

DOES FINANCIAL STATEMENT COMPARABILITY ENHANCE
THE USEFULNESS OF EARNINGS?
EVIDENCE FROM CANADA

by

Yige Jiang, MBA/MSA
Loyola University Chicago, 2017

A thesis
presented to Ryerson University
in partial fulfillment of the
requirements for the degree of
Master of Science in Management (MScM)
in the program of
Master of Science in Management

Toronto, Ontario, Canada, 2020

© Yige Jiang, 2020

AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I authorize Ryerson University to lend this thesis to other institutions or individuals for the purpose of scholarly research. I further authorize Ryerson University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research. I understand that my thesis may be made electronically available to the public.

DOES FINANCIAL STATEMENT COMPARABILITY ENHANCE
THE USEFULNESS OF EARNINGS?
EVIDENCE FROM CANADA

Yige Jiang

Master of Science in Management (MScM)

Ryerson University

2020

ABSTRACT

Building on the comparability construct developed by De Franco, Kothari, and Verdi (2011), the study examines whether the comparability enhances the usefulness – relevance and reliability – of earnings, as suggested in the International Financial Reporting Standards (IFRS) Conceptual Framework. By far, researchers have examined the benefit of comparability from the users’ perspective. However, the relationships between comparability and earnings relevance or earnings reliability have not been directly examined. This paper is motivated to address such a question using Canadian firms’ data in the post-IFRS period to estimate firm-specific comparability, and then to test the roles of comparability in earnings relevance and earnings reliability. The results document that comparability has a significantly positive impact on both relevance and reliability of earnings. Additionally, the study conducts comparability analysis with size and industry effect. Overall, the results are consistent with the prediction, indicating that comparability enhances the decision-usefulness of earnings.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor Dr. Shadi Farshadfar for her guidance when searching the research topic, and for providing continuous feedback, helpful answers, and valuable comments throughout the entire process of writing this thesis.

Dr. Farshadfar has always been available whenever I needed her advice, support, or guidance on my research. Her consistent involvement, patience, and advice have proven very valuable to this thesis.

In addition, I would like to thank Dr. Laleh Samarbakhsh for her co-supervising of the data analysis of this thesis. With her valuable expertise in empirical financial data analysis, and guiding process of data collecting, analyzing and generating results, the analysis part of the thesis has been completed timely and successfully.

Meanwhile, I would like to thank Dr. Guoping Liu and Dr. Yi Feng for their participation on my thesis examination committee and my thesis defense, and I greatly appreciate their valuable comments and helpful advice on this paper.

Finally, I must express my gratitude to my dear parents for providing me with unconditional trust, strong support, and continuous encouragement throughout my years of study. This achievement would not have been possible without them.

TABLE OF CONTENTS

Author's Declaration	ii
Abstract.....	iii
Acknowledgements	iv
List of Tables.....	vi
List of Definitions.....	vii
1. Introduction	1
2. Background and Literature Review	6
2.1 Background	6
2.1.1 Standard Setting on Qualitative Characteristics	6
2.1.2 A Closer Look at Relevance and Reliability	12
2.1.3 A Closer Look at Comparability	15
2.1.4 The Canadian Institutional Background.....	16
2.2 Literature Review	19
2.2.1 Studies on Relevance and Reliability.....	19
2.2.2 Studies on Financial Statements Comparability.....	21
2.2.3 The Effects of IFRS Adoption on Earnings Quality in Canada	26
3. Research Question and Hypotheses Development.....	29
3.1 Research Question	29
3.2 Hypothesis Development.....	31
3.2.1 Hypothesis One: Comparability and Earnings Relevance	32
3.2.2 Hypothesis Two: Comparability and Earnings Reliability	34
4. Methodology.....	37
4.1 Definitions of Variables.....	37
4.1.1 Measuring Comparability.....	39
4.2 Empirical Models	41
4.2.1 Testing Hypothesis 1	41
4.2.2 Testing Hypothesis 2	43
4.3 Estimation of Regression	44
5. Empirical Results and Discussion	47
5.1 Data Description	47
5.1.1 Sample Selection.....	47
5.1.2 Summary Statistics	49
5.2 Comparability Measure	52
5.3 Testing Comparability and Earnings Relevance.....	54
5.4 Testing Comparability and Earnings Reliability	57
5.5 Comparability Analysis and Size Effect.....	60
5.6 Comparability Analysis and Industry Effect.....	64
6. Conclusions	69
References.....	71

List of Tables

TABLE 1.1 Standard Setting: IFRS Adoption in Canada.....	8
TABLE 1.2 Qualitative Characteristics under the Conceptual Framework.....	12
TABLE 1 Sample Selection	48
TABLE 2 Descriptive Statistics	50
TABLE 3 Pearson Correlations.....	51
TABLE 4 Comparability Measure Estimation.....	52
TABLE 5 Comparability Measure Statistics for the Firm i - Firm j Pairwise Observations	53
TABLE 6 Comparability and Earnings Relevance	56
TABLE 7 Comparability and Earnings Reliability	59
TABLE 8 Comparability and Earnings Relevance by Size	62
TABLE 9 Comparability and Earnings Reliability by Size	63
TABLE 10 Comparability and Earnings Relevance by Industry	65
TABLE 11 Comparability and Earnings Reliability by Industry.....	66

List of Definitions

Variable Definitions

Variable	Definition
<i>COMPACC</i>	Median $COMPACC_{ijt}$ for all of firm i and its industry peer firms j within the same SIC two-digit code in fiscal year t , consistent with the definition in De Franco et al. (2011). $COMPACC_{ijt}$ is the average of the negative value of the average absolute differences between predicted earnings using firm i and firm j 's accounting functions: $COMPACC_{ijt} = -1/8 \times \sum_{t-7}^t E(EARN)_{iit} - E(EARN)_{ijt} $
<i>CFO</i>	Cash flow from operations scaled by total assets at the beginning of the year
<i>EARN</i>	Income before extraordinary items available to common shareholders scaled by total assets at the beginning of year
<i>TA</i>	Total assets at the end of the fiscal year
<i>INDUSTRY</i>	Standard Industry Classification (SIC) Code
<i>SIZE</i>	Logarithm of the market value of equity measured at the end of year
<i>BM</i>	The ratio of book value of equity to market value of equity
<i>LOSS</i>	An indicator variable which equals one if income before extraordinary items is negative, zero otherwise
<i>LEV</i>	The sum of long term debt plus short term debt divided by total assets

1. Introduction

The purpose of this study is to examine whether comparability enhances the relevance and reliability of earnings. As specified in the International Financial Reporting Standards (IFRS) Foundation (2018)'s *Conceptual Framework for Financial Reporting* (hereafter, the Conceptual Framework), as an enhancing qualitative characteristic of accounting information useful to financial statement users, financial statement comparability (hereafter, comparability) should enable users to distinguish similarities and differences in financial performance among firms (IFRS Foundation, 2018, para. QC21). Although comparability is important to improving the decision-usefulness of financial reporting, as recognized by the International Accounting Standards Board (IASB), the direct impact of comparability on the usefulness of earnings has not been explicitly examined in prior comparability studies. Therefore, this study aims to address a single but important research question: Does financial statement comparability enhance the usefulness of earnings?

There are two main streams of research studies related to comparability. One stream focuses on the effect of mandatory IFRS adoption on comparability, and further examines its impact on financial reporting quality, examined by different measures such as stock liquidity, analyst forecast accuracy, analyst forecast agreement, and firm valuation (Barth, Landsman, Lang, & Williams, 2012; Neel, 2017). Barth et al. (2012) find evidence that adoption of IFRS by non-US firms results in higher comparable accounting amounts between US firms and non-US firms, compared to non-US firms that employ their domestic accounting standards rather than IFRS. Neel (2017) documents the positive impact of mandatory IFRS adoption on the comparability of accounting information across European countries, and the positive association between higher comparability and better economic outcomes. The other stream of recent comparability studies has investigated the impact of comparability on improving investors' decision making by studying the effect of comparability on analyst forecast accuracy, value relevance of accounting information, and informativeness of stock price (e.g. De Franco, Kothari, & Verdi, 2011; Kim,

Kim, & Musa, 2018; Choi, Choi, Myers, & Ziebard, 2019). This study extends the field of comparability research by specifically testing the effect of comparability on the relevance and reliability of earnings.

The goal of financial reporting is to provide useful information to users in decision-making; relevance and reliability are two fundamental qualitative characteristics of useful accounting information (IASB, 2010; FASB, 2010). Accounting studies associate earning quality with decision usefulness to users, consistent with the goal of financial reporting (Schipper & Vincent, 2003). Furthermore, earnings quality is of interest to a broad group of users for contracting purposes, investment decision purposes, and standard setting purposes. To users of financial reporting for contracting purposes, low-quality earnings may lead financial reporting users to mistakenly lend to firms with overstated earnings. To investment decision makers, low-quality earnings will lead them to make mistakes in allocating capital and predicting the expected payoffs of investments. To standard setters, earnings quality is widely tractable and can be used as an indirect measure of quality of accounting standards, making it an important measure of output of accounting standards (Schipper & Vincent, 2003). Earnings quality is thus an important accounting research topic commonly examined in prior accounting studies in order to evaluate the performance of firms (e.g., Sloan, 1996; Richardson, Sloan, Soliman, & Tuna, 2005).

The Canadian capital market provides an important context to study the research question because Canada has a large capital market with strong enforcement of accounting standards and a high level of investor protection (e.g. Leuz, Nanda, & Wysocki, 2003; Burnett, Gordon, Jorgensen, & Linthicum, 2015; Khan, Anderson, Warsame, & Wright, 2015). Due to the above factors, Canadian financial reporting is considered high quality (Liu & Sun, 2015). Therefore, studying the Canadian context reduces the possibility that weak standards enforcement mechanisms or poor-quality financial reporting affects the results of this study. Given the different industry structure in the Canadian economy, particularly the greater relative size of the commodities industry (Liu & Sun, 2015), the prior studies about post-IFRS comparability (e.g.

Neel, 2017; Barth et al., 2012) on European or other countries setting may lack generalizability to the Canadian context.

Furthermore, given that Canada is a late adopter of IFRS, effective January 1, 2011, the studies on the quality of accounting information using post-IFRS data are scarce and limited, it is an important motivation for this study to examine the Canadian post-IFRS data. One notion behind IFRS adoption is to increase the financial reporting quality and comparability of international accounting information for financial statement users (Barth et al., 2012). Also, using data from before IFRS adoption could confound the results of this study. Therefore, the study employs data from after the effective date of Canadian IFRS adoption.

The study employs annual data from 491 Canadian publicly traded firms in the COMPUSTAT North America database, during the period from 2011 to 2018. The study uses earnings as a proxy for financial statements and cash flow from operations as a proxy for economic events, consistent with Kim et al. (2018). Building on the prior studies on earnings usefulness measure and comparability measure (Dechow, Kothari, and Watts, 1998; Bandyopadhyay, Chen, Huang, & Jha, 2010), the study employs six the ordinary least square (OLS) regression models on a pooled time series and cross-sectional data to test the two hypotheses, as detailed in Section 4 of this study. To evaluate the results of the regressions, the study first estimates the comparability measure at the firm-level over the period of 2011 to 2018, and then conducts OLS regressions to compare the sign and significance levels of the coefficients of interest with the predicted positive sign of the coefficients of interest, and to compare the adjusted R² between models with and without the estimated comparability measure during the target time period.

The empirical results overall are consistent with the predictions. Specifically, the coefficients of interest, presented as the interaction terms of comparability and cash flow from operations and the interaction terms of comparability and earnings, show both positive and statistically significant either with or without control variables. Furthermore, the regression

results show that models incorporating the comparability variable appear to have better relative explanatory powers, reported by the higher adjusted R², compared to the cash flow forecast model or the earnings forecast model when the comparability variable is not incorporated.

Additionally, to test for the size effect on the hypotheses, the study divides the entire sample into 2 groups based on their firm size. The coefficients of interest on the two sizes (small and large) are all positive and significant, and the adjusted R² of the models with comparability measures show greater explanatory power than those without estimated comparability in the regression. Similarly, to test for industry effect on the hypotheses, the study subgroups the sample into 2 industry groups – the mining group and the non-mining group, and then extends the regression tests on relations between comparability and earnings relevance or earnings reliability for each of the 2 industry groups. The industry analysis shows positive and significant coefficients of interest in the OLS regressions. Consequently the industry effect and size effect tests show consistent results with the main tests, indicating the positive role of comparability in enhancing the usefulness of earnings, as stated in the conceptual framework.

The study makes an important contribution to accounting by providing the first empirical evidence that comparability enhances the relevance and reliability of earnings in a significant way, supporting the conceptual framework's statement about comparability as an enhancing qualitative characteristic of useful financial reporting. This study also has an important implication for standard setters in making policy decisions. Specifically, given the empirical evidence provided in this study that comparability enhances the usefulness of earnings, standard setters could take comparability into consideration in setting future accounting standards, with intent to increase comparability. Additionally, the findings of this study are also beneficial to all market participants, including investors and creditors. For investors in making investment decision, given the evidence that the higher comparable firms appear to have more useful earnings information in predicting firm's performance. For creditors, the more comparable firms' financial reports, the

better prediction they can make about firms' future performance in related to making lending decisions to certain firms.

Despite the key contributions of the study, there are a few limitations of this research. First, the study does not examine potential factors that could affect comparability. Additionally, the study does not examine the cost of improving comparability at the firm level or across industries. Moreover, the study employs the De Franco et al. (2011) comparability measure, but some arguments about using earnings as the only proxy for financial statements exist in recent research. Therefore, the opportunity exists for future research about enriching the comparability measure to include other factors as a proxy for accounting information. There also exist some directions in which to extend the current study. First, researchers may examine the relations between comparability and usefulness of earning across different countries. Furthermore, researchers could look at how other control factors, such as firm's life cycles, may affect the results of this study.

The remainder of the thesis is organized as follows. The next section discusses the background and literature review related to the study. Specifically, section 2.1 provides background about standard setting, relevance and reliability, comparability, and the Canadian institutional background. Section 3 presents the research question and the development of hypotheses about relations between comparability and relevance or reliability of earnings. The research design of the study is detailed in Section 4, Methodology. Section 5 describes the empirical results and discussions in detail. Section 6 elaborates the conclusions of the paper.

2. Background and Literature Review

The purpose of this section is to provide a detailed review on the standard setting background, a closer look at three qualitative characteristics – relevance, reliability, and comparability, and Canadian institutional background, and then a comprehensive literature review of prior studies related to this study.

In detail, Section 2 is structured as follows. Section 2.1 introduces the overall background of the study, as articulated further in the next paragraph. Next, in Section 2.2, the study conducts a literature review of related prior studies explained from the following three perspectives, consisting of Section 2.2.1, studies on relevance and reliability, Section 2.2.2, studies on financial statement comparability, and Section 2.2.3, the effects of IFRS adoption on earnings quality in Canada.

2.1 Background

The background is elaborated in the following four sub-sections. First, this section introduces the history of qualitative characteristics in accounting standards, mainly from the perspective of recent Canadian standard setting (Section 2.1.1). Then, the section further describes the two fundamental qualitative characteristics, relevance and reliability (Section 2.1.2), and an important enhancing qualitative characteristic, comparability (Section 2.1.3), in a comprehensive manner. Finally, the background section also provides an informative review on the Canadian capital market (Section 2.1.4), to help readers gain the overall understanding of the context of this study.

2.1.1 Standard Setting on Qualitative Characteristics

Before Canada adopted the IFRS effective January 1, 2011, Canada's standard setting body, the Accounting Standards Board (AcSB), required all publicly accountable enterprises to

comply with the accounting standards in the Handbook of the Canadian Institute of Chartered Accountants (hereafter, the CICA Handbook). According to the CICA Handbook Section 1000, the four principal qualitative characteristics of useful accounting information included understandability, relevance, reliability, and comparability (CICA, 2005, para. 18). Similarly, the FASB also recognized the above four qualitative characteristics without assigning priorities among them (FASB, 2008a, para. 34). Specifically, as documented in the Statement of Financial Accounting Concepts (SFAC) No. 2, relevance and reliability are the primary decision-specific qualities, understandability is a use-specific quality, and comparability is a secondary and interactive quality (FASB, 2008b).

Beginning from March 2004, the AcSB started development of a plan for the adoption of the IFRS in Canada by issuing invitations to comment on the subject of interest to the public in 2004 and 2005 respectively (AcSB, 2006). Specifically, in May 31, 2004, the AcSB issued an invitation to comment document to seek public opinions in the discussion paper *Canadian Accounting Standards Future Direction*, and particularly provided options, including IFRS, U.S. GAAP, and Canadian GAAP, as possible future directions for the purpose of discussion (AcSB, 2005). While proponents for each option demonstrated their opinions, general comments supported the change (AcSB, 2005). In 2005, AcSB issued a second invitation to comment on the proposal of IFRS adoption in Canada, and the feedback showed a general consensus on the board's proposal to adopt IFRS in an expected five-year transitional period (AcSB, 2006). Finally, the AcSB required most publicly accountable entities to report under IFRS, effective Jan 1, 2011 (AcSB, 2010). Additionally, as stated in the *AcSB 2006 – 2011 Strategic Plan*, the AcSB needs to work to promote the deeper convergence of IASB and FASB, as part of AcSB's general approach to achieve the convergence of Canadian GAAP with IFRS (AcSB, 2006). Table 1.1 below summarizes the important milestones of standards adoption from Canadian GAAP to IFRS.

TABLE 1.1 Standard Setting: IFRS Adoption in Canada

The Timeline of IFRS Adoption	Progress and Milestones of IFRS Adoption in Canada
March 2004	AcSB began a review of standards setting in Canada about the future directions.
May 2004	AcSB issued to the public an invitation to comment, inquiring after opinions on the important issues regarding Canadian standards setting, and mentioned particularly the possibility of IFRS adoption in the future. The issues were documented in the discussion paper <i>Canadian Accounting Future Direction</i> .
March 2005	AcSB issued another invitation to comment on its <i>Accounting Standards in Canada: Future Directions Draft Strategic Plan</i> to request comments from the public on key issues, particularly the proposal of converging Canada's GAAP with the IFRS over an expected five-year period for public companies listed in the Canadian capital market.
January 2006	AcSB issued the <i>2006 - 2011 strategic plan Accounting Standards in Canada: New Directions</i> , which elaborates its plan to adopt the IFRS for public companies over a transitional period (expected 5 years).
January 2011	Officially effective from January 1, 2011, for most publicly accountable enterprises in Canada, it is required to adopt IFRS in preparing their financial statements.

Moreover, the Canadian standard setter AcSB claimed in the CICA Handbook (2005) Section 1000 that qualitative characteristics of accounting information are the attributes that make accounting information decision useful to users (CICA, 2005, para. 18).

The IASB and FASB agreed to work on the joint project for developing a common conceptual framework in their joint meeting in 2004. As part of the development of a common conceptual framework, in July 6, 2006, the Boards issued the discussion paper *Preliminary Views on an Improved Conceptual Framework for Financial Reporting: The Objective of Financial Reporting and Qualitative Characteristics of Decision-Useful Financial Reporting Information*,

where the standard setters identified the qualities of decision-useful accounting information as relevance, reliability, comparability, and understandability (FASB, 2006, para. QC7), and requested comments from the public to either IASB or FASB (FASB, 2006). Moreover, to clarify the meaning of reliability, in the *IASB Project Update April 2007*, the Board discussed replacing the term “reliability” with the term “faithful representation”¹, to maintain reliability as a fundamental qualitative characteristic of useful financial reporting, and to further distinguish between the fundamental and enhancing qualitative characteristics (IASB, 2007). Furthermore, in May 29, 2008, the IASB issued the exposure draft *An Improved Conceptual Framework for Financial Reporting* to ask for comments from the public (IASB, 2008). In the IASB exposure draft, the Board proposes relevance and reliability as the two fundamental qualitative characteristics to make the financial reporting useful (IASB, 2008, para. QC2). Additionally, the exposure draft specifies the complementary role of the four enhancing qualitative characteristics, including comparability, verifiability, timeliness, and understandability (IASB, 2008, para. QC15).

Finally, in September 2010, the IASB and FASB issued an approved common conceptual framework, as a part of the further convergence efforts between IASB and FASB (IASB, 2010). This IASB and FASB joint Conceptual Framework (2010) officially identifies relevance and reliability as the two fundamental qualitative characteristics of useful financial information, and presents comparability as an enhancing qualitative characteristic (IASB, 2010). Until then, the definitions of reliability did not reach official consensus across different standard setters (Scott, 2015). In the CICA Handbook Section 1000, for information to be reliable, it needs to have representational faithfulness, verifiability, and neutrality (CICA, 2005, para.21). Take a closer look at the meaning of representational faithfulness. The AcSB (2005) states that for information to have representational faithfulness, it must capture the substance of the transactions or events,

¹ In accounting research, the term “reliability” has been widely adopted by researchers (e.g., Richardson et al., 2005; Bandyopadhyay et al., 2010; Scott, 2015). Hereafter, faithful representation will be referred to as reliability throughout the paper.

where a group of related transactions or events may be necessary to take into account (CICA, 2005, para. 21 [a]). Accordingly, the process of determining the substance of a transaction will involve professional judgment depending on the conditions (CICA, 2005, para. 21 [a]). Similarly, in the IASB's Framework, reliability refers to the information that is free from material error and bias and can faithfully represent what it intends to represent or what it expects to represent (IASB, 1989). As stated in the IASB discussion paper, the definition of reliability contains multiple features, including freedom from material error and bias, faithful representation, and verifiability; this later led to different understandings among users during the application of the Framework (IASB, 2006, para. BC2.26). Similarly, multiple features of reliability appeared in the FASB Concepts Statement No. 2, where reliability comprises of faithful representation, verifiability, neutrality and completeness (FASB, 2008). Therefore, the standard setters present concerns that such a lack of focus or clarity within the definitions of reliability in the IASB's Framework (1989) and FASB Concepts Statement No.2 (2008) would lead to the subsequent confusion about the definitions of reliability among users (IASB, 2006, para. BC2.27 - BC2.29). For instance, some users think reliability should focus on freedom from material error or verifiability, and others believe the concept should focus on faithful presentation (IASB, 2006, para. BC2.28). To address such an issue, IASB and FASB worked together in the joint project and issued a conceptual framework (2010), in which faithful representation replaces the term reliability, in order to help users understand the exact meaning and intended focus of reliability (IASB, 2010, para. BC3.25).

In contrast to the gradually clarified and focused definition of reliability, the definition of relevance has a clear consensus and is more intuitively understandable to users as presented in the conceptual framework over time (IASB, 2010, para. BC3.12). In addition, the IASB and FASB's conceptual framework identifies comparability, verifiability, understandability, and timeliness as the four enhancing qualitative characteristics of decision-useful financial information (IASB, 2010, para. QC19). Therefore, the distinguishing roles of each qualitative characteristic have been clearly specified in the conceptual framework (IASB, 2010). The fundamental qualitative

characteristics of financial information are more important than the enhancing qualitative characteristics of financial information (IASB, 2010, para. QC4). In other words, without the relevance and reliability of accounting information, the comparability, verifiability, understandability, or the timeliness of accounting information cannot make information useful (IASB, 2010, para. QC33). Accordingly, the enhancing qualitative characteristics of accounting information can further improve the usefulness of accounting information that is relevant and reliable (IASB, 2010, para. QC19).

Furthermore, to provide more detail about the Conceptual Framework, in March 2018, the IASB published the updated Conceptual Framework for Financial Reporting (henceforth, the Conceptual Framework) to replace the previous conceptual framework issued by the IASB in 2010. However, the fundamentals of the conceptual framework remained unchanged because the standard setters had already gone through extensive work in the development of the previous conceptual framework, according to the IFRS conceptual framework project summary (IFRS Foundation, 2018b). Some important details, such as the role of prudence to support neutrality, have been added to the revised 2018 Framework. Specifically, prudence refers to the exercise of caution when making decisions under uncertainty, and thereby requires entities neither overstate nor understate assets, liabilities, income, or expenses (IFRS Foundation, 2018b, para. 2.16 – 2.17). The latest Conceptual Framework is shown in table 1.2 below.

TABLE 1.2 Qualitative Characteristics under the Conceptual Framework

Fundamental qualitative characteristics	
Relevance	Faithful representation
<ul style="list-style-type: none">information is relevant if it is capable of making a difference to the decisions made by usersfinancial information is capable of making a difference in decisions if it has predictive value or confirmatory value	<ul style="list-style-type: none">information must faithfully represent the substance of what it purports to representa faithful representation is, to the maximum extent possible, complete, neutral and free from errora faithful representation is affected by level of measurement uncertainty

Enhancing qualitative characteristics			
Comparability	Verifiability	Timeliness	Understandability
<ul style="list-style-type: none">these four qualitative characteristics enhance the usefulness of informationbut they cannot make non-useful information useful			

Cost constraint
<ul style="list-style-type: none">the benefit of providing the information needs to justify the cost of providing and using the information

Source: IFRS Foundation, 2018

In summary, the accounting standards in Canada have shifted from the Canadian GAAP to the adoption of IFRS. Meanwhile, international standards setters have put efforts into accounting convergence, as reflected in the joint Conceptual Framework issued by IASB and FASB in 2010. Next, the paper will further discuss the concept of relevance and reliability under the Conceptual Framework.

2.1.2 A Closer Look at Relevance and Reliability

The two fundamental qualitative characteristics are relevance and reliability, according to the Conceptual Framework (IFRS Foundation, 2018a). In light of the decision usefulness approach and the Conceptual Framework, for information to be relevant, it must provide financial statement users the information needed to predict the future economic performance of a company, that is, its future cash flows (Scott, 2015; IFRS Foundation, 2018a). The importance of relevance and reliability in useful financial information has been emphasized in FASB Statement of Financial Accounting Concepts No.1, where the board demonstrates that the objective of financial

reporting by business entities is to provide users information in assessing the amount, timing, and uncertainty of cash flows (FASB, 2008a).

The IASB states that to be relevant, financial statements should have predictive value, confirmative value, and materiality in making a difference in users' decision making (IASB, 2010, para. QC7 - QC11). Accordingly, accounting researchers (e.g., Dechow et al., 1998; Barth, Cram, & Nelson, 2001) define relevance as the extent to which accounting information can be used to predict the future economic prospects of companies, measured as the ability of earnings to predict future cash flows.

Reliability, according to the Conceptual Framework, is the ability of information to faithfully represent the underlying transactions in financial statements where the information is not influenced by management bias, errors, or omissions (IFRS Foundation, 2018a). To further understand the meaning of reliability, accounting researchers have also paid attention to reliability of earnings. Earnings quality is of interest to a wide range of users of financial reporting because of the important association between earnings quality and the decision-usefulness of financial reporting. The decision-usefulness of earnings quality is also consistent with the purpose of financial reporting in the Conceptual Framework. For investors, poor earnings quality will lead to misjudgments in expected payoff on investment, and thus to wrong decisions in capital allocation. For lenders, a poor earnings quality will make users mistakenly decide on lending to poorly performing companies with overstated earnings. For standard setters, earnings quality is important to examine the effects of certain accounting standards on the quality of accounting information.

Some seminal studies have examined earnings quality and particularly earnings reliability (e.g. Sloan, 1996; Richardson et al., 2005). Sloan (1996) articulates that earnings consists of the accrual component and the cash flow component of earnings, and that the "reliability" of the accrual component of earnings is compromised due to the subjectivity involved in the estimation of accruals. Building on Sloan's (1996) findings, Richardson et al. (2005) captures accrual

reliability as earnings persistence, measured as the predictive ability of current earnings about future earnings. Bandyopadhyay et al. (2010) follow the above notion and therefore assess “reliability” by current earnings’ ability to reflect future earnings. Consistent with previous studies, this study will view reliability as earnings persistence, as measured by the predictive ability of current earnings (e.g., Richardson et al., 2005; Bandyopadhyay et al., 2010).

From the perspective of standard setters, the definition of reliability has also been developing over time. Early on, before Canada’s adoption of IFRS, the Canadian AcSB specified that for information to be reliable, it must have representational faithfulness, verifiability, and neutrality (CICA, 2005, para. 21). Most recently, as stated in the conceptual framework, IFRS confirms relevance and reliability as the two fundamental qualitative characteristics of useful financial information (IFRS Foundation, 2018a, para. QC. 5). The conceptual framework further states that for information to be reliable, it needs to provide users all necessary descriptions and explanations of the phenomenon the information intends to represent (IFRS Foundation, 2018a, para. QC 12 - QC13).

There is a trade-off between relevance and reliability (e.g., Journey, 2008; Bandyopadhyay et al., 2010; Scott, 2015). In theory, relevance and reliability of accounting information can be obtained jointly under ideal economic conditions. In other words, without ideal economic conditions, one characteristic needs to be traded off against the other (Scott, 2015). The trade-off between relevance and reliability is implied in studies and theoretical discussion between different measurement bases, known as the debate between fair value measurement and historical cost measurement (e.g., Sloan, 1996; Kallapur and Kwan, 2004; Journey, 2008; Bandyopadhyay et al., 2010). Specifically, historical cost measurement is more reliable because the cost of an asset or liability can be verifiable and thus less likely to be subject to management bias due to estimation, while it also could be less relevant given the market value of an asset or liability changing over time. On the contrary, current value accounting is more relevant, yet the need for

estimation exposes it to relatively low reliability compared to historical cost measurement (IFRS 13 Fair Value Measurement, 2018, para. 3).

In summary, both relevance and reliability have been recognized as important fundamental qualitative characteristics of accounting information since the earliest versions of the conceptual framework of financial reporting. Meanwhile, the definitions of both relevance and reliability have been developing and becoming more understandable to users over time. In particular, the concept of reliability has been receiving attention from standard setters, given the change of the term from the 1980s to the 2010 Conceptual Framework. The conceptual background communicated by standard setters provides an important fundamental understanding for researchers in further studying related topics in the quality of financial reporting. The next section discusses the concept of comparability in detail.

2.1.3 A Closer Look at Comparability

According to the IASB, the objective of financial statements is to provide useful accounting information to external users in making resource allocation decisions (IFRS Foundation, 2018a, para. OB2). The IASB also states that comparability can help users identify similarities in and differences between information from two given sets of financial statements (IFRS Foundation, 2018a, para. QC21). As demonstrated in the IASB's Conceptual Framework, the decisions made by external users of financial statements involve choosing between investment alternatives: for example, selling, holding, or buying one firm's common stock versus the others', or providing loans to firms (IASB, 2018, para. QC20). According to standard setters, the usefulness of information is enhanced if a firm's information can be compared with similar information from another firm or with similar information about the same firm in a different period or point of time (IFRS Foundation, 2018a, para. QC20).

The definition of comparability is also further explained in recent accounting research. Specifically, to capture the concept of financial statement comparability and further examine its

benefit to users, researchers have developed a conceptual definition of comparability (De Franco et al., 2011). Briefly, the conceptual definition elaborates that two firms have comparable accounting systems if, under the same set of economic events, the two firms produce similar financial statements. The accounting system of any given firm can be captured from a regression model using firms' earnings and stock returns (De Franco et al., 2011). Through comparing differences in the predicted earnings between two firms, assuming firms experience the same economic events, the measure captures how "close" the two firms' accounting systems are. In other words, De Franco et al.'s (2011) measure can evaluate how comparable two firms' financial statements are.

In summary, both standard setters and researchers have provided conceptual definitions of comparability. It is a fundamental concept important to researchers further studying the impact of comparability on the quality of financial reporting. This study also builds on both the boards' definition and the De Franco et al.'s (2011) definition of comparability, in order to further examine the impact of comparability on the relevance and reliability of accounting information in the Canadian context. The next section discusses the Canadian capital market and adoption of the IFRS in Canada.

2.1.4 The Canadian Institutional Background

The Canadian economy is important to the world. According to the World Bank's 2018 Gross Domestic Products (GDP) ranking, Canada is the 10th largest economy in the world with a GDP of \$1.709 trillion² (World Bank, 2019). Canada has the 7th largest stock market in the world³ (Statista, 2019). There are currently six stock exchanges in Canada's capital market, including the Toronto Stock Exchange (TSX), the TSX Venture Exchange, the Canadian Securities Exchange

² See the World Bank data for the details: <https://databank.worldbank.org/data/download/GDP.pdf>

³ Further detail can be viewed in the website: <https://www.statista.com/statistics/710680/global-stock-markets-by-country/>

(CSE), the Montreal Exchange (MX), NASDAQ Canada, and the Aequis Neo Exchange (NSSC, 2017). Among them, the largest stock exchange is the TSX, founded in 1861, with a market capitalization of over \$ 2 trillion (TSX, 2019). The TMX Group is the parent company owning TSX, TSX Venture Exchange, and MX marketplaces in Canada (TMX Group, 2019). According to the TMX Group, there are overall five sectors for Canadian and Global companies, including energy, mining, technology, diversified industries, and real estate (TMX Group, 2019). As of May 31, 2019, the two largest sectors by the size of market capitalization traded in TSX and TSXV are the energy sector and the mining sector (TMX Group, 2019). Specifically, the energy sector consists of oil and gas, utilities and pipelines issuers, and energy services (TMX Group, 2019). When looking at the scope of global participants, U.S. companies are the main participants among other global issuers in Canadian capital market (TMX Group, 2019). Specifically, in 2017, the equity capital raised by the U.S. companies (\$ 1.8 billion in equity) consists of approximately half of the total equity capital raised by global issuers (\$ 3.9 billion) (TMX Group, 2019).

The Canadian Securities Administrator (CSA) is the regulator of capital markets in the 10 provinces and 3 territories across the country. The purpose of the CSA is to protect investors from any unfair, improper, or fraudulent practices in capital market, and to achieve consensus from provincial and territorial securities regulation bodies on policies affecting the capital market (CSA, 2019)⁴. The Ontario Securities Commission (OSC), established with its current title in 1933, is the securities regulator for the capital markets in Ontario, based on the Ontario Securities Act. The OSC regulates the largest financial marketplaces in Canada, such as the TSX. According to the OSC 2018 - 2019 Annual Report, Ontario issuers account for 50 percent of the overall equity market in Canada (OSC, 2019). Therefore, the regulatory functions of the OSC play an important role in protecting investors and ensuring the stability of financial markets in Canada, as stated in its goals (OSC, 2019).

⁴The detailed mission and structure of CSA can be found via <https://www.securities-administrators.ca/>.

In conclusion, given the large scale of the Canadian capital market, it is reasonable to emphasize the importance of providing useful information to financial reporting users to facilitate their investment decision-making or other resource allocation decisions. In other words, users need relevant and reliable information to choose among investment alternatives in decision-making processes, during which comparability enhances the usefulness of accounting information. Therefore, building on the standard setting background, the definitions of relevance, reliability and comparability in the conceptual framework, and the institutional background of the Canadian capital market, this study focuses on examining the impact of comparability on the relevance and reliability of earnings explicitly. The next section reviews important research studies in relevance, reliability, and comparability, and then covers the impact of IFRS adoption in Canada on earnings quality.

2.2 Literature Review

In this section, this study provides a comprehensive literature review of prior research studies on relevance and reliability, comparability, and the effects of IFRS adoption on Earnings Quality in Canada. The overall structure of Section 2.2 is organized as follows. First, Section 2.2.1 describes the related studies on relevance and reliability. Then, Section 2.2.2 discusses research studies on comparability. Finally, Section 2.2.3 provides a review of related studies examining the effects of IFRS adoption on earnings quality in Canada.

2.2.1 Studies on Relevance and Reliability

The literature on the fundamental qualitative characteristics of useful financial information – relevance and reliability of earnings has been extensively extended over time (e.g. Dechow et al., 1998; Barth et al., 2001; Schipper & Vincent, 2003; Kim & Kross, 2005; Richardson et al., 2005; Bandyopadhyay et al., 2010; Farshadfar & Monem, 2013). Accounting studies on earnings quality are important because of the association between quality of earnings and decision usefulness among different users (Schipper & Vincent, 2003). A number of seminal literatures have examined the relevance of accounting information in cash flow prediction studies. Specifically, Dechow et al. (1998) develop a model to show that earnings has better predictive ability than current operating cash flows to predict future cash flows. Furthermore, Barth et al. (2001) provide evidence that disaggregated earnings and cash flow from operation together have better predictive ability than aggregate earnings, as supported by a greater adjusted R^2 . Building on the models of Dechow et al. (1998) and Barth et al. (2001), Kim and Kross (2005) demonstrate empirically that earnings has significant predictive ability to forecast future cash flow, and furthermore, that the ability of earnings to predict future cash flow has been improving, rather than decreasing, over the last 28 years. In addition, Kim and Kross (2005) present evidence that increasing accounting conservatism could be associated with the increasing ability of earnings to

predict future cash flows. Building on the studies mentioned above, Farshadfar and Monem (2013) further disaggregate the operating cash flow and present the stronger predictive ability of disaggregated operating cash flow components in cash flow prediction, compared to aggregated operating cash flow. In other words, it is well grounded in prior studies that the predictive ability of current earnings to forecast future cash flows has been a commonly adopted proxy for the relevance of financial information. Therefore, consistent with the above studies, this study uses the predictive ability of current earnings in cash flow prediction as a proxy for relevance.

According to the Conceptual Framework, financial reporting should faithfully represent the economic phenomena it intends to present (IFRS Foundation, 2018a). A number of seminal studies have focused on the reliability of useful accounting information. Sloan (1996) recognizes the issue of the trade-off between relevance and reliability, and thereby states that the accrual component of earnings is less persistent compared to the cash flow component of earnings due to the subjectivity involved in needed estimations. Furthermore, Richardson et al. (2005) build a model to provide evidence that less reliable accruals are associated with less earnings persistence, and thus establish the relationship between earnings persistence and reliability. Kim and Kross (2005) provide evidence that the ability of earnings to predict future cash flows has been increasing, and the reasons remain to be explored.

Building on the findings of Kim and Kross (2005) and Richardson et al. (2005), Bandyopadhyay et al. (2010) further examines the relationship between accounting conservatism and reliability, using current earnings' ability to forecast future earnings as the measure of reliability. To recap, reliability is the ability of current earnings to predict future earnings. Bandyopadhyay et al. (2010) use the predictive ability of current earnings to reduce the possibility that measurement error in accruals will affect results in earnings reliability. Accordingly, this study uses the same measure as Bandyopadhyay et al. (2010) to assess the reliability of earnings, consistent with prior studies (Richardson et al., 2005; Bandyopadhyay et al., 2010).

In summary, standard setters, including the Canadian AcSB, the IASB, and the FASB, all stress the importance of relevance and reliability as fundamental qualitative characteristics of useful accounting information. Meanwhile, the literature documents established measures of relevance and reliability in prior studies (e.g., Barth et al. 2001; Richardson et al., 2005; among others). Building on established measures of earnings relevance and earnings reliability, this study focuses on examining the links between comparability and relevance as well as reliability. The next section reviews recent studies on financial statement comparability.

2.2.2 Studies on Financial Statements Comparability

The importance of comparability is clearly addressed in the conceptual framework, both in the pre- and post-IFRS adoption periods in Canada. In the pre-IFRS adoption period, comparability is a principal qualitative characteristic that makes accounting information useful (CICA, 2005, para. 18). By far, a majority of studies have focused on examining the fundamental qualitative characteristics of financial reporting – relevance and reliability. However, research studies on comparability have not received much attention. One important reason for this lack of attention was the absence of an established and commonly recognized measure of financial statement comparability. Even though De Franco et al. (2011) developed the empirical measure of financial statement comparability (hereafter, comparability) employing earnings and stock returns, they state that one limitation of their measure of comparability is using only earnings as a proxy for financial statements. Meanwhile, other opinions about the measure emerged. For example, one argument is that the measure of comparability is a conceptual proxy and could be affected by more than one factor – earnings (Klein, 2018).

As discussed in further detail in subsequent paragraphs, a noticeable growth of comparability studies appears after De Franco et al. (2011), once a testable, quantitative, and empirical measure of accounting system comparability had been developed. In other words, the

invention of the construct of comparability is important because the role of comparability in enhancing the usefulness of financial information can be further examined empirically and understood by scholars and regulators from multiple perspectives, such as standards setting and information content (IASB, 2010; Barth et al., 2012; Kim, Kraft, & Ryan, 2013; Kim et al., 2018; Chen, Collins, Kravet, & Mergenthaler, 2018; Choi et al., 2019). Thus, a quantifiable measure facilitates studies on issues related to comparability (e.g., Barth et al., 2012; Kim et al., 2013; Neel, 2017; Chen et al., 2018; Kim et al., 2018, Choi et al., 2019).

Briefly, the conceptual definition of the measure of comparability by De Franco et al. (2011) is that two firms have comparable accounting systems if, under the same set of economic events, the two firms' financial statements are similar. The proxy for financial statements is earnings or net income, and the proxy for economic events is stock returns (De Franco et al., 2011). There are two main streams in extant comparability studies. One stream focuses on issues related to the IFRS adoption on comparability across countries (e.g., Barth et al., 2012; Yip & Young, 2012; Neel, 2017), and the other focuses on topics related to the impact of comparability on financial information (De Franco et al., 2011; Kim et al., 2018; Kim et al. 2019). The following content reviews prior studies on the comparability issue in detail.

Using a similar conceptual definition of comparability to that of De Franco et al. (2011), Barth et al. (2012) investigate whether the accounting amounts reported by non-US firms adopting IFRS and non-US firms using their own domestic accounting standards are comparable with those of US firms who report under the US GAAP. The study collects data range from 1995 to 2005 among 27 countries. Barth et al.'s (2012) study uses two approaches to measure comparability: 1) an accounting system comparability approach using the measure developed by De Franco et al. (2011), and 2) a value-relevance comparability approach, as measured by comparing the explanatory power (adjusted R^2) respectively for three models among US firms, IFRS adoption firms, and non-IFRS adoption non-US firms. Specifically, the three value-relevance metrics include 1) a stock price model (regression of stock price on book value of

equity and net income), 2) a stock return model (regression of stock return on net income and change in net income), and 3) a cash flow model (regression of future operating cash flows on net income). Controlling for country and industry factors, these metrics are used to test the effects of IFRS adoption on the value-relevance of non-US firms adopting IFRS and that of US firms. The findings of the value-relevance approach show that US firms have higher value-relevance than non-US firms, however, such differences in value-relevance are reduced for firms after IFRS adoption. In general, Barth et al. (2012) show that IFRS firms after IFRS adoption have higher comparability with US firms than non-IFRS firms using their own domestic accounting standards. This study makes important contributions to the debate about whether US firms should adopt the IFRS to make their financial information more comparable to their international peer firms so that investors can make better decisions.

Yip and Young (2012) examine the effect of IFRS adoption on comparability in European Union countries, with data ranging from 2002 to 2007, among which 2002-2004 represents the pre-IFRS period while 2005-2007 represents the post-IFRS period. The definition of comparability in their study is consistent with that specified in the IASB (2010) Conceptual Framework. To measure comparability, Yip and Young (2012) use three approaches to measure comparability: 1) the similarity of accounting functions method developed by De Franco et al. (2011), 2) a degree of information transfer method, as measured by the association between earnings announcements of a firm and the stock price movement of other firms, and 3) a method measuring the similarity in information content of earnings with that of book value of equity, as measured by the association between stock price and earnings, or the association between stock price and the book value of equity. As a result, Yip and Young (2012) find that IFRS adoption positively impacted comparability in the 17 European Union countries that had adopted the IFRS since 2005.

Similarly, Neel (2017) examines whether the increased comparability after the 2005 IFRS adoptions in 23 countries has had a positive impact on four economic outcomes: analyst

following, analyst forecast agreement, stock liquidity, and Tobin's Q⁵. Using the comparability measurement developed by De Franco et al. (2011), with data ranging from 2001 to 2008, Neel (2017) conducts panel regressions to test the effects of cross-country comparability. Overall, consistent with finds from prior studies (e.g., De Franco et al., 2011; Barth et al., 2012; Yip & Young, 2012), Neel (2017) documents the positive impacts of increased comparability among 23 IFRS adoption countries on several financial measures, such as increased analyst following, analyst forecast agreement, and stock liquidity.

Another stream of studies in comparability investigate the effects of comparability on the financial reporting users in making investment or credit decisions (De Franco et al., 2011; Chen et al., 2018; Kim et al., 2018; Choi et al., 2019). Specifically, De Franco et al. (2011) investigate and document the positive role of comparability for one specific group of users – analysts – in improving analyst following, enhancing analyst forecast accuracy, and decreasing analyst dispersion, thereby indicating that comparability can reduce the cost of information acquisition. Given the potential large amount of data, De Franco et al. (2011) limit their sample analysis to one year of data ending with fiscal year on December 2005, and select 10 percent of available firm pairs in the year 2005 to conduct measurement of comparability tests. As a result, De Franco et al. (2011) find that comparability has significant positive relations with analyst following and analyst forecast accuracy, and a negative association with analyst dispersion, as shown in their OLS regressions results.

The objective of Kim et al. (2018) is to examine if comparability can better enhance the value-relevance of accounting information given differences in the user characteristics of investor sophistication and information asymmetry. Specifically, Kim et al. (2018) examine the importance of comparability by focusing on users' characteristics. The study consists of data ranging from the first quarter of 1992 to the third quarter of 2016, and measures comparability

⁵ Tobin's Q is calculated as a ratio of market value of assets to book value of assets, to measure firm valuation.

using data ranging from 1988 to 1991, because cash flow statements have been widely available in the U.S. since 1988 (Kim et al., 2018). To measure comparability, Kim et al. (2018) extend the original model of De Franco et al. (2011) by including cash flow from operations as an alternative proxy for economic events to replace stock returns in the initial return-earnings regression model. Kim et al. (2018) first examines the enhancing role of comparability and value-relevance of earnings, measured by the earnings response coefficient (ERC), and provides evidence that the positive relation between comparability and ERC is strengthened in firms with high investor sophistication, measured by institutional ownership level, as well as in firms with lower information asymmetry, as measured by quoted spread level calculated by difference between ask price and bid price.

Furthermore, Choi et al. (2019) examine the importance of comparability by investigating the effects of comparability on the ability of stock price to forecast future earnings. Choi et al. (2019) find that comparability enhances how informative stock prices are about future earnings, as measured by the change in future earnings response coefficient (FERC). In addition, using Morck, Yeung, and Yu's (2000) definition of stock synchronicity as the degree to which entities' stock prices in the same industry move in the same manner, Choi et al. (2019) find that comparability is negatively associated with stock price synchronicity. The more comparable the financial statements of a firm, the more firm-specific information will be available, thereby indicating that firm-specific information, rather than industry level information, is more reflected in the current stock price about the firm's future earnings (Choi et al., 2019).

In summary, De Franco et al. (2011) provide an important empirical measure of comparability, thereby inspiring a growth of research interest in comparability. However, the relationships between comparability and the relevance or reliability of earnings have not been examined directly. In other words, no empirical study has yet to directly examine whether comparability enhances the ability of current earnings to predict future cash flow from operations or the ability of the current earnings to predict future earnings. This study is motivated by such a

knowledge gap to address two important questions: whether comparability enhances the ability of current earnings to predict future cash flows, and whether comparability enhances the ability of current earnings to predict future earnings. The next section discusses research on the effects of IFRS adoption on earnings quality in Canada.

2.2.3 The Effects of IFRS Adoption on Earnings Quality in Canada

The International Accounting Standard Board (IASB) has been constantly making progress to achieve global convergence in accounting standards along with the globalization of the world economy (IFRS Foundation, 2019). Starting from March 2004, the Accounting Standards Board initiated the process of seeking public opinion about whether Canada should adopt IFRS in the future (AcSB, 2006). As a result, in the standard setter issued *AcSB 2006 – 2011 strategic plan*, Canada decided to adopt the IFRS for publicly accountable entities listed in Canadian capital markets, in order to issue financial statements under the IFRS effective Jan. 1, 2011. One notion behind IFRS adoption is to improve the comparability of financial information (Barth et al., 2012; Burnett et al., 2015).

Even though some studies examine the effects of IFRS adoption on the quality of financial reporting (e.g., Barth et al. 2012; Cascino & Gassen, 2015; Neel, 2017; among others), most of those studies focus on the European or Asian data because of the relatively early and broad adoption of the IFRS in European and Asian countries (e.g., Yip & Young, 2012; Brochet, Jagolinzer, & Riedl, 2013; among others). However, comparability is related not only to financial standards, but also to other factors, such as interpretation, auditing, regulations, laws, and enforcement (Barth et al., 2012). Therefore, the studies examining the impact of IFRS adoption on Canada context, while necessary and critical, have yet received little attention.

The unique value of the Canadian context for IFRS adoption studies is present in the study by Burnett, et al. (2015), in which the authors specify three main distinguishing

characteristics of the Canadian context. They include 1) options for Canadian cross listed firms between the U.S. GAAP and the IFRS, 2) high levels of enforcement in Canada, and 3) the recent adoption of the IFRS by Canadian publicly accountable companies. Additionally, Liu and Sun (2015) and Khan et al. (2015) identify two differentiating characteristics of the Canadian context: 1) Canada has an industry structure different from that of other countries; for example, Canada has more commodities exposure than other economies; and 2) Canada's accounting standards and standards enforcement levels differ from those of other countries (Liu & Sun, 2015; Khan et al., 2015). However, recent studies examining the effects of IFRS adoption on quality of financial reporting have been mixed. (Burnett, et al., 2015; Cascino & Gassen, 2015; Khan et al., 2015; Liu & Sun, 2015; Jin, 2017) Therefore, this study chooses the Canadian context for this study to address this gap in knowledge about the effects that the recent IFRS adoption in Canada has had on financial statement comparability.

By far, most studies on the effects of IFRS adoption on financial information show mixed results, particularly in the Canadian context. (e.g., Burnett, et al., 2015; Cascino & Gassen, 2015; Khan et al., 2015; Liu & Sun, 2015; Jin, 2017; among others) For example, Cascino and Gassen's (2015) study uses European listed firms and finds empirical evidence that the effects of mandatory IFRS adoption on the comparability of accounting information are mixed, depending on level of compliance determinants, and that only those with high compliance determinants show significant enhancement in the comparability of financial reporting. Similarly, Burnett et al. (2015) conduct a study in Canadian cross-listed firms in the US capital market, and provide evidence that the most significant determinant for cross-listed companies choosing to report under IFRS is the peer benefit of increased comparability within the same industry. Moreover, Khan et al. (2015) find that the information content of earnings has increased for TSX firms, and thus value-relevant accounting information has increased for TSX listed firms during the post-IFRS adoption period. Furthermore, Jin (2017) provides findings that the persistence of return on equity (ROE) has decreased after IFRS adoption in Canada, although this result does not indicate the

quality of financial reporting has changed in Canadian firms post-IFRS adoption. However, one explanation for such financial phenomena, as mentioned in Jin (2017), is that the principle-based IFRS provide more flexibility for managers to report certain accruals items, and thus reduce the ROE persistence upon IFRS adoption in Canada. Liu and Sun's (2015) study intends to investigate earnings quality in Canada upon IFRS adoption, yet finds mixed results and no significant differences in earnings quality among Canadian firms in the post-IFRS period.

Although Barth et al. (2012) and Neel (2017) study comparability outcomes using cross-countries data, including Canadian data, both of their sample periods include data only until the end of 2008 at the most. Specifically, the sample periods range from 1992 to 2005 for Barth et al. (2012) and from 2001 to 2008 for Neel (2017). However, Canadian public companies did not adopt IFRS until 2011. Therefore, both Barth et al. (2012) and Neel (2017) did not use Canadian post-IFRS adoption data in their comparability studies. This study examines the Canadian context in the post IFRS adoption period to provide standard setters and users with further insights into the impact of comparability, and its relationships with relevance and reliability of earnings during the post-IFRS period in Canada.

In conclusion, prior studies have been extensively focused on the fundamental qualitative characteristics of relevance and reliability, and their relationships with earnings quality. However, there is a lack of studies examining the direct relationship between earnings relevance, earnings reliability, and comparability, using the measures developed by De Franco et al. (2011). It is an important issue for standard setters to understand the impact of mandatory IFRS adoption in the Canadian context, whose economy has unique features, as explained earlier. It is important to devote further efforts into issuing more decision-useful oriented financial standards. Therefore, this study focuses on directly examining the links between comparability and earnings relevance as well as earnings reliability, and the impact the comparability in Canada during the post-IFRS adoption period. The next section demonstrates the research question and hypotheses development.

3. Research Question and Hypotheses Development

Section 3 explains the main purpose of the study, to examine the role of comparability in the usefulness of earnings, by describing the research question and two hypotheses developed by the paper. Section 3.1 provides discussion on the research question. Section 3.2 describes the development of the two hypotheses. Section 3.2.1 presents the hypothesis on the relation between comparability and the relevance of earnings. Section 3.2.2 presents the hypothesis on the relation between comparability and the reliability of earnings.

3.1 Research Question

Facilitated by De Franco et al.'s (2011) recent development of comparability measures, growing attention has been paid to the positive impact of comparability on the information content of stock returns, or on firms' economic performance (Barth et al., 2012; Neel, 2017; Kim et al., 2018; Choi et al. 2019). Kim et al. (2018) elaborate the positive impact of comparability on the value-relevance of stock returns when users are more sophisticated and information less asymmetric. Choi et al. (2019) identifies the positive role of comparability in enhancing the information current stock returns provide about future earnings, indicating the cost benefit to users in processing information when firms' information is more comparable. Therefore, prior comparability studies have been mostly centered on the effects of comparability on predictive ability related to stock returns. However, the impact of comparability on the predictive ability of current earnings has not been directly studied.

The purpose of financial reporting is to provide decision-useful information to a broad group of users, including creditors, investors, standard setters, regulators, and researchers. Schipper and Vincent (2003) associate earnings quality with the decision usefulness of financial reporting, consistent with the purpose of financial statement. Accordingly, earnings quality is of interest to a wide range of user groups for different decision-making purposes, including for

contracting, investment, standard setting, and regulatory decisions. Specifically, regarding users' contracting decisions, users working with low quality reported earnings might make misguided lending decisions to firms with overstated earnings performance. For users' investment decisions, low quality earnings will lead users to allocate capital mistakenly based on misleading expected payoffs on investments. For standard setting decisions, earnings quality is an important output of accounting standards; being thus measureable, earnings can be used as an indirect measure of quality of accounting standards (Schipper & Vincent, 2003). For regulators, earnings quality can be an implicit indicator of improper or fraudulent practices in the capital market. It is therefore important to understand earnings quality as a measure of the decision-usefulness of financial reporting.

Accordingly, research on earnings quality is of particular interest of accounting researchers and is commonly examined as a measure of firms' performance in prior studies (e.g., Sloan, 1996; Dechow et al., 1998; Schipper & Vincent, 2003; Bandyopadhyay et al., 2010). As discussed in the literature review section, Sloan (1996) and Dechow et al. (1998) both provide evidence about the information content of earnings or earnings components extensively. Similarly, as mentioned prior, a majority of accounting studies focus on the relevance and reliability of accounting information (Sloan, 1996; Dechow et al., 1998; Barth et al., 2001; Kim & Kross, 2005; Farshadfar & Monem, 2019; among others).

Note that most prior studies on comparability have been conducted in the US setting, where the capital market is more sophisticated (Farshadfar & Monem, 2019), and where both the rule-based US GAAP and the principle-based IFRS are allowed for publicly traded firms. Given that the quality of financial information in a country is affected by its country-specific institutional environment (Leuz et al., 2003), the generalizability of results in US setting could be undermined.

The Canadian capital market provides an important context to study the impact of comparability on the usefulness of earnings, due to several factors. First, Canada has a large

capital market with strong enforcement of accounting standards and a high level of investor protection (Leuz et al., 2003; Burnett et al., 2015; Khan et al., 2015). Due to the above regulatory factors, Canada is considered a high quality financial reporting setting (Liu & Sun, 2015). Therefore, focusing on the Canadian context reduces the possibility that weak standards enforcement or a low quality financial reporting affects the results of this study. Second, the Canadian economy has its unique industry structures, particularly a greater industry composition of commodities (Liu & Sun, 2015). Accordingly, the findings of prior comparability studies conducted on data from European or other countries may not be as generalizable to the Canadian setting. Third, unlike European countries in prior studies (Barth et al., 2012; Neel, 2017), Canada is a late IFRS adopter for public firms effective January 1, 2011. It is important to understand the impact of comparability on the usefulness of earnings in the Canadian setting. To avoid the impact of any structural change in accounting standards on the results of this study, the testing period is limited to data after the effective date of Canadian IFRS adoption, from 2011 to 2018.

In light of the above discussion, this study seeks to examine the important relations that comparability has with the relevance and reliability of earnings in the Canadian context. Therefore, this study addresses a single but important research question: Does financial statement comparability enhance the usefulness of earnings?

3.2 Hypothesis Development

Two hypotheses about relations between comparability and relevance or reliability of earnings are developed in this section. Section 3.2.1 describes the development of a hypothesis on the relation between comparability and earnings relevance. Section 3.2.2 presents the development of a hypothesis on the relation between comparability and earnings reliability.

3.2.1 Hypothesis One: Comparability and Earnings Relevance

In the conceptual framework, comparability is identified as an enhancing qualitative characteristic of financial reporting, while relevance is described as the fundamental qualitative characteristic of financial reporting. As stated by the IASB and the FASB, both major standard setters, relevant information should enable financial users to predict future cash flows of a firm in order to make capital allocation decisions (IFRS Foundation, 2018a; FASB, 2010). Comparability, as an enhancing qualitative characteristic, should enhance users' ability to conduct such an evaluation of a firm's performance. In spite of the importance of comparability to users as stressed by standard setters, prior studies have mainly focused on the relevance of financial reporting (Dechow et al., 1998; Barth et al., 2001; Schipper & Vincent, 2003; Kim & Kross, 2005), and comparability has not received much attention prior to the recent development of comparability measures by De Franco et al. (2011). In recent earnings quality related studies, relevance is measured by the predictive ability of current earnings to forecast future cash flow in prior studies (Dechow et al., 1998; Barth et al., 2001; Schipper & Vincent, 2003; Kim & Kross, 2005). Specifically, Dechow et al. (1998) develops a model to provide evidence that earnings has better predictive ability than current operating cash flows to forecast future cash flows, which seems counterintuitive. Furthermore, Barth et al. (2001) not only disaggregate earnings into accruals and operating cash flows, but also further disaggregate accruals into accrual components, and discover the evidence that disaggregated earnings provides better predictive ability than current operating cash flows when forecasting future cash flows.

A growing number of comparability studies appear following De Franco et al. (2011), where the comparability measure was constructed. Recent comparability studies have examined the benefits of comparability to users or the impacts comparability has on the value-relevance of accounting information, measured by earnings response coefficient (ERC) (e.g. De Franco et al., 2011; Barth et al., 2012; Neel, 2017; Kim et al., 2018). De Franco et al. (2011) develop the measure of comparability, and further document that comparability improves analyst forecast

accuracy and analyst following while decreasing analyst dispersion on earnings forecasts, indicating the benefits of comparability in acquiring information at lower cost with an overall higher quality and quantity of firm-level information. Barth et al. (2012) use value relevance as an alternative metric to assess comparability as the difference in accounting amounts between non-US firms adopting IFRS and US firms before and after IFRS adoption. As a result, the difference in value-relevance between non-US firms and US firms after IFRS adoption show significant declines, suggesting IFRS adoption makes accounting amounts more comparable between US firms and non-US firms than between those firms and firms using domestic standards. Furthermore, Neel (2017) documents that a cross-country accounting comparability increase is positively associated with economic outcomes, presented as forecast accuracy, forecast agreement, firm valuation, and liquidity. Moreover, Kim et al. (2018) find that the positive relation between comparability and value-relevance, as measured by ERC, is positively associated with higher investor sophistication and lower information asymmetry.

According to Holthausen and Watts (2001), value-relevance research on the association between accounting numbers and common stock valuation has limited implications for standard setters or other non-equity holders. Specifically, studies use stock returns as the common measure of value-relevance of financial reporting when researchers assume that the users of the financial statements are common equity investors. However, according to standard setters, users of accounting information include a broader group of people in addition to equity investors, such as creditors, regulators, vendors, suppliers, and standard setters. Additionally, standard setters also stress that financial reporting should help users in assessing the amount, timing, and uncertainty of future cash flows (FASB, 2008a). Therefore, understanding earnings and cash flow from operations serve a consistent goal of standard setters – to help a broad group of users in decision making for different purposes. Also, given that earnings is an important accounting number commonly examined by users and researchers to be decision-useful, understanding whether comparability enhances the relevance of earnings is very important for standard setters' policy

making. Additionally, it is also important for all market participants to understand whether comparability can improve how informative earnings is about future cash flows. For example, Kim et al. (2018) find that comparability can allow investors to make better projections about firm's future performance by referring to the comparable firms' accounting numbers. This evidence indicates that the more comparable firms' financial statement, the more value-relevant the accounting information could be. Accordingly, the more comparable accounting information a firm has with its industry peers, the better prediction about the firm's future performance, particularly, about future cash flows, the users could make. Therefore, this study predicts a significant and positive relation between comparability and earnings relevance.

Based on the above discussion, using the cash flow forecast model developed in the seminal literature (Dechow et al., 1998; Kim & Kross, 2005), the first hypothesis is described as follows:

H₁: Financial statement comparability is positively associated with the ability of earnings to forecast future cash flows.

3.2.2 Hypothesis Two: Comparability and Earnings Reliability

The reliability of accounting information is recognized by standard setters as another fundamental qualitative characteristic (IFRS Foundation, 2018a; FASB, 2010). According to the definition of reliability in the conceptual framework, accounting information is reliable if it faithfully represents what it intends to represent (IFRS Foundation, 2018a). In other words, reliable accounting information should be complete, neutral, and free from error (IFRS Foundation, 2018a, para. QC12).

Empirical studies on reliability have focused on earnings reliability, measured as the relative predictive ability, of earnings or of earnings components, to forecast future earnings (Richardson et al., 2005). Specifically, Richardson et al. (2005) examine the relationship between accruals reliability and earnings persistence, and provide evidence that accrual reliability is

positively associated with earnings persistence. Moreover, Bandyopadhyay et al. (2010) study the trade-off between earnings relevance and earnings reliability by using the ability of current earnings to predict future earnings as the measure for earnings reliability. The reason that Bandyopadhyay et al. (2010) employ the predictive ability of current earnings about future earnings as the proxy for earnings reliability is in order to reduce the possibility that measurement error related to accrual components affects the results of their study.

Although the effect of comparability on the reliability of earnings has not been directly examined, the recent comparability study by Choi et al. (2019) has investigated the effect of comparability on the ability of stock returns to predict future earnings, measured as the future earnings response coefficient. Importantly, Choi et al. (2019) find that comparability has a positive impact on earnings predictions by stock returns. However, as discussed earlier, using current stock returns in earnings prediction carries the previously mentioned assumption that the users of financial statements are primarily equity investors. Alternatively, using current earnings instead of stock returns can help reduce such a bias by broadening the group of users, consistent with standard setters' wider definition of financial statement users. However, the important relation between comparability and earnings reliability has not been directly investigated in recent studies. Therefore, this study extends the literature on the impact comparability has on the reliability of accounting information by examining that impact as assessed by current earnings' predictive ability regarding future earnings.

To stay consistent with prior studies on earnings reliability, this study follows Bandyopadhyay et al. (2010) and employs the predictive ability of current earnings as a proxy for earnings reliability. Researchers have paid extensive attention to earnings as an important indicator of a firm's performance. However, the important relation between comparability and earnings reliability has not been examined directly. Therefore, providing evidence to address the question of whether comparability enhances earnings reliability is of particular interest to this study.

Choi et al. (2019) explain why comparability can improve the information content of stock price regarding future earnings, as investors are better able to evaluate a firm's relative performance over its comparable industry peers given more comparable firms' accounting information. This finding of Choi et al. (2019) indicates comparability helps investors to make better forecast about firms' future earnings, using current stock returns. It is predicted in this study that using accounting numbers, particularly, current earnings, from more comparable firms should help users make better predictions about firms' future earnings, as users can better account for the comparable firms' earnings information. Accordingly, this study predicts a positive relation between comparability and earnings reliability.

Based on the above discussion of the importance of the relation between comparability and earnings, and the earnings forecast model, the second hypothesis is represented as follows:

***H₂**: Financial statement comparability is positively associated with the ability of current earnings to predict future earnings.*

In summary, section 3 provides discussion about the research question and the development of two hypotheses on the relations between comparability and earnings relevance or earnings reliability, based on the claim of the conceptual framework, the importance of earnings usefulness, and the positive findings of the recent comparability studies. The study hypothesized that comparability enhances the usefulness of earnings, presented as the relevance and reliability of earnings respectively, consistent with the recent comparability studies on the positive effect of comparability from the users' perspective (e.g., De Franco et al., 2011; Barth et al., 2012; Kim et al., 2018; Choi et al., 2019). The next section explains the methodology of this study in detail.

4. Methodology

The purpose of this section is to explain the methodology this study adopts in order to examine the relations between comparability and earnings relevance or earnings reliability. Section 4.1 provides specific definitions for the variables used and a detailed approach to measuring comparability. Section 4.2 elaborates on the empirical models to test the hypotheses. Section 4.3 describes the estimation of regression results using statistical benchmarks.

4.1 Definitions of Variables

To examine the relationship between comparability and relevance, the study employs one-year ahead cash flow from operations as the dependent variable. The independent variables of interest are the interaction terms of comparability and earnings, as well as the cash flow from operations ($COMPACC \times EARN$; $COMPACC \times CFO$), in the ordinary least square (OLS) regression models, based on the approach used in the prior literature (e.g., Kim et al., 2018; Choi et al., 2019). Similarly, to examine the relationship between comparability and reliability, the study adopts one-year ahead earnings as the dependent variable. The independent variables of interest are the interaction terms of comparability and earnings ($COMPACC \times EARN$), and the interaction terms of the comparability and cash flow from operations ($COMPACC \times CFO$), consistent with approaches adopted in the recent literature (Kim et al., 2018; Choi et al., 2019).

The research methodology requires the sample be composed of data available through the entire sample period, from 2011 to 2018. The sample should include firms with non-missing data for all variables of interest in the entire sample period, based on the approach commonly used in prior studies (e.g. Neel, 2017; Kim et al., 2018). To reduce any selection bias, the sample does not restrict firm size, industry sector, or any firm-specific fiscal year end, following recent literature. Specifically, the variables of interest are specified as follows:

A) Earnings

Earnings (*EARN*) is defined as net income before extraordinary items, as reported in the income statement of companies' annual financial statements, per prior studies (e.g. De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019).

B) Cash Flow from Operations

Cash flow from operations (*CFO*) is the amount of net cash flow from operating activities, as reported in the statement of cash flows of companies' annual financial statements, based on the commonly used term in prior studies (e.g. De Franco et al., 2011; Neel, 2017; Kim et al., 2018; Choi et al., 2019).

C) Contextual variables

Overall, the study uses three widely used control variables, including size (*SIZE*), book to market ratio (*BM*), loss (*LOSS*), and leverage (*LEV*) based on prior comparability studies (De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019). Additionally, consistent with definitions used by De Franco et al. (2011), firm-level industry is represented by the two-digit SIC code in COMPUSTAT North America database. Specifically, SIC refers to Standard Industrial Classification, a four-digit industry classification system established in the US in 1973. The first two digits represent the major industry sector into which a firm falls, and the third and the fourth digits specify the industry group to which a firm belongs. An SIC is determined based on the largest product line of a company. *SIZE* is computed as a logarithm of market value of equity at the end of the fiscal year. *BM* is defined as the ratio of the book value of equity to market value of equity in COMPUSTAT database. *LOSS* is an indicator variable, with a value of one when *EARN* is negative, and a value of zero otherwise. *LEV* is the total of long-term debt and short-term debt scaled by total assets. The controls used in this study are based on the commonly used control variables in the literature (e.g. De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019).

4.1.1 Measuring Comparability

This study follows the approach of the seminal work by De Franco et al. (2011) on firms' comparability and its measurement. The study estimates and measures firm-specific comparability by adopting the same proxies for economic events used in recent studies (Neel, 2017; Kim et al., 2018); in detail, by replacing stock returns with *CFO* deflated by the total assets at the beginning of period t . Moreover, the study employs *EARN* as a proxy for financial statement, based on the comparability measure developed by De Franco et al. (2011). Also, this study uses eight years of annual data to estimate the firm-specific comparability measure, consistent with Neel (2017).

Given that annual financial data have been widely available in the international setting (Neel, 2017), the study includes the entire eight years of annual data since effective IFRS adoption in Canada at the beginning of 2011; this is compared to the four-year quarterly data commonly used in comparability studies (e.g. De Franco et al., 2011; Neel, 2017; Kim et al., 2018; Choi et al., 2019). In particular, the annually reported firm-specific *EARN* and *CFO* data are employed in the measure of estimation comparability, consistent with Neel (2017)'s research on the effects of IFRS adoption on comparability in international contexts. Furthermore, the sample period for comparability measure estimation and hypothesis development also requires data available during the entire sample period between 2011 and 2018. In summary, the study employs reasonably sufficient annual data, ranging from 2011 to 2018, for comparability measure and hypotheses tests.

The three steps to estimate a firm-level comparability measure are described as follows. First, as shown in equations (1a) and (1b), the study estimates the accounting functions for firms i and j using eight year annual *EARN* and *CFO*, respectively. For firm i , its accounting functions are captured by α_i and β_i in equation (1a). Similarly, the accounting functions of firm j are explained by α_j and β_j in equation (1b) as presented below:

$$EARN_{it} = \alpha_i + \beta_i CFO_{it} + \varepsilon_{it} \quad (1a)$$

$$EARN_{jt} = \alpha_j + \beta_j CFO_{jt} + \varepsilon_{jt} \quad (1b)$$

where i and j denote for firm i and firm j , and t denotes for the fiscal year for the firms' observations. $EARN$ is the annual net income before extraordinary items scaled by the beginning total assets. CFO is computed as cash flows from the operations scaled by total assets at the beginning of the year.

Using the above estimated accounting functions, the study calculates predicted earnings for two firms, i and j respectively, assuming that firm i and j experience the same economic events over period t , and thus they have same CFO in the equations (2a) and (2b):

$$E(EARN)_{iit} = \alpha_i + \beta_i CFO_{it} \quad (2a)$$

$$E(EARN)_{ijt} = \alpha_j + \beta_j CFO_{it} \quad (2b)$$

where $E(EARN)_{iit}$ and $E(EARN)_{ijt}$ represent the predicted earnings for firm i and j , given firm i 's CFO in the fiscal year t . Similar to De Franco et al. (2011), the study holds its proxy for economic events constant, by using firm i 's CFO in both equations (2a) and (2b).

Consistent with the comparability literature, this study accordingly calculates the comparability measure between firm i and j as explicitly written in equation (3), and defined as “the negative value of the average absolute difference between the estimated earnings” using eight years of annual data calculated from equations (1), (2a) and (2b). The interpretation is that the higher the value of the function, the more comparable the two firms' accounting systems are.

$$COMPACC_{ijt} = -1/8 \times \sum_{t-7}^t |E(EARN)_{iit} - E(EARN)_{ijt}| \quad (3)$$

where $COMPACC_{ijt}$ denotes the comparability value between firm i and j at time period t . This study estimates the comparability for each firm $i - j$ pair for firms in the same two-digit SIC industry classification code in the COMPUSTAT North America database. The greater value of $COMPACC_{ijt}$, the greater comparability between the firm i and its industry peer firms j s. To estimate firm level comparability, the study calculates $COMPACC_{it}$ as the median of $COMPACC_{ijt}$ for all firms j , compared with firm i in the same two-digit SIC industry. This method is commonly adopted in comparability related researches to compute firm-specific comparability for any given fiscal year t (e.g., De Franco et al., 2011; Neel, 2017; Kim et al. 2018; Choi et al., 2019). Such a firm level comparability measure is used throughout this study.

4.2 Empirical Models

This section will explain the empirical models used to test the relationships between comparability and earnings relevance or earnings reliability. The models use one-year ahead accounting data to measure predictive ability of current $EARN$ about future CFO or about future $EARN$. The study employs the empirical approach developed by De Franco et al. (2011) to measure comparability, and the models developed in the recent related comparability studies (e.g. Neel, 2017; Kim et al., 2018; Choi et al., 2019). The details of the empirical models are explained in the following sections. Section 4.2.1 describes testing hypothesis 1, and Section 4.2.2 describes testing hypothesis 2.

4.2.1 Testing Hypothesis 1

To test the two hypotheses about the relationships comparability has with the relevance and reliability of earnings, this study adopts proxies for earnings relevance already established in the literature (e.g., Dechow et al., 1998; Barth et al., 2001; Kim & Kross, 2005). Specifically, it

uses Dechow et al. (1998)'s *CFO* forecast model to estimate earnings relevance, for which the ability of current *EARN* to predict future *CFO* serves as proxy, as shown in equation (4):

$$CFO_{it+1} = \gamma_0 + \gamma_1 CFO_{it} + \gamma_2 EARN_{it} + \varepsilon_{it} \quad (4)$$

where *EARN* is firm *i*'s income before extraordinary items available to common shareholders, scaled by total assets at the beginning of the period *t* in COMPUSTAT database.

To construct the empirical models, based on the model Choi et al. (2019) used to examine the relationship between comparability and the Future Earnings Response Coefficient (FERC), this study replaces the FERC model in the empirical model of Choi et al. (2019) with Dechow et al. (1998)'s *CFO* forecast model in order to examine the relationship between comparability and the ability of current *EARN* to forecast future *CFO*, for the purpose of testing the first hypothesis. Therefore, the following empirical equation (5a) is used to test hypothesis 1 without control variables, and the equation (5b) is used to test the hypothesis 1 with control variables:

$$CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it} \quad (5a)$$

$$CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it} \quad (5b)$$

where control variables include industry (*INDUSTRY*), size (*SIZE*), book to market ratio (*BM*), loss (*LOSS*), and leverage (*LEV*), based on prior comparability studies (De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019). The definition of control variables is detailed in Section 4.1. *COMPACC* is firm *i*'s calculated comparability value, as described in equation (3). In this study, *COMPACC* is estimated as the median $COMPACC_{ijt}$ of all firm *i* - *j* pairs within the same SIC

two-digit industry classification for a given firm i , consistent with the method commonly adopted in prior comparability studies (e.g. De Franco et al., 2011; Neel, 2017; Kim et al., 2018; Choi et al., 2019).

4.2.2 Testing Hypothesis 2

To measure reliability of earnings, the study employs the proxy of earnings reliability used in Bandyopadhyay et al. (2010). Specifically, the study measures earnings reliability as the ability of current $EARN$ to predict future $EARN$ by regression of current $EARN$ against $EARN$ from one year ahead, following the $EARN$ forecast model in Bandyopadhyay et al. (2010), as shown in equation (6).

$$EARN_{it+1} = \delta_0 + \delta_1 CFO_{it} + \delta_2 EARN_{it} + \varepsilon_{it} \quad (6)$$

where $EARN$ is firm i 's income before extraordinary items available to common shareholders, scaled by total assets at the beginning of period t in the COMPUSTAT database.

Building on Choi et al.'s (2019) model, this study constructs equations (7a) and (7b) by replacing the FERC model with Bandyopadhyay et al. (2010)'s $EARN$ forecast model to examine the relationship between comparability and the ability of current $EARN$ to predict future $EARN$ for the purpose of testing the second hypothesis, as shown in the following empirical equations (7a) and (7b), which are used to test hypothesis 2 with and without control variables, respectively:

$$EARN_{it+1} = \sigma_0 + \sigma_1 CFO_{it} + \sigma_2 EARN_{it} + \sigma_3 COMPACC_{it} + \sigma_4 COMPACC_{it} \times CFO_{it} + \sigma_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it} \quad (7a)$$

$$EARN_{it+1} = \sigma_0 + \sigma_1 CFO_{it} + \sigma_2 EARN_{it} + \sigma_3 COMPACC_{it} + \sigma_4 COMPACC_{it} \times CFO_{it} + \sigma_5 COMPACC_{it} \times EARN_{it} + \sum \sigma_n Controls + \varepsilon_{it} \quad (7b)$$

The coefficients on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$) in the equations (7a) and (7b) are the variables of interest, and thus the effect of comparability is expected to directly reflect on the coefficients of the interaction terms in equations (7a) and (7b) respectively. Based on prior studies on earnings relevance and earnings reliability, the coefficients on CFO and $EARN$ are predicted to be positive and significant (e.g. Dechow et al., 1998; Kim & Kross, 2005; Bandyopadhyay et al., 2010).

4.3 Estimation of Regression

To test the two hypotheses in this study, the study uses the six OLS regression models presented as the equations (4), (5a), (5b) for the first hypothesis and the equations (6), (7a), and (7b) for the second hypothesis in Section 4.2.1 and Section 4.2.2, consistent with approaches used in recent comparability studies (e.g. Kim et al., 2018; Choi et al., 2019). The variables of interest are the interactions terms of comparability and CFO ($COMPACC \times CFO$), as well as the interaction terms of comparability and $EARN$ ($COMPACC \times EARN$). This study evaluates the results of OLS regressions by focusing on significance and explanatory power, which is achieved by comparing coefficients and adjusted R^2 across regression models. Also, to test the two hypotheses, this study excludes the bottom 1 percent of the $EARN$, CFO , and $COMPACC$ in the OLS regression tests to reduce the possibility that outliers affect the results of this study.

To test the first hypothesis, the empirical model aims to examine the relationship of interest between comparability and earnings relevance by comparing 1) the positive sign of the coefficients of interest, comprised of the coefficients (θ_4, θ_5) on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$) in equations (5a) and (5b), 2) the statistical

significance of the coefficients of interest, and 3) the change in adjusted R^2 between equation (4) and the equations (5a) and (5b). Consistent with the first hypothesis, the study predicts a positive association between comparability and the ability of *EARN* to predict future *CFO* (earnings relevance). Therefore, to reflect such a predicted direction, the coefficients (θ_4, θ_5) are expected to show positive signs and be statistically significant.

To test the second hypothesis, the empirical model is designed to examine the relationship between comparability and reliability by comparing 1) the positive sign of the coefficients of interest, comprised of the coefficients (σ_4, σ_5) on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$) in equations (7a) and (7b); 2) the statistical significance of the coefficients of interest, measured by t-value; and 3) a positive change in adjusted R^2 between equation (6) and equations (7a) or (7b).

Based on the second hypothesis, the current study expects to find the enhancing role of comparability in reliability of earnings, and therefore this study predicts a positive association between comparability and the ability of current *EARN* to forecast future *EARN*, shown by positive signs of coefficients on interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$). Therefore, the study predicts significant and positive signs on the coefficients (σ_4, σ_5) on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$) in equations (7a) and (7b) to be statistically significant. Moreover, the study predicts a positive change in the adjusted R^2 of the regressions between that of equation (6) and that of equation (7a) or (7b).

In summary, Section 4 details how, based on related studies as mentioned in the corresponding sections, the research design of this study aims to measure comparability and to test its two hypotheses. The comparability measure estimation is comprised of three steps, based on the approach widely adopted in recent studies (De Franco et al., 2011; Neel, 2017; Kim et al., 2018; Choi et al., 2019). To test hypothesis 1, the study uses the ability of *EARN* to predict *CFO*

as a proxy for relevance, and focuses on the resulting sign on coefficients of the interaction terms of comparability and *CFO* as well as those of current *EARN*, based on the approach used in recent comparability studies (Kim et al., 2018; Choi et al., 2019). Similarly, the study employs the ability of current *EARN* to predict future earnings as a proxy for reliability, consistent with Bandyopadhyay et al. (2010), using the actual signs and significance of the coefficients of interaction terms of comparability and current *EARN* as well as those of comparability and *CFO*. Finally, the statistical method for estimation of regression has been explained. The next section (Section 5) presents the results of the study.

5. Empirical Results and Discussion

Section 5 provides in detail the empirical results of this research based on the models described in Section 4. The comparability will be measured based on the approach developed by De Franco et al. (2011) and extended by recent studies (e.g. Neel, 2017; Kim et al., 2018; Choi et al., 2019). The relations between comparability and earnings relevance, as well as between comparability and earnings reliability, will be assessed by empirical models based on the approaches of Kim et al. (2018) and Choi et al. (2019). In summary, the empirical results show a significant and positive relation between comparability and earnings usefulness.

Section 5 is organized into the following components. Section 5.1 presents the descriptive statistics of the data. Section 5.2 details the descriptive statistics of the comparability measure. Section 5.3 describes the results of testing hypothesis 1, and Section 5.4 reports the results of testing hypothesis 2. Section 5.5 explains the results of the comparability analysis, controlling for size effects. Section 5.6 reports the results of the comparability analysis, controlling for industry effects.

5.1 Data Description

5.1.1 Sample Selection

The study collects data on Canadian publicly traded firms from the COMPUSTAT North America database. The entire sample selection period consists of annually reported firm-specific data on COMPUSTAT North America from 2011 to 2018. The sample period begins with the fiscal year of 2011, when Canadian companies are widely required to comply with the IFRS. The sample period ends at the end of the fiscal year of 2018, the latest fiscal year of annual data available for the purpose of estimating comparability and testing hypotheses in this study. The testing period was selected to avoid any structural changes in the data due to IFRS adoption.

Table 1 includes a detailed, step by step sample selection procedure in terms of the count of unique firms. The sample initially includes 113,025 firm-year observations in North America from 2010 to 2018, representing 16,884 unique firms, based on the global company keys in COMPUSTAT North America. As this study focuses on Canadian companies, based on the prior studies using the country code of incorporations in COMPUSTAT (e.g. Liu & Sun, 2015; Jin, 2017), this study identifies 21,282 firm-year observations, representing 3,434 unique firms incorporated in Canada.

TABLE 1
Sample Selection

Canadian firms from COMPUSTAT North America	3,434
Delete: Firms in utilities sector (SIC 4000-4999)	(121)
Delete: Firms in financial sector (SIC 6000-6999)	(1,210)
Delete: Firms with missing data for the variables	(187)
Delete: Firms with missing years for the sample period during 2011-2018	(1,307)
Delete: Firms with less than 10 firms within same two-digit SIC code in a year to estimate <i>COMPACC</i>	(118)
Number of Canadian firms in the final sample	491

This table reports the sample selection. The final sample consists of 491 firms incorporated in Canada, and each has reported the required data for this study during 2011 to 2018 sample period, since the effective date of Canadian IFRS adoption.

Due to special regulations for financial reporting in the utilities sector (SIC 4000-4999) and financial sector (SIC 6000-6999), the study excludes firms belonging to those two SIC industry classifications groups. This exclusion reduces the sample to 13,666 firm-year observations representing 2,103 Canadian firms. Additionally, the study excludes those firms with missing variables or missing years for comparability calculation and regression tests, resulting in 609 firms.

Consistent with prior studies (De Franco et al., 2011; Kim et al., 2018), the study excludes those with less than 10 firms in each industry classification in a year, reducing the

sample to 491 firms. Furthermore, as performed in the seminal study of De Franco et al. (2011), due to the potentially large number of firm pairs, the prior study takes a sample of 10 percent of the available firm i - firm j pairs in the year of 2015. The final sample consists of 3,928 firm-year observations from 491 Canadian firms. Table 1 shows the changes in firm counts in each step of sample selection.

5.1.2 Summary Statistics

Table 2 reports the descriptive statistics of dependent variables and control variables for the sample used in all regressions in this study. The median *CFO* is close to zero, suggesting that approximately half the firms in the sample have negative annual *CFO*. Consistently, the median *LOSS* is also 1.00, indicating around 50 percent of the firms have negative annual *EARN*. The median (mean) *EARN* is -0.06 (-0.47) and the median (mean) *TA* is 67.99 (1388.49). These values are relatively smaller than those employed in Neel (2017), but fall within reasonable ranges. The median (mean) *BM* is 0.59 (3.18) and the median (mean) *SIZE* is 4.14 (4.31).

These values are generally smaller than those reported by Neel (2017) but similar to those shown in Kim et al. (2018) and Choi et al. (2019), and thus fall within reasonable ranges given that the other two studies are conducted in either international contexts or the U.S. context. The median (mean) *LEV* is 0.06 (1.03), and the median (mean) *LOSS* is 1.00 (0.68). These values related to *LEV* are generally similar to those presented by Neel (2017) and Kim et al. (2018), and the statistics of *LOSS* are relatively higher than those reported by Neel (2017) and Kim et al. (2018), again falling within reasonable ranges.

TABLE 2
Descriptive Statistics

	N	Mean	SD	10%	25%	Median	75%	90%
<i>COMPACC</i>	3,928	-0.68	7.45	-0.61	-0.23	-0.12	-0.08	-0.06
<i>EARN</i>	3,928	-0.47	8.27	-0.87	-0.28	-0.06	0.03	0.10
<i>CFO</i>	3,928	-0.42	5.68	-0.57	-0.13	-0.02	0.09	0.16
<i>BM</i>	3,928	3.18	6.22	0.00	0.08	0.59	3.96	10.04
<i>SIZE</i>	3,928	4.31	2.45	1.25	2.59	4.14	6.12	7.63
<i>LEV</i>	3,928	1.03	19.21	0.00	0.00	0.06	0.25	0.47
<i>LOSS</i>	3,928	0.68	0.47	0.00	0.00	1.00	1.00	1.00
<i>TA</i>	3,928	1388.49	4983.28	2.40	12.13	67.99	514.66	3008

The total sample consists of 3,928 firm-year observations for 491 firms incorporated in Canada with data in fiscal years between 2011 and 2018. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *TA* is total assets, in millions, at the end of the fiscal year in Canadian dollars; *BM* is the ratio of book value of equity to market value of equity; *SIZE* is logarithm of the market value of equity measured at the end of year; *LOSS* is an indicator variable which equals one if income before extraordinary items is negative, zero otherwise; *LEV* is the sum of long term debt plus short term debt divided by total assets; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

Table 3 reports the Pearson correlations matrix among all variables and control variables used in testing the hypotheses considered in this study. Consistent with the predictions, *CFO* and *EARN*, are significantly and positively correlated with each other ($\rho = 0.827$). Also, consistent with the predictions, both *CFO* and *EARN* appear to have significant positive correlations with *COMPACC* ($\rho = 0.473$; 0.472). *SIZE* is also positively correlated with *COMPACC* ($\rho = 0.267$). In other words, all else being equal, the larger the firms, the higher comparability the firms tend to have. *LOSS* is negatively correlated with almost all other variables, evidenced by such significant negative Pearson correlations with *COMPACC* ($\rho = -0.181$), with *CFO* ($\rho = -0.150$), with *EARN* ($\rho = -0.148$), and with *TA* ($\rho = -0.189$), respectively.

TABLE 3
Pearson Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) <i>COMPACC</i>	1							
(2) <i>CFO</i>	0.473***	1						
(3) <i>EARN</i>	0.472***	0.827***	1					
(4) <i>TA</i>	0.096***	0.064***	0.061***	1				
(5) <i>BM</i>	0.174***	0.118***	0.113***	0.508***	1			
(6) <i>SIZE</i>	0.267***	0.152***	0.137***	0.496***	0.598***	1		
(7) <i>LEV</i>	-0.184***	-0.072***	-0.086***	-0.003	-0.030*	-0.109***	1	
(8) <i>LOSS</i>	-0.181***	-0.150***	-0.148***	-0.189***	-0.428***	-0.452***	0.043***	1

The total sample consists of 3,928 firm-year observations from 491 Canadian firms. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *TA* is total assets, in millions, at the end of the fiscal year in Canadian dollars; *BM* is the ratio of book value of equity to market value of equity; *SIZE* is logarithm of the market value of equity measured at the end of year; *LOSS* is an indicator variable which equals one if income before extraordinary items is negative, zero otherwise; *LEV* is the sum of long term debt plus short term debt divided by total assets; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

5.2 Comparability Measure

The study obtains data to calculate the firm-specific comparability measure from COMPUSTAT North America database. Table 4 presents the descriptive statistics for coefficients, intercepts, and the adjusted R^2 related to estimating the comparability measure, by running the firm-level ordinary least squares (OLS) regressions of $EARN$ on CFO as per equations (1a) and (1b). This is based on the research design identified in Section 4.1.1, with the total sample of 3,928 firm-year observations representing 491 Canadian firms.

TABLE 4
Comparability Measure Estimation

Descriptive statistics from estimations of $COMPACC$ ($EARN_{it} = \alpha_i + \beta_i CFO_{it} + \varepsilon_i$)							
Variable	N	Firms	Mean	SD	10th percent	Median	90th percent
<i>Intercept (α)</i>	3,928	491	-0.19	1.91	-0.34	-0.08	0.06
<i>β_1 coefficient</i>	3,928	491	0.71	2.37	-0.42	0.74	1.90
<i>Regression R^2</i>	3,928	491	0.43	0.33	0.02	0.38	0.92

This table shows descriptive statistics related to the calculation of comparability measure. $EARN$ is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; CFO is cash flow from operations scaled by total assets at the beginning of the year; $COMPACC$ is comparability measure as estimated in De Franco et al. (2011).

As shown in table 4, a total of 491 estimations are conducted among the 491 unique firms. The median β_1 coefficient is 0.74, indicating a positive relationship between $EARN$ and CFO , and the median R^2 is 38 percent. In comparison, De Franco et al. (2011) employ 16 data points for each firm (quarterly data) to regress $EARN$ on stock return using 71,295 observations from the COMPUSTAT Universe, resulting in a median β_1 coefficient of 0.01. The mean R^2 is 6.93 percent. Therefore, using eight-year annual CFO data shows a greater explanatory power, as reflected in a higher R^2 (38 percent > 6.93 percent), and a greater positive relation between cash flows from operation and earnings, as reflected in a greater positive median coefficient (0.74 > 0.01).

TABLE 5**Comparability Measure Statistics for the Firm i - Firm j Pairwise Observations****Panel A: No Classification**

<i>COMPACC (%)</i>							
	N	Firms	Mean	STD	10th Percent	Median	90th Percent
Full sample	3,928	491	-67.7	744.9	-60.6	-12.3	-6.0

Panel B: Industry Classifications

<i>COMPACC (%)</i>							
Industry	Firm <i>i-j</i> pair code	N	Firms	% of total	Mean	Median	
<i>Metal mining</i>	SIC 10	1,936	242	49%	-103.0	-13.93	
<i>Oil & Gas extraction</i>	SIC 13	720	90	18%	-26.3	-8.4	
<i>Business services</i>	SIC 73	280	35	7%	-86.8	-10.8	
<i>Chemicals and allied products</i>	SIC 28	256	32	7%	-45.2	-25.9	
<i>Electronic products</i>	SIC 36	160	20	4%	-17.4	-7.5	
<i>Machinery and computer equipment</i>	SIC 35	112	14	3%	-16.4	-10.9	
<i>Food products</i>	SIC 20	104	13	3%	-3.7	-3.4	
<i>Wholesale trade</i>	SIC 50	104	13	3%	-7.1	-4.9	
<i>Non-metal mining</i>	SIC 14	88	11	2%	-16.5	-15.0	
<i>Measuring & Controlling Instruments</i>	SIC 38	88	11	2%	-40.9	-14.7	
<i>Transportation equipment</i>	SIC 37	80	10	2%	-9.3	-5.4	
Total		3,928	491	100%			

This table shows the descriptive statistics of the comparability measure. Panel A reports the statistics of comparability measures for the full sample of 3,928 firm-year observations. Panel B reports the statistics of comparability measures in each SIC two-digit code industry classifications. SIC is a firm-level four-digit Standard Industrial Classification code, collected from the COMPUSTAT North America database. *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

Table 5 Panel A presents the descriptive statistics of the pooled data used in this study in estimated comparability measures for the 3,928 firm-year observations from 491 Canadian firms across the entire sample period from 2011 to 2018, without industry classification. Table 5 Panel B presents descriptive statistics from comparability measure estimations and the detailed statistics broken down into eleven two-digit SIC industry classifications. In detail, Panel A of table 5 shows the descriptive statistics for the final sample of 3,928 firm-year observations. The mean (median) for *COMPACC* is -67.7 (-12.3), representing the mean (median) difference in annual earnings between firm *i*'s and firm *j*'s accounting functions, is 67.7 percent (12.3 percent). Moreover, I group the sample by each category falling in the same two-digit SIC code into 11 groups, as presented in Table 5 Panel B. As shown in the breakdown of *COMPACC* by industries, firms in the SIC 20 (food products) industry classification appears to have the highest estimated comparability value both in median (-3.4) and mean (-3.7).

In terms of the least comparable SIC industry group, firms in the SIC 28 (chemicals and allied products) industry category have the smallest median comparability value (-25.9), while firms within SIC 10 (metal mining) appear to have the lowest mean comparability value (-103.0) among any other industry categories. Therefore, it seems that different industries have an impact on firm comparability, consistent with prior findings in De Franco et al. (2011), which evidences that comparability measures are greater for firms within the same industry category.

5.3 Testing Comparability and Earnings Relevance

Table 6 presents the result for the first hypothesis test related to the impact of comparability on the earnings relevance, based on the research design in equations (4), (5a) and (5b) using OLS regressions¹, consistent with recent studies (De Franco et al., 2011; Kim et al.,

¹ In the unreported results, the regression models are re-conducted using a fixed-effects approach for both hypotheses. The fixed-effects test results support the findings from the OLS regressions.

2018; Choi et al., 2019). Generally, the results are consistent with this study's predictions about the relation between comparability and earnings reliability.

Table 6 reports the results from using equation (4) to estimate the relevance of earnings without the impact of comparability. The coefficients on *CFO* (0.117; t-statistic = 8.85) and on *EARN* (0.054; t-statistic = 4.90) are positive and statistically significant. These results are consistent with those in Kim and Kross (2005), indicating earnings' significant ability to predict future operating cash flows. Also, further columns are presented to report the results of testing the impact of comparability on the relevance of earnings, using equations (5) and (5a). Equation (5a) column shows the regression result with no control variables. The coefficients of interest are those on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$). Consistent with the prediction, the coefficient on the interaction term $COMPACC \times CFO$ is positive and statistically significant (0.125; t-statistic = 11.48). The coefficient on the interaction term $COMPACC \times EARN$ is also positive and significant (0.031; t-statistic = 3.62). Meanwhile, the explanatory power also increases from the results in the equation (4) column, with adjusted R^2 increased from 12.67 percent in the equation (4) to 26.96 percent as reported in the equation (5a) column. In summary, these results tell the positive role of comparability in improving the ability of earnings to predict future cash flows. Therefore, these results significantly support the first hypothesis that comparability positively impacts the ability of earnings to predict future cash flow, and provide empirical evidence for the enhancing role of comparability in the usefulness of financial reporting, as stated in IFRS Conceptual Framework.

TABLE 6
Comparability and Earnings Relevance

Dependent variable = <i>CFO</i>				
	Predicted	Eq. (4)	Eq. (5a)	Eq. (5b)
Intercept		-0.101*** (-11.70)	-0.018* (-1.92)	-0.013 (-0.50)
<i>CFO</i>	(+)	0.117*** (8.85)	0.418*** (14.10)	0.385*** (13.39)
<i>EARN</i>	(+)	0.054*** (4.90)	0.082*** (3.70)	0.057*** (2.69)
<i>COMPACC</i>			0.269*** (12.63)	0.179*** (8.40)
<i>COMPACC x CFO</i>	(+)		0.125*** (11.48)	0.114*** (10.80)
<i>COMPACC x EARN</i>	(+)		0.031*** (3.62)	0.020** (2.48)
<i>BM</i>				0.001 (0.60)
<i>SIZE</i>				0.019*** (4.70)
<i>LEV</i>				-0.058*** (-11.11)
<i>LOSS</i>				-0.151*** (-8.08)
N		3,777	3,777	3,777
Adj. R^2 (%)		12.67	26.96	32.32

This table presents the OLS regression results of testing hypothesis 1, the relation between comparability and relevance of earnings. The sample consists of 3,777 firm-year observations from 2011 to 2018. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *BM* is the ratio of book value of equity to market value of equity; *SIZE* is logarithm of the market value of equity measured at the end of year; *LOSS* is an indicator variable which equals one if income before extraordinary items is negative, zero otherwise; *LEV* is the sum of long term debt plus short term debt divided by total assets; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (4)} \quad CFO_{it+1} = \gamma_0 + \gamma_1 CFO_{it} + \gamma_2 EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5a)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5b)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it}$$

As the study includes control variables consistent with recent studies (De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019), similar positive and significant results are reported in the table 6 equation (5b) column. In order to get a closer look at the impact of different control variables on the test, the equation (5b) column shows results controlling for *BM*, *SIZE*, *LEV*, and *LOSS*. Overall, the coefficients of interest are all positive and significant, consistent with the predictions. Specifically, as shown in the reported regression of the equation (5a) column, the positive and significant coefficient on *COMPACC X CFO* is 0.114 (t-statistic = 10.80), and the coefficient of *COMPACC X EARN* is 0.020 (t-statistic = 2.48). Generally, the explanatory powers of the regressions are improving and increasing when adding controls, with adjusted R^2 from 26.96 percent in equation (5a) to 32.32 percent in equation (5b). Particularly, the results in equation (5b) with all controls appear to have the highest explanatory power (adjusted $R^2 = 32.32$). In summary, the model with control variables in equation (5b) show similar positive and significant results to those without any controls in equation (5a), providing robust evidence of the positive role comparability plays in the predictive ability of earnings.

5.4 Testing Comparability and Earnings Reliability

To test the second hypothesis about the role of comparability in reliability of earnings, I conduct OLS regression using equations (6), (7a) and (7b) as presented in the methodology section. The results are presented in table 8. The variables of interest are the coefficients on the interaction terms (*COMPACC × CFO*; *COMPACC × EARN*). Overall, results are consistent with the predictions made about the enhancing role of comparability in the current earnings' ability to forecast future earnings.

Table 7 the equation (6) column presents the results from using earning forecast model to estimate the reliability of earnings without the impact of comparability. The coefficient on *EARN* is positive and statistically significant (0.098; t-statistic = 5.49), as is the coefficient on *CFO*

(0.120; t-statistic = 7.99)..These results are consistent with Bandyopadhyay et al. (2010), suggesting current earnings' ability to predict earnings as the proxy for reliability.

Columns of equations (7a) and (7b) are presented to report the results of testing the impact of comparability on the reliability of earnings. Column equation (7a) shows the regression result with no control variables. The coefficients of interest are those on the interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$). Consistent with the predicted results, the coefficients of the interaction terms $COMPACC \times CFO$ is (0.128; t-statistic = 8.62) and $COMPACC \times EARN$ (0.047; t-statistic = 4.08) are both positive and statistically significant. Meanwhile, the explanatory power also increases from that in column equation (6), represented as the adjusted $R^2 = 12.19$, to 26.39 in column equation (7a). In summary, these results demonstrate the positive role of comparability in improving the predictive ability of current earnings. Therefore, these results significantly support the second hypothesis: that comparability positively impacts the ability of current earnings to forecast future earnings. This is important because such significant empirical evidence for the enhancing role of comparability in the usefulness of earnings supports the position of the IFRS Conceptual Framework to classify comparability as an important enhancing qualitative characteristic of useful financial reporting.

TABLE 7
Comparability and Earnings Reliability

Dependent variable = <i>EARN</i>				
	Predicted	Eq. (6)	Eq. (7a)	Eq. (7b)
Intercept		-0.224*** (-19.20)	-0.085*** (-6.78)	-0.005 (-0.13)
<i>CFO</i>	(+)	0.098*** (5.49)	0.384*** (9.57)	0.336*** (8.69)
<i>EARN</i>	(+)	0.120*** (7.99)	0.163*** (5.45)	0.127*** (4.41)
<i>COMPACC</i>			0.512*** (17.73)	0.387*** (13.51)
<i>COMPACC x CFO</i>	(+)		0.128*** (8.62)	0.111*** (7.82)
<i>COMPACC x EARN</i>	(+)		0.047*** (4.08)	0.032*** (2.88)
<i>BM</i>				-0.001 (-0.59)
<i>SIZE</i>				0.022*** (4.07)
<i>LEV</i>				-0.082*** (-11.81)
<i>LOSS</i>				-0.278*** (-11.07)
N		3,777	3,777	3,777
Adj. R^2 (%)		12.19	26.39	32.86

This table presents the OLS regression results of testing hypothesis 2, the relation between comparability and reliability of earnings. The sample consists of 3,777 firm-year observations from 2011 to 2018. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *BM* is the ratio of book value of equity to market value of equity; *SIZE* is logarithm of the market value of equity measured at the end of year; *LOSS* is an indicator variable which equals one if income before extraordinary items is negative, zero otherwise; *LEV* is the sum of long term debt plus short term debt divided by total assets; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (6) } EARN_{it+1} = \delta_0 + \delta_1 CFO_{it} + \delta_2 EARN_{it} + \varepsilon_{it}$$

$$\begin{aligned} \text{Eq. (7a) } EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} \text{Eq. (7b) } EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it} \end{aligned}$$

The equation (7b) column of table 7 presents empirical results when control variables are included, consistent with recent studies (De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019). Generally, similar positive and significant results are reported in these tests. In detail, the results of equation (7b) control for *BM*, *SIZE*, *LEV*, and *LOSS*. The results are consistent with the predictions, the coefficients of interest are all positive and significant. Additionally, the explanatory powers of the regressions are similar, and increase when adding controls. Specifically, the results in column equation (7b) with all controls appear to have the highest explanatory power (adjusted $R^2 = 32.86$). The coefficient on the interaction term $COMPACC \times CFO$ is positive and statistically significant (0.111; t-statistic = 7.82), as is the coefficient on the interaction term $COMPACC_i \times EARN$ (0.032; t-statistic = 2.88). In summary, the models show consistently positive and significant results with or without controls as predicted. The results significantly support the second hypothesis about the enhancing role of comparability in the ability of current earnings to predict future earnings.

5.5 Comparability Analysis and Size Effect

Earnings relevance and reliability can differ among different firm sizes. Large firms appear to have more stable growth, which can be captured as more predictable cash flows and more persist earnings (Kim & Kross, 2005). To further test the impact of comparability on the usefulness of earnings, the study conducts additional analyses to subgroup the total sample based on *SIZE*, which is measured as logarithm of the market value of equity measured at the end of year (De Franco et al., 2011; Kim et al., 2018; Choi et al., 2019). Specifically, the study subgroups the full sample into the following two groups, including those falling in the bottom 40 percent of the *SIZE* (“Small”) and in the top 40th percent of the *SIZE* (“Large”) among the total firm observations. Overall, the results of additional tests generally support the main findings that comparability enhances the relevance and reliability of earnings, with significant coefficients of

interest and strong explanatory powers. The results for the two hypotheses by size effect are detailed in table 8 and table 9 respectively.

Table 8 present results for the first hypothesis testing using two size groups, the “Small” column and the “Large” column, using equations (4), (5a) and (5b). As shown in table 9, the coefficients on the interaction terms for both the “Small” group ($COMPACC \times CFO = 0.108$, t-statistic = 6.13; $COMPACC \times EARN = 0.038$; t-statistic = 2.50) and the “Large” group ($COMPACC \times CFO = 0.796$, t-statistic = 8.30; $COMPACC \times EARN = 0.156$; t-statistic = 1.88) are all positive and significant. The size test results reported in table 8 indicate the findings about the positive relation between comparability and relevance of earnings are robust to firm size. Furthermore, it is noticeable that the “Large” group has the greater explanatory powers than those of the “Small” group, across three equations. For example, in the equation (5a), the “Large” group has an adjusted R^2 of 40.35 percent, and the “Small” group has an adjusted R^2 of 19.15 percent.

Similarly, I re-conduct OLS regressions for the second hypothesis related to comparability and reliability relations for the two groups, using equations (6), (7a) and (7b). For this, the same firm size grouping rules are applied. The results are presented in table 10.. Consistently, coefficients on the interaction terms are positive and significant for both “Small” and “Large” groups. Specifically, the coefficient of the interaction term $COMPACC \times CFO$ is 0.128 (t-statistic = 5.45) for the “Small” group and $COMPACC \times CFO$ is 0.560 (t-statistic = 3.23) for the large group, as reported in the two column of table 10. The coefficient of $COMPACC \times EARN$ for the “Small” group is 0.560 (t-statistic = 3.23), and 0.362 (t-statistic = 2.42) for the “Large” group. Furthermore, The explanatory powers of the “Large” group are generally greater than those of the “Small” group. For example, the results of equation (7b) show that explanatory power of the “Large” group is 28.34, greater than that of the “Small” group with an adjusted R^2 of 26.91. Therefore, the size effect indicates the “Large” firms show more predictive power of current *EARN* about future *CFO* and *EARN*.

TABLE 8
Comparability and Earnings Relevance by Size

Dependent variable = <i>CFO</i>			
	Predicted	Small	Large
Intercept		-0.112*** (-5.47)	0.045*** (7.32)
<i>CFO</i>	(+)	0.375*** (7.61)	0.691*** (15.88)
<i>EARN</i>	(+)	0.096*** (2.66)	0.124*** (3.30)
<i>COMPACC</i>		0.228*** (6.72)	0.226*** (6.28)
<i>COMPACC x CFO</i>	(+)	0.108*** (6.13)	0.796*** (8.30)
<i>COMPACC x EARN</i>	(+)	0.038*** (2.50)	0.156* (1.88)
N		1,511	1,481
Adj. R^2 (%) - Eq. (5a)		19.15	40.35
Adj. R^2 (%) - Eq. (4)		9.78	33.54
Adj. R^2 (%) - Eq. (5b)		23.77	45.59

This table presents the OLS regression results of testing hypothesis 1, the relation between comparability and relevance of earnings. The sample consists of 1,511 firm-year observations fall in the small size group from 2011 to 2018, and 1,481 firm-year observations fall in the large size group from 2011 to 2018. Small size contains observations with *SIZE* fall in the bottom 40 percentile of the sample. Large size contains observations with *SIZE* fall in the top 40 percentile of the sample. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *SIZE* is logarithm of the market value of equity measured at the end of year; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (4)} \quad CFO_{it+1} = \gamma_0 + \gamma_1 CFO_{it} + \gamma_2 EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5a)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5b)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it}$$

TABLE 9
Comparability and Earnings Reliability by Size

Dependent variable = <i>EARN</i>			
	Predicted	Small	Large
Intercept		-0.202*** (-7.35)	-0.006 (-0.50)
<i>CFO</i>	(+)	0.396*** (6.02)	0.367*** (4.66)
<i>EARN</i>	(+)	0.152*** (3.16)	0.427*** (6.32)
<i>COMPACC</i>		0.470*** (10.36)	0.330*** (5.07)
<i>COMPACC x CFO</i>	(+)	0.128*** (5.45)	0.560*** (3.23)
<i>COMPACC x EARN</i>	(+)	0.046** (2.29)	0.362** (2.42)
N		1,511	1,481
Adj. R2 (%) - Eq. (7a)		20.87	18.77
Adj. R2 (%) - Eq. (6)		10.03	15.59
Adj. R2 (%) - Eq. (7b)		26.91	28.34

This table presents the OLS regression results of testing hypothesis 2, the relation between comparability and reliability of earnings. The sample consists of 1,511 firm-year observations fall in the small size group from 2011 to 2018, and 1,481 firm-year observations fall in the large size group from 2011 to 2018. Small size contains observations with *SIZE* fall in the bottom 40 percentile of the sample. Large size contains observations with *SIZE* fall in the top 40 percentile of the sample. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *SIZE* is logarithm of the market value of equity measured at the end of year; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (6)} \quad EARN_{it+1} = \delta_0 + \delta_1 CFO_{it} + \delta_2 EARN_{it} + \varepsilon_{it}$$

$$\begin{aligned} \text{Eq. (7a)} \quad EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} \text{Eq. (7b)} \quad EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it} \end{aligned}$$

Overall, the comparability analysis with size effect reports consistently significant and positive results that the “Large” size group has the greatest explanatory power than the “Small” size group. Therefore, the size effect analysis indicates that the “Large” group, the more positive impact comparability has on enhancing the relevance and the reliability of earnings.

5.6 Comparability Analysis and Industry Effect

The accounting policies and economic environments of firms are generally affected by industry (Farshadfar & Monem, 2019). The varieties of earnings components also tend to be industry specific (Barth et al., 2001). Accordingly, industry is an important factor to examine the impact of comparability. Also, given that the two largest sectors by market capitalization in Canadian capital market are mining and energy sectors and the mining industry being the major composition (49 percent) of the total sample in this study, the industry analysis grouping by the mining and non-mining classification is particular of interest to the impact of comparability on the usefulness of earnings in Canada context.

To better examine the effect of industry classifications on the role of comparability in the relevance or reliability of earnings, the study conducts additional analyses to subgroup the sample into two groups based on firm-specific two-digit SIC industry classifications. Specifically, the firms with SIC10 (metal mining), SIC 13 (oil and gas extraction), and SIC 14 (non-metal mining) are re-grouped into one industry group (labeled as “mining firms”), and the other eight SIC groups are combined into another industry group (labeled as “non-mining firms”). Moreover, the industry analysis re-run the OLS regressions based on equations (4), (5a), (5b), (6), (7a), and (7b) for the two industry groups. The results for the industry effect are summarized in table 10 and table 11. The industry analysis shows similar findings supporting the main predictions. Overall, the coefficients of interest are positive and significant.

TABLE 10
Comparability and Earnings Relevance by Industry

Dependent variable = <i>CFO</i>			
	Predicted	Mining, Oil and Gas	Others
Intercept		-0.181 (-1.48)	-0.026 (-1.00)
<i>CFO</i>	(+)	0.556*** (4.83)	0.455*** (8.49)
<i>EARN</i>	(+)	0.553*** (4.75)	0.256*** (5.30)
<i>COMPACC</i>		0.104*** (4.41)	0.267*** (9.17)
<i>COMPACC x CFO</i>	(+)	0.018*** (7.79)	0.056*** (5.80)
<i>COMPACC x EARN</i>	(+)	0.051*** (7.07)	0.0639*** (4.78)
N		2,716	1,184
Adj. R^2 (%) - Eq. (5a)		3.93	39.37
Adj. R^2 (%) - Eq. (4)		1.05	34.94
Adj. R^2 (%) - Eq. (5b)		4.19	42.15

This table presents the OLS regression results of testing hypothesis 1, the relation between comparability and earnings relevance. The sample consists of 2 significant industry groups from 2011 to 2018. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (4)} \quad CFO_{it+1} = \gamma_0 + \gamma_1 CFO_{it} + \gamma_2 EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5a)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it}$$

$$\text{Eq. (5b)} \quad CFO_{it+1} = \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} + \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it}$$

TABLE 11
Comparability and Earnings Reliability by Industry

Dependent variable = <i>EARN</i>			
	Predicted	Mining, Oil and Gas	Others
Intercept		-0.328*** (-3.00)	-0.033 (-1.09)
<i>CFO</i>	(+)	0.529*** (5.14)	0.138 (0.77)
<i>EARN</i>	(+)	0.203* (1.95)	0.704*** (4.99)
<i>COMPACC</i>		0.177*** (8.37)	0.436*** (4.17)
<i>COMPACC x CFO</i>	(+)	0.032*** (15.38)	-0.881*** (-3.55)
<i>COMPACC x EARN</i>	(+)	0.091*** (14.21)	0.665*** (3.58)
N		2,716	1,150
Adj. R^2 (%) - Eq. (7a)		35.68	35.56
Adj. R^2 (%) - Eq. (6)		28.73	33.99
Adj. R^2 (%) - Eq. (7b)		40.12	39.94

This table presents the OLS regression results of testing hypothesis 2, the relation between comparability and earnings reliability. The sample consists of 2 significant industry groups from 2011 to 2018. Coefficient t-statistics are reported in parentheses. ***, **, * denote the significance respectively at 1%, 5%, and 10% (two-tailed) levels. Coefficients of interest are in boldface format. *EARN* is income before extraordinary items available to common shareholders scaled by total assets at the beginning of year; *CFO* is cash flow from operations scaled by total assets at the beginning of the year; *COMPACC* is comparability measure as estimated in De Franco et al. (2011).

This table reports the following regression equations:

$$\text{Eq. (6)} \quad EARN_{it+1} = \delta_0 + \delta_1 CFO_{it} + \delta_2 EARN_{it} + \varepsilon_{it}$$

$$\begin{aligned} \text{Eq. (7a)} \quad EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} \text{Eq. (7b)} \quad EARN_{it+1} &= \theta_0 + \theta_1 CFO_{it} + \theta_2 EARN_{it} + \theta_3 COMPACC_{it} + \theta_4 COMPACC_{it} \times CFO_{it} \\ &+ \theta_5 COMPACC_{it} \times EARN_{it} + \sum \theta_n Controls + \varepsilon_{it} \end{aligned}$$

As shown in table 10, the results for the relations between comparability and earnings relevance by two industry groups show consistent significant and positive results, as documented from the total sample in table 6 and table 7. Specifically, both mining and non-mining groups show positive and significant coefficients of interest. For example, the coefficient on the interaction term *COMPACC X CFO* for the mining group is 0.018 (t-statistic = 7.79), and for the non-mining group is 0.056 (t-statistic = 5.80). Moreover, the coefficient of *COMPACC X EARN* for the mining group is 0.051 (t-statistic = 7.07), for the non-mining group is 0.064 (t-statistic = 4.78). Additionally, the explanatory power of the non-mining group is generally higher than that of the mining-group for the results in equations (4), (5a) and (5b). Therefore, the above results overall support the main results in table 6, indicating a positive relation between comparability and earnings relevance, robust to the industry effect.

The study conducts similar subgrouping industry analyses for the second hypothesis test, related to the impact of comparability on the reliability of earnings. The overall results shown in table 11 generally support the major results for testing hypothesis two in table 8. Similarly, the results are presented into the same two industry groups: the mining group, and the non-mining group. As shown in the two columns of table 11, both the mining group and the non-mining group have similar positive and significant coefficients on *COMPACC X CFO* and *COMPACC X EARN*, as those drawn from the total sample. For example, the coefficient of *COMPACC X EARN* for the mining group is 0.091 (t-statistic = 14.21) and for the non-mining group is 0.665 (t-statistic = 3.58). Therefore, the industry analysis for the relation between comparability and earnings reliability show similar positive findings as those from the total sample.

Overall, the results of comparability analysis by industry effect are generally consistent with the major findings of the study, indicating the significant and positive relations between comparability and the usefulness of earnings. As discussed above, both the mining and non-mining groups report similar positive and significant coefficients of interest from tests of equations (4), (5a), (5b), (6), (7a), and (7b). Therefore, it is reasonable to conclude that the

additional comparability analysis by industry supports our main conclusion about the positive role of comparability in the usefulness of earnings.

In summary, the empirical results provide important findings about the role of comparability in enhancing the relevance and reliability of earnings, consistent with the IFRS Conceptual Framework. The study documents empirical evidence about the significant and positive relations between comparability and relevance, and between comparability and reliability. Additionally, the study performs sensitivity tests in terms of firm size and industry classifications. Overall, the additional size and industry tests' results support the prediction, shown by the positive and significant coefficients of interest on the both interaction terms ($COMPACC \times CFO$; $COMPACC \times EARN$). Therefore, the two hypotheses are supported by the empirical evidence available for the Canadian context since IFRS adoption in 2011.

6. Conclusions

The purpose of this study is to examine an important question about whether comparability enhances the usefulness of earnings in Canadian setting. To address the research question, this study builds on the measure of comparability developed by De Franco et al. (2011) and estimates the comparability of 491 unique Canadian publicly traded firms across 11 SIC industries during the post IFRS adoption period from 2011 to 2018. Furthermore, this study examines the relations between comparability and the relevance and reliability of earnings for the entire sample of 3,928 firm-year observations over the eight-year sample period.

The results suggest the positive significant role of comparability in enhancing the relevance and reliability of earnings, consistent with the predictions. Furthermore, the paper also explores the effect of size on relations between comparability and the relevance or reliability of earnings, and the results indicate the more important enhancing role of comparability for the “Large” firms in enhancing earnings relevance, compared to the “Small” firms. Additionally, this study conducts the comparability analysis under industry effects. The documented results overall are consistent with the main findings with the total sample, and the industry analysis supports a significant and positive relation between comparability and the relevance or reliability of earnings, for both the mining and the non-mining industry groups. Overall, these sensitivity test results support the two hypotheses of this study, indicating that comparability enhances the usefulness of earnings.

The important contribution of this study is to provide the first empirical evidence on whether comparability has a significant positive impact on the usefulness of earnings in Canadian context. Furthermore, the study conducts extensive analysis using size and industry grouping, to further examines the positive role of comparability in the usefulness of earnings. Also, this study extends accounting research by documenting whether comparability enhances the usefulness of earnings during the post-IFRS adoption period in Canada, thereby indicating that adoption of the

IFRS achieves the standard setters' intended goal: to produce decision-useful information to financial statement users.

The study also provides several important implications to the standard setters and the market participants about the enhancing role of comparability in the usefulness of earnings. This evidence provides empirical support to the claim of policy makers in setting standards intended to make financial reporting more comparable, and thereby more useful. This study therefore also supports the IFRS conceptual framework and the role it grants comparability as an enhancing qualitative characteristic of useful financial reporting. Additionally, the findings of this study is also beneficial to major market participants, including investors or creditors in making investment or lending decisions, given the evidence that the higher comparable firms appear to provide more useful earnings information in predicting firm's performance.

The above contribution aside, there are some limitations to this research. In spite of the documented benefits of comparable financial statements, the study does not examine potential factors that could cause or improve firms' comparability with peers. Moreover, the study does not further investigate the cost of implementing accounting systems to achieve higher comparability at the firm level or across industries. Additionally, there are some arguments in recent research about using earnings as the only proxy for financial statements. The research opportunity exists to enrich the comparability measure by including other factors as proxies for financial statements, and to further examine the usefulness of earnings or its components using alternative comparability measures.

Therefore, some future research opportunities exist in examining and comparing the results of this study in different countries. For instance, future studies could also investigate the impact of other control variables on the findings of this study, such as the impact of a firm's life cycle. Future research can also focus on testing the results of this study in other countries' context to expand knowledge of how comparability can enhance the decision-usefulness of financial reporting across contexts.

References

- Accounting Standards Board (AcSB) (2005) *Accounting Standards in Canada: Future Directions Draft Strategic Plan*. Toronto, Canada: Accounting Standards Board.
- Accounting Standards Board (AcSB) (2006) *Accounting Standards in Canada: New Directions 2006 -2011 Strategic Plan*. Toronto, Canada: Accounting Standards Board.
- Accounting Standards Board (AcSB) (2010) *Annual Report 2009 - 2010*. Toronto, Canada: Accounting Standards Board. Retrieved from <https://www.frascanada.ca/en/acsb/about/annual-reports>
- Bandyopadhyay, S. P., Chen, C., Huang, A. G., & Jhar, R. (2010). Accounting conservatism and the temporal trends in current earnings' ability to predict future cash flows versus future earnings: Evidence on the trade-off between relevance and reliability: Conservatism and relevance-reliability trade-off. *Contemporary Accounting Research*, 27(2), 413-460.
- Barth, M. E., Cram, D. P., & Nelson, K. K. (2001). Accruals and the prediction of future cash flows. *The Accounting Review*, 76(1), 27-58.
- Barth, M. E., Landsman, W. R., Lang, M., & Williams, C. (2012). Are IFRS-based and US GAAP-based accounting amounts comparable?. *Journal of Accounting and Economics*, 54(1), 68-93.
- Brochet, F., Jagolinzer, A. D., & Riedl, E. J. (2013). Mandatory IFRS adoption and financial statement comparability. *Contemporary Accounting Research*, 30(4), 1373-1400.
- Burnett, B. M., Gordon, E. A., Jorgensen, B. N., & Linthicum, C. L. (2015). Earnings quality: Evidence from Canadian firms' choice between IFRS and US GAAP. *Accounting Perspectives*, 14(3), 212-249.
- Canadian Institute of Chartered Accountants (CICA) (2005). *General accounting: Sections 1000 Financial statement concepts*. Toronto, Canada: Accounting Standards Board.
- Canadian Securities Administrators (CSA) (2019, November). *Mission of the CSA*. Retrieved from <https://www.securities-administrators.ca/>

- Cascino, S., & Gassen, J. (2015). What drives the comparability effect of mandatory IFRS adoption?. *Review of Accounting Studies*, 20(1), 242-282.
- Chen, C. W., Collins, D. W., Kravet, T. D., & Mergenthaler, R. D. (2018). Financial statement comparability and the efficiency of acquisition decisions. *Contemporary Accounting Research*, 35(1), 164-202.
- Choi, J. H., Choi, S., Myers, L. A., & Ziebart, D. (2019). Financial statement comparability and the informativeness of stock prices about future earnings. *Contemporary Accounting Research*, 36(1), 389-417.
- Dechow, P. M., Kothari, S. P., & Watts, R. L. (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics*, 25(2), 133-168.
- De Franco, G., Kothari, S. P., & Verdi, R. S. (2011). The benefits of financial statement comparability. *Journal of Accounting Research*, 49(4), 895-931.
- Farshadfar, S., & Monem, R. (2013). Further evidence on the usefulness of direct method cash flow components for forecasting future cash flows. *The International Journal of Accounting*, 48(1), 111-133.
- Farshadfar, S., & Monem, R. M. (2019). Further evidence of the relationship between accruals and future cash flows. *Accounting & Finance*, 59(1), 143-176.
- Financial Accounting Standards Board (FASB) (2006). Preliminary Views: Conceptual Framework for Financial Reporting: Objective of Financial Reporting and Qualitative Characteristics of Decision-Useful Financial Reporting Information. *Financial Accounting Series* No. 1260-0001.
- Financial Accounting Standards Board (FASB) (2008a). *Statement of Financial Accounting Concepts No.1: Objectives of Financial Reporting by Business Enterprises*. Norwalk, Connecticut: FASB.

- Financial Accounting Standards Board (FASB) (2008b). *Statement of Financial Accounting Concepts No.2: Qualitative Characteristics of Accounting Information*. Norwalk, Connecticut: FASB.
- Financial Accounting Standards Board (FASB) (2010). *Statement of Financial Accounting Concepts No. 8: The Conceptual Framework for Financial Reporting*. Norwalk, Connecticut: FASB.
- Holthausen, R. W., & Watts, R. L. (2001). The relevance of the value-relevance literature for financial accounting standard setting. *Journal of Accounting and Economics*, 31(1-3), 3-75.
- International Accounting Standards Committee (IASC) (1989). *Framework for the preparation and presentation of financial statements*. London, UK: IASC.
- International Accounting Standards Board (IASB) (2006). *Preliminary Views: Conceptual Framework for Financial Reporting: Objective of Financial Reporting and Qualitative Characteristics of Decision-Useful Financial Reporting Information*. International Accounting Standards Committee Foundation. London, UK: IASB.
- International Accounting Standards Board (IASB) (2007). *IASB Project Update April 2007*. Retrieved from <https://cdn.ifrs.org/-/media/feature/news/updates/iasb/2007/upd0704.pdf>
- International Accounting Standards Board (IASB) (2008). *An Improved Conceptual Framework for Financial Reporting*. London, UK: IASB.
- International Accounting Standards Board (IASB) (2010). *The Conceptual Framework for Financial Reporting*. Retrieved from <http://eifrs.ifrs.org/eifrs/bnstandards/en/framework.pdf>
- International Financial Reporting Standards (IFRS) Foundation (2018a). *IFRS® Conceptual Framework for Financial Reporting*. London, UK: IFRS Foundation.
- International Financial Reporting Standards (IFRS) Foundation (2018b). *IFRS® Conceptual Framework Project Summary*. London, UK: IFRS Foundation.

- International Financial Reporting Standards (IFRS) Foundation (2019). *The use of IFRS® Standards around the world*. Retrieved from <https://www.ifrs.org/use-around-the-world/>
- Jin, Y. (2017). DuPont analysis, earnings persistence, and return on equity: Evidence from mandatory IFRS adoption in Canada. *Accounting Perspectives*, 16(3), 205-235.
- Jurney, N. (2008). *How do nonprofessional investors understand and use relevance and reliability of financial information?*. Available from ProQuest Dissertations & Theses A&I; ProQuest Dissertations & Theses Global. (304488707).
Retrieved from <https://search-proquest.com.ezproxy.lib.ryerson.ca/docview/304488707>
- Kallapur, S., & Kwan, S. Y. (2004). The value relevance and reliability of brand assets recognized by UK firms. *The Accounting Review*, 79(1), 151-172.
- Khan, S., Anderson, M., Warsame, H., & Wright, M. (2015). Do IFRS-Based Earnings Announcements Have More Information Content than Canadian GAAP-Based Earnings Announcements?. *Accounting Perspectives*, 14(3), 276-302.
- Kim, M., & Kross, W. (2005). The ability of earnings to predict future operating cash flows has been increasing—not decreasing. *Journal of Accounting Research*, 43(5), 753-780.
- Kim, S., Kraft, P., & Ryan, S. G. (2013). Financial statement comparability and credit risk. *Review of Accounting Studies*, 18(3), 783-823.
- Kim, R., Kim, S., & Musa, P. M. (2018). When does comparability better enhance relevance? Policy implications from empirical evidence. *Journal of Accounting and Public Policy*, 37(5), 436-457.
- Klein, A. (2018). Discussion of “Financial Statement Comparability and the Efficiency of Acquisition Decisions”. *Contemporary Accounting Research*, 35(1), 203-210.
- Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of Financial Economics*, 69(3), 505-527.

- Liu, G., & Sun, J. (2015). Did the mandatory adoption of IFRS affect the earnings quality of Canadian firms?. *Accounting Perspectives*, 14(3), 250-275.
- Morck, R., Yeung, B., & Yu, W. (2000). The information content of stock markets: why do emerging markets have synchronous stock price movements?. *Journal of Financial Economics*, 58(1-2), 215-260.
- Neel, M. (2017). Accounting comparability and economic outcomes of mandatory IFRS adoption. *Contemporary Accounting Research*, 34(1), 658-690.
- Nova Scotia Securities Commission (NSSC) (2017, August 23). How many stock exchanges exist in Canada? Retrieved from <https://nssc.novascotia.ca/before-you-invest/question-week-how-many-stock-exchanges-exist-canada>
- Ontario Securities Commission. (2019). OSC News Release: OSC 2018 – 2019 Annual Report. Retrieved from https://www.osc.gov.on.ca/documents/en/Publications/Publications_rpt_2019_osc-annual-rpt_en.pdf
- Richardson, S. A., Sloan, R. G., Soliman, M. T., & Tuna, I. (2005). Accrual reliability, earnings persistence and stock prices. *Journal of Accounting and Economics*, 39(3), 437-485.
- Schipper, K., & Vincent, L. (2003). Earnings quality. *Accounting Horizons*, 17, 97-111.
- Scott, W. R. (2015). *Financial Accounting Theory*. US: Pearson...
- Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings?. *The Accounting Review*, 289-315.
- Statista (2019). *Distribution of Countries with Largest Stock Markets Worldwide in 2018*. Retrieved from <https://www.statista.com/statistics/710680/global-stock-markets-by-country/>
- Toronto Stock Exchange (TSX) (2019, September). *TSX Composite Index Profile*. Retrieved from https://web.tmxmoney.com/index_profile.php?qm_symbol=^TSX

TMX Group (2019, August). TSX-Sector and Product Profiles. Retrieved from <https://www.tsx.com/listings/listing-with-us/sector-and-product-profiles>

World Bank (2019, September 19). *Gross Domestic Products 2018*. Available from World Development Indicators database.

Retrieved from <https://databank.worldbank.org/data/download/GDP.pdf>

Yip, R. W., & Young, D. (2012). Does mandatory IFRS adoption improve information comparability?. *The Accounting Review*, 87(5), 1767-1789.