably to firms that are more likely to benefit from the adoption, such as those with lower

information quality and higher information asymmetry, and in contrast document unfavorable market reactions to those firms domiciled in civil-law countries. Nevertheless, their further analysis indicates that investors still regard the mandatory move towards IFRS in the EU as overall bringing convergence benefits, as they find that markets react positively even for those firms with high pre-adoption information quality.

Consistent with the findings of Armstrong et al. (2010), several single-country and multiple-countries studies that similarly focus on the EU setting also provide evidence which suggests that those EU firms switching to IFRS exhibit higher accounting quality (Chen et al., 2010; Iatridis, 2010; Zéghal, Chtourou & Fourati, 2012), more value-relevant accounting information (Aharony et al., 2010; Capkun et al., 2008; Devalle, Onali & Magarini, 2010; Elbakry et al., 2017; Morais & Curto, 2009), enhanced accounting comparability (Brochet et al., 2013; Caban-Garcia & He, 2013; Yip & Young, 2012) and improved disclosure quality (Daske & Gebhardt, 2006) than previously under various local accounting standards. Consequently, extant studies document numerous capital market benefits associated with the mandatory introduction of IFRS among the EU member states, including improved multiples-based valuations using foreign peers' multiples (Young & Zeng, 2015), higher information content of accounting earnings for prediction and valuation (Choi, Peasnell & Toniato, 2013; Wang, Young & Zhuang, 2008), reduced cost of capital (Li, 2010), increased analyst forecast accuracy and reduced analyst forecast dispersion (Beuselinck et al., 2010; Byard et al. 2011; Houqe, Easton & van Zijl, 2014; Jiao et al., 2012; Wang et al., 2008), and greater cross-border investment by foreign mutual funds (DeFond et al., 2011; DeFond et al., 2012). In particular, prior studies show that the capital market benefits around mandatory IFRS adoption are more pronounced among (if not limited to) the EU adopters than others (Christensen et al., 2013; Daske et al., 2008).

However, there are also some studies which reveal contradictory evidence to the expected capital market benefits of mandatory IFRS adoption in the EU. Specifically, the findings show

that after EU firms switched from local GAAPs to IFRS mandatorily, there is evidence of significant non-compliance with IFRS disclosure requirements (Glaum et al., 2013; Verriest, Gnaeremynck & Thornton, 2012), decreased level of conditional conservatism (André, Filip & Paugam, 2015), lower value relevance of net income and equity book value (Aubert & Grudnitski, 2011; Tsalavoutas, André & Evans, 2012; Zéghal et al., 2012), along with either no significant change or even an increase in the level of earnings management (Callao & Jarne, 2010; Capkun et al., 2016; Doukakis, 2014; Jeanjean & Stolowy, 2008). Even within the EU setting, where the adopting firms are subject to EU Regulation 1606/2002 en masse, prior studies also consistently highlight cross-sectional heterogeneity in their observed capital market consequences across firms and countries, which they show to be conditional upon firms' reporting incentives (Christensen et al., 2007; Glaum et al., 2013; Verriest et al., 2012), country-level institutional environment (Byard et al., 2011; Christensen et al., 2013; Neel, 2011; Yip & Young, 2012) and economic similarities (Caban-Garcia & He, 2013; Jayaraman & Verdi, 2013). Therefore, these findings overall suggest that the mandatory introduction of IFRS in the EU brings more limited capital market benefits than advocated, or at least, does not benefit all firms or all countries in the EU equally.

Nor does the parallel of the Australian wholesale mandatory adoption of IFRS to the EU's adoption necessarily yield analogous capital market consequences. From the viewpoint of the financial executives of 305 Australian-listed firms surveyed by Morris et al. (2014), there were great concerns about the difficulties of IFRS implementation and the low level of expected benefits engendered by the Australian mandatory requirement. Consistent with this negative perception, prior research documents findings that corroboratively suggest that the mandatory transition from Australian GAAP to IFRS results in no significant improvement in the quality of accounting information, which is examined based on the pervasiveness of earnings management (Bryce, Ali & Mather, 2015; Jeanjean & Stolowy, 2008), value relevance of accounting numbers under IFRS (Clarkson et al., 2011; Goodwin, Ahmed & Heaney, 2008; Ji

& Lu, 2014), management of earnings benchmark during transition (Bentwood & Lee, 2012), conditional conservatism (Lai, Lu & Shan, 2013), accrual quality and reliability (Bryce et al., 2015; Lai et al., 2013) and compliance of accounting requirements (Bond, Govendir & Wells, 2016). In contrast, several other studies that similarly examine the consequences of IFRS adoption in the Australian context find that the mandatory adoption overall leads to lower earnings management (Chua et al., 2012), more timely recognition of loss (Chua et al., 2012), higher value relevance of accounting information (Chalmers, Clinch & Godfrey, 2011; Chua et al., 2012; Hanlon, Navissi & Soepriyamto, 2014), better analyst forecasts characteristics (Chalmers et al., 2012; Cotter, Tarca & Wee, 2012) and lower accounting diversity (Bayerlein & Al Farooque, 2012; Cairns et al., 2011; Jones & Finley, 2011), which suggest that there are still some capital market benefits resulting from the Australian adoption.

When expanding the analyses to a larger context of cross-country settings, empirical findings on the capital market consequences of mandatory IFRS adoption also remain conflicting. Some studies find that mandatory IFRS adoption is positively associated with analyst forecast accuracy and following (Demmer, Pronobis & Yohn, 2016; Horton et al., 2013, Tan, Wang & Welker, 2011), the information content of earnings announcement (Landsman, Maydew & Thornock, 2012), cross-border information transfers (Wang, 2014), the sensitivity of managerial decisions to stock price information (Loureiro & Taboada, 2015), the reduction of crash risk (DeFond et al., 2015), debt financing benefit (Florou & Kosi, 2015), firms' investment efficiency (Gao & Sidhu, 2018) and cross-border capital flows (Amiram, 2012; Beneish, Miller & Yohn, 2014; Florou & Pope, 2012; Khurana & Michas, 2011; Yu & Wahid, 2014). Alternatively, other studies show that mandating IFRS has little or no significant impact on improving earnings quality (Houqe et al., 2014) and accounting comparability (Cascino & Gassen, 2015), and possibly even lowers accounting quality, so much so in countries with strong enforcement (Ahmed, Neel & Wang, 2013). As Daske et al. (2008) show, the realization of positive economic consequences for early mandatory adopters in 26 countries is restricted to

those IFRS adopters domiciled in countries where firms have incentives to be transparent and where legal enforcement is strong. Similarly, Cascino and Gassen (2015) and Daske et al. (2013) also find that a lack of firms' reporting incentives impedes enhanced comparability and positive capital market outcomes from accruing after mandatory adoption of IFRS.

On balance, the vast amount of empirical literature on mandatory IFRS adoption still offers ambivalent evidence with respect to its impact on the quality of accounting information and capital market consequences. This is further exacerbated as extant evidence on the consequences of IFRS adoption also attributes their cross-sectional heterogeneity to the conditional roles of firms' reporting incentives, country-level institutional variables and economic factors. Therefore, there is still a concern about the potential influence of contaminating events on findings that are based on a mandatory adoption setting, although the revisiting of empirical evidences from voluntary adoption in some extent ameliorates the inherent self-selection concerns.

2.4 Summary and Conclusion

This chapter reviews the existing literature pertaining to accounting comparability and IFRS adoption. Comparability is a desired financial reporting characteristic that has been discussed extensively at a conceptual level, in which achieving comparability also becomes an oft-stated objective in promoting IFRS adoption. While the use of empirical constructs to measure comparability has evolved considerably over time, there is still limited evidence with respect to its determinants and attendant consequences for the capital market. In particular, the bulk of the literature suggests that the properties of accounting numbers are determined by the complex interaction of accounting standards, firms' reporting incentives and country-level institutional features. Notwithstanding that, the association between comparability and mandatory IFRS

adoption, the extent to which achieving comparability can be detrimental due to various firm- and country-level variations, and the informativeness of comparable accounting information to stock prices are yet to be fully explored.

In the wake of the recent trend of mandating IFRS adoption, many studies have revisited empirical evidence based on voluntary adopters who arguably possess different inherent incentives from those mandatory adopters. Although this shift has resulted in abundant studies which investigate the impact of mandatory IFRS adoption in a variety of settings, the findings are typically 'on average' results and there is no systematic understanding of the potential channels through which IFRS adoption leads to those observed capital market outcomes. Even when some findings indirectly suggest that the said capital market benefits coinciding with the IFRS mandate are driven by enhanced comparability, the 'first-order' impact of mandatory IFRS adoption on cross-country accounting comparability is still fragmented and predominantly focused on the within-EU setting. Given the consensus that comparability matters to investors, much remains to be considered in advancing the understanding of how to achieve global comparability in the context of mandatory adoption of IFRS. This includes how and why accounting comparability arises, and the way comparable accounting information influences the information environment directly. This is ultimately expected to have many implications for the efficiency of decision making for various capital market participants.

CHAPTER THREE:

THE IMPACT OF MANDATORY IFRS ADOPTION ON ACCOUNTING COMPARABILITY

3.1 Introduction

Accounting comparability is an important qualitative attribute of financial reporting information that enables capital market participants to identify and understand similarities and differences in financial statements (IFRS Foundation, 2010). This chapter examines the association of mandatory IFRS adoption, as required in the EU and Australia as of 2005, with cross-country accounting comparability. Mandatory adoption of IFRS by countries around the world represents perhaps one of the most substantial regulatory changes in corporate financial reporting ever undertaken in accounting history (Daske et al., 2008). This significant historical event, which began with the 2005 switchover in the EU and Australia, therefore provides a unique natural quasi-experimental setting for examining whether changing accounting standards per se matters in determining the quality of accounting information.

From 1 January 2005, a large number of listed firms in member countries of the EU and Australia were required to switch from their local accounting standards to IFRS mandatorily.[23] The simultaneous move towards this single set of internationally acceptable accounting standards was the result of the regulation approved by the EU and Australia in 2002 in pursuit of similar objectives. Specifically, it was advocated that IFRS adoption would enhance the reporting quality and cross-border comparability of financial statements for listed firms in their

[23] Refer to Chapter Two for more details on the mandatory requirements for IFRS adoption in Australia and the EU.

jurisdictions (Brüggemann et al., 2013; De George et al., 2016). This should level the playing field for market participants across countries, which would facilitate firms accessing the global capital markets and raising capital at a lower cost (AGFRC, 2002; Brüggemann et al., 2013; EC, 2002).

In view of the persuasive arguments in favor of IFRS adoption, a vast amount of literature has examined the impact of IFRS adoption in various settings. Some studies provide direct evidence of the adoption's impact on financial reporting outcomes (e.g. Aharony et al., 2010; Ahmed et al., 2013; Barth et al., 2018; Chua et al., 2012; Lang et al., 2010; Yip & Young, 2012). Others have focused on the link between IFRS adoption and its attendant capital market implications (e.g. Armstrong et al., 2010; Byard et al., 2011; Daske et al., 2008; DeFond et al., 2011; Florou & Pope, 2012; Horton et al., 2013; Li, 2010; Tan et al., 2011). The latter studies on capital market consequences generally assume that their positive findings stem from improvements in financial reporting transparency and accounting comparability upon IFRS implementations (Armstrong et al., 2010; Daske et al., 2008; Li, 2010). This is despite the fact that these indirect findings render it difficult to evaluate the 'first-order' impact of adopting IFRS on the quality of accounting information (Brüggemann et al., 2013). In particular, Brüggemann et al. (2013) observe that empirical evidence documented so far for the attendant capital market consequences of mandatory IFRS adoption is mostly consistent and positive, whereas findings for the direct impact of IFRS on comparability and transparency of financial statements are scarce and conflicting.

Even as additional studies have attempted to provide more evidence on the direct association between IFRS adoption and various earnings attributes, the emphasis by far has been on other accounting quality perspectives (e.g. earnings management, timeliness, earnings persistence etc.) (e.g. Chua et al., 2012; Jeanjean & Stolowy, 2008, Paananen & Lin, 2009). While these

attributes are considered as important as comparability for enhancing the usefulness of financial accounting information, the Conceptual Framework of the IASB stresses that they are distinctly different from the concept of comparability (IFRS Foundation, 2010). In a handful of studies directly examining the comparability benefit of mandatory IFRS adoption, findings drawn from pairwise comparability within the EU alone appear to be more consistent and positive (e.g. André et al., 2012; Caban-Garcia & He, 2013; Yip & Young, 2012) than those averaged from a large cross-country setting dominated by EU observations (e.g. Cascino & Gassen, 2015; Lang et al., 2010).[24] This somewhat corroborates empirical evidence which suggests that the capital market benefits of IFRS adoption are more pronounced among the EU mandatory adopters (Christensen et al., 2013; Daske et al., 2008). Therefore, there is limited understanding of the determinants of cross-country accounting comparability between EU and non-EU adopting firms.

To address this gap, this study explicitly investigates the impact of mandatory IFRS adoption on cross-country comparability of accounting information between adopting firms in the EU and Australia. Analogous to the work by Yip and Young (2012), this study refers to the Conceptual Framework of the IASB and operationalizes the concept of 'comparability' of financial statements based on two facets: (1) the similarity facet, and (2) the difference facet. In other words, the similarity (difference) facet focuses on the extent to which similar (different) firms report similar (dissimilar) accounting amounts. In the empirical context for this chapter, this means that similar (different) firms are based on firm-pairs in the same (different) industry, but from different countries. To the extent that these similar (different) firms are assumed to be exposed to the same (different) general economic conditions, they are expected to translate similar (dissimilar) economic events into similar (dissimilar) accounting

[24] The 'average' findings for cross-country studies on mandatory IFRS adoption generally mask the fact that the results are driven by EU observations which are subject to the same EU Regulation/Accounting Directives and similar economic events pertaining to the EU.

earnings, *ceteris paribus*. Since the similarity and difference facets are equally important but mutually exclusive in describing 'comparability', this chapter examines whether mandatory IFRS adoption in Australia and the EU is associated with changes in both facets of accounting comparability from the pre-adoption period (2000 to 2004) to the post-adoption period (2007 to 2011).

In line with the bilateral nature of cross-country accounting comparability, this study deliberately focuses on the pairwise relations between a sample of Australian and EU firms that have switched from their non-US local accounting standards to IFRS mandatorily since 2005. Subject to a series of selection criteria, the matched sample design employed by this study ensures that listed firms from eight EU countries (Denmark, France, Germany, Greece, Italy, Norway, Sweden and the UK) are matched with Australian firms that satisfy the industry and size requirements. This produces a final sample for tests of the similarity facet that is represented by a total of 496 firm-pairs (2,480 firm-year observations for the pre-adoption/the post-adoption periods), and a sample for tests of the difference facet that consists of 841 firm-pairs (4,205 firm-year observations for the pre-adoption/the post-adoption periods).

Consistent with the emerging comparability studies, this study employs the proxy developed by De Franco et al. (2011) that is oriented towards output-based comparability. This proxy is intended to measure 'accounting systems comparability', which is based on the relation between earnings and share returns commonly accepted by the extant finance and accounting literature. The empirical results show that the cross-border comparability of accounting information among similar firms from Australia and the EU is significantly higher in the post-adoption period (2007 to 2011) than in the pre-adoption period (2000 to 2004). Moreover, the findings further indicate no significant change to the difference facet of accounting comparability across the two time periods. Taken together, these results thus suggest that

mandatory IFRS adoption leads to an overall improvement in the similarity facet of cross-country accounting comparability between Australian and EU adopters without significantly compromising the difference facet of accounting comparability, which is consistent with the objective of adopting IFRS.

Furthermore, this study also performs additional analyses on the similarity facet of cross-country accounting comparability to complement the primary inferences. First, this study adopts an alternative accounting comparability measurement that is based on the association between contemporaneous operating cash flows and accruals. The sensitivity result supports the main findings of comparability improvement following the mandatory IFRS adoption by similar firms from Australia and the EU. Second, this study also undertakes a supplemental test on the influence of a firm's institutional environment on the expected improvement of cross-border accounting comparability. Consistent with prior studies, this study uses the legal origin classifications (common-law versus civil-law) as a general proxy for the complex institutional features which a firm is subject to (La Porta et al., 1998; Yip & Young, 2012). Accordingly, this study partitions the sample based on the similarity and difference in the legal origins of a firm's home country for pairs of similar firms. The results continue to show the predicted positive sign across the sub-samples of same and different legal origins, although it is significant only for the sub-sample of similar firms from countries with different legal origins. Overall, the results provide some evidence that the comparability benefit of IFRS adoption is more pronounced when comparable firms have different institutional environments, which further underscores the importance of adopting a uniform set of international accounting standards.

This study makes a number of significant contributions to the past literature. First, this study provides empirical evidence directly for the comparability benefit of changing accounting

standards. Anecdotal research often claims that accounting diversity is the underlying barrier to achieving comparability of financial statements (Barlev & Haddad, 2007; Laínez & Callao, 2000; Zeff, 2007). Yet there is limited and conflicting empirical evidence with respect to the role of harmonizing accounting standards in determining accounting comparability. This is particularly relevant in the context of the increasing harmonization efforts undertaken by the EU and the rest of the world, and between IFRS and US GAAP. To the extent there are other factors that possibly influence the level of accounting comparability across firms and countries, the findings of this chapter provide some early indication on the importance of IFRS adoption as a determinant of accounting comparability.

Second, this study also adds to the existing stream of research on the 'first-order' impact of IFRS adoption that has primarily focused on the changes in reporting quality rather than on the changes in comparability of accounting information (e.g. Ahmed et al., 2013, Atwood et al., 2011; Landsman et al., 2012). Although the Conceptual Framework of the IASB places equal weight on the desirability of high quality and comparable accounting information, prior findings show that the impact of IFRS adoption on these different reporting attributes is not always consistent (Ortega, 2012). Furthermore, the findings in Neel (2017) also suggest that changes in comparability have a greater role than changes in reporting quality in influencing capital market outcomes arising from IFRS adoption. Considering the significance of accounting comparability for capital market benefits to accrue from IFRS adoption, the findings of this chapter shed some light on the premise that mandatory IFRS adoption improves cross-country accounting comparability.

Third, by focusing on the pairwise comparability of mandatory adopters from Australia and the EU, this study extends this line of research in terms of research design. A closely related study is by Yip and Young (2012), who examine the similarity and the difference facets of

comparability among the EU adopting firms. Expanding beyond the EU-specific analysis in Yip and Young (2012), this study similarly addresses both facets of comparability between the adopting firms in the EU and Australia. The results suggest that the comparability benefit advocated by IFRS adoption is not restricted to within the EU, but extends to enhancing cross-border comparability of financial accounting information with non-EU adopting firms. Even though the EU's adoption alone provides a rich research setting to examine various outcomes from a mandatory change of accounting standards, confining the investigation to the EU does not fully address the EU's objective of adopting IFRS to enhance global accounting comparability (EC, 2000). This also possibly restricts the generalization of the findings to other non-EU adopting countries due to other concurrent changes that have taken place in the EU (Caban-Garcia & He, 2013; Christensen et al., 2013; Daske et al., 2008). Moreover, this study also complements existing cross-country comparability studies, which tend to focus on the *average* impact of mandatory IFRS adoption that is largely driven by EU observations (e.g. Cascino & Gassen, 2015; Lang et al., 2010). Prior studies show that the capital market benefits of IFRS adoption are generally more pronounced for EU adopting firms than non-EU adopting firms (Christensen et al., 2013; Daske et al., 2008). Therefore, disentangling the pairwise comparability relations within the EU from those between EU and non-EU adopting countries provides a clearer picture of the changes in cross-country comparability of IFRS reporting. This provides more relevant evidence for the increasing number of non-EU countries that have mandated IFRS adoption and those considering IFRS adoption.

Fourth and finally, the study also provides important insights for regulators regarding the impacts of mandatory accounting standards change. Extant research in the context of mandatory IFRS adoption is fragmented and limited to some countries, yet it remains unclear whether inferences from voluntary adoption setting will extend to the current trend of mandatory adoption. This is because there is likely an inherent self-selection bias for voluntary adopters

that have different reporting incentives from those mandatory adopters, and the extent of reporting externalities is also likely to be significantly different between voluntary and mandatory settings.

The remainder of this chapter proceeds as follows. Section 3.2 provides some institutional background on IFRS adoption and discusses the related literature. This leads to the development of hypotheses for this study in Section 3.3. Section 3.4 presents the research methodology and framework, and Section 3.5 outlines the sample and data construction for conducting the study. Then empirical results are provided in Section 3.6, with some additional analyses in Section 3.7. Section 3.8 summarizes and concludes the study of this chapter.

3.2 Institutional Background and Literature Review

In 2002, the EU Parliament laid down the 'IAS Regulation' (EC No. 1606/2002) that required all listed firms in their member countries to prepare consolidated financial statements in accordance with IFRS from 1 January 2005 (EC, 2002). This commitment to a mandatory adoption by the EU soon became a momentous stimulus for the widespread acceptance and adoption of IFRS around the world (Brown, 2013), which included an announcement in the same year by the FRC (AGFRC, 2002). According to the FRC, all Australian reporting entities were required to adopt IFRS in line with the EU's 2005 timetable (AGFRC, 2002).[25] This is despite the EU's switch to IFRS being part of the ongoing accounting harmonization efforts to improve the comparability and equivalence of accounting information within the EU (Brüggemann et al., 2013; EC, 2002; Haller, 2002; Whittington, 2005). Nevertheless, the EU

[25] The mandatory adoption of IFRS in Australia applies to all reporting entities as defined under the *Corporations Act 2001*, which include listed and unlisted entities.

and Australia still shared the view that a mandatory IFRS adoption in their jurisdictions would enhance the international comparability of financial statements that has been increasingly in demand due to rapid business globalization (AGFRC, 2002; Brüggemann et al., 2013; EC, 2002; Haller, 2002; Whittington, 2005).

According to the Conceptual Framework of IFRS as issued by the IASB, the concept of 'comparability' is defined as "the qualitative characteristic that enables users to identify and understand similarities in, and differences among items" (IFRS Foundation, 2010, A30). This differs from other qualitative characteristics of accounting information because comparability can only be determined based on the relation between at least two items, rather than solely on a single item (IFRS Foundation, 2010). In the context of cross-country accounting comparability, this implies that the quality of accounting information must be evaluated across firms at a specific time between at least two countries to ensure that firms from different countries account for alike economic phenomena similarly while also accounting for unlike economic phenomena differently. Since the varied local accounting standards often reflect different requirements and sophistications, the aim is that adopting a uniform set of accounting standards that are internationally acceptable would enable firms to achieve accounting comparability internationally that satisfies the demands of global users (Barlev & Haddad, 2007).

Given the importance of the comparability benefit in motivating IFRS adoption, emerging studies have examined numerous comparability-related issues surrounding the recent worldwide adoption. Using data from 17 European countries from 2002 to 2007, Yip and Young (2012) adopted the comparability construct introduced by De Franco et al. (2011) and two additional comparability metrics to investigate whether the mandatory adoption of IFRS by the EU listed firms in 2005 has significantly improved cross- and within-country comparability for

the similarity and difference facets.[26] Although the study by Yip and Young (2012) is confined to the EU's IFRS adoption, their findings provide some evidence that mandatory IFRS adoption has enhanced the similarity facet of information comparability without significantly undermining the difference facet of comparability. Moreover, they also documented an increase in the similarity facet of within-country comparability, which suggests that the observed comparability benefit from IFRS adoption is due to accounting convergence and higher information quality among the EU countries.

Consistent with the study by Yip and Young (2012), Caban-Garcia and He (2013) also examine the comparability of earnings within the European setting, but only among those EU countries in the Scandinavian region (which include Denmark, Finland, Norway and Sweden). In particular, their research was motivated by two important changes that took place concurrently in 2005. The first is the EU's mandatory IFRS adoption, and the second is the concurrent merger of the three stock exchanges of Denmark, Finland, and Sweden into a single Nordic Exchange (or OMX Nordic).[27] Overall, they find that accounting comparability improved during the 2005–2008 post-IFRS adoption period for the Scandinavian countries, and relative to those in Norway which is not a member of the Nordic Exchange. Their findings suggest that while IFRS adoption in the EU leads to more comparable financial statements among firms in the Scandinavian countries, harmonized regulation resulting from the integration of the equity markets could have a contemporaneous impact on accounting comparability among the EU countries.

[26] Yip and Young (2012) perform comparability analyses for firms from different EU countries in determining cross-country comparability.
[27] Although the Iceland Exchange was consolidated into the Nordic Exchange in 2006, it was excluded from the study by Caban-Garcia and He (2013) due to a small sample size.

Similarly, based on the EU adoption of IFRS in 2005, André et al. (2012) focused on the constituent firms of the Standard and Poor's (S&P) Europe 350 Index to investigate the comparability outcome based on financial statements output and firms' accounting practices (input). They found an overall significant improvement for the output and input comparability post-IFRS adoption. However, their results further suggest that the observed improvement for output comparability is driven by IFRS adoption and more comparable accruals in relation to industry peers, rather than by the converged accounting practices (input comparability). They also find that there is no significant difference for the output and input comparability as firms become more familiar with the use of IFRS over time. Nevertheless, they find that output comparability is positively associated with forecast accuracy, suggesting that the EU adoption of IFRS enhances the usefulness of accounting information for analysts through more comparable financial statement numbers.

At the international level, Ortega (2012) investigates whether mandatory IFRS adoption has had any impact on accounting comparability and representational faithfulness. The Conceptual Framework of the IASB describes accounting comparability and representational faithfulness as two desirable qualitative characteristics of financial information. Contrary to the Conceptual Framework, the findings of Ortega (2012) show that the mandatory adoption of IFRS improves cross- and within-country comparability but decreases the representational faithfulness of financial statements. Although a trade-off exists between accounting comparability and representational faithfulness, Ortega (2012) finds that there is no association between changes in accounting comparability and the flexibility of local accounting standards. However, she finds that the decrease in representational faithfulness for firms with higher quality local accounting standards than IFRS is not as much as for those firms with lower quality local accounting standards than IFRS.

In addition, Barth et al. (2012) examine whether the application of IFRS by non-US firms results in enhanced comparability with those US firms applying US GAAP, by focusing on accounting systems comparability and value relevance comparability. Based on a sample of voluntary and mandatory IFRS adopting firms from 27 countries, they find that accounting amounts for non-US firms that do not cross-list in the US exhibited greater comparability with those matched firms applying US GAAP after switching from non-US local accounting standards to IFRS. Specifically, they find that the documented improvement for these adopting firms is greater when they are mandatory adopters, in common-law countries and in countries with strong enforcement. Furthermore, they also find that the resulting comparability improvement for these IFRS adopting firms is attributed to higher accounting quality, in terms of earnings smoothing, accrual quality and timeliness. Overall, although significant differences persist for accounting amounts from applying IFRS and US GAAP, the findings of Barth et al. (2012) demonstrate that adopting IFRS narrows the differences between these two sets of international accounting standards. Thus, this could be desirable for non-US firms seeking to raise capital from US capital markets without the need to change to US GAAP.

Similarly, Barth et al. (2018) also examine the impact of IFRS adoption on accounting systems comparability and value relevance comparability for firms that voluntarily adopted IFRS. Their findings show that there was an increase in comparability of accounting amounts for voluntary IFRS adopters from 27 countries with those firms that had already adopted IFRS, while there was an opposite impact for those firms that did not adopt IFRS. Furthermore, they also find that the voluntary adoption of IFRS is positively associated with capital market benefits in terms of liquidity, share turnover and firm-specific information (stock return synchronicity). Therefore, their results provide support for the notion that there are comparability and capital market benefits in the context of voluntary IFRS adoption.

By contrast, there are several studies which provide mixed results with respect to the association between IFRS adoption and accounting comparability. Based on a sample of mandatory IFRS adopters from 26 countries, Lang et al. (2010) examine cross-country comovement and accounting comparability changes before (2001–2004) and after (2005–2008) IFRS adoption. Lang et al. (2010) find that although these IFRS adopters exhibit a significant increase in earnings comovement, they also experienced a decrease in accounting comparability relative to matched non-IFRS adopters. In addition, Lang et al. (2010) also show that the observed increase in earnings comovement among IFRS adopters is negatively associated with the usefulness of accounting information, which is proxied by various analysts' properties and bid-ask spread. Since the mixed results of Lang et al. (2010) represent an 'average' outcome for a sample that is dominated by the pairwise comparability relations among the EU mandatory IFRS firms, it is difficult to ascertain how the relation between the EU and other countries influences the findings.

Consistent with Lang et al. (2010), Cascino and Gassen (2015) also find that the mandatory adoption of IFRS across 29 countries, on average, only has a marginal impact on the cross-country comparability of financial statements. As a result, they conjecture that the marginal comparability benefit is possibly associated with firms' compliance incentives. By hand-collecting data on the IFRS measurement and disclosure choices for a sample of German and Italian firms, they first find that firms' compliance incentives are influenced by firm-, region- and country-level factors. Their additional results reveal that there is a positive association between firms' compliance incentives and comparability, which suggest that the expected comparability benefit following IFRS adoption can only eventuate when firms have high incentives to comply with IFRS.

By similarly focusing on two EU countries (France and Germany), Liao et al. (2012) examine cross-country comparability in terms of the valuation usefulness of earnings and book value of equity. They find that cross-country comparability improved in the year immediately after the adoption, but that this benefit diminished in subsequent years. Based on their findings, it is found that there are differences in the ways in which French and German firms recognize accounting estimates, special items and other equity reserves that consequently reduce the comparability of their earnings and book value of equity. This complements the results of Cascino and Gassen (2015), as Liao et al. (2012) demonstrate that institutional differences possibly limit the realization of any comparability benefit expected to accrue from IFRS adoption. However, the findings of Liao et al. (2012) are limited to only two civil-law countries, and so it is uncertain whether the results can be generalized to other countries, especially those of a common-law nature.

In summary, prior research so far does not provide unanimous empirical support for the comparability improvement that has been widely claimed and expected to accrue from the worldwide use of IFRS. Barth et al. (2018) find that there are comparability and capital market benefits for adopters that voluntarily switch to IFRS, which is consistent with the positive findings commonly documented by other studies on voluntary IFRS adoption. However, other studies have found less consistent results across those firms that adopted IFRS mandatorily. In particular, research to date on the impact of a mandatory accounting standards change which has primarily focused on the EU setting generally finds a consistent positive association between IFRS adoption and accounting comparability. However, the results are somewhat conflicting when the relation is averaged across a sample of international mandatory adopters, even though the sample is dominated by EU firms. Hence, this chapter contributes to the existing literature on the impact of mandatory IFRS adoption on cross-country accounting

comparability by specifically focusing on the bilateral relationship between Australia and the EU.

3.3 Hypothesis Development

It is *a priori* expected that the adoption of IFRS produces more internationally comparable financial accounting information than that prepared under varied local accounting standards. This is because accounting standards stipulate the ways in which economic events and transactions are reported by the firm when preparing its financial statements. It is therefore assumed that imposing a common set of international accounting standards such as IFRS should eliminate many accounting differences that would otherwise be inherent when local accounting standards are applied, as they differ considerably from country to country (Ball, 2006). Consistent with this expectation, many adopting jurisdictions, including Australia and the EU, have thus claimed that the primary regulatory objective for mandating the switch to IFRS is to enhance cross-country comparability of financial statements that will ultimately lead to a wide range of capital market benefits for market participants (AGFRC, 2002; EC, 2002;).

Despite this expectation, existing evidence for the association between mandatory IFRS adoption and accounting comparability is rather mixed. Several studies focusing on the EU setting find that there has been an overall improvement in accounting comparability post-IFRS adoption (e.g. André et al., 2012; Caban-Garcia & He, 2013; Yip & Young, 2012). The findings of other studies, such as those of Lang et al. (2010) and Cascino and Gassen (2015), show that the comparability improvement is indeed small, if not inconsistent, when the impact is averaged across the many adopting firms from countries within and outside of the EU. Even though all these findings are related to mandatory adopters who are similarly compelled to switch to IFRS

under their respective mandatory adoption regimes, the lack of unanimous supporting evidence suggests that the anticipated comparability benefit following IFRS adoption does not accrue in all circumstances. As Zeff (2007) notes, there are some obstacles that possibly impede the realization of a global comparability benefit, as countries generally differ in term of their business and financial culture, accounting culture, auditing culture and regulatory culture. Thus, it remains an empirical question as to whether cross-country accounting comparability would, on average, improve as predicted after mandating the adoption of IFRS.

Based on the extant research on the influence of countries' institutional settings on corporate financial reporting, the question arises as to the ability of changing accounting standards per se to improve the financial reporting outcomes (such as accounting quality and comparability) and capital market consequences of these outcomes (such as cost of capital, market liquidity and firm value) (Holthausen, 2009; Soderstrom & Sun, 2007; Wysocki, 2011). Ball (2006) points out that there is still a lack of settled theory or evidence to support the adoption of uniform accounting standards, whether within a country or internationally. Various studies also demonstrate that, even when firms are subject to the same accounting standards, reporting practices can still differ considerably across firms and countries (Ball et al., 2003; Ball & Shivakumar, 2005; Burgstahler et al., 2006; Cascino & Gassen, 2015; Glaum et al., 2013). For example, Glaum et al. (2013) and Cascino and Gassen (2015) find significant non-compliance with IFRS when EU firms were required to switch to IFRS mandatorily, and further indicate that the heterogeneity in compliance is associated with firm- and country-level determinants. As Wysocki (2011) emphasizes, it is difficult to achieve uniform implementation of IFRS by firms around the world if countries' institutional factors remain influential. Since the claimed comparability benefit expected from IFRS adoption depends on how the standards are implemented, the observed divergence in firms' reporting practices is likely to diminish any realization of such benefit.

Even in cases where firms comply with IFRS, it is also possible that the *de facto harmonization* of accounting standards does not translate into more comparable accounting information. One reason for this is because IFRS has been advocated to be a set of principles-based standards, and so, by nature, this requires managers to exercise professional judgment in applying broad principles for accounting issues at hand (Carmona & Trombetta, 2008). In fact, Nobes (2006, 2013) points out five sources inherent in IFRS that provide much scope for varied accounting practices to exist (but still comply with IFRS), including (i) overt options, (ii) covert options or vague criteria, (iii) gaps in IFRS requirements, (iv) estimations, and (v) first-time adoption requirements. This also applies for the fair value orientation of IFRS, which similarly requires many estimations and assumptions to be made (Paananen & Lin, 2009). The expectation is that the inherent flexibility in IFRS produces more comparable financial statements because it accommodates the application of a common set of accounting standards by different countries with diverse institutional characteristics and traditions (Carmona & Trombetta, 2008). However, this is likely to compromise comparability if the principles provide too much latitude to firms in exercising their judgment, and are instead used opportunistically by preparers.

On the basis of these alternative arguments, it is thus uncertain whether mandatory IFRS adoption is associated with cross-border accounting comparability. Following this line of reasoning, the first alternative hypothesis is stated as follows:

H1: Comparability of accounting information among mandatory IFRS adopters from the EU and Australia has changed from the pre-adoption period to the post-adoption period.

3.4 Research Methodology and Framework

3.4.1 Measurement of Accounting Comparability

The measurement of accounting comparability is the main dependent variable of this study, and it resembles closely the comparability proxy developed by De Franco et al. (2011). According to De Franco et al. (2011), accounting comparability can be measured as the extent to which the accounting systems for two firms, *i* and *j*, can similarly translate a given set of economic events into accounting data. Consistent with this definition, the model of De Franco et al. (2011) builds on the relation between earnings and share returns that is widely accepted by extant finance and accounting literature, by using share returns and earnings as proxies for the net effect of economic outcome and accounting performance respectively. Therefore, the starting point of measuring accounting comparability is based on the 'reverse' regression of earnings on share returns, which is expressed in equation (3.1) as below:

$$NI_{i,t} = \alpha_i + \beta_i RETURN_{i,t} + \varepsilon_{i,t} \quad (3.1)$$

where $NI_{i,t}$ is annual net income (scaled by total assets) of firm *i* in year *t*, and $RETURN_{i,t}$ is the cumulative share return of firm *i* over year *t*. By estimating equation (3.1) for firm *i*, the coefficients, α_i and β_i, are determined to represent the accounting function for firm *i*, while re-estimating the equation for firm *j* provides the coefficients, α_j and β_j, that constitute the accounting function for firm *j*.

The next step in constructing the measurement of accounting comparability is to measure the distance between the estimated accounting functions of firm *i* and firm *j* that are conditional on the same economic events. By first using firm *i*'s share return as a proxy for the economic event,

two earnings predictions are calculated by using: (i) firm *i*'s accounting function (α_i and β_i), and (ii) firm *j*'s accounting function (α_j and β_j), as represented in equation (3.2) and equation (3.3).

$$E(NI)_{i,i,t} = \hat{\alpha}_{oi} + \hat{\beta}_{1i} RETURN_{i,t} \quad (3.2)$$

$$E(NI)_{i,j,t} = \hat{\alpha}_{oj} + \hat{\beta}_{1j} RETURN_{i,t} \quad (3.3)$$

Based on the two computed earnings predictions of firm *i* for a given share return in year *t*, which are $E(NI)_{i,i,t}$ and $E(NI)_{i,j,t}$, this study computes the absolute value of their difference.

Similarly, holding firm *j*'s economic event constant, this study repeats the above earnings predictions by using: (i) firm *j*'s accounting function (α_j and β_j), and (ii) firm *i*'s accounting function (α_i and β_i). Again, the absolute difference between the predicted earnings for firm *j*, which are $E(NI)_{j,j,t}$ and $E(NI)_{j,i,t}$, is also being computed for each year *t*.

Lastly, for each firm-pair *i* and *j*, this study computes the average of the sum of the absolute difference between the predicted earnings to proxy for 'accounting systems comparability' (*ASCOMP*) between firm *i* and firm *j* over *n* years for each sub-period *sp* (the pre-adoption or post-adoption periods), as expressed below:

$$ASCOMP_{i,sp} = -\frac{1}{2n}\sum \left|E(NI)_{i,i,t} - E(NI)_{i,j,t}\right| + \left|E(NI)_{j,j,t} - E(NI)_{j,i,t}\right| \quad (3.4)$$

Following the work of De Franco et al. (2011) and Yip and Young (2012), this study computes $ASCOMP_{i,sp}$, as the negative value of the average aggregated absolute difference between the predicted earnings and the alternative predicted earnings for firm *i* and firm *j*, using its own and the corresponding firm's accounting functions. By construction, greater values of $ASCOMP_{i,sp}$ indicate greater accounting comparability for firm-pair *i* and *j*.

Although this study closely follows the work of De Franco et al. (2011) in employing the comparability metric developed by them, several modifications are made in a similar way to Yip and Young (2012) and Cascino and Gassen (2015) to suit the research setting of this study. First, the focus of this study is on using annual data from the audited financial statements for firms across different countries, because the availability of quarterly data is less comprehensive and the reporting requirements for non-annual accounting data vary across firms and countries. Second, the main objective of this chapter is to examine changes in cross-country accounting comparability, which unlike making comparisons within a country as in De Franco (2011) requires some reliance on the assumption that the levels of market efficiency across different countries are relatively stable. Third, to examine the changes in cross-border accounting comparability arising from the switch from local accounting standards to IFRS, the comparability measure *ASCOMP* is computed separately for two time periods: the pre-adoption and the post-adoption periods respectively. That is, this study obtains the accounting comparability measure for all firm-pairs in the sample to compute the *average* cross-country accounting comparability in the period before IFRS adoption (*ASCOMP_PRE*) and in the period after IFRS adoption (*ASCOMP_POST*), and subsequently performs a univariate analysis on them.

3.4.2 Research Design

To address the research hypothesis, accounting comparability is assessed for the period in which local accounting standards were being used (the pre-adoption period) against the period when IFRS was being introduced mandatorily (the post-adoption period). This involves making inferences based on firms that had used non-US local accounting standards for financial reporting in the pre-adoption period and later switched to IFRS compulsorily in the post-adoption period as required under the mandatory reporting regime for their jurisdiction. The

same sets of firms are also included in the pre-adoption and post-adoption periods so that each firm is used as its own control. To strengthen the validity of inferences for comparability across time, the number of firm-year observations is also set as equal in the two time periods to form a balanced panel of data before and after IFRS adoption.[28]

Consistent with the Conceptual Framework issued by the IASB, this study adopts the approach used by Yip and Young (2012) to address the comparability concept based on two mutually exclusive but equally important facets: (i) the similarity facet, and (ii) the difference facet. Building on the definition of 'comparability' in De Franco et al. (2011), the similarity facet of accounting comparability is the extent to which similar economic events/transactions are accounted for similarly, while the difference facet of accounting comparability is the extent to which dissimilar economic events/transactions are accounted for differently. For this purpose, this study follows prior related work by classifying firms in the same industry as similar firms and firms in different industries as different firms (e.g. Barth et al., 2012; De Franco et al., 2011; DeFond et al., 2011; Yip & Young, 2012). This is consistent with the general assumption that firms in the same industry face similar business environments and exhibit similar operational properties, and are thus more likely to experience similar economic events that are to be translated into comparable accounting performance. Supporting this underlying assumption, firms in the same industry are also often used, in practice, for benchmarking in management accounting and analysts' forecasts (Beuselinck et al., 2017).

3.4.3 Empirical Framework

To compare accounting comparability before and after mandatory IFRS adoption, this study performs a parsimonious model on the comparability measure for each firm-pair *i* and *j*,

[28] The requirement for a constant sample over the entire sampling period is, however, likely to induce a survivorship bias towards larger firms.

$ASCOMP_{i,sp}$, that has been pooled into the respective sub-periods (either the pre-adoption period or the post-adoption period), which is expressed as follows:

$$ASCOMP_{i,sp} = \vartheta_0 + \vartheta_1 IFRS_{sp} + \sum \vartheta_2 \, CONTROLS_{i,sp} + \varepsilon \quad (3.5)$$

where $ASCOMP_{i,sp}$ is the comparability value for pair *i* in the sub-period *sp*, while $IFRS_{sp}$ is an indicator variable that equals one for the post-adoption period observations, and zero otherwise. By estimating equation (3.5), a significant and positive (negative) ϑ_1 indicates that cross-country accounting comparability has increased (decreased) from the pre-adoption period to the post-adoption period under the mandatory adoption regime.

To control for innate firm-specific characteristics, this study also includes a set of control variables. In particular, this study emulates the work of Yip and Yong (2012) by including four control variables to capture the many unobservable firm-specific characteristics that are likely to influence accounting comparability, namely: (i) firm size (*SIZE*), (ii) common listings (*LISTINGS*), (iii) difference in legal origins (*LEGALORIGIN_DIFF*), and industry fixed effects. *SIZE* is measured by the ratio of the smaller value of total assets to the larger value of the two firms *i* and *j* for each firm-pair in 2006. *LISTINGS* is an indicator variable that equals one if the pair of firms is listed on at least one same stock exchange, and zero otherwise. *LEGALORIGIN_DIFF* is an indicator variable that equals one when the home countries of the two firms in the pair have different legal origins (common-law versus civil-law), and zero otherwise. While the inclusion of these variables is to control for differences in firm size, stock listing environment and institutional setting between pairs of sample firms that are expected to be associated with accounting comparability, there is no prediction as to the signs of the coefficients on these control variables.

3.5 Sample and Data Construction

To achieve the research objective, this study deliberately chooses to focus on the pairwise comparability relationships between Australia and member countries of the EU. This enables an assessment of changes in cross-country accounting comparability upon the simultaneous introduction of mandatory IFRS adoption as of 2005 in these jurisdictions. Data collection begins with an initial sample of listed firms from Australia and member countries of the EU. It is restricted by the first criteria that the sample country must have at least 200 listed firms to ensure that there are sufficient firms to satisfy other matching requirements. Based on this first criterion, eight EU countries are retained for the purpose of forming the initial sample for this study, including Denmark, France, Greece, Germany, Italy, Norway, Sweden, and the UK.

As described in Section 3.4.2, the sample period is partitioned into two sub-periods: (1) the pre-adoption period and (2) the post-adoption period, to enable this study to make inferences about the impact of mandatory IFRS adoption on cross-country accounting comparability. With reference to the mandatory introduction of IFRS in Australia and the EU, 1 January 2005 represents the official date of the compulsory switch from their local accounting standards to IFRS and so this implies that listed firms must prepare their financial statements based on IFRS for all financial years after this date.[29] However, this study chooses to omit observations for the 2005 and 2006 financial years in constructing the sample for the post-adoption period because these two years represent the transition time for many Australian and EU firms that adopted IFRS for the first time. There is concern that the uncertainties surrounding the transition process could potentially cause some confounding influences that are unattributable to the *long-term* IFRS impact on the comparability of the financial reporting systems. In particular, firms that

[29] Refer to Chapter Two for more details on the specific requirements for IFRS adoption in Australia and the EU.

adopt IFRS for the first time are required to adopt IFRS 1[30], which includes many one-time adjustments to the first-IFRS financial statements. Owing to the incompleteness of electronic data for the earlier years, this study also set the beginning of the pre-adoption period after 2000. Hence, the sample period for this study covers ten years, which consists of 2000 to 2004 for the pre-adoption period and 2007 to 2011 for the post-adoption period.

Since the investigation is centered on the mandatory adoption of IFRS from 1 January 2005, firms that already adopted IFRS before 2005 and firms that do not supply financial statements under IFRS post-2005 are excluded from the sample. Even firms that adopted US GAAP before 2005 are removed from the sample to ensure that the investigation focuses on the switch from non-US local accounting standards to IFRS. Moreover, financial, insurance and real estate firms (SIC codes 60–67) are eliminated from the sample due to their unique operating characteristics and erroneous regulatory requirements pertaining to this industry. Finally, firms with missing data are also removed from the sample. Where most of the financial and non-financial data are collected from Thomson Reuters, Worldscope and DataStream databases as deemed appropriate, all financial variables are winsorized at the top and bottom 1 percent in order to mitigate the influence of outliers in confounding the inferences made in this study.

Table 3.1, Panel A, summarizes the initial sample composition by country, together with the sample selection procedures as described above. As shown in the table, the initial sample of mandatory IFRS adopters consists of 370 listed Australian firms and 1,066 listed firms from across eight different EU countries. Of the EU mandatory adopters, most are from the UK (348 firms) and France (254 firms), even though Germany initially had a similar number of listed firms to the UK market. However, many German firms are excluded from the initial sample because they already applied US GAAP or IFRS prior to the 2005 mandate and thus do not

[30] IFRS 1 'First-time Adoption of International Financial Reporting Standards' sets out the requirements and adjustments for firms in preparing their first financial statements under IFRS.

satisfy the sample selection requirement for this study. As a result, this leaves only 81 German firms for further matching with the Australian sample.

To construct the comparability metric, this study employs a matched sample design to form pairs of firms that consist of one mandatory adopter from Australia and another from one of the EU member countries. This is because the focus of this study is on the bilateral relationship between Australia and the EU, and so the matching process with the Australian sample needs to be repeated across the eight EU countries that have been selected in the initial sample. That is, the same Australian firm can be matched with multiple EU firms domiciled in different member countries, provided that they further satisfy the industry and size matching requirements (as described below).[31]

To form firm-pairs for the sample of testing the similarity facet of cross-country accounting comparability, this study follows prior research by defining firms in the same industry as similar firms (e.g. Barth et al., 2012; De Franco et al., 2011; Yip & Young, 2012) and therefore first matches each Australian firm with another EU firm based on the two-digit SIC industry classification level. Second, this study also adopts a matching approach by ensuring that firms are matched in terms of their similarity in size based on their total assets in 2006. That is, each Australian firm is matched with an EU firm in the same industry whose size is closest to the Australian firm, and the size of the smaller firm is also at least 50 percent of the size of the larger firm for each firm-pair (e.g. Barth et al., 2012; Yip & Young, 2012). Matching on size mitigates any accounting and economic differences that could potentially confound firms' comparability of their accounting amounts and consequently the inferences for this study. However, this study also observes a disproportionate matching for mining firms (SIC codes 10–14) between Australia and the EU based on the industry and size requirements, given that there

[31] A control sample of non-IFRS adopting firms is not used in this study because Australia implemented a wholesale adoption of IFRS as of 2005, which makes such a comparison infeasible.

are relatively more mining firms in Australia than in the EU. For this reason, mining firms are subsequently excluded from the sample for the similarity facet, and following the matching process therefore yields a total of 496 firm-pairs and 2,480 firm-year observations for each sub-period.[32,33]

For the purpose of constructing a sample for the difference facet of cross-country accounting comparability, this study defines different firms as those from different industries and countries (Barth et al., 2012; De Franco et al., 2011; Yip & Young, 2012). This means that for the industry matching requirement, this study closely follows the approach by Yip and Young (2012) by forming each firm-pair of one manufacturing firm (one-digit SIC code of 2 or 3) and another service firm (one-digit SIC code of 7 or 8) in a different country. In addition, this study also matches different firms based on their size: that is, the ratio of the smaller value of total assets to the larger value of total assets in 2006 is greater than 50 percent. By adhering to the industry and size matching requirements, the sample for the difference facet is represented by 841 pairs of different firms and 4,205 firm-year observations for each sub-period.[34]

Table 3.1, Panel B, provides a breakdown of firm-pairs for the similarity facet and the difference facet by country. It shows that most of the similar firms and different firms for matching with the Australian sample, in terms of industry and size requirements, are from the UK, France and Sweden. While other EU countries like Denmark, Germany and Greece also contribute relatively similar weight to the samples of the similarity facet and difference facet, the table shows that Italy has the fewest matched firms with Australian firms in both samples due to the significant differences in firm size.

[32] This is based on 496 firm-pairs over 5 years in each sub-period, which is greater than the corresponding minimum sample size suggested by Milton (1986) to reach a t-value of 2.00.
[33] Nobes (2013) recommends that IFRS studies should treat mining companies differently due to their sector-specific policies.
[34] This is based on 841 firm-pairs over five years in each sub-period, which is greater than the corresponding minimum sample size suggested by Milton (1986) to reach a t-value of 2.00.

Table 3.2 provides a breakdown of the similar firms by industry and by country. It shows that the sample of similar firms is represented, based on the two-digit SIC classification levels, by a wide range of industries even though the distribution varies significantly across the eight EU member countries. Among the different industries, the greatest proportion of matched similar firms with the Australian sample are from Business Services (SIC code 73) (17.34%), and Engineering, Accounting, Research, Management and Related Services (SIC code 87) (13.91%), which are mostly from the UK, France, Sweden and Norway.

TABLE 3.1
SAMPLE SELECTION AND COMPOSITION BY COUNTRY

Panel A: Initial Sample Selection and Composition by Country

	Australia	Denmark	France	Germany	Greece	Italy	Norway	Sweden	UK	Total
Number of firms obtained from Worldscope	2,128	200	856	1,116	309	295	228	507	1,922	7,561
Exclude:										
Firms with missing SIC industry classifications	(6)	-	(7)	(20)	(2)	(2)	(5)	(12)	(35)	(89)
Financial institutions, insurance companies, and real estate firms (SIC code 60–67)	(271)	(75)	(138)	(296)	(35)	(65)	(38)	(63)	(362)	(1,343)
Firms that did not use local accounting standards prior to 2005 and do not apply IFRS post-2005	(12)	(3)	(8)	(125)	(20)	(1)	(7)	(4)	(35)	(215)
Firms that voluntarily adopted IFRS prior to 2005	(38)	(15)	(34)	(266)	(8)	(33)	(14)	(30)	(74)	(512)
Firms with incomplete data for the entire sample period (accounting standards, accounting data and stock market data)	(1,431)	(50)	(415)	(328)	(157)	(114)	(116)	(287)	(1,068)	(3,966)
Initial Sample Before Matching	370	57	254	81	87	80	48	111	348	1,436

TABLE 3.1 (CONTINUED)

Panel B: Final Sample Composition by Country (Matched by Industry and Size)

	Denmark	France	Germany	Greece	Italy	Norway	Sweden	UK	Total
Matched similar firms between Australia and the EU (Similarity Facet)	49	90	49	45	28	35	76	124	496
	(9.88%)	(18.15%)	(9.88%)	(9.07%)	(5.65%)	(7.05%)	(15.32%)	(25.00%)	(100.00%)
Matched different firms between Australia and the EU (Difference Facet)	94	129	105	89	64	99	126	135	841
	(11.18%)	(15.34%)	(12.49%)	(10.58%)	(7.61%)	(11.77%)	(14.98%)	(16.05%)	(100.00%)

TABLE 3.2
INDUSTRY BREAKDOWN BY COUNTRY

SIC Code	Industry	Matched EU Firms with Australian Sample									
		Denmark	France	Germany	Greece	Italy	Norway	Sweden	UK	Total	%
1	Agricultural Production – Crops								2	2	0.40%
8	Forestry		1							1	0.20%
15	Building Construction General Contractors and Operative Builders	1			3		2	3	5	14	2.82%
16	Heavy Construction other than Building Construction Contractors	1	1		1					3	0.60%
17	Construction Special Trade Contractors								1	1	0.20%
20	Food and Kindred Products	3	6	6	4	2	2	3	6	32	6.45%
22	Textile Mill Products	1		1	1	1			1	5	1.01%
23	Apparel and other Finished Products Made from Fabrics and Similar Materials		1							1	0.20%
27	Printing, Publishing, and Allied Industries		1		1	3	2		3	10	2.02%
28	Chemicals and Allied Products	7	2	2	5	2		2	8	28	5.65%
29	Petroleum Refining and Related Industries		1		1	1				3	0.60%
32	Stone, Clay, Glass, and Concrete Products		1	2	3	4			3	13	2.62%
33	Primary Metal Industries	2	1		4	2		2	4	15	3.02%
34	Fabricated Metal Products, except Machinery and Transportation Equipment	1	3	3	4		1	2	5	19	3.83%

TABLE 3.2 (CONTINUED)

SIC Code	Industry	Matched EU Firms with Australian Sample									
		Denmark	France	Germany	Greece	Italy	Norway	Sweden	UK	Total	%
35	Industrial and Commercial Machinery and Computer Equipment	2	2	1	1	1		3	2	12	2.42%
36	Electronic and other Electrical Equipment and Components, except Computer Equipment	3	6	8		3	6	6	8	40	8.07%
37	Transportation Equipment	3	3		1			2	4	13	2.62%
38	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks	2	5				1	7	4	19	3.83%
39	Miscellaneous Manufacturing Industries		1	1						2	0.40%
48	Communications	1	5		5	3		2	2	18	3.63%
49	Electric, Gas and Sanitary Services	2	3	5		4	2	2	4	22	4.44%
50	Wholesale Trade-Durable Goods	4	4	2	8		1	5	10	34	6.86%
51	Wholesale Trade-Nondurable Goods	2	2	2		1			4	11	2.22%
53	General Merchandise Stores								1	1	0.20%
54	Food Stores								1	1	0.20%
56	Apparel and Accessory Stores		1						2	3	0.61%
57	Home Furniture, Furnishings, and Equipment Stores		1							1	0.20%
59	Miscellaneous Retail		1							1	0.20%
70	Hotels, Rooming Houses, Camps, and other Lodging Places		1	1	1					3	0.61%
73	Business Services	6	21	8	1		6	22	22	86	17.34%
76	Miscellaneous Repair Services								1	1	0.20%

TABLE 3.2 (CONTINUED)

SIC Code	Industry	Matched EU Firms with Australian Sample									
		Denmark	**France**	**Germany**	**Greece**	**Italy**	**Norway**	**Sweden**	**UK**	**Total**	**%**
79	Amusement and Recreation Services	3	2			1		3	1	10	2.02%
80	Health Services			1	1					2	0.40%
87	Engineering, Accounting, Research, Management, and Related Services.	5	14	6			12	12	20	69	13.91%
	TOTAL	49	90	49	45	28	35	76	124	496	100.00%

3.6 Empirical Results

3.6.1 Descriptive Statistics

Descriptive statistics for the samples of similarity and difference facets are presented in Panel A and Panel B of Table 3.3 for the full sample period, the sub-sample of the pre-adoption period and the sub-sample of the post-adoption period. As expected, the mean and median of *ASCOMP* for the full sample period are higher for cross-country similar firms (mean of -0.165 and median of -0.087) than cross-country different firms (mean of -0.228 and median of -0.109). Similar patterns are also observed when comparing the mean and median of *ASCOMP* of similar firms with those of different firms for the two sub-samples of the pre-adoption and the post-adoption periods. Moreover, the mean and median of *SIZE* for similar firms are also lower (mean of 0.794 and median of 0.815) than those of different firms (mean of 0.884 and median of 0.934), although they are almost identical in terms of their likelihood of listing on the same stock exchange between pairs of firms, as the mean of *LISTING* for both is close to 0.02.

Comparing the variables between the pre-adoption and the post-adoption periods, Panel A of Table 3.3 shows that the mean of *ASCOMP* for the sample of similar firms increased significantly from the pre-adoption period of -0.179 to -0.151 in the post-adoption period at 5 percent. This indicates that, without controlling for other factors, accounting comparability for cross-country similar firms is higher after switching from local accounting standards to IFRS. Panel B of Table 3.3 also likewise shows that the mean of *ASCOMP* for the sample of different firms increased from -0.234 to -0.221 post-IFRS adoption, although the difference (0.013) is statistically not significant. This provides some initial evidence that the mandatory adoption of IFRS has not had any significant impact on the comparability of cross-country different firms. Nevertheless, the median of *ASCOMP* also increased for the sample of similar firms and the sample of different firms, although the difference is statistically significant at 5 percent only for the latter sample.

TABLE 3.3
DESCRIPTIVE STATISTICS

Panel A: Variables for Sample of Similar Firms (Similarity Facet)

Variable	Full Sample				Pre-Adoption Sample				Post-Adoption Sample			
	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.
Dependent Variable												
ASCOMP	992	-0.165	-0.087	0.216	496	-0.179	-0.090	0.223	496	-0.151 **	-0.083	0.208
Independent Variables												
IFRS	992	0.500	0.500	0.500	496	-	-	-	496	1.000	1.000	-
SIZE	992	0.794	0.815	0.146	496	0.794	0.815	0.146	496	0.794	0.815	0.146
LISTINGS	992	0.020	-	0.141	496	0.020	-	0.141	496	0.020	-	0.141
LEGALORIGIN_DIFF	992	0.750	1.000	0.433	496	0.750	1.000	0.433	496	0.750	1.000	0.433

TABLE 3.3 (CONTINUED)

Panel B: Variables for Sample of Different Firms (Difference Facet)

Variable	Full Sample				Pre-Adoption Sample				Post-Adoption Sample				
	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	Mean	Median		Std. Dev.	
Dependent Variable														
ASCOMP	1,682	-0.228	-0.109	0.346	841	-0.234	-0.120	0.312	841	-0.221	-0.098	**	0.376	***
Independent Variables														
IFRS	1,682	0.500	0.500	0.500	841	-	-	-	841	1.000	1.000		-	
SIZE	1,682	0.884	0.934	0.127	841	0.884	0.934	0.127	841	0.884	0.934		0.127	
LISTINGS	1,682	0.026	-	0.160	841	0.026	-	0.160	841	0.026	-		0.160	
LEGALORIGIN_DIFF	1,682	0.839	1.000	0.367	841	0.839	1.000	0.367	841	0.839	1.000		0.367	

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Variable Definitions:

ASCOMP	=	the comparability value between two firms in period *t*.
IFRS	=	an indicator variable that equals one for the post-adoption period observations, and zero otherwise.
SIZE	=	the ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.
LISTINGS	=	an indicator variable that equals one if the two firms in a pair are listed on at least one of the same stock exchanges, and zero otherwise.
LEGALORIGIN_DIFF	=	an indicator variable that equals one when home countries of the two firms in a pair have different legal origins, and zero otherwise.

Table 3.4 provides the Pearson correlations among the variables related to the sample of similar firms (Panel A) and the sample of different firms (Panel B). As a suggestive indication of the underlying relationship, and consistent with the descriptive statistics, *ASCOMP* for the sample of cross-country similar firms is positively correlated with *IFRS* (0.066), and this is significant at 5 percent. Panel B also shows that *ASCOMP* is similarly positively correlated with *IFRS* (0.018) for the sample of cross-country different firms. Although the correlation is not significant, this is consistent with the descriptive statistics reported above. Given that all correlations reported for the samples of similarity and difference facets are relatively low, multicollinearity is not a concern for the variables related to these samples.

TABLE 3.4
PEARSON CORRELATION MATRIX

Panel A: Pearson Correction Matrix Between Variables for the Sample of Similarity Facet

Variable	*ASCOMP*	*IFRS*	*SIZE*	*LISTINGS*
IFRS	0.066 **			
SIZE	0.004	-		
LISTINGS	-0.081 **	-	0.007	
LEGALORIGIN_DIFF	0.065 **	-	-0.149 ***	-0.017 *

Panel B: Pearson Correction Matrix Between Variables for the Sample of Difference Facet

Variable	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*
IFRS	0.018			
SIZE	0.096 ***	-		
LISTINGS	-0.076 ***	-	-0.087 ***	
LEGALORIGIN_DIFF	0.047 *	-	-0.243 ***	-0.066 ***

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Variable Definitions:

ASCOMP	=	the comparability value between two firms in period *t*.
IFRS	=	an indicator variable that equals one for the post-adoption period observations, and zero otherwise.
SIZE	=	the ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.
LISTINGS	=	an indicator variable that equals one if the two firms in a pair are listed on at least one of the same stock exchanges, and zero otherwise.
LEGALORIGIN_DIFF	=	an indicator variable that equals one when home countries of the two firms in a pair have different legal origins, and zero otherwise.

3.6.2 Univariate Analysis

Table 3.5 presents the mean of *ASCOMP* for the samples of similar firms (Panel A) and different firms (Panel B) across the eight sample EU countries that have been matched with the Australian sample for the sub-samples of the pre-adoption and post-adoption periods, and for

the full sample period. As a starting point, it indicates that the mean of *ASCOMP* before and after mandatory IFRS adoption is significantly different from zero across all sample countries for the samples of both similar firms and different firms. For example, the mean values of *ASCOMP* in the periods before and after firms adopt IFRS mandatorily are -0.179 and -0.151 for the entire sample of similar firms, and -0.234 and -0.221 for the entire sample of different firms. Overall, the mean of *ASCOMP* that is averaged across the full sample period for the respective sample countries is also significantly different from zero for both facets, with the mean values for the samples of similar firms and different firms being shown as -0.165 and -0.228. As expected, the mean of *ASCOMP* is higher for the sample of similar firms across all sample countries and for the entire sample than for that of different firms, where higher values indicate greater cross-country accounting comparability.

For cross-country similar firms, the findings in Panel A of Table 3.5 indicate that the mean of *ASCOMP* is higher for all country-pairs in the post-adoption period than in the pre-adoption period. Only the change for the country-pair of Australia and Greece is statistically significant at 5 percent. Moreover, there has been a significant increase in the mean of *ASCOMP*, by 0.028, for the entire sample after IFRS adoption, and this change is also significant at 5 percent. This suggests that accounting comparability between similar firms in Australia and member countries of the EU significantly improved after firms from these countries were mandated to switch from their local accounting standards to IFRS. Without controlling for other factors, sample firms from Italy (-0.073) are the most comparable with Australian matched firms, while sample firms from Sweden (-0.224) exhibit the lowest comparability with Australian matched firms.

For cross-country different firms, the changes from the pre-adoption period to the post-adoption period are rather mixed across country-pairs. As shown in Panel B of Table 3.5, the improvements in comparability for Australian sample firms matched with different firms from Denmark (0.093) and Greece (0.059) are statistically significant at 10 percent. Changes in the comparability for other country-pairs after mandatory IFRS adoption are not statistically significant. Although the comparability for all country-pairs is higher in the post-adoption period (-0.221) than in the pre-adoption period (-0.234), the difference is not statistically significant. At the univariate level, this indicates that mandatory IFRS adoption has neither improved nor compromised accounting comparability for cross-country different firms. Moreover, Australian sample firms are most comparable to those matched firms from Italy (-0.129) and least comparable to those matched firms from Sweden (-0.269). This is analogous to the sample of similar firms even though these matched firms are by design from different industries.

TABLE 3.5
ACCOUNTING SYSTEMS COMPARABILITY (*ASCOMP*) FOR THE PRE-ADOPTION AND THE POST-ADOPTION PERIODS BY COUNTRY-PAIRS

Panel A: Analysis of Accounting Systems Comparability (*ASCOMP*) for the Similarity Facet (Similar Firms)

Country-Pair	Pre-Adoption Period		Post-Adoption Period		Difference		Full Sample Period	
	N	$ASCOMP_{PRE}$	N	$ASCOMP_{POST}$	$ASCOMP_{POST}$ -$ASCOMP_{PRE}$ Expected Sign: +/-		N	*ASCOMP*
Australia–Denmark	49	-0.117	49	-0.115	0.002		98	-0.116
Australia–France	90	-0.182	90	-0.146	0.036		180	-0.164
Australia–Germany	49	-0.158	49	-0.121	0.037		98	-0.140
Australia–Greece	45	-0.165	45	-0.087	0.078	**	90	-0.126
Australia–Italy	28	-0.078	28	-0.069	0.009		56	-0.073
Australia–Norway	35	-0.191	35	-0.176	0.015		70	-0.183
Australia–Sweden	76	-0.240	76	-0.208	0.032		152	-0.224
Australia–UK	124	-0.198	124	-0.180	0.018		248	-0.189
Full Sample	496	-0.179	496	-0.151	0.028	**	992	-0.165

TABLE 3.5 (CONTINUED)

Panel B: Analysis of Accounting Systems Comparability (*ASCOMP*) for the Difference Facet (Different Firms)

Country-Pair	Pre-Adoption Period		Post-Adoption Period		Difference		Full Sample Period	
	N	$ASCOMP_{PRE}$	N	$ASCOMP_{POST}$	$ASCOMP_{POST}$ - $ASCOMP_{PRE}$		N	*ASCOMP*
					Expected Sign: +/-			
Australia–Denmark	94	-0.289	94	-0.196	0.093	*	188	-0.242
Australia–France	129	-0.233	129	-0.253	-0.020		258	-0.243
Australia–Germany	105	-0.187	105	-0.203	-0.016		210	-0.195
Australia–Greece	89	-0.210	89	-0.151	0.059	*	178	-0.180
Australia–Italy	64	-0.147	64	-0.112	0.035		128	-0.129
Australia–Norway	99	-0.242	99	-0.223	0.019		198	-0.232
Australia–Sweden	126	-0.253	126	-0.284	-0.031		252	-0.269
Australia–UK	135	-0.267	135	-0.262	0.005		270	-0.264
Full Sample	841	-0.234	841	-0.221	0.013		1,682	-0.228

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

The mean of accounting systems comparability metric (*ASCOMP*) across all sample countries are significantly different from zero.

ASCOMP is the comparability value between two firms in period *t*.

3.6.3 Multivariate Analysis

Table 3.6 reports the regression results for hypothesis H1, which states that, on average, mandatory adoption of IFRS is associated with cross-country accounting comparability between Australia and the EU. Consistent with the hypothesis and also the results from the univariate analysis described above, the coefficient of *IFRS* (β_1) is positive and significant at 5 percent level for the sample of similar firms (0.028), but is statistically not significant for the sample of different firms (0.012). Taken together, the findings provide evidence that the similarity facet of cross-country accounting comparability has, on average, significantly improved following the mandatory IFRS adoption and that this has occurred with no significant compromise to the difference facet of cross-country accounting comparability. Therefore, the results are consistent with those in Yip and Young (2012), which documented a similar pattern for the impact of mandatory IFRS adoption on accounting comparability among similar and different firms from EU countries only.

In terms of the control variables, the coefficient of *SIZE* is positively significant for the samples of similar firms and different firms at 1 percent. This suggests that the similarity in firms' operating fundamentals is a significant determinant of cross-country accounting comparability and should be controlled for. The coefficient of *LISTING* is negative for the samples of both similar and different firms, but it is only marginally significant at 10 percent for the sample of similar firms. The regression results for the samples of similar and different firms show that the coefficient of *LEGALORIGIN_DIFF* is positive and significant at 5 percent. Although this is inconsistent with the EU results provided by Yip and Young (2012), it provides some indication that institutional factors possibly have different influences on accounting comparability among EU and non-EU firms.

TABLE 3.6
REGRESSION RESULTS FOR THE AVERAGE IMPACT OF MANDATORY IFRS ADOPTION ON CROSS-COUNTRY ACCOUNTING COMPARABILITY (*ASCOMP*)

	MODEL 3.6.1		**MODEL 3.6.2**	
	Similar Firms		**Different Firms**	
	ASCOMP		*ASCOMP*	
INTERCEPT	-0.360		-0.542	
IFRS	0.028	**	0.012	
SIZE	0.139	***	0.291	***
LISTINGS	-0.135	*	-0.131	
LEGALORIGIN_DIFF	0.038	**	0.064	**
Industry Fixed Effects	Included		No	
No. of Observations	992		1,682	
Adjusted R-squared	0.144		0.016	

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Variable Definitions:

ASCOMP = the comparability value between two firms in period *t.*

IFRS = an indicator variable that equals one for the post-adoption period observations, and zero otherwise.

SIZE = the ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.

LISTINGS = an indicator variable that equals one if the two firms in a pair are listed on at least one of the same stock exchanges, and zero otherwise.

LEGALORIGIN_DIFF = an indicator variable that equals one when home countries of the two firms in a pair have different legal origins, and zero otherwise.

3.7 Additional Analyses

3.7.1 Additional Analysis Using an Alternative Accounting Comparability Measurement

To increase the robustness of the reported main results, this study re-runs a sensitivity analysis by using an alternative comparability measurement that is based on the accrual accounting system (*ACC_COMP*). Similar to the approach proposed by De Franco et al. (2011) of mapping economic events onto accounting amounts to represent a firm's accounting system, this alternative comparability measurement applies the 'cash flow model' in Ball and Shivakumar (2006) by using contemporaneous operating cash flows and accruals as proxies for economic events and accounting amounts respectively. This is consistent with prior studies which view the relation between cash flows and accruals as reflective of the roles of accruals in mitigating noise (Dechow, 1994) and timely recognition of gains and losses (Ball & Shivakumar, 2006). Moreover, the substitution of earnings and stock returns in the mapping process also overcomes the reliance on the assumption of stable levels of market efficiency across jurisdictions when interpreting cross-country empirical results (Cascino & Gassen, 2015).

To obtain the modified comparability score for the sample of similarity facet of cross-country accounting comparability, this study again uses five years of annual data to estimate equation (3.6) for the pre-adoption (2000–2004) and the post-adoption (2007–2011) periods respectively:

$$ACC_{i,t} = \rho_i + \sigma_i CFO_{i,t} + \varepsilon_{i,t} \quad (3.6)$$

where $ACC_{i,t}$ is accruals and $CFO_{i,t}$ is cash flow from operating activities, both scaled by total assets.[35] The procedure to compute the comparability score (*ACC_COMP*) based on the association of contemporaneous operating cash flows (*CFO*) and accruals (*ACC*) is the same as described in Section 3.4.1, and is as expressed below:

$$ACC\_COMP_{i,sp} = -\frac{1}{2n}\sum\left|E(ACC)_{i,i,t} - E(ACC)_{i,j,t}\right| + \left|E(ACC)_{j,j,t} - E(ACC)_{j,i,t}\right| \quad (3.7)$$

Based on a sample of 425 pairs of Australian and EU mandatory IFRS adopters that are matched based on industry and size (results not tabulated), the univariate result continues to show that the mean comparability score is higher in the post-adoption period (-0.155) than the pre-adoption period (-0.204) at the 5 percent significance level.[36] Similarly, the multivariate result also confirms that mandatory IFRS adoption improves the similarity facet of cross-country accounting comparability (coefficient of 0.049 at 5 percent significance level). Taken together, the sensitivity results support the primary inferences.

3.7.2 Additional Analysis for the Influence of Institutional Environment

As a supplement, this chapter performs an analysis of the impact of mandatory IFRS adoption on cross-country accounting comparability conditional on a firm's institutional environment. To the extent that IFRS adoption is advocated to be a significant determinant of accounting comparability, the importance of a firm's institutional environment on the quality of financial accounting information has been constantly emphasized by the existing financial reporting literature (e.g. Ball et al., 2000, 2003; Ball & Shivakumar, 2005). Therefore, this additional

[35] This study follows the approach of Yip and Young (2012) by defining accruals as net income minus operating cash flow.

[36] The sample size for the additional analysis using an alternative accounting comparability measurement is smaller than the sample size used in the primary analysis due to the lack of cash flow information disclosed by some sample firms.

analysis examines as to whether and how the relation between mandatory IFRS adoption and cross-country accounting comparability varies linearly with a country's institutional structure.

To be comparable with the work of Yip and Young (2012), this chapter performs the additional analysis by categorizing a firm's institutional environment based on the origins of the legal system in its home country. As Hope (2003b) indicates, the legal origins dichotomy of countries is the most *primitive* measure of legal factors because it directly associates with many other institutional variables. The common view is that local accounting standards in common-law countries were shareholder-oriented and commercially driven, whereas local accounting standards in civil-law countries had traditionally been state-driven and tax-dominated (Ball et al., 2003; Li & Yang, 2016). Given that accounting diversity prior to IFRS adoption is greater when firms are from different legal origins than those of same origin, one is to expect that the extent of comparability improvement is likely to be greater for firms from different legal origins after implementing a single set of IFRS. However, the political influence as determined by a country's legal origin creates different demand for accounting income, and this results in heterogeneity in firms' reporting incentives that could influence the quality of accounting information (e.g. timeliness and conservatism) (Ball et al., 2000). Therefore, it is also possible for the comparability benefit of mandatory IFRS adoption to be undermined by any significant difference in reporting incentives arising from institutional differences due to different origins of legal system.

In this study, the sample consists of EU adopting firms which are matched with Australian firms that are of English common-law origin. Accordingly, the supplemental analysis involves partitioning the sample into (1) same legal origin (i.e. both common-law), and (2) different legal origins (i.e. common-law vs. civil-law). Table 3.7 reports the regression results for the sample partitions of same and different legal origins. The results show that cross-country comparability

is positively associated with mandatory IFRS adoption, but the improvement in accounting comparability is significant at 5 percent only for the sub-sample of similar firms with different legal origins. Unlike the findings of Yip and Young (2012), the findings of this additional analysis suggest that the accounting comparability benefit of IFRS adoption is more pronounced for firm-pairs from countries of common-law and civil-law origins. This provides support for the importance of adopting a uniform set of accounting standards for comparability benefit to eventuate.

TABLE 3.7
REGRESSION RESULTS BY LEGAL ORIGINS

	SIMILAR FIRMS	
	MODEL 3.7.1	**MODEL 3.7.2**
	Same Legal Origin (i.e. Both Common-Law)	***Different Legal Origins (i.e. Common-Law vs. Civil-Law)***
	ASCOMP	*ASCOMP*
INTERCEPT	-0.555	-0.287
IFRS	0.018	0.032 **
SIZE	0.424 ***	0.078 **
LISTINGS	-0.150	-0.093
Industry Fixed Effects	Included	Included
Country Fixed Effects	No	No
No. of Observations	248	744
Adjusted R-squared	0.156	0.131

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Variable Definitions:

ASCOMP = the comparability value between two firms in period *t.*

IFRS = an indicator variable that equals one for the post-adoption period observations, and zero otherwise.

SIZE = the ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.

LISTINGS = the ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.

3.8 Summary and Conclusion

An expectation of improved cross-country accounting comparability is among the underlying motivations for promoting IFRS adoption worldwide. This has gained much momentum since the mandatory implementation of IFRS in member countries of the EU and Australia as of 2005. Using this unique natural quasi-experimental research setting, this chapter provides empirical evidence for the posited comparability improvement based on the pairwise relationship between Australian and EU mandatory adopters.

In accordance to the concept of comparability as stated in the Conceptual Framework of the IASB, this study addresses the similarity and difference facets of comparability. By operationalizing the output-based comparability measurement proposed by De Franco et al. (2011), the results indicate that mandatory IFRS adoption improves the similarity facet of accounting comparability but has no discernible association with the difference facet of accounting comparability. Overall, the findings support the view that mandatory IFRS adoption is positively associated with cross-country accounting comparability improvement across EU and non-EU adopting firms, which is consistent with the regulatory objective of mandating IFRS adoption in Australia and the EU (AGFRC, 2002; EC, 2002). Moreover, the results show that cross-country comparability improvement is more pronounced upon mandatory IFRS adoption among firms from different legal origins, as the switch to IFRS narrows the pre-existing accounting differences between them. This underscores the relative importance of accounting standards in achieving higher cross-country comparability of accounting information.

CHAPTER FOUR:

FIRM-LEVEL AND COUNTRY-LEVEL DETERMINANTS OF ACCOUNTING COMPARABILITY

4.1 Introduction

The relative importance of accounting standards, firms' reporting incentives and institutional features in determining the quality of financial accounting information has been a contentious topic. This chapter examines whether and how the extent of firms' dissimilarity in reporting incentives and institutional characteristics is associated with cross-border comparability of financial accounting information. The global IFRS adoption was widely promoted on the premise of accounting comparability improvement across firms and countries (AGFRC, 2002; Barth, 2013; EC, 2002). Therefore, this chapter explicitly investigates the association of these firm-level and country-level determinants with the structural changes in accounting comparability surrounding the mandatory adoption of IFRS that began as of 2005 in Australia and the EU.

Increasing globalization is making the case for uniform accounting throughout the world compelling. As Barth (2006) points out, "[w]ithout global standards, there is virtually no hope that economically similar transactions, events, and conditions will be reflected similarly in financial statements around the world, and the economically dissimilar transactions, events, and conditions will be reflected differently" (p. 130). Therefore, the adoption of a uniform set of internationally acceptable accounting standards such as IFRS has been carried out on the assumption that it will bring about accounting comparability improvement across countries. Ultimately, this is expected to lower the costs of preparing and interpreting financial statements, which facilitate firms' access

to the global capital markets and enable capital raising at a cheaper cost (AGFRC, 2002; Ball, 2006; EC, 2002).

Nevertheless, the proposition that accounting standards alone determine the outcome of the financial reporting process is strongly contended by Ball et al. (2003) and other studies (e.g. Christensen et al., 2015; Daske et al., 2013; Doukakis, 2014; Holthausen, 2009; Isidro & Raonic, 2012; Leuz et al., 2003). Ball (2006), among others, argues that the existence of a uniform set of accounting standards does not necessarily lead to uniform implementation by the adopting firms across a wide range of countries. As Wysocki (2011) notes, it is difficult to achieve the desired uniformity in IFRS implementation due to the strong influence of institutional factors driving firms' reporting incentives, which in turn results in diverged firms' accounting practices. In fact, prior research shows that national laws, capital market regulations and oversight, corporate governance and other institutional characteristics can substantially influence the quality of accounting information (Glaum et al., 2013). In some instances, these forces could possibly be even greater than the influence of accounting standards in place (Ball et al., 2003; Christensen et al., 2013, Daske et al., 2013; Leuz et al., 2003). This is expected to be more prevalent where firms are compelled to switch to IFRS irrespective of their reporting incentives under a mandatory adoption context, whereas a voluntary adoption offers the discretion to firms depending on their own reporting incentives (Christensen et al., 2015). Based on this premise, empirical research finds consistent evidence to suggest that changes in accounting quality and capital market benefits arising from a mandatory IFRS adoption are generally unevenly distributed across firms and countries (e.g. Byard et al., 2011; Christensen et al., 2013; Daske et al., 2013).

With the passing of a mandate in the EU and Australia that required the compulsory adoption of IFRS in their respective jurisdictions as of 1 January 2005, this provides an interesting setting for cross-sectional analysis of cross-border comparability that is conditional on firm-level and

country-level determinants.[37] Even though mandatory IFRS adoption accelerates the harmonization of accounting standards among firms and countries, it is expected that there will remain significant differences in their incentive backgrounds. Thus, this study adapts the comparability measurement developed by De Franco et al. (2011) to the current research setting, to examine the association of dissimilarities in firm-level reporting incentives and country-level institutional characteristics with accounting comparability between Australian and EU mandatory IFRS adopters.

Focusing on the pairwise comparability of financial statements between mandatory IFRS adopters in Australia and member countries of the EU, the sample in this study consists of 496 firm-pairs of Australian-listed firms that are matched with EU listed firms from eight different countries (Denmark, France, Germany, Greece, Italy, Norway, Sweden and the UK). This results from employing the matched sample design used in previous related studies (e.g. Barth et al., 2012; Yip & Young, 2012), for which these firm-pairs must have switched from their non-US local accounting standards to IFRS mandatorily since 2005, and also be similar in terms of their industry and firm size. This research design ensures that inferences can be drawn from similar firms but still account for the influence of inherent firm-level and country-level factors on the comparability outcome of mandatory transition to IFRS. Furthermore, this study also partitions the sample period into the pre-adoption period (2000 to 2004) and the post-adoption period (2007 to 2011) to compare the comparability changes of the same firm-pairs from Australia and the EU before and after implementing the IFRS mandate.

[37] The requirement to mandate IFRS adoption was outlined in EU Regulation 1606/2002 and the Australian *Corporations Act 2001*, respectively. More details on the institutional background of IFRS adoption are provided in Section 2.3.1.

Based on the 'accounting systems comparability' measurement adopted in this chapter, the empirical results show that cross-country comparability of financial accounting information for similar firms from Australia and the EU is significantly greater in the post-IFRS adoption period (2007–2011) than in the pre-IFRS period (2000–2004), even after controlling for cross-sectional variations in the dissimilarity of reporting incentives between similar firms. However, similar firms that are more dissimilar in reporting incentives due to either their growth opportunities, capital dependence or audit quality exhibited statistically significant lower cross-country comparability. Furthermore, the findings also demonstrate that the enhancing role of IFRS adoption on cross-country accounting comparability is weakened by greater pairwise dissimilarity in similar firms' reporting incentives when differences in proxies for profitability, growth opportunities and capital dependence are considered collectively.

For country-level determinants, the findings show that the realization of the comparability benefit following a mandatory IFRS adoption remains statistically significant even after controlling for similar firms' institutional differences. The results further provide some weak evidence that similar firms domiciled in countries with different institutional characteristics also diminish cross-country accounting comparability. Specifically, the statistical significance of these various country-level variables depends on whether the institutional environment is proxied using one or multiple measures, as the diminishing role of their differences is somewhat dependent on the existence of other institutional features. Nonetheless, the results reveal that even after mandating the adoption of a common set of accounting standards like IFRS, similar firms exhibit lower cross-country comparability of financial statements when they are subject to greater differences in some institutional features (such as legal origins and investor protection). Taken together, the findings support the view that the adoption impact, particularly the comparability benefit, is not homogeneous across countries and firms. More specifically, the realization of the comparability

improvement is impeded when financial statements are compared between IFRS adopting firms that have dissimilar reporting incentives and institutional characteristics.

Furthermore, this study performs two additional analyses to complement the findings of the main analysis. The first additional analysis is to substitute the market-based comparability construct developed by De Franco et al. (2011) with a cash flow-based variant. This alternative measurement uses contemporaneous cash flows and accruals as proxies for mapping economic events onto accounting amounts in measuring accounting comparability. The findings of this supplemental test corroborate the primary inferences that mandatory IFRS adoption is associated with comparability improvement even when pairwise dissimilarities in firm-level and country-level determinants are controlled for. Albeit more weakly, the findings also continue to support the view that cross-country comparability is lower for firm-pairs that are more dissimilar in reporting incentives and institutional backgrounds, and some firm- and country-level differences also erode comparability benefit even under the mandatory IFRS reporting regime.

In the second analysis, this study explores the role of enforcement changes in influencing the comparability outcome of mandatory IFRS adoption. Consistent with the primary inferences, the results demonstrate that, irrespective whether EU countries concurrently made substantive enforcement changes, mandatory IFRS adoption enhances cross-country accounting comparability after controlling for pairwise dissimilarity in firm-level reporting incentives. Without controlling for these firm-level differences, the enhancing role of mandatory IFRS adoption on cross-country accounting comparability indeed loses its significance, because some EU countries made substantive enforcement changes concurrently with the 2005 IFRS mandate while other countries (including Australia) did not. Nevertheless, the results continue to show that higher pairwise dissimilarity in firms' reporting incentives (as proxied by profitability, growth opportunities, capital dependence and audit quality) significantly undermine cross-country accounting

comparability across both sub-samples. Even after mandating the IFRS adoption, greater pairwise dissimilarity in firms' reporting incentives also moderates the comparability benefit of IFRS adoption. The findings thus suggest that concurrent institutional changes significantly influence similarity in the incentives background for cross-country similar firms. When one country has made substantive enforcement changes while another has not, then the comparability benefit of IFRS adoption is pronounced only when the dissimilarity of reporting incentives between similar firms is considered so as to make their incentives background more aligned. Nevertheless, the negative impact of firms' dissimilarity in reporting incentives on accounting comparability and its moderating role on the association between mandatory IFRS adoption and cross-country accounting comparability are not significantly influenced by the concurrent enforcement changes in some EU countries.

This study seeks to contribute to the existing literature in several ways. First, the primary contribution of this study lies in offering empirical evidence concerning the importance of firms' reporting incentives and a country's institutional setting as determinants of the quality of financial outcomes. Researchers and practitioners cast doubt on the ability of adopting a common set of accounting standard to enable convergence in financial reporting quality, and some evidence has been documented by prior studies to support this concern (e.g. Ball et al., 2003; Burgstahler et al., 2006; Daske et al., 2013 Leuz et al., 2003). Moreover, Holthausen's (2003) discussion calls for more research like that undertaken by Ball et al. (2003), by stating that "there is little doubt that determining the marginal effect of accounting standards, incentives, ownership structure, institutional features of the capital markets and enforcement of the quality of financial reporting is an interesting and important issue" (p. 273). The findings of this study therefore shed light on the role of firms' reporting incentives and institutional factors, not changing accounting standards per se, in determining the quality of financial accounting information. To the extent that the

introduction of IFRS narrows accounting diversity across countries, managerial reporting incentives are likely to vary.

Second, this study answers the recent call by Gross and Perotti (2017) for a better understanding of the sources that impede increased accounting comparability under IFRS adoption. Existing IFRS studies tend to focus on the 'average' impacts of the adoption based on some outcome variables or examine cross-sectional differences at the country level (e.g. Armstrong et al., 2010; Daske et al., 2008; Landsman et al., 2012). This study demonstrates that the extent of the dissimilarity in firm-level reporting incentives between similar firms plays a critical role in undermining the comparability benefit around IFRS adoption. In particular, the findings of this study complement the work of Cascino and Gassen (2015), which is the first to explore firm-level (compliance) and country-level (enforcement) determinants in explaining the observed marginal comparability improvement post-IFRS adoption. Using a broader set of proxies for firm-level and country-level determinants than Cascino and Gassen (2015), this study offers additional evidence that a firm's accounting system is dependent upon a complex structure of complementary economic, legal, political/regulatory forces that give rise to the incentives that firms face when preparing their financial statements. More importantly, this diverged incentive background introduces some obstacles to achieving the comparability benefit of IFRS adoption.

Third, the findings of this study also provide important insights for practitioners and regulators regarding the determinants of accounting comparability. While the comparability argument is constantly used to justify the expected capital benefits of mandatory IFRS adoption, to date very few studies have looked at the joint implications of accounting standards change, firm-level determinants and institutional factors for accounting comparability. To the extent that accounting standards lay out the requirements of financial reporting, this study provides new evidence that the alignment of firms' incentives and institutional backgrounds influences the similarity of firms'

financial reporting behavior to other firms, and this determines the extent of accounting comparability.

Fourth and finally, previous IFRS-related studies have paid little attention to the 'first-order' impact of mandatory IFRS adoption on the comparability of accounting information. Even though there is a rich evidence of positive capital market outcomes coinciding with IFRS mandate (e.g. Armstrong et al., 2010; Li, 2010; Wang, 2014), prior IFRS research tends to indirectly assume that the economic benefits are driven by changes in reporting transparency and accounting comparability arising from IFRS adoption. While this has prompted an increased focus on examining the 'first-order' impact of mandatory IFRS adoption on transparency (e.g. Aharony et al., 2010; Ahmed et al., 2013; Chen et al., 2010), this study adds to the limited stream of comparability research (e.g. Barth et al., 2012; Cascino & Gassen, 2015; Yip & Young, 2012). Specifically, the objective of this study is to examine the conditions and mechanisms under which accounting comparability can be realized in the context of mandatory IFRS adoption. Enriching understanding of the costs and benefits of mandatory IFRS adoption as advocated by Christensen (2012) is important to countries that have already decided to make IFRS mandatory based on the comparability benefit, and to countries that are currently working towards this goal.

The remainder of this chapter is structured as follows. Section 4.2 reviews the related literature and develops the hypotheses. Section 4.3 presents the research methodology and framework, while Section 4.4 describes the sample and data construction for conducting the empirical study. Empirical results are detailed in Section 4.5 and additional analyses are provided in Section 4.6. Finally, Section 4.7 summarizes and concludes the study of this chapter.

4.2 Literature Review and Hypothesis Development

4.2.1 The Role of Firm-Level Reporting Incentives on Cross-Country Accounting Comparability

Ball et al. (2003), among others, contend that accounting standards alone do not determine financial reporting practice (Ball & Shivakumar, 2005; Burgstahler et al., 2006; Christensen et al., 2015; Daske et al., 2013; Soderstrom & Sun, 2007). They argue and empirically find that preparer incentives have a more important influence on a firm's reporting behavior, which in turn, determines the quality of accounting information being produced (Ball et al., 2003; Ball & Shivakumar, 2005; Burgstahler et al., 2006; Christensen et al., 2015; Daske et al., 2013). For example, Ball et al. (2003) examine the properties of income in the four East Asian countries (regions) of Hong Kong, Malaysia, Singapore and Thailand, which all have their standards derived from common-law sources (the UK, the US, and IAS) that are deemed to be of higher quality than civil-law standards. Consistent with their prediction, they find that financial reporting quality (as measured by timeliness of loss recognition) in these countries is generally low. They conclude that this is driven by poor preparer incentives, that are determined by the underlying economic and political factors and not by accounting standards per se.

Nevertheless, proponents of IFRS adoption advocate that IFRS standards issued by the IASB are a set of high quality internationally recognized accounting rules that would ideally enhance the functioning of capital markets globally (Barth, 2006). In particular, the prolonged accounting diversity due to the use of local accounting standards that varied considerably across countries is claimed to be the underlying reason for the mixed level of reporting transparency across firms (Barth et al., 2008) and the lack of cross-country comparability of accounting information (Barlev & Haddad, 2007; Laínez & Callao, 2000; Zeff, 2007). Hence, this has introduced an increased interest in IFRS, with the goal that uniform application of this global accounting standard will improve reporting quality and comparability of accounting information across firms and countries.

In line with this reasoning, extant studies provide empirical evidence to support the conjecture that IFRS adoption is significantly associated with a wide range of capital market benefits, which include enhanced analysts' performance and following (Beuselinck et al., 2010; Byard et al. 2011; Demmer et al., 2016; Horton et al., 2013, Houqe et al., 2014; Jiao et al., 2012; Tan et al., 2011; Wang et al., 2008), improved cross-border information transfers (Wang, 2014), lower crash risk (DeFond et al., 2015), reduced cost of capital (Li, 2010), debt financing benefit (Florou & Kosi, 2015), higher firms' investment efficiency (Gao & Sidhu, 2018) and higher cross-border capital flows (Amiram, 2012; Beneish et al., 2014; DeFond et al., 2011, 2012; Florou & Pope, 2012; Khurana & Michas, 2011; Yu & Wahid, 2014).

While prior IFRS research examining the adoption consequences based on various capital market outcomes so far has been consistent and positive in supporting the important role of accounting standards, the findings on the 'first-order' impact of IFRS adoption on reporting quality and accounting comparability remain ambivalent. For example, Barth et al. (2008) document better accounting quality for a sample of voluntary IFRS adopters in 21 countries after switching from non-US local accounting standards to IFRS, but other studies later find that such improvement does not consistently extend to mandatory IFRS adopters in various settings (see Chen et al., 2010; Chua et al., 2012, for similar findings; Ahmed et al., 2013; Houqe et al., 2012, for opposite findings). Similarly, even in a mandatory IFRS adoption environment, Yip and Young (2012) and Lang et al. (2010) provide conflicting results with respect to the comparability benefit of IFRS adoption. As the findings of Christensen et al. (2015) suggest, voluntary IFRS adoption is associated with higher accounting quality due to the presence of inherent incentives to comply, whereas improvement in accounting quality is only marginal for mandatory adopters because they are forced to adopt IFRS. Analogous to Christensen et al. (2015), Cascino and Gassen (2015) conclude that the marginal improvement in accounting comparability among mandatory IFRS

adopters is driven by a lack of incentives to comply, which again indicates the important role of reporting incentives as determinant of financial reporting.

Similarly, a stream of IFRS research also shows that their observed improvement in the quality of accounting information and the attendant capital market benefits do not necessary accrue to all firms in a uniform way (Byard et al., 2011; Christensen et al., 2015; Daske et al., 2013). In fact, studies examining the cross-sectional differences of the adoption impacts at the firm- and country-levels concur with Christensen et al. (2015) and Cascino and Gassen (2015) that the apparent benefits of IFRS are more prevalent when firms have strong incentives to be transparent despite applying the same accounting standards. For example, Daske et al. (2013) examine the association between liquidity and cost of capital surrounding voluntary and mandatory IFRS adoption by differentiating firms between "serious" and "label" adopters (which are classified based on firm-level changes in reporting incentives, actual reporting behavior, and the external reporting environment around the switch to IAS/IFRS). Consistent with their predictions, their findings comport with previous studies that the capital market benefits only accrue to "serious" adopters and not to "label" adopters due to their heterogeneity in reporting incentives.

Even as prior studies highlight that reporting incentives are an important determinant of financial reporting practices, most existing research examining the influence of reporting incentives typically focuses on firm-specific earnings attributes (such as relevance, timeliness and conservatism) rather than comparability as the financial reporting outcomes. According to a survey conducted by Cole et al. (2012), auditors, analysts and other users of European IFRS financial statements considered accounting methods used, along with judgments exercised by preparers and interpretation differences, as important factors for determining the comparability of financial statements. This is likely due to the nature of IFRS, which offers firms with substantial discretion to make judgment and to use private information when applying the principles-based standards

(Barth, 2006; Daske et al., 2013). Owing to the information asymmetry and agency problems, the way in which firms exercise this reporting discretion ultimately depends on firms' reporting incentives (Healy & Palepu, 2001), which are shaped by several exogenous factors including countries' institutional frameworks, market forces and firm characteristics. Therefore, at the firm-level, the presence of dissimilarity in firms' reporting incentives is expected to result in different quality of financial reporting outcomes, which thereby diminishes the comparability of accounting information.

Among the recent studies which examine issues related to accounting comparability, Fang et al. (2015) show that foreign mutual ownership is an important firm-level factor in producing comparable financial statements, but only for firms domiciled in emerging markets. In addition, they also find that non-US firms with greater US institutional ownership are more likely to switch to a Big 4 auditor, and that this switch subsequently enhances comparability between non-US firms and their US peers. Consistent with prior studies, their findings suggest that US institutional investment changes firms' reporting incentives and thereby serves as a mechanism for improving accounting comparability. In the context of a mandatory IFRS adoption, Cascino and Gassen (2015) find that the comparability of accounting information under the same set of accounting rules for mandatory adopters across different countries is also conditioned upon firms' compliance incentives, which vary across firms, regions and countries. This corroborates with the findings by Beuselinck et al. (2007), which provide evidence that reporting incentives that arise from the capital market, debt market and labor pressures significantly change the reporting behavior of the accrual accounting system across a sample of EU firms. This did not disappear even after the EU's mandatory IFRS adoption as from 2005.

Unlike previous studies in which the quality of accounting information is only linked with the reporting incentives for each respective individual firm, this chapter assesses the impact of

dissimilarity in firm-level reporting incentives between comparable firms when accounting comparability is evaluated across countries. Even though existing research unambiguously stresses that the quality of financial statements for a given firm is driven by its own firm-level reporting incentives (Burgstahler et al., 2006; Gaio, 2010), to date there is limited evidence to determine how *pairwise* firm-level dissimilarity in reporting incentives is related to the bilateral nature of comparability. The prediction is that comparability of accounting information is greater when a firm is benchmarked against its peers that are similar in each aspect of the financial reporting determinants. That is, while similar firms are assumed to subject to the same general economic conditions, their financial reporting outcomes still depend on management's reporting incentives, and so any significant difference in firm-level reporting incentives between similar firms is likely to diminish the level of pairwise accounting comparability.

Even extending this to the context of mandatory IFRS adoption, the goal of harmonizing accounting standards under the IFRS mandate does not necessary harmonize firms' reporting incentives. As Cascino and Gassen (2015) show, firms' incentives to comply with IFRS can vary at the firm, region, and country levels when applying the same accounting standards. In effect, poor reporting incentives moderates the comparability benefit of mandatory IFRS adoption. Then, in line with existing literature on the importance of reporting incentives, it is expected that the dissimilarity of reporting incentives between comparable firms is likely to persist irrespective of accounting standards used and should similarly have a diminishing role on the comparability outcome of IFRS adoption.

Based on the above-mentioned arguments, this chapter first establishes the relation between cross-country accounting comparability and pairwise dissimilarity in firm-level reporting incentives, which this study expects to be negatively associated. Then, this study explores the interaction between accounting standards and firms' reporting incentives with cross-country accounting

comparability, by examining whether the association between mandatory IFRS adoption and cross-country accounting comparability is conditioned upon the pairwise dissimilarity of firm-level reporting incentives. This leads to the following hypotheses:

H1(a): Cross-country comparability of accounting information between Australian and EU firms is negatively associated with the pairwise dissimilarity of firm-level reporting incentives.

H1(b): The association between mandatory IFRS adoption and cross-country accounting comparability is conditional on the pairwise dissimilarity of firm-level reporting incentives.

4.2.2 The Role of Country-Level Institutional Characteristics on Cross-Country Accounting Comparability

Prior research has shown that preparer incentives have an important influence on financial reporting practice, and that incentives are in part a function of institutional variables (Ball et al., 2000, 2003). This is because the incentives for preparers to produce high quality financial statements are bound by the framework set by the standard-setting regime and the constraints placed on them, which ultimately depend on firm-level and country-level governance mechanisms. Intuitively, when the country-level enforcement framework is strong, it is expected that firms have more incentives to produce better quality financial statements. This is consistent with Ball et al. (2003) and others, who find that the existence of high quality accounting standards alone does not lead to higher earnings quality and various capital market benefits if the accounting regime is not supported by a strong institutional environment (e.g. Barniv et al., 2005; Chu et al., 2014; Hail & Leuz, 2006; Hope, 2003a; Leuz et al., 2003; Shima & Gordon, 2011).

Holding accounting standards constant, Ball et al. (2000) demonstrate that the properties of accounting earnings vary internationally due to institutional differences in the demand for accounting income. Similarly, Rahman, Yammeesri and Perera (2010) also show that the varying institutional settings of individual countries define the business contexts that drive the diversity in accounting practices, which consequently result in different levels of financial reporting quality. Using an institutional theory perspective, they explain that firms are expected to be different in the way they conduct their accounting practice because they respond to the demands and pressures of their environment for producing accounting numbers, which are likely to differ vastly among countries.

Considering that firms are likely to be subject to different institutional arrangements and market forces which shape their reporting incentives, it is expected that the importance of country-level institutional determinants on financial reporting outcomes will also extend to influencing the ways in which comparable accounting information is achieved. As Zeff (2007) points out, global comparability could be impeded by four country-level differences in cultures, which are (i) the business and financial culture, (ii) the accounting culture, (iii) the auditing culture, and (iv) the regulatory culture. This is supported by Schultz Jr. and Lopez (2001), who demonstrate that even when accountants in France, Germany and the US are provided with similar facts and rules, their judgments appear to be significantly inconsistent. Their findings suggest that the underlying reason for this observed behavioral variances is due to national culture. Consequently, this country-level diversity is expected to reduce comparability of accounting information.

In the context of mandating a uniform set of accounting standards like IFRS, many studies also unambiguously show heterogeneity in their observed adoption impacts across countries. In particular, several IFRS studies find that firms' accounting policy choices continue to be influenced by their national practices that exist prior to IFRS adoption (Haller & Wehrfritz, 2013;

Kvaal & Nobes, 2010; 2012; Stadler & Nobes, 2014; Wehrfritz & Haller, 2014). Daske et al. (2008) are the first to show that the positive capital market consequences on market liquidity, firms' cost of capital and Tobin's Q occur only in countries where the institutional environment induces high firms' reporting incentives for transparent reporting and strong legal enforcement. This is likewise demonstrated by Li (2010), who finds a reduction in the firms' cost of capital among the EU countries, but only in countries with strong legal enforcement. Similarly, Houqe et al. (2012) also find that earnings quality is higher where a country offers strong protection to investors, while Byard et al. (2011) find lower analysts' forecast errors and dispersion only among mandatory adopters from countries with strong enforcement regimes and local accounting standards that differ substantially from IFRS.

Consequently, changes made to many countries' implementation mechanisms around the time of adopting IFRS are expected to influence the impacts of the new standards per se (Cascino & Gassen 2015; Christensen et al., 2013; Daske et al., 2008, 2013). To the extent that there is a prevailing view about the role of firm-level reporting incentives in shaping the quality of accounting information as explained in the preceding discussion, this chapter next exploits cross-country differences to identify whether and how institutional characteristics systematically explain the impact on cross-country accounting comparability around mandatory IFRS adoption.

As extant studies show that cross-country institutional differences determine the properties of accounting numbers, and thus the realization of any benefit around mandatory IFRS adoption, it is expected that the comparability benefit of IFRS adoption is also conditioned upon country-level institutional factors. Since comparability is determined based on the bilateral relationship between firms, the focus is therefore on whether the institutional differences between firms across different countries influence the perceived cross-country accounting comparability. Using only the legal origins as a broad proxy for the institutional environment within the EU, Yip and Young (2012)

find that the results for enhanced cross-country comparability are more consistent for EU mandatory adopters with same legal origin but remain mixed for those with different legal origins. While the study of Yip and Young (2012) has not identified as to which specific institutional characteristics contribute to the mixed results, it nevertheless provides some early indication that any significant difference in country-level institutional factors between firms is likely to undermine cross-country accounting comparability. However, it is also possible for this study to find a different result from those in the EU when cross-country accounting comparability is determined across EU and non-EU countries. Existing evidence, such as that by Daske et al. (2008) and Christensen et al. (2013), shows that the economic benefits of IFRS adoption are more pronounced for EU adopting firms than non-EU adopting firms. Otherwise, it is also possible that the influence is likely to be small (or negligible) if country-level institutional factors do not matter in determining the impact on cross-country accounting comparability. To gain a better understanding of the role of institutional characteristics on cross-country accounting comparability, this study first establishes the relation between cross-country accounting comparability and pairwise dissimilarity in country-level institutional factors between firms. This study then tests whether and how the association between mandatory IFRS adoption and cross-country accounting comparability is conditioned upon these institutional differences. The research hypotheses are thus developed as follows:

H2(a): Cross-country accounting comparability is negatively associated with the pairwise dissimilarity of country-level institutional factors.

H2(b): The association between mandatory IFRS adoption and cross-country accounting comparability is conditional on the pairwise dissimilarity of country-level institutional factors.

4.3 Research Methodology and Framework

4.3.1 Research Design

Following previous comparability studies, this study uses a matched sample research design in identifying *similar firms* across countries when assessing changes in cross-country accounting comparability. That is, this study concentrates on firms in the same industry (based on 2-digit SIC codes) and primarily focuses on investigating whether any significant pairwise dissimilarities in firm-level reporting incentives and country-level institutional factors between similar firms diminish the comparability of their financial statements. Consistent with prior work, it is assumed that firms in the same industry are more likely to face similar economic events due to similar business environments and operational characteristics, and therefore are expected to be more comparable from the accounting perspective. Furthermore, this study also employs an additional matching procedure based on firm size (based on total assets in 2006) to mitigate the potential confounding influence on inferences arising from any economic and accounting differences.

To test cross-country accounting comparability, this study chooses the unique setting of mandatory IFRS adoption as of 2005 in Australia and the EU as a natural experiment. Prior to this date, firms in Australia and member countries of the EU were largely subjected to different regulatory and accounting frameworks for preparing their financial statements. Then firms in these jurisdictions were simultaneously required to switch from the use of local accounting standards to IFRS as of 1 January 2005. The objective is similar, in that a uniform adoption of global accounting standards reduces accounting diversity and improves cross-country comparability. Therefore, this research setting allows this study to interpret the results as to whether and how pairwise dissimilarities in firm-level incentives and country-level institutional factors diminish the degree of comparability among mandatory IFRS adopters. In particular, this study categorizes the sample period into the

pre-adoption (2000–2004) and the post-adoption (2007–2011) periods in assessing any changes in cross-country comparability between the paired firms from Australia and the EU arising from mandatory IFRS adoption. To alleviate the concern that transition uncertainties during firms' switching from local accounting standards to IFRS could potentially confound inferences made, this study removes all firm-year observations in 2005 and 2006. This study also ensures that there are the same sets of firms and equal observations in the pre-adoption and the post-adoption periods to strengthen the validity of the inferences for this study.

4.3.2 Measurement of Accounting Comparability

As research on accounting comparability remains an emerging field, this study follows similar prior research in adopting the comparability measurement developed by De Franco et al. (2011) as the main dependent variable (e.g. Cascino & Gassen, 2015; Yip & Young, 2012). As De Franco et al. (2011) describe, accounting comparability can be measured as the extent to which accounting functions for two firms similarly translate economic events into financial statement information. Therefore, they posit that earnings and share returns can be used as the relevant proxies for the net effect of economic outcome and accounting performance, respectively. These proxies are then applied in the following regression to model the accounting function for each firm:

$$NI_{i,t} = \alpha_i + \beta_i RETURN_{i,t} + \varepsilon_{i,t} \quad (4.1)$$

where $NI_{i,t}$ is annual net income (scaled by total assets) of firm i in year t, and $RETURN_{i,t}$ is the cumulative share return of firm i over year t. The coefficients, α_i and β_i, from estimating equation (4.1) for firm i, represent the accounting function for firm i. Re-estimating the equation for firm j provides the coefficients, α_j and β_j, that constitute the accounting function for firm j. Similar to previous cross-country comparability studies (e.g. Barth et al., 2012; Cascino & Gassen, 2015),

this study estimates equation (4.1) at the firm-level, using annual data separately for the respective time periods (the pre-adoption period and the post-adoption period).[38]

To construct the comparability measurement, equation (4.1) is estimated separately at the firm-level for each matched pair of firms to obtain the respective coefficients that represent firm *i*'s accounting function (α_i and β_i) and firm *j*'s accounting function (α_j and β_j). Based on the share return of firm *i* for each year *t*, the predicted earnings for firm *i* can then be estimated using its own accounting function (α_i and β_i) and the corresponding matched firm *j*'s accounting function (α_j and β_j) to yield two predicted values. This is represented by regressing equations (4.2) and (4.3) as below:

$$E(NI)_{i,i,t} = \hat{\alpha}_{oi} + \hat{\beta}_{1i} RETURN_{i,t} \quad (4.2)$$

$$E(NI)_{i,j,t} = \hat{\alpha}_{oj} + \hat{\beta}_{1j} RETURN_{i,t} \quad (4.3)$$

After obtaining the two computed predicted earnings of firm *i* for a given share return in year *t*, which are $E(NI)_{i,i,t}$ and $E(NI)_{i,j,t}$, this study then computes the absolute value of their difference.

By repeating the described process for firm *j* in each year *t*, two expected earnings ($E(NI)_{j,j,t}$ and $E(NI)_{j,i,t}$) are also obtained so that this again yields the absolute value of the difference in the two predicted values for firm *j*.

[38] De Franco et al. (2011) applied the comparability measurement using quarterly data, which is generally not feasibly available for cross-country research on IFRS adopting firms.

Finally, for each firm-pair *i* and *j*, this study computes the metric for 'accounting systems comparability' (*ASCOMP*) between firm *i* and firm *j* as the mean of the above two absolute values over *n* years for each sub-period *sp* (the pre-adoption or the post-adoption periods). By expressing the value as a negative value, a higher value therefore indicates greater accounting comparability for firm-pair *i* and *j*.

$$ASCOMP_{i,sp} = -\frac{1}{2n}\sum\left|E(NI)_{i,i,t} - E(NI)_{i,j,t}\right| + \left|E(NI)_{j,j,t} - E(NI)_{j,i,t}\right| \quad (4.4)$$

4.3.3 Empirical Frameworks

The Role of Firm-Level Reporting Incentives on Cross-Country Accounting Comparability

To examine the role of firm-level reporting incentives in driving the change in cross-country comparability of financial accounting information around mandatory IFRS adoption, this study incorporates a set of firm-level variables to proxy for firms' reporting incentives for transparent reporting (*FIRM_FACTORS*) and an interaction term between these firm-level variables and the indicator variable *IFRS*. To better assess the individual impact and the moderating role of the firm-level variables on accounting comparability, the approach is to first include each firm-level variable independently in the model and follow with the combined influences of all firm-level variables. Equation (4.5) is therefore expressed as below:

$$ASCOMP_{i,sp} = \gamma_0 + \gamma_1 IFRS_{sp} + \sum \gamma_2 CONTROLS_{i,sp} + \sum \gamma_3 FIRM\_FACTORS_{i,sp} + \sum \gamma_4 FIRM\_FACTORS_{i,sp} * IFRS_{sp} + \varepsilon \quad (4.5)$$

By estimating the regression equation (4.5), a significantly positive γ_1 provides evidence that mandatory IFRS adoption has a positive association with accounting comparability between cross-country firms after controlling for dissimilar firm's reporting incentives. A negative and significant

γ_3 indicates that greater dissimilarity in firm-level reporting incentives undermines cross-country accounting comparability, while the significance of the negative coefficient γ_4 on the interaction with the indicator variable *IFRS* supports the moderating role of dissimilar firm-level reporting incentives on cross-country accounting comparability post-IFRS adoption.

The Role of Country-Level Institutional Characteristics on Cross-Country Accounting Comparability

To exploit cross-country variations to examine the role of country-level institutional factors on the level of comparability of accounting figures, this study regresses accounting comparability on a set of country-level variables (*COUNTRY_FACTORS*) and an interaction term with the indicator variable *IFRS*. Akin to the above, this study first introduces the country-level variables one at a time to assess their individual impacts on accounting comparability, and subsequently on the combined influences of these country-level variables on accounting comparability. Thus, equation (4.6) is represented as follows:

$$ASCOMP_{i,sp} = \delta_0 + \delta_1 IFRS_{sp} + \sum \delta_2 \, CONTROLS_{i,sp} + \sum \delta_3 \, COUNTRY\_FACTORS_{i,sp} + \sum \delta_3 \, COUNTRY\_FACTORS_{i,sp} * IFRS_{sp} + \varepsilon \quad (4.6)$$

Identical to the multivariate tests on the firm-level variables, this study interprets a significantly positive δ_1 as evidence for the conjecture that mandatory IFRS adoption is associated with accounting comparability improvement between cross-country firms even when institutional differences are controlled for. Where firms are from countries that have significant different institutional environments, a significantly negative coefficient δ_2 provides evidence that cross-country accounting comparability is impaired, while a coefficient δ_3 that is significantly negative indicates that cross-country accounting comparability is moderated by these institutional differences after mandatory IFRS adoption.

4.3.4 Independent Variables

The objective of this study is to determine the impact of firm-level differences in reporting incentives and institutional factors on the comparability of accounting information across cross-country firms. Therefore, the independent variables incorporated in this study are based on the *differences*, rather than on the levels, in firm-pair characteristics, and so the suffix "*_Diff*" is added to the variables for easy identification. Also, the dependent variable ($ASCOMP_{i,sp}$) used in the regression models is obtained by pooling the firm-level observations in each sub-period (either the pre-adoption or the post-adoption periods), and for this reason the independent variables also need to reflect the same for consistency.

All independent variables with continuous data, with the exception of the control variable *SIZE* (see below), are measured by the absolute value of the difference between firm *i*'s and firm *j*'s firm-level variables and their country-level variables. Higher values are indicative of greater differences for the variables of interest between firms/countries. In other words, for all applicable firm-level continuous data, this study averages each variable of interest for each firm in each sub-period and uses the absolute value of the difference in these averages to construct the *difference* variables. For country-level continuous data, subject to data availability, a similar averaging approach is also used to form the mean value for each sub-period and to construct the *difference* metrics.[39]

For other dichotomies using an indicator variable, the variables of interest are compared between firms/countries before a value of one is assigned when they are different, and zero otherwise. To capture the influence of the different factors in explaining cross-country accounting comparability,

[39] No averaging is done for country-level data that is time-invariant.

the firm-level reporting incentives' variables and the country-level institutional variables are introduced one at a time to the models before all variables are incorporated into one model. Regressions also include the control variables and industry fixed effects in some specifications. Table 4.1 lists the description for all variables used in the regression models, including for firm-level reporting incentives variables (*FIRM_FACTORS*) and country-level institutional variables (*COUNTRY_FACTORS*).

TABLE 4.1
VARIABLE DESCRIPTION

Variable	Description
ASCOMP	The comparability value between two firms in period *t.*
IFRS	An indicator variable that equals one for the post-adoption period observations, and zero otherwise.
SIZE	The ratio of the smaller value of total assets to the larger value of the firms in a pair in 2006.
LISTINGS	An indicator variable that equals one if the two firms in a pair are listed on at least one of the same stock exchanges, and zero otherwise.
ROE_DIFF	The absolute value of the difference in the average *ROE* for each firm-pair in period t. ROE is defined as net income divided by total equity.
TOBINQ_DIFF	The absolute value of the difference in the average *TOBINQ* for each firm-pair in period *t*. TOBINQ is defined as market value of assets divided by book value of assets.
LEVERAGE_DIFF	The absolute value of the difference in the average *LEVERAGE* for each firm-pair in period *t*. *LEVERAGE* is defined as total liabilities divided by total assets.
CLOSEHELD_DIFF	The absolute value of the difference in the average *CLOSEHELD* for each firm-pair in period *t*. *CLOSEHELD* is defined as the percentage of closely held shares (number of closely held shares/common shares outstanding) as reported by DataStream/Worldscope.
FOREIGNSALES_DIFF	The absolute value of the difference in the average *FOREIGSALES* for each firm-pair in period *t*. FOREIGNSALES is defined as the percentage of foreign sales (foreign sales/total sales).
BIG4_DIFF	An indicator variable that equals one if at least one of the two firms in a pair is not audited by a Big 4 auditor, and zero otherwise.
LEGALORIGIN_DIFF	An indicator variable that equals one when the home countries of the two firms in a pair have different legal origins (common-law/civil-law), and zero otherwise.
ENFORCE_DIFF	The absolute value of the difference in the assigned value for each element in the *ENFORCE* index for 2002 (the pre-adoption period) and 2008 (the post-adoption period) between the home countries of the two firms in a pair, as obtained from Brown et al. (2014).
PROTECTION_DIFF	The absolute value of the difference in the average *PROTECTION* score for period t between the home countries of the two firms in a pair. *PROTECTION* score is obtained from the Strength of Minority Investor Protection Index provided by the Doing Business Database of the World Bank Group; higher values of *PROTECTION* represent stronger investor protection.
ROL_DIFF	The absolute value of the difference in the average *ROL* score for period t between the home countries of the two firms in a pair. *ROL* score is based on the "rule of law" variable obtained from the Worldwide Governance Indicators published by the World Bank developed by Kaufmann et al. (2014); higher values of *ROL* represent stronger enforcement.

TABLE 4.1 (CONTINUED)

Variable	Description
JUDEFF_DIFF	The absolute of the difference in *JUDEFF* score between the home countries of the two firms in a pair. *JUDEFF* score is based on the 'judicial efficiency' variable from La Porta et al. (1998); higher values of *JUDEFF* represent higher judicial efficiency.
INTRAD_DIFF	The absolute value of the difference in *INTRAD* score between the home countries of the two firms in a pair. *INTRAD* score is obtained from Beny (2005); higher values of *INTRAD* represent more prohibitive insider trading laws.

FIRM-LEVEL REPORTING INCENTIVES VARIABLES (FIRM_FACTORS)

To capture firm-level variations in terms of their reporting incentives for transparent reporting, this study closely follows Byard et al. (2011) and other previous research (e.g. Ashbaugh, 2001; Barth et al., 2008; Christensen et al., 2007; Daske et al., 2013; Leuz, 2006; Pagano, Röell & Zechner, 2002). Specifically, this study identifies: (1) profitability, (2) growth opportunities, (3) leverage, (4) dispersed ownership structure, (5) international exposure, and (6) audit quality, as firm-level determinants that are highly associated with reporting incentives to provide high quality financial reporting. As the existing research on accounting comparability is still in its infancy, this study therefore refers to the body of literature on disclosure practices and other financial reporting outcomes to understand the link between various firm characteristics and accounting comparability. Accordingly, this study uses these six firm-level proxies to compare the reporting incentives for each firm-pair and conjectures that any significant difference in the firm-level reporting incentives is likely to decrease accounting comparability, which leads to the prediction of a negative coefficient on all the firm-level variables as explained below.

(i) *ROE_DIFF*

To proxy for a firm's profitability, this study adopts the most commonly used profitability measure of return on equity (*ROE*), which is defined as net income divided by total equity (Dong & Stettler, 2011). As argued by Meek et al. (1995), profitable firms are likely to have incentives to distinguish themselves from less profitable firms in competing for capital on the best available terms. Nevertheless, prior earnings management studies also find evidence that firms' profitability is associated with accounting practices and disclosures due to political pressures (e.g. Godfrey & Jones, 1999; Moses, 1987; Watts & Zimmerman, 1978). Therefore, it is expected that firms' profitability influences their reporting incentives on the extent to which IFRS standards are being implemented rigorously, and consequently on the

financial reporting outcomes. If two firms with significantly different profitability exhibit diverged reporting incentives and accounting practices, then this is predicted to diminish accounting comparability. This is captured by *ROE_DIFF*, which is the absolute value of the difference in the average *ROE* for each firm-pair in each sub-period (the pre-adoption or the post-adoption periods).

(ii) *TOBINQ_DIFF*

A firm's growth opportunity can be reflective of its need to raise capital to fund its investment opportunities, thereby potentially providing managerial incentives to enhance the quality of accounting information to obtain required capital at a lower cost. This is evidenced by Gaio (2010), who finds a positive association between earnings quality and firms' growth opportunities across 38 countries. Therefore, this study employs Tobin's Q (*TOBINQ*) as a proxy for firms' growth by measuring it as the market value of assets divided by the book value of assets. The market value of assets is the sum of the book value of assets and the market value of common equity before deferred taxes. *TOBINQ_DIFF* is based on the absolute value of the difference in the average Tobin's Q for each firm-pair in each sub-period (the pre-adoption or the post-adoption periods), which is to proxy for the difference in growth opportunities that is expected to influence firms' reporting incentives and consequently on the comparability of financial statements across firms.

(iii) *LEVERAGE_DIFF*

Financial leverage (*LEVERAGE*) is measured as total liabilities divided by total assets, and *LEVERAGE_DIFF* is computed as the absolute value of the difference in firm-pair's leverage that has been averaged for each sub-period (the pre-adoption or the post-adoption periods). Consistent with prior research, this study uses a firm's leverage as a proxy to capture the firm's reliance on sourcing capital from *insiders*, because this determines firms' incentives to provide public disclosure and to use disclosure as a means of reducing information asymmetry with shareholders (e.g. Cuijpers & Buijink, 2005; Meek et al., 1995;

Zarzeski, 1996). Meek et al. (1995) and Zarzeski (1996) find that disclosure decreases with leverage. However, Ahmed and Courtis (1999) and Jaggi and Low (2000) document a positive association between disclosure and leverage. While the previous findings on the relation of leverage with disclosure practices remain mixed, the impact of leverage on firms' financial reporting suggests that any difference in capital dependency between firms is likely to be associated with the comparability of financial statements.

(iv) *CLOSEHELD_DIFF*

This study measures a firm's ownership concentration based on the percentage of closely held shares (*CLOSEHELD*) reported by the Worldscope Database. This study then uses the absolute value of the difference in a firm-pair's average closely held shares in each sub-period (the pre-adoption or the post-adoption periods) as *CLOSEHELD_DIFF*. This is consistent with prior research which demonstrates that the degree of concentration in ownership structure is positively associated with the level of earnings management (Haw et al., 2004; Leuz, 2006; Leuz et al., 2003). This is because firms with concentrated ownership are more likely to rely on private channels to communicate firm performance and thereby reduce reliance on publicly disclosed financial statements. Consequently, the influence of ownership concentration on firms' incentive to provide quality financial reporting is also expected to change accounting comparability where two firms have different ownership structures.

(v) *FOREIGNSALES_DIFF*

Prior research shows that foreign sales have a direct link with levels of disclosure because they are used as a proxy for a firm's international exposure (Archambault & Archambault, 2003; Meek et al., 1995; Zarzeski, 1996). This is because firms with greater international exposure are likely to require foreign resources, such as labor and capital, which consequently provide firms with incentives to disclose more information in order for them to obtain the necessary resources. For a similar reason, Tarca (2004) also finds support for

the notion that firms with higher international exposure are more likely to adopt IFRS voluntarily to respond to the pressure to provide more internationally comparable accounting information. Therefore, these findings suggest that a firm's international exposure, as proxied by the percentage of foreign sales (*FOREIGNSALES*) obtained from the Worldscope Database, can influence firms' reporting incentives and accounting practices. This leads to an expectation that any significant difference between firms is also likely to reduce accounting comparability. Accordingly, this study measures *FOREIGNSALES_DIFF* as the absolute value of the difference in firm-pair's average foreign sales in each sub-period (the pre-adoption or the post-adoption periods).

(vi) *BIG4_DIFF*

BIG4_DIFF is an indicator variable that is equal to one if the auditor for a pair of firms is not one of the Big 4 firms for the respective sub-period, and zero otherwise.[40] Consistent with the extant research on the association of audit characteristics with the quality of accounting numbers, this study uses the Big4/non-Big 4 dichotomy to proxy for audit quality, as prior findings show a positive link between audit quality and earnings quality (e.g. Becker et al., 1998; Francis et al., 1999, Krishnan, 2005). If two firms are not equally audited by one of the Big 4 auditors, then it is predicted that the disparity in audit quality is likely to diminish accounting comparability.

COUNTRY-LEVEL INSTITUTIONAL VARIABLES (COUNTRY_FACTORS)

In addition to firm-level reporting incentives, this study also focuses on the institutional differences exhibited by the countries in which the pair of firms are domiciled as determinants of accounting comparability, whereby a set of proxies used in prior research is incorporated to reflect the

[40] As the sample period of this study precedes the collapse of Arthur Andersen, which was previously one of the largest auditing firms like the current Big 4 auditors, this study treats the presence of Arthur Andersen as the same as a Big 4 auditor for the purpose of constructing this variable.

different elements of a country's institutional settings. Overall, previous findings indicate that firms have higher incentives to produce high quality financial reporting where there is strong legal enforcement (Byard et al., 2011; Daske et al., 2008; Hope, 2003a; Li, 2010), better investor protection (Houqe et al., 2012), and in regulatory environments with stronger institutions, higher levels of economic development, greater business sophistication and more globalized markets (Isidro & Raonic, 2012). For the purpose of this study, a negative coefficient is interpreted as evidence that significant institutional differences between countries diminishes accounting comparability.

(i) *LEGALORIGIN_DIFF*

Many previous studies have classified countries based on their legal origin (common-law versus civil-law) following the seminal work by La Porta et al. (1998). Overall, they find that this proxy is associated with country-level differences in the levels of financial disclosure (Jaggi & Low, 2000), timeliness in loss recognition (Ball et al., 2000) and the effectiveness of corporate governance (Barniv et al., 2005). While this dichotomy of countries is arguably too comprehensive by itself to reflect the many elements in cross-country institutional differences, Hope (2003b) notes that this measure is the most *primitive* legal factor as it correlates with many other legal variables. Therefore, this study emulates prior studies by incorporating this legal classification to complement other more specific institutional factors and capture unaccounted differences in a country's institutional environment, such as the link between financial reporting requirements and taxation or the financing systems. Accordingly, this study creates an indicator variable *LEGALORIGIN_DIFF* that equals one if the home countries of the two firms are from different legal origins, and zero otherwise.

(ii) *ENFORCE_DIFF*

This study uses an *ENFORCE* index developed by Brown, Preiato and Tarca (2014) to reflect the level of activities of national enforcement bodies with respect to the compliance of

accounting standards. It is assumed that this index has a more direct association with the quality of financial statement outcomes than those other enforcement indexes that primarily focus on the enforcement of different elements of the legal system or securities law (e.g. the 'rule of law' proxies developed by La Porta et al. (1998) and Kaufmann et al. (2014)). Given that this index is only available for 2002, 2005 and 2008, this study applies the 2002 values to proxy for the accounting enforcement environment during the pre-adoption period and the 2008 values for the post-adoption period. Despite the limited availability, this index still provides a partial time-variant measure to reflect the institutional environment in which accounting standards were enforced across countries before and after IFRS adoption.

For *ENFORCE_DIFF*, this study constructs a composite measure for each country-pair by taking the sum of the absolute differences in the assigned value for each element in the index between the home countries of firm *i* and firm *j*. This is to ensure that any difference between countries across different elements is accounted for individually, rather than by simply taking the difference between the aggregated values in which the influence is potentially diluted by different elements in the index composition. Appendix A.1 presents the measurement of *ENFORCE_DIFF* for all the country-pairs included in the sample of this study.

(iii) *PROTECTION_DIFF*

Complementary to accounting enforcement, this study also captures differences in the level of general enforcement at country-level and thus follows Hope's (2003a) measure of enforcement by incorporating investor protection as a proxy. Investor protection is another significant element of a country's institutional arrangement, because La Porta et al. (2000) note that it is common in many countries to find that minority shareholders and creditors are being expropriated by the controlling shareholders. As a result, the legal approach to

corporate governance is through the protection of outside investors against opportunistic behavior by majority shareholders, which attenuates incentives for managers to engage in opportunistic accounting practices and therefore incentivizes exercising a greater standard of care in providing high quality financial information to investors (Ball, 2001; Hung, 2000). Consequently, Leuz et al. (2003) find that the systematic difference in the country-level of earnings management is negatively associated with the strength of investor protection, and subsequent papers also document that the strength of investor protection is linked to observed changes in financial reporting outcomes and the capital market consequences around IFRS adoption (e.g. Byard et al., 2011; Houqe et al., 2012).

To proxy for the strength of investor protection, this study employs the index provided by the Doing Business Database of the World Bank Group, which has been constructed based on the methodology by Djankov et al. (2008). The focus of this index is to measure the strength of minority shareholders' protection against expropriation by corporate insiders, and it reflects three dimensions: (1) transparency of related-party transactions (extent of disclosure index), (2) liability for self-dealing (extent of director liability index), and (3) shareholders' liability to sue officers and directors for misconduct (ease of shareholder suits index). Using data collected from a survey, this index ranges from 0 to 10, with higher values indicating stronger protection for minority shareholders. Based on this index, this study constructs *PROTECTION* by averaging the scores for the available years between 2006 and 2011 and gauges the difference (*PROTECTION_DIFF*) for each country-pair based on the absolute value of the difference in the mean scores.

(iv) *ROL_DIFF*

To complement the proxy for the level of accounting enforcement (*ENFORCE*) and also follow the previous work of Hope (2003a) in measuring enforcement, this study uses the 'Rule of Law' (*ROL*) variable developed by Kaufmann et al. (2014), which is sourced from

the Worldwide Governance Indicators published by the World Bank. While this index is less directly associated with the enforcement of accounting standards, it is crucial to account for the influence of cross-country differences on the degree to which market participants have confidence in and comply with the laws of society on cross-border accounting comparability. In particular, this index consists of several elements of enforcement in general, such as the quality of contract enforcement, property rights, the police, and the courts, and the likelihood of crime and violence (Kaufmann et al., 2014), in which higher values indicate stronger enforcement. As this index is available annually for most years since 1996, this study computes the mean score for each sub-period for each sample country, and *ROL_DIFF* is based on the absolute value of the difference in the mean scores for each country-pair.[41] Using this time-variant proxy enables this study to account for changes in enforcement level in general over time.

(v) *JUDEFF_DIFF*

Aside from investor protection and rule of law, Hope (2003a) also incorporates judicial efficiency as another component of enforcement, that is, the extent to which the "efficiency and integrity of the legal environment as it affects business" (La Porta et al., 1998, p. 1124). In particular, Hope (2003a) deems judicial efficiency an important factor in complementing the enforcement of accounting standards as accounting regulations tend to be more effectively enforced in countries with a strong judicial system; but not necessarily the opposite. Consistent with that, this study therefore incorporates the judicial efficiency (*JUDEFF*) score from La Porta et al. (1998), which ranges from 0 to 10, with lower values indicating less efficiency. The absolute difference in *JUDEFF* for each country-pair is thus being computed to represent *JUDEFF_DIFF*.

[41] Data for 2001 is the only missing year for the sample period of this study.

(vi) *INTRAD_DIFF*

Consistent with Hope (2003a) in measuring enforcement, this study also incorporates a measure for insider trading laws, because it is argued that insider trading laws attenuate managers' incentives to engage in manipulative accounting practices that enable them to profit from trading in the firm's shares. Consequently, prior research demonstrates that insider trading laws are positively associated with the dispersion of equity ownership, the accuracy of stock prices and the liquidity of stock markets (Beny, 2005), and that insider trading is also related to earnings management (Beneish & Vargus, 2002) and the cost of equity capital (Bhattacharya & Daouk, 2002). Using an index developed by Beny (2005) to account for country-level differences in the degree of insider trading prohibition, the proxy *INTRAD* therefore represents four elements, including: (1) tipping, which equals one if a corporate insider is liable for providing price-sensitive, private information to an outsider (a so-called tippee) and encouraging the tippee to trade on behalf of the insider, and zero otherwise, (2) tippee, which equals one if tippees are also forbidden to trade on price-sensitive private information, and zero otherwise, (3) damages, which equals one if the potential monetary penalty for violating a country's insider trading law is greater than the illicit trading profits, and zero otherwise, and (4) criminal, which equals one if insider trading is a criminal offence in the country, and zero otherwise. This index thus ranges from 0 to 4, with higher values indicating more prohibitive insider trading laws, while *INTRAD_DIFF* is calculated as the absolute difference in *INTRAD* for each country-pair.

CONTROL VARIABLES

According to Lang et al. (2010), there is no theoretical or empirical guidance in relation to which control variables should be included in a regression to explain accounting comparability. This study follows Yip and Young (2012) by including three control variables, namely: (1) firm size (*SIZE*), (2) common listings (*LISTINGS*), and (3) industry fixed effects, in order to capture the

many unobservable firm-specific characteristics.[42] Due to the absence of theory, there is no prediction as to what the signs of the coefficients on these control variables will be.

(i) *SIZE*

Widely used in prior research, firm size is a control for the economic fundamentals of a firm's business model and operating environment (Dechow, Ge & Schrand, 2010; Doyle, Ge & McVay, 2007a, 2007b). Moreover, several studies also find evidence that size is positively related to firm-level earnings quality (Dechow & Dichev, 2002; Francis, 2004; Gaio, 2010). Consistent with Yip and Young (2012), this study therefore measures the difference in size (*SIZE*) between two firms as the ratio of the smaller value of total assets to the larger value of the two firms *i* and *j* for each firm-pair in 2006.

(i) *LISTING*

LISTING is an indicator variable that equals one if the pair of firms is listed on at least one of the same stock exchanges, and zero otherwise. The inclusion of this variable is to control for the extent to which firms are subject to similar stock exchange requirements when they are listed on the same stock exchange. This is consistent with previous research which provides evidence that a firm's listing influences firms' incentives to use international accounting standards (Tarca, 2004), levels of disclosure (Botosan & Frost, 1998) and earnings management (Lang et al., 2006).

(ii) *INDUSTRY FIXED EFFECTS*

Prior research demonstrates that there are variations in disclosure practices and corporate governance structures across industries (Agrawal & Knoeber, 2001; Demsetz & Lehn, 1985; Meek et al., 1995). To control for unobservable firm characteristics and potential omitted

[42] One exception from the study by Yip and Young (2012) is that this study does not include the control variable *Com_Code* to proxy for two firms with home countries of different legal origins, because it is one of the key variables for the country-level institutional factors used by this study (*LEGALORIGIN_DIFF*). Instead, country fixed effects are incorporated into the regressions of this study where appropriate.

variables, this study includes industry fixed effects at the two-digit SIC industry classification level.

4.4 Sample and Data Construction

The research setting of this study concentrates on the bilateral relationship between firms from Australia and member countries of the EU that have similarly mandated IFRS adoption as of 2005 but continue to be characterized by differences in reporting incentives and institutional factors. Of the many EU countries that were required to comply with EU Regulation 1606/2002, the initial sample of this study comprises eight EU countries that have at least 200 listed firms, which include Denmark, France, Greece, Germany, Italy, Norway, Sweden and the UK.

From this initial sample, this study matches Australian firms with firms in those EU countries based on industry and size. Explicitly, the matched sample design involves repeating the matching procedure for each Australian firm with another EU firm across the eight EU countries in the initial sample. Even though the same Australian firm can be matched with multiple EU firms domiciled in different EU countries, it is important that the firm-pairs satisfy the industry and size matching requirements. Following prior research (e.g. Barth et al., 2012; De Franco et al., 2011; Yip & Young, 2012), each firm-pair is matched based on the same two-digit SIC industry classification level and their highest proximity in size (based on total assets in 2006), in which the size of the smaller firm is at least 50 percent of the size of the larger firm for each firm-pair. The exception is that this study chooses to remove mining firms from the sample construction because there is

disproportionate matching for mining firms (SIC codes 10–14) between Australia and the EU that potentially distorts the interpretation of the results.[43]

Furthermore, this study also removes all firm-year observations that correspond to early IFRS adopters, as these firms are likely to possess different inherent reporting incentives from 2005 mandatory adopters (Ashbaugh, 2001). Firms that adopted US GAAP before 2005 and firms that delayed adoption of IFRS post-2005 are also deleted from the sample as the primary focus of the study is on the switch from non-US local accounting standards to IFRS as of 2005. This study also further excludes firm-year observations for financial, insurance and real estate firms (SIC codes 60–67) and those with missing data. Most of the financial and non-financial data are collected from Thomson Reuters, Worldscope and DataStream databases as deemed appropriate. To mitigate the influence of outliers on the inferences, all financial variables are winsorized at the top and bottom 1 percent.

The final sample of this study consists of 496 firm-pairs of similar firms matched between Australia and the EU member countries and 2,480 firm-year observations for the respective pre-adoption (2000–2004) and the post-adoption (2007–2011) periods.[44] Table 4.2 summarizes the final sample composition by country and the institutional characteristics of those sample countries. Among the sample firms across the eight EU countries, only those from the UK have the same common-law legal origin as those from Australia, while the rest of the sample firms are from the civil-law countries.

[43] Nobes (2013) asserts that mining companies are to be treated differently in research studies due to their sector-specific policies.
[44] This is based on 496 firm-pairs over 5 years for each sub-period.

TABLE 4.2
SAMPLE DISTRIBUTIONS BY COUNTRY AND INSTITUTIONAL VARIABLES

Country	Frequency	EU Member Countries	Legal Origin (*LEGAL ORIGIN*)	Enforcement Index (*ENFORCE*)		Protection Index (*PROTECTION*)	Rule of Law Index (*ROL*)		Judicial Efficiency Index (*JUDEFF*)	Insider Trading Laws Index (*INTRAD*)	Countries with Concurrent Substantive Enforcement Changes (*EU_ENF*)
				2002	2008		Pre-Adoption	Post-adoption			
Australia	496	No	Common-Law	22	22	5.70	1.78	1.75	10.00	3	No
Denmark	49	Yes	Civil-Law	12	22	6.30	1.89	1.94	10.00	3	No
France	90	Yes	Civil-Law	19	16	5.70	1.35	1.46	8.00	4	No
Germany	49	Yes	Civil-Law	5	21	5.00	1.61	1.67	9.00	3	Yes
Greece	45	Yes	Civil-Law	5	9	3.12	0.81	0.69	7.00	2	No
Italy	28	Yes	Civil-Law	19	19	6.00	0.69	0.40	6.75	3	No
Norway	35	Yes	Civil-Law	12	22	6.70	1.88	1.91	10.00	1	Yes
Sweden	76	Yes	Civil-Law	5	9	5.42	1.85	1.93	10.00	3	No
UK	124	Yes	Common-Law	14	22	8.00	1.64	1.70	10.00	3	Yes
	992										

TABLE 4.2 (CONTINUED)

This table reports the sample distributions by country and some institutional descriptions. The balanced sample of firm-year observations that is used to construct the comparability metrics is based on the matching of firms between Australia and EU member countries. *LEGALORIGIN* denotes the sub-group of law regime a country belongs to as sourced from La Porta et al. (1998). *ENFORCE* measures the level of activities of national enforcement bodies with respect to the compliance of accounting standards, based on the index sum for 2002 and 2008 developed by Brown et al. (2014). Further details on the transformation of *ENFORCE* for analysis are presented in Appendix A.1. *PROTECTION* measures the strength of minority investor protection, based on the index provided by Doing Business Database of the World Bank Group. *ROL* is the average of annual 'Rule of Law' score for the respective sample period that is sourced from the Worldwide Governance Indicators published by the World Bank. *JUDEFF* measures the extent of judicial efficiency, based on the score from La Porta et al. (1998). *INTRAD* measures the extent of insider trading prohibition, which is an index developed by Beny (2005). *EU_ENF* denotes the sub-groups of whether a substantive change in reporting enforcement occurred concurrently with the 2005 IFRS mandate (based on a survey of national regulators and audit firms and publicly available sources) as sourced from Christensen et al. (2013).

4.5 Empirical Results

4.5.1 Descriptive Statistics

Table 4.3 reports descriptive statistics for variables used in this chapter, as presented for the full sample period and for the sub-samples of the pre- and post-adoption periods. For dependent variable *ASCOMP*, it accords with the expectation that the mean and median values are higher in the post-adoption period (mean of -0.151 and median of -0.083) than in the pre-adoption period (mean of -0.179 and median of -0.090). Although only the difference in mean value of *ASCOMP* is significant at 5 percent level, it provides some initial indication that cross-country accounting comparability between firms in Australia and the EU is higher after mandatory IFRS adoption.

For firm-level variables (*FIRM_FACTORS*), the mean profitability difference (*ROE_DIFF*) for pairs of adopting firms decreased significantly from 8.153 to 0.368 after switching to IFRS, but their mean difference in foreign sales (*FOREIGNSALES_DIFF*) instead became significantly higher in the post-adoption period (from 0.225 to 0.296). This suggests that while matched firms from Australia and member countries of the EU are more similar in their profitability post-IFRS adoption, not all firms benefit equally from having better access to the international markets simply by adopting a common set of IFRS. For other firm-level reporting incentive factors, the changes in the mean values of these differences between pairs of comparable firms are not significant from the pre-adoption to the post-adoption period.

For countrywide institutional variables (*COUNTRY_FACTORS*), Table 4.3 shows that the matched EU firms are different from the Australian sample in many aspects of their institutional features, with the most obvious being that the majority of these EU firms are of different legal origins from the Australian sample firms (mean of 0.750). While the mean difference in the level

of accounting enforcement (*ENFORCE*) is also relatively high between the matched Australian and EU sample firms (7.579), the mean difference is found to have decreased significantly from 10.234 to 4.923 post-IFRS adoption. This provides some indication that these adopting countries devoted efforts to improving their level of enforcement activities at the time of mandatorily introducing IFRS in their countries, which narrows their institutional difference in the extent of accounting enforcement .

TABLE 4.3
DESCRIPTIVE STATISTICS

Variable	Full Sample				Pre-Adoption Sample				Post-Adoption Sample							
	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	Mean		Median		Std. Dev.		
Dependent Variable																
ASCOMP	992	-0.165	-0.087	0.216	496	-0.179	-0.090	0.223	496	-0.151	**	-0.083		0.208		
Independent Variables																
IFRS	992	0.500	0.500	0.500	496	-	-	-	496	1.000		1.000		-		
SIZE	992	0.794	0.815	0.146	496	0.794	0.815	0.146	496	0.794		0.815		0.146		
LISTINGS	992	0.020	-	0.141	496	0.020	-	0.141	496	0.020		-		0.141		
Firm_Factors																
ROE_DIFF	992	4.260	0.164	52.873	496	8.153	0.173	74.605	496	0.368	**	0.155		0.606	***	
TOBINQ_DIFF	992	1.150	0.458	2.257	496	1.174	0.464	2.191	496	1.126		0.455		2.322		
LEVERAGE_DIFF	992	0.243	0.175	0.234	496	0.246	0.171	0.230	496	0.240		0.181		0.239		
CLOSEHELD_DIFF	992	0.278	0.238	0.200	496	0.284	0.252	0.202	496	0.272		0.226		0.198		
FOREIGNSALES_DIFF	992	0.260	0.186	0.256	496	0.225	0.151	0.247	496	0.296	***	0.234	***	0.259		
BIG4_DIFF	992	0.535	1.000	0.499	496	0.558	1.000	0.497	496	0.512		1.000		0.500		
Country_Factors																
LEGALORIGIN_DIFF	992	0.750	1.000	0.433	496	0.750	1.000	0.433	496	0.750		1.000		0.433		
ENFORCE_DIFF	992	7.579	8.000	5.919	496	10.234	10.000	5.427	496	4.923	***	5.000	***	5.153		
PROTECTION_DIFF	992	1.068	0.700	0.979	496	1.068	0.700	0.980	496	1.068		0.700		0.980		
ROL_DIFF	992	0.305	0.162	0.346	496	0.306	0.132	0.318	496	0.304		0.188		0.372	***	
JUDEFF_DIFF	992	0.917	-	1.182	496	0.917	-	1.183	496	0.917		-		1.183		
INTRAD_DIFF	992	0.413	-	0.620	496	0.413	-	0.620	496	0.413		-		0.620		

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

Table 4.4 outlines the Pearson correlations among the variables related to the study in this chapter. As a starting point, *ASCOMP* is positively correlated with *IFRS* (0.066) at 5 percent significance level, which provides some early indication of the underlying relation between IFRS adoption and accounting comparability. All differences in firm-level reporting incentives are also in the predicted negative direction with *ASCOMP* and are significantly correlated at 1 percent. The exceptions are *ROE_DIFF* and *FOREIGNSALES_DIFF*, which are positively correlated but remain not significant. Overall, correlations among the firm-level variables are modest, which suggest that multicollinearity is not likely to be a substantive issue. However, the correlations between country-level institutional factors and *ASCOMP* are rather mixed. Even some of the pairwise correlations among the country-level variables are greater than 0.50 in absolute value, which is relatively common among country-level variables (Hope, 2003b; Kim & Shi, 2012). For example, the correlation between *LEGALORIGIN_DIFF* and *PROTECTION_DIFF* is found to be significantly negative at -0.727, while *ROL_DIFF* is positively correlated with *JUDEFF_DIFF* at 0.882. Thus, some degree of caution is still warranted in interpreting the results for these variables.

TABLE 4.4
PEARSON CORRELATION MATRIX

Variable	*ASCOMP*	*IFRS*	*SIZE*	*LISTINGS*	*ROE_DIFF*	*TOBINQ_DIFF*	*LEVERAGE_DIFF*	*CLOSEHELD_DIFF*
IFRS	0.066 **							
SIZE	0.004	-						
LISTINGS	-0.081 **	-	0.007					
ROE_DIFF	0.018	-0.074 **	-0.046	0.092 ***				
TOBINQ_DIFF	-0.327 ***	-0.011	-0.089 ***	-0.039	-0.020			
LEVERAGE_DIFF	-0.325 ***	-0.011	0.010	0.022	0.089 ***	0.307 ***		
CLOSEHELD_DIFF	-0.013	-0.029	-0.050	0.040	0.016	0.029	0.019	
FOREIGNSALES_DIFF	0.039	0.139 ***	0.029	-0.038	-0.048	0.023	-0.021	0.024
BIG4_DIFF	-0.174 ***	-0.046	0.008	-0.010	0.067 **	-0.007	0.148 ***	0.094 ***
LEGALORIGIN_DIFF	0.065 **	-	-0.149 ***	-0.017	0.041	-0.110 ***	0.010	0.104 ***
ENFORCE_DIFF	-0.057 *	-0.449 ***	-0.049	-0.037	0.115 ***	-0.017	-0.019	0.079 **
PROTECTION_DIFF	-0.010	-	0.042	-0.001	-0.028	0.036	0.002	-0.055 *
ROL_DIFF	0.122 ***	-0.002	-0.054 *	0.021	-0.031	-0.120 ***	0.021	0.009
JUDEFF_DIFF	0.119 ***	-	-0.025	0.028	0.005	-0.127 ***	0.060 *	0.008
INTRAD_DIFF	0.009	-	-0.023	-0.026	-0.048	-0.024	0.030	0.032

TABLE 4.4 (CONTINUED)

Variable	*FOREIGN SALES _DIFF*	*BIG4 _DIFF*	*LEGAL ORIGIN _DIFF*	*ENFORCE _DIFF*	*PROTECTION _DIFF*	*ROL_DIFF*	*JUDEFF _DIFF*
IFRS							
SIZE							
LISTINGS							
ROE_DIFF							
TOBINQ_DIFF							
LEVERAGE_DIFF							
CLOSEHELD_DIFF							
FOREIGNSALES_DIFF							
BIG4_DIFF	-0.089 ***						
LEGALORIGIN_DIFF	-0.057 *	0.050					
ENFORCE_DIFF	-0.142 ***	0.089 ***	0.349 ***				
PROTECTION_DIFF	-0.037	0.003	-0.727 ***	-0.031			
ROL_DIFF	-0.084 ***	0.032	0.358 ***	0.098 ***	0.048		
JUDEFF_DIFF	-0.107 ***	0.124 ***	0.448 ***	0.057 *	-0.133 ***	0.882 ***	
INTRAD_DIFF	-0.008	0.113 ***	0.385 ***	-0.068 **	-0.109 ***	0.233 ***	0.350 ***

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

4.5.2 Multivariate Analysis

4.5.2.1 The Role of Firm-Level Reporting Incentives on Cross-Country Accounting Comparability

Table 4.5 reports the regression results for hypotheses H1(a) and H1(b), with seven different models (Models 4.5.1 to 4.5.7) representing the individual influences of each of the six firm-level proxies and the combined influences of all firm-level proxies on accounting comparability. One-tail *p*-values are reported for variables with predicted signs; otherwise, two-tail *p*-values are presented. Standard errors are based on the Newey-West procedure (Newey & West, 1987).

As the key interest of estimating these models is on the interaction terms, this study follows previous research by adding mean-centering to all continuous firm-level variables so as to reduce the multicollinearity between the indicator variable *IFRS* and their corresponding two-way interaction term with *FIRM_FACTORS* (Afshartous & Preston, 2011; Aiken & West, 1991; Smith & Sasaki, 1979).[45] All six firm-level proxies used in Models 4.5.1 to 4.5.7 are therefore mean-centered, with the exception of *ROE_DIFF* where the uncentered data is retained, since the mean-centering method would have otherwise increased the threat of multicollinearity between the variable *IFRS* and the interaction term with *ROE_DIFF* (refer to Appendix A.2 for the impact of mean-centering for each variable) (Shieh, 2011).

The results of the respective models for firm-level proxies (*FIRM_FACTORS*) are reported in Table 4.5. All reported coefficients of *IFRS* (γ_1) show the predicted positive sign and are significant at either 1 percent or 5 percent. As for the different proxies for cross-sectional variations in the

[45] Mean-centering is not applicable to the indicator variable *IFRS*, as it takes a value of one or zero otherwise. Consequently, it is not feasible to lower the collinearity between firm-level variables and their corresponding interaction with *IFRS*.

dissimilarity of firms' reporting incentives, the coefficients (γ_2) of *TOBINQ_DIFF*, *LEVERAGE_DIFF* and *BIG4_DIFF* are statistically significant and negative in their respective individual models and in the combined Model 4.5.7. Consistent with hypothesis H1(a), these results indicate that while mandatory adoption of IFRS enhances cross-country accounting comparability, similar firms exhibiting dissimilar reporting incentives due to growth opportunities (proxied by Tobin's Q), capital dependence (proxied by leverage), and audit quality (proxied by the use of Big 4 auditors) are less comparable as their differences become greater.

Moreover, the results in Table 4.5 also indicate that the enhancement role of mandatory IFRS adoption on cross-country accounting comparability is conditional on firm-level differences in reporting incentives, which support hypothesis H1(b). Specifically, the negative coefficients of the interaction terms between *IFRS* and *ROE_DIFF* (-0.171), *TOBINQ_DIFF* (-0.027), and *LEVERAGE_DIFF* (-0.126) in the respective individual models are significant. This provides evidence that the improvement in cross-country accounting comparability following mandatory IFRS adoption is weakened when similar firms exhibit greater differences in their reporting incentives (i.e. firms' profitability, growth opportunities or capital dependence). Additionally, the sum of the coefficients of *IFRS* and its interaction term with *ROE_DIFF* is also negative and significant at 1 percent (untabulated). This further suggests that the moderating impact arising from greater pairwise dissimilarity in firms' profitability negates the comparability improvement post-IFRS adoption. Likewise, in the combined Model 4.5.7 in which firms' reporting incentives are captured together by six different proxies, the coefficients of the interaction terms between *IFRS* and *ROE_DIFF* (-0.141) and *TOBINQ_DIFF* (-0.016) are also negative and significant. Again, the findings provide support for the notion that the positive association between IFRS adoption and cross-country accounting comparability is weakened by greater pairwise dissimilarity in firm-level reporting incentives. Only the interaction term between *IFRS* and

LEVERAGE_DIFF loses its significance in Model 4.5.7 when all other firms' reporting incentives proxies are accounted for together.

In short, the findings provide evidence that mandatory adoption of IFRS enhances cross-country accounting comparability, and this adoption benefit persists after controlling for dissimilar firm-level reporting incentives between cross-country similar firms. Nevertheless, the improvement in cross-country accounting comparability arising from mandatory IFRS adoption is conditioned on the extent to which benchmarked firms exhibit similar reporting incentives for transparent reporting even under a common set of IFRS.

4.5.2.2 The Role of Country-Level Institutional Characteristics on Cross-Country Accounting Comparability

Table 4.6 reports the regression results for testing hypotheses H2(a) and H2(b), which incorporate the six countrywide proxies to capture the variations in the multi-dimensional institutional environment which similar firms are domiciled in. In particular, the key interest of this study is in examining whether and to what extent the association between IFRS adoption and cross-country accounting comparability is influenced by these institutional differences. Therefore, all country-level proxies used in the models are mean-centered to overcome the potential multicollinearity problem associated with the interaction terms between the indicator variable *IFRS* and the respective country-level proxies (*COUNTRY_FACTORS*) (Afshartous & Preston, 2011; Aiken & West, 1991; Smith & Sasaki, 1979).[46] The reported results are based on one-tail *p*-values for variables with predicted signs and two-tail *p*-values otherwise. Standard errors are produced using the Newey-West procedure (Newey & West, 1987).

[46] Refer to Appendix A.2 for the Pearson correlations of the indicator variable *IFRS* with the corresponding two-way interaction terms, between uncentred data and mean-centered data.

TABLE 4.5
REGRESSION RESULTS FOR THE ROLE OF FIRM-LEVEL REPORTING INCENTIVES (*FIRM_FACTORS*) ON CROSS-COUNTRY ACCOUNTING COMPARABILITY (*ASCOMP*)

	Expected Sign	MODEL 4.5.1 *ROE_DIFF*		MODEL 4.5.2 *TOBINQ_DIFF*		MODEL 4.5.3 *LEVERAGE_DIFF*		MODEL 4.5.4 *CLOSEHELD_DIFF*		MODEL 4.5.5 *FOREIGN SALES_DIFF*		MODEL 4.5.6 *BIG4_DIFF*		MODEL 4.5.7 *FIRM_FACTORS *IFRS*	
		ASCOMP		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*	
INTERCEPT		-0.315		-0.300		-0.360		-0.373		-0.373		-0.328		-0.237	
IFRS	+	0.091	***	0.027	***	0.027	**	0.028	**	0.026	**	0.028	**	0.064	***
ROE_DIFF	-	0.000												0.000	
*ROE_DIFF*IFRS*	-	-0.171	***											-0.141	***
TOBINQ_DIFF	-			-0.012	***									-0.011	***
*TOBINQ_DIFF*IFRS*	-			-0.027	***									-0.016	**
LEVERAGE_DIFF	-					-0.204	***							-0.185	***
*LEVERAGE_DIFF*IFRS*	-					-0.126	*							0.067	
CLOSEHELD_DIFF	-							-0.007						0.028	
*CLOSEHELD_DIFF*IFRS*	-							0.008						0.003	
FOREIGNSALES_DIFF	-									0.054				0.046	
*FOREIGNSALES_DIFF *IFRS*	-									-0.046				-0.019	
BIG4_DIFF	-											-0.067	***	-0.050	***
*BIG4_DIFF*IFRS*	-											-0.006		0.021	
SIZE	+/-	0.127	***	0.107	**	0.142	***	0.158	***	0.158	***	0.143	***	0.080	**
LISTINGS	+/-	-0.119		-0.157	**	-0.136	*	-0.144	*	-0.143	*	-0.138	*	-0.131	*
Industry Fixed Effects		Included		Included		Included		Included		Included		Included		Included	
Country Fixed Effects		Included		Included		Included		Included		Included		Included		Included	
No. of Observations		992		992		992		992		992		992		992	
Adjusted R-squared		0.260		0.240		0.237		0.148		0.150		0.169		0.356	

TABLE 4.5 (CONTINUED)

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

All continuous firm-level test variables are mean-centered to reduce multicollinearity between the lower- and higher order variables, except for *ROE_DIFF*.

TABLE 4.6
REGRESSION RESULTS FOR THE ROLE OF COUNTRY-LEVEL INSTITUTIONAL FACTORS (*COUNTRY_FACTORS*) ON CROSS-COUNTRY ACCOUNTING COMPARABILITY (*ASCOMP*)

	Expected Sign	MODEL 4.6.1 *LEGAL ORIGIN _DIFF*	MODEL 4.6.2 *ENFORCE _DIFF*	MODEL 4.6.3 *PROTECTION _DIFF*	MODEL 4.6.4 *ROL_DIFF*	MODEL 4.6.5 *JUDEFF _DIFF*	MODEL 4.6.6 *INTRAD _DIFF*	MODEL 4.6.7 *COUNTRY _FACTORS *IFRS*
		ASCOMP	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*
INTERCEPT		-0.355	-0.311	-0.324	-0.318	-0.315	-0.320	-0.473
IFRS	+	0.018	0.023 *	0.028 **	0.028 **	0.028 **	0.028 **	0.079 *
LEGALORIGIN_DIFF	-	0.032						0.216
*LEGALORIGIN_DIFF*IFRS*	-	0.014						-0.119 **
ENFORCE_DIFF	-		-0.002					-0.010 ***
*ENFORCE_DIFF*IFRS*	-		0.002					0.006
PROTECTION_DIFF	-			-0.018 *				0.058
*PROTECTION_DIFF*IFRS*	-			0.004				-0.044 *
ROL_DIFF	-				0.005			-0.057
*ROL_DIFF*IFRS*	-				0.026			0.035
JUDEFF_DIFF	-					0.002		-0.013
*JUDEFF_DIFF*IFRS*	-					0.010		0.027
INTRAD_DIFF	-						-0.002	-0.053 ***
*INTRAD_DIFF*IFRS*	-						0.011	0.034
SIZE	+/-	0.139 ***	0.117 ***	0.127 ***	0.124 ***	0.121 ***	0.123 ***	0.153 ***
LISTINGS	+/-	-0.135 *	-0.138 *	-0.135 *	-0.139 *	-0.139 *	-0.137 *	-0.139 *
Industry Fixed Effects		Included	Included	Included	Included	Included	Included	Included
Country Fixed Effects		No	No	No	No	No	No	No
No. of Observations		992	992	992	992	992	992	992
Adjusted R-squared		0.144	0.139	0.143	0.139	0.140	0.138	0.145

TABLE 4.6 (CONTINUED)

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

All continuous firm-level test variables are mean-centered to reduce multicollinearity between the lower- and higher order variables, except for *ROE_DIFF*.

Models 4.6.1 to 4.6.6 reflect the individual influences of each country-level proxy used in this study, and Model 4.6.7 accounts for the combined influences of all six country-level proxies. When each country-level proxy is added one at a time, together with its interaction term with the indicator variable *IFRS*, the coefficient of *IFRS* (δ_1), all are in the anticipated positive sign. Moreover, the coefficient of IFRS (δ_1) across all individual models, except for Model 4.6.1, is statistically significant at 5 percent or 10 percent. The findings thus indicate that mandatory adoption of IFRS plays a significant role in enhancing cross-country accounting comparability while various aspects of institutional differences between similar firms are individually controlled for. Among these individual influences of country-level proxies, only *PROTECTION_DIFF* (Model 4.6.3) shows a significant negative coefficient of -0.018, suggesting that firms from countries with significant different strengths of investor protection are less comparable. However, contrary to the prediction of this study, none of the coefficients of the interaction terms for Models 4.6.1 to 4.6.6 is statistically significant, which indicates that comparability improvement is not diminished when mandatory IFRS adopters are subject to different institutional environments in the post-adoption period.

As shown in Table 4.6, the regression result for Model 4.6.7 indicates that the coefficient of *IFRS* (δ_1) is still significant and in the predicted positive direction when the six country-level proxies are included in the same model (coefficient of 0.079 and significant at 10 percent). The statistical significance of various coefficients in Model 4.6.7 has also changed from the respective individual models, as there is no longer evidence that the difference in the strength of investor protection (*PROTECTION_DIFF*) is negatively associated with cross-country accounting comparability in this combined model. Instead, significant differences in the level of accounting enforcement (*ENFORCE_DIFF*) and the strength of insider trading prohibition (*INTRAD_DIFF*) now lead to lower accounting comparability (coefficients are -0.010 and -0.053). In addition, the results also

indicate that differences in legal origins (*LEGALORIGIN_DIFF*) and strength of investor protection (*PROTECTION_DIFF*) play a moderating role on the positive relation between mandatory IFRS adoption and accounting comparability. This is evidenced by the statistically significant negative coefficients of the respective interaction terms, which are -0.119 and -0.044.

Overall, the mixed findings in Table 4.6 suggest that no individual aspect of institutional differences between cross-country firms necessarily undermines accounting comparability. Indeed, the influence of these institutional differences on cross-country accounting comparability is interdependent on the presence of other institutional characteristics, as a country's institutional environment is not defined by one but by many different elements. Nevertheless, the results provide some evidence that the comparability improvement following the mandatory IFRS adoption can still be moderated by differences in legal origins and strengths of investor protection between comparable firms.

In summary, the primary findings provide several insights into the relations between cross-country accounting comparability, mandatory IFRS adoption and the roles of firm-level reporting incentives and country-level institutional factors. The findings in this study provide consistent evidence with other existing IFRS studies that likewise show that mandatory IFRS adoption is associated with an improvement in accounting comparability (e.g. André et al., 2012; Yip and Young, 2012). In line with previous literature on reporting incentives, accounting comparability is weakened by higher pairwise dissimilarities in firm-level reporting incentives and institutional characteristics. Moreover, the moderating impact on the comparability improvement of IFRS adoption is greater when similar firms are more dissimilar in profitability and growth opportunities. At the country-level, such improvement in accounting comparability following mandatory IFRS adoption is also diminished when there are differences in the legal origins and the strengths of investor protection between similar firms.

4.6 Additional Analyses

4.6.1 Additional Analysis Using an Alternative Accounting Comparability Measurement

The primary inferences are based on the comparability measurement developed by De Franco et al. (2011), which builds on the relation between earnings and share returns. To test the sensitivity of using market data in the main analysis, this study performs an additional analysis by following Cascino and Gassen (2015) in using accruals and contemporaneous operating cash flows as alternative proxies for the mapping of economic events onto accounting amounts. This is inspired by the 'cash flow' model of Ball and Shivakumar (2006), who suggest that accruals are informative for noise reduction and timely gain and loss recognition. Moreover, accrual accounting which uses cash flows to capture a firm's economic events is also an important feature of accounting recognition process, which has the advantage of removing the need to account for differences in market efficiency across countries. The association between contemporaneous operating cash flows and accruals is expressed as follows:

$$ACC_{i,t} = \rho_i + \sigma_i CFO_{i,t} + \varepsilon_{i,t} \quad (4.7)$$

$ACC_{i,t}$ is accruals and $CFO_{i,t}$ is cash flow from operating activities, both scaled by total assets.[47] Akin to the main analysis, the procedure to compute the comparability score based on the association of contemporaneous operating cash flows and accruals (*ACC_COMP*) is as described in Section 4.3.2. Again, the estimation is performed based on annual data for the pre-adoption

[47] This study follows the approach of Yip and Young (2012) by defining accruals as net income minus operating cash flow.

(2000–2004) and the post-adoption (2007–2011) periods respectively. The modified comparability score is as expressed below:

$$ACC\_COMP_{i,sp} = -\frac{1}{2n}\sum\left|E(ACC)_{i,i,t} - E(ACC)_{i,j,t}\right| + \left|E(ACC)_{j,j,t} - E(ACC)_{j,i,t}\right| \quad (4.8)$$

Even though the sample size decreases due to missing cash flow information, the sensitivity results as reported in Table 4.7 continue to find that mandatory IFRS adoption leads to comparability improvement (predicted significant positive coefficient of *IFRS* across Model 4.7.1 to Model 4.7.7) even when different proxies for cross-sectional dissimilarity in firm-level reporting incentives between similar firms are considered. Although the direction of the coefficients of various firm-level proxies (*FIRM_FACTORS*) and their interactions with IFRS across all models (Models 4.7.1 to 4.7.7) closely resemble the main results, their significance appear to be weaker in this additional analysis. For example, in their respective individual models and the combined model, the coefficient on *BIG4_DIFF* changes sign and loses its significance (Model 4.7.6 and Model 4.7.7), but the coefficient of *CLOSELYHELD_DIFF* switches to negative and significant at 5 percent (Model 4.7.4 and Model 4.7.7). In addition, the coefficients of *TOBINQ_DIFF* (-0.006) and *LEVERAGE_DIFF* (-0.241) are also significantly negative in their respective individual models, while the latter variable (-0.244) is also significant in the combined model. Among the coefficients for the interactions term with the indicator variable *IFRS*, only *ROE_DIFF* (-0.027) remains significantly negative at 1 percent in the individual model.

TABLE 4.7
ADDITIONAL ANALYSIS USING AN ALTERNATIVE ACCOUNTING COMPARABILITY MEASUREMENT (*ACC_COMP*) ON FIRM-LEVEL REPORTING INCENTIVES (*FIRM_FACTORS*)

	Expected Sign	MODEL 4.7.1 *ROE_DIFF*		MODEL 4.7.2 *TOBINQ_DIFF*		MODEL 4.7.3 *LEVERAGE_DIFF*		MODEL 4.7.4 *CLOSEHELD_DIFF*		MODEL 4.7.5 *FOREIGN SALES_DIFF*		MODEL 4.7.6 *BIG4_DIFF*		MODEL 4.7.7 *FIRM_FACTORS*IFRS*	
		ASCOMP		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*		*ASCOMP*	
INTERCEPT		-0.240		-0.214		-0.245		-0.248		-0.250		-0.251		-0.228	
IFRS	+	0.058	***	0.049	***	0.051	***	0.048	***	0.047	***	0.057	**	0.069	**
ROE_DIFF	-	0.000												0.000	
*ROE_DIFF*IFRS*	-	-0.027	*											-0.010	
TOBINQ_DIFF	-			-0.006	*									-0.004	
*TOBINQ_DIFF*IFRS*	-			-0.011										-0.011	
LEVERAGE_DIFF	-					-0.241	**							-0.244	*
*LEVERAGE_DIFF*IFRS*	-					0.128								0.213	
CLOSEHELD_DIFF	-							-0.126	**					-0.124	**
*CLOSEHELD_DIFF*IFRS*	-							0.135						0.138	
FOREIGNSALES_DIFF	-									0.055				0.069	
*FOREIGNSALES_DIFF*IFRS*	-									-0.038				-0.046	
BIG4_DIFF	-											0.003		0.018	
*BIG4_DIFF*IFRS*	-											-0.017		-0.031	
SIZE	+/-	0.018		-0.004		0.008		0.015		0.021		0.022		-0.019	
LISTINGS	+/-	-0.091		-0.101		-0.089		-0.092		-0.092		-0.094		-0.084	
Industry Fixed Effects		Included		Included		Included		Included		Included		Included		Included	
Country Fixed Effects		Included		Included		Included		Included		Included		Included		Included	
No. of Observations		850		850		850		850		850		850		850	
Adjusted R-squared		0.018		0.028		0.036		0.020		0.017		0.016		0.037	

TABLE 4.7 (CONTINUED)

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

All continuous firm-level test variables are mean-centered to reduce multicollinearity between the lower- and higher order variables, except for *ROE_DIFF*.

Table 4.8 reports the sensitivity results using the alternative comparability measurement on various proxies for country-level institutional differences. Even when the dissimilarity of country-level institutional factors between similar firms is controlled for, the positive and significant coefficients of *IFRS* in five out of seven cases (Model 4.8.2 to Model 4.8.7) continue to indicate that mandatory IFRS adoption is associated with cross-country comparability improvement. As for the respective coefficients of the different country-level proxies (*COUNTRY_FACTORS*) and their interaction terms with *IFRS*, the results for the sensitivity analysis appear to be mixed when compared with the main results. As seen in Table 4.8, only *LEGALORIGIN_DIFF* has the predicted significant negative coefficient (-0.047 at 5 percent) across the different individual models. In the combined Model 4.8.7, the negative coefficient on *ENFORCE_DIFF* (-0.008) retains its significance at 5 percent like the main result, together with the significant negative coefficient for *JUDEFF_DIFF* (-0.123 at 10 percent). Among the coefficients for the interactions term with the indicator variable *IFRS*, only the coefficient of *ROL_DIFF* becomes negatively significant (-0.311) at 10 percent.

TABLE 4.8
ADDITIONAL ANALYSIS USING AN ALTERNATIVE ACCOUNTING COMPARABILITY MEASUREMENT (*ACC_COMP*) ON COUNTRY-LEVEL INSTITUTIONAL FACTORS (*COUNTRY_FACTORS*)

	Expected Sign	MODEL 4.8.1 *LEGAL ORIGIN _DIFF*	MODEL 4.8.2 *ENFORCE _DIFF*	MODEL 4.8.3 *PROTECTION _DIFF*	MODEL 4.8.4 *ROL_DIFF*	MODEL 4.8.5 *JUDEFF _DIFF*	MODEL 4.8.6 *INTRAD _DIFF*	MODEL 4.8.7 *COUNTRY _FACTORS *IFRS*
		ASCOMP	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*	*ASCOMP*
INTERCEPT		-0.221	-0.242	-0.254	-0.257	-0.268	-0.260	-0.278
IFRS	+	0.005	0.034 *	0.046 ***	0.050 ***	0.051 ***	0.048 ***	0.015
LEGALORIGIN_DIFF	-	-0.047 **						0.028
*LEGALORIGIN_DIFF*IFRS*	-	0.061						0.061
ENFORCE_DIFF	-		-0.005					-0.008 **
*ENFORCE_DIFF*IFRS*	-		0.003					0.004
PROTECTION_DIFF	-			0.023				-0.003
*PROTECTION_DIFF*IFRS*	-			-0.024				0.030
ROL_DIFF	-				0.024			0.380
*ROL_DIFF*IFRS*	-				0.012			-0.311 *
JUDEFF_DIFF	-					-0.012		-0.123 *
*JUDEFF_DIFF*IFRS*	-					0.009		0.107
INTRAD_DIFF	-						0.002	-0.003
*INTRAD_DIFF*IFRS*	-						-0.008	-0.015
SIZE	+/-	0.008	0.005	0.010	0.016	0.020	0.017	0.032
LISTINGS	+/-	-0.092	-0.094	-0.093	-0.094	-0.088	-0.090	-0.101
Industry Fixed Effects		Included	Included	Included	Included	Included	Included	Included
Country Fixed Effects		No	No	No	No	No	No	No
No. of Observations		850	850	850	850	850	850	850
Adjusted R-squared		0.014	0.015	0.014	0.012	0.012	0.011	0.018

TABLE 4.8 (CONTINUED)

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

All continuous firm-level test variables are mean-centered to reduce multicollinearity between the lower- and higher order variables, except for *ROE_DIFF*.

Although the sensitivity results using the cash flow-variant of accounting comparability measurement appear to be weaker, they corroborate the main findings: mandatory IFRS adoption enhances cross-country comparability of accounting information when cross-sectional variances of dissimilarities in firms' reporting incentives and institutional factors are controlled for. Moreover, accounting comparability is reduced when firms are more dissimilar in their reporting incentives and institutional characteristics. In the post-adoption period, greater pairwise dissimilarities in firms' profitability and institutional variable 'Rule of Law' also have a significant moderating impact on the comparability benefit of IFRS adoption.

4.6.2 Additional Analysis for the Role of Enforcement Changes

The focus of the supplemental test is to examine whether and how the interplay of mandatory IFRS adoption and firms' reporting incentives on cross-country accounting comparability is influenced by a country's enforcement changes. Many IFRS studies find substantial heterogeneity in the adoption consequences across countries with different legal and regulatory systems (e.g. Byard et al., 2011; Daske et al., 2008; Landsman et al., 2012). In contrast, Christensen et al. (2013) document that the liquidity benefits around the IFRS mandate are confined to countries that concurrently made substantive changes in reporting enforcement even when they have strong legal and regulatory systems. As their findings suggest that enforcement changes play a critical role in explaining the adoption impacts, this study explores the role of enforcement changes on the comparability benefit of mandatory IFRS adoption.

Adopting the dichotomy supplied by Christensen et al. (2013), this study conducts the supplemental analysis by partitioning the sample into (1) EU countries without concurrent substantive enforcement changes (*EU_NONENF*), and (2) EU countries with concurrent

substantive enforcement changes (*EU_ENF*). In particular, their study identified only five EU countries that made substantive changes in reporting enforcement concurrently with the implementation of IFRS mandate as of 2005, which include Finland, Germany, the Netherlands, Norway and the UK.[48] To isolate the comparability outcome of mandatory IFRS adoption from concurrent enforcement changes (country-level determinant), this study estimates the average impact of the mandatory IFRS adoption on cross-country accounting comparability (Model 4.9.1 and Model 4.9.3), and those conditional on the cross-sectional variations of dissimilarity in firms' reporting incentives between similar firms (Model 4.9.2 and Model 4.9.4), across both sub-groups. Regression results are reported in Table 4.9.[49]

[48] Among the five EU countries identified by Christensen et al. (2013), three countries are part of the sample for this study: Germany, Norway and the UK.

[49] As a robustness check (not tabulated), the supplemental analysis is repeated by grouping Denmark together with the three bundled countries (Germany, Norway and the UK) that concurrently made enforcement changes. This is because Christensen et al. (2013) note that Denmark had already began some enforcement changes before 2005 and the shift in reporting enforcement changes around the IFRS mandate was perceived as more gradual and less substantive. The results are very similar to those reported and therefore no change to the inferences made.

TABLE 4.9
REGRESSION RESULTS BY ENFORCEMENT CHANGES

	Expected Sign	*EU COUNTRIES WITHOUT CONCURRENT SUBSTANTIVE ENFORCEMENT CHANGES (EU_NONENF)*		*EU COUNTRIES WITH CONCURRENT SUBSTANTIVE ENFORCEMENT CHANGES (EU_ENF)*	
		MODEL 4.9.1	**MODEL 4.9.2**	**MODEL 4.9.3**	**MODEL 4.9.4**
		ASCOMP	*ASCOMP*	*ASCOMP*	*ASCOMP*
INTERCEPT		-0.251	-0.182	-0.375	-0.196
IFRS	+	0.033 **	0.042 **	0.022	0.062 ***
ROE_DIFF	-		-0.053 ***		0.000
*ROE_DIFF*IFRS*	-		-0.148 ***		-0.113 ***
TOBINQ_DIFF	-		-0.011 **		-0.015 ***
*TOBINQ_DIFF*IFRS*	-		-0.027 ***		-0.011
LEVERAGE_DIFF	-		-0.100 **		-0.188 **
*LEVERAGE_DIFF*IFRS*	-		0.015		0.140
CLOSEHELD_DIFF	-		0.034		0.015
*CLOSEHELD_DIFF *IFRS*	-		-0.013		0.043
FOREIGNSALES_DIFF	-		0.042		0.038
*FOREIGNSALES_DIFF *IFRS*	-		-0.011		-0.014
BIG4_DIFF	-		-0.038 *		-0.078 ***
*BIG4_DIFF*IFRS*	-		0.031		0.022
SIZE	+/-	0.078	0.067 *	0.159	0.035
LISTINGS	+/-	-0.202	-0.170	-0.119	-0.116
Industry Fixed Effects		Included	Included	Included	Included
Country Fixed Effects		No	No	No	No
No. of Observations		576	576	416	416
Adjusted R-squared		0.121	0.402	0.150	0.332

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

All continuous firm-level test variables are mean-centered to reduce multicollinearity between the lower- and higher order variables, except for *ROE_DIFF*.

Consistent with the main findings, the coefficient of *IFRS* shows the predicted positive sign across all regression models and is statistically significant at 1 percent or 5 percent (except for Model 4.9.3). The findings indicate that, on average, mandatory IFRS adoption improves accounting comparability for similar firms in Australia and EU countries after controlling for dissimilar firms' reporting incentives, and this is irrespective of whether substantive enforcement changes have been made concurrently with the IFRS mandate. In contrast to Christensen et al. (2013), the result demonstrates that no significant comparability improvement is observed when Australian firms are matched with those EU peers domiciled in countries that have bundled their IFRS mandate with substantive enforcement changes. Instead, for this group of mandatory adopters, comparability improvement following mandatory IFRS adoption is pronounced only when the dissimilarity of firm-level reporting incentives between similar firms is controlled for.

As for the different firm-level proxies for cross-sectional variations in the dissimilarity of firms' reporting incentives between similar firms, the results indicate that the significance of these proxies is considerably analogous to the main findings in Model 4.5.7 and across the two sub-groups. For example, the results in Model 4.9.2 and Model 4.9.4 reveal that *TOBINQ_DIFF*, *LEVERAGE_DIFF* and *BIG4_DIFF* are significant and negatively associated with accounting comparability at 1 percent or 5 percent, together with the negative coefficient of *ROE_DIFF* which is also significant at 1 percent in Model 4.9.2. Following mandatory IFRS adoption, *ROE_DIFF* (-0.148) and *TOBINQ_DIFF* (-0.027) remain significant moderating factors on the comparability improvement between Australian and EU firms that are without concurrent substantive changes in reporting enforcement (Model 4.9.2). However, only *ROE_DIFF* (-0.113) is found to be statistically significant in reducing comparability between similar firms in Australia and the EU countries that bundled IFRS adoption with enforcement changes (Model 4.9.4).

Overall, the findings of the supplemental analysis continue to support the primary inference that mandatory IFRS adoption plays a crucial role in enhancing cross-country accounting comparability between similar firms from Australia and the EU. To the extent that some EU countries concurrently made substantive changes to their reporting enforcement around the 2005 IFRS mandate, the positive association between mandatory IFRS adoption and cross-country accounting comparability is pronounced only when the dissimilarity of firm-level reporting incentives between similar firms is controlled for. This is because similarity in the incentives background for the adopting firms is influenced by some EU countries making concurrent enforcement changes while others have not. Although there are institutional differences induced by the concurrent enforcement changes, greater pairwise dissimilarity in firms' reporting incentives undermines accounting comparability and weakens the comparability benefit of IFRS adoption.

4.7 Summary and Conclusion

The influence of firms' reporting incentives and institutional factors in determining the quality of financial accounting information has been constantly debated in accounting literature. This is the case even when firms across different jurisdictions were mandatorily required to implement a single set of IFRS standards with the objective of enhancing cross-country comparability of accounting information. Therefore, this chapter examines the influence of dissimilarities in firm-level and country-level determinants in determining accounting comparability between mandatory adopters in Australia and member countries of the EU.

Consistent with the regulatory objective of mandatory IFRS adoption in Australia and the EU that began in 2005, the findings overall show an improvement in cross-country accounting

comparability post-adoption, even when pairwise dissimilarities in firm-level reporting incentives and country-level institutional factors are controlled for. Nevertheless, the empirical results further indicate that higher pairwise dissimilarities in some of the firm-level and country-level determinants significantly lower cross-country accounting comparability and even moderate the comparability improvement following the mandatory IFRS adoption. This suggests that it is inevitable that the inherent divergence in firms' reporting incentives and institutional structures remain significant obstacles to achieving the comparability benefit. Hence, it is important to take into account these firms' dissimilarities when making comparisons with a peer firm, even under a common set of international accounting standards.

CHAPTER FIVE:

CROSS-COUNTRY ACCOUNTING COMPARABILITY AND THE INFORMATION CONTENT OF STOCK PRICES

5.1 Introduction

Accounting comparability has been in the forefront of accounting standard-setting due to its unique feature that enables capital market participants to identify and understand similarities and differences in financial statements across firms (IFRS Foundation, 2010). This desirable qualitative characteristic is considered important by regulators and practitioners because it is expected to enhance the quality of the information sets, which is essential for efficient investment decisions (Barlev & Haddad, 2007). This has also prompted a widespread adoption of IFRS with an expectation that capital market participants benefit from accounting comparability improvement that stems from implementing a uniform set of internationally acceptable accounting standards (DeFond et al., 2011; Neel, 2017). In this chapter, the objective is to investigate the association between cross-country accounting comparability and the information content of stock prices around mandatory adoption of IFRS in Australia and the EU.

Considering that accounting comparability reflects an important attribute of financial information quality, the benefits of accounting comparability have been well-advocated at a conceptual level (Barth, 2013; Cairns, 1994) and empirically examined by emerging studies in various settings. By far, the general thrust of prior comparability research supports the view that accounting comparability enhances financial analysts' information environment (De Franco et al., 2011; Horton et al., 2013; Neel, 2017; Peterson et al., 2015), facilitates cross-border investment flow

(DeFond et al., 2011), increases firm valuation and stock liquidity (Neel, 2017), enables better equity valuation (Young & Zeng, 2015) and improves acquisition decisions (Chen et al., 2016). Despite these apparent benefits, to date there is little direct evidence for the relation between accounting comparability and a firm's information environment from the investors' perspective. Easley and O'Hara (2004) and Lambert et al. (2007) develop models which propose that a firm's information structure plays a significant role in determining asset pricing, and so does information quality. Therefore, it is imperative to explore the role of accounting comparability in influencing a firm's information flow into the capital market, which determines various capital allocation decisions.

To examine the information content of stock prices, this study adopts stock return synchronicity as a proxy for the relative amount of firm-specific versus marketwide information incorporated into stock prices.[50] This is inspired by the work of Roll (1988), who finds that higher R^2 statistics are indicative of relatively lower (greater) amount of firm-specific (marketwide) information impounded into their stock price, *ceteris paribus*. Consistent with this interpretation, R^2 statistics, or stock return synchronicity, are therefore an inverse measure of the flow of private information about firms (Ferreira & Laux, 2007). As the extent of comparability with benchmarked peers is expected to influence market participants' incentives to collect, process and trade on firm-specific information, accounting comparability decreases (increases) stock return synchronicity if it encourages (discourages) the incorporation of more firm-specific information relative to marketwide information into stock prices. For brevity, this is referred to as the *information encouragement (substitution) role* of accounting comparability.

[50] For simplicity, this study uses the term 'marketwide information' and 'common information' interchangeably to include industry-wide and other macro-based information that are not considered to be firm-specific.

From the *information encouragement role* perspective, higher accounting comparability is useful for investors in collecting and processing firm-specific information through improved benchmarking with industry peers (Gao & Sidhu, 2016; Wang, 2014; Wu & Zhang, 2010; Young & Zeng, 2015). This is because greater accounting comparability allows investors to better distinguish reported differences in financial statements that arise from economic fundamentals from those that arise from accounting treatments, by garnering information from benchmarked peers. This should therefore increase the ability of investors to evaluate the relative performance of firms (Chen et al., 2013; Young & Zeng, 2015) and to make better inferences about the firm's future performance (Choi et al., 2019). Moreover, firms with more comparable financial statements to their peers' are also more likely to have incentives to produce high quality financial information due to the increased transparency in the firms' information environment (Jin & Myers, 2006; Sohn, 2016). This should help investors to collect and process firm-specific information at a lower cost, thereby decreasing stock return synchronicity.

Nevertheless, it is also possible that accounting comparability plays an *information substitution role* through the dissemination of more marketwide information. As higher accounting comparability is associated with increased information transfers across industries and countries (Kim & Li, 2010; Wang, 2014), such externality gains can help investors to derive more marketwide information that is less costly to produce. Furthermore, greater comparability improves the information environment for financial analysts (De Franco et al., 2011; Horton et al., 2013; Neel, 2017; Petaibanlue, Walker & Lee, 2015; Peterson et al., 2015), who are considered important conveyors of common information (Chan & Hameed, 2006; Piotroski & Roulstone, 2004). Hence, the generation of common information from comparable accounting information could crowd out private information collection, thereby increasing stock return synchronicity.

The introduction of mandatory IFRS adoption in Australia and member countries of the EU in 2005 presents an exogenous shock to the financial reporting system that offers a unique setting for this study to capture the structural change of cross-country accounting comparability on a firm's information environment. Although there is limited and mixed evidence for the comparability outcome of IFRS adoption (e.g. Cascino & Gassen, 2015; Yip & Young, 2012), the findings of Beuselinck et al. (2009) and Bissessur and Hodgson (2012) show that mandatory IFRS adoption in the EU and Australia is significantly associated with stock return synchronicity. They consistently document that the initial mandatory transition to IFRS decreases stock return synchronicity due to increased disclosure of new information. Nonetheless, they subsequently find an increasing relation of synchronicity in the later post-adoption period, which they attribute to comparability improvement arising from mandatory IFRS adoption. While these findings indirectly suggest that comparability increases stock return synchronicity, this is in contrast to Choi et al. (2019), who find a negative relation between accounting comparability and stock return synchronicity in the US setting. Thus, the focus of this study is a direct examination of the association between cross-country accounting comparability and stock return synchronicity among mandatory IFRS adopters in Australia and the EU, and the conditioning role of mandatory IFRS adoption on this association.

To measure cross-country accounting comparability, this study applies the comparability measurement developed by De Franco et al. (2011) on matched firm-pairs from Australia and the EU. The premise is that, by measuring comparability based on the similarity in the mapping of underlying economic events onto the financial statements, comparable firms across different countries should produce similar financial statements for a given set of economic events (De Franco et al., 2011). Specifically, this study concentrates on Australian and EU firms that switched from their non-US local accounting standards to IFRS mandatorily as of 2005, so that they are subject to similar structural improvement in cross-border accounting comparability from the IFRS

mandate. Furthermore, this study also ensures that comparable firms are matched based on industry and size to create a matched sample for assessing accounting comparability. Based on a series of selection and matching procedures, this yields a sample of 2,845 matched firms (10,820 firm-year observations) between Australia and five EU countries (France, Germany, Greece, Italy and the UK).

The empirical results of this study can be summarized as follows. First, stock return synchronicity is negatively associated with accounting comparability, which supports the *information encouragement* role of accounting comparability. Second, the negative association of accounting comparability with synchronicity is moderated by firms adopting the IFRS reporting regime and relatively more common information being impounded into the market for firms with higher comparability that adopted IFRS. The results thus suggest that mandatory IFRS adoption plays a vital role in encouraging investors to crowd out private information gathering from comparable accounting information with relatively more common information produced via IFRS adoption. Third, the main results are robust to alternative accounting comparability measurement, for which a 'cash flow' variant of accounting comparability measurement is adopted for sensitivity testing. Finally, the results of the supplemental test reveal that the negative association of accounting comparability with synchronicity is not dominated by the positive association between analyst coverage and synchronicity. Nevertheless, greater analyst coverage encourages the production and dissemination of common information for firms with greater comparability only after firms mandatorily adopted IFRS. This leads to accounting comparability reflecting predominantly common information and increasing synchronicity for firms with greater analyst coverage in the context of mandatory IFRS adoption.

This study makes contributions to the literature in several ways. First, this study contributes to enriching understanding of the link between accounting comparability and the information content

of stock prices. Comparability reflects an important qualitative attribute of high quality financial accounting information, and yet, little is known about its direct implication for a firm's information environment. Existing research finds some evidence that accounting comparability improves a firm's information environment through its financial intermediaries (as proxied by forecast accuracy, forecast agreement and analysts' coverage) (De Franco et al., 2011; Peterson et al., 2015). Nonetheless, it is also important to understand its influence on the components of a firm's information structure as reflected in its stock price because they have different implications for capital market participants in their efficient capital allocation decisions. The findings therefore support the view that accounting comparability helps investors to gain more firm-specific information for making informed investment decisions. This comports with the findings of Choi et al. (2019) in the US setting, which document a negative relation between within-country comparability and stock return synchronicity as further evidence of the higher informativeness of stock prices about future earnings. However, further testings also indicate that the relation between accounting comparability and synchronicity is conditioned on mandatory changes in financial reporting regimes and analyst coverage.

Second, this study also provides some additional evidence for the comparability benefit in the context of mandatory IFRS adoption. Existing comparability research finds substantial benefits of comparable accounting information, but many have confined their investigation to a single country setting (such as the US) with a focus on within-country comparability (e.g. Choi et al., 2019; De Franco et al., 2011; Peterson et al., 2015). As comparable accounting information creates reporting externality, the difference in the extent of comparability externality across within- and cross-jurisdictions settings potentially limits the generalization of the findings to a mandatory IFRS adoption environment. Although more countries have mandated IFRS adoption with the view of improving cross-country accounting comparability, direct evidence for the comparability benefit of mandatory IFRS adoption is scant. Instead, there are plentiful IFRS studies documenting

positive capital market consequences coinciding with the mandate, and they tend to use the comparability argument to justify the link as an indirect evidence of comparability benefit (e.g. Bissessur & Hodgson, 2012, Brochet et al., 2013; Clarkson et al., 2011; Louis & Urcan, 2014, Wang, 2014; Wu & Zhang, 2010).

Third, the findings of this study add to the stream of research on stock return synchronicity by explicitly examining the role of accounting comparability. Prior studies show that stock return synchronicity is influenced by accounting standards and a firm's reporting environment (e.g. Beuselinck et al., 2009; Bissessur & Hodgson, 2012; Cheong and Zurbruegg, 2016; Wang & Yu, 2015). Yet there is limited understanding about how the quality of financial accounting information as defined by the desirable qualitative attributes (such as comparability) determines capital market preference for the relative amount of firm-specific and marketwide information. Aside from Choi et al. (2019), who focus on the US setting, this study is the first to examine the association between comparability and the information content of stock prices in the context of mandatory IFRS adoption. Moreover, this study extends the scope of previous literature examining the influence of analyst coverage and mandatory IFRS adoption on synchronicity through the specific channel of comparable accounting information.

Fourth, this study complements existing research on the impact of mandatory IFRS adoption on a firm's information environment. Prior studies provide consistent evidence that synchronicity decreases with mandatory IFRS adoption due to the comparability benefit (e.g. Beuselinck et al., 2009; Bissessur & Hodgson, 2012) and this contradicts the negative association between accounting comparability and synchronicity in the US setting (Choi et al., 2019). To reconcile this issue, this study provides systematic evidence by evaluating the interaction of accounting comparability and mandatory IFRS adoption in determining the information flow into the market. The results show that the *information encouragement role* of accounting comparability is

moderated by mandatory IFRS adoption, and all the more so, is dominated by the greater amount of common information disseminated via mandatory IFRS adoption. The findings therefore answer the recent call by Gross and Perotti (2017) for a deeper understanding of the circumstances in which accounting comparability has detrimental impact on the informativeness of financial statements. This should offer useful insights to regulators and practitioners about the implications of mandating IFRS.

The remainder of this chapter is organized as follows. Section 5.2 reviews the relevant literature on the benefits of accounting comparability and stock return synchronicity. This is followed by hypothesis development in Section 5.3. The next section presents the research methodology. Section 5.5 reports the empirical results, and Section 5.6 presents additional analyses. A summary and conclusion are provided in Section 0.

5.2 Literature Review

5.2.1 Benefits of Accounting Comparability

The benefits of accounting comparability have been of great interest to regulators and practitioners. This is because capital market participants need to make informed comparisons between alternative investment opportunities for capital allocation decisions, and the decisions would be suboptimal without accounting information that enables similar economic circumstances to appear similar while also allowing dissimilar economic circumstances to appear different (Barlev & Haddad, 2007; Barth, 2013). Although this is intuitively appealing, empirical evidence for the benefits of accounting comparability is scarce. To address this empirical question, recent studies have been motivated by the growing trend of IFRS adoption and the development of empirically

feasible comparability measurements to examine the benefits of accounting comparability in various research settings (Gross & Perotti, 2017).

Focusing on the US setting, several studies have examined the influence of within-country comparability on numerous outcomes, such as the properties of analysts' forecast (De Franco et al., 2011), earnings management activities (Sohn et al., 2016), the informativeness of stock prices about future earnings (Choi et al., 2019), the performance of SEOs (Shane et al., 2014) and acquisition efficiency (Chen et al., 2016). Most notably, using a novel output-based measurement of *de jure* comparability, the findings of De Franco et al. (2011) show that firms with more comparable financial statements have smaller analyst forecast errors, greater analyst coverage and lower forecast dispersion. Adopting the same comparability measurement as De Franco et al. (2011), Choi et al. (2019) find that accounting comparability enhances the informativeness of stock prices about future earnings, as evidenced by a higher future earnings response coefficient and lower stock return synchronicity. All in all, evidence in the US setting consistently suggests that comparability is associated with better information environments and positive capital market consequences, which are consistent with the expected benefits of accounting comparability.

In the context of mandatory IFRS adoption, proponents of IFRS also tout the importance of comparability improvement for bringing economic benefits. While there is limited evidence for the comparability improvement following IFRS adoption in 2005 (e.g. Cascino and Gassen, 2015; Yip and Young, 2012), research finding capital market benefits under IFRS adoption generally link the benefits of IFRS adoption to accounting comparability. For example, Louis and Urcan (2014) provide evidence suggesting that mandatory IFRS adoption encourages cross-border acquisitions of listed firms in the IFRS adopting countries, and comparability improvement is the primary reason for the increase in investment flow. Similarly, Bissessur and Hodgson (2012)

document that mandatory IFRS adoption increases stock return synchronicity in the later adoption years, and they attribute this to increased comparability.

Nevertheless, empirical research explicitly examining the benefits of accounting comparability around mandatory IFRS adoption is nascent. Neel (2017) examines the associations between economic outcomes of mandatory IFRS adoption (Tobin's Q, stock liquidity, analyst forecast accuracy and analyst forecast agreement) and two accounting constructs (accounting comparability and reporting quality). Using three output-based measurements for accounting comparability, Neel's (2017) findings show that accounting comparability is positively related to the economic outcomes and has a more dominant role over reporting quality in determining these outcomes. Other studies also use indirect measures to proxy for changes in comparability for mandatory IFRS adopters. These studies similarly provide evidence that comparability improvement post-IFRS adoption is associated with higher cross-border investment (DeFond et al., 2011), increased investment efficiency (Chen et al., 2013; Gao & Sidhu, 2016), better analyst forecasting performance (Horton et al., 2013; Petaibanlue et al., 2015) and improved valuation performance (Young & Zeng, 2015).

In summary, existing studies provide evidence to support the view that accounting comparability brings substantial benefits to capital market participants. This is despite the limited comparability studies tending to focus on the US setting, for which only the benefits of within-country comparability are examined. To the extent that comparability benefits are central to promoting mandatory IFRS adoption, little is known about the direct implications of cross-country accounting comparability. IFRS studies generally link the benefits of comparability with attendant capital market consequences of IFRS adoption (e.g. Bissessur & Hodgson, 2012, Brochet et al., 2013; Clarkson et al., 2011; Louis & Urcan, 2014, Wang, 2014; Wu & Zhang, 2010) or use some indirect measures to proxy for the changes in comparability around mandatory IFRS adoption (e.g. Chen

et al., 2013; DeFond et al., 2011; Young & Zeng, 2015). Hence, the direct influence of accounting comparability on a firm's information environment around mandatory IFRS adoption is still under-explored.

5.2.2 The Concept of Stock Return Synchronicity

In financial economics, it is hypothesized that observed stock prices contain all available information about a firm, its industry, and the market (Roll, 1988). The arrival of any new information, which include firm-specific and marketwide information, should therefore be reflected by changes in stock prices in an efficient market (Hutton, Marcus & Tehranian, 2009; Morck, Yeung & Yu, 2000). As King (1966) documents, stock prices generally comove with market and industry returns. Nevertheless, French and Roll (1986) and Roll (1988) subsequently find that individual stock returns exhibit only a weak association with market and industry stock price movements, suggesting the important role of firm-specific information in stock prices formation.

Based on the market model regression, Roll (1988) is the first to present evidence on the use of stock return synchronicity, or R^2 statistics, as a measure to capture the extent to which market and industry returns explain variation in firm-level stock returns. By analyzing the stock returns for the US markets, Roll (1988) finds that the average R^2 is only 20–35 percent, which indicates that a large proportion of the changes in firms' stock returns are not explained by market and industry returns. Among the plausible explanations for this, Roll (1988) demonstrates that firm-specific stock price movements are generally not associated with identifiable new release. This leads him to suggest that "the financial press misses a great deal of private information generated privately" (p. 564), although he also acknowledges the possible presence of "occasional frenzy unrelated to concrete information" (p. 566).

Building on the early work of Roll (1988), a body of research has emerged to adopt stock return synchronicity as a proxy for the *relative amount* of firm-specific versus marketwide information impounded into stock prices to reflect the information content of stock prices (e.g. Durnev et al., 2003; Kim & Shi, 2012; Morck et al., 2000; Piotroski & Roulstone, 2004 and others).[51] That is, they argue that firms that exhibit high (low) stock return synchronicity, or R^2 statistics, have relatively lower (greater) amount of firm-specific (marketwide) information impounded into their stock price, *ceteris paribus*. As Ferreira and Laux (2007) point out, the inverse relationship shown by Roll (1988) between stock return synchronicity and the intensity of informed trading based on firm-specific information thus makes R^2 statistics "a good measure of information inflow, especially for private information about firms" (p. 952). This is despite West (1988) making a theoretical case to suggest that firms with high firm-specific return volatility are possibly more reflective of noise trading than stock price informativeness.

Consistent with the informational interpretation of stock return synchronicity, Durnev et al. (2003) first provide evidence that firm-specific stock price variation is positively correlated with accounting measures of stock price informativeness. Overall, their results imply that the current stock returns for firms and industries that are less synchronous with the market contain more information about future earnings. For this reason, Wurgler (2000) finds that lower stock return synchronicity is associated with higher efficiency of capital allocation at the country level. They interpret the results as suggesting that more firm-specific information in domestic stock returns possibly facilitates effective arbitrage by informed investors. Even at the firm-level, the existing literature also finds that firms that exhibit lower R^2 enable managers to make more efficient

[51] Other studies in this area also use 'idiosyncratic volatility', 'firm-specific stock price variation', and 'stock price informativeness' to reflect the relative amount of firm-specific information impounded into stock prices. They are inversely related to stock return synchronicity and the terms are used interchangeably throughout this thesis for simplicity.

corporate investment (Durnev, Morck & Yeung, 2004), and have greater sensitivity of corporate investment (Chen, Goldstein & Jiang, 2007; Bakke and Whited, 2010) and corporate cash savings (Fresard, 2012) to stock price. Therefore, these findings suggest that the capital market accrues benefits from stock prices that contain relatively more private information about the firm when this enhances managers' ability to learn more about firm fundamentals that can be incorporated into their investment decisions.

Contrarily, some studies also object to the assertion that lower stock return synchronicity is associated with a better information environment. For example, Ashbaugh-Skaife, Gassen and LaFond (2005) and Alves, Peasnell and Taylor (2010) cast doubt on the reliability of R^2 as a measure to capture stock price informativeness. This is especially the case at the country-level, in which stock return synchronicity appears to exhibit inconsistent association with various information quality measures across countries. Kelly (2014) also finds that firms that are less synchronous with the market (or lower R^2) are smaller, younger, have lower institutional ownership, lower analyst coverage, lower liquidity, and greater transaction costs. Their findings thus provide indications of a poor information environment surrounding lower stock return synchronicity.

Instead, Dasgupta, Gan and Gao (2010) conjecture and provide supporting evidence that stock return synchronicity can indeed increase as firms' transparency improves because the rapid incorporation of information into the stock price reduces idiosyncratic return volatility and therefore increases R^2. Corroboratively, Chan, Hameed and Kang (2012) show that stock return synchronicity is positively associated with stock liquidity because market participants are able to learn more from the market when firm fundamentals are correlated. Moreover, Chan and Chan (2014) also demonstrate that stock return synchronicity is inversely associated with SEO discounts (the percentage differences between pre-offer day closing prices and offer prices), which similarly

suggests less information asymmetry for firms with higher synchronicity. In line with this reasoning, Bramante, Petrella and Zappa (2015) therefore assert that the market model R^2 statistic appears to be a direct measure of price efficiency rather than inefficiency.

5.2.3 Determinants of Stock Return Synchronicity

As Grossman and Stiglitz (1980) propose that information is costly and that stock prices reflect only a subset of information of informed trading, prior literature examines how different information environments at the country- and firm-level determine the types of information impounded into stock prices (e.g. Cheong & Zurbruegg, 2016, Jin & Myers, 2006; Morck et al., 2000; Piotroski & Roulstone, 2004, among others). Specifically, it is expected that stock prices incorporate relatively more firm-specific information as the cost of information collection and processing declines (Grossman & Stiglitz, 1980; Veldkamp, 2006a; 2006b), thereby resulting in firm-level stock returns being less synchronous with industry and market returns (or lower R^2).

By focusing on the average R^2 at the country-level, Morck et al. (2000) provide early evidence that stock prices in emerging economies are more synchronous than those in developed countries, and that the result is not driven by country-level factors such as market size, fundamentals volatility, country size, economy diversification, or the comovement of firm-level fundamentals. Rather, Morck et al. (2000) attribute their findings to the cross-country variation in protection for private property rights. Where emerging countries have lower degrees of private property rights protection, the economic conditions deter information-driven arbitrage trading based on firms' fundamentals and so this results in greater marketwide stock price variation, which translates into higher stock return synchronicity. Moreover, they also find that the low stock return synchronicity in developed markets is associated with strong legal protection against corporate insiders. They

argue that the presence of sound institutional systems discourages intercorporate income-shifting by controlling shareholders and therefore resulting in more firm-specific variation in stock returns.

Motivated by the findings of Morck et al. (2000), other cross-country studies on stock return synchronicity also document varying results across different institutional structures. Concentrating on emerging economies, Li et al. (2004) find that trade openness generally increases stock return synchronicity, while capital market openness is associated with higher stock return synchronicity, but only in sound institutions. Fernandes and Ferreira (2009) examine the impact of first-time enforcement of insider trading laws on stock price informativeness and find that there is a strong asymmetric association between them with respect to a country's macro infrastructure (the efficiency of the judicial system, investor protection and financial reporting). While the enforcement of insider trading laws is advocated to encourage information collection that leads to more informed trading, Fernandes and Ferreira (2009) find that the negative association with stock return synchronicity is concentrated in countries with strong macro infrastructure. In emerging countries where macro infrastructure is weak, the association remains non-significant (or even positive) after the initial enforcement of insider trading laws, as insiders continue to crowd out information collection when there is a lack of rigorous enforcement. As Wang and Yu (2015) also demonstrate, the expected improvement in the flow of firm-specific information following firms' adoption of high quality accounting standards (US GAAP or IFRS) eventuates only when countries have effective legal environments. They find that the results are consistent irrespective of whether the adoption is voluntary or mandatory. Even when Ahmad (2013) extends the study of Morck et al. (2000) to a longer sample period, he also documents corroborative evidence that stock return synchronicity is negatively associated with a country's level of investor protection. In particular, he shows that the usefulness of firm fundamentals such as accruals in providing firm-specific information to investors is conditioned on the country's level of investor protection.

Relatedly, Jin and Myers (2006) develop a new theory to explain the R^2 pattern at the country-level documented by Morck et al. (2000), by linking the association with opaqueness, and find similar results as Morck et al. (2000) for a much larger sample. Nonetheless, they demonstrate that stock return synchronicity is also higher for countries where firms are more opaque to outside investors, and this consequently leads to higher frequencies of crashes. Based on their findings, Jin and Myers (2006) argue that firms' lack of transparency limits the provision of information to outside investors, which influences the division of risk bearing between inside managers and outside investors. As firm-specific risk is shifted from outside investors to insider managers given the information asymmetry, this results in higher R^2.

In addition to the country-level determinants, a stream of research also examines the extent to which firm-level attributes determine stock return synchronicity. Piotroski and Roulstone (2004) investigate the influence of different market participants' activities (financial analysts, institutional investors and insiders) on the incorporation of firm-specific, industry-level and market-level information into stock prices and conclude that each of these market participants possesses different information advantage. Specifically, they find that stock return synchronicity is positively associated with analyst forecasting activities due to enhanced intra-industry information transfers by analysts. However, they find that synchronicity is negatively associated with insider trades due to higher flow of firm-specific information into stock prices. Instead, Piotroski and Roulstone (2004) offer less conclusive finding with respect to the relation between stock return synchronicity and changes in institutional holdings. Their additional tests reveal that insider and institutional trading accentuate the incorporation of firm-specific earnings news into stock prices, while analyst activity accelerates firm-specific and industry-level earnings news being impounded into stock prices. In addition, Chan and Hameed (2006) also document a positive relation between analyst coverage and stock return synchronicity in emerging markets. This provides likewise evidence, as in Piotroski and Roulstone (2004), to suggest that financial analysts play a vital role in

disseminating marketwide information rather than firm-specific information. Nevertheless, Cheong and Zurbruegg (2016) argue that the types of information analysts impound can still be highly dependent on the quality of firms' compliance of auditing and financial reporting standards. Even though they similarly find that analyst coverage generally increases stock return synchronicity, they document that analysts are more incline to impound firm-specific information into the market in environment where auditing and financial reporting compliance is strong.

Aside from the important role of analysts in determining stock return synchronicity, several papers also examine the relation of ownership structure and corporate governance on the incorporation of information into stock prices. Corroborating the study by Piotroski and Roulstone (2004), Brockman and Yan (2009) find that the presence of blockholders lowers stock return synchronicity. This is because they have informational advantage over diffuse shareholders in acquiring private information, and thus this induces the incorporation of more firm-specific information into stock prices. However, Gul, Kim and Qiu (2010) document somewhat different results in the Chinese market, explicitly that the association between stock return synchronicity and ownership concentration is concave with its maximum at an approximately 50 percent level and that synchronicity is also higher when the largest shareholder is government-related. Nonetheless, the findings of Gul et al. (2010) also show that the synchronicity among the Chinese firms is lower with foreign ownership and stronger auditor quality. Even by cross-listing in the US, Fernandes and Ferreira (2008) similarly find a negative association on stock return synchronicity for non-US firms from developed countries, although the relation reverses for those from emerging countries due to increased analyst coverage post cross-listing. In addition to ownership structure, the existing literature also provides consistent evidence to suggest that firm-level corporate governance, such as the absence of antitakeover provision (Ferreira & Laux, 2007), the existence of gender-diverse boards (Gul, Srinidhi & Ng, 2011) and the quality of a firm's corporate governance structure (Yu, 2011), enhances the information environment and thus

encourage private information collection, which therefore results in lower stock return synchronicity.

At the firm-level, the quality of financial reporting also determines a firm's information environment (Easley & O'Hara, 2004), and consequently is expected to impact on stock return synchronicity. Extending the aforementioned work of Jin and Myers (2006), Hutton et al. (2009) examine the association between firm-level transparency of financial statements and stock return synchronicity. They provide evidence akin to Jin and Myers (2006) that opaque firms are more synchronous with the market and more prone to stock price crashes. While Hutton et al. (2009) argue that opacity discourages the availability of firm-specific information and thus causes investors to place more reliance on marketwide information, Choi et al. (2019) find that comparability among the US firms improves the informativeness of stock prices by enhancing the incorporation of more firm-specific information into stock prices. This is somewhat different from the findings of Peterson et al. (2015), who instead find that greater cross-sectional accounting consistency in the US setting is associated with higher stock return synchronicity because investors benefit from industry information transfer. Nevertheless, Dasgupta et al. (2010) develop a framework and show that stock return synchronicity can indeed have a dynamic response to an improvement in firms' information environment. Specifically, they find that older firms have higher stock return synchronicity because stock prices already incorporate most of the time-invariant firm-specific information. When substantial new information about a firm is disclosed, they find that stock return synchronicity first decreases as the improved transparency encourages the incorporation of more firm-specific information. However, they further show that this association subsequently reverses once the relevant information is impounded into stock prices. Based on this line of reasoning, they find empirical evidence to support the dynamic pattern on stock return synchronicity for two major events, namely SEOs and listings of ADRs.

As IFRS adoption represents a significant change in firms' financial reporting and thus is expected to influence its information environment, several studies also focus on examining the impact of IFRS adoption *directly* on the types of information impounded into stock prices. In the voluntary setting, Kim and Shi (2012) find that voluntary IFRS adopters from 34 countries exhibit lower stock return synchronicity than non-adopters, and there is also a decreasing pattern that is prevalent from the pre-adoption to the post-adoption period. Their findings are analogous to that of Barth et al. (2018), who examine the capital market benefits for firms adopting IFRS voluntarily and find that lower stock return synchronicity is one of them after adoption.[52] Together, their findings suggest that enhanced disclosures via voluntary adoption of IFRS has improved the flow of firm-specific information, thereby providing incentives to market participants to collect and trade on firm-specific information in their investment decisions. Nevertheless, Wang and Yu (2015) further emphasize that this negative association between stock return synchronicity and the voluntary adoption of high quality accounting standards (IFRS or US GAAP) is restricted only for countries with effective legal environments, suggesting that changing accounting standards per se can have a limited role in determining the informativeness of stock prices.

Like many other studies on IFRS adoption, the findings on stock return synchronicity based on voluntary IFRS adoption are not extended to the context of mandatory adoption. For example, Beuselinck et al. (2009) examine the mandatory adoption of IFRS in the EU while Bissessur and Hodgson (2012) focus their investigation solely on Australian adopting firms. Both studies find that stock return synchronicity has a similar dynamic response to mandatory IFRS adoption, akin to the framework developed by Dasgupta et al. (2010). Specifically, their studies show that the mandatory introduction of IFRS initially decreases stock return synchronicity when firms first move towards IFRS, but subsequently increases synchronicity in later years. Therefore, their

[52] Barth et al. (2018) examine capital market benefits associated with voluntary adoption of IFRS, including liquidity, share turnover and firm-specific information. Stock return synchronicity is the measure adopted for firm-specific information.

results suggest that although IFRS adoption in the mandatory setting similarly provides new firm-specific information to the market during the transition, the surprise of future disclosures reduces. Consequently, this leads to less firm-specific information for investors post-adoption. As Loureiro and Taboada (2011) argue, voluntary and mandatory IFRS adopters are expected to exhibit different synchronicity with the market due to their inherent incentives to apply IFRS. Consistent with the expectation, their finding thus shows that voluntary adopters gain more benefits following IFRS adoption by experiencing a smaller decline in stock price informativeness than mandatory adopters. Despite this, the findings of Wang and Yu (2015) suggest that the relation between the effectiveness of adopting high quality accounting standards (voluntary and mandatory) and stock prices informativeness is conditional on the quality of the legal environment.

5.3 Hypothesis Development

5.3.1 The Role of Accounting Comparability on Stock Return Synchronicity

Financial statements are widely perceived to be a pivotal source of information for capital market participants, and so prior research has extensively discussed and empirically examined the implications of the quantity and quality of financial reporting information for various capital allocation decisions (e.g. Biddle & Hilary, 2006; Biddle, Hilary & Verdi, 2009; Easley & O'Hara, 2004; Lambert et al., 2007; Ramalingegowda, Wang & Yu, 2015). While there are many aspects of financial reporting attributes (e.g. faithful representation, timeliness, conservatism) that are deemed to be desirable for producing high quality accounting information, comparability is a key concept that is expected to expand the information sets for efficient capital allocation decisions (Barth, 2013; De Franco et al., 2011).

In line with this expectation, it is posited that the availability of comparable financial accounting information directly influences the information environment in which market participants collect, process and trade on information. A growing body of literature provides consistent evidence to support the conjecture that accounting comparability benefits the capital market through enhanced forecasting activities, improved cross-border capital flows, better capital market outcomes, improved valuation performance etc. (e.g. De Franco et al., 2011; DeFond et al., 2011; Neel, 2017; Young & Zeng, 2015). There is however little understanding about the specific role of accounting comparability in determining investors' preference for the relative mix of firm-specific and common information used in their decision making.

In accordance with the information model of Grossman and Stiglitz (1980), the intensity of informed trading is influenced by the cost-benefit trade-off of private information collection activity. When the cost increases, then investors have fewer incentives to collect and trade on firm-specific information, which in turn leads to higher stock return synchronicity (Roll, 1988). Extending the work of Grossman and Stiglitz (1980), the information model of Veldkamp (2006a) also predicts that when high quality private information is costly and incomplete, investors prefer cheaper and abundant common information, and this consequently also increases stock price comovement. Nevertheless, Kim and Verrecchia (1994) develop a model which proposes that public disclosures of high quality financial accounting information enable informed traders, or *elite information processors*, to collect additional private information and/or process publicly available information into value-relevant private information, which on the contrary leads to lower stock return synchronicity.

Consistent with the information models of Grossman and Stiglitz (1980), Veldkamp (2006a) and Kim and Verrecchia (1994), the association between accounting comparability and stock return synchronicity can be either negative or positive. In simplicity, the negative correlation between

comparable accounting information and stock return synchronicity arises when comparable accounting information facilitates the amount of firm-specific information (relative to common information) incorporated into stock prices, which in this chapter is referred to as the *information encouragement role* of accounting comparability. In contrast, stock return synchronicity increases when comparable accounting information results in stock prices comoving more closely due to the incorporation of relatively more common information than firm-specific information into stock prices, which this chapter refers to as the *information substitution role* of accounting comparability.

In the context of this chapter, the *information encouragement role* of accounting comparability can arise for two reasons. First, prior literature demonstrates that accounting comparability enhances the ability of peer selection for comparison (Petaibanlue et. al, 2015; Young & Zeng, 2015) and encourages the use of peer firms' financial information for benchmarking (Gao & Sidhu, 2016; Kim & Li, 2010; Wang, 2014; Wu & Zhang, 2010). For investors, the improvement in benchmarking gives them a better position to understand and evaluate firms' competitive advantages relative to peer firms (Chen et al., 2013; Young & Zeng, 2015). Moreover, a better understanding of firms' underlying economic events via more comparable financial statements also enhances investors' ability to predict firms' future performance (Choi et al., 2019). Consistent with the information model of Kim and Verrecchia (1994, 1997), the information advantage should create a better information environment for informed trading, and the increased incorporation of firm-specific information is thus expected to lower the synchronicity of stock prices.

Second, firms with higher comparability are also expected to have higher quality information sets. This is because more comparable firms serve as better benchmarks for each other and this increases firms' incentives to reduce information asymmetry with investors (Chen et al., 2013; Gao & Sidhu, 2016). By garnering information from comparable financial statements, investors gain more

understanding of how economic events are translated into accounting performance. This aids investors in making sharper inferences about the economic similarities and dissimilarities across firms for enhanced monitoring. As Sohn (2016) conjectures, comparable financial statements increase the transparency of firms' accounting environments, that potentially serves as a mechanism to curtail managers' incentives to conduct opportunistic accrual earnings management. According to Jin and Myers (2006), who develop a theory that links managerial opportunism, transparency and firm-specific variation, greater information opacity exerts pressure on insider managers (outside investors) to absorb more firm-specific variance (common variance) that eventually increases (lowers) stock return synchronicity.[53] Given that Sohn's (2016) finding lends support to his prediction that higher accounting comparability ameliorates firms' opportunistic accrual earnings management, it is expected, to follow the model of Jin and Myers (2006), that accounting comparability encourages investors to rely more on firm-specific information than common information, which thereby decreases stock return synchronicity. However, Sohn (2016) also documents a corresponding increase in real earnings management in substitution of accrual earnings management that is harder to be reflected in financial statements, and so the impact of such a shift in earning management strategies on stock return synchronicity is somewhat unknown.

Conversely, it is also possible for accounting comparability to have an *information substitution role* on stock return synchronicity due to reporting externality of comparable accounting information. Prior research shows that improved cross-sectional comparability is associated with increased intra-industry and cross-country information transfers (Kim & Li, 2010; Wang, 2014). As accounting comparability increases the availability of more superior benchmarks, it is possible that this boosts investors' ability to discover and derive useful common information about an industry/economy by gleaning information from other comparable peer firms. According to the

[53] Hutton et al. (2009) extend the work of Jin and Myers (2006) using firm-level earnings management as a measure of opacity, and document similar findings that opacity is positively associated with stock return synchronicity due to less revelation of firm-specific information.

information model of Veldkamp (2006a), an increase in the supply of common information is expected to lower investors' incentives to acquire and trade on firm-specific information. This is because there is a high fixed cost associated with information production that can now be shared among more and better information that becomes publicly available. If this is the case, then this potentially leads to stronger comovement in stock prices with common information, which in turn, results in greater stock return synchronicity.

Moreover, extant literature also generally agrees that accounting comparability contributes to better analyst forecasting activities in terms of expanding analyst coverage, improving forecast accuracy and decreasing forecast dispersion (De Franco et al., 2011; Horton et al., 2013; Neel, 2017; Petaibanlue et al., 2015; Peterson et al., 2015). As analysts are deemed to be significant conveyors of common information (Chan & Hameed, 2006; Piotroski & Roulstone, 2004), the findings suggest that accounting comparability enhances analysts' ability to evaluate firm performance at a lower cost and thus increases analysts' preference for collecting and disseminating public (versus private) information about a firm (De Franco et al., 2011; Neel, 2017). Building on the information model of Veldkamp (2006a) and prior findings on the positive impact of analyst activity on stock return synchronicity (Chan & Hameed, 2006; Cheong & Zurbruegg, 2016; Piotroski & Roulstone, 2004), it is expected that comparable accounting information crowds out private information collection due to increased dissemination of common information by financial analysts, resulting in higher stock return synchronicity.

Thus far, the two most related studies on the association between comparability and stock return synchronicity are based on the US sample that has offered opposite findings. Choi et al. (2019) find that higher financial statement comparability among the US firms increases the amount of firm-specific information that resulted in lower stock return synchronicity. However, Peterson et al. (2015) document stronger stock return synchronicity when there is greater cross-sectional

accounting consistency based on the textual similarities of accounting policy footnotes disclosed in 10-K filings.[54] Given the competing arguments set forth and the mixed evidence documented in the US setting alone, the first objective of this study is therefore to test whether and how accounting comparability is associated with the incorporation of firm-specific information relative to marketwide information into stock prices, which is stated in the following first hypothesis (in alternative form):

H1: Accounting comparability is significantly associated with stock return synchronicity, *ceteris paribus*.

5.3.2 The Conditioning Role of Mandatory IFRS Adoption

Prior research shows that IFRS adoption determines a firm's reporting structure and consequently has important implications for the information environment in which investors can obtain firm-specific versus common information to make their investment decisions (e.g. Ahmed et al., 2013; Chen et al., 2013; Kim & Shi, 2012).[55] This is particularly evidenced by several studies which find that IFRS adoption is significantly associated with stock return synchronicity. Studies on voluntary adoption show that voluntarily committing to IFRS facilitates the flow of firm-specific information that eventually decreases stock return synchronicity (e.g. Barth et al., 2018; Kim & Shi, 2012; Wang & Yu, 2015). In contrast, subsequent studies on mandatory adoption find that this negative association only persists in the initial period of mandatory IFRS adoption but subsequently reverses in the later post-IFRS adoption period (e.g. Beuselinck et al., 2009; Bissessur & Hodgson,

[54] According to the Conceptual Framework of the IASB, accounting consistency is related but not equivalent to accounting comparability (IFRS Foundation, 2010). The study by Peterson et al. (2015) is included here for comparison purposes only.

[55] Evidence so far is drawn from the impact of IFRS adoption on the properties of accounting numbers that are directly associated with capital market participants' resource allocation decisions (e.g. earnings timeliness, earnings persistence, accrual/earnings quality), and on various proxies for decision usefulness based on observable decision outcomes (e.g. cost of capital, stock liquidity, forecast properties).

2012). Specifically, the latter studies suggest that the increased synchronicity of stock prices for mandatory adopters in the post-adoption period is attributable to improved analyst forecasting performance that stems from the greater comparability of financial statements under the IFRS reporting regime (Beuselinck et al., 2009; Bissessur & Hodgson, 2012).

Given evidence that a greater amount of marketwide information (relative to firm-specific information) was impounded into stock prices after firms in Australia (Bissessur & Hodgson, 2012) and the EU (Beuselinck et al., 2009) fully adopted IFRS, it is expected that comparable accounting information produced under IFRS reporting intensifies (attenuates) the positive (negative) relation of cross-country accounting comparability on synchronicity. This is possible as prior studies argue and show that financial reporting externality and the extent of information transfers are higher post-IFRS adoption (Chen et al., 2013; DeFond et al., 2011; Gao & Sidhu, 2016; Kim & Li, 2010; Wang, 2014; Yip & Young, 2012). This provides greater incentives for investors to acquire and process common information that is available in the market than to extract more expensive firm-specific information (Veldkamp, 2006a), thereby increasing stock return synchronicity.

Furthermore, existing research also asserts and finds that mandatory IFRS adoption improves the information environment for financial analysts due to greater comparability (Ball, 2006; Beuselinck et al., 2017; Horton et al., 2013; Houqe et al., 2014; Jiao et al., 2012; Neel, 2017). The argument is that eliminating international accounting diversity through IFRS adoption ameliorates the efforts and costs of making adjustments by financial analysts in order to make financial statements more comparable across countries (Ball, 2006). This should lead to more accurate analyst forecasts, lower analyst disagreement and greater analyst coverage (e.g. Beuselinck et al., 2017; Byard et al., 2011; Cotter et al., 2012; Horton et al., 2013; Jiao et al., 2012). Since analysts are prominent information intermediaries in generating and disseminating a large amount of

common information to the market (Chan & Hameed, 2006; Piotroski & Roulstone, 2004), this is likely to increase investors' preference to crowd out costly private information gathering with cheaper and abundant common information from analysts to impound into stock prices.

However, it is also possible that one can expect the conditional impact of mandatory IFRS adoption on the association between comparability and stock return synchronicity to be negative. Putting institutional differences aside, financial statements from different countries applying the same set of accounting standards are more appealing to investors because they are easier to interpret and compare than those prepared under varied local accounting standards (Ball, 2006). Moreover, prior studies also provide evidence to suggest that accounting information disclosed under mandatory IFRS adoption is of higher quality and greater value relevance to investors (e.g. Aharony et al., 2010; Chen et al., 2010; Chua et al., 2012). This implies that managers and investors can more easily utilize comparable accounting information prepared using IFRS to collect additional firm-specific information and/or process high quality information into value-relevant firm-specific information (Kim & Verrecchia, 1994). The lower cost of private information gathering as a result of mandatory IFRS adoption is thus expected to facilitate informed trading and lower stock return synchronicity.

Given the importance of comparability in a mandatory IFRS adoption setting but lack of empirical evidence on this issue, the aim is to provide evidence on whether and how the association between comparability and stock return synchronicity is conditioned on the mandatory adoption of IFRS. In doing so, this study first establishes the relation between synchronicity and mandatory IFRS adoption. Then this study examines whether the association between comparability and synchronicity differs systematically between the pre-adoption and the post-adoption periods. Specifically, the second hypothesis is stated as follows (as alternative form):

H2: The synchronicity impact of accounting comparability is conditioned on the mandatory adoption of IFRS.

5.4 Research Methodology

5.4.1 Measurement of Stock Return Synchronicity

The main dependent variable for this study is stock return synchronicity, which is a proxy to capture the extent to which firm-specific information (relative to common information) is incorporated into stock prices. Emulating the standard procedure set forth in prior research (Durnev et al., 2003; Piotroski & Roulstone, 2004), the measurement of stock return synchronicity is obtained from the R^2 statistics of the market model for each sample firm and calendar year in each country, which is estimated based on the linear regression as follows:

$$RET_{i,t} = \alpha_0 + \alpha_1 MKTRET_{i,t} + \alpha_2 MKTRET_{i,t-1} + \alpha_3 INDRET_{i,t} + \alpha_4 INDRET_{i,t-1} + \varepsilon_{i,t} \quad (5.1)$$

where $RET_{i,t}$ is the firm i's weekly return at week t, the value-weighted industry return for industry of firm i at week t ($INDRET_{i,t}$) is created using all firms in the same industry as firm i (excluding firm i) and the market return ($MKTRET_{i,t}$) is the weekly S&P market index return in the country of firm i in week t. Similar to previous studies, lagged return metrics are included in equation (5.1) to correct for potential autocorrelation problems and firms with less than 40 weekly returns in a year are also eliminated from the regression estimation.

By obtaining R^2 statistics from estimating the market model (equation (5.1)) for each firm-year, stock return synchronicity (*SYNCH*) is defined as follows:

$$SYNCH_i = log\left(\frac{R_i^2}{1-R_i^2}\right) \quad (5.2)$$

where R^2 is a variable bound by zero and one, and therefore requires applying a log transformation to change the R^2 variable into a continuous variable that is more normally distributed. After the log transformation, higher (lower) values of stock return synchronicity (*SYNCH*) are indicative that individual firms' returns comove more closely with the market and/or industry returns (firm-specific return variation). In other words, any inverse relation between accounting comparability and stock return synchronicity (*SYNCH*) is interpreted as meaning that comparable accounting information facilitates the flow of firm-specific information into the market and its incorporation into stock prices, which is consistent with the *information encouragement role* of accounting comparability. Likewise, comparable accounting information could possibly lead to the incorporation of relatively more common information than firm-specific information into stock prices that increases stock return synchronicity, which is interpreted in this study as the *information substitution role* of accounting comparability.

5.4.2 Measurement of Accounting Comparability

To assess cross-country accounting comparability, this study adopts an output-based measurement that emulates the methodology pioneered by De Franco et al. (2011) to address the underlying notion of comparability in the Conceptual Framework of the IASB (IFRS Foundation, 2010). That is, accounting amounts are comparable if, when two firms *i* and *j* face similar economic outcomes, the firms report similar accounting results.

Consistent with this notion, the comparability measurement intends to capture the similarity of accounting systems based on the earnings-returns relation between firms. Under this approach, the focus is to use share returns and earnings as proxies to estimate a firm's mapping of economic events onto accounting outcomes (De Franco et al., 2011). For the purpose of this study, the earnings-returns regression outlined below is estimated at the firm-level using annual data for two time periods: the pre-adoption (2000–2004) and post-adoption (2007–2011) periods:[56]

$$NI_{i,t} = \beta_i + \gamma_i RETURN_{i,t} + \varepsilon_{i,t} \quad (5.3)$$

where $NI_{i,t}$ is annual net income (scaled by total assets) of firm i in year t and $RETURN_{i,t}$ is the cumulative share return of firm i over year t. The coefficients of equation (5.3), β_i and γ_i, represent the estimate of the accounting function for firm i to reflect how economic events (i.e. *RETURN*) are mapped onto accounting income (i.e. *NI*). Similarly, the estimation is repeated using the share returns and earnings for firm j to obtain a separate set of coefficients (β_j and γ_j) to estimate the accounting function for firm j.

To measure the similarity of the accounting functions for firm i and firm j, the next step is to predict firm i's earnings by assuming the same economic outcome (i.e. $RETURN_i$). Specifically, using firm i's own coefficients from estimating equation (5.3) (β_i and γ_i) and the coefficients of its industry peer firm j (β_j and γ_j) in the same two-digit ICB code for the respective time periods, two predicted earnings of firm i ($E(NI)_{i,i,t}$ and $E(NI)_{i,j,t}$) are calculated as below:

$$E(NI)_{i,i,t} = \hat{\beta}_{0i} + \hat{\gamma}_{1i} RETURN_{i,t} \quad (5.4)$$

$$E(NI)_{i,j,t} = \hat{\beta}_{0j} + \hat{\gamma}_{1j} RETURN_{i,t} \quad (5.5)$$

[56] This study differs from De Franco et al. (2011) who estimate accounting comparability among the US firms using quarterly data. There is a lack of quarterly data availability for most non-US firms, and so similar international studies generally rely on annual data to compute their comparability measures (e.g. Barth et al., 2012; Cascino & Gassen, 2015; Neel, 2017).

where $E(NI)_{i,i,t}$ is the predicted earnings of firm *i* using firm *i*'s accounting function and firm *i*'s return in period *t*, and $E(NI)_{i,j,t}$ is the predicted earnings of firm *i* using firm *j*'s accounting function and firm *i*'s return in period *t*.

By holding the economic income constant, a comparability score between firm *i* and firm *j* can be measured by the negative value of the absolute difference between the predicted earnings using firm *i*'s and firm *j*'s accounting functions. Finally, a firm-level measure of accounting comparability ($COMP_i$) is computed annually by averaging the comparability scores for all firm *i*-firm *j* combinations for a given firm *i* within a country-industry group as expressed below:

$$COMP_i = -\frac{1}{n} \times \Sigma_{i,j} \left| E(NI)_{i,i,t} - E(NI)_{i,j,t} \right| \quad (5.6)$$

where *n* is the number of firm-pairs available for firm *i* within a given country-industry group (based on its two-digit ICB code). Consistent with De Franco et al. (2011), the comparability metric is expressed as negative values so that a larger value of *COMP* indicates greater cross-country comparability.

5.4.3 Empirical Framework

To address the hypotheses developed in the earlier section, this study estimates the following annual time-series cross-sectional regression equation:

$$SYNCH_i = \kappa_i + \lambda_1 COMP_i + \lambda_2 IFRS + \lambda_3 COMP_i * IFRS + Control\ Variables + Fixed\ Effects + \varepsilon_i \quad (5.7)$$

where $SYNCH_i$ and $COMP_i$ refer to the firm-level stock return synchronicity and comparability measures as described above. *IFRS* is a binary variable coded one for mandatory IFRS adopters in the post-adoption period, and zero otherwise. By estimating equation (5.7), a significantly positive

(negative) λ_1 provides evidence for the *information encouragement (information substitution*) role of accounting comparability in facilitating the incorporation of relatively more firm-specific (marketwide) information than marketwide (firm-specific) information into stock prices, and vice versa. In equation (5.7), *COMP* and its interaction term with *IFRS* are included to permit the relation between comparability and stock return synchronicity to differ before and after adopting firms adopt IFRS mandatorily. While the coefficient of the interaction term (λ_3) is interpreted as the incremental impact of accounting comparability post-IFRS adoption, the sum of the two coefficients ($\lambda_1 + \lambda_3$) represents the total impact of accounting comparability, coupled with mandatory IFRS adoption, on stock return synchronicity. Moreover, the variable *IFRS* is also included as a control for intertemporal changes in stock return synchronicity arising from mandatory IFRS adoption. To distinguish the relations of accounting comparability and mandatory IFRS adoption on stock return synchronicity, *IFRS* and its interaction term with *COMP* are introduced sequentially to the baseline regression. The inclusion of *Control Variables* and *Fixed Effects* are explained in Section 5.4.4. All results from the panel regressions are reported based on heteroskedastic and contemporaneous correlation corrected standards errors.

5.4.4 Control Variables

Consistent with previous studies, this study controls for additional cross-sectional differences that are expected to influence stock return synchronicity by incorporating various control variables into the multivariate analyses (e.g. Cheong & Zurbruegg, 2016; Kim & Shi, 2012; Piotroski & Roulstone, 2004).

First, prior studies provide consistent evidence that analyst coverage significantly influences the degree of stock return synchronicity because analysts are considered as key information intermediaries (Chan & Hameed, 2006; Cheong & Zurbruegg, 2016; Ferreira & Laux, 2007; Kim

& Shi, 2012; Piotroski & Roulstone, 2004). Although analysts are primarily involved in producing earnings forecasts for firms that are firm-specific related, Veldkamp (2006a) and others predict that analysts have more incentives to collect and disseminate cheaper and abundant common information rather than to acquire costly firm-specific private information (e.g. Chan & Hameed, 2006; Piotroski & Roulstone, 2004). As a result, previous findings show that more common information (relative to firm-specific information) is capitalized into stock prices for firms with higher analyst coverage, which thus leads to a positive association between analyst coverage and stock return synchronicity (Chan & Hameed, 2006; Ferreira & Laux, 2007; Kim & Shi, 2012; Piotroski & Roulstone, 2004). Therefore, this study controls for analyst coverage by using the variable *ANALYST*, which is defined in Panel A of Table 5.1.

Second, this study also includes an array of firm-specific control variables drawn from related literature on stock return synchronicity in the empirical design. They comprise: (i) firm size (*SIZE*), (ii) earnings volatility (*RISK*), (iii) trading volume (*VOLUME*), (iv) the extent of debt financing (*LEVERAGE*), (v) the extent of institutional investors' holding (*INSTITUTION*), and (vi) audit quality (*BIG4*), which are each defined in Panel A of Table 5.1 (Chan & Hameed, 2006; Cheong & Zurbruegg, 2016; Ferreira & Laux, 2007; Kim & Shi, 2012; Piotroski & Roulstone, 2004). In line with previous findings, this study expects *SIZE* and *VOLUME* to have a positive relation with *SYNCH* because larger firms have greater weight in determining market returns while actively traded firms are more responsive to market information (Chan & Hameed, 2006; Cheong & Zurbruegg, 2016). Moreover, it is predicted that *RISK* and *SYNCH* are positively associated because the higher volatility of a firm's earnings makes private information more valuable and harder to acquire (Chan & Hameed, 2006). However, this study expects the level of debt financing (*LEVERAGE*) and institutional holdings (*INSTITUTION*) to decrease synchronicity due to the information advantage of debtholders and institutional investors in collecting and utilizing private information (Ferreira & Laux, 2007; Hartzell & Starks, 2003; Piotroski & Roulstone, 2004).

Nevertheless, financial statements audited by Big 4 auditors (*BIG4*) are deemed to be of higher quality and facilitate greater reliance on private information, and so are expected to be negatively associated with synchronicity (Gul et al., 2010).

Third, following prior related research, this study also incorporates a set of country-level control variables in the empirical regression (Fernandes & Ferreira, 2009; Kim & Shi, 2012; Morck et al, 2000). Among them, controls for the level of a country's economic development (*GDP*), stock market development (*SDEV*) and economic growth (*GDPGROWTH*) are included because prior studies demonstrate that macro-economic factors influence the level of stock return synchronicity. A description of each country-level control variable is provided in Panel B of Table 5.1.

Finally, there are potential concerns about omitted variables and endogeneity issue, so this study report results by considering firm fixed effects.[57] Moreover, this study also uses a year fixed effect to control for trending pattern of stock return synchronicity.

[57] The use of firm fixed effect to control for time invariant firm characteristics in alleviating endogeneity is consistent with the approach suggested by econometric textbooks (e.g. Greene, 2008; Woolridge, 2010) (Reeb, Sakakibara & Mahmood, 2012).

TABLE 5.1
DEFINITIONS OF FIRM-SPECIFIC AND COUNTRY-LEVEL CONTROL VARIABLES

Variable	Definition
Panel A: Firm-specific Control Variables	
ANALYST	Natural logarithm of one plus the number of analysts.
SIZE	Natural logarithm of the total assets of a firm.
RISK	Annualized stock return volatility.
VOLUME	Natural logarithm of trading volume over year *t*.
LEVERAGE	Ratio of short-term and long-term debts to total assets.
INSTITUTION	Ratio of the number of shares held by institutions to the total Number of shares outstanding at the beginning of the year.
BIG4	An indicator variable that equals one if a firm is audited by one of the Big 4 auditors, or zero otherwise.
Panel B: Country-level Control Variables	
GDP	Natural log of the gross domestic product per capita (in USD) in year *t*.
SDEV	Natural log of the number of listed firms in a given country in year *t*.
GDPGROWTH	Annual percentage of growth rate of gross domestic product (GDP) as obtained from the World Bank database.

5.4.5 Sample Selection

The focus of this chapter is on listed firms from Australia and member countries of the EU which were required by the Australian Corporations Act 2001 and EU Regulation 1606/2002 to adopt IFRS mandatorily as of 2005. Therefore, the sample period is bifurcated into two sub-periods with reference to the mandatory IFRS adoption date: the pre-adoption period (2000 to 2004) and the post-adoption period (2007–2011). This study chooses to omit firm-year observations in 2005 and 2006 because the uncertainties during the transition to IFRS potentially confound inferences. At the same time. this study creates a balanced panel of data for the same set of firms across the pre-adoption and the post-adoption periods so that each firm acts as its own control and the confounding influence of macro-economic over time is minimized.

The construction of the sample for this study begins with the collection of accounting and market data from Datastream and Thomson Reuters databases. Specifically, the initial sample of this study concentrates on countries that have more than 100 listed firms followed by the Thomson Reuters database with sufficient data to calculate stock return synchronicity annually for the entire sample period. From this initial sample, this study excludes firm-year observations for financial, real estate and utilities firms because they are bound by unique operating environment and additional regulatory requirements. Moreover, this study restricts the sample to firms that used their non-US domestic accounting standards during the pre-adoption period, and later transitioned to IFRS as of 1 January 2005 for the entire post-adoption period. This is to ensure that the sample firms are subject to the same shift in financial reporting standards to IFRS to alleviate the concern about other confounding events. This is done so by eliminating firms that adopted US GAAP and firms that adopted IFRS voluntarily before 2005. These firms are likely to have different reporting incentives from those of mandatory IFRS adopters (Ashbaugh, 2001; Christensen et al., 2015) and

thus can potentially introduce a self-selection bias.[58] Furthermore, firm-year observations are also deleted when data is unavailable. This yields a base sample of 921 firms from Australia and five EU countries (France, Greece, Germany, Italy and the UK) that qualify for further matching to construct a matched sample. All financial variables are also winsorized at the top and bottom 5% to mitigate the influence of outliers on the inferences made in this study.

To construct a matched sample for measuring cross-country accounting comparability, this study forms pairs of firms from the base sample that consist of an Australian firm and an EU firm. Consistent with prior research, this study requires pairs of firms from different countries to be from the same industry (based on two-digit ICB code) because firms in the same industry are deemed to have more similar economic fundamentals (De Franco et al., 2011; Barth et al., 2012; Yip & Young, 2012). Moreover, this study also performs another matching procedure for pairs of firms based on the similarity in firm size (based on total assets in 2006) to ameliorate the potential confounding influences from any economic and accounting differences. That is, any firm-pair for which the ratio of the smaller value of total assets to the larger value is below 50 percent is eliminated from the matched sample.

Table 5.2 Panel A provides a breakdown of the sample selection procedures and the sample composition by country. As shown in the table, the matched sample consists of 2,845 pairs of firms from Australia and the EU. The greatest proportion of the sample are Australian firms that are matched with firms from France and the UK, for which no voluntary adoption of IFRS was permitted before 2005 in these three countries (Jeanjean & Stolowy, 2008). In contrast, Germany

[58] Like many other IFRS studies on various economic consequences, the different results across voluntary and mandatory adopters are anticipated due to the variation in firms' commitment to IFRS adoption (Loureiro & Taboada, 2011) and this consequently influences the informativeness of stock prices.

contributes the least proportion to the matched sample, which is consistent with the fact that many German firms chose to voluntarily adopt IFRS before the 2005 mandate date (Brown, 2013).

Table 5.2 Panel B reports the industry breakdown for the matched sample across the five EU countries. It shows that matched sample firms are from eight industries, with 46.22 percent of firm-pairs from Industrials. Aside from this, there is no apparent industry concentration.

TABLE 5.2
SAMPLE SELECTION AND COMPOSITION BY COUNTRY AND INDUSTRY

PANEL A: SAMPLE SELECTION PROCEDURES AND COMPOSITION BY COUNTRY

	Australia	EU Member Countries					Total
		France	Germany	Greece	Italy	UK	
Number of firms followed by Thomson Reuters database with sufficient data for stock return synchronicity	388	314	284	119	141	331	1,577
Exclude:							
Financial, real estate and utilities firms	(69)	(53)	(39)	(17)	(55)	(59)	(292)
Firms that had not used local accounting standards before 2005 and do not apply IFRS post-2005	(18)	(30)	(166)	(2)	(1)	(6)	(223)
Firms with incomplete data for the entire sample period	(49)	(8)	(40)	(29)	(1)	(14)	(141)
Base Sample Before Matching	252	223	39	71	84	252	921
Matched Firms between Australia and the EU (Based on Industry and Size)		795	172	362	382	1,134	2,845
		(27.94%)	(6.05%)	(12.72%)	(13.43%)	(39.86%)	(100.00%)

TABLE 5.2 (CONTINUED)

PANEL B: INDUSTRY BREAKDOWN BY COUNTRY

ICB Code	Industry	Matched EU Firms with Australian Sample						
		France	**Germany**	**Greece**	**Italy**	**UK**	**Total**	**%**
0001	Oil & Gas	12	-	3	1	23	39	1.37%
1000	Basic Materials	58	16	82	25	112	293	10.30%
2000	Industrials	270	88	169	213	575	1,315	46.22%
3000	Consumer Goods / Staples	147	33	54	62	94	390	13.71%
4000	Health Care	12	1	2	-	23	38	1.34%
5000	Consumer Services / Discretionary	177	34	48	77	223	559	19.65%
6000	Telecommunications	-	-	-	-	2	2	0.07%
9000	Technology	119	-	4	4	82	209	7.34%
		795	**172**	**362**	**382**	**1,134**	**2,845**	**100.00%**

5.5 Empirical Results

5.5.1 Descriptive Statistics and Univariate Comparisons

Table 5.3 displays descriptive statistics for all the key variables included in the main regression of this chapter for the full sample, the sub-sample of the pre-adoption period and the sub-sample of the post-adoption period, respectively. Based on the averaging approach in constructing the comparability measurement described in Section 5.4.2, 2,845 pairs of matched firms yield 10,820 firm-year observations for the entire sample period across Australia and five EU countries for estimating the main regression. As shown in the table, the mean and median of *SYNCH* are 0.235 and 0.182 respectively for the full sample. The mean and median for *SYNCH* also increased from the pre-adoption period (mean of 0.194 and median of 0.147) to the post-adoption period (mean of 0.275 and median of 0.237), and the increase in the mean value is significant at 1 percent. In a similar pattern, the mean and median of *COMP* are also significantly higher in the post-adoption period (mean of -0.089 and median of -0.057) than in the pre-adoption period (mean of -0.108 and median of -0.061). As the increase in the mean of *COMP* is statistically significant at 1 percent, it is consistent with the comparability benefit of mandatory IFRS adoption.

In terms of control variables, it is apparent that all variables exhibit significantly higher mean values in the post-adoption than in the pre-adoption period, except for *LEVERAGE* and *GDPGROWTH*. While *LEVERAGE* is not statistically different between the pre-adoption and the post-adoption periods, the mean of *GDPGROWTH* decreased significantly across the two periods (from 2.924 to 1.583 at 1 percent significance level). Most notably, the mandatory adoption of IFRS enhanced institutional investors' holding (*INSTITUTION*) and analyst coverage (*ANALYST*). This is consistent with prior evidence on the benefits of adopting IFRS (e.g. Florou & Pope, 2012; Tan et al., 2011).

TABLE 5.3
DESCRIPTIVE STATISTICS

Variable	Full Sample				Pre-Adoption Sample				Post-Adoption Sample							
	N	Mean	Median	Std. Dev.	N	Mean	Median	Std. Dev.	N	Mean		Median		Std. Dev.		
Dependent Variable																
SYNCH	10,820	0.235	0.182	0.172	5,410	0.194	0.147	0.154	5,410	0.275	***	0.237		0.179		
Independent Variables																
COMP	10,820	-0.099	-0.059	0.118	5,410	-0.108	-0.061	0.123	5,410	-0.089	***	-0.057		0.111		
IFRS	10,820	0.500	0.500	0.500	5,410	-	-	-	5,410	1.000		1.000		-		
Control Variables																
ANALYST	10,820	1.188	1.099	1.066	5,410	1.101	1.099	0.981	5,410	1.275	***	1.386	***	1.137	***	
SIZE	10,820	19.843	19.878	2.006	5,410	19.565	19.559	2.037	5,410	20.122	***	20.116	***	1.935	***	
RISK	10,820	0.447	0.393	0.217	5,410	0.442	0.377	0.227	5,410	0.452	**	0.405	***	0.207	***	
VOLUME	10,820	10.234	10.353	2.465	5,410	10.031	10.130	2.363	5,410	10.437	***	10.639	***	2.547	***	
LEVERAGE	10,820	0.212	0.207	0.153	5,410	0.214	0.208	0.156	5,410	0.210		0.206		0.151	**	
INSTITUTION	10,820	0.295	0.250	0.248	5,410	0.267	0.210	0.249	5,410	0.324	***	0.290	***	0.243	**	
BIG4	10,820	0.559	1.000	0.497	5,410	0.531	1.000	0.499	5,410	0.587	***	1.000	***	0.492		
GDP	10,820	14.153	13.976	0.586	5,410	14.075	13.780	0.600	5,410	14.231	***	13.976	***	0.561	***	
SDEV	10,820	7.114	7.248	0.663	5,410	7.071	7.196	0.610	5,410	7.158	***	7.556	***	0.710	***	
GDPGROWTH	10,820	2.253	2.463	1.762	5,410	2.924	2.986	1.118	5,410	1.583	***	2.068	***	2.015	***	

Table 5.4 reports the Pearson correlations among the key variables included in the regressions. Suggestive of the underlying relation, the correlation between *COMP* and *SYNCH* is positive and is statistically significant at 1 percent. Similarly, *SYNCH* is also positively related to *IFRS* at 1 percent significance level. This finding is consistent with prior evidence, such as that presented by Beuselinck et al. (2009) and Bissessur and Hodgson (2012), who find that mandatory IFRS adoption in the EU and Australia increases stock return synchronicity in the later adoption years. Consistent with prior literature, *SYNCH* is also significantly correlated with most of the control variables in the predicted fashion (Beuselinck et al., 2009; Bissessur & Hodgson, 2012; Brockman & Yan, 2009; Chan & Hameed, 2006; Kim & Shi, 2012; Wang & Yu, 2015). For example, *SYNCH* is positively correlated with analyst coverage (*ANALYST*), firm size (*SIZE*), trading volume (*VOLUME*), leverage (*LEVERAGE*) and audit quality (*BIG4*), while it is negatively associated with institutional investors' holding (*INSTITUTION*). As most of the correlations appear to be modest, this suggests that multicollinearity is not likely to be a substantive issue. Nevertheless, it is noteworthy that analyst coverage (*ANALYST*) has a high correlation of 0.690 with firm size (*SIZE*). This is fairly close to the same correlation reported by Kim and Shi (2012) who examine stock return synchronicity in a voluntary IFRS adoption setting.

TABLE 5.4
PEARSON CORRELATION MATRIX

Variable	*SYNCH*	*COMP*	*IFRS*	*ANALYST*	*SIZE*	*RISK*
COMP	0.140 ***					
IFRS	0.235 ***	0.080 ***				
ANALYST	0.418 ***	0.279 ***	0.082 ***			
SIZE	0.503 ***	0.449 ***	0.139 ***	0.690 ***		
RISK	-0.050 ***	-0.419 ***	0.023 **	-0.332 ***	-0.443 ***	
VOLUME	0.373 ***	0.042 ***	0.082 ***	0.507 ***	0.442 ***	-0.004
LEVERAGE	0.113 ***	0.225 ***	-0.011	0.140 ***	0.327 ***	-0.090 ***
INSTITUTION	-0.149 ***	0.062 ***	0.115 ***	-0.081 ***	-0.034 ***	-0.047 ***
BIG4	0.065 ***	0.080 ***	0.056 ***	0.185 ***	0.197 ***	-0.094 ***
GDP	-0.042 ***	0.052 ***	0.133 ***	0.131 ***	0.171 ***	-0.100 ***
SDEV	-0.151 ***	-0.109 ***	0.066 ***	0.129 ***	-0.062 ***	0.066 ***
GDPGROWTH	-0.148 ***	-0.068 ***	-0.380 ***	-0.036 ***	-0.139 ***	-0.060 ***

TABLE 5.4 (CONTINUED)

Variable	*VOLUME*	*LEVERAGE*	*INSTITUTION*	*BIG4*	*GDP*	*SDEV*
COMP						
IFRS						
ANALYST						
SIZE						
RISK						
VOLUME						
LEVERAGE	0.023 **					
INSTITUTION	-0.340 ***	0.028 ***				
BIG4	0.238 ***	0.046 ***	-0.047 ***			
GDP	-0.111 ***	-0.064 ***	0.231 ***	-0.067 ***		
SDEV	0.403 ***	-0.206 ***	-0.221 ***	0.158 ***	0.139 ***	
GDPGROWTH	0.158 ***	-0.095 ***	-0.193 ***	0.087 ***	-0.285 ***	0.306 ***

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively (two-tailed).

5.5.2 Multivariate Analysis

Table 5.5 presents the regression results for estimating equation (5.7). In the table, Model 5.5.1 represents the baseline regression without *IFRS* and its interaction term with *COMP*, while Model 5.5.2 incorporates *IFRS* into the baseline regression. Finally, the expanded regression with *COMP*, *IFRS* and their two-way interaction term is presented in Model 5.5.3. One-tail *p*-values are reported for variables with predicted signs; otherwise, two-tail *p*-values are presented. Standard errors are corrected for firm-level clustering, with the year dummy included.

TABLE 5.5
REGRESSION RESULTS OF STOCK RETURN SYNCHRONICITY (*SYNCH*) ON CROSS-COUNTRY ACCOUNTING COMPARABILITY (*COMP*) AND OTHER VARIABLES

	Expected Sign	MODEL 5.5.1 *SYNCH*		MODEL 5.5.2 *SYNCH*		MODEL 5.5.3 *SYNCH*	
INTERCEPT		-1.149		-1.275		-1.579	
COMP	?	-0.064	***	-0.064	***	-0.182	***
IFRS	+			0.126	***	0.149	***
*COMP*IFRS*	?					0.256	***
ANALYST	+	0.036	***	0.036	***	0.034	***
SIZE	+	0.039	***	0.039	***	0.039	***
RISK	+	0.044	***	0.044	***	0.030	***
VOLUME	+	0.016	***	0.016	***	0.018	***
LEVERAGE	-	-0.081	***	-0.081	***	-0.073	***
INSTITUTION	-	-0.057	***	-0.057	***	-0.058	***
BIG4	-	-0.010	***	-0.010	***	-0.011	***
GDP	?	0.034		0.034		0.051	
SDEV	?	-0.005		-0.005		0.002	
GDPGROWTH	?	0.010	***	0.010	***	0.010	***
*Total Effect: COMP + COMP*IFRS = 0*						0.074	***
Firm Fixed Effect		Included		Included		Included	
Year Fixed Effect		Included		Included		Included	
No. of Observations		10,820		10,820		10,820	
Adjusted R-squared		0.567		0.567		0.574	

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

5.5.2.1 The Role of Accounting Comparability on Stock Return Synchronicity

As reported in Model 5.5.1, the coefficient of *COMP* is significantly negative at 1 percent (-0.064). This indicates that accounting comparability plays an *information encouragement role* for the information content of stock prices, by facilitating the incorporation of relatively more firm-specific information than marketwide information into stock prices. Although the correlation between *SYNCH* and *COMP* is significantly positive at the univariate level as shown in Table 5.4, this relationship reverses once the other control variables are considered. Therefore, the finding supports hypothesis H1 and is consistent with evidence documented by Choi et al. (2019), who find that within-country accounting comparability in the US lowers stock return synchronicity.

5.5.2.2 The Conditioning Role of Mandatory IFRS Adoption

In Model 5.5.2, the coefficient of *IFRS* is significantly positive at 1 percent (0.126) and its inclusion into the baseline regression has not altered the direction and significance of the coefficient of *COMP* (-0.064 at 1 percent significance level). The findings indicate that accounting comparability facilitates the flow of firm-specific information (relative to marketwide information) into the market, even after controlling for mandatory IFRS adoption. In particular, the significantly positive coefficient of *IFRS* on stock return synchronicity comports with evidence reported for mandatory IFRS adoption in the EU (Beuselinck et al., 2009) and Australia (Bissessur & Hodgson, 2012) that investors place more reliance on common information than firm-specific information under the IFRS reporting regime.

As seen in Model 5.5.3, the key variable of interest, the interaction term between *COMP* and *IFRS*, is statistically significant at 1 percent and with a positive sign. This significantly positive

coefficient indicates that the negative association of accounting comparability with synchronicity is moderated by firms switching from their local accounting standards to IFRS mandatorily, which is consistent with hypothesis H2. Additionally, the sum of the coefficients of accounting comparability (*COMP*) and its interaction term with IFRS adoption (0.074) is also positive and significant at 1 percent. Taken together, the results suggest that the event of mandatory IFRS adoption encourages investors to crowd out firm-specific information for firms with greater comparability with common information produced via IFRS adoption.

5.5.2.3 Results on Control Variables

In line with the prior literature, a number of control variables is included in the regression, and the following key relations are evident. First, the coefficients of all firm-specific control variables (including *ANALYST*, *SIZE*, *RISK*, *VOLUME*, *LEVERAGE*, *INSTITUTION* and *BIG4*) have the predicted sign and are statistically significant at 1 percent across all models. Second, contrary to the firm-specific control variables, all the coefficients of country-level control variables appear to be not significant across all models, except for the coefficient of *GDPGROWTH*.

5.6 Additional Analyses

5.6.1 Additional Analysis Using an Alternative Accounting Comparability Measurement

As an alternative to the market-based comparability measurement used in the main regression, this study adopts a 'cash-flow' variant of comparability measurement that closely follows the methodology of Cascino and Gassen (2015) for sensitivity testing. Analogous to De Franco et al. (2011) for measuring comparability as the extent of similarity in the mapping between economic

events and accounting results, this approach uses a regression of contemporaneous cash flows and accruals to proxy for economic events and accounting amounts respectively. As accrual accounting forms a central foundation to accounting recognition process, this alternative approach inspired by Ball and Shivakumar (2006) captures the mapping of economic events via cash flows. This alleviates the concern for any cross-country differences in market efficiency that is inherent in using market data in confounding inferences made. Therefore, this study similarly estimates the following linear regression at the firm-level using annual data separately for the two time periods (the pre-adoption and the post-adoption periods) as an estimate for the accounting functions of firm *i* and firm *j* respectively:

$$ACC_{i,t} = \kappa_i + \vartheta_i CFO_{i,t} + \varepsilon_{i,t} \quad (5.8)$$

where $ACC_{i,t}$ is total accruals deflated by total assets for firm *i* in period *t*, and $CFO_{i,t}$ is cash flow from continuing operations deflated by total assets for firm *i* in period *t*. The estimation of equation (5.8) yields the coefficients (κ_i and ϑ_i) for approximating the accounting function for firm *i*, and repeating the procedure provides the coefficients (κ_j and ϑ_j) of firm *j*.[59]

To compute the alternative comparability measurement, *ACC_COMP*, this study first computes two predicted accruals of firm *i* by applying the coefficients of firm *i* and the coefficients of firm *j*, respectively, on the same contemporaneous cash flows of firm *i*. The idea is to hold the economic income (proxied by contemporaneous cash flows) constant so that accounting comparability between firm *i* and firm *j* is measured by the negative value of the absolute difference between the

[59] For the purpose of this study, total accruals are computed as current assets minus change in current liabilities minus change in cash plus change in current debt minus depreciation and amortization minus change in provisions. Cash flows from operations are represented by net income before extraordinary items minus total accruals (Cascino & Gassen, 2015).

two predicted accruals. Next, this study averages the annual comparability scores for a given firm *i* across all firm *i*-firm *j* combinations within a country-industry group. This is expressed as below:

$$ACC\_COMP_i = -\frac{1}{n} \times \Sigma_{i,j} \left| E(ACC)_{i,i,t} - E(ACC)_{i,j,t} \right| \quad (5.9)$$

where *n* is the number of firm-pairs available for firm *i* within a given country-industry group (based on its two-digit ICB code). Again, the comparability metric is expressed as negative values so that a larger value of *ACC_COMP* indicates greater cross-country comparability.

Table 5.6 provides the regression results for the sensitivity test using an alternative accounting comparability measurement (*ACC_COMP*). Based on a sample of 8,790 firm-year observations, the results reveal that the predicted sign and significance of all key variables of interest (*COMP*, *IFRS*, and *COMP * IFRS*) are identical to the main results.[60] Hence, the primary inferences remain unaltered.

[60] The number of firm-year observations for the additional analysis using an alternative comparability measurement is lower than the main results due to the unavailability of cash flow information.

TABLE 5.6
ADDITIONAL ANALYSIS USING AN ALTERNATIVE ACCOUNTING COMPARABILITY MEASUREMENT (*ACC_COMP*)

	Expected Sign	MODEL 5.5.1 *SYNCH*		MODEL 5.5.2 *SYNCH*		MODEL 5.5.3 *SYNCH*	
INTERCEPT		-2.142		-2.268		-2.872	
COMP	?	-0.078	***	-0.078	***	-0.155	***
IFRS	+			0.126	***	0.144	***
*COMP*IFRS*	?					0.257	***
ANALYST	+	0.034	***	0.034	***	0.031	***
SIZE	+	0.044	***	0.044	***	0.044	***
RISK	+	0.067	***	0.067	***	0.057	***
VOLUME	+	0.011	***	0.011	***	0.013	***
LEVERAGE	-	-0.083	***	-0.083	***	-0.078	***
INSTITUTION	-	-0.046	***	-0.046	***	-0.045	***
BIG4	-	-0.012	***	-0.012	***	-0.013	***
GDP	?	0.109		0.109		0.147	**
SDEV	?	-0.022		-0.022		-0.017	
GDPGROWTH	?	0.002		0.002		0.002	
Total Effect: *COMP + COMP*IFRS = 0*						0.102	***
Firm Fixed Effect		Included		Included		Included	
Year Fixed Effect		Included		Included		Included	
No. of Observations		8,790		8,790		8,790	
Adjusted R-squared		0.583		0.583		0.588	

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

5.6.2 Additional Analysis on the Role of Analyst Coverage

As a supplement, this study examines the influence of financial analysts on the association between accounting comparability and synchronicity around mandatory IFRS adoption. Evidence suggests that financial analysts have significant influence on the degree of stock return synchronicity (Beuselinck et al., 2009; Chan & Hameed, 2006; Cheong & Zurbruegg, 2016; Piotroski & Roulstone, 2004). Although analysts are primarily involved in providing earnings forecasts and stock recommendations that contain firm-specific information, Piotroski and Roulstone (2004) argue and show that their competitive advantage lies in processing and disseminating marketwide information. Additionally, they also find that analysts' forecasting activities facilitate intra-industry information transfers, which result in higher comovement with the market. Consistent with Piotroski and Roulstone (2004), the findings of Chan and Hameed (2006) demonstrate that stock return synchronicity is higher for firms with greater analyst coverage in emerging markets. To the extent that the positive association of analyst coverage on stock return synchronicity is empirically supported, its role on the negative relation between accounting comparability and synchronicity is still an open question.

Furthermore, prior research shows that mandatory IFRS adoption significantly improves the information environment for financial analysts (Beuselinck et al., 2017; Byard et al., 2011; Horton et al., 2013; Tan et al., 2011; Wang et al., 2008). In particular, Horton et al. (2013) find that the improvement in the quality of information intermediation is driven by the comparability and information benefits of IFRS adoption. As analysts' forecasting activities increase when there is less accounting diversity (Bae, Tan & Welker, 2008; Beuselinck et al., 2017), the introduction of the mandatory IFRS reporting regime is expected to change the way in which comparable financial accounting information is used by financial analysts. Prior to IFRS adoption, comparable financial statements prepared using local accounting standards that varied considerably across countries

increased the cost involved for financial analysts to interpret and transform the information for cross-country comparisons (Bae et al, 2008; Beuselinck et al., 2017). However, this is likely to ameliorate when the same accounting standards are applied. As the usefulness of comparable accounting information increases, this enables financial analysts to access to a larger pool of potential comparable peer firms (Petaibanlue et al., 2015) and provides greater incentives for financial analysts to produce and disseminate common information. Therefore, the lower cost of common information produced by financial analysts is expected to crowd out private information collection by investors (Veldkamp, 2006a) and consequently increase stock return synchronicity.

Table 5.7 reports the regression results for the additional analysis on the role of analyst coverage. In Model 5.7.1, an interaction term between *COMP* and *ANALYST* is introduced into the baseline regression to gauge the incremental impact of accounting comparability on stock return synchronicity with greater analyst coverage. As shown in the table, the significantly negative coefficient of *COMP* and positive coefficient of *ANALYST* are akin to the results of the baseline regression (Model 5.5.1), but the coefficient of the interaction term is not significantly positive. Although accounting comparability and analyst coverage have opposite associations with stock return synchronicity, the sum of the coefficients of accounting comparability (*COMP*) and its interaction term with analyst coverage (*ANALYST*) is significantly negative (-0.057) at 1 percent. Taken together, the findings suggest that accounting comparability and analyst coverage each plays a distinct role in determining stock return synchronicity. While accounting comparability facilitates the flow of firm-specific information (relative to common information) into the market, financial analysts continue to disseminate a greater amount of common information to the market and the *information substitution role* of analyst coverage does not dominate the *information encouragement role* of accounting comparability.

In addition, the baseline regression and the modified regression with the interaction term between *COMP* and *ANALYST* are also separately estimated across the pre-adoption (Model 5.7.2 and Model 5.7.3) and the post-adoption periods (Model 5.7.4 and Model 5.7.5) to examine how the interplay of accounting comparability and analyst coverage on stock return synchronicity varies linearly across the two time periods. Consistent with the findings of Chan and Hameed (2006), the results show that the coefficient of *ANALYST* is statistically significant at 1 percent across all cases (Model 5.7.2 to Model 5.7.3). This indicates that analyst coverage increases stock return synchronicity irrespective of IFRS adoption.

As for *COMP*, the coefficient is negative but not significant across Model 5.7.2 and Model 5.7.3, suggesting that accounting comparability is not significantly associated with stock return synchronicity before IFRS adoption. This is also supported by the negative coefficient of the interaction term between *COMP* and *ANALYST* that is also not significant, which implies that comparable accounting information is not associated with synchronicity even with greater analyst coverage before IFRS adoption.

In the post-adoption period, the significantly positive coefficient of *COMP* (0.037) in Model 5.7.4 indicates that accounting comparability complements analyst coverage in increasing stock return synchronicity. As shown in Model 5.7.5, when the interaction term between *COMP* and *ANALYST* is added into the model, the positive coefficient of *COMP* (0.006) becomes not significant while the interaction term (0.073) is positive and significant at 1 percent. Additionally, the sum of the coefficient of accounting comparability (*COMP*) and its interaction term with analyst coverage (*ANALYST*) is also significantly positive (0.079) at 1 percent in the post-adoption period. Taken together, the findings suggest that greater analyst coverage facilitates the production of common information for firms with greater comparability, and that this relation is pronounced only after mandatory IFRS adoption.

In sum, the findings indicate that the *information encouragement role* of accounting comparability on stock return synchronicity is not dominated by the positive relation of analyst coverage with synchronicity. In effect, the interplay of accounting comparability and analyst coverage on stock return synchronicity varies significantly before and after mandatory IFRS adoption. While analyst coverage facilitates the incorporation of common information (relative to firm-specific information) into stock prices, accounting comparability under varied local accounting standards has no significant relation to synchronicity. After the implementation of IFRS reporting, stock return synchronicity increases with higher accounting comparability and greater analyst coverage. Furthermore, the positive association of accounting comparability on synchronicity post-IFRS adoption is intensified by wider analyst coverage, and so the increased analyst coverage improves the flow of common information for firms with greater comparability. This is consistent with low information costs upon the mandatory adoption of IFRS encouraging financial analysts to process and disseminate common information to dominate the extent of firm-specific information impounded into stock prices.

TABLE 5.7
ADDITIONAL ANALYSIS ON THE ROLE OF ANALYST COVERAGE

	Expected Sign	MODEL 5.7.1		PRE-ADOPTION PERIOD				POST-ADOPTION PERIOD			
				MODEL 5.7.2		MODEL 5.7.3		MODEL 5.7.4		MODEL 5.7.5	
		SYNCH		*SYNCH*		*SYNCH*		*SYNCH*		*SYNCH*	
INTERCEPT		-1.150		-0.006		-0.013		-5.872		-5.896	
COMP	?	-0.071	***	-0.024		-0.015		0.037	*	0.006	
*COMP*ANALYST*	?	0.014				-0.012				0.073	**
ANALYST	+	0.037	***	0.020	***	0.018	***	0.030	***	0.036	***
SIZE	+	0.039	***	0.035	***	0.035	***	0.038	***	0.037	***
RISK	+	0.045	***	0.092	***	0.092	***	-0.042		-0.038	
VOLUME	+	0.016	***	0.010	***	0.010	***	0.012	***	0.012	***
LEVERAGE	-	-0.081	***	-0.064	***	-0.064	***	-0.056	***	-0.056	***
INSTITUTION	-	-0.058	***	-0.020	**	-0.019	**	-0.033	***	-0.032	**
BIG4	-	-0.011	***	-0.014	**	-0.013	**	-0.002		-0.002	
GDP	?	0.034		-0.042		-0.042		0.471	***	0.473	***
SDEV	?	-0.005		-0.011		-0.011		-0.196	***	-0.197	***
GDPGROWTH	?	0.010	***	0.004	*	0.004	*	-0.003	**	-0.003	**
*Total Effect: COMP + COMP*ANALYST*		-0.057	***			-0.027				0.079	**
Firm Fixed Effect		Included		Included		Included		Included		Included	
Year Fixed Effect		Included		Included		Included		Included		Included	
No. of Observations		10,820		5,410		5,410		5,410		5,410	
Adjusted R-squared		0.567		0.562		0.562		0.663		0.664	

*, **, *** represent significant difference between metrics at the 10 percent, 5 percent, and 1 percent levels, respectively. The significance level is based on a one-sided alternative when there is an expected sign, and on a two-sided alternative otherwise.

5.7 Summary and Conclusion

This study investigates whether and how cross-country accounting comparability is associated with the information content of stock prices. Accounting comparability enables investors to identify similarities and differences in firms' translation of economic events or transactions onto accounting numbers across firms, and such information is deemed essential for efficient capital allocation decisions. As the extent of firms' comparability with other peer firms determines the cost and effort of collecting, processing and trading on firm-specific information for investors, this is expected to influence the relative flow of firm-specific versus marketwide information impounded into stock prices.

Using stock return synchronicity as proxy for the information content of stock prices, empirical tests reveal that cross-country accounting comparability is, on average, negatively associated with synchronicity, even after controlling for other factors including mandatory IFRS adoption. Nevertheless, this study finds that the *information encouragement role* of accounting comparability is weakened by firms switching to IFRS reporting mandatorily when a greater amount of cheaper and abundant common information is made available. As a result, this leads to firms with greater comparability impounding more common information disseminated via IFRS adoption in event of mandatory IFRS adoption. Further testing shows that this is because wider analyst coverage encourages the production of common information for firms with higher comparability in the context of mandatory IFRS adoption, thereby increasing stock return synchronicity. Hence, the usefulness of comparable accounting information in providing firm-specific information to the capital market is conditioned on mandatory adoption of IFRS.

CHAPTER SIX:

SUMMARY AND CONCLUSION

6.1 Summary of the Thesis

The purpose of this thesis is to provide empirical evidence for the determinants and associations of accounting comparability around mandatory adoption of IFRS. Consistent with the notion of 'comparability', cross-country accounting comparability is assessed by adopting the comparability measurement proposed by De Franco et al. (2011) on pairs of matched firms from Australia and the EU. The simultaneous introduction of a mandatory IFRS reporting regime in Australia and the EU as of 2005 provides a natural research setting for this thesis. With reference to the 2005 mandate date, this thesis focuses on the structural changes in comparability across the pre-adoption (2000–2004) and the post-adoption periods (2007–2011).

Chapter Three examines the association between mandatory IFRS adoption and cross-country accounting comparability. Specifically, the first empirical study refers to the Conceptual Framework of the IASB and addresses the concept of 'comparability' based on two facets: (1) the similarity facet, and (2) the difference facet. The study finds that the cross-country comparability of accounting information for similar firms is significantly higher in the post-adoption period than in the pre-adoption period. However, the results indicate that there are no significant changes in accounting comparability among different firms across the two time periods. Further analysis also reveals that accounting comparability between similar firms across countries is more pronounced for similar firms with different legal origins. Therefore, the findings provide support that mandatory IFRS adoption improves cross-country accounting comparability and that this benefit is more likely to materialize among similar firms from different institutional environments.

In Chapter Four, the study investigates the interactions between accounting standards, firms' reporting incentives and institutional factors in determining cross-country accounting comparability. This extends the first empirical study by considering the extent to which dissimilarity in firm-level reporting incentives and institutional differences between similar firms diminishes the comparability benefit of IFRS adoption. The results show that, after controlling for pairwise dissimilarity in firms' reporting incentives and institutional differences, the comparability of accounting information for similar firms across countries remains greater in the post-adoption period than in the pre-adoption period. This is despite the results revealing the diminishing role of dissimilarity in firms' reporting incentives and institutional differences on accounting comparability. Even after the mandatory adoption of IFRS, the dissimilarity in firm-level reporting incentives and institutional differences also moderates the cross-country comparability improvement for similar firms. In the situation where some EU countries concurrently made substantive enforcement changes while others did not, the results of the additional analysis demonstrate that the comparability benefit of mandatory IFRS adoption is pronounced only when the dissimilarity in firm-level reporting incentives between similar firms is considered. Hence, the findings suggest that cross-country accounting comparability is partly determined by the alignment of firm-specific and country-level factors, even when a common set of accounting standards is in place.

Chapter Five examines the impact of accounting comparability on the information content of stock prices around mandatory IFRS adoption. Using stock return synchronicity as a proxy for the information content of stock prices, the results show that firms with greater comparability incorporate more firm-specific information into stock prices. The results are consistent even after controlling for all other factors, including mandatory IFRS adoption. However, the results also show that mandatory IFRS adoption decreases the incorporation of firm-specific information into

stock prices for comparable firms by facilitating the addition of a greater amount of marketwide information to the capital market. This resulted in comparable firms reflecting relatively more marketwide information into stock prices after mandatory adoption of IFRS. As the results of the additional analysis indicate, wider analyst coverage encourages the production of marketwide information for comparable firms after firms adopt IFRS. Therefore, the findings suggest that the information usefulness of accounting comparability in determining the relative flow of firm-specific information is dependent on mandatory IFRS adoption.

Overall, the empirical findings documented in Chapters Three to Five highlight the interdependence of accounting comparability and mandatory IFRS adoption. From the determinants perspective, the findings contribute evidence that IFRS adoption is a critical step to achieving global comparability, which echoes the objective set forth by the IASB. However, the findings also enrich the understanding that firm-level differences in accounting comparability are likely to persist following mandatory IFRS adoption because accounting comparability is a function of the firm's reporting incentives and its complementary institutional setting. Therefore, this thesis suggests that mandatory IFRS adoption provides a necessary, but not adequate, condition for realizing an improvement in comparability across countries. From the consequences perspective, the findings also have important implications for practitioners and regulators by suggesting that mandatory IFRS adoption can influence the usefulness of comparable accounting information in enhancing the information content of stock prices.

6.2 Limitations of the Thesis

This thesis is subject to several limitations. First, this thesis primarily focuses on mandatory adopters from Australia and the EU, and therefore no benchmark firm is included in the sample.

The wholesale adoption of IFRS in Australia and the EU as of 2005 required all listed firms in these jurisdictions to prepare their financial statements using IFRS (AGFRC, 2002; EC, 2002). Subject to some exceptions, this restricted the availability of suitable benchmark firms that did not adopt IFRS within these jurisdictions for comparison.[61] The limitation of this sample selection is that it is difficult to ascertain whether the findings of this thesis capture the influence of other factors (such as general time trends and economic conditions) that are not related to IFRS adoption. This thesis attempts to rule out the influence of other confounding factors by using a balanced panel of same firm-pairs as a control group and incorporating the relevant control variables in the multivariate analyses.

Second, comparability is an elusive concept and this renders it difficult for researchers to empirically measure comparability in a consistent manner. Although prior studies have proposed a number of ways to evaluate comparability, this thesis relies on the output-based measurement pioneered by De Franco et al. (2011) that is based on the association between accounting numbers and stock returns. The limitation of this methodology is that it requires an assumption of stable stock price efficiency across firms and countries. To ameliorate this concern, this thesis performs additional analyses by using an alternative accrual-based comparability measurement that is based on the relation between contemporaneous cash flows and accruals.

Third, the research design for the empirical studies in this thesis is constrained by the use of a balanced sample across the pre-adoption and the post-adoption periods and annual audited accounting data. Therefore, this thesis recognizes that inferences made are subject to the classical survivorship bias and limited generalization due to a small sample size.

[61] For example, the 2005 mandate was not applicable to unlisted EU firms, but was applicable to unlisted firms in Australia. The difference in the scope of IFRS adoption and the restricted availability of data for other firms in Australia and the EU preclude them from being included as benchmark firms in the sample.

6.3 Suggestions for Future Research

This thesis highlights several opportunities for future research. First, this thesis and other related studies mainly concentrate on the comparability issues for listed firms. So far, there has been little attention given to unlisted firms, despite comparability being an important qualitative attribute of financial reporting for them. The demands and requirements for financial reporting of listed firms differs vastly from those of unlisted firms, and so this limits the generalization of the findings from the earlier to the latter group. As more countries are now permitting the use of IFRS by unlisted firms, this should provide an opportunity for future research to provide empirical evidences on comparability concerning unlisted firms.

Second, the majority of comparability studies including this thesis focus on the determinants and consequences of comparability from the point of view of equity investors. It would be interesting for future research to probe into the comparability issues for other users of financial statements, such as debt holders.

Third, research on the consequences of comparability for contracting and stewardship is still in its infancy. The objective of financial reporting is not limited to providing quality information for valuation purposes, but also for stewardship and contracting. Therefore, a prospective avenue for future research to investigate at greater length is the usefulness of comparable accounting information for contracting and stewardship purposes.

APPENDICES

APPENDIX A.1
MEASURES OF DIFFERENCE IN ENFORCEMENT INDEX (*ENFORCE_DIFF*)

PANEL A: An Extract of Individual Items Included in the Enforcement Index (*ENFORCE*) by Country

Country	Year	Enforcement Index Items						
		ENFOR 01	**ENFOR 02**	**ENFOR 03**	**ENFOR 04**	**ENFOR 05**	**ENFOR 06**	**ENFOR SUM**
AUSTRALIA	2002	2	0	4	4	6	6	22
DENMARK	2002	2	0	4	0	0	6	12
FRANCE	2002	2	0	4	4	6	3	19
GERMANY	2002	2	0	0	0	0	3	5
GREECE	2002	2	0	0	0	0	3	5
ITALY	2002	2	0	4	4	6	3	19
NORWAY	2002	2	0	4	0	0	6	12
SWEDEN	2002	2	0	0	0	0	3	5
UK	2002	2	0	0	0	6	6	14
AUSTRALIA	2008	2	0	4	4	6	6	22
DENMARK	2008	2	0	4	4	6	6	22
FRANCE	2008	2	0	4	4	6	0	16
GERMANY	2008	2	2	4	4	6	3	21
GREECE	2008	2	0	4	0	0	3	9
ITALY	2008	2	0	4	4	6	3	19
NORWAY	2008	2	0	4	4	6	6	22
SWEDEN	2008	2	0	4	0	0	3	9
UK	2008	2	0	4	4	6	6	22

APPENDIX A.1 (CONTINUED)

Panel B: Measures of Differences in the Enforcement Index (*ENFORCE_DIFF*) Across Individual Items for Each Country-Pair

Country-Pair	Year	Enforcement Index Items						
		ENFOR 01	**ENFOR 02**	**ENFOR 03**	**ENFOR 04**	**ENFOR 05**	**ENFOR 06**	**ENFOR SUM**
AUS _DENMARK	2002	0	0	0	4	6	0	10
AUS _FRANCE	2002	0	0	0	0	0	3	3
AUS_GER	2002	0	0	4	4	6	3	17
AUS _GREECE	2002	0	0	4	4	6	3	17
AUS_ITALY	2002	0	0	0	0	0	3	3
AUS _NORWAY	2002	0	0	0	4	6	0	10
AUS _SWEDEN	2002	0	0	4	4	6	3	17
AUS_UK	2002	0	0	4	4	0	0	8
AUS _DENMARK	2008	0	0	0	0	0	0	0
AUS _FRANCE	2008	0	0	0	0	0	6	6
AUS_GER	2008	0	2	0	0	0	3	5
AUS _GREECE	2008	0	0	0	4	6	3	13
AUS_ITALY	2008	0	0	0	0	0	3	3
AUS _NORWAY	2008	0	0	0	0	0	0	0
AUS _SWEDEN	2008	0	0	0	4	6	3	13
AUS_UK	2008	0	0	0	0	0	0	0

APPENDIX A.1 (CONTINUED)

In Panel A, scores for individual Enforcement Index items are sourced from Brown et al. (2014), with higher values standing for higher level of accounting enforcement. In Panel B, *ENFORCE_DIFF* is based on the absolute value of the difference of each item for each country-pair, with higher values representing higher discrepancies in accounting enforcement between countries. Description for each item is obtained from Table 2 in Brown et al. (2014) as listed below.

Enforcement Index Item	Max Score	Item Description
ENFOR01	2	Security market regulators or other body monitors financial reporting
ENFOR02	2	The body has power to set accounting and auditing standards
ENFOR03	4	The body reviews financial statements
ENFOR04	4	The body provides a report about its review of financial statements
ENFOR05	6	The body has taken enforcement action re financial statements
ENFOR06	6	Level of resourcing (0= low, 1= medium, 2 =high, based on number of staff employed by the securities market regulator)
ENFORSUM	24	

APPENDIX A.2
PEARSON CORRELATIONS FOR CONTINUOUS TEST VARIABLES WITH IFRS

		Uncentered Data	Mean-centered Data
FIRM_FACTORS			
	*ROE_DIFF*IFRS*	0.395	-0.977
	*TOBINQ_DIFF*IFRS*	0.325	-0.007
	*LEVERAGE_DIFF*IFRS*	0.580	-0.008
	*CLOSEHELD_DIFF*IFRS*	0.697	-0.021
	*FOREIGNSALES_DIFF*IFRS*	0.628	0.096
COUNTRY_FACTORS			
	*ENFORCE_DIFF*IFRS*	0.761	0.103
	*PROTECTION_DIFF*IFRS*	0.611	0.000
	*ROL_DIFF*IFRS*	0.501	-0.002
	*JUDEFF_DIFF*IFRS*	0.481	0.000
	*INTRAD_DIFF*IFRS*	0.427	0.000

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