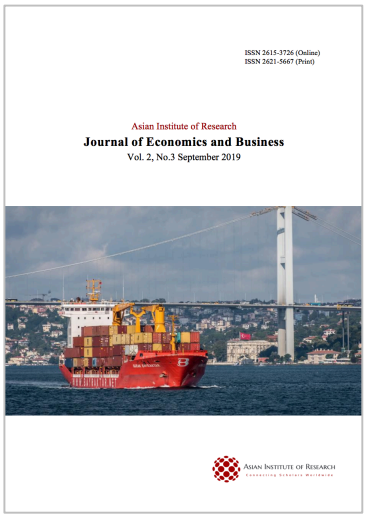

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The Impact of IFRS Adoption on Earnings Management-Results from Canada

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Abstract
The purpose of this paper is to find out the impact of the adoption of IFRS on the practice of earnings management. It provides empirical results using panel data from 2000 to 2018 of the 19,869 firm-year observations of available data from 791 Canadian firms based on the Modified Jones model. The result of our study supports that there is the existence of earnings management practice. The overall result was negative but not significant suggesting adopting IFRS has no direct influence on earnings management used among publicly listed firms. In addition, this paper examined the influence of firm factors (independent variables) of leverage, return on assets, and enrings growth, the interaction variables of IFRS adoption on earnings management. Obtained results in this paper indicate the interaction variable of IFRS adoption is positively related with earnings management, but not significant, suggesting that adopting IFRS has no direct influence on earnings management used among publicly listed firms.

Keywords: Discretionary accruals (DACC), Earnings management (AM), Return on assets (ROA), Leverage (LEV), Delta earnings before interest, and taxes (ΔEBIT).

INTRODUCTION

Financial reporting in Canada has been undergoing a remarkable change since International Financial Reporting Standards (IFRS) have been adopted as Canadian Generally Accepted Accounting Principles (GAAP) for publicly accountable enterprises and government business entities. In the past, Canadian standards for financial accounting and reporting by public companies were developed by the Accounting Standards Board (AcSB).1 Since the adoption of IFRS, the AcSB has been active in monitoring the technical content and timing of standards implementation to Canadian public companies which are required to report under IFRS no later than 2011. The International Accounting Standards Board (IASB) is responsible for developing and publishing IFRSs which have been increasingly adopted globally, with or without adaptation. Earnings is a measure that provides an indication of the inherent value transformation of a company, in essence, how well a company transform their assets, knowledge, experience, and expertise into monetary values. It is an estimate that grants owners and stakeholders an indication of the company's ability to generate value for the shareholders, which means that it is a principal point in determining share price (Cotter, 2009). Hence, an adjustment of earnings could change the view of a company and how it performs. Therefore, not surprisingly, Burgstahler and Dichev (1997) argue that earnings is the single most important measure for managers and therefore represents a focal point. Burgstahler and Dichev

(1997) continue by stating that consistent earnings with a slight upward trend is a desirable pattern for managers, in other words, surprises are not suitable. DeAngelo, DeAngelo, and Skinner (1996) argue that, on average, a company interrupting their upward trend could expect a 14% negative return the same year as the interruption. One could, therefore, suggest that there are a lot of incentive to keep earnings positive since a negative message to the market could have sincere ramifications on the company's performance in the stock market. Hence, earnings is an essential part of financial reporting, and it is a measure that communicates to owners, stakeholders and the market how well the company is managed and performs, which in turn has a profound impact on the company's share price which provides incentives to 'manage earnings.'

Callao and Jarne (2010) define earnings management as "the use of accounting practices within limits available within a comprehensive basis of accounting by management in order to achieve a desired result" (p. 160). Earnings management often occurs when managers use judgment in financial reporting and when they structure transactions (Healy and Wahlen, 1999).

Prior accounting research has examined whether IFRS adoption reduces the management of accrual-based earnings and the use of discretionary accruals. Discretionary accruals are those components of reported income that are discretionary or abnormal and are due to management choices they often used as a proxy for discussing and measuring accrual-based earnings management. Cai et al. (2014) discuss accounting studies that examine whether IFRS influences earnings management provide inconclusive results since a couple of studies have provided evidence of IFRS adoption having a positive influence on earnings management among European Union (EU) member states (Chen et al., 2010; Zeghal et al., 2011; Zeghal et al.,2012) whereas on the contrary a couple of studies have provided evidence of IFRS adoption having a negative influence on earnings management among EU member states (Ahmed et al.,2013; Callao and Jarne 2010). A positive influence depicts that IFRS adoption reduces earnings management, whereas a negative influence depicts that IFRS adoption stimulates earnings management. This inconclusive evidence shows that the influence of mandatory IFRS adoption on earnings management remains an open empirical issue that warrants further investigation.

LITERATURE REVIEW HYPOTHESIS DEVELOPMENT

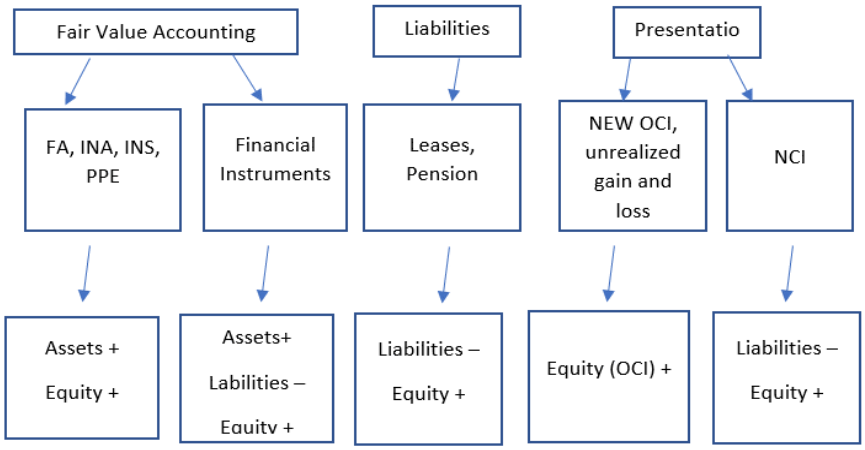
Incremental Effects on Financial Statements of the Adoption of IFRS in Canada

The conceptual framework of IFRS is like the one of Canadian GAAP. Both are principle-based and require professional judgment in application. While the main areas of fundamental difference can be attributable to fair value accounting and consolidation, there are several other areas of potentially significant differences in the detailed application (Blanchette, 2007).9 In the area of long-lived assets, IFRS, like Canadian GAAP, requires impairment tests. Although the conceptual justification for impairment – conservatism – is the same under the two regimes, the result can differ significantly.

On the liability side, several IFRS differ from the corresponding standards under Canadian GAAP. The standards on leases, pensions, and contingencies may require different levels of liabilities under IFRS. Also, the standard on share-based payments may change expenses and equity. Leverage and profitability ratios are particularly sensitive to these standards.

Figure 1 highlights the potential incremental effects on financial statements and of the IFRS adoption in Canada.

Figure 1. The Effects on Financial Statements of the Adoption of IFRS in Canada



The fair value concept adopted by Canadian companies caused by a migration to IFRS represents a departure from the traditional historical cost principle rendered under earlier Canadian GAPP. Specifically, in the investment property standard which set in IAS16 that became an effective force on January 1, 2011. Because of the revaluation of assets, the value of these assets can go up or fall. Differences arising from the revaluation of assets that encounter a hike are recognized as revaluation surplus which is a benefit/profit for the company, the benefits recognized are reported in the income statement, thus increase profit for the company. When the difference is a decrease in the asset revaluation, it means losses for the company and the same for the Impairment in asset value. These changes will greatly affect the financial statements of a company when at the end of the road, will have impacts on the assessment of the company's profitability ratio consist of profit margin ratio (profit margin on sales), return on assets (ROA), and return on equity (ROE).

Lantto and Sahlström (2009) investigated the impact of IFRS on financial ratios in Finland, by comparing ratios calculated under IFRS and Finnish GAAP for the same time period – the year 2004. The authors found leverage and profitability ratios increase under IFRS. Leverage ratios increase as more liabilities are recognized under IFRS; these liabilities result from lease accounting (IAS 17), employee benefit obligations (IAS 19), and financial instruments (IAS 32 and 39). Profitability ratios increase because profit is higher under IFRS due primarily to business combinations (IFRS 3) and the combined effects of several other standards.

Accordingly, I leverage and corporate performance by including some control variables. These control variables are Leverage (LEV), Return on Assets (ROA), and Earnings before Interest and Tax (EBIT)**.**

Effect of IFRS Standard Adoption on Earnings Management

It is possible to conjecture that, in general, both investors and the market respond positively to the movement towards the adoption of IFRS, since these international standards are expected to result in better financial reporting quality, and therefore have the potential to reduce information asymmetry between the company and its stakeholders, reducing the risk of information and, consequently, the cost of capital In the process of adoption and financial reporting according to the financial accounting standard, management interest often dominates the principal interest. The agency theory exemplifies that conflict of interest always occurs between the principal and the agent. Therefore, there must be a mechanism and tools that can suppress the conflict of interest. The management has the opportunity to use any gap of the judgment in applying the financial reporting standard so that its earnings are obtained by exploiting policies in the financial reporting. Scott (1997) writes, from the financial reporting perspective, the concept of manage of earning allows the manager to possess more detailed information about the financial statement to fulfill their needs by using policies in the adoption of the accounting standard to perform earnings management. The IFRS focuses on the use of management judgment and transparent process provided that the management is more capable of disclosing the organization's policy to improve the

positive value from the externalities. A few articles that cover earnings management focusing on accounting change and/or on the difference between standards are presented in Table 1.

Table 1: Literature Review - Findings of prior research surveys on IFRS adoption and Earnings management

References	Country	Topic	Results
Callao and Jarne (2010)	European Union	The change of earnings management (AM) after adopting IFRS	Earnings management (AM) increased after the adoption of IFRS
Denis (2016)	Canada 2016	The Advent of IFRS in Canada: Incidence on Value Relevance	Less earnings management accompanies IFRS adoption.
Jermakowic (2017)	Canada 2011-2017	Financial statement effects of adopting IFRS: the Canadian experience	IFRS in Canada created more relevant financial reporting for the book value of equity and net income.
Doukakis (2014)	European Union 2000-2010	The effect of mandatory IFRS adoption on real and accrual-based earnings management activities	No significant impact of IFRS on earnings management through AM
Frentinou and Anagnostopoulou (2016)	Greece 2001-2008	Accrual-based and real earnings management before and after IFRS adoption: The case of Greece	Significant move to from AM
Hilliard (2013)	Canada 2009-2013	The effects of adopting IFRS: the Canadian experience	The result from the tests of value relevance were not statistically significant.
Hellman (2011)	Sweden 20014-2005	The impact of IFRS on financial statements	The findings indicate that firms gained discretion which was used for earnings management
Rathke, Santana, and Lourenco (2016)	Latin America 2010-2012	Amount of earnings management (AM) after the adoption of IFRS of US cross-listed firms	Cross-listed Latin American firms show a high level of earnings management (AM).
VanTendeloo and Vanstraelen (2005)	Germany 1999-2001	Does voluntary adoption of IFRS reduce earnings management (AM)	Earnings management (AM) under IFRS was not different from earnings management under local German GAAP
JeJeanjean and Stolowy (2008)	Australia, France& UK 2002 -2006	Earnings management before and after IFRS	Earnings management increased post-IFRS
Kao (2014)	China 2002-2009	Relationship between IFRS, earnings management and earnings losses thresholds	Earnings management did not increase after the adoption of IFRS
Lyu, Yuen, Zhang, and Zhang	China 2011	Impact of IFRS adoption on earnings management	Adopting IFRS reduced earnings management, and the quality of earnings increased.

NavarroGarc´ıa and Madrid- Guijarro (2014)	Germany 1998-2006	The impact of IFRS on earnings management	Earnings management reduced after the adoption of IFRS
Paglietti (2009)	Italy 2002-2007	The impact of IFRS on earnings management, timely loss recognition, and value relevance	Earnings management increased, and timeliness decreased, while value relevance increase
Pelucio-Grecco, Geron, Grecco, and Lima (2014)	Brazil 2005-2012	Impact of IFRS on earnings management	Earnings management reduced with the full implementation of IFRS
Rathke et al. (2016)	Latin American 2010-2012	Amount of earnings management after the adoption of IFRS of US cross-listed firms	Cross-listed Latin American firms show a high level of earnings management compared to continental Europe and Anglo-Saxon firms
Van Tendeloo and Vanstraelen (2005)	Germany 1999-2001	Does voluntary adoption of IFRS reduce earnings management	Earnings management under IFRS was not different from earnings management under local German GAAP
Wang and Campbell (2012)	China 1998 - 2009	Earnings management before and after IFRS	IFRS did not change the level of earnings management
Zéghal, Chtourou, and Sellami (2011)	France 2003-2006	The impact of IFRS on earnings management	Earnings management reduced after the implementation of IFRS
Hai Q. Ta (2014)	Canada2011-2014	Effects of IFRS adoption on earnings quality: Evidence from Canada	Earnings quality improves following the adoption of IFRS

HYPOTHESES DEVELOPMENT

Despite the contrary empirical evidence, considering that IFRS are intended to be a single set of high-quality accounting standards to promote transparent and comparable information to inform economic decisions (Chen et al. 2010); considering the intense discussions by regulators about the potential for improving the quality of information through IFRS, the adoption may positively affect earnings management because its principle-based standards offer more rooms for managers to use their professional judgments in financial reporting instances. To test the research four questions, I hypothesize the following:

H1*:* In Canadian listed companies, the level of earnings management has a positive effect because of the mandatory introduction IFRS instead of Canadian GAAP.

The dependent variable for the testing of hypothesis 1 is the discretionary accruals and is based on the estimation of the Modified Jones Model regression model.

$$DACC_{i,t} = \beta_0 + \beta_1 IFRS_t + \varepsilon_{i,t} \quad \text{..... model 1}$$

Hypothesis 1 is tested again with the additional control variables based on the discretionary accruals concerning the Modified Jones model, the next cross-sectional regression, including the control variables, is performed:

$$DACC_{i,t} = \beta_0 + \beta_1 IFRS_t + \beta_2 LEV_{i,t} + \beta_3 ROA_{i,t} + \beta_4 \Delta EBIT_{i,t} + \varepsilon_{i,t} \quad \text{..... model 2}$$

Leverage, ROA, ΔEBIT, IFRS adoption and earnings management

To expand understanding of the relationships among the variables in the model and allows more hypotheses to be tested, I study the interaction between independent control variables and IFRS towards the effect on the earnings management using the following hypothesis:

H2: Compared to pre-IFRS period, after the introduction of IFRS, a higher leverage increases earnings management.
This hypothesis is tested by the model:

$$DACC_{i,t} = \beta_0 + \beta_1 IFRS_t + \beta_2 LEV_{i,t} + \beta_3 (LEV \times IFRS)_{i,t} + \beta_4 ROA_{i,t} + \beta_5 \Delta EBIT_{i,t} + \varepsilon_{i,t} \quad \ldots\ldots \text{model 3}$$

model: 3

H3*:* Compared to pre-IFRS period, after the introduction of IFRS, a higher ROA increases earnings management.
This hypothesis is tested by the model:

$$DACC_{i,t} = \beta_0 + \beta_1 IFRS_t + \beta_2 ROA_{i,t} + \beta_3 (ROA \times IFRS)_{i,t} + \beta_4 LEV_{i,t} + \beta_5 \Delta EBIT_{i,t} + \varepsilon_{i,t} \quad \ldots\ldots \text{ model:4}$$

H4*:* Compared to pre-IFRS period, after the introduction of IFRS, a higher EBIT growth increases earnings management.

This hypothesis is tested by the model:

$$DACC_{i,t} = \beta_0 + \beta_1 IFRS_t + \beta_2 \Delta EBIT_{i,t} + \beta_3 (\Delta EBIT \times IFRS)_{i,t} + \beta_4 ROA_{i,t} + \beta_5 LEV_{i,t} + \varepsilon_{i,t} \quad \ldots\ldots \text{model: 5}$$

RESEARCH METHODOLOGY AND DATA

Population, Sample and Data Collection Method

After the data has been corrected for outliers, the sample comprises using panel data from the year 2005 to 2018 of 20,704 firm-year observations of an available data from 791 Canadian firms based on the Modified Jones model. The Model use three independent variables to calculate the discretionary accruals. Some observations were deleted because these three terms were having less observation common. Table 2 shows the partitions of the observations per Industry. The data sources used in this study was secondary data, in the form of annual financial reports consists of all companies had filed financial statements under both Canadian GAAP prior to 2011 and IFRS beginning on or after January 1, 2011, sourced from the Toronto Stock Exchange (TSX) and SEDAR.

Table 2: Partitions of the observations per Industry.

Industry group	Freq.	Percent	Cum.
Agriculture	36	0.18	0.17
Construction	69	0.33	0.51
Finance	6,216	30.02	30.53
Manufacturing	2,733	13.20	43.73
Mining	8,552	41.16	84.89
Public	227	1.10	85.99
Retail	438	2.12	88.10
Services	1,286	6.21	94.32
Transportation	932	4.50	98.82
Wholesale	245	1.18	100.00

Total	**20,704**	**100**

Measurement of Variables

In this research, accrual earnings management is calculated using Modified Jones Models developed by Dechow et al. (1995). as follows:

a. $\mathrm{TACC_t} = \Delta\mathrm{CA_t} - \Delta\mathrm{Cash} - \Delta\mathrm{CL_t} + \Delta\mathrm{DCL_t} - \mathrm{DEP_t}$

where $TACC_t$=total accruals, which is calculated as firm net income minus cash flows from operations; ΔCA_t = Change in current assets in year t; $\Delta Casht$, ΔCL_t = Change in current liabilities in year t; ΔDCL_t= Change in short term debt included in current liabilities in year t; DEP_t= Depreciation and amortization expense in year t.

b. $$\frac{TACC_t}{A_{t-1}} = \alpha_1 \frac{1}{A_{t-1}} + \alpha_2 \frac{(\Delta REV_t - \Delta REC_t)}{A_{t-1}} + \alpha_3 \frac{PPE_t}{A_{t-1}} + \varepsilon_t$$

Where *TACCt* = Total accruals in year t divided by total assets in year t-1; Δ*REVt* =Delta revenue in year t; Δ*REC* = Delta receivable in year t; *PPEt* = Gross property plant and equipment in year t; *At-1* = Total assets in year t-1; *α1, α2*, and *α3* = Parameters; ε_t Residual in year t. Discretionary accruals can be calculated with the next formula:

c. $DACC_t = TACC_t - NDACC_t$

Where $NDACC_t$ = Non-discretionary accruals divided by total assets in yer t-1;
Where *DACCt* = Discretionary accruals for the firm in year t.

The other research variables are:

d. Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA was chosen because of its ability to measure the return of a company without it being misrepresented by debt. The Formula that often used to calculate the
Return on Assets = EBIT/ Lag total assets (EBIT/At-1)

e. Leverage (LEV) Total-debt-to-total-assets is a leverage ratio that defines the total amount of debt relative to assets. The Formula that often used to calculate the LEV is *Leverage = TL / TA*

f. ΔEBIT refers to the change in income before deduction of interest expense and income taxes between year *t* and year *t*-1, as indicators of income smoothing practices the growth rate of earnings before interest and taxes equation is: Δ*EBIT= (EBIT-EBIT-1)*

h. Earning Smoothing's (ES) I estimate income smoothing as the negative correlation between the change in a firm's discretionary-accruals proxy (Δ*DACC*) and the change in its pre-discretionary income as a (Δ*EBIT*). proxy for earnings management
ES= Corr (ΔDACC, ΔEBIT)

RESEARCH RESULTS AND DISCUSSION

Descriptive Statistics and Correlation Matrices

Descriptive statistics are presented in Tables 3 and 4, and the correlation results are presented in Table5. According to the results in table 3, the average total accruals are decreasing quite significant in the period after IFRS. Though, this finding is based on the total accruals and does not necessarily prove the same for the discretionary accruals. The summary statistics for the mean value of the non-discretionary accruals been decreased from 0.097 before IFRS and to (-0.105) after adopting IFRS. The mean value of the discretionary accruals before IFRS is 0.158 and

it is 2.91 while IFRS. This indicates that the discretionary accruals increased significantly after IFRS implementation. We can see the standard deviation for TACC and DACC before and after adoption IFRS are larger than the mean and unusually high. This indicates that each activity manipulation points are spread out across a large range of values. The may be the reason behind such large standard deviations is that in each year, the use of operational transactions to manipulate earnings would be significantly different among the companies. Some firms may manipulate earnings slightly while others may smooth earnings depending on operational transactions. Under this assumption, the standard deviation in each year would be very large and lead to the standard deviation of the total sample becoming unusually high too.

Table 3: Summary statistics for the proxies of earnings management. *TACC* = Total Accruals; *NDACC* = Non-Discretionary Accruals; *DACC* = Discretionary Accruals.

Variable		Obs	Mean	Std.Dev.
TACC	Pre-IFRS	1314	-63.232	258.543
	Post-IFRS	1679	-132.798	540.577
DACC	Pre- IFRS	1176	0.158	242.902
	Post-IFRS	1499	2.908	354.042
NDACC	Pre- IFRS	1176	0.097	5.809
	Post-IFRS	1499	-0.105	1.644

Table 4: Descriptive Statistics *other variables. LEV* = leverage*; ROA* = return on assets*;* Δ*EBIT* = difference of the earnings before interest rates and taxes; Δ*TA*= Δ Assets; Δ*TL*= Δ Liabilities

Variables	Obs	Mean	St.Dev
LEV	Pre-IFRS	2605	0.914	16.258
	Post-IFRS	2917	4.566	106.906
ROA	Pre-IFRS	2483	-0.137	4.098
	Post-IFRS	2792	2.797	7.461
ΔEBIT	Pre-IFRS	1474	15.832	354.016
	Post-IFRS	1792	26.798	350.789
ΔTA	Pre-IFRS	1880	681.357	6522.152
	Post-IFRS	1546	595.937	6854.347
ΔTL	Pre-IFRS	1948	488.396	5364.808
	Post-IFRS	1834	682.780	5597.418

As seen in Table4, for the period after the IFRS, the average value of LEV (4.566) is higher than before the IFRS (0.914) with standard deviation much higher than the mean (106.906). It can be concluded that has more variability in its mean. Increase in the average of LEV in the period after IFRS is happening due to the decrease in the average value of total assets and an increase in the value of total liabilities. The mean value for ROA after the IFRS (2.797)

and standard deviation (7.461) are significant bigger than before the adoption of IFRS (mean = -0.137, standard deviation = 4.098) indicating that increase in total assets and earnings before interest and tax quit big if compared with before the implementation of IFRS. The same happens with the average value of the ΔEBIT with standard deviation much higher than the mean in the period before and after the adoption of IFRS concluded that has more variability in its mean.

Table 5 reports the Pearson correlations among these variables. The table shows that IFRS adoption has a negative correlation with the DACC activities' manipulation proxies and all the control variables, except for ROA. The DACC activities manipulation proxies are also negatively correlated with the control variables except for ROA. Also, we can see a negative correlation between ΔEBIT and ΔDACC (-0.055) this indicate that there is an innate, un-managed income series and that management uses discretionary accruals to smooth earnings. Earning smoothing as another proxy for earnings management.

Table 5: Correlations. TACC = Total Accruals; NDACC = Non-Discretionary Accruals; DACC = Discretionary Accruals; LEV = leverage; ROA = return on assets; ΔEBIT = 1st difference of the earnings before interest rates and taxes.

Variables	TACC	NDACC	DACC	IFRS	LEV	ROA	ΔEBIT	ΔDACC
TACC	1.000							
NDACC	-0.003	1.000						
DACC	-0.001	0.068	1.000					
IFRS	-0.053	0.016	-0.038	1.000				
LEV	0.012	0.002	-0.037	0.034	1.000			
ROA	-0.027	-0.004	0.014	-0.018	-0.528	1.000		
ΔEBIT	-0.089	0.004	-0.002	0.001	-0.009	0.026	1.000	
ΔDACC	0.005	0.098	0.740	-0.008	-0.021	0.009	-0.055	1.000

Estimations of the Modified Jones model

In Table 6, the estimation results of the Modified Jones Model. Dependent variable is total accruals, which is defined as $\frac{TACC_t}{TA_{t-1}}$. The independent variables are: **α1** (TA_{t-1} = 1-year lag of total assets); **α2**(ΔREV = 1st difference of revenues or sales; ΔREC = 1st difference of receivables); **α3** PPE = property, plant, and equipment. Standard errors in parentheses.

Table 6: The estimation results of the Modified Jones Model

TACC_ta	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
α1	0.014	0.016	0.84	0.005	-0.018	0.046	***
α2	0.980	0.020	48.81	0.000	0.941	1.019	***
α3	-0.285	0.008	-36.01	0.001	-0.301	-0.270	***
Constant	0.199	0.123	1.61	0.107	-0.043	0.441	
Mean dependent var	-0.024	SD dependent var				9.820	
R-squared	0.582	Number of obs				2675	
F-test	1241.195	Prob > F				0.000	

**** p<0.01, ** p<0.05, * p<0.1*

The Coef in the table 6 is the regression coefficient for all three variables, so this is the part that the dependent variable changes because of a change in the independent variable. In short, this table shows that *β1* is 0.014, *β2* is

0.980, and β3 is -0.285. For example, this means that when the variable [ΔREV (*i,t*)-ΔREC (*i, t*)] /A (*i, t*-1) increases with 1, the dependent variable TA (*i,t*) / A (*i, t*-1) increases with 0.285. Both the total assets and the revenue minus the receivables have a positive influence on the total accruals, while the gross property, plant, and equipment has a negative influence on the level of the total accruals. The overall model was said to be significant, and all individual variables are. As is shown in table three, the variable 1/A (*i, t*-1) is significant since the value of 0.005 is smaller than 0.05. The other two independent variables are significant since 0.000 and 0.001 are both smaller than 0.05. and finally, the R^2 is high (58.2%), and this statistic defines the explanatory power of the model variables, i.e., they explain for 58.2% the variation in the total accruals. Obviously, this model is sufficient to estimate the discretionary.

Empirical Results

In this study, the analysis of H1 was performed by using Model 1 and 2. while the analysis of H2.H3 and H4 was performed by using the results of regression Model 3,4, and 5, respectively.

Table 7 and 8 Explanation of the discretionary accruals and of the abnormal discretionary expenses with (out) control variables. Dependent variable is discretionary accruals that is estimated by means of the Modified Jones model, which is defined as $DACC_t/TA_{t-1}$. The independent variables are IFRS = dummy variables with 0 the period before the introduction of International Financial Reporting Standards and 1 after the introduction. LEV = leverage; ROA = return on assets; ΔEBIT = 1st difference of the earnings before interest rates and taxes.

Table 7: Regression analysis for Model 1

DACC	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
IFRS	-0.376	0.247	-1.52	0.129	-0.860	0.109	
Constant	0.211	0.185	1.14	0.255	-0.152	0.573	
Mean dependent var		0.000	SD dependent var			6.347	
R-squared		0.001	Number of obs			2675	
F-test		2.312	Prob > F			0.129	

**** p<0.01, ** p<0.05, * p<0.1*

Table 8: Regression for Model 2

DACC	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
IFRS	-0.424	0.246	-1.72	0.185	-0.907	0.059	
LEV	0.060	0.010	5.77	0.000	0.040	0.081	***
ROA	0.032	0.020	1.64	0.102	-0.006	0.070	
ΔEBIT	0.000	0.000	-0.12	0.908	-0.001	0.001	
Constant	0.182	0.184	0.98	0.325	-0.180	0.543	
Mean dependent var		-0.002	SD dependent var			6.351	
R-squared		0.314	Number of obs			2671	
F-test		9.600	Prob > F			0.000	

**** p<0.01, ** p<0.05, * p<0.1*

It is observed from table 7, that the significance of the model is 0.000, which means that the model is significant and have an explaining power since 0.00 is less than 0.05. This is an important thing to keep in mind when the results are discussed.

The regression coefficient for IFRs, when the dependent variable is Discretionary Accruals, is -0.424. It is a negative coefficient, meaning the level of discretionary accruals expected to increase by 0.424 when the dummy variable IFRS increases by 1. But, besides this coefficient being negative, it is not significant since the corresponding P-value is 0.185, which is large than 0.05. The hypothesis 1 asserts that a positive association implies that after the adoption of IFRS, the use of earnings management has increased. However, the findings show, that insufficient evidence exists to suggest that a positive association exists between the use of earnings management and the introduction of IFRS from 2011 on, for the stock listed companies in Canada. Hypothesis 1 is rejected. Also, we can see that only 0.1 % of DACC can be predicted from the IFRS independent variables.

However, in table 8, based on the explanation of the discretionary accruals, proxies by discretionary accruals, by IFRS and the control variables, it is evident that the adoption of IFRS has not a differential effect it on the discretionary accruals, it is observed that that dummy variable IFRS after introducing the control variable, is still negative and have no significant effect on DACC. We can see also that 31.5 % of DACC now can be predicted from the IFRS control variables after the control variables leverage, ROA, and ΔEBIT been added to the regression. Also, In the output of table 8 we can see the only the control variable Leverage is significant on the dependent variable and the P-Value for the other control variables (ROA, ΔEBIT) are positive and greater than common alpha level of 5% which indicates that it is not statistically significant on the abnormal discretionary expenses. In other words, during the sample period 2005-2018, even though control variables leverage, ROA, and ΔEBIT are added to the regression, no differential effect of the introduction of IFRS on respectively the discretionary accruals is found. Consequently, no evidence is found to suggest that an association exists with the use of earnings management and the mandatory adoption of IFRS concerning stock-listed companies in Canada.

Table 9 illustrates the relationship between leverage, IFRS, and DACC, and the results indicate that and IFRS has a significant negative effect on DACC. The analysis of the results revealed that the Model 3 overall is highly significant. The regression coefficient for IFRS, when the dependent variable is Discretionary Accruals, is -0.487. It is a negative coefficient but not significant since the corresponding P-value is 0.054 larger than 5% level of significance. The regression coefficient for leverage variable is 0.050, which is positive and has a significant effect on DACC before the adoption of IFRS. After adoption the IFRS It is observed that the regression coefficient for the interaction variable (IFRS*LEV) is positive and has a significant effect since the corresponding P-value is 0.009, which is lower than 0.05. In other words, a higher Leverage causes an increase of the use of earnings management after the introduction of IFRS and vice versa. H2 is accepted.

Table 9: Regression for Model 3

DACC	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
IFRS	-0.487	0.252	-1.93	0.054	-0.982	0.008	*
LEV	0.050	0.097	-0.52	0.004	-0.240	0.139	**
IFRS*LEV	0.111	0.096	1.15	0.009	-0.078	0.300	**
ROA	0.030	0.020	1.53	0.126	-0.008	0.069	
ΔEBIT	0.000	0.000	-0.12	0.908	-0.001	0.001	
Constant	0.242	0.192	1.26	0.206	-0.134	0.618	
Mean dependent var		-0.002	SD dependent var			6.351	
R-squared		0.015	Number of obs			2671	
F-test		7.946	Prob > F			0.000	

**** p<0.01, ** p<0.05, * p<0.1*

Table 10 shows that this model has a significant explaining power since the significance is 0.00. However, *while the overall model was said to be significant, not all individual variables are. As is shown in table 10, the variables (ROA, ΔEBIT beside IFRS) are not significant.* The R^2 for this model is only 0.114, which means that approximately 11.4% of the discretionary accruals is explained by the model independent variables under which the financial report is made. This means that the explaining power of this model is low. There were no significant outliers in the data that could bring the noise to the results, so that is not the reason that the models' R^2 is so low.

The analysis of the results revealed that the regression coefficient for moderation effect of the IFRS on the relationship of ROA and earnings management (DACC) is 0.024 positive *this means that when the variable* (IFRS*ROA) increases with 1, the dependent variable DACC increases with 0.042. *However,* the interaction variable is not significant since the corresponding P-value is 0.599, which is bigger than the 5% level. It is observed that there is no significant effect of the interaction of ROA with the dummy variable IFRS. In other words, a higher ROA has no significant effect on earnings management before and after the introduction of IFRS. H3 is rejected.

Table 10: Regression for Model 4

DACC	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
IFRS	-0.417	0.247	-1.69	0.091	-0.901	0.067	*
LEV	0.062	0.011	5.72	0.000	0.041	0.083	***
IFRS*ROA	0.024	0.046	0.53	0.599	-0.066	0.114	
ROA	0.013	0.040	0.33	0.739	-0.066	0.093	
ΔEBIT	0.000	0.000	-0.12	0.909	-0.001	0.001	
Constant	0.177	0.185	0.96	0.339	-0.185	0.539	
Mean dependent var		-0.002	SD dependent var			6.351	
R-squared		0.114	Number of obs			2671	
F-test		7.733	Prob > F			0.000	

**** p<0.01, ** p<0.05, * p<0.1*

Again, table 11 shows that this model has a significant explaining power since the significance is 0.00. However, *while the overall model was said to be significant, not all individual variables are. In the table, the regression coefficient for all three variables [(IFRS*ΔEBIT), ROA, ΔEBIT] is positive, and this means the part that the dependent variable changes because of a change in the independent variable. Only the accounting principles IFRS has a negative coefficient, so when IFRS increases by 1, the dependent variable DACC decrease by 0.427.* The interaction variable between the IFRS and the delta EBIT should have a positive *regression coefficient* and has no significant effect on the DACC.In other words, a higher ΔEBIT has not caused an increase in the use of earnings management after the introduction of IFRS. H4 is rejected.

Table 11: Regression for Model 5

DACC	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
IFRS	-0.427	0.247	-1.73	0.084	-0.911	0.057	*
LEV	0.060	0.010	5.77	0.000	0.040	0.081	***
ROA	0.032	0.020	1.64	0.102	-0.006	0.070	
IFRS*ΔEBIT	0.000	0.001	0.22	0.829	-0.002	0.002	
ΔEBIT	0.000	0.001	-0.25	0.806	-0.002	0.001	
Constant	0.184	0.185	1.00	0.320	-0.178	0.546	
Mean dependent var		-0.002	SD dependent var			6.351	
R-squared		0.014	Number of obs			2671	

F-test	7.687	Prob > F	0.000
Akaike crit. (AIC)	17428.176	Bayesian crit. (BIC)	17463.517

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

SUMMARY AND CONCLUSION

This study investigates the impact of IFRS on earnings management post- IFRS adoption and in relation to other variables of 791 Canadian publicly listed firms. The study employed the Modified Jones model as the basis of statistical analysis. It became clear that the mandatory adoption of IFRS by Canadian companies has no significant influence on earnings management and has not produced any meaningful impact on the independent control variables at 5% level of significance except for the variable Leverage, there was a significant influence namely, the higher the Leverage, the higher the level of earnings management. In addition, to expand understanding of the relationships among the variables in the model and allows more hypotheses to be tested, I study the interaction between independent control variables and IFRS to examine the effects on earnings management post- IFRS adoption. The study reveals that, the Modified Jones model is sufficient to estimate the discretionary accruals, and that all hypotheses have been rejected, except for H2 based. A higher LEV causes an increase in the use of earnings management after the introduction of IFRS and vice versa.

Limitations of the study

As with every research, a couple of limitations arise at this point. These will be discussed below. The first limitation is recognized by Lippens (2010). The focus of this research is only on accruals-based earnings management. However, this is not the only way of managing earnings. Real earnings management is another opportunity, but this is hardly measurable. Still, it could be possible that the conclusion about no change in the level of earnings management is no longer valid when real earnings management has been considered. The second limitation is with respect to the Modified Jones model. In the regression formula for estimating the nondiscretionary accruals, all variables of the year (t) are scaled by the total assets of year (t-1). This gives a problem for the year 2011, since the main variables such as revenue and property, plant and equipment are valued under IFRS methods, while the assets with which the variables are scaled are valued under Canadian GAAP method. A consequence is that this variable might be less valid when the numerator and the denominator of one number are calculated under different rules, especially when the value differs a lot under both standards.

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