

**The Advent of IFRS in Canada: A Harbinger of the Future  
for  
North American Financial Markets**

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## **The Advent of IFRS in Canada: A Harbinger of the Future for North American Financial Markets**

### Abstract

This paper examines how the advent of IFRS modified the properties of financial reporting and disclosure in Canadian financial markets. After more than 15 years of converging toward U.S. GAAP, Canada's accounting standard setter adopted IFRS for all publicly-accountable enterprises, effective in 2011, thus providing a glimpse of things to come for North American financial markets if the U.S. were to shift toward IFRS. Results show that migrating from Canadian GAAP to IFRS enhances the value relevance of earnings. More credible and informative non-GAAP measures and financial disclosure seem to underlie such higher value relevance. Stock market prices also embed more precise anticipations about future IFRS earnings. Finally, earnings management appears to be less extensive under IFRS. Overall, results suggest that IFRS self-proclaimed goal of providing investors with relevant information is achieved in the Canadian context.

Key words: IFRS, non-GAAP, reliability, predictability, value relevance.

## **L'avènement des IFRS au Canada : un présage de l'avenir pour les marchés financiers nord-américains**

### Résumé

Cet article examine comment l'avènement des IFRS a modifié les propriétés de l'information financière sur les marchés financiers canadiens. Après plus de quinze ans de convergence vers les normes américaines (US GAAP), le Canada a adopté, en 2011, les IFRS pour toutes les entreprises faisant appel à l'épargne publique, offrant ainsi un aperçu des choses à anticiper pour les marchés financiers nord-américains si les États-Unis adoptent les IFRS. Les résultats montrent que le passage des PCGR canadiens aux IFRS augmente la pertinence des résultats pour la valorisation boursière. Des mesures extra comptables (non-GAAP) plus crédibles de même qu'un niveau de détails plus élevé (notes aux états financiers) de l'information financière semblent sous-tendre une telle pertinence. De plus, les cours boursiers intègrent mieux les anticipations des résultats futurs en IFRS. Enfin, la gestion des résultats semble être moins étendue en normes IFRS.

Mots clés: IFRS, non -GAAP, la fiabilité de l'information, la prévisibilité de l'information, pertinence de l'information.

## **I. Introduction**

Focusing on Canada's enactment of IFRS for publicly accountable firms, in this paper we investigate if IFRS meet one of their stated goals, i.e., to improve financial statements' relevance. In fact, we consider three related research questions. First, does the adoption of IFRS enhance the relevance of accounting earnings reported by Canadian firms? Second, is the relevance of IFRS-based accounting earnings driven by better measurement or better disclosure, the latter being proxied by non-GAAP measures and the details in financial statement notes? Third, to better understand how earnings measurement and recognition may underlie the value relevance results, we investigate if there is less discretionary accruals management following the advent of IFRS, a potential indication of higher earnings quality.

While there is extensive research worldwide on the impact of adopting IFRS, we believe that looking at the Canadian experience may provide unique insights. Over the past decade, International Financial Reporting Standards (IFRS) have emerged as the dominant reference for financial reporting in most countries around the world. Meanwhile, in the world's leading capital market, the U.S. Securities and Exchange Commission has publicly expressed its interest in eventually migrating toward IFRS and the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) have worked on having both sets of standards converge through various joint projects. In addition, firms reporting under IFRS and listed in the United States are exempt from filing Form 20-F requiring a reconciliation of domestic GAAP earnings to U.S. GAAP earnings. Nevertheless, as of today, there is no clear road map toward the adoption of IFRS by the U.S. and recent events suggest tensions in this

regard.<sup>1</sup> We believe that Canada's experience with IFRS provides a glimpse of things to come if the U.S. were to adopt IFRS. For more than 15 years starting in the late 80s, Canada's accounting standard setter had a convergence policy toward U.S. GAAP, essentially adopting U.S. standards with some adaptation or simplification. Hence, by the time Canada's publicly accountable enterprises initially reported under IFRS in 2011, their pre-IFRS Canadian GAAP financial statements, both in terms of measurement and disclosure, bore close resemblance to U.S. firms' practices. Such similarities translated into Canadian GAAP-based information exhibiting value relevance that was essentially indistinguishable from U.S. GAAP information (Bandyopadhyay, Hanna and Richardson, 1994; Barth and Clinch, 1994).

Our key results suggest that IFRS adoption was beneficial to the functioning of Canadian capital markets. First, compared with Canadian GAAP, IFRS do enhance the value relevance of earnings. In this regard, our findings provide some useful hints as to what U.S. firms and markets may expect from IFRS adoption. Second, non-standardized performance measures (previously called non-GAAP) and financial statement notes further enhance the value relevance of earnings, thus suggesting that IFRS impact on capital markets emanates from both measurement and disclosure effects. In that regard, our results suggest that, under IFRS, current earnings are more in tune with economic performance as reflected by stock market returns (current and lag), with stock markets improving their capacity to anticipate future earnings. With respect to earnings

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<sup>1</sup> For example, speaking at the Financial Reporting Outlook conference organized by Ernst & Young and held at Westminster, Stephen Haddrill, Chief Executive Officer of the United Kingdom's Financial Reporting Council stated that IASB's unsuccessful attempts with regard to its program of convergence with the FASB is a 'failure' as one specific set of accounting principles/standards have not been achieved despite more than 10 years of efforts (<http://www.readyratios.com/news/ifrs/2150.html>).

measurement and recognition, the results are somewhat mixed but there is a weak indication of a slight decrease in earnings management under IFRS, which is consistent with its advent enhancing financial reporting quality.

We consider that our paper brings forth the following contributions. First, as far as we know, this study is the first to assess the value relevance of earnings under IFRS considering non-standardized disclosure measures that are derived from IFRS-based financial statements. Second, to the best of our knowledge, this paper is also the first to discriminate between earnings numbers and details in financial statement notes in assessing the value relevance of earnings under IFRS. Third, including in the sample firms that are not affected by a change in the set of GAAP ensures that our results are not altered by some economic factors affecting the periods of investigation. Prior research does indicate that in many countries, the enactment of IFRS was accompanied by other institutional and regulatory changes, thus potentially confounding its impact (e.g., Christensen, Hail and Leuz, 2013). Overall, we consider that this study contributes to the debate on the merits and disadvantages of IFRS for North American stock market participants.

The remainder of the paper is organized as follows. Section 2 presents the theoretical background and the development of hypotheses. The study's method is described in section 3. Results are presented in section while section 5 provides a discussion of the potential implications of the results.

## II. Background and hypotheses

### IFRS and Financial Reporting Relevance

#### *Prior Research*

While prior research on the impact of IFRS adoption spans many dimensions, one focus so far has been on the relevance of IFRS-based information for stock market investors, as reflected in value relevance, market liquidity or cost of capital. It does appear that IFRS-based financial statements map into how investors assess a firm's stock market value.<sup>2</sup>

For instance, there is evidence that the IFRS adjustments reported by French firms for 2004 are useful to investors' in their assessment of a firm's stock market value (financial statements prior to 2005 prepared according to domestic standards needed to be reconciled with IFRS) (Cormier et al. 2009). In a similar vein, Platikanova (2009) shows that the bid/ask spread has decreased in France, but, not in Germany, Sweden, and in the UK. Moreover, in the United Kingdom, firms reporting IFRS earnings that were lower than those computed according to UK GAAP were penalized by the stock market (Horton and Sarafeim 2010).

In addition, there is some evidence that a switch from domestic standards to IFRS has a modest positive impact on market liquidity and the cost of equity capital, most likely resulting from the reduction in information asymmetry between investors and managers following the implementation of IFRS (Daske et al. 2008; Bruggermann et al. 2009). However, firms that voluntarily adopt IFRS ahead of the mandated year of

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<sup>2</sup> IASB's other self-proclaimed goal for IFRS includes increased comparability. With respect to comparability, there is evidence that it is enhanced by the adoption of IFRS as the latter translates into greater coverage by foreign financial analysts as well as greater accuracy in their forecasts, especially in countries with high investor protection (Byard et al. 2011).

adoption experience a stronger improvement in the liquidity of their stock and in their cost of capital than firms that only adopt IFRS at the required date. Therefore, it is unlikely that IFRS adoption in itself drives the improvement in the information set that is available to investors: other regulatory or institutional changes probably take precedence. For example, in the context of Australia, a country categorized by strong investor protection laws and active enforcement, and using a longitudinal study that covers pre-IFRS and post-IFRS periods during 1990 to 2008, Chalmers et al.'s (2011) find an increase in the value relevance of earnings under IFRS. Their study suggests that the impact of IFRS-based financial information on financial markets may be driven by a country's institutions regarding investor protection and enforcement, both dimensions underlying high quality financial reporting. Focusing on the European Union, Christensen et al. (2013) show that IFRS adoption has a beneficial impact on market liquidity only for firms in those countries that changed their reporting enforcement, i.e., tightened it. They conclude that, by itself, the change in accounting standards seems to have had little effect on market liquidity.<sup>3</sup>

Hence, overall, the evidence with respect to IFRS impact on financial reporting relevance is rather mixed, and potentially conditional on the strictness of legal enforcement.

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<sup>3</sup> Beyond stock market prices, investors use IFRS information to rebalance their portfolios. Investors who rely more extensively on fundamental analysis or accounting data (foreign investors, value investors) use IFRS-derived financial statements to sell or buy specific securities, much more so than when just domestic standards were used and, on average, increase equity ownership in these firms after IFRS adoption (Florou and Pope 2012).

## *Hypotheses*

The level of details in financial reporting under IFRS is higher than under local GAAP including Canadian GAAP. Under IFRS, income statement items are detailed in terms of nature (depreciation, purchases of materials, transport costs, employee benefits, and advertising costs) and function (cost of sales, cost of distribution). We also observe more notes and more detailed notes under IFRS. Hence, the following hypotheses:

*H1: IFRS-based earnings are more useful to investors than Canadian GAAP-based earnings.*

*H2: Compared with the situation that prevails under Canadian GAAP, the extent of a firm's footnote disclosure under IFRS enhances the value relevance of earnings.*

Concerning non-GAAP measures, the International Accounting Standards Board (IASB) tries to deal with the issue of non-GAAP measures by issuing regulations which require entities to clearly label these numbers as non-GAAP, setting requirements to present them outside the financial statements (in MD&A) and requiring reconciliation of the non-GAAP numbers to reported GAAP numbers (Key points from the January 2012 IFRS Discussion Group). However, how and to what extent regulators issue regulations on this differs between jurisdictions.

In the Canadian context, and prior to IFRS adoption, Cormier et al. (2011) focus on a non-GAAP performance measure labeled distributable cash, which purports to represent the amount of cash a flow-through entity such as a REIT (Real Estate Income Trusts) is capable of distributing to its investors on a sustaining basis. They find that distributable cash is deemed to be value relevant by investors, relegating audited GAAP

earnings to a secondary role. However, distributable cash's measurement is subject to extensive managerial discretion, is unaudited and is unverifiable by investors. In this regard, Cormier et al. (2011) document that reported levels of distributable cash exhibit a smoothing pattern, thus ensuring stable cash distributions to investors. They show also that managerial incentives (stock option holdings) and corporate governance (board and ownership) variables affect the level of reported distributable cash. They infer that investors, lacking details about underlying measurement assumptions, do not seem able to see through managerial opportunism and seem to focus on distributable cash as reported, discretionary or non-discretionary. Thus, we anticipate that IFRS make non-GAAP performance measures more reliable and thus should increase their impact on earnings valuation by market participants:

*H3: Compared with the situation that prevails under Canadian GAAP, the number of non-GAAP measures disclosed by a firm under IFRS enhances the value relevance of earnings.*

Finally, Warfield and Wild (1992) suggest market returns should lead annual earnings have a predictive power for investors. If earnings have a greater predictive power under IFRS, they should be anticipated much before the release of the annual report under IFRS than under Canadian GAAP. This gives rise to our last hypothesis:

*H4: Stock markets' capacity to anticipate future earnings is greater under IFRS than under Canadian GAAP.*

### *IFRS and Earnings Quality*

With respect to quality, the evidence in this regard is mixed. For instance, Ahmed et al. (2013), compare firms from 20 countries that adopted IFRS in 2005, when matched to a benchmark group of firms from countries that did not adopt IFRS. Relative to these benchmark firms, Ahmed et al. (2013) find that IFRS firms exhibit significant increases in income smoothing and aggressive reporting of accruals, and a significant decrease in timeliness of loss recognition. However, they do not find significant differences across IFRS and benchmark firms in meeting or beating earnings targets. Their findings primarily hold for firms in strong enforcement countries, suggesting that enforcement mechanisms in these countries were not able to counter the initial effects of greater flexibility in IFRS relative to domestic GAAP. Both Garcia et al. (2009) and Jeanjean and Stolowy (2008) find that earnings management did not decline after the introduction of IFRS, and may in fact have increased in some countries. Looking at firms from 15 European Union member states, Chen et al. (2010) find that the majority of accounting quality indicators improved after IFRS adoption in the European Union. However, they find that firms engage in more earnings smoothing and recognize large losses in a less timely manner in post-IFRS periods. In contrast, Horton et al. (2013), also for a European sample, and Tan et al. (2011), for an international sample, both find that investors can be better at detecting earnings management as a result of a change in the information environment following IFRS adoption.

### *Hypothesis*

In light of these conflicting findings, we put forward the following hypothesis (in null form):

*H5: Compared with the situation that prevails under Canadian GAAP, there is no difference in earnings quality under IFRS.*

## **III. Method**

### **Sample**

The sample is based on Canadian firms composing S&P/TSX index of the Toronto stock exchange for years 2009 (Canadian GAAP) and 2011 (IFRS). The index comprises 233 firms. From this sample, there are missing data for 13 firms (data not available for both years). From the sample of 220 firms, 36 firms use the same set of GAAP for 2009 and 2011 (so-called no-change firms): 17 firms are complying with US-GAAP and 19 firms have a year-end after April 30 or IFRS adoption is postponed for different reasons (e.g. regulated industries). For firms with year-end after April, the data in Compustat database are for 2009 and 2010, i.e. prior to IFRS adoption.

For year 2010, Canadian firms must report earnings and balance sheet reconciliations between Canadian GAAP and IFRS. However, financial statement numbers are still presented in Canadian GAAP. We decided not to include year 2010 to avoid confusion and to focus on clear Canadian GAAP and IFRS years.

## Empirical Models

The empirical models are the following:

### *(1) Relevance of earnings*

$$\begin{aligned} \text{Price} = \\ EQPS + EPS + EPS*YIFRS + EPS*NCHANGE + EPS*NCHANGE*YIFRS + \\ NCHANGE + NCHANGE*YIFRS + YIFRS \quad (1) \end{aligned}$$

### *(2) Impact of financial statement notes on the relevance of earnings*

$$\begin{aligned} \text{Price} = \\ EQPS + EPS + EPS*YIFRS + EPS*NCHANGE + EPS*NCHANGE*YIFRS + \\ NCHANGE + NCHANGE*YIFRS + EPS*NUMNOTES + EPS*NUMNOTES*YIFRS + \\ EPS*PAGESNOTES + EPS*PAGESNOTES*YIFRS + NUMNOTES + \\ NUMNOTES*YIFRS + PAGESNOTES + PAGESNOTES*YIFRS + YIFRS \quad (2) \end{aligned}$$

### *(3) Impact of Non-GAAP on the relevance of earnings*

$$\begin{aligned} \text{Price} = \\ EQPS + EPS + EPS*YIFRS + EPS*NCHANGE + EPS*NCHANGE*YIFRS + \\ NCHANGE + NCHANGE*YIFRS + EPS*NUMNGAAP + EPS*NUMNGAAP*YIFRS + \\ EPS*PAGESNGAAP + EPS*PAGESNGAAP*YIFRS + NUMNGAAP + \\ NUMNGAAP*YIFRS + PAGESNGAAP + PAGESNGAAP*YIFRS + YIFRS \quad (3) \end{aligned}$$

### *(4) Stock markets' anticipation of earnings*

$$\begin{aligned} ROE = \\ R_i \quad t + R_i \quad t-1 + R_i \quad t-2 \quad (4) \end{aligned}$$

Where:

*EQPS*: Equity per share; *EPS*: Earnings per share; *NCHANGE*: Year with no change in the set of GAAP; *ROE*: Return on equity; *NUMNOTES*: Number of financial statement notes; *PAGESNOTES*: Pages of financial statement notes; *NUMNGAAP*: Number of Non-GAAP; *PAGESNGAAP*: Number of pages of Non-GAAP in MD&A; *YIFRS*: Year for financial reporting under IFRS; *R<sub>i</sub>*: Stock market return.

The variable *NCHANGE* allows controlling for economic factors beyond the change in the set of GAAP that could affect the stock market valuation of earnings between 2009 and 2011.

Concerning the model of stock market anticipation of earnings, Warfield and Wild (1992) suggest that three periods are sufficient to capture the effect of market leading annual earnings. Our tests are based on the comparison of the estimated coefficients across regressions. Higher estimated coefficients for the return variables would be consistent with greater recognition of earnings by the market in the year indicated. If earnings have a predictive power for investors, they should be anticipated much before the release of the annual report.

## **IV. Results**

### **Descriptive statistics**

Table 1 provides some descriptive statistics about sample firms' financial variables under Canadian GAAP versus IFRS. We document more details about Non-GAAP measures as expressed by the number of pages Non-GAAP. This may be due to the fact that IFRS require reconciliation between Non-GAAP measures with GAAP. Also, as expected, the level of details, as expressed by the number of notes and pages of notes to financial statements is higher under IFRS. Moreover, more than a third of sample firms are U.S cross-listed.

**Table 1**  
**Descriptive statistics**

N: 184 (220-36)	Canadian GAAP (2009)		IFRS (2011)		T-test p-value	Chi2 p-value
	Mean	Median	Mean	Median		
<i>Price</i>	23.38	18.55	25.69	19.41	0.399	0.600
<i>Ri</i>	0.059	0.058	-0.016	-0.012	0.000	0.000
<i>EQPS</i>	14.61	10.70	13.11	10.83	0.142	0.532
<i>EPS</i>	1.10	0.57	1.49	1.02	0.138	0.007
<i>ROE</i>	0.05	0.06	0.11	0.10	0.003	0.000
<i>NUMNGAAP</i>	2.32	2	2.5	2	0.615	0.874
<i>PAGESNGAAP</i>	12.28	7	15.06	9.50	0.042	0.284
<i>NUMNOTES</i>	23.39	24	28.04	28	0.000	0.000
<i>PAGESNOTES</i>	33.48	30	47.56	43	0.000	0.000
<i>USLISTED (%)</i>	34.74	0	35.64	0	0.433	0.952

*Price*: Stock price at year-end; *Ri*: Stock market return; *EQPS*: Equity per share; *EPS*: Earnings per share; *ROE*: Return on equity; *NUMNGAAP*: Number of Non-GAAP; *PAGESNGAAP*: Number of pages of Non-GAAP in MD&A; *NUMNOTES*: Number of financial statement notes; *PAGESNOTES*: Pages of financial statement notes; *USLISTED*: U.S. cross-listed.

### Multivariate results

We estimate regressions using OLS with robust estimators since the Breusch-Pagan / Cook-Weisberg tests show the presence of heteroscedasticity. Durbin-Watson tests do not reveal autocorrelation problems (statistic close to 2.0 in all regressions). Moreover, multicollinearity is not an issue in any regressions since the highest variance of inflation factor is 4.0. Finally, we exclude from regressions all observations with standardized residuals exceeding two.

Table 2 reports ordinary-least-square regressions with robust estimators on the relation between earnings and stock market valuation. Focusing on the regression without controlling for U.S. cross-listings, it does appear that both GAAP-based equity (0.839;  $p < 0.01$ ) and earnings (1.995;  $p < 0.01$ ) are deemed value relevant. Consistent with our

expectation (Hypothesis 1), the relevance of earnings is greater under IFRS than under GAAP since the coefficient on the interaction term  $EPS*YIFRS$  (1.363;  $p < 0.05$ ) is positive and significant. The variable  $EPS*NCHANGE$  controls for firms that apply the same set of GAAP for 2009 and 2011. It seems that, for these firms, the advent of IFRS does not affect the value relevance of their earnings. The difference in coefficients  $EPS*NCHANGE$  and  $EPS*NCHANGE*YIFRS$  is close to zero ( $F = 0.04$ ;  $p < 0.84$ ).<sup>4</sup> Moreover, the joint test for the difference in coefficients  $EPS*IFRS$  and  $EPS*NCHANGE*IFRS$  allows to assess that in the IFRS (post) period, the value relevance differs between change firms and no-change firms ( $F = 0.05$ ;  $p < 0.82$ ). This suggests that firms complying with IFRS have the same earnings multiple than no-change firms (complying with US-GAAP or are highly followed by analysts, i.e. banks and public utilities).

A certain number of Canadian firms are cross-listed on U.S. stock markets and, as result, either provide U.S. GAAP financial reporting or reconcile Canadian GAAP financial results with U.S. GAAP results. The second regression includes variables to control for this fact. It does appear that cross-listed firms' earnings exhibit greater value relevance than earnings from non-cross-listed firms in the pre-IFRS period (coefficient for  $EPS*USLISTED$ : 1.521;  $p < 0.05$ ). However, the advent of IFRS eliminates the difference in earnings value relevance between cross-listed and non-cross-listed firms (Joint F test:  $F = 0.07$ ;  $p < 0.79$ ). Other results remain qualitatively the same.

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<sup>4</sup> Since No-Change firms are composed of US-GAAP compliers to a significant proportion (17 out of 33 firms), this result could indicate that IFRS equals US-GAAP for stock market valuation of earnings. However, given the small sample size of US-GAAP complying firms and given the group of No-Change also comprises Canadian GAAP compliers, this result must be interpreted cautiously.

**Table 2**  
**OLS Regressions – Robust estimators**  
**Relevance of earnings for stock price valuation**

	Expected Sign	Without Controlling for U.S. Cross-Listing		Controlling for U.S. Cross-Listing	
		Coefficient Unstandardized	Coefficient Standardized	Coefficient Unstandardized	Coefficient Standardized
<i>EQPS</i>	+	***0.839	0.703	***0.859	0.721
<i>EQPS*YIFRS</i>	?	-0.121	-0.049	-0.129	-0.054
<i>EPS</i>	+	***1.995	0.219	***1.773	0.195
<i>EPS*YIFRS</i>	+	**1.363	0.085	**1.192	0.075
<i>EPS*NCHANGE</i>	?	**1.917	0.084	**1.238	0.054
<i>EPS*NCHANGE*YIFRS</i>	?	-1716	-0.062	-1.114	-0.040
<i>NCHANGE</i>	?	***5.792	0.087	***6.954	0.103
<i>NCHANGE*YIFRS</i>	?	0.022	0.001	-0.844	-0.009
<i>EPS*USLISTED</i>	?			**1.521	0.067
<i>EPS*USLISTED*YIFRS</i>	?			-0.131	-0.005
<i>USLISTED</i>	?			0.018	-0.000
<i>USLISTED*YIFRS</i>	?			-0.846	-0.013
<i>YIFRS</i>	?	-0.580	-0.011	-0.039	-0.001
Joint test F statistic					
<i>EPS*NCHANGE+</i>		0.04 (0.84)		0.03 (0.87)	
<i>EPS*NCHANGE*YIFRS=0</i>					
<i>EPS*YIFRS+</i>		0.05 (0.82)		0.01 (0.96)	
<i>EPS*NCHANGE*YIFRS=0</i>					
<i>EPS*YIFRS - EPS*USLISTED + EPS*USLISTED*YIFRS = 0</i>				0.07 (0.79)	
R-Square		84.9%		85.4%	
F Statistic		154.4(0.000)		187.1(0.000)	
N		440		440	
Durbin Watson		1.97		1.98	

*EQPS*: Equity per share; *EPS*: Earnings per share; *NCHANGE*: Year with no change in the set of GAAP; *USLISTED*: U.S. cross-listed; *YIFRS*: Year for financial reporting under IFRS  
\*: p < 0.10; \*\*: p < 0.05; \*\*\*: p < 0.01. One-tailed if there is a predicted sign and in the right direction, two-tailed otherwise.

From our descriptive statistics, we observe that the level of details in financial statements increases significantly under IFRS. The mean score of the number of notes increases from 23 to 28 while the number of pages goes up from 33 to 48. In column 3 of Table 3, we present results of a regression on the value relevance of earnings, controlling for the number of notes and number of pages of notes to financial statements. Results show that the number of pages of notes lowers the relationship between earnings and stock market valuation under Canadian GAAP while, under IFRS, it has a neutral effect

on earnings value relevance. For example, Canadian GAAP EPS of \$1 accompanied by 30 pages of notes translate into a valuation of \$3.98 ( $6.318 - 0.078 \times 30$ ) while the same level of earnings under IFRS translates into a valuation of \$6.38 ( $6.318 - 0.078 \times 30 + 0.080 \times 30$ ).<sup>5</sup> This is consistent with hypothesis 2. Under Canadian GAAP, notes confuse investors and undermine earnings relevance while, under IFRS, notes corroborate the earnings number and thus have a neutral effect. The joint test for the difference in coefficients  $EPS \times PAGESNOTES$  and  $EPSPAGESNOTES \times IFRS$  suggests the neutral effect of financial statement notes under IFRS ( $F = 0.02$ ;  $p < 0.89$ ).

In the second regression of Table 3, we present results controlling for the number of non-GAAP measures and number of pages devoted to non-GAAP measures. Overall, results from a joint F test indicate that the advent of IFRS reduces the gap in earnings value relevance between IFRS-adopting firms and firms experiencing no change in accounting standards ( $F: 8.62$ ;  $p < 0.01$ ). Results show that the number of non-GAAP measures undermines the relationship between earnings and stock market valuation under Canadian GAAP while it potentially enhances that relation under IFRS. For example, Canadian GAAP EPS of \$1 accompanied by 2 non-GAAP measures translate into a valuation of \$2.00 ( $2.934 - 0.466 \times 2$ ) while the same level of earnings under IFRS translates into a valuation of \$3.55 ( $2.934 - 0.466 \times 2 + 0.774 \times 2$ ). This is consistent with hypothesis 3. Moreover, the coefficients for  $EPS \times NUMNGAAP$  and  $EPS \times NUMNGAAP \times IFRS$  are different (joint test  $F: 2.94$ ;  $p < 0.08$ ). Similarly, the

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<sup>5</sup> Under IFRS, results (not tabulated) also show significant negative correlations between the implied cost of capital and  $NUMNGAAP$  (-0.20),  $PAGESNGAAP$  (-0.27),  $NUMNOTES$  (-0.09) and  $PAGESNOTES$  (-0.18) while, except for  $NUMNGAAP$  (-0.13), non-significant positive correlations are observed under Canadian GAAP.

coefficients for  $EPS * PAGESNGAAP$  and  $EPS * PAGESNGAAP * YIFRS$  are different (joint test F: 2.67;  $p < 0.10$ ). Both results are consistent with Hypothesis 3.

An OLS regression including non-GAAP measures, i.e. the number of non-GAAP measures reported, and the number of pages of non-GAAP reported essentially provides the same results (untabulated).

**Table 3**  
**OLS Regressions – Robust estimators**  
**Value Relevance of Earnings**

	Dependent Variable: Stock Market Value			Dependent Variable: Stock Market Value		
	Controlling for financial statements notes			Controlling for Non-GAAP		
		Coefficient			Coefficient	
	Unstandardized	Standardized	Unstandardized	Standardized		
<i>EQPS</i>	+	***1.051	0.884	***0.887		0.744
<i>EQPS*YIFRS</i>	?	** -0.323	-0.131	-0.151		-0.062
<i>EPS</i>	+	***6.318	0.694	***2.934		0.334
<i>EPS*YIFRS</i>	+	-0.942	-0.057	-1.473		-0.101
<i>EPS*NCHANGE</i>	?	**1.583	0.070	***2.553		0.113
<i>EPS*NCHANGE*YIFRS</i>	?	-1.622	-0.059	***-3.178		-0.116
<i>NCHANGE</i>	?	***6.637	0.098	***4.859		0.074
<i>NCHANGE*YIFRS</i>	?	0.013	0.000	2.491		0.028
<i>EPS*NUMNOTES</i>	-	-0.043	-0.121			
<i>EPS*NUMNOTES*YIFRS</i>	+	-0.025	-0.046			
<i>EPS*PAGESNOTES</i>	-	***-0.078	-0.558			
<i>EPS*PAGESNOTES*YIFRS</i>	+	***0.080	0.299			
<i>NUMNOTES</i>	?	-0.134	-0.030			
<i>NUMNOTES*YIFRS</i>	?	0.230	0.127			
<i>PAGESNOTES</i>	?	0.087	0.059			
<i>PAGESNOTES*YIFRS</i>	?	-0.092	-0.095			
<i>EPS*NUMNGAAP</i>	-			***-0.466		-0.191
<i>EPS*NUMNGAAP*YIFRS</i>	+			***0.774		0.205
<i>EPS*PAGESNGAAP</i>	-			-0.001		-0.000
<i>EPS*PAGESNGAAP*YIFRS</i>	+			*0.038		0.059
<i>NUMGAPP</i>	?			***0.916		0.092
<i>NUMNGAAP*YIFRS</i>	?			** -1.105		-0.097
<i>PAGESNGAAP</i>	?			-0.041		-0.026
<i>PAGESNGAAP*YIFRS</i>	?			0.028		0.013
<i>YIFRS</i>		-1.477	-0.028	2.381		0.047
Joint test F statistic						
<i>EPS*NCHANGE+</i>		0.01 (0.96)		0.55 (0.45)		
<i>EPS*NCHANGE*YIFRS = 0</i>						
<i>EPS*YIFRS+</i>		0.71 (0.40)		8.62 (0.01)		
<i>EPS*NCHANGE*YIFRS=0</i>						
<i>EPS*PAGESNOTES+</i>		0.02 (0.89)				
<i>EPS*PAGESNOTES*YIFRS = 0</i>						
<i>EPS*NUMNGAPP+</i>				2.94 (0.08)		
<i>EPS*NUMNGAAP*YIFRS = 0</i>						
<i>EPS*PAGESNGAAP+</i>				2.67 (0.10)		
<i>EPS*PAGESNGAAP*YIFRS = 0</i>						
R-Square		86.3%		84.9%		
F Statistic		138.9(0.000)		90.3(0.000)		
N		440		440		
Durbin Watson		1.98		1.98		

*EQPS*: Equity per share; *EPS*: Earnings per share; *NCHANGE*: Year with no change in the set of GAAP; *NUMNGAAP*: Number of non-GAAP measures; *PAGESNGAAP*: Pages of non-GAAP measures; *NUMNOTES*: Number of financial statement notes; *PAGESNOTES*: Pages of financial statement notes; *YIFRS*: Year for financial reporting under IFRS.

\*:  $p < 0.10$ ; \*\*:  $p < 0.05$ ; \*\*\*:  $p < 0.01$ . One-tailed if there is a predicted sign and in the right direction, two-tailed otherwise.

Table 4 shows results from regressions on the stock market anticipation of earnings. Consistent with hypothesis 4, the stock market anticipation of earnings under IFRS appears to be greater than under Canadian GAAP. Under IFRS, stock markets appear to anticipate earnings three years before its publication (0.381;  $p < 0.01$ ). It is the case under Canadian GAAP to a lesser extent considering the size of the coefficient (0.051;  $p < 0.05$ ). Both sets of standards offer the same relationship between current stock return and current earnings (coefficient of 0.301 versus 0.281). Our results suggest that earnings have a predictive power for investors and are better anticipated under IFRS, which is consistent with Hypothesis 4.

**Table 4**  
**OLS regressions – with robust estimators**  
**Stock markets’ capacity to anticipate future earnings**

		<i>ROE 2009</i>		<i>ROE - IFRS</i>	
		Coefficient		Coefficient	
		Unstandardized	Standardized	Unstandardized	Standardized
<i>Ri t</i>	+	***0.301	0.280	***0.281	0.246
<i>Ri t-1</i>	+	*-0.031	-0.101	**0.249	0.210
<i>Ri t-2</i>	+	**0.051	0.164	***0.381	0.313
N		175		175	
R-square		16.4%		19.4%	
F		11.4(0.000)		9.9(0.000)	
Statistic					

\*:  $p < 0.10$ ; \*\*:  $p < 0.05$ ; \*\*\*:  $p < 0.01$ . One-tailed if there is a predicted sign and in the right direction, two-tailed otherwise.

### **Additional Analyses on Earnings Quality**

Results shown so far suggest that reliance on IFRS for the measurement and reporting of earnings may improve their value relevance. Most of that effect seems to be emanating from footnotes and non-GAAP measures enhancing the value relevance of

earnings within an IFRS framework compared with the situation prevailing under Canadian GAAP. Underlying such a shift may be investors' improved ability to decipher earnings under IFRS as a result of enhanced disclosure: such additional transparency may in turn put pressure on a firm's executives to attenuate its earnings management.

Leuz et al. (2003) develop different country-level measures of earnings management that capture various dimensions along which insiders can exercise their discretion to manage reported earnings. We refer to three of these measures. The first measure of a country-level earnings management uses the standard deviation of earnings divided by the standard deviation of cash flow from operations. A low ratio implies a higher level of earnings management. The second measure uses the magnitude of accruals as a proxy for the extent to which managers exercise discretion in reporting earnings. It is computed as a country's median of the absolute value of firms' accruals scaled by the absolute value of firms' cash flow from operations. A high ratio suggests a high level of earnings management. The third measure is the ratio of "small profits" to "small losses", using net earnings scaled by total assets. Small losses are defined to be in the range  $[-0.01, 0.00]$  and small profits are defined to be in the range  $[0.00, 0.01]$ . This last measure is qualified as an earnings-smoothing measure by Leuz *et al.* (2003).

Results presented in Table 5 suggest that earnings management does vary in Canada under IFRS compared to domestic GAAP. On the one hand, the first and second measures exhibit lower earnings management under IFRS. The level of details warranted under IFRS may refrain managers from engaging in accruals management. On the other hand, we observe more extensive earnings smoothing under IFRS than under Canadian GAAP: among IFRS adopters, the proportion of small profits for one small loss is 2.625

under Canadian GAAP compared to 2.80 under IFRS. However, considering the small sample sizes for this test (21/8 versus 14/5), caution is warranted in its interpretation.<sup>6</sup>

**Table 5**  
**Earnings management measures**

1) $\sigma$ Earnings / $\sigma$ CFO (scaled by total assets)	(-)
Canadian GAAP (2009)	0.849
IFRS (2011)	1.179
2) $ \text{Acc} / \text{CFO} $ (scaled by total assets)	(+)
Canadian GAAP (2009)	0.697
IFRS (2011)	0.598
3) # small profits / # Small losses (ROA<0.01 and > -0.01)	(+)
Canadian GAAP (2009)	2.625 (21/8)
IFRS (2011)	2.800 (14/5)

## References

## V. Conclusion

<sup>6</sup> Another way to measure earnings quality would be to assess if it leads users to improve their decision-making. In this regard, additional analyses (not tabulated) show that IFRS appears to enhance financial analysts' ability to forecast firm earnings, thus suggesting a reduction in information asymmetry. Hence, forecast dispersion, forecast error, cost of debt, cost of capital, and bid-ask spreads are lower under IFRS compared with Canadian GAAP. Consistent with prior research, firms are followed by more analysts under IFRS than under local GAAP.

This aim of this paper was to investigate the properties of financial reporting in Canada under IFRS. We bring some evidence that moving from Canadian GAAP to IFRS provides investors with more relevant information to investors. More specifically, results suggest that IFRS-based earnings do exhibit higher value relevance than under Canadian GAAP. These results hold after controlling for firms that should not have been affected by IFRS, i.e., firms that did not change their financial reporting standards. Moreover, it appears that most of the IFRS effect emanates from the increase in value relevance of footnote information and non-GAAP measures. In addition, stock markets' capacity to anticipate future earnings is enhanced by the adoption of IFRS. Finally, underlying such improvement in earnings value relevance, we observe a decrease in earnings management under IFRS, albeit modest and potentially confounded by greater income smoothing. Overall, results are consistent with IFRS self-proclaimed goals of providing investors with relevant information that is of higher quality being achieved in a Canadian context.

The worldwide enforcement of IFRS worries many regulators and market participants in the United States. A recent SEC study (2011) analyzing financial statements of public companies prepared in accordance with IFRS, including SEC registrants and not SEC registrants, found financial statements lacking in transparency and clarity to the point that questions were raised about whether some companies financial statements complied with IFRS. The SEC staff also noticed diversity in the application that made it challenging to compare companies. We consider that our findings may be of interest to U.S. regulators since the Canadian context is comparable to the U.S. one in many aspects. We must keep in mind that, even for Canadian U.S. cross-listed

firms, which must comply with SEC regulations, we observe an enhancement in the value relevance of earnings following IFRS adoption.

## References

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- Ahmed, A.S., Neel, M.J., and D. Wang. 2013. Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence. *Contemporary Accounting Research*. Forthcoming.
- Armstrong, C.S., Barth, M.E., and E.J. Riedl. 2010. Market Reaction to the Adoption of IFRS in Europe. *The Accounting Review* 85 (1): 31-61.
- Bandyopadhyay, S.P., Hanna, J.D. 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 G. Clinch. 1996. International Accounting Differences and Their Relation to Share Prices: Evidence from U.K., Australian, and Canadian Firms. *Contemporary Accounting Research* 13(1): 135–170.
- Bruggemann, U., Daske, H., Homberg, C., and P.F. Pope. 2009. *How Do Individual Investors React to Global IFRS Adoption?* Available at SSRN: <http://ssrn.com/abstract=1437542>
- Byard, D., Li, Y. and Y. Yu. 2011. The Effect of Mandated IFRS Adoption on Analyst' Forecast Error. *Journal of Accounting Research* 49 (1): 69-96.
- Chalmers, K., Clinch, G., and J. Godfrey. 2011. Changes in Value Relevance of Accounting Information upon IFRS Adoption: Evidence from Australia. *Australian Journal of Management* 36 (2): 151-173.
- Chen, H., Tang, Q., Jiang, Y. and Z. Lin. 2010. The Role of International Financial Reporting Standards and Accounting Quality: Evidence from the European Union. *Journal of International Financial Management & Accounting* 21 (3): 220-278.
- Christensen, H.B., Hail, L. and Leuz, C., 2013. Mandatory IFRS Reporting and Changes in Enforcement (September 2013). ECGI - Finance Working Paper No. 377/2013; The Wharton School Research Paper; Chicago Booth Research Paper No. 12-12. Available at SSRN: <http://ssrn.com/abstract=2017160> or <http://dx.doi.org/10.2139/ssrn.2017160>
- Cormier, D., Demaria, S., Lapointe, P., and R. Teller. 2009. First-Time Adoption of IFRS, Managerial Incentives and Value-Relevance: Some French Evidence. *Journal of International Accounting Research* 8 (2), 20-22.

- Cormier, D., Lapointe-Antunes, P., and M. Magnan. 2007. Le référentiel IFRS : nous dirigeons-nous vers une comptabilité au-delà du réel?. *Comptabilité-Contrôle-Audit* 13 (special issue): 43-56.
- Cormier, D., Lapointe-Antunes, P., and M. Magnan. 2011. Revisiting the Relevance and Reliability of non-GAAP Reporting: The Case of Income Trusts. *Contemporary Accounting Research* 28 (5): 1585-1609.
- Daske, H., Hail, L., Leuz, C., and R. Verdi. 2008. Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research* 46 (5): 1085-1143.
- Easton, P. 2004. PE Ratios, PEG Ratios, and Estimating the Implied Expected Rate of Return on Equity Capital. *The Accounting Review* 79 (1): 73-95
- Florou, A., and P.F. Pope. 2012), Mandatory IFRS Adoption and Investor Asset Allocation Decisions. *The Accounting Review* 87 (6): 1993-2025.
- Francis, J., Khurana, I., and R. Pereira. 2005. Disclosure Incentives and Effects on Cost of Capital. *The Accounting Review* 80 (4): 1125-1162
- Garcia, L., Garcia, O., and P.F. Pope. 2009. *Earnings Quality Effects of Mandatory IFRS Adoption*. American Accounting Association, 2009 Annual Meeting Sessions International Accounting.
- Horton, J. and G. Serafeim. 2010. Market Reaction & Valuation of IFRS Reconciliation Adjustments: First Evidence from the UK. *Review of Accounting Studies* 15 (4):725-751.
- Horton, J., Serafeim, G. and I. Serafeim. 2013. Does Mandatory IFRS Adoption Improve the Information Environment?. *Contemporary Accounting Research* 30 (1): 388-423.
- Iatridis, G. 2010. IFRS Adoption and Financial Statement Effects: The UK Case. *International Research Journal of Finance and Economics* 38 (April): 165-172.
- Leuz, C., Nanda, D., and P.D. Wysocki. 2003. Earnings Management and Investor Protection: An International Comparison, *Journal of Financial Economics* 69 (3): 505-527.
- Li, S. 2010. Does Mandatory Adoption of International Financial Reporting Standards in the European Union reduce the Cost of equity Capital?. *The Accounting Review* 85 (2): 607-636.
- Platikanova, P. 2009. Market Liquidity Effects of the IFRS Introduction in Europe, SSRN: <http://ssrn.com/abstract=1005364>

Securities and Exchange commission Staff Paper (SEC) (November 2011), *Work Plan for the Consideration of Incorporating International Financial Reporting Standards into the Financial Reporting System for U.S. Issuers An Analysis of IFRS in Practice*.

Tan, H., Wang, S. and M. Welker. 2011. Analyst Following and Forecast Accuracy After Mandated IFRS Adoptions. *Journal of Accounting Research* 49 (5): 1307-1357.

Warfield, T., and J. Wild. 1992. Accounting Recognition and the Relevance of Earnings as an Explanatory Variable for Returns. *The Accounting Review* 67 (4): 821-842.