

**Brian M. Burnett, Elizabeth A. Gordon, [Bjorn N. Jorgensen](#)
and Cheryl L. Linthicum**

Earnings quality: evidence from Canadian firms' choice between IFRS and U.S. GAAP

**Article (Accepted version)
(Refereed)**

Original citation:

Burnett, Brian M., Gordon, Elizabeth A., Jorgensen, Bjorn N. and Linthicum, Cheryl L. (2015) Earnings quality: evidence from Canadian firms' choice between IFRS and U.S. GAAP.

[Accounting Perspectives](#), 14 (3). pp. 212-249. ISSN 1911-3838

DOI: [10.1111/1911-3838.12051](https://doi.org/10.1111/1911-3838.12051)

© 2015 CAAA/ACPC

This version available at: <http://eprints.lse.ac.uk/62325/>

Available in LSE Research Online: October 2015

LSE has developed LSE Research Online so that users may access research output of the School. Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Users may download and/or print one copy of any article(s) in LSE Research Online to facilitate their private study or for non-commercial research. You may not engage in further distribution of the material or use it for any profit-making activities or any commercial gain. You may freely distribute the URL (<http://eprints.lse.ac.uk>) of the LSE Research Online website.

This document is the author's final accepted version of the journal article. There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

Earnings Quality: Evidence from Canadian firms' choice between IFRS and U.S. GAAP*

Brian M. Burnett**
Biola University

Elizabeth A. Gordon
Temple University

Bjorn N. Jorgensen
London School of Economics

Cheryl L. Linthicum
University of Texas at San Antonio

June 1, 2015

Abstract

For fiscal years starting on or after January 1, 2011, Canada abandoned Canadian Generally Accepted Accounting Principles (GAAP) and adopted International Financial Reporting Standards (IFRS), but permitted firms cross-listed in the U.S. to adopt U.S. GAAP instead. We document that the number of Canadian firms reporting under U.S. GAAP increased after Canada adopted IFRS. We find that cross-listed firms are more likely to choose IFRS if IFRS is the standard most commonly used by the leading global firms in their industry. In addition, we find that firms more likely to choose IFRS are larger, of civil law legal origin, have less U.S. operations, report exploration expense, have fewer U.S. shareholders and report higher stockholders' equity under Canadian GAAP than under U.S. GAAP. Of these, we find that the convergence benefits of comparability with industry peers is the most significant determinant in firms' choice of standard. Further, we are unable to document changes in earnings quality from cross-listed firms adopting IFRS or U.S. GAAP or that earnings quality changed for firms adopting IFRS relative to firms adopting U.S. GAAP.

JEL Code: M41

Keywords: IFRS, U.S. GAAP, Accounting Choice, Earnings Quality.

* We thank Vic Anand, Holger Daske, Alan Jagolinzer, Karen Jones, Grace Pownall, Shiva Rajgopal, Gregory Waymire, Michael Welker, Eunyoung Whang (IAS discussant), and seminar participants at Baylor, Drexel, Emory, IASB, IESE, Mannheim, Rotterdam, 2013 American Accounting Association Annual Meeting, 2013 European Accounting Association Meeting, and the 2013 International Accounting Section Midyear Meeting for helpful comments and suggestions. We thank Larry Ochoa and Claire Costin for helpful research assistance.

** Crowell School of Business, Biola University, 13800 Biola Avenue, La Mirada, CA 90639. E-mail: brian.burnett@biola.edu.

1. Introduction

In this paper, we examine Canada's adoption of IFRS focusing on the option that permitted cross-listed Canadian companies to adopt U.S. Generally Accepted Accounting Principles (U.S. GAAP) instead.¹ We explore both the determinants and consequences of cross-listed firms' choice of IFRS versus U.S. GAAP. We document the consequence that more Canadian companies report using U.S. GAAP after the adoption of IFRS than before. As such, Canada's adoption of IFRS offers a unique setting to examine and provide further evidence on the debate about firms having a choice among accounting standards.

To our knowledge, only two prior natural experimental settings permit empirical-archival examination of the effects of IFRS adoption relative to U.S. GAAP: (1) European exchanges that allowed some firms the choice between U.S. GAAP and International Accounting Standards (IAS), the predecessor to IFRS, and (2) U.S. cross-listed firms that were required to reconcile differences between IFRS and U.S. GAAP. Ashbaugh (2001) studies non-U.S., non-U.K. firms from 17 countries listed in London that voluntarily adopted either IAS or U.S. GAAP. She finds that firms are more likely to choose IAS when larger, listed in many capital markets, issuing equity, or have large differences in mandatory disclosure standards between home-country GAAP, IAS, and U.S. GAAP. Germany's Neue Markt exchange allows for an examination of the choice of accounting standards in a market where domestic GAAP was considered low quality since enforcement of standards was limited in Germany at that time. Germany's enforcement body did not implement a proactive review of financial statements until 2005 (Christensen et al. 2011), which makes it challenging to infer whether the insignificant

¹ Only firms registered with the SEC were immediately permitted to use U.S. GAAP instead of IFRS by Canadian securities regulators. However, we note that Canadian firms arguably had a *de facto* choice because firms could, though at some cost, register with the SEC and report with U.S. GAAP. In fact, Nimin Energy Corporation and some other Canadian firms publicly stated that they initiated cross-listing in the U.S. to be permitted to adopt U.S. GAAP.

differences between IAS and U.S. GAAP documented in Leuz (2003) for Neue Markt and in Bartov et al. (2005) for all German exchanges are due to the similarity of the standards or lack of enforcement of the standards.

The IFRS to U.S. GAAP reconciliations of foreign private issuers (FPIs) provide a direct comparison of reporting under IFRS and U.S. GAAP.² Gordon et al. (2013) compare the earnings attributes of IFRS and U.S. GAAP holding fixed the underlying cash transactions of the firm. They conclude that while some earnings attributes do not differ due to accounting standards, other differences due to financial reporting incentives persist even after the adoption of IFRS.³

While informative, the generalizability of the above findings to the Canadian setting may be limited. If enforcement and other financial reporting incentives are integral determinant of earnings quality then drawing reliable inferences from samples of European firms that face different reporting environments is difficult. Specifically, Christensen et al. (2013) note that IFRS adoption in EU coincides with increased enforcement and their findings suggest that liquidity increases with stronger enforcement, instead of IFRS adoption *per se*. Their findings, however, do not preclude that IFRS adoption *per se* could have an effect on earnings quality in countries with a long tradition of strong enforcement, such as Canada (see Barth and Israeli, 2013). Further, most European countries have civil law legal origins, except for the two common law countries, Ireland and the United Kingdom. Ball et al. (2000) document that legal origin is a co-determinant of earnings attributes. With Quebec being the notable exception, the

² During the period from 2004 through 2007, these foreign private issuers were required to reconcile from IFRS to U.S. GAAP.

³ Similarly, Eng et al. (2014) study non-U.S. firms with American Depositary Receipts (ADRs) that were either required or permitted to adopt IFRS instead of U.S. GAAP and overall find insignificant differences in earnings attributes. Further, current research studies the effect of discontinuing the reconciliation requirements for foreign private issuers. See, among others, Chen and Sami (2008, 2013), Jiang et al. (2010), Kim et al. (2012), and Chen and Khurana (2015).

remaining Canadian provinces have common law, and as a result inferences regarding IFRS adoption from a sample of firms located in the European Union's predominantly civil law countries with lower intensity of enforcement may be limited.

Finally, with the recent adoption of IFRS, Canadian companies are using updated IFRS standards that have benefited from the IASB-FASB convergence project. In summary, the Canadian setting has three distinct characteristics: (1) the choice between IFRS and U.S. GAAP, (2) a high level of enforcement in Canada both before and after IFRS adoption, and (3) the recent adoption of IFRS.

We examine two main aspects related to IFRS adoption in Canada. First, we describe and investigate the determinants of the initial reporting choices of Canadian firms.⁴ While Canada adopted IFRS for fiscal years starting on or after January 1, 2011, standard setters gave companies the *de facto* option to use IFRS or U.S. GAAP. Those Canadian firms that had cross-listed in the U.S. and maintained their FPI status did not need permission from regulators to use U.S. GAAP. Other Canadian firms needed regulatory approval to use U.S. GAAP. Interestingly, we find more firms report under U.S. GAAP after Canada adopted IFRS. Before Canada's IFRS adoption, 48 out of 245 cross-listed companies reported under U.S. GAAP, or about 20%. After, 72 (32%) of the cross-listed firms report under U.S. GAAP. Of the 197 cross-listed companies that previously reported under Canadian GAAP, we document that at least 29 or about 15%, *voluntarily* choose U.S. GAAP over IFRS, implying that companies differ in the

⁴ Canadian firms may continue to reassess whether IFRS or U.S. GAAP best meets their reporting needs. For example, Encana initially switched to IFRS from Canadian GAAP, but then announced on December 8, 2011 that for fiscal 2012 it was switching to U.S. GAAP, stating "Adopting U.S. GAAP will make it easier for investors to compare Encana's financial performance with its peer companies, most of which are based in the United States. Consistent with current practice, Encana will report its 2011 year-end financial results in February 2012 in accordance with International Financial Reporting Standards (IFRS). Starting in April 2012, Encana will report its first quarter results using U.S. GAAP."

perceived costs and benefits of their choice of accounting standards.⁵ We investigate the determinants of the choice of IFRS versus U.S. GAAP, and we find that cross-listed firms are more likely to choose IFRS if IFRS is the standard most commonly used by the leading global firms in their industry. In addition, we find that the firms more likely to choose IFRS are larger, of civil law legal origin, have fewer U.S. operations, report exploration expense, have fewer U.S. shareholders and report higher stockholders' equity under Canadian GAAP than under U.S. GAAP. Our analysis indicates that the convergence benefits of comparability with industry peers is the most significant determinant in firms' choice of standard.

Second, we investigate effects of IFRS adoption on earnings quality measures that are predicted to arise from two primary differences between the three accounting standards – Canadian GAAP, IFRS, and U.S. GAAP. The first primary difference is that IFRS provides managers with more reporting discretion than either Canadian GAAP or U.S. GAAP (U.S. GAAP provides more detailed industry and transaction guidance than Canadian GAAP). Managers may use the increase (decrease) in reporting discretion under IFRS (U.S. GAAP) relative to Canadian GAAP to better convey economic performance or opportunistically. We examine two earnings attributes that examine these competing motivations: earnings persistence and accrual aggressiveness. Earnings persistence measures how well current earnings predict future earnings. An increase in earnings persistence is consistent with current earnings better conveying future performance. We use two common measures of accrual aggressiveness, signed and unsigned accruals, to see if managers' increase in discretion results in more opportunistic reporting.

⁵ In addition to these 29 firms, five Canadian firms were *mandated* to switch to U.S. GAAP by the U.S. Securities and Exchange Commission (SEC) because they no longer qualified for Foreign Private Issuer status.

The second primary difference between the three accounting standards is that the verification standard for losses and gains is more symmetric under IFRS than under Canadian GAAP and U.S. GAAP. IFRS requires reversal of impairment losses on tangible and certain intangible assets. Additionally, IFRS permits firms to revalue tangible and some intangible assets to fair value. Canadian GAAP does not permit these reversals and revaluations, except for inventory write-downs (which U.S. GAAP does not permit). As such, we examine timely loss recognition as discussed by Basu (1997) and Watts (2003a, b). Timely loss recognition may decrease under IFRS because more unrealized gains are recognized in IFRS earnings than under Canadian GAAP or U.S. GAAP.

We employ a pre-post research design that uses each firm as its own control and examines the difference-in-differences between firms that choose IFRS to firms that choose U.S. GAAP. To control for potential selection bias, we include the inverse Mills' ratio from the accounting standard choice analysis. We are unable to document a significant change in earnings quality using any of the three attributes for firms adopting IFRS or U.S. GAAP or that adopting IFRS affected earnings quality more or less than firms adopting U.S. GAAP. Inability to reject the null hypothesis of no change in accounting quality is challenging to interpret because our statistical tests may lack power to detect the true effect on earnings quality, possibly due to small sample sizes, our chosen earnings quality measures may be measured with error or may not capture the appropriate earnings attributes, or the null hypothesis is true. We stress this caveat – that concluding from our study that earnings quality did not change for Canadian firms is inappropriate – because a current academic debate explores whether financial reporting incentives play the dominant role on earnings quality relative to adoption of new accounting standards per se (see Christensen et al. 2013 and Barth and Israeli 2013).

Nevertheless, our findings appear consistent with the successful transition to co-existence of two accounting standards in the Canadian markets with a high level of enforcement. By allowing choice, direct adoption costs borne by firms and their owners are invariably lower. Given the similarities between the Canadian and U.S. setting, and between IFRS and U.S. GAAP, these findings inform the debate over whether the U.S. Securities and Exchange Commission (SEC) should permit U.S. firms to choose between IFRS and U.S. GAAP, see Cox (2007).

The paper proceeds as follows. Section 2 summarizes the arguments for and against full convergence or permitting two accounting standards to exist side by side in a market. Section 3 offers a brief literature review and description of the institutional background. Section 4 investigates Canadian firms' choice of accounting standards. Section 5 analyzes the earnings quality of IFRS adoption in Canada. Section 6 concludes and suggests avenues for future research. An Appendix provides formal variable definitions.

2. Choice among accounting standards

Academic literature discusses the costs and benefits of full convergence versus continued competition between IFRS and U.S. GAAP accounting standards. One core argument in favor of allowing firms a choice between accounting standards is that competition among standard setting bodies increases the long run efficiency of accounting standards. The standard-setting organizations are likely to be more responsive to constituents' demand for better standards than with a monopolist standard setter. Countervailing concerns, however, include that competition may lead to a "race to the bottom" and lower comparability. Although motivated by this debate,

we cannot speak directly to long run effects (if any) of absence of convergence but merely to firms' choice of accounting standards and the resulting consequences.

Canada's recent experience with IFRS adoption also provides potential insights about what might happen if the U.S. permits U.S. firms to choose between the two standards. As Tricia O'Malley, a former Canadian Accounting Standards Board (AcSB) member and IASB member, stated, Canada is "the canary in the coal mine on behalf of this whole process [in the US]" (SEC 2011b). Canada permitted choice between accounting standards for Canadian firms registered with the SEC. These firms were allowed to choose between the IFRS and U.S. GAAP. Such choice is consistent with a long-standing tradition for competition between provinces in Canada concerning its legal standard setting (Daniels 1991). In summary, Canada's IFRS adoption experience may provide unique insights about the unsettled debate over whether the SEC should permit U.S. firms to choose between IFRS and U.S. GAAP.

3. Related research and institutional background

The large-scale adoption of IFRS has prompted accounting researchers and regulators to consider the preferred attributes of accounting standards.⁶ Some argue that adoption *per se* is more a label than an actual change in financial reporting quality. While the prevailing accounting standards (prior GAAP or IFRS) might be of importance, the surrounding institutions and enforcement mechanisms that help shape managers' financial reporting incentives could be equally – or even more – important. Given the flexibility within every accounting standard, the financial reporting incentives could *a priori* play as important a role as the rules and standards themselves.

⁶ For recent survey papers see, Hail et al. (2010a, b) and Kothari et al. (2010). Hail et al. (2010a,b) provide a conceptual discussion of the economic arguments for and against the adoption of IFRS.

The use of IFRS by over 100 countries has led to a number of insightful academic studies, mainly focused in the European Union (EU). This literature generally documents capital market benefits around IFRS adoption. For example, Daske et al. (2008) investigate the firm characteristics of early IFRS adopters in the EU and find improvements in liquidity, cost of capital, and equity valuation, while Armstrong et al. (2010) find share prices react positively to the likelihood of IFRS adoption in the European setting. Barth et al. (2008) find improvements in earnings quality for voluntary adopters of IFRS using a broad sample of countries. Not all research, however, documents positive effects of IFRS adoption. Ahmed et al. (2013) find mandatory IFRS adoption decreased earnings quality using a broad sample of countries. Christensen et al. (2013) note that IFRS adoption in the EU coincides with increased enforcement and their findings suggest that stock market liquidity increased with stronger enforcement, instead of IFRS adoption *per se*.

Other research considers the effect of IFRS adoption of firms cross-listed in the U.S. Henry et al. (2009) and Gordon et al. (2013) consider the effect of FPIs' adoption of IFRS. For example, Henry et al. (2009) study the reconciliations between IFRS and U.S. GAAP for 75 US-listed European firms. They find that the level of reported net income is statistically significantly higher under IFRS relative to U.S. GAAP. Further, the reconciliation from IFRS to U.S. GAAP is value relevant. However, the U.S. SEC removed the reconciliation requirement for IFRS filers for reporting periods beginning in 2008. Therefore, while some non-U.S. firms can report using either IFRS or U.S. GAAP, U.S. firms have no choice but to provide the SEC with financial statements prepared using U.S. GAAP.

Prior research indicates that Canadian GAAP is a high quality accounting standard that is quite similar to U.S. GAAP (Bandyopadhyay et al. 1994), although using a more current sample,

Webster and Thornton (2005) find Canadian GAAP yields higher accrual quality than U.S. GAAP.

Canadian IFRS adoption

The Canadian Accounting Standards Board (AcSB) sets accounting standards for Canadian entities outside of the public sector. Prior to 2004, the AcSB was implementing a dual strategy of harmonizing with U.S. GAAP and working towards convergence with international accounting standards. The ultimate goal was one single set of internationally accepted standards. On May 31, 2004, the AcSB reconsidered its existing strategy and sought input from constituents on whether Canada should (1) keep Canadian GAAP, (2) abandon Canadian GAAP and adopt IFRS, (3) abandon Canadian GAAP and adopt U.S. GAAP, or (4) permit firms to choose between IFRS or U.S. GAAP.

Constituents advocated for all four positions. Proponents of maintaining Canadian GAAP argued that the costs involved in switching to either IFRS or U.S. GAAP outweighed the benefits. They felt that Canadian GAAP better represented the economics of Canadian firms and saw no need to abandon Canadian GAAP in the near term. Proponents of adopting U.S. GAAP argued that this was the natural choice since so many companies already reported under U.S. GAAP for primary or secondary reporting purposes. They further argued that U.S. GAAP was a high quality standard and that separate Canadian and U.S. GAAPs led to poor comparability within industry peer groups and within a single North American market. The majority of respondents were in favor of adopting IFRS. They emphasized that capital markets had become truly international, a trend they believed would only accelerate in the future, and that it was in the best long-term interest of Canada to adopt IFRS. The AcSB also noted the global focus of

IFRS and knew they could be involved in the due process as the standards continued to evolve. In contrast, U.S. GAAP was focused only on serving the needs of the U.S. capital markets and that neither the SEC nor FASB were going to be responsive to their needs or concerns. Some constituents, such as PricewaterhouseCoopers, advocated permitting firms to choose between IFRS or U.S. GAAP.

After considering their constituents' input, on February 10, 2005, the AcSB proposed adopting IFRS in full to its oversight body, the Accounting Standards Oversight Council, while allowing entities cross-listed in the U.S. to use U.S. GAAP.⁷ A little less than a year later the AcSB ratified its plan on January 10, 2006 to adopt IFRS over a five-year transition period for fiscal years beginning on or after January 1, 2011, while allowing SEC registrants to continue reporting with U.S. GAAP.⁸

Canadian GAAP and U.S.-listed companies

While the AcSB required all publicly accountable enterprises to apply IFRS, the provincial securities regulators with authority over the application of accounting standards gave Canadian companies cross-listed in the U.S. the option to choose IFRS or U.S. GAAP. The provincial securities regulators also permitted firms to petition for special permission to use U.S. GAAP without listing in the United States. The provincial securities regulators required companies to begin reporting under IFRS or U.S. GAAP for the first quarter of 2011 (e.g., Ontario Securities Commission 2011).

⁷ For a more thorough discussion of why Canada adopted IFRS, please see the AcSB's 2011 report, "Adoption of International Financial Reporting Standards: Background and Basis for Conclusions." See also Leuz and Wysocki. (2006).

⁸ Similar to cross-listed companies, private enterprises in Canada were required to choose between accounting standards. In 2009, the AcSB published a new set of accounting standards that were a more simplified version of Canadian GAAP tailored to the needs of smaller companies. For fiscal years beginning on or after January 1, 2011, private enterprises in Canada were required to adopt this new version of Canadian GAAP or IFRS.

Prior to Canada's adoption of IFRS, Canadian and U.S. regulators determined that Canadian GAAP and U.S. GAAP were allowable alternatives for cross-listed companies under the Multi-jurisdictional Disclosure System (MJDS).⁹ Canadian regulators accepted U.S. GAAP for domestic reporting. U.S. regulators accepted Canadian GAAP for FPIs, *without* reconciliation to U.S. GAAP. Canada was the first country for which the SEC accepted domestic GAAP reporting for FPIs. In November 2007, the U.S. SEC exempted all non-U.S.-based firms that report under IFRS from reconciliation. Therefore, as Canadian firms switched to IFRS, they maintained the exemption from reconciliation requirements.

The distinction between the SEC's requirements for FPIs and registrants is important in our sample selection and research design.¹⁰ FPIs are not required to report under U.S. GAAP. Some Canadian firms listed in the U.S. do not qualify to be FPIs, and must then follow the same higher reporting requirements as U.S. companies, including using U.S. GAAP, see Burnett et al. (2015). We exclude these firms from our analysis because they did not have a choice between standards.

4. Firms' accounting standard choice

Data

Our sample consists of Canadian firms in Compustat that were listed in the U.S. and required to choose IFRS or U.S. GAAP. The AcSB required Canadian companies with fiscal years beginning on or after January 1, 2011 to adopt IFRS and begin reporting under IFRS in the first

⁹ Canadian regulators also permitted these Canadian firms to report under U.S. GAAP.

¹⁰ The U.S. SEC defines a FPI as any foreign issuer that does *not* meet either of the following two conditions: (i) More than 50 percent of the outstanding voting securities of such issuers are directly or indirectly owned of record by residents of the U.S.; and (ii) any of the following: (A) The majority of the executive officers or directors are U.S. citizens or residents; (B) More than 50 percent of the assets of the issuer are located in the U.S.; or (C) The business of the issuer is administered principally in the U.S.

quarter of 2011.¹¹ Because of the MJDS, the provincial securities regulators allowed SEC registrants to choose between IFRS and U.S. GAAP, and similarly required them to begin reporting using one of these two accounting standards for the first quarter of 2011 (e.g., Ontario Securities Commission 2011). Beginning in 2006, after the AcSB's formal adoption of IFRS, we classify cross-listed firms' choices as IFRS and U.S. GAAP by hand-collecting data on their accounting standard choice. Cross-listed firms were required to seek special permission to adopt IFRS early, but were allowed to adopt U.S. GAAP at any time. Our sample contains eight firms that adopt U.S. GAAP prior to 2011 and five firms that adopt IFRS prior to 2011.¹² The remainder of firms in our sample adopted IFRS or U.S. GAAP for fiscal years beginning on or after January 1, 2011, which results in a range of adoption years from 2007 to 2012.¹³ We obtain stock prices and most financial data from Compustat, except that we hand-collect firms' foreign sales and assets from their filings on SEDAR and obtain U.S. institutional ownership data from 13F filings from Thomson-Reuters Institutional Holdings database. We winsorize all continuous variables at the 1st and 99th percentiles.¹⁴

Table 1 details our sample selection. We identified 245 Canadian firms in Compustat that were listed in the U.S. at least one year prior to their accounting standard choice. Panel A presents the accounting standards firms adopt conditional on their previous accounting standard. The first row indicates that 48 firms were listed in the U.S. and reporting with U.S. GAAP prior

¹¹ Due to delayed International Accounting Standards Board (IASB)'s projects involving investment companies, insurance contracts, and accounting for rate-regulated entities, the provincial securities regulators initially allowed investment companies, insurance companies, and rate-regulated entities to delay adoption of IFRS until fiscal years beginning on or after January 1, 2013 (2012 for rate-regulated entities).

¹² The specific year of adoption for early U.S. GAAP adopters are: 2 in 2007, 1 in 2008, 2 in 2009, and 3 in 2010. The specific year of adoption for early IFRS adopters are: 3 in 2009 and 2 in 2010. Our results are qualitatively similar if we exclude these firms.

¹³ 2012 is the fiscal year of the adoption for firms with fiscal years beginning on or after June 1, 2011.

¹⁴ In our choice analysis, winsorization at the extreme percentiles may not adequately address outliers with only 170 observations. As a sensitivity test, we follow Barth et al. (2008) and winsorized all continuous variables at the 5 percent level and find qualitatively similar results.

to 2006, the year the AcSB formally adopted IFRS.¹⁵ Many of these firms had already lost their FPI status and were required by the SEC to report using U.S. GAAP, which is the primary reason why all but three firms continue to use U.S. GAAP. The second row represents firms listed in the U.S., but initially reporting under Canadian GAAP. These firms are arguably the most interesting because they were permitted to choose between IFRS or U.S. GAAP. Of the 197 firms in this category, five firms lost their FPI status and were required by the SEC to begin reporting with U.S. GAAP. The remaining 192 firms had a *choice* between IFRS and U.S. GAAP – 29 (15%) chose U.S. GAAP, while 163 (85%) chose IFRS.

While the majority of Canadian firms chose IFRS, Table 1 documents an interesting consequence of Canada's adoption of IFRS. Before Canada adopted IFRS, 48 (20%) out of 245 cross-listed companies previously reported under U.S. GAAP. After Canada adopted IFRS, the number of cross-listed firms reporting under U.S. GAAP increased to 79 (32%).

Panel B identifies the firms used in our analysis of firms' accounting standard choice. We eliminate: 10 firms that did not provide a reconciliation to U.S. GAAP as this is required data to calculate a variable in our analysis; nine firms that did not disclose foreign assets (or revenues), which is also used to calculate a variable used in our analysis; five firms that were required by the SEC to choose U.S. GAAP because they lost their FPI status and therefore did not have a choice of standard; and three rate-regulated entities that chose U.S. GAAP, as discussed in footnote 11 above. Our final sample consists of 170 firms in the choice analysis.

Of the 170 firms used in the choice analysis, we identify the firms with available data to calculate our earnings quality measures as shown in Panel C of Table 1. Our earnings quality analysis requires at least two years of data after IFRS adoption, which 29 firms did not have in Compustat.

¹⁵ If a firm's inception is in 2006 or later, we label the firm based on its accounting standard used in its first year.

Determinants of firms' accounting standard choice

We examine the determinants of U.S.-listed Canadian firms' choice between IFRS and U.S. GAAP. We focus on U.S.-listed Canadian firms because they were given a choice between IFRS and U.S. GAAP, without having to incur additional costs to obtain special permission to use U.S. GAAP or register with the SEC. We exclude those Canadian firms that originally reported under U.S. GAAP because the SEC required many of these to report under U.S. GAAP as they did not qualify as FPIs. This results in a sample of U.S.-listed firms that originally reported under Canadian GAAP and then had a choice between IFRS and U.S. GAAP.

We are not the first to examine firms' choices between accounting standards. Leuz and Verrecchia (2000) study the determinants of German firms' choices between German GAAP and international reporting standards (U.S. GAAP and IAS). They find the choice of an international reporting standard is positively associated with firms' performance, measured as return on assets (ROA), and financing needs, measured as capital intensity and a listing in the U.S. or UK. Leuz (2003) studies firms trading in Germany's New Market during the years 1999 and 2000 where German firms chose between U.S. GAAP and IAS, the predecessor to IFRS. His primary motivation was to provide evidence about the quality of IAS relative to U.S. GAAP. Assuming U.S. GAAP is associated with higher quality corporate disclosure, he hypothesizes that the choice of U.S. GAAP is a function of firm size (+), financing needs (+), and firm performance (+/-). He finds that the choice of U.S. GAAP is significantly and positively associated with financing needs, which he notes, is consistent with a perception at that time that U.S. GAAP was preferable for firms with large future financing needs because it allowed them better access to the U.S. capital markets. Leuz (2003) does not find that the choice of U.S. GAAP is significantly associated with firm size or firm performance.

We believe (re)examining the choice between IFRS and U.S. GAAP is important. The SEC is contemplating whether to require U.S. public companies to (a) retain U.S. GAAP, (b) adopt IFRS, or (c) permit firms to choose between the two standards (see Schnurr 2014). As the most similar capital market to the U.S., Canada is the nearest setting, both geographically and in terms of accounting standards and financial reporting incentives, to best possibly understand what U.S. firms might choose if permitted a choice between IFRS and U.S. GAAP. Finally, the study of Canadian firms listed in the U.S. enables more robust analysis than a study of accounting choice by non-U.S. listed companies. The financial reporting incentives of firms are similar to U.S. firms; they are all listed in the U.S. and provided reconciliations from Canadian GAAP to U.S. GAAP in their SEC filings prior to adopting either IFRS or U.S. GAAP.

We model the choice between adopting IFRS or U.S. GAAP as a function of the firm-specific costs and benefits of adoption. Specifically, we use the following probit regression to examine this choice:

$$\begin{aligned}
 Prob(IFRS_i=1) = F(\beta_0 + \beta_1 \text{CAN-US GAAP Distance}_{t-1} + \beta_2 \text{R\&D}_{t-2} + \beta_3 \text{Exploration}_{t-2} \\
 + \beta_4 \text{IFRS Predominant}_{t-2} + \beta_5 \text{IFRS vs. US Operations}_{t-2} \\
 + \beta_6 \text{US Ownership}_{t-2} + \beta_7 \text{Leverage}_{t-2} + \beta_8 \text{Size}_{t-2} \\
 + \beta_9 \text{ROA}_{t-2} + \beta_{10} \text{Code}_{t-2} + \varepsilon_i)
 \end{aligned} \tag{1}$$

We include industry fixed effects and use robust standard errors. We calculate the variables in our model two years prior to firms' adoption of IFRS or U.S. GAAP because the decision to adopt IFRS requires a two-year transition period, and this is likely when most firms made the choice between the two standards.

As cross-listed firms weighed the costs and benefits of choosing between the accounting standards, they commonly disclosed three primary determinants informing their decisions: (1)

the impact on reported results, (2) comparability with industry peers, and (3) the needs of key stakeholder groups (e.g., shareholders, lenders, etc.).¹⁶ *CAN-US GAAP Distance*, *R&D*, and *Exploration* proxy for the impact on reported results. *IFRS Predominant* and *IFRS vs. US Operations* focus on comparability with peer firms. *US Ownership* considers stakeholders' needs. Additionally, we include proxies for the relative costs of IFRS adoption versus US GAAP and control for firm size, performance, and legal origin.

The financial statement impact of U.S. GAAP relative to IFRS on reported results is likely a primary determinant of firms' choice between the two standards. Specifically, firms are more likely to choose IFRS than U.S. GAAP when IFRS portrays the firm's performance and financial position in a more favorable light than U.S. GAAP, and vice versa. Ideally, we could observe IFRS and U.S. GAAP reported numbers for the same firm in the same year prior to their choice of accounting standard. Unfortunately, we are unable to observe IFRS and U.S. GAAP reported numbers for firms that choose U.S. GAAP.¹⁷ We are, however, able to observe Canadian GAAP and U.S. GAAP reporting in the year prior to their choice of accounting standard because the firms in our sample provided reconciliations to U.S. GAAP. The difference between stockholders' equity under Canadian GAAP and U.S. GAAP is similar in nature to a LIFO reserve, where adopting U.S. GAAP results in the cumulative difference between the standards being reflected in the financial statements. We posit that when stockholders' equity (i.e., net assets) is higher under U.S. GAAP than Canadian GAAP firms are more likely to choose U.S. GAAP. In the spirit of the C-score promoted by Penman and Zhang (2002), we

¹⁶ As an example, Magna International Inc. stated that in making its decision between the two standards, the board of directors "considered many factors, including, but not limited to (i) the changes in accounting policies that would be required and the resulting impact on our reported results and key performance indicators, (ii) the reporting standards expected to be used by many of our industry comparables, and (iii) the financial reporting needs of our market participants, including shareholders, lenders, rating agencies and market analysts."

¹⁷ For firms that chose IFRS, IFRS adoption requires retroactive disclosure of the prior year under IFRS making it possible to observe firms' reporting under Canadian GAAP and IFRS. Thus, in the year prior to IFRS adoption, for firms that adopt IFRS, we can observe their reporting under Canadian GAAP, IFRS, and US GAAP.

examine the comparability of stockholders' equity under Canadian GAAP and U.S. GAAP as a cumulative summary measure of which standard portrays the net assets of a firm in a more positive light.¹⁸ We calculate the variable *CAN-US GAAP Distance* as Canadian GAAP stockholders' equity less U.S. GAAP stockholders' equity scaled by the absolute value of Canadian GAAP stockholders' equity (formal definitions for all variables are provided in the Appendix that detail the calculations and data sources).¹⁹ We expect that *CAN-US GAAP Distance* will be positively associated with choosing IFRS.

We further consider the impact of the standard choice on reported results by focusing on a key accounting difference between IFRS and U.S. GAAP with respect to capitalization of expenses. Under U.S. GAAP, R&D expenditures are generally expensed as incurred, with capitalization of software development being a notable exception. In contrast, IFRS requires capitalization of certain R&D expenses. As a consequence, we predict that firms with R&D expense are more likely to adopt IFRS. *R&D* equals one if the firm has R&D expense, and zero otherwise. Further, in the mineral resource industries, IFRS permits, but does not require, capitalization of exploration and evaluation costs earlier than U.S. GAAP (Gordon et al. 2015).²⁰ Similar to our prediction for R&D, we expect that firms with exploration expense are more likely to adopt IFRS. *Exploration* equals one if the firm has exploration expense, and zero otherwise.

¹⁸ Alternatively, we measure the difference between the net income reported under Canadian GAAP and U.S. GAAP and find qualitatively similar results.

¹⁹ Ten firms in this sample have negative stockholders' equity. We obtain qualitatively similar results if we exclude these firms from our analysis.

²⁰ IFRS also permits earlier capitalization of exploration expenses than Canadian GAAP. For example, Kinross Gold Inc. disclosed, "On transition to IFRS, in the opening balance sheet, the change in accounting policy [with respect to capitalization of exploration and development expenses] resulted in an increase of \$74.4 million in property, plant and equipment and \$9.6 million in deferred tax liabilities and a decrease of \$63.1 million in the accumulated deficit...Of the amount capitalized to property, plant and equipment, \$25.8 million related to capitalized E&E costs and the balance related to capitalized development costs."

Firms are more likely to choose IFRS or U.S. GAAP when that standard provides for enhanced comparability with a firms' peer group.²¹ We include two variables to proxy for comparability with industry peers. Joos and Leung (2013) argue that the convergence benefits of adopting IFRS are highest for firms in industries where IFRS is the predominant accounting standard among the leading firms in the world. Following Joos and Leung (2013), we identify the 20 largest non-Canadian firms by market value in Global Compustat for each two-digit SIC code in the fiscal year 2009. Next, for the 20 largest firms globally within each industry, we identify the statistical mode of the accounting standards and set *IFRS Predominant* equal to one if IFRS is the most commonly used standard among these 20 firms, and zero otherwise. As an example, if eight of the top 20 firms use IFRS, seven use U.S. GAAP, and five use their domestic GAAP (e.g., Brazil, Russia, etc.), then *IFRS Predominant* is set equal to one for that two-digit SIC code.

We base our second measure of comparability on the foreign markets in which Canadian firms participate. Canadian firms with significant operations in the U.S. (outside the U.S.) are likely to have peer firms that use U.S. GAAP (IFRS). We use *IFRS vs. US Operations* to measure whether more of a firm's foreign operations are in or outside the U.S. *IFRS vs. US Operations* is calculated as the proportion of a firm's assets located outside of Canada and the U.S. less the proportion of a firm's assets located in the U.S.²² We expect both *IFRS Predominant* and *IFRS vs. US Operations* will be positively associated with choosing IFRS, consistent with a higher likelihood of a firm's peers using IFRS.

²¹ For example, Canadian Pacific Railway Limited stated, "CP commenced reporting its financial results using U.S. GAAP, which is consistent with the current reporting of all other North American Class I railways."

²² Alternatively, if we measure firms' operations using foreign and U.S. revenues, we obtain qualitatively similar results.

We consider the role of stakeholders' needs in the choice between the two standards by focusing on shareholders. Chi (2009) finds that processing costs are higher when investors must interpret financial statements reported under multiple accounting standards. *Ceteris paribus*, U.S. shareholders are likely to demand reporting under U.S. GAAP to minimize processing costs of financial information for the companies they own. We proxy for this using *US Ownership*, which is the percentage of common shares held by U.S. institutional investors. We expect that *US Ownership* will be negatively related to choosing IFRS.

Since changing accounting standards adopting likely entails renegotiation of contracts, where the contractual terms are based on accounting numbers (unless the covenants are based on adjusted GAAP), we consider the firm-specific costs involved with renegotiating debt covenants. For Canadian firms, renegotiation costs are likely lower when adopting U.S. GAAP than IFRS because each of these firms was already providing reconciliation from Canadian GAAP to U.S. GAAP in their U.S. filings.²³ *Leverage*, long-term debt divided by total assets, captures the costs involved in renegotiating debt covenants. IFRS adoption may move firms closer or farther from their debt covenants depending on the effect of IFRS adoption. For example, IFRS adoption permits firms to revalue their property, plant and equipment (PP&E) to fair market value. If revaluation results in higher PP&E values then IFRS adoption may reduce a firm's leverage ratio and therefore reduce debt-covenant renegotiation costs. Therefore, we do not have a prediction on the direction of the relationship between *Leverage* and IFRS adoption.

Assuming fixed cost components of IFRS adoption, adopting IFRS should be less expensive for larger firms. Accordingly, we control for *Size*, the log of total assets. We also

²³ Bandyopadhyay et al. (1994) find that earnings scaled by market capitalization are 2% lower under U.S. GAAP than Canadian GAAP. Since the time of Bandyopadhyay et al. (1994)'s study, U.S. GAAP and Canadian GAAP have become even more similar. From 1995 to 2004, the AcSB focused on harmonizing Canadian GAAP with U.S. GAAP by adopting standards that reduced differences between the two accounting standards (Discussion Paper of Accounting Standards in Canada: Future Directions June 24, 2004).

control for a firm's operating performance which may affect a firm's ability to fund IFRS adoption. Specifically, we include *ROA*, net income scaled by total assets, as our measure of operating performance. Since both *Size* and *ROA* may proxy for other constructs (including information environment, level of enforcement, and political costs), we do not make directional predictions for these two variables.

Finally, cross-country studies examining earnings quality and legal origin generally find that earnings quality is higher in common law countries (e.g., Ball et al. 2000) than in civil law countries. Cascino and Gassen (2015) document intra-country variation in the consequences of IFRS adoption in Germany and Italy. While Canada is predominantly a common law country, the province of Quebec has civil law legal origin with political and economic ties may be closer to France for Quebec relative to other provinces, see Filip et al. (2015) on the link to earnings quality within Canada. To control for variation in legal origin within Canada, we use an indicator variable, *Code*, equal to 1 if a firm is domiciled in Quebec, and 0 otherwise. A positive coefficient on *Code* implies that Quebec based companies are more likely to adopt IFRS. Thus, we expect a positive coefficient for *Code*.

Empirical results for determinants of firms' accounting standard choice

Table 2 presents descriptive statistics for the 170 U.S.-listed Canadian firms reporting under Canadian GAAP with a choice between IFRS and U.S. GAAP and with necessary financial information (see Table 1, Panel B for details of the sample formation). The difference in *CAN-US GAAP Distance* is consistent with differences in reported results playing an important role in choosing between IFRS and U.S. GAAP. The mean and median of *CAN-US GAAP Distance* are statistically significantly larger for firms that choose IFRS based on a t-test of difference in means and the non-parametric Wilcoxon signed-rank test, respectively. The

mean of -0.12 for firms that choose U.S. GAAP indicates that on average stockholders' equity of firms that choose U.S. GAAP is larger under U.S. GAAP than Canadian GAAP. The positive mean and median indicate that the opposite is true for firms that adopt IFRS. This is consistent with firms choosing the standard which results in the highest reported equity. On average, 35% of firms that adopt U.S. GAAP have R&D expense compared to 16% of firms that adopt IFRS. The t-test and non-parametric Wilcoxon signed-rank test both indicate that this difference is statistically significant. One issue with this univariate analysis of R&D is that a high proportion of firms that adopt IFRS are in the mining industry and do not engage in R&D activities. Thus, multivariate testing where we control for industry is necessary to make valid inferences. Exploration measures the analog of R&D in the mineral resource industries. Twenty-nine percent of firms adopting IFRS report exploration expense compared to just four percent of firms adopting U.S. GAAP, with the difference being statistically significant at the five percent level. This is consistent with firms in the mineral resource industry reporting exploration expense preferring the earlier capitalization of exploration costs permitted by IFRS compared to U.S. GAAP.

Comparability with global industry peers appears to be an important determinant of choosing an accounting standard. Ninety percent of firms that adopt IFRS are in two-digit SIC industry group where IFRS is the predominant standard compared to only 57% of firms that choose U.S. GAAP; the difference is statistically significant. Consistent with *IFRS Predominant*, the differences in *IFRS vs. US Operations* suggest that comparability with peer firms plays an important role in firms' decisions between the two standards. The mean (median) of -0.25 (-0.15) for *IFRS vs. US Operations* for firms that choose U.S. GAAP indicates that on average they have more operations in the U.S., while the mean (median) of 0.16 (0.00) of *IFRS*

vs. *US Operations* for firms that choose IFRS indicates that firms that choose IFRS have more operations in IFRS-based countries.

Neither the mean nor the median of *US Ownership* are statistically significantly different, contrary to our expectation. However, this is likely due to measurement error in the proxy since institutional investors tend to invest in large companies. Multivariate testing that controls for size is necessary to control for this weakness in this variable. The descriptive statistics indicate that firms choosing U.S. GAAP are not statistically significantly different from firms that choose IFRS in terms of *Leverage*, *Size*, or *ROA*.

Panel B of Table 2 documents that 67% of firms that chose IFRS are in the mining industry, in contrast, to 30% of firms that chose U.S. GAAP. Our *Exploration* variable examines whether accounting method differences between IFRS and U.S. GAAP that might motivate mining firms to choose IFRS.

Table 3 reports the pairwise correlations. The Pearson and Spearman correlations indicate that adopting IFRS is positively and statistically significantly correlated with *CAN-US GAAP Distance* and *Exploration*, consistent with an accounting standard's impact on reported results affecting which standard firms choose. *IFRS Predominant* and *IFRS vs. US Operations* are positively and statistically significantly correlated with adopting IFRS, suggesting that the impact of reported results and comparability with peer firms are important determinants of firms' choice between the two standards.²⁴ The high and statistically significant Pearson (Spearman) correlation of 0.50 (0.57) between *US Ownership* and *Size* highlights the measurement error in *US Ownership* caused by institutional investors preference for investing in large stocks and confirms the need to control for size when using our proxy.

²⁴ *IFRS Predominant* and *IFRS vs. US Operations* both proxy for the same construct and have a relatively low, but statistically significant correlation. If we include only *IFRS Predominant* or only *IFRS vs. US Operations*, our results presented in Table 4 are qualitatively similar.

Table 4 reports coefficients, z-statistics, and marginal effects for the probit regression analysis of firms' standard choice. We calculate the marginal effect of each independent variable as $\pi(x) = \Phi(x'\beta)$, where Φ is the cumulative distribution function of the standard normal distribution and x' and β represent the vector of independent variables and corresponding coefficient estimates from equation (1). We use the values zero and one for indicator variables and the first and third quartiles for continuous independent variables, with the remaining independent variables set equal to their mean values. We then compute the difference in $\pi(x)$ at these two values of each independent variable, x .

The effect of the standard choice on reported results is a significant determinant in firms' decision between standards. The coefficient on *CAN-US GAAP Distance* is 0.42 and statistically significant at the 10 percent level (z-statistic of 1.59). The marginal effect indicates that as Canadian GAAP portrays the net assets of the firm in a more favorable light than US GAAP, firms are 1.1 percent more likely to adopt IFRS when moving from the first quartile to the third quartile *CAN-US GAAP Distance*.²⁵ *R&D* is positive but not statistically significant. Thus, we are unable to document that firms with R&D activities prefer the capitalization approach under IFRS to U.S. GAAP, or vice versa.²⁶ Our failure to reject the null may also stem from measurement error in the recording of R&D documented in recent work by Koh and Reeb

²⁵ We acknowledge that Canadian GAAP net assets being higher than those under U.S. GAAP does not necessarily mean that IFRS will result in higher reported net assets than US GAAP. For the firms that adopt IFRS, we are able to provide evidence consistent with our hypothesis because we have these firms reported stockholders' equity under IFRS and U.S. GAAP for the year prior to IFRS adoption. Sixty-two percent of the time IFRS is higher than U.S. GAAP and the mean and median stockholders' equity are statistically significantly higher under IFRS than U.S. GAAP.

²⁶ A trade off of using a dummy variable for R&D is that it eliminates information about how important R&D activities are to a firm. The most common alternative approach is to scale R&D expense by sales. We do not find a relationship between IFRS adoption and R&D expense scaled by sales; however, we lose 50 firms because they do not have sales, many of which are early stage companies where R&D activities are very important to the firm. Alternatively, when we scaled R&D expense by total assets, we do find a positive and statistically significant association between IFRS adoption and R&D. Thus, the inferences regarding the relationship between R&D activities and IFRS adoption are sensitive to how we measure R&D activities for a firm.

(2015). The coefficient on *Exploration* is 0.67 and statistically significant (z-statistic of 1.34).²⁷ This suggests firms reporting exploration expense prefer the capitalization approach under IFRS to U.S. GAAP as they are 3.2% more likely to choose IFRS than U.S. GAAP. Overall, these results are consistent with firms' choice of standard being affected by the differences in permitted accounting methods between the standards.

Table 4 indicates that comparability with peer firms is an important determinant of accounting standard choice. The coefficient on *IFRS Predominant* of 1.18 is positive and statistically significant (z-statistic of 2.38). The marginal effect indicates that firms are 16.7 percent more likely to adopt IFRS if they are in an industry where IFRS is the most common standard among the top 20 firms in a two-digit SIC industry group. The location of firm's foreign operations is also an important determinant of firms' choice in accounting standard as indicated by the statistically significant coefficient of 1.04 (z-statistic of 2.90) on *IFRS vs. US Operations*. Firms with operations in a foreign jurisdiction are likely competing with peer firms in those locations; the marginal effect of 4.1 percent suggests comparability with peer firms in those jurisdictions is important.

Firms with higher U.S. investor ownership are more likely to choose U.S. GAAP than IFRS as evidenced by the statistically significant coefficient of -1.80 (z-statistic of -1.49) on *US Ownership* where the marginal effect is -2.4 percent. These results highlight the importance of controlling for size when using this proxy.

The result for *Leverage* provides evidence about the role of costs in firms' decisions between IFRS and U.S. GAAP. The coefficient on *Leverage* is not statistically significant. This may be because debt renegotiation costs were not material, the adoption of IFRS had differing

²⁷ We find similar results if we use a continuous variable where exploration expense is scaled by total assets.

effects for firms, moving some firms closer and some firms farther from their covenants, or measurement error in *Leverage* as a proxy for nearness to financial debt covenants.

Size is significantly and positively correlated with the likelihood that firms adopt IFRS with a coefficient estimate of 0.23 (z-statistic of 2.88). The marginal effect is economically significant at 6.3 percent. This result is consistent with a fixed cost component to IFRS adoption that makes adoption relatively less costly for larger firms. Performance as measured by *ROA* is not statistically significantly associated with firms' standard choice. As expected, the coefficient on *Code* is positive, 5.47, and statistically significant (z-statistic of 11.42), likely due to the close political and economic ties between Quebec and France.

5. Earnings quality effects of IFRS adoption in Canada

We extend our analysis of the choice between IFRS and U.S. GAAP for Canadian firms cross-listed in the U.S. by examining whether the choice affects earnings quality. *A priori*, the effects of transitioning from Canadian GAAP to IFRS or U.S. GAAP on earnings quality are not clear. If enforcement and other financial reporting incentives are the primary determinants of earnings quality, then changing accounting standards may not affect earnings quality. If, however, the differences between the three standards are material and enforced, they may affect earnings quality. A useful feature of the Canadian setting is the high enforcement both before and after IFRS adoption (e.g., Jackson and Roe 2009). High enforcement implies that Canadian firms adopting IFRS and U.S. GAAP are required to faithfully implement each of these standards in contrast to many European countries where enforcement is relatively low. The lack of concurrent changes in enforcement around IFRS adoption permits a relatively clean setting to study the effects of changing accounting standards (e.g., Christensen et al. 2013).

Providing managers discretion to make estimates is an essential requirement for informative financial reporting. An inherent trade off of providing managers with more discretion is that they may use it either for signaling or to make opportunistic financial reporting decisions (Subramanyam 1996, Healy and Palepu 2001). Thus, the optimal amount of discretion accounting standards should provide is not clear. Canadian GAAP, IFRS, and U.S. GAAP provide different amounts of discretion over financial reporting to managers. Both Canadian GAAP and IFRS are perceived as more principles-based standards relative to U.S. GAAP, which is perceived as more rules-based. Among the more principles-based standards, Canadian GAAP provides more detailed guidance than IFRS. As a representative example, revenue recognition under Canadian GAAP and IFRS is similar at a conceptual level, but Canadian GAAP provides specific criteria related to the existence of an arrangement, the occurrence of delivery or rendering of services, and whether the seller's price to the buyer is fixed or determinable; Canadian GAAP also provides detailed guidance for multiple-element arrangements that is not present in IFRS (BDO 2008). The lack of detailed implementation guidance provides managers reporting under IFRS more discretion.²⁸ U.S. GAAP generally provides even more detailed guidance than Canadian GAAP. The SEC published a detailed comparison of U.S. GAAP and IFRS noting that the substantial differences between the two standards arise from U.S. GAAP providing more detailed industry- and transaction-specific guidance than IFRS (SEC 2011a). The net result of this difference is that IFRS provides managers more discretion than U.S. GAAP.

We focus on two earnings quality attributes that are likely to capture whether greater discretion under IFRS compared to Canadian GAAP and U.S. GAAP improves financial

²⁸ IFRS permits true and fair override when compliance would not give a true and fair view. Canadian GAAP and U.S. GAAP do not permit override.

reporting quality. Investors' valuation demand leads them to prefer current earnings that predict a firm's future earnings. Providing managers more discretion can have one of two effects: (1) enable them to report current earnings that better signal future earnings, or (2) reduce earnings predictive value because managers use their discretion opportunistically. Following prior literature (e.g., Subramanyam 1996), we examine whether discretion improves or decreases earnings quality by examining earnings persistence. Prior literature interprets income-increasing accruals as well as large unsigned accruals (i.e., the absolute value of accruals) as indicators of accrual aggressiveness (e.g., Ahmed et al. 2013, Becker et al. 1998). Consistent with this literature, we examine whether adoption of IFRS and U.S. GAAP is associated with an increase in managers' discretionary use of income-increasing accruals and with the magnitude of unsigned accruals.

The differences between Canadian GAAP, IFRS, and U.S. GAAP may also affect the earnings attribute timeliness of loss recognition. Basu (1997) argues that higher verification standards for gains than losses results in losses being incorporated into earnings on a timelier basis than gains. Kothari et al. (2010) argue that this attribute is desirable because managers have incentives that raise fundamental questions about the credibility of their performance reporting related to positive news. Differences between Canadian GAAP, IFRS, and U.S. GAAP relating to measurement of assets may result in reduced timeliness of loss recognition under IFRS. Specifically, both Canadian GAAP and IFRS require asset impairments to be recorded (IFRS generally results in more impairments because it does not use the recoverability test and applies the analysis to the individual asset level), but IFRS requires the reversal of impairment losses, except for goodwill, when a change in estimates has been used to determine the recoverable amount. In contrast, Canadian GAAP prohibits any reversal of impairment losses.

Further, IFRS permits revaluation of PP&E and intangibles to fair value when fair value can be measured reliably (and then firms must consistently update). The effect of these differences is that the verification standard for losses and gains is more symmetric under IFRS than under Canadian GAAP. Kothari et al. (2010) argue that such reversals are likely less credible because of managers' financial reporting incentives. Asset measurement under U.S. GAAP is generally similar to Canadian GAAP, except with respect to inventory write-downs. Canadian GAAP permits the reversal of inventory write-downs to net realizable value (as does IFRS), whereas, U.S. GAAP does not permit such reversals. Thus, under U.S. GAAP unrealized gains are reported on a less timely basis than either IFRS or Canadian GAAP. This may manifest itself in more asymmetric recognition of bad news relative to good news under U.S. GAAP and less asymmetric recognition of bad news relative to good news under IFRS. As such, we examine the impact of IFRS and U.S. GAAP adoption on the earnings attribute timeliness of loss recognition as measured by Basu (1997).

Data and research design

From the 170 U.S.-listed Canadian firms that were previously using Canadian GAAP and had a choice between IFRS and U.S. GAAP, we identify firms with sufficient data in Compustat to calculate our three measures of earnings quality. As Table 1, Panel C reports this yields a sample of 141 firms, 122 of which adopted IFRS and 19 that adopted U.S. GAAP. Consistent with Ahmed et al. (2013) we exclude the first year under IFRS or U.S. GAAP as including this year would contaminate our tests by mixing earnings reported under IFRS or U.S. GAAP with Canadian GAAP due to the lagged data requirement for certain attributes. We require firms to have at least one year of data before and one year after the year of IFRS or U.S. GAAP adoption

(which requires two years of data before and after the year of IFRS or U.S. GAAP adoption because of the use of lagged data). If a firm has two firm-year observations of data before IFRS or U.S. adoption and two year firm-year observations of data after, then we keep both years. If a firm has only one firm-year of data before or after its change in accounting standard, then we only keep one firm-year of data before and after the change in accounting standard. For our sample of 141 firms, this results in a total of 488 firm-year observations.

Table 5 documents the descriptive statistics for the variables used to estimate earnings quality for the firms that chose U.S. GAAP relative to those that chose IFRS. While most variables are not statistically significantly different between the two samples, there are exceptions. First, the mean and median current and lagged earnings per share are statistically significantly higher for firms that choose IFRS. Consistent with this, the mean and median of *EARN* are statistically significantly higher for firms that choose IFRS. Second, the mean and median *RET* are also statistically significantly higher for firms that choose IFRS. Third, the median cash flows are statistically significantly higher for firms that adopt IFRS. Finally, as expected, the mean and median *Mills* is statistically significantly lower for firms that adopt IFRS.

We study this sample of firms because they have a choice between IFRS and U.S. GAAP. The challenge of this choice is that since firms are not randomly assigned to an accounting standard, selection bias may affect inferences about earnings quality. To control for potential selection bias, we follow the procedure developed by Heckman (1979) that uses our analysis in Table 4 as a first-stage selection model and then incorporate the inverse Mills' ratio in our regressions of earnings quality.²⁹ We employ a pre-post research design that uses each firm as

²⁹ Lennox et al. (2012) note the challenge of using this procedure is identifying variables in the first stage that are exogenous to the outcome variable in the second stage. In our sensitivity analysis, we follow their suggestion and run our analysis without the inverse Mills' ratio. We find qualitatively similar results as those presented.

its own control and examines the difference-in-differences between firms that choose IFRS to firms that choose U.S. GAAP after controlling for self-selection.³⁰

We measure persistence as the slope coefficient in the regression of current earnings on lagged earnings as follows:

$$X_t = \phi_0 + \phi_1 X_{t-1} + \phi_2 Post_t + \phi_3 Post_t * X_{t-1} + \phi_4 IFRS_t + \phi_5 IFRS_t * Post_t + \phi_6 IFRS_t * X_{t-1} + \phi_7 IFRS_t * Post_t * X_{t-1} + \phi_8 Mills_t + \varepsilon_t \quad (2)$$

where X is the annual split-adjusted earnings per share (measured as a firm's net income before extraordinary items divided by the weighted average number of outstanding shares). Larger values of ϕ_1 indicate more permanent earnings while lower values of ϕ_1 indicate more transitory earnings. $Post$ is equal to one after a firm adopts IFRS or U.S. GAAP, and zero otherwise. $IFRS$ is equal to one if a firm adopts IFRS, and zero otherwise (i.e., a firm adopts U.S. GAAP). $Mills$ is the inverse Mills' ratio from the choice model in Table 4. ϕ_3 indicates whether earnings persistence changes after our sample firms adopt their new standard, and ϕ_7 measures if persistence changes more or less for firms that adopt IFRS relative to those who adopt U.S. GAAP. The differences between Canadian GAAP, IFRS, and U.S. GAAP do not lead to directional predictions as the changes in discretion may lead to more or less persistence earnings. We cluster standard errors by firm and industry (Gow et al. 2010).

Following Ahmed et al. (2013) we examine signed accruals, which assumes managers' preference is to increase earnings with income-increasing accruals. Prior literature documents many settings where managers use their discretion to decrease earnings with income-decreasing accruals (e.g., Healy 1985, Jones 1991, etc.). To capture this broader use of accruals to manage

³⁰ This approach may not adequately control for contemporaneous earnings quality effects that are unrelated to the adoption of IFRS or U.S. GAAP. In our sensitivity analysis, we perform an untabulated matched-pair research design where we match our sample firms to U.S. firms based on year and industry as well as size, growth opportunities, and return on assets. We find qualitatively similar results to those presented using U.S. firms as a benchmark. See the Sensitivity analyses section for details.

earnings, particularly since our theory about the differences of IFRS and U.S. GAAP for accruals does not predict a specific direction (income-increasing or income-decreasing), we examine the absolute (unsigned) value of accruals. Our regression model is as follows:

$$ACC_t \text{ or } |ACC_t| = \gamma_0 + \gamma_1 IFRS_t + \gamma_2 Post_t + \gamma_3 IFRS_t * Post_t + \gamma_4 \Delta Rev_t - \Delta Rec_t + \gamma_5 PPE_t + \gamma_6 BTM_t + \gamma_7 CF_t + \gamma_8 I/Assets_t + \gamma_9 Mills_t + \varepsilon_t \quad (3)$$

where ACC is net income less cash flows from operations scaled by average total assets and $|ACC|$ is the absolute value of ACC . γ_2 measures if accruals change after firms' adopt the new standard and γ_3 measures whether the change is different for firms that adopt IFRS relative to firms that adopt U.S. GAAP. As with persistence, the differences between Canadian GAAP, IFRS, and U.S. GAAP do not lead to directional predictions as the changes in discretion may lead to more or less aggressive accruals. Following the modified Jones model from Dechow et al. (1995), normal accruals are modeled as a function of the level of property, plant and equipment and the change in revenue less the change in receivables, which assumes that accruals arising from a change in credit policy reflect discretionary choices. $\Delta Rev - \Delta Rec$ is the change in revenue less the change in receivables scaled by average total assets. PPE is gross property, plant, and equipment scaled by average total assets. In addition to controlling for current growth, we follow Larcker and Richardson (2004) and control for expected future growth in firms' operations and the correlated investment in working capital using BTM , the ratio of the book value of equity to the market value of equity. Prior literature (e.g., Dechow et al. 1995) documents cash flows from operations are negatively correlated with accruals. As such we include CF , the cash flows from operations scaled by average total assets. $I/Assets$ is equal to 1 scaled by average total assets. We cluster standard errors by firm and industry (Gow et al. 2010).

To examine the timeliness of loss recognition, we use the following reverse regression of earnings on returns based on Basu (1997):

$$\begin{aligned}
EARN_t = & \alpha_0 + \alpha_1 RET_t + \alpha_2 NEG_t + \alpha_3 RET_t * NEG_t + \alpha_4 Post_t + \alpha_5 Post_t * RET_t \\
& + \alpha_6 Post_t * NEG_t + \alpha_7 Post_t * RET_t * NEG_t + \alpha_8 IFRS_t + \alpha_9 IFRS_t * RET_t \\
& + \alpha_{10} IFRS_t * NEG_t + \alpha_{11} IFRS_t * RET_t * NEG_t + \alpha_{12} IFRS_t * Post_t \\
& + \alpha_{13} IFRS_t * Post_t * RET_t + \alpha_{14} IFRS_t * Post_t * NEG_t \\
& + \alpha_{15} IFRS_t * Post_t * RET_t * NEG_t + \varepsilon_t
\end{aligned} \tag{4}$$

where *EARN* is income before extraordinary items scaled by the market value of equity at the beginning of the year. *RET* is the 12-month return ending three months after the fiscal year end. *NEG* is equal to 1 if *RET* is negative, and 0 otherwise. α_7 measures if the timeliness of loss recognition changes after firms' adopt the new standard and α_{15} measure whether the change in timeliness of loss recognition is different for firms that adopt IFRS relative to firms that adopt U.S. GAAP. The differences between IFRS and U.S. GAAP suggest that α_{15} is likely to be negative. We cluster standard errors by firm and industry (Gow et al. 2010).

Empirical results for IFRS and U.S. GAAP adoption on earnings quality

Table 6 presents the impact of adopting IFRS versus U.S. GAAP on earnings persistence. Our analysis employs a difference-in-difference research design comparing the earnings persistence of firms before and after adopting IFRS to firms adopting U.S. GAAP after controlling for selection bias using the inverse Mills' ratio. The coefficient on X_{t-1} of 0.69 is positive and significant (t-statistic of 11.82) as expected. The interaction of *Post* and X_{t-1} indicates that the earnings persistence is not statistically significantly different after firms change standards. We are unable to reject the null hypothesis that earnings quality is not different before and after IFRS or U.S. GAAP adoption. The interaction of *IFRS*, *Post*, and X_{t-1} indicates that

after adopting IFRS earnings persistence is not statistically significantly different than firms adopting U.S. GAAP. Thus, we are unable to reject the null hypothesis that earnings quality is not different after firms adopt IFRS relative to firms that adopt U.S. GAAP. The statistically significant coefficient of 1.37 (t-statistic of 1.88) on *Mills* indicates that selection bias is present.

Table 7 documents the impact of adopting IFRS versus U.S. GAAP on accruals. Our two variables of interest, *Post* and the interaction of *IFRS* and *Post*, are not statistically significantly different from zero for either signed accruals or the absolute value of accruals. Thus, we are unable to reject the null hypothesis that accruals are not different after adopting IFRS or U.S. GAAP, nor are we able to reject the null that accruals do not differ for firms that adopt IFRS compared to firms that adopt U.S. GAAP after adopting their respective new standard. *PPE* and *CF* are statistically significant (t-statistics of -1.89 and -2.23, respectively) with their predicted signs in the signed accruals model while $\Delta Rev - \Delta Rec$ and *CF* are statistically significant (t-statistics of 1.51 and -1.55, respectively) with their predicted signs in the absolute value of accruals model. The statistically insignificant coefficient on *Mills* fails to indicate the presence of selection bias.

Table 8 examines the impact of IFRS versus U.S. GAAP on the timeliness of loss recognition. As expected, the coefficient on the interaction of *RET* and *NEG* of 0.41 is positive and statistically significant (t-statistic of 1.41) indicating that earnings reflect bad news on a more timely basis than good news for these firms both before and after IFRS or U.S. GAAP adoption. The lack of a statistically significant coefficient on the interaction of *Post*, *RET*, and *NEG* means we are unable to reject the null hypothesis that timeliness of loss recognition did not change after firms adopted IFRS or U.S. GAAP. Further, the lack of a statistically significant coefficient on the interaction of *IFRS*, *Post*, *RET*, and *NEG* consistent with the null hypothesis

that the timeliness of loss recognition did not change more for firms after IFRS than those adopting U.S. GAAP. Thus, despite measurement differences under IFRS that likely render earnings reported using IFRS less asymmetric with respect to recognition of gains and losses than under Canadian GAAP or U.S. GAAP, we do not find evidence of less timely loss recognition for firms that adopt IFRS.

Overall, we are unable to document that earnings quality changed for firms adopting IFRS or U.S. GAAP or that adopting IFRS affected earnings quality more or less than firms adopting U.S. GAAP after controlling for selection bias. Our small sample of 19 firms adopting U.S. GAAP may result in insufficient statistical power to detect an effect. Our sample of firms that adopt IFRS at 122 is larger and results in a more powerful test of the effects of IFRS adoption on earnings quality than the sample firms that adopt U.S. GAAP. With this larger sample, we are unable to document changes in earnings quality. Overall, these results inform U.S. regulators considering whether to permit or require IFRS reporting by U.S. firms.

Sensitivity analyses

Approximately 35 percent of the firms in our sample are Development Stage Enterprises (DSEs)³¹ where earnings may be less informative than the earnings of non-DSE firms (Willenborg 1999). In untabulated analysis, we reran our tests using only non-DSE firms. Our results are consistent with those presented in Tables 6 – 8 where we are unable to document significant changes in earnings quality after changing accounting standards.

Lennox et al. (2012) discuss the difficulties of controlling for selection bias using two-stage approaches like the one we employ. The primary challenge is that identifying a variable

³¹ Accounting Standards Codification 915-10-05 states that a DSE “will typically be devoting most if its efforts to activities such as the following: a. Financial planning b. Raising capital c. Exploring for natural resources d. Developing natural resources e. Research and development f. Establishing sources of supply g. Acquiring property, plant, and equipment, or other operating assets, such as mineral rights h. Recruiting and training personnel i. Developing markets j. Starting up production.”

that has high explanatory power in the first stage, but is uncorrelated with the independent variable in the second stage. Technically, such a variable is not necessary since functional form assumptions can serve as a basis for identification, but this requires making an assumption about the functional form that may not be true. Lennox et al. (2012) document that including the inverse Mills' ratio can bias results more than using ordinary least squares regression. They suggest researchers examine results excluding the inverse Mills' ratio using ordinary least squares. In untabulated analysis, when we perform the analysis presented in Tables 6 – 8 excluding the inverse Mills' ratio, we find qualitatively similar results.

Our analyses in Tables 6, 7 and 8 employ a pre-post research design that uses firms as their own control after attempting to control for selection bias. A shortcoming of this approach is the lack of adequate controls for contemporaneous earnings quality effects that are unrelated to the adoption of IFRS or U.S. GAAP. Using a control sample that is subject to these contemporaneous earnings quality effects, but unaffected by the change in accounting standard can mitigate this concern. In untabulated analysis, we match our Canadian firms to U.S. firms following the matching procedure in Ahmed et al. (2013). Specifically, we match Canadian firms, without replacement, to U.S. firms in the year prior to the adoption of their new standard and in the same industry (using SIC Divisions A-J classifications) that minimizes a penalty score based on three observable dimensions that affect earnings quality: size, growth opportunities, and return on assets. The penalty score is calculated as:

$$((MV_C - MV_U)/MV_C)^2 + ((BTM_C - BTM_U)/BTM_C)^2 + ((ROA_C - ROA_U)/ROA_C)^2$$

where MV_C (MV_U) are market values of equity, BTM_C (BTM_U) are the book-to-market ratios, and ROA_C (ROA_U) are return on assets for Canadian (U.S.) firms. The procedure yields quality matches as the Canadian firms and their matched U.S. pairs are not statistically significantly

different along these dimensions. We retain the same overlapping annual periods for the matched-pairs of U.S. firms as used for the sample firms. Using this difference-in-difference-in-differences research design, we continue to find similar results to those presented in Tables 6 – 8 and are unable to reject the null hypothesis of no differences in earnings quality before and after IFRS or U.S. GAAP adoption.

6. Conclusion

Canadian firms cross-listed in the U.S. were permitted to report under either IFRS or U.S. GAAP. We document that more Canadian firms report using U.S. GAAP after 2011. We also document the determinants of Canadian firms' choice between accounting standards, IFRS or U.S. GAAP and find that cross-listed firms are more likely to choose IFRS if IFRS is the standard most commonly used by the leading global firms in their industry. In addition, we find that the firms more likely to choose IFRS are larger, of civil law legal origin, have fewer U.S. operations, report exploration expense, have fewer U.S. shareholders and report higher stockholders' equity under Canadian GAAP than under U.S. GAAP.

We also investigate effects of IFRS adoption on earnings quality measures that are predicted to arise from differences between the three accounting standards – Canadian GAAP, IFRS, and U.S. GAAP. Our earnings quality analyses fail to document changes around IFRS or U.S. GAAP adoption. Inability to reject the null hypothesis of no change in earnings quality around the time when firms became required to abandon Canadian GAAP clearly does not imply that the null hypothesis is true. Nevertheless, our findings of accounting standards choice appear consistent with the successful transition to co-existence of two accounting standards in the Canadian markets. The coexistence of two standards likely lowered transition costs. Given the

similarities between the Canadian and U.S. setting, and between IFRS and U.S. GAAP, these findings provide insights into the debate over whether the SEC should permit U.S. firms to choose between IFRS and U.S. GAAP.

Future research might investigate other economic consequences of IFRS adoption in Canada. For example, did non-cross-listed public Canadian firms delist to avoid IFRS adoption or did private Canadian firms favor takeovers (becoming acquired) over IPOs? Did accounting comparability decrease as a result of Canada permitting cross-listed firms to choose between IFRS and US GAAP? Answering these questions could further inform continuing deliberations in the U.S. whether the SEC should permit or require some or all U.S. firms choose between IFRS and U.S. GAAP.

Appendix

Variable definitions

I/Assets: 1 scaled by average total assets (Compustat: AT).

BTM: The book value of equity (Compustat: CEQ) divided by the market value of equity (Compustat: CSHO*PRCC_F).

CAN-US GAAP Distance: The percentage difference between the stockholders' equity under Canadian GAAP and U.S. GAAP calculated as Canadian GAAP stockholders' equity less U.S. GAAP stockholders' equity divided by the absolute value of Canadian GAAP stockholders' equity based on hand-collected data from SEDAR.

CF: The cash flows from operations (Compustat: OANCF) scaled by average total assets (Compustat: AT).

Code: An indicator variable equal to 1 if the firm is domiciled in Quebec (Compustat: STATE = "QC"), and 0 otherwise.

EARN: Income before extraordinary items (Compustat: IB) scaled by the market value of equity (Compustat: CSHO*PRCC_F) at the beginning of the year.

Exploration: An indicator variable equal to 1 if exploration expense (Compustat: MMXPX or OGXPX) is greater than 0, and 0 otherwise.

IFRS: An indicator variable equal to 1 if a firm adopts IFRS, and 0 otherwise (i.e., a firm adopts U.S. GAAP).

IFRS Predominant: An indicator variable equal to 1 if IFRS is the most commonly used accounting standard among the 20 largest global firms (based on market value (Compustat Global: CSHOC*PRCCD) in a given two-digit SIC code, and 0 otherwise.

IFRS vs. US Operations: The assets in IFRS countries less assets in the U.S. divided by total assets based on hand-collected data from SEDAR.

Leverage: Debt (Compustat: DLC+DLTT) divided by total assets (Computstat: AT).

MV: Market value of equity (Compustat: CSHO*PRCC_F).

Mills: The inverse Mills' ratio calculated from the probit regression firms' standard choice in Table 4.

NEG: An indicator variable equal to 1 if *RET* is negative, and 0 otherwise.

Post: An indicator variable equal to 1 after the adoption either IFRS or U.S. GAAP, and 0 otherwise.

PPE: Gross property, plant, and equipment (Compustat: PPEGT) scaled by average total assets (Compustat: AT).

R&D: An indicator variable equal to 1 if R&D expense (Compustat: XRD) is greater than 0, and 0 otherwise.

RET: The 12-month return ending three months after the fiscal year end using price data from Compustat.

$\Delta Rev - \Delta Rec$: The change in revenue (Compustat: SALE) less the change in receivables (Compustat: RECT) scaled by average total assets (Compustat: AT).

ROA: Net income (Compustat: NI) divided by total assets (Compustat: AT).

Size: The log of total assets (Compustat: AT).

US Ownership: The percentage of common stock held by U.S. institutional investors (based on 13F filings with the SEC).

X: The annual split-adjusted earnings per share before extraordinary items (Compustat: EPSPX divided by AJEX).

References

- Ahmed, A. S., M. Neel, and D. Wang. 2013. Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence. *Contemporary Accounting Research* 30 (4): 1344-1372.
- Armstrong, C. S., M. E. Barth, A. D. Jagolinzer, and E. J. Riedl. 2010. Market reaction to the adoption of IFRS in Europe. *The Accounting Review* 85: 31-61.
- Ashbaugh, H. 2001. Non-US firms' accounting standard choices. *Journal of Accounting and Public Policy* 20 (2): 129-153.
- Ball, R., S. P. Kothari, and A. Robin. 2000. The effect of institutional factors on properties of accounting earnings. *Journal of Accounting and Economics* 29 (2): 1-51.
- Bandyopadhyay, S. P., J. D. Hanna, and G. Richardson. 1994. Capital market effects of U.S.-Canada GAAP differences. *Journal of Accounting Research* 32 (2): 262-277.
- Barth, M. E., and D. Israeli. 2013. Disentangling mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics* 56 (2-3): 178-188.
- Barth, M. E., W. R. Landsman, and M. H. Lang. 2008. International accounting standards and accounting quality. *Journal of Accounting Research* 46 (3): 467-498.
- Bartov, E., S. R. Goldberg, and M. S. Kim. 2005. Comparative value relevance among German, U.S., and international accounting standards: A German stock market perspective. *Journal of Accounting, Auditing & Finance* 20 (2): 95-119.
- Basu, S. 1997. The conservatism principle and the asymmetric timeliness of earnings. *Journal of Accounting and Economics* 24 (1): 3-37.
- BDO. 2008. Canadian GAAP – IFRS comparison series. Issue 1 – revenue recognition. <http://www.bdo.ca/en/Library/Services/assurance-and-accounting/IFRSGAAP/IFRS-Canadian-GAAP-Differences-Series-Issue-01.pdf>
- Becker, C. L., M. L. DeFond, J. Jiambalvo, and K. R. Subramanyam. 1998. The effect of audit quality on earnings management. *Contemporary Accounting Research* 15 (1): 1-24.
- Burnett, B. M., B. N. Jorgensen, and T. J. Pollard. 2015. The economic consequences of losing or gaining Foreign Private Issuer status. Working paper, LSE.
- Cascino, S., and J. Gassen. 2015. What drives the comparability effect of mandatory IFRS adoption? *Review of Accounting Studies* 20 (1): 242-282.

- Chen, L. H., and I. K. Khurana. 2015. The impact of eliminating the Form 20-F reconciliation on shareholder wealth: Evidence from U.S. cross-listed firms. *The Accounting Review* 90 (1): 199-228.
- Chen, L. H., and H. Sami. 2008. Trading volume reaction to the earnings reconciliation from IAS to U. S. GAAP. *Contemporary Accounting Research* 25 (1): 15-53.
- Chen, L. H., and H. Sami. 2013. The impact of firm characteristics on trading volume reaction to the earnings reconciliation from IFRS to U.S. GAAP. *Contemporary Accounting Research* 30 (2): 697–718.
- Chi, S. 2009. Simultaneous presence of different domestic GAAPs and investors' limited attention bias in U.S. equity markets: Implications for convergence. Working paper, University of Arkansas.
- Christensen, H. B., L. Hail, and C. Leuz. 2011. Capital-market effects of securities regulation: Hysteresis, implementation, and enforcement. Working paper, University of Chicago.
- Christensen, H. B., L. Hail, and C. Leuz. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting Economics* 56 (2-3): 147-177.
- Cox, C. 2007. Speech by SEC Chairman: Chairman's Address to the SEC Roundtable on International Financial Reporting Standards. *U.S. Securities and Exchange Commission*, Washington, D.C. (March 6).
- Daniels, R. J. 1991. Should provinces compete? The case for a competitive corporate law market. *Revue de droit de McGill* 36: 130-190.
- Daske, H., L. Hail, C. Leuz, and R. S. Verdi. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research* 46 (5): 1085-1142.
- Dechow, P., R. Sloan, and A. Sweeney. 1995. Detecting earnings management. *The Accounting Review* 70: 193-225.
- Eng, L.L., L. Sun, and T. Vichitsarawong. 2014. Are International Financial Reporting Standards–based and U.S. GAAP–based accounting amounts comparable? Evidence from U.S. ADRs. *Journal of Accounting, Auditing & Finance* 29 (2): 163-187.
- Filip, A., R. Labelle, and S. Rousseau. 2015. Legal regime and corporate financial reporting quality. *Contemporary Accounting Research* (forthcoming).
- Gordon, E. A., B.N. Jorgensen, and C. L. Linthicum. 2013. Are IFRS-U.S. GAAP reconciliations informative? Working paper, Temple University.

- Gordon, E. A., J. S. Raedy, and A. J. Sannella. 2015. *Intermediate Accounting*. 1st Edition. Prentice Hall.
- Gow, I. D., G. Ormazabal, and D. J. Taylor. 2010. Correcting for cross-sectional and time-series dependence in accounting research. *The Accounting Review* 85 (2): 483-512.
- Hail, L., C. Leuz, and P. D. Wysocki. 2010a. Global accounting convergence and the potential adoption of IFRS by the U.S. (part I): Conceptual underpinnings and economic analysis. *Accounting Horizons* 24 (3): 355-394.
- Hail, L., C. Leuz, and P. D. Wysocki. 2010b. Global accounting convergence and the potential adoption of IFRS by the U.S. (part II): Political factors and future scenarios for U.S. accounting standards. *Accounting Horizons* 24 (4): 567-588.
- Healy, P. M. 1985. The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7 (1-3): 85-107.
- Healy, P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31 (1-3): 405-440.
- Heckman, J. J. 1979. Sample selection bias as a specification error. *Econometrica* 47 (1): 153-161.
- Henry, E., S. Lin, and Y. Yang. 2009. The European-U.S.: IFRS to U.S. GAAP Form 20-F reconciliations. *Accounting Horizons* 23: 121-150.
- Jackson, H. E., and M. J. Roe. 2009. Public and private enforcement of securities laws: Resource-based evidence. *Journal of Financial Economics* 93 (2): 207-238.
- Jiang, J. X., K. R. Petroni, and I. Y. Wang. 2010. Did eliminating the 20-F reconciliation between IFRS and U.S. GAAP matter? Working paper, Michigan State University.
- Jones, J. J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29 (2): 193-228.
- Joos, P. P. M., and P. Y. E. Leung. 2013. Investor perceptions of potential IFRS adoption in the United States. *The Accounting Review* 88 (2): 557-609.
- Kim, Y., H. Li, and S. Li. 2012. Does eliminating the Form 20-F reconciliation from IFRS to U.S. GAAP have capital market consequences? *Journal of Accounting and Economics* 53 (1-2): 249-270.
- Koh, P., and D. M. Reeb. 2015. Missing R&D. *Journal of Accounting and Economics*. 60 (1) 73-94.

- Kothari, S. P., K. Ramanna, and D. J. Skinner. 2010. Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics* 50 (2-3): 246-286.
- Larcker, D. F., S. A. Richardson. 2004. Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research* 42 (3): 625-658.
- Lennox, J. R., C. S. Francis, and Z. Wang. 2012. Selection models in accounting research. *The Accounting Review* 87 (2): 589-616.
- Leuz, C. 2003. IAS versus U.S. GAAP: Information asymmetry-based evidence from Germany's new market. *Journal of Accounting Research* 41 (3): 445-427.
- Leuz, C., and R. E. Verrecchia. 2000. The economic consequences of increased disclosure. *Journal of Accounting Research* 38 (1): 91-124.
- Leuz, C., and P. D. Wysocki. 2006. Capital-market effects of corporate disclosures and disclosure regulation. In: *Canada steps up: Evolving investor protection, research studies for the final report of the Task Force to Modernize Securities Legislation in Canada*, T. Allen et al. (eds.) Volume 2, 181-239.
- Ontario Securities Commission. 2011. *National Instrument 52-107. Acceptable Accounting Principles and Auditing Standards*. Ontario, Canada.
- Penman, S. H., and X.-J. Zhang. 2002. Accounting conservatism, the quality of earnings, and stock returns. *The Accounting Review* 77 (2): 237-264.
- Schnurr, J. 2014. Remarks before the 2014 AICPA National Conference on Current SEC and PCAOB Developments. Transcript available at website:
<http://www.sec.gov/News/Speech/Detail/Speech/1370543609306#.VPtIHOG2rb0>
- Securities and Exchange Commission. 2011a. Work plan for the consideration of incorporating international financial reporting standards into the financial reporting system for U.S. issuers: A comparison of U.S. GAAP and IFRS. November 16, 2011.
- Securities and Exchange Commission. 2011b. Roundtable on International Financial Reporting Standards. Transcript available at website:
<http://www.sec.gov/spotlight/ifrsroadmap/ifrsroundtable070711-bios>
- Subramanyam, K. R. 1996. The pricing of discretionary accruals. *Journal of Accounting and Economics* 22 (1-3): 249-281.
- Watts, R. L. 2003a. Conservatism in accounting part 1: Explanations and implications. *Accounting Horizons* 17 (3): 207-221.

Watts, R. L. 2003b. Conservatism in accounting part 2: Evidence and research opportunities. *Accounting Horizons* 17 (4): 287-301.

Webster, E., and D. B. Thornton. 2005. Earnings quality under rules-versus principles-based accounting standards: A test of the Skinner hypothesis. *Canadian Accounting Perspectives* 4 (2): 167-192.

Willenborg, M. 1999. Empirical analysis of the economic demand for auditing in the IPOs market. *Journal of Accounting Research* 37 (1): 225-238.

TABLE 1

Sample formation

Panel A: Sample and adoption of IFRS or U.S. GAAP conditional on previous accounting standard

Listed in U.S. one year prior to accounting standard choice?	Accounting standard prior to 2006*	Accounting standard adopted		
		IFRS	U.S. GAAP	Total
Yes	U.S. GAAP	3	45	48
	Canadian GAAP	163	34	197
	Total	166	79	245

Panel B: Sample used in standard choice analysis

Firms Listed in U.S. and Using Canadian GAAP	197
No disclosure of reconciliation to U.S. GAAP	(10)
Foreign assets not disclosed	(9)
Lost FPI Status and forced to use U.S. GAAP	(5)
Rate-regulated entities	(3)
Firms used in standard choice analysis	170

Panel C: Sample used in earnings quality analysis

Firms used in standard choice analysis	170
Firms without Compustat data to calculate measures of earnings quality	(29)
Firms used in earnings quality analysis	141

Notes:

The sample consists of Canadian firms in Compustat that were listed in the U.S. and required to adopt either IFRS or U.S. GAAP.

*If a firm's inception is in 2006 or later, the firm's first accounting standard is reported.

TABLE 2

Descriptive statistics for firms used in standard choice analysis

Panel A: Descriptive statistics				
Variable	U.S. GAAP (N=23)		IFRS (N=147)	
	Mean	Median	Mean	Median
<i>CAN-US GAAP Distance</i>	-0.12	0.00	0.27**	0.07***
<i>R&D</i>	0.35	0.00	0.16**	0.00**
<i>Exploration</i>	0.04	0.00	0.29**	0.00**
<i>IFRS Predominant</i>	0.57	1.00	0.90***	1.00***
<i>IFRS vs. US Operations</i>	-0.25	-0.15	0.16***	0.00***
<i>US Ownership</i>	0.14	0.01	0.12	0.06
<i>Leverage</i>	0.19	0.17	0.15	0.05
<i>Size</i>	4.98	4.79	5.63	5.32
<i>ROA</i>	-0.21	-0.03	-0.22	-0.04
<i>Code</i>	0.00	0.00	0.07	0.00

Panel B: Distribution of accounting standards by industry				
Industry (Two-Digit SIC Codes)	U.S. GAAP		IFRS	
	Frequency	Percentage	Frequency	Percentage
Mining (10-14)	7	30%	98	67%
Manufacturing (20-39)	9	39%	24	16%
Transportation and Utilities (40-49)	3	13%	4	3%
Services (70-89)	2	9%	7	5%
Other	2	9%	14	10%
Total	23	100%	147	100%

Notes:

The sample consists of 170 Canadian firms previously using Canadian GAAP and listed in the U.S. *CAN-US GAAP Distance* is the percentage difference between the stockholders' equity under Canadian GAAP and U.S. GAAP calculated as Canadian GAAP stockholders' equity less U.S. GAAP stockholders' equity scaled by the absolute value of Canadian GAAP stockholders' equity. *R&D* is equal to 1 if R&D Expense is greater than 0, and 0 otherwise. *Exploration* is equal to 1 if exploration expense is greater than 0, and 0 otherwise. *IFRS Predominant* is equal to 1 if IFRS is the most commonly used accounting standard among the 20 largest global firms (based on market value) in a given two-digit SIC code, and 0 otherwise. *IFRS vs. US Operations* indicates whether more of a firm's assets are located in IFRS countries or the U.S. and is calculated as assets in IFRS countries less assets in the U.S. scaled by total assets. *US Ownership* is the percentage of common stock held by U.S. institutional investors. *Leverage* is debt divided by total assets. *Size* is the log of total assets. *ROA* is net income divided by total assets. *Code* is equal to 1 if the firm is domiciled in Quebec, and 0 otherwise. "Other" consists of Agriculture (01-09), Finance (60-67), and Wholesale Trade (50-51). *, **, *** denote statistical significance at the 0.10, 0.05, and 0.01 levels (one-tailed when predicted direction), respectively, based on t-test for the difference in means and a nonparametric Wilcoxon signed-rank test for the difference in medians.

TABLE 3
Correlations

	CAN-US GAAP				IFRS	IFRS vs. US	US				
	IFRS	Distance	R&D	Exploration	Predominant	Operations	Ownership	Leverage	Size	ROA	Code
<i>IFRS</i>	1.00	0.22	-0.17	0.19	0.12	0.25	0.01	-0.10	0.07	0.01	0.10
<i>CAN-US GAAP Distance</i>	0.18	1.00	-0.14	-0.07	0.22	0.04	-0.19	-0.21	-0.14	-0.18	0.02
<i>R&D</i>	-0.17	-0.05	1.00	-0.24	-0.11	-0.02	-0.08	-0.14	-0.21	-0.15	0.27
<i>Exploration</i>	0.19	-0.07	-0.24	1.00	0.17	0.23	0.13	-0.11	-0.01	-0.02	-0.09
<i>IFRS Predominant</i>	0.12	0.14	-0.11	0.17	1.00	0.15	-0.18	-0.09	-0.29	-0.14	0.01
<i>IFRS vs. US Operations</i>	0.25	0.10	-0.05	0.21	0.14	1.00	0.12	0.00	-0.07	-0.09	-0.01
<i>US Ownership</i>	-0.04	-0.19	-0.06	0.07	-0.23	0.13	1.00	0.28	0.57	0.36	0.00
<i>Leverage</i>	-0.06	-0.10	0.03	-0.14	0.00	0.10	0.08	1.00	0.50	0.31	0.10
<i>Size</i>	0.07	-0.17	-0.21	-0.03	-0.35	-0.05	0.50	0.12	1.00	0.67	-0.02
<i>ROA</i>	0.00	-0.14	-0.19	0.07	-0.10	-0.04	0.12	-0.23	0.41	1.00	-0.02
<i>Code</i>	0.10	0.01	0.27	-0.09	0.01	-0.02	-0.04	0.09	-0.04	-0.12	1.00

Notes:

The table presents pairwise Pearson (Spearman) correlations below (above) the diagonal for the 170 Canadian firms used in the choice analysis that were previously using Canadian GAAP and listed in the U.S. Bold indicates correlations statistically significant at the 10 percent level or lower. *IFRS* is equal to 1 if a firm adopts IFRS, and 0 if a firm adopts U.S. GAAP. *CAN-US GAAP Distance* is the percentage difference between the stockholders' equity under Canadian GAAP and U.S. GAAP calculated as Canadian GAAP stockholders' equity less U.S. GAAP stockholders' equity scaled by the absolute value of Canadian GAAP stockholders' equity. *R&D* is equal to 1 if R&D Expense is greater than 0, and 0 otherwise. *Exploration* is equal to 1 if exploration expense is greater than 0, and 0 otherwise. *IFRS Predominant* is equal to 1 if IFRS is the most commonly used accounting standard among the 20 largest global firms (based on market value) in a given two-digit SIC code, and 0 otherwise. *IFRS vs. US Operations* indicates whether more of a firms' assets are located in IFRS countries or the U.S. and is calculated as assets in IFRS countries less assets in the U.S. scaled by total assets. *US Ownership* is the percentage of common stock held by U.S. institutional investors. *Leverage* is debt divided by total assets. *Size* is the log of total assets. *ROA* is net income divided by total assets. *Code* is equal to 1 if the firm is domiciled in Quebec, and 0 otherwise.

TABLE 4
 Probit regression analysis of standard choice

Variable	Expectation	Coefficient	z-statistic	Marginal Effect
Intercept		-0.66	-0.98	
<i>CAN-US GAAP Distance</i>	+	0.42	1.59*	1.1%
<i>R&D</i>	+	0.12	0.23	0.7%
<i>Exploration</i>	+	0.67	1.34*	3.2%
<i>IFRS Predominant</i>	+	1.18	2.38***	16.7%
<i>IFRS vs. US Operations</i>	+	1.04	2.90***	4.1%
<i>US Ownership</i>	-	-1.80	-1.49*	-2.4%
<i>Leverage</i>	+/-	-0.37	-0.78	-0.5%
<i>Size</i>	+/-	0.23	2.88***	6.3%
<i>ROA</i>	+/-	-0.14	-0.53	-0.2%
<i>Code</i>	+	5.47	11.42***	5.5%
Industry Fixed Effects		Yes		
No. of Observations		170		
McFadden R ²		37.3%		
Wald χ^2		430.02		

Notes:

The sample consists of 170 Canadian firms used in the choice analysis that were previously using Canadian GAAP and listed in the U.S. The dependent variable is *IFRS*, which is equal to 1 if a firm adopts IFRS, and 0 if a firm adopts U.S. GAAP. *CAN-US GAAP Distance* is the percentage difference between the stockholders' equity under Canadian GAAP and U.S. GAAP calculated as Canadian GAAP stockholders' equity less U.S. GAAP stockholders' equity scaled by the absolute value of Canadian GAAP stockholders' equity. *R&D* is equal to 1 if R&D Expense is greater than 0, and 0 otherwise. *Exploration* is equal to 1 if exploration expense is greater than 0, and 0 otherwise. *IFRS Predominant* is equal to 1 if IFRS is the most commonly used accounting standard among the 20 largest global firms (based on market value) in a given two-digit SIC code, and 0 otherwise. *IFRS vs. US Operations* indicates whether more of a firm's assets are located in IFRS countries or the U.S. and is calculated as assets in IFRS countries less assets in the U.S. scaled by total assets. *US Ownership* is the percentage of common stock held by U.S. institutional investors. *Leverage* is debt divided by total assets. *Size* is the log of total assets. *ROA* is net income divided by total assets. *Code* is equal to 1 if the firm is domiciled in Quebec, and 0 otherwise. We calculate the marginal effect of each independent variable as $\pi(x) = \Phi(x'\beta)$ using the values 0 and 1 for indicator variables and the first and third quartiles for continuous *X* variables, with the remaining *X* variables set equal to their mean values. We then compute the difference in $\pi(x)$ at these two values of each *X* variable. *, **, *** denote statistical significance at the 0.10, 0.05, and 0.01 levels (one-tailed when predicted direction), respectively, based on robust standard errors.

TABLE 5

Descriptive statistics for firms used in analysis of earnings quality

Variable	U.S. GAAP (N=19)		IFRS (N=122)	
	Mean	Median	Mean	Median
<i>X</i>	-0.44	-0.16	0.32***	-0.02***
<i>X</i> _{<i>t-1</i>}	-0.50	-0.17	0.41***	-0.01***
<i>ACC</i>	-0.09	-0.03	-0.09	-0.06
<i>ACC</i>	0.12	0.06	0.12	0.07
<i>EARN</i>	-0.21	-0.07	-0.07***	-0.02***
<i>RET</i>	0.00	-0.06	0.24**	0.04*
<i>NEG</i>	0.48	0.00	0.53	1.00
<i>ΔRev - ΔRec</i>	-0.01	0.00	0.01	0.00
<i>PPE</i>	0.71	0.69	0.71	0.79
<i>BTM</i>	0.75	0.54	0.71	0.54
<i>CF</i>	-0.08	0.01	-0.03	0.02**
<i>1/Assets</i>	0.02	0.00	0.13	0.00
<i>Mills</i>	0.51	0.51	0.32***	0.29***

Notes:

The sample consists of the 141 U.S.-listed Canadian firms that were previously using Canadian GAAP with the necessary data to calculate the earnings attributes. *X* is annual split-adjusted earnings per share (measured as net income before extraordinary items divided by the weighted average number of outstanding shares). *ACC* is net income less cash flows from operations scaled by average total assets. |*ACC*| is the absolute value of *ACC*. *EARN* is income before extraordinary items scaled by the market value of equity at the beginning of the year. *RET* is the 12-month return ending three months after the fiscal year end. *NEG* is equal to 1 if *RET* is negative, and 0 otherwise. *ΔRev - ΔRec* is the change in revenue less the change in receivables scaled by average total assets. *PPE* is gross property, plant, and equipment scaled by average total assets. *BTM* is the book value of equity scaled by the market value of equity. *CF* is the cash flows from operations scaled by average total assets. *1/Assets* is equal to 1 scaled by average total assets. *Mills* is the inverse Mills' ratio calculated from the probit regression firms' standard choice in Table 4. *, **, *** denote statistical significance at the 0.10, 0.05, and , 0.01 levels (one-tailed when predicted direction), respectively, based on t-test for the difference in means and a nonparametric Wilcoxon signed-rank test for the difference in medians.

TABLE 6

The impact of IFRS vs. U.S. GAAP adoption on earnings persistence

Variable	Predicted Sign	Coefficient	t-statistic
Intercept		-0.70	-1.83*
X_{t-1}	+	0.69	11.82***
<i>Post</i>	?	-0.33	-1.11
<i>Post</i> * X_{t-1}	?	-0.39	-1.43
<i>IFRS</i>	?	0.39	7.97***
<i>IFRS</i> * <i>Post</i>	?	0.12	0.35
<i>IFRS</i> * X_{t-1}	?	0.03	2.46**
<i>IFRS</i> * <i>Post</i> * X_{t-1}	?	0.38	1.39
<i>Mills</i>	?	1.37	1.88*
Number of firm-year observations		488	
Number of firms that adopt IFRS		122	
Number of firms that adopt U.S. GAAP		19	
R^2		55.3%	

Notes:

The table presents an analysis of how IFRS versus U.S. GAAP adoption affects the persistence of earnings for the 141 U.S.-listed Canadian firms that were previously using Canadian GAAP with the necessary data to calculate the earnings attributes. Of these 141 firms, 122 firms chose IFRS and 19 firms chose U.S. GAAP. The dependent variable X is annual split-adjusted earnings per share (measured as net income before extraordinary items divided by the weighted average number of outstanding shares). *Post* is equal to 1 after the adoption either IFRS or U.S. GAAP, and 0 otherwise. *IFRS* is equal to 1 if a firm adopts IFRS, and 0 otherwise (i.e., a firm adopts U.S. GAAP). *Mills* is the inverse Mills' ratio calculated from the probit regression firms' standard choice in Table 4. *, **, *** denote statistical significance at the 0.10, 0.05, and 0.01 levels (one-tailed when predicted direction), respectively, based on standard errors clustered by firm and industry.

TABLE 7

The impact of IFRS vs. U.S. GAAP adoption on accruals

Variable	Predicted Sign	<i>ACC</i>		<i> ACC </i>	
		Coefficient	t-statistic	Coefficient	t-statistic
Intercept		-0.08	-1.67**	0.13	2.12**
<i>IFRS</i>	?	0.03	1.95*	-0.03	-2.84**
<i>Post</i>	?	-0.03	-0.58	0.00	0.01
<i>IFRS*Post</i>	?	-0.01	-0.13	0.03	0.51
$\Delta Rev - \Delta Rec$	+	-0.05	-0.66	0.11	1.51*
<i>PPE</i>	-	-0.03	-1.89**	0.02	1.14
<i>BTM</i>	+	0.00	-0.24	0.00	0.05
<i>CF</i>	-	-0.07	-2.23**	-0.09	-1.55*
<i>1/Assets</i>	?	-0.04	-7.39***	0.04	3.83***
<i>Mills</i>	?	0.04	0.39	-0.06	-0.58
Number of firm-year observations		488		488	
Number of firms that adopt IFRS		122		122	
Number of firms that adopt U.S. GAAP		19		19	
R^2		5.4%		7.8%	

Notes:

The tables present an analysis of how IFRS versus U.S. GAAP adoption affects accruals for the 141 U.S.-listed Canadian firms that were previously using Canadian GAAP with the necessary data to calculate the earnings attributes. Of these 141 firms, 122 firms chose IFRS and 19 firms chose U.S. GAAP. The dependent variable *ACC* is net income less cash flows from operations scaled by average total assets. *|ACC|* is the absolute value of *ACC*. *IFRS* is equal to 1 if a firm adopts IFRS, and 0 otherwise (i.e., a firm adopts U.S. GAAP). *Post* is equal to 1 after the adoption either IFRS or U.S. GAAP, and 0 otherwise. $\Delta Rev - \Delta Rec$ is the change in revenue less the change in receivables scaled by average total assets. *PPE* is gross property, plant, and equipment scaled by average total assets. *BTM* is the book value of equity scaled by the market value of equity. *CF* is the cash flows from operations scaled by average total assets. *1/Assets* is equal to 1 scaled by average total assets. *Mills* is the inverse Mills' ratio calculated from the probit regression firms' standard choice in Table 4. *, **, *** denote statistical significance at the 0.10, 0.05, and 0.01 levels (one-tailed when predicted direction), respectively, based on standard errors clustered by firm and industry.

TABLE 8

The impact of IFRS vs. U.S. GAAP adoption on timeliness of loss recognition

Variable	Predicted Sign	Coefficient	t-statistic
Intercept		-0.21	-1.06
<i>RET</i>	?	-0.08	-2.83***
<i>NEG</i>	?	0.08	6.28***
<i>RET*NEG</i>	+	0.41	1.41*
<i>Post</i>	?	0.02	0.20
<i>Post*RET</i>	?	0.61	4.16
<i>Post*NEG</i>	?	-0.13	-1.65
<i>Post*RET*NEG</i>	?	-0.73	-1.12
<i>IFRS</i>	?	0.14	1.06
<i>IFRS*RET</i>	?	0.24	3.27***
<i>IFRS*NEG</i>	?	-0.08	-6.11***
<i>IFRS*RET*NEG</i>	?	-0.25	-1.82*
<i>IFRS*Post</i>	?	0.07	0.81
<i>IFRS*Post*RET</i>	?	-0.28	-1.63
<i>IFRS*Post*NEG</i>	?	0.10	1.17
<i>IFRS*Post*RET*NEG</i>	?	0.33	1.39
<i>Mills</i>	?	0.12	0.35
Number of firm-year observations		488	
Number of firms that adopt IFRS		122	
Number of firms that adopt U.S. GAAP		19	
R^2			17.8%

Notes:

The table presents an analysis of how IFRS versus U.S. GAAP adoption affects the timeliness of loss recognition for the 141 U.S.-listed Canadian firms that were previously using Canadian GAAP with the necessary data to calculate the earnings attributes. Of these 141 firms, 122 firms chose IFRS and 19 firms chose U.S. GAAP. The dependent variable *EARN* is income before extraordinary items scaled by the market value of equity at the beginning of the year. *RET* is the 12-month return ending three months after the fiscal year end. *NEG* is equal to 1 if *RET* is negative, and 0 otherwise. *Post* is equal to 1 after the adoption either IFRS or U.S. GAAP, and 0 otherwise. *IFRS* is equal to 1 if a firm adopts IFRS, and 0 otherwise (i.e., a firm adopts U.S. GAAP). *Mills* is the inverse Mills' ratio calculated from the probit regression firms' standard choice in Table 4. *, **, *** denote statistical significance at the 0.10, 0.05, and 0.01 levels (one-tailed when predicted direction), respectively, based on standard errors clustered by firm and industry.