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Maryam Firoozi, Michel Magnan, Steve Fortin

Série Scientifique/Scientific Series

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# **Board Diversity and Financial Reporting Quality**\*

Maryam Firoozi<sup>†</sup> Michel Magnan<sup>‡</sup>, Steve Fortin<sup>§</sup>

#### **Abstract**

The diversity of boards of directors (or lack of thereof) is currently attracting significant attention from regulators and institutional investors all over the world, with some jurisdictions either imposing conditions (e.g., quotas on gender diversity) or requesting disclosure of measures taken to enhance diversity. Diversity is seen as providing boards with access to a wider pool of competencies, experiences and perspectives, which should be beneficial to board effectiveness. In this study, we investigate how a firm's financial reporting quality relates to two dimensions of board diversity: geography and gender. Geographical diversity reflects directors' geographical location relative to corporate headquarters. Our results show that financial reporting quality, as measured by the level of abnormal accruals and restatements, is lower for firms with independent directors who are geographically spread out than for firms with less geographically diverse boards. In addition, firms with more geographic diversified audit committee members have lower financial reporting quality. Moreover, we do not find any significant relationship between board gender diversity and financial reporting quality. Our findings hold after controlling for endogeneity and also alternate explanations. These findings suggest that firm-specific effects from board diversity do differ and are conditional upon the facet of the diversity being considered. Our results also indicate that regulators may need to take a more comprehensive approach if they push for board diversity.

**Keywords**: Board of Directors, Geographical Diversity, Gender Diversity, Financial Reporting Quality

#### Résumé

Depuis quelques années, la diversité des conseils d'administration (ou l'absence de diversité) constituent une préoccupation de plusieurs autorités réglementaires ou politiques, lesquelles sont parfois intervenues en imposant des conditions (p.ex., quotas) ou en requérant une divulgation exhaustive des mesures entreprises afin d'accroître la diversité d'un conseil. Cet intérêt pour la diversité découle de la prémisse qu'elle donne accès pour un conseil à un plus grand bassin de compétences, d'expériences et de perspectives, lequel amener celui-ci à être plus performant. Dans cette étude, nous examinons comment la qualité de la divulgation financière d'une entreprise est reliée à deux facettes de la diversité : géographique et de genre. La diversité géographique découle de la proximité (ou distance) entre la résidence d'un administrateur et l'endroit où est situé le siège administratif de l'entreprise. Nos résultats indiquent que les entreprises ayant une plus grande proportion d'administrateurs indépendants résidant loin du siège administratif de l'entreprise affichent des résultats financiers de moins bonne qualité, tel que capté par les accruals discrétionnaires et la fréquence des redressements comptables. En outre, il semble que la diversité de genre n'a pas d'effet sur la qualité des résultats financiers. Différentes analyses de sensibilité donnent des résultats similaires. Somme toute, il semble qu'il soit nécessaire de voir la diversité de manière plus globale car son effet est conditionné par la facette analysée. En outre, les pressions des instances de réglementation afin d'augmenter la diversité devraient tenir compte de sa nature multi-dimensionnelle.

**Mots clés** : conseil d'administration, diversité géographique, diversité de genre, qualité des résultats financiers

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# Introduction

Our study investigates the impact of board diversity on a key aspect of boards of directors' decision-making, i.e., financial reporting quality. Within the context of our paper, board diversity is defined in terms of geographical diversity and gender diversity while financial reporting quality relates to abnormal accruals management and accounting restatements. The motivation for the study is the call by several stakeholders (regulators, social or ethical investors and academics) for greater diversity in the boards of directors of publicly-traded organizations. Such demands are consistent with the path taken by several countries which have established quotas for women representation on their boards (e.g., Norway, France and Spain). In addition, Australia, Belgium and France have adopted policies mandating that publicly-traded firms disclose their diversity programs or, if such a policy does not exist, provide justification for its absence. Similarly, the U.S. adopted a policy in 2010 mandating public firms to disclose their diversity policies. Following the U.S. lead, Canada adopted a comply-or-explain approach to gender diversity in 2014.

Despite such increased institutional and regulatory pressures for increased board diversity, evidence so far remains mixed. For instance, the impact of board geographical diversity on disclosure quality may be either positive or negative. On the one hand, the geography literature documents that access to information is an advantage for local investors, creditors and analysts (e.g. Ayers et al. 2011, Arena and Dewally, 2012, O'Brien and Tan, 2015). Due to proximity, local stakeholders have a lower cost in acquiring information about a firm, which helps them in their decision-making. Similarly, local directors (i.e., who reside close to a firm's headquarters, i.e., same city or region) have access to local information, which in turn

helps them perform their monitoring and advising roles more effectively (Alam et al. 2014). Local directors also have the opportunity to acquire information about a firm from channels such as the local media and face-to-face communication with employees, suppliers and executives (Coval and Moskwitz, 1999, 2001, Wan, 2008). But, for non-local directors, the cost of acquiring information is greater because of the higher cost of attending meetings and visiting firms' locations (Masulis et al., 2012). Based on this explanation, a diversified board in terms of geography may not be able to monitor managers' disclosure policies since directors who are far from firms do not have access to enough information.

On the other hand, a diversified board can contribute to better disclosure quality for the following reasons. Non-local directors are typically independent from managers since they do not have day-to-day interactions and social connections with the management team (Coval and Moskwitz, 1999, 2001., Masulis et al. 2012). Therefore, they may better monitor managers' disclosure' policies. In addition, for a diversified board, access to information is costly, and as such, they rely more on public disclosure (Armstrong et al, 2010). Thus, firms with a diversified board may have better disclosure quality to fulfill directors' demand for information.

As for the effect of board gender diversity on financial reporting quality, previous research relies on the different characteristics of men and women. Women are considered more independent decision makers, less tolerant of unethical behaviour and more risk averse (Adams and Ferreira, 2009, Srinidhi et al., 2011). This in turn, may help women to be more effective in monitoring and oversight of managers' decision making. With respect to gender diversity, some studies report a positive relationship between the presence of women on a board and financial

reporting quality (e.g. Srinidhi, Gul and Tsui, 2011, Gul, Srinidhi and Ng, 2011). In contrast, some prior research documents no relationship between the two. (e.g. Sun, Liu and Lau, 2011).

However, a Canadian setting has unique features in terms of industry concentration, ownership structure and market for directors which are likely to affect its gender diversity. First, the Canadian economy is highly concentrated in Oil and Gas and Mining industries which are male-dominated. Second, there are many family-owned firms in Canada. Lastly, Canada relies heavily on the U.S. to supply its board of directors, since the Canadian board of directors' market is not as developed as the U.S. In this regard, based on Spencer Stuart Board Index 2015, one-third of women nominated to the boards of CSSBI 100 companies reside outside Canada and all of them are from the U.S. (Spencer Stuart Board Index Canada, 2015).

Our sample comprises 1131 firm-year observations from Canadian firms during the period between 2008 and 2012. We choose Canada to investigate the effect of diversity on financial reporting quality for several reasons. First, with respect to geographical diversity, Canadian firms disclose the residential addresses of their directors in proxy circulars (Addresses are at city or province levels). This data availability provides an opportunity to investigate the geographic diversity of directors and how it impacts firm performance. Second, directors of Canadian firms are more geographically diversified, measured by their business addresses, than U.S. firms. While U.S. firms nominate directors regionally, Canadian firms nominate board members intra-regionally. This is mainly due to a less-developed directors' market in Canada than in the U.S. (O'Hagan and Green, 2004). O'Hagan, Rice, and Green (2008) also find that Canadian firms hire board members from more geographically diverse areas, as measured by the university attended by board members, than U.S. firms that prefer to nominate board members

who graduated from universities located in their regional areas. Third, as the French language is the formal language of Quebec, this introduces another dimension of board geographical diversity among Quebec firms vs. the rest of Canada. Along the same lines, firms located in Alberta may have a different board composition because of their focus on oil and gas.

Descriptive statistics show that in terms of geographical diversity, firms located in Quebec and Alberta draw directors from a more concentrated geographic area than other Canadian firms. As for the gender dimension, only 30% of the firms in our sample have at least one female independent director. In addition, 19% of firms have at least one female director on their audit committee. 1 Quebec has the highest percentage of independent female directors and Alberta has the lowest percentage (9% versus 4%). In the next step, we measure financial reporting quality using abnormal accruals and also restatements. We define local directors as directors who reside in the same province as where the firm is headquartered. Results of the multivariate analysis show that the higher the proportion of local directors (audit committee members), the lower the level of absolute abnormal accruals, which implies higher financial reporting quality. In addition, the likelihood of restatement is lower for firms with a higher percentage of independent local directors (local audit committee members). These results are consistent with the argument that directors who live close to a firm's headquarters end up being more effective at monitoring their managers' decision-making regarding financial reporting quality. With respect to gender diversity, we do not find any significant relationship between the presence of women on the board and financial reporting quality. Our results hold after controlling for endogeneity and alternate explanations.

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<sup>&</sup>lt;sup>1</sup> Compare to the 63% and 37% documented in a U.S. study (Srinidhi et al., 2011).

We consider that the study contributes to four streams of research. First, this study provides evidence regarding a new dimension of board diversity which has rarely been explored before, i.e., geographic diversity (Alam et al., 2013, 2014, 2015). It also adds to gender diversity literature by showing that the effect of gender diversity may differ conditional upon the setting which is tested. Our results show that gender diversity is not associated with improvement in financial reporting quality. Possible reasons for this finding include, among others, the fact that women do have other attributes (such as residence, expertise, etc.) beyond their gender and that such attributes underlie their behavior. Second, our study adds to the board diversity literature by providing evidence that the effects of different aspects of board diversity on financial reporting quality do differ and regulators may need to take this in to consideration when they push for diversity. Third, our study contributes to the literature that investigates the relationship between board composition and corporate transparency (e.g. Armstrong et al. 2010), which mostly focuses on the statutory diversity of directors (directors' independence) and its effects on the information environment. We investigate a new dimension of demographic diversity, i.e., location of directors, and its impact on financial reporting quality which has not been previously explored. Finally, the paper adds to the geography literature and its effects on stakeholders' decision-making by providing evidence that proximate directors do a better job at monitoring managers, similar to proximate institutional investors and proximate analysts (e.g. Ayers et al, 2011, O'Brien and Tan, 2015).

The next section provides an overview of the literature as well as hypothesis development. Then, sample and methodological choices are presented and discussed. The exposition of results then follows. A discussion and conclusion close the paper.

# Literature Review and Hypothesis Development

# Diversity as a Multi-Dimensional Reality

Board of directors play an important role in monitoring and advising managers and aligning their interests with the interests of shareholders (e.g. Armstrong et al, 2010). In fact, boards of directors, as corporate governance mechanisms, affect managers' decision-making regarding different aspects of a firm's performance such as financial reporting (Srinidhi et al, 2011). To understand the factors that affect directors' ability to perform these roles, there is now a line of studies investigating how directors' characteristics, either mandated (e.g., independence) or not (age, experience, gender), affect their performance (e.g. Armstrong et al, 2010). Up until now, most research focuses on the mandated facets of board diversity such as independence (e.g. Klein, 2002). For example, firms with a higher percentage of independent directors have a superior earnings quality and a better information environment (e.g. Armstrong et al, 2010).

Less is known about the effects of demographic diversity on directors' performance. Within that context, how gender and ethnicity influence board decision-making has attracted the most attention (e.g. Adams and Ferreira, 2009). The underpinnings of such a trend usually rest on two arguments. First, most Western societies have enacted charters and laws stating that men and women have equal rights and opportunities and that any discrimination on the basis of gender is thus prohibited (e.g. Article 119 of the European Economic Community Treaty, 1957). It then follows that boards of directors, the critical governance mechanism in most private sector

<sup>2</sup> Board diversity encompasses both "statutory" and "demographic" diversity. Statutory diversity "is mandated by law or best practices." (Ben-Amar et al. 2013, p. 85). However, demographic diversity deals with directors' characteristics that may affect their statutory diversity and, as a result, their performance (Ben-Amar et al. 2013).

organizations, should reflect surrounding societal values and promote the status of women. Second, there is extensive research in management and psychology which suggests that diverse teams tend to be more effective and better performing (e.g. Erhardt, Werbel and Shrader, 2003). Such evidence is then transposed to gender and ethnic diversity at the board level. However, there is no consensus as to the effect of board gender diversity on firm performance.

However, diversity is a multi-dimensional concept. For instance, U.S. Securities and Exchange Commissioner Luis A. Aguilar states that "there still remains a need to highlight the importance of diversity in the boardroom. Diversity can mean variety of thoughts, geography, age, career experience as well as the more traditional categories of gender and ethnicity": (SEC Commissioner, Luis A. Aguilar, 2010). Similarly, Pamela Jeffery, founder of the Canadian Board Diversity Council, also observes that: "...directors do not understand what constitutes diversity on a board." Having a single female director, she argues, does not make a board diverse." (*The Globe and Mail*, October 21, 2010). The Institute of Corporate Directors, Canada's leading membership association of corporate directors, recognizes and actually encourages consideration of diversity in a comprehensive manner by stating that board diversity "defined as gender, ethnicity, age, business experience, and geographic background, can contribute to better corporate governance:"

The geographical dimension of board diversity has been explored in few studies, most likely due to a lack of data about the residence of directors (Alam, Chen, Ciccotello and Ryan, 2013, 2014, 2015). This aspect may be even more important than gender and ethnicity since many firms are now seeking directors who live far away from their headquarters. Corporate

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https://www.icd.ca/getmedia/6520e80b-add0-4549-affc-70eb42a11c0e/2011 BoardDiversity EN.pdf.aspx

expansion and globalization underlie the shift but also improvements in technology and transportation, which in turn allow directors to perform their duties even if they do not live in the proximity of a firm (Alam et al, 2014). Secondly, geographic diversity may affect other dimensions of diversity such as gender and ethnicity. The reason is that this dimension is directly related to information accessible to directors, which in turn may affect their performance when it comes to monitoring and advising managers (Alam et al, 2014). Even a female director or a minority member's effectiveness on the board is directly based on how much information they have access to and how independent they are. These two key factors are directly related to the distance from a firm (Alam et al, 2014).

# Geographical Diversity

Geographical Diversity and Decision-Making by Market Participants

In contrast to prior research in corporate governance, which completely disregards the geographic diversity's potential influence on board' effectiveness and actions, geography is an important factor underlying decision-making by important stakeholder groups such as investors and analysts. For instance, investors typically prefer to invest in local firms and, on average, earn higher returns from such investments compared with investments in non-local firms (Ivkovic and Weisbenner, 2005). Mutual funds invest more in local firms as well and earn abnormal returns especially when investing in local small and leveraged firms (Coval and Moskwitz, 1999, 2001). The documented local bias is attributed to the information advantage that local investors hold against non-local investors. Local investors have the opportunity to acquire information directly

from employees, managers and suppliers and they may have social ties with executives that give them an information advantage over non-local investors (Coval and Moskwitz, 1999, 2001).

In addition, local investors, due to their information advantage over non-local investors, are able to fulfil their monitoring role over management more effectively. Ayers et al. (2011), using a sample of firms covering the 1996-2008 period, document that local institutional investors are better monitors than non-local ones. More specifically, firms with a higher percentage of local institutional investors have less financial reporting discretion, as measured by abnormal accruals. Ayers et al. (2011) attribute this finding to the cost of acquiring information, which is lower for local institutional investors. Local institutional investors attenuate managers' propensity to engage in opportunistic financial reporting, especially for firms with more investment opportunities. Similarly, Chhaochharia, Kumar and Niessen-Ruenzi (2012), find that firms with high local institutional ownership have better corporate governance. They are more profitable, have more independent directors, less earnings management and less option backdating. Also, they are less likely to be a target of class action lawsuits. Local institutional investors are more effective in monitoring management through mechanisms such as introducing shareholder proposals, reducing CEO compensation and increasing CEO turnover. The monitoring power of local institutional investors arises from their access to more private information through formal and informal daily interactions with employees and managers (Chhaochharia et al., 2012).

A similar local information advantage also exists for equity analysts. O'Brien and Tan (2015) provide evidence that analysts are 80% more likely to cover a local firm. In addition, local analysts begin to cover local firms one to three weeks earlier than non-local ones. Molloy

(2005) documents that earnings forecasts issued by local analysts are more precise and have a higher impact on the market, especially for firms located in remote areas. Hence, it does appear that proximate analysts have an information advantage over other analysts.

Local information advantage also has an effect on creditors' decisions. Arena and Dewally (2012) find that firms located in rural areas and small cities have a higher cost of debt and are less able to attract large underwriters and lending banks. Consequently, rural firms borrow from the same local banks repeatedly because of this information disadvantage. In sum, stakeholders located in proximity to a firm have access to information through channels which are not accessible to stakeholders who are located far from a firm.

Geographical Diversity and Corporate Governance: Does the Location of Directors Matter?

As for the geography of directors, due to a lack of data for the residential addresses of directors there are few studies that examine the effects of the geographical diversity of directors on their performance. Therefore, it is not clear whether board geographical diversity has a negative or positive impact on firms' financial reporting quality.

Evidence provided by Wan (2008) shows that local directors hold an information advantage over non-local ones as reflected in their trading behaviours. However, it appears that they are not effective monitors on managers. He has collected the data for the locations of directors using the Thomson Reuters Insider Data (Form 144), but this database only provides the addresses of directors who have traded, and in most of the cases the addresses happen to be their business addresses. Alam et al. (2014), using the residential addresses of more than 4000 directors in the U.S., investigate the determinants of nominating non-local directors. They

document that firms have more non-local independent directors when board members need less of the firm's specific information in their decision-making. Alam et al (2015) investigate the effect of SOX on the distance between directors and firm' headquarters. They find that after SOX the average distance between directors sitting on monitoring committees and firm' headquarters has increased and this in turn has caused directors to rely more on public information which is evident in relying more on stock based compensation. They argue that this in turn may give managers incentive to manage earnings which is reflected in higher discretionary accruals. In the same vein, Masulis et al. (2012) examine the effects of foreign directors on U.S. firms. They find that firms with foreign directors exhibit lower performance and are more likely to have earnings restatements. Nevertheless, the result of the Masulis et al. (2012) study is hard to interpret when it comes to geography, as foreign directors may not be effective monitors either because they are located far away (geography-based information advantage argument) or because of their non-familiarity with U.S. regulations and the business environment.

# Geographic Diversity of Directors and Financial Reporting Quality

The impact of board geographical diversity on a firm's financial reporting quality is complex. On the one hand, a diversified board may be associated with better financial reporting quality. The reason for this is that non-local directors may be more independent, due to their direct and indirect rare interactions in daily life with managers (Coval and Moskwitz, 1999, 2001., Masulis et al. 2012). Such distance may help them to monitor managers' decision-making, including disclosure policies, more soundly. In addition, due to the higher cost of gathering

information for non-local directors, they may rely more on public disclosure to fulfil their monitoring and advising roles (Armstrong et al, 2010). Therefore, non-local directors have a higher demand for transparency which may lead to better financial reporting quality:

H1a: There is a positive relationship between board geographic diversity and financial reporting quality of firms.

On the other hand, a geographically diversified board may have a negative effect on financial reporting quality. Directors may not be able to acquire information about a firm because of their diversified locations, since they do not have the day-to-day social interactions with the local community to acquire soft information about the firm (Coval and Moskwitz, 1999, 2001). In addition, attending meetings and visiting a firm's location are costly for them (Masulis et al. 2012). Therefore, they may not be able to monitor disclosure policies due to a lack of information. Thus, the relationship between board geographic diversity and financial reporting quality may be negative:

H1b: There is a negative relationship between board geographic diversity and financial reporting quality of firms.

# Gender Diversity

Board Gender Diversity and Financial Reporting Quality

There is extensive research on the effect of board gender diversity on different aspects of firm performance including financial reporting quality. However, the results are mixed so far.

For instance, Ye, Zhang and Rezaee (2010) do not find any significant relationship between top executives gender diversity and earnings quality in a Chinese setting. Along the same line, Sun, Liu and Lau (2011) do not find any significant association between presence of female directors on the audit committees of U.S. firms and earnings management, measured by abnormal accruals. In contrast, Srinidhi et al., (2011) find that presence of female directors on a board is associated with higher earnings quality in a U.S. setting. In addition, Gul et al., (2011) find that gender diverse boards are associated with higher stock price informativeness.

Alam et al (2013) find that female directors are clustered in major metropolitan areas in the U.S. and this in turn, causes women to live further than men relative to a corporate headquarters. They also find that firms with female directors rely more on stock price for CEO compensation and CEO turn over. They argue that firms with female directors are tougher monitors not because of gender difference explanation, but due to their higher distance to a firm location. They also find a positive stock price reaction when a women who lives close to a company is appointed on a board.

Gender diversity literature is based on the idea that women bring different characteristics to the board which in turn make them better in monitoring managers' decision making. As argued by Srinidhi et al., (2011), women are more independent in decision-making, less tolerant of unethical behaviour and they take lower risks. This in turn may help them to be better monitors over managers' decision-making including financial reporting quality.

The mixed results regarding the effect of board gender diversity may be due to the fact that these studies have been done in different time frames as well as in different countries with different governance mechanism at firm and country levels. Thus, generalization of findings

from one setting to another may not be appropriate. As argued by Alam et al., (2013) it may also be due to women's distance to firm locations. Accordingly, we frame our third hypothesis in null form:

H3: There is no relationship between board gender diversity and financial reporting quality.

# Methodology

# Setting

Four reasons underlie the decision to choose Canadian firms to investigate board diversity and its effect on firms' disclosure quality. First, Canadian firms disclose the residential addresses of their directors in proxy circulars, as it is mandated by securities markets regulators. Secondly, the geography of Canada is unique: Canada is a wide country and, being a neighbour to the U.S., Canadian firms have access to a rich pool of directors beyond Canada's borders as both countries share a common language (English) and similar business practices. This in turn, helps Canadian firms have a geographically diversified board. For example, O'Hagan and Green (2004) document that Canadian boards are more diversified than U.S. boards. U.S. firms nominate directors regionally, but Canadian firms nominate directors intra-regionally. In the same vein, O'Hagan et al. (2008) document that Canadian firms are more geographically diversified than U.S. firms, measured by the university attended by directors. Third, within Canada there is the province of Quebec, where French is the primary language of business. The language may contribute to the decision by some Quebec firms not to nominate board members from outside Quebec due to language distance. Previous research shows that firms nominate

outside directors when information asymmetry between insiders and outsiders is low (Armstrong et al. 2010). Therefore, Quebec firms may prefer to nominate directors from Quebec because of information asymmetry associated with language. Also, due to this information asymmetry, non-Quebec directors may not be willing to sit on the board of Quebec firms since information asymmetry associated with language reduces their access to information. Therefore, firms located in Quebec may have a different geographic diversity than firms located in the rest of Canada. In addition, Alberta is the location for almost all oil and gas firms in Canada which provides a unique pool of directors for firms located in Alberta from which to choose. This variation provides an appropriate setting to investigate the effects of geographic diversity on the financial reporting quality of firms. Fourth, as for the gender diversity, the corporate governance mechanisms in Canada are different compare to the U.S. Ownership structure is different in Canada due to the presence of family firms compare to the U.S. In addition, Canadian economy is mainly dependent on Oil and Gas and Mining industries which are mainly male-oriented. Finally, Canada board of directors market is not as developed as the U.S. and it is dependent on U.S. board of director market to fulfill its diversity policies.

# Sample

The sample comprises Canadian firms in Compustat for the fiscal years ending 2008 to 2012. We start with Canadian firms in Compustat for the fiscal year 2010. Then, we eliminate firms in financial industries (SIC-Code 6021-6999), incorporated outside Canada and firms with headquarters outside Canada. We also exclude firms on the Venture Toronto Stock Exchange since they are small and are subject to different filing requirements. We also eliminate

investment trusts since they have different tax and dividend regulations. Also, 481 observations are removed due to a lack of data for financial variables in Compustat. Small firms (with stock market capitalization below \$10 million) are excluded too. Eleven firms with negative equity are excluded as well. Finally, 141 firms are excluded as there are fewer than six observations in their industries for which to calculate abnormal accruals.

Next, we collect governance data from proxy statements. Data from Annual information forms and proxy circulars filled by Canadian companies are from SEDAR. For missing information we use 'The Directory of Directors' which is a database including the personal information of directors in Canada. For 56 firms, the data from proxy circulars is not complete; therefore we eliminate them from the sample. Lastly, there are 260 firms for year end 2010 with complete data. Then, we collect the data for these firms in 2008, 2009, 2011 and 2012. We also collect restatement data from Audit Analytics Canada. In total, the sample consists of 1131 firm-year observations. Table 1 shows the sample selection process.

# [INSERT TABLE 1 ABOUT HERE]

Table 2 shows the distribution of the sample based on industry and location. In a few cases where the headquarters and executive office of a firm are located in different cities, we choose the executive office, since board meetings are usually held in the executive office. 34% of the firms are headquartered in Ontario, 28% in Alberta, 19% in British Colombia and 14% in Quebec. The remaining 5% of the firms are located in other provinces. As for industry distribution, 24% of the firms are in the oil and gas industry from, with 91% of them being

located in Calgary. Twenty-three percent of the firms are in the metal mining industry, from which 44% are located in Ontario and 38% in British Colombia.

# [INSERT TABLE 2 ABOUT HERE]

# Measurement of Board Geographic and Gender Diversity

The variable of interest for board geographical diversity is based on the residential addresses of directors. For each firm, we calculate the proportion of directors who live inside the province in which the headquarters are located. The second measure is the proportion of independent directors who live inside the province. The third measure is the proportion of audit committee members who live in the same province where the headquarters are located. This measure is a better proxy of the geographical diversity of directors for this study, since we investigate the effects of board composition on financial reporting quality, an outcome for which the audit committee plays an important role. As a final measure we use a dummy variable equal to one when all audit committee members live in the same province where the headquarters is located and zero otherwise. We also use three dummy variables to capture geographical diversity. The first one equals to one if the proportion of directors who live inside the province in which the headquarters are located is higher than the mean of the sample, zero otherwise. The second dummy variable is equal to one if the proportion of independent directors who live inside the province is higher than the mean of the sample, zero otherwise. Finally, the third dummy

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<sup>&</sup>lt;sup>4</sup> We use this measure since percentage of audit committee members living in the same province where the headquarters is located is clustered at 0%, 33%, 67% and 100%. So using a dummy variable will better captures this variable than a continuous variable.

variable equals to one if the proportion of audit committee members who live in the same province is higher than the mean of the sample, zero otherwise.

To measure gender diversity, we use six proxies. The first three measures are dummy variables. The first dummy variable is equal to one if there is at least one female director on the board and zero otherwise. The second dummy variable is equal to one if there is at least one female independent director on the board and zero otherwise. And the third dummy is equal to one if there is at least one female director on the audit committee and zero otherwise. We also use three other measures for gender diversity: The percentage of female directors (percentage of independent female directors) on the board and the percentage of female directors on the audit committee.

# Measurement of Financial Reporting Quality

We use two measures for financial reporting quality; abnormal accruals and probability of restatements.

#### Abnormal Accruals

The accrual model is based on Dechow and Dichev, 2002 model. We also control for change in sales revenue and property, plant and equipment suggested by McNichols (2002).

$$\begin{split} \frac{\mathrm{TA_{ij}}}{\mathrm{ASSET_{ijt-1}}} &= \beta_0 + \ \beta_1 \frac{\mathrm{CFO_{ijt-1}}}{\mathrm{ASSET_{ijt-1}}} + \beta_2 \, \frac{\mathrm{CFO_{ijt}}}{\mathrm{ASSET_{ijt-1}}} + \, \beta_3 \frac{\mathrm{CFO_{ijt+1}}}{\mathrm{ASSET_{ijt-1}}} + \beta_4 \frac{\Delta REV_{ijt}}{ASSET_{ijt-1}} \\ &+ \beta_5 \frac{PPEG_{ijt}}{ASSET_{ijt-1}} + \varepsilon_{ijt} \end{split}$$

Where TA *is* the firm's total accruals in industry two-digit code measured as change in non-cash current assets minus change in current liabilities minus the current portion of long-term debt minus depreciation and amortization expense.  $ASSET_{ijt-1}$  is the firms'i total assets in year t-1 and two-digit SIC code j. CFO<sub>ijt</sub> is operating cash flow of firm i in year t and two-digit SIC code j.  $AREV_{ijt}$  is change in sales of firm i in year t and two-digit SIC code j.  $PPEG_{ijt}$  is gross value of the property, plant, and equipment of firm i in year t and two-digit SIC code j. We winsorize all the variables entering the models at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to prevent the effect of outliers.

Therefore our first models is

 $Accruals = \beta_0 + \beta_1 Geography + \beta_2 Gender + \beta_3 Control Variables$ 

Accruals is the absolute abnormal accruals calculated based Dechow and Dichev, 2002 model. Geography is a measure of geographical diversity and gender is a measure of gender diversity. We also control for variables that have been shown to be associated with abnormal accruals in previous studies (e.g; Filip et al, 2015, Srinidhi et al., 2011). All variable are defined in table 3.

#### Restatement

Using accrual quality as a measure of financial reporting quality may not take in to account the costing method used in the oil, gas and mining industries, considering almost half of the sample firms are in these industries. As a consequence, we also use restatement as another measure for financial reporting quality to ensure our results are robust vis-à-vis an alternate measure. If more diverse boards are perceived to have more monitoring power on managers'

decision-making about disclosure quality then we expect to find lower probability of restatement for firms with a greater percentage geographical and gender diversity.

For Restatement we estimate the following model

 $Restatement = \alpha_0 + +\alpha_1 Geography + \alpha_2 Gender + \alpha_3 Control variables$ 

Restatement is a dummy variable equal to 1 if a firm has restatement for year t, and zero otherwise. All variables are defined in table 3.

# **Results**

# **Descriptive Statistics**

Table 3 shows the definition of the variables and Table 4 presents descriptive statistics for the whole sample and is also based on each province.

[INSERT TABLE 3 ABOUT HERE]

[INSERT TABLE 4 ABOUT HERE]

Table 4 part A presents the descriptive statistics for the governance variables for the sample. Since 95% of the firms in our sample are located in Alberta, Ontario, British Colombia and Quebec, we present the comparison between these four provinces here. The mean of board size is 7.78 in the sample, which is almost the same across the four provinces except for Quebec which has an average of 8.44. The percentage of shares owned by institutional investors has a mean of 10.38%. British Colombia has a minimum average of 7.10% among the provinces and

Quebec has the highest mean at 11.85%. The percentage of local institutional investors has a mean of 3.65%. British Colombia, with 1.14% local institutional investors, has the minimum average and Quebec, with 6.29%, has the highest average of local institutional investors among the provinces. The mean of the percentage of the shares owned by family members or individuals is 10.68%. Again, Quebec has the highest level of family ownership (17.78%) while Alberta has the lowest (7.10%). The mean number of directors on the audit committee is 3.47 which is similar across all provinces. Average CEO tenure is 8.20 years. The CEOs of Quebec firms have the longest tenure (10.23) while Alberta's CEOs exhibit the shortest tenure (7.50). The average number of other directorships held by directors is 1.39. However, directors in Alberta have an average of 1.58 while Quebec directors have on average 1.20. Mean board tenure is 7.48 years. Quebec directors have the longest tenure, 8.92 years, and Alberta directors have the shortest tenure at 6.65 years. The average proportion of independent directors by board is equal to 0.74 and is almost similar among the four provinces. In 22% of the firms, the CEO is also the chairman. On average, 9% of the sample firms have dual class shares, but Quebec firms exhibit the highest proportion (21%) while firms in British Colombia have the lowest percentage at 2%. Average audit committee tenure is 6.77 years. Quebec with 8.15 and Alberta with 6.01 exhibit the longest and shortest average tenure. 34% of audit committee members have accounting expertise. 4% of audit committee members are sitting on the board of another public firm with the CEO of the company. Finally, 91% of the firms are audited by one of the BIG4 audit firms (KPMG, Deloitte, EY, PwC).

Table 4 part B presents the descriptive statistics for geography and gender variables. 64% of the directors of the sample firms live in the same province where the headquarters are located.

Alberta and Quebec have the highest percentage of directors in the same province (75%).

Ontario and British Colombia, with 63% and 51% respectively, exhibit more geographically diverse boards.

Sixty percent of the independent directors live in the same province as where the headquarters are located. Among the four provinces, Quebec and Alberta, with 71% and 70% have the highest percentage of independent directors living in the same province as where the headquarters are located and British Colombia has the lowest percentage (47%). Ontario falls in between with 60%.

The average percentage of audit committee members living in the same province where headquarters are located is 63%. Alberta and Quebec have the highest percentage among provinces (72% and 76% respectively) and British Colombia with 47% has the lowest average among provinces. Ontario with 63% is close to the average of the sample. Thirty-two percent of the firms in our sample have a full local audit committee. Quebec with 52% and British Colombia with 12% exhibit the highest and lowest percentages.

As for the gender variables, 35% of the firms in our sample have at least one female director. Thirty percent of the firms have at least one independent female director. Also 19% of the firms have at least one female director on the audit committee.

Part C of table 4 presents the descriptive statistics for firm characteristics. Thirty-one percent of the firms are cross-listed outside Canada. The proportion by province is the following: Quebec (19%), Alberta (21%), British Colombia (52%) and Ontario (36%). Firm size proxied by logarithm of total assets is 2.57. Firms in Alberta are larger than firms in other provinces (2.70). The mean of leverage (LEV) as measured by total liabilities divided by total assets is 0.38. The

mean of performance (ROA) proxied by net income divided by total assets is -0.02. In the same vein, 42% of the sample firms reported a loss. The average of the absolute abnormal accruals calculated based on the DD model is 0.05. Quebec has the minimum (0.03) amount of abnormal accruals. On average 8% of firms have restatements. Quebec has the lowest and British Colombia has the highest restatement scores (2% versus 13%).

Table 5 part A shows the correlation between the variables. The measure of abnormal accruals is negatively and significantly correlated with geographical diversity variables except for percentage of audit committee members who live in the same province, which is significant only at 0.16. All gender diversity variables are negatively and significantly correlated with abnormal accruals except for percentage of female directors on the audit committee.

Probability of restatement is significantly and negatively correlated with all geographical diversity variables. However, none of gender diversity variables are associated with the probability of restatement. Firms with higher percentage of local directors are correlated with higher board tenure, are smaller, have more family and institutional ownership and also have higher percentage of audit committee accounting experts. These firms also have lower percentage of women on their boards. The presence of women on a board is positively correlated with firm size, family ownership, board tenure, firm age and audit committee financial expertise.

[INSERT TABLE 5 ABOUT HERE]

**Multivariate Analysis** 

Accrual Quality

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In the first multivariate analysis, we regress the abnormal accruals, on board geographic diversity measures, gender diversity and control variables. We control for firms' characteristics that are associated with financial reporting quality, according to prior research: firm size, leverage, change in revenues, reporting of a loss, change in cash flow from operating activities and change in net income. We also control for incorporation law, since Filip et al. (2015) show that firms incorporated under Quebec incorporation law and located in Quebec have better earnings quality than firms incorporated under the Canadian Business Corporation Act (CBCA). We also control for governance variables at the firm level. Based on a factor analysis on governance variables, we use the first six factors which have the most explanatory power with an eigenvalue higher than 1. Table 6 shows the components loaded on the first six factors. Based on the rotated factor patterns, we label the six factors as follows: Tenure, Board size, Institutional ownership, family ownership, board interlock and audit committee financial experts.

# [INSERT TABLE 6 ABOUT HERE]

Table 7 provides results from the regression analysis using four measures of board geographic diversity and also three measures of gender diversity. The first regression shows results based on the proportion of directors living inside the province. This variable has a negative significant relationship with abnormal accruals (-0.012, p-value < 0.05). The percentage of female directors on the board has a negative relationship with abnormal accruals but is not significant (-0.013). The second regression presents the results for the proportion of independent directors living in the same province which is negative and significant (-0.011, p-value < 0.05).

The percentage of independent female directors on the board has a negative relationship with abnormal accruals but is not significant (-0.014). The third regression shows the findings for the proportion of audit committee members living in the same province, and the coefficient is negative and significant only at 0.11 (-0.007, p-value < 0.11). The coefficient for the percentage of women on the audit committee is not significant (0.001). In the last regression, when all members of audit committee are local, then the abnormal accruals is significantly lower. (-0.007, p-value < 0.05). For the control variables, the effects of size and first factor, which represents board and audit committee tenure, are negatively associated with abnormal accruals and leverage is positively and significantly associated with abnormal accruals.

# [INSERT TABLE 7 ABOUT HERE]

#### Restatements

In the next step, we regress a dummy variable, which is equal to one if a firm in our sample has restatement for year t and zero otherwise, on geography and gender diversity and control variables. Table 8 shows the results for the probit model for restatements.

# [INSERT TABLE 8 ABOUT HERE]

There is a negative significant relationship between percentage of local directors and probability of restatements. (-0.642, p-value <0.01). The presence of female directors has no effect on the probability of restatements (-0.431). Also the relationship between the percentage

of independent directors who live inside the same province is negatively and significantly associated with likelihood of restatements (-0.535, p-value < 0.01). The percentage of female independent directors has no effect on the likelihood of restatements (-0.522). The relationship between the percentage of audit committee members who live in the same province is negatively associated with the likelihood of restatements (-0.636, p-value < 0.0.1). The percentage of female directors on the audit committee is not significantly associated with restatements (-0.498). Finally, when all audit committee members are local, then the likelihood of restatement is lower (0-0.576, p-value < .0.01). As for the control variables, the likelihood of restatement is higher for leveraged firms and lower for firms with higher board tenure and larger board size.

Overall, results are consistent with the idea that a less diversified board in terms of geography has better monitoring power over managers' decision-making regarding financial reporting quality. In terms of gender diversity, we do not find any significant effect on financial reporting quality.

# **Robustness Analysis**

There are some concerns regarding our findings in terms of methodological and conceptual issues. First of all, the findings support the existence of a relationship and not a causal relationship. Following Srinidhi et al. (2011), first we use Heckman two-stage model to control for endogeneity related to gender diversity. Following Srinidhi et al., (2011), in the first stage we control for the variables that may affect a firm's decision to hire women directors. Table 9 shows the results for the first stage. Larger more mature firms are more likely to retain women. Also, firms with a lower ROA have higher likelihood of having female directors. Firms where

directors have a higher number of other directorships are more likely to have female independent directors. We then calculate inverse mills ratio in the first stage to use in the second stage.

In the second stage, we replicate our multivariate analysis for abnormal accruals and restatements by including inverse mills ratio in the regressions to control for endogeneity associated with gender diversity.

# [INSERT TABLE 9 ABOUT HERE]

Table 10 and 11 show the results for the second stage. Our results are similar to the findings in the first set of regressions. None of the gender diversity measures are significant. The coefficient for the percentage of directors living in the same province as headquarters is located is negative and significant (-0.011, p-value < .05). The coefficient for the percentage of independent directors who live inside the province is also negative and significant (-0.009, p-value < .10). The coefficient for the percentage of audit committee members living in the same province is negative and only significant at 0.14 (-0.006). Finally, the coefficient for full local audit committee is significant (-0.006, p-value < .0.05). In the restatement model, none of the gender diversity variables are significant. The coefficients for the percentage of directors living in the same province, percentage of independent directors living in the same province, percentage of audit committee members living in the same province and the dummy variable for the audit committee are all significant (-0.638, p-value <.01, -0.521, p-value <.05, -0.616, p-value <.01)

# [INSERT TABLE 10 ABOUT HERE]

# [INSERT TABLE 11 ABOUT HERE]

A similar concern regarding endogeneity exists for our measures of geographical diversity. Firms that retain more local directors may have a specific characteristic that correlates with higher financial reporting quality. To address this concern, we use a Heckman two-stage procedure following the method used for gender diversity by Srinidhi et al., (2011). In the first stage, we control for variables that may affect the decision by firms to select local directors. Based on our correlation table we control for firm size, ROA, change in sales, number of other directorships, firm age, book to market ratio, percentage of accounting financial experts on the audit committee, cross listing, percentage of local institutional ownership, percentage of family ownership and percentage of female directors. First stage results are presented in table 12.

The results show that firms with more local directors have higher ROA, have higher percentage of accounting experts on their audit committees, are less likely to cross list, have higher family ownership and lower percentage of female directors. The second regression shows that firms with higher percentage of local independent directors have higher percentage of audit committee financial experts, less cross listed, higher family ownership and lower percentage of female independent directors. Finally, firms with higher local audit committee members are smaller, have higher change in sales revenue, have more audit committee accounting experts, higher family ownership and lower percentage of women on the audit committee. We calculate inverse mills ratio in the first stage to use in the second stage to control for endogeneity.

# [INSERT TABLE 12 ABOUT HERE]

Table 13 and 14 show the results for multivariate analysis after controlling for endogeneity. We use the inverse mills ratio calculated in the first stage, in stage two to control for endogeneity. In the regression for abnormal accruals, the dummy variables for the geographical location are negatively and significantly associated with abnormal accruals (-0.008, p-value, <0.05, -0.007, p-value, .< 0.05, -0.005, p-value < .0.10). None of the gender diversity variables are significant. In the restatement model, likelihood of restatement is lower for firms with more local directors (-0.246, p-value < .0.05). The coefficient for the dummy variable for the percentage of local independent directors is negative but not significant. Finally, the dummy variable for the location of audit committee members is negative and significant (-0.264, p-value < .0.05). In sum, our results hold after controlling for endogeneity.

[INSERT TABLE 13 ABOUT HERE]

[INSERT TABLE 14 ABOUT HERE]

#### **Discussion and conclusion**

Boards of directors play an important role in monitoring and advising managers, ensuring that their interests align with the interests of shareholders. Therefore, there are actually a handful of studies that investigate the determinants of board composition, which in turn help directors to fulfill their monitoring and advising roles (Armstrong et al. 2010). The common dimension of board structure is based on their relationship with the firm: independent and non-independent. Independent directors are considered effective monitors of managers since they do not have ties

to the firms. But, because of their limited ability to access a firm's specific information, they may not be able to perform their monitoring and advising roles effectively (Armstrong et al. 2010).

However, less is known about the demographic composition of boards, especially the location of directors, due to a lack of data. In this study, using a unique Canadian setting, we investigate two dimensions of board diversity: geography and gender. We find a negative relationship between board geographic diversity and financial reporting quality, i.e. firms with boards exhibiting less geographic diversity (more local directors) have higher financial reporting quality. In contrast, women on the board do not relate to financial reporting quality.

The results of this study contribute to the board diversity literature by examining a new dimension of diversity, i.e., the location of directors, and showing that director proximity (or lack thereof) does matter when monitoring managers' decision-making regarding financial reporting quality, consistent with findings in other settings (e.g. Ayers et al, 2011).

Our results for gender diversity suggest that prior research that does not control for other dimensions of diversity and governance, which women directors exhibit as well, may not capture adequately the actual dynamics at work in board decision-making. While there are several other diversity dimensions, we consider that our paper does encompass two critical ones, as well as relevant governance mechanisms. Our focus on Canadian firms may impede generalization but, at the same time, allows to analyze director proximity in a setting where it does matter as even Montreal and Toronto, Canada's two major cities, are 600 kilometers apart and represent different cultural realities in terms of language. Calgary and Vancouver, the other two major headquarter cities, are more than 1,500-2000 kilometers from Toronto and Montreal.

# References

Adams, R., B. Hermalin, and M. Weisbach (2010), 'The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey', Journal of Economic Literature, 48, 58–107.

Adams, R.B. and D. Ferreira, 2009. Women in the boardroom and their impact on governance and performance. Journal of Financial Economics 94 (2), 291-309.

Alam, Z., Chen, M., Ciccotello, C., Ryan, H., 2013. Where are the Women? Board Decisions and Female Director Location, Florida Atlantic University working paper.

Alam, Z., Chen, M., Ciccotello, C., Ryan, H., 2014. Does the location of directors matter? Information acquisition and board decisions. Journal of Financial and Quantitative Analysis, 49 (01), 131-164.

Alam, Z., Chen, M., Ciccotello, C., Ryan, H. 2015. Board Structure Mandates: Consequences for Director Location and Financial Reporting. Florida Atlantic University working paper.

Arena, M and Dewally, M., 2012. Firm location and corporate debt. Journal of Banking & Finance 36, 1079-1092

Armstrong, C., Guay, W., Weber, J., 2010. The role of information and financial reporting in corporate governance and debt contracting. Journal of Accounting & Economics, 50 (2-3), 179-234

Ayers, B; S. Ramalingegowd and P.E. Yeung., 2011. Hometown advantage: The effects of monitoring institution location on financial reporting discretion. Journal of Accounting and Economics, 52 (1), 41–61

Ben-Amar, W., Francoeur, C., Hafsi, T., & Labelle, R. 2013. What makes better boards? A closer look at diversity and ownership. British Journal of Management, 24, (1),85-101

Chhaochharia, V., A., Kumar, and A. Niessen-Ruenzi, 2012. "Local Investors and Corporate Governance," Journal of Accounting and Economics, 54 (1), 42-67

Coval, J.D., Moskowitz, T.J., 1999. Home bias at home: Local equity preference in domestic portfolios. Journal of Finance 54, 2045-2073

Coval, J.D., Moskowitz, T.J., 2001. The geography of investment: Informed trading and asset prices. Journal of Political Economy 109, 811-841

Dechow, P., and I. Dichev. 2002. The quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review 77 (Supplement): 35–59.

Dechow, P., Sloan, R., Sweeney, A., 1995. Detecting earnings management. The Accounting Review (April) 193-225.

Erhardt, N., Werbel, J. and Shrader, C. (2003) Board of director diversity and firm financial Performance, Corporate Governance: An International Review, 11(2), 102–11.

Filip, A., Labelle, R, and Rousseau, S. 2015. Legal regime and financial reporting quality. Contemporary Accounting Research, 32 (1), 280-307.

Gul, F., B. Srinidhi and A. Ng, 2011, Does board gender diversity improve the informativeness of stock prices? Journal of Accounting and Economics 51, 314-338

Gul, F., M. Hutchinson and K. Lai, 2013, Gender-Diverse Boards and Properties of Analyst Earnings Forecasts. Accounting Horizons 27 (3), 511-538

Ivkovic, Z., Weisbenner, S., 2005. Local does as local is: Information content of the geography of individual investors' common stock investments. Journal of Finance 60, 267-306

Klein, A., 2002b. Audit committee, board of director characteristics, and earnings management. Journal of Accounting and Economics 33, 375-400.

Linck, J., Netter, J., Yang T., 2008. The determinants of board structure. Journal of Financial Economics 87, 308-328.

Malloy, C.J., 2005. The geography of equity analysis. Journal of Finance 60, 719-755

Masulis, R. W., Wang, C., &Xie, F. 2012. Globalizing the boardroom: The effects of foreign directors on corporate governance and firm performance. Journal of Accounting and Economics, 53(3): 527–554.

O'Hagan, S. B., & Green, M. B. (2004). Corporate knowledge transfer via interlocking directorates: A network analysis approach. Geoforum 35, 127–139.

O'Hagan, S., Rice, M. D. and Green, M. B. (2008). North American corporate directors and educational affiliations: a geographical analysis. Geography Research Forum 28, 59–81.

O'Brien, P. C., & Tan, H. 2015. Geographic Proximity and Analyst Coverage Decisions: Evidence from IPOs. Journal of Accounting and Economics 59 (1), 41-59.

Srinidhi, B., Gul, F.A., Tsui, J., 2011. Female directors and earnings quality. Contemporary Accounting Research 28, 1610-1644.

Sun, J., Liu, G., & Lan, G. (2011). Does female directorship on independent audit committees constrain earnings management?. *Journal of Business Ethics*, 99(3), 369-382.

Urcan, O, 2007, Geographical Location and Corporate Disclosures" working paper, London school of business.

Ye, K., Zhang, R., & Rezaee, Z. (2010). Does top executive gender diversity affect earnings quality? A large sample analysis of Chinese listed firms. *Advances in Accounting*, 26(1), 47-54.

Wan, H. "Two essays on corporate governance - are local directors better monitors, and directors incentives and earnings management". Doctoral dissertation, University of South Florida, 2008

Table 1: Sample Selection

## Number of Firms Canadian firms in Compustat for fiscal year 2010 1971 Exclude: Headquartered outside Canada 123 Financial Firms (Code 6021-6999) 489 Small firms (market cap below 10 Million) 307 Financial variables missing 481 Firms in Toronto Stock Exchange Venture 56 47 **Trusts** Less than 6 observations in the industry (SIC 2-digit) 141 Firms with negative equity 11 Incomplete data from proxy circulars 56 2010 Sample 260 Firms with available data for fiscal year 2008 218 Firms with available data for fiscal year 2009 243 Firms with available data for fiscal year 2011 232 Firms with available data for fiscal year 2012 178 1131 Final sample

**Table 2:** Distribution of the sample based on industry and location

Industry				P	rovince					
-	AB	BC	MB	NB	NS	ON	QC	SK	Total	%
Metal mining	5	99	3	4	0	115	27	10	263	23.2
Oil and gas	245	6	0	0	5	13	0	0	269	23.78
Food & Kindred Products Manufacturing	0	8	0	0	5	33	9	0	55	4.86
Chemicals & Allied Prods Manufacturing	2	19	4	0	0	43	22	5	95	8.40
Industrial & Commercial Machinery Manufacturing	3	0	4	0	0	11	7	0	25	2.21
Electronic & Other Electrical Equipment Manufacturing	3	26	0	0	0	54	10	0	93	8.22
Transportation Equipment Manufacturers	0	13	5	0	0	22	7	0	47	4.16
Measuring & Analyzing Instruments Manufacturers	3	3	3	0	0	1	9	0	19	1.68
Communications	5	10	5	0	5	17	23	0	65	5.75
Electric Gas & Sanitary Services	30	11	0	0	4	8	8	0	61	5.39
Wholesale Trade - Durable Goods	3	4	0	0	0	12	11	0	30	2.65
Business Services	16	14	0	0	0	51	26	2	109	9.64
Total	315	213	24	4	19	380	159	17	1131	100.00
%	27.85	18.83	2.12	0.35	1.68	33.6	14.06	1.5	100	

**Table 3:** Variables' Definitions

A. Governance Variables	Definition
Board size	Number of directors on the board
Institutional Investors	Percentage of shares held by institutional investors
Local Institutional Investors	Percentage of shares held by institutional investors located in the same city where the headquarters are located
Family or Individuals	Percentage of shares held by a family member or individual
Audit Committee Size	Number of directors on the audit committee
CEO Tenure	Number of years CEO has been in this position
Number of other Directorship	Average number of other directorships held by directors in other public companies
Board Tenure	Average number of years that directors have been sitting on the board
Independent Directors	Number of independent directors divided by board size
CEO Chairman	Dummy variable equals to 1 when CEO is also chairman of the board and 0 otherwise
Dual Class	Dummy variable equals to 1 when a firm has dual class shares and 0 otherwise
Audit	Dummy variable equals to 1 when a firm is audited by the BIG4 and 0 otherwise
Financial Expert	Number of audit committee members with accounting expertise (CFO experience, CA, CMA or CGA designation) divided by audit committee size
Interlock with CEO	Number of audit committee members who sit on the same board of another company with the CEO divided by audit committee size
Audit Committee tenure	Average number of years audit committee members have been sitting on the board
B. Diversity Variables	
PF	Number of female directors on the board divided by board size
PFI	Number of female independent directors on the board divided by total number of independent directors
PFAC	Number of female directors on the audit committee divided by audit committee size
PFDUMMY	Dummy variable equals to one if there is at least one female director on the board, zero otherwise
PFIDUMMY	Dummy variable equals to one if there is at least one female independent director on the board, zero otherwise
PFACDUMMY	Dummy variable equals to one if there is at least one female director on the audit committee
SPROV	Number of directors who live inside the province where the headquarters are located divided by board size
SPROVI	Number of independent directors who live inside the province where the headquarters are located divided by number of independent directors

<b>Table 3:</b> Variables' Definition	ons, Continued
Variable	Definition
ACSPROV	Number of audit committee members who live in the same province where the headquarters are located divided by audit committee size
ACFULLLOCAL	Dummy variable equals to one if all members of the audit committee live in the same province where the headquarters is located, zero otherwise
SPROVDUMMY	Dummy variable equals to one if the percentage of directors who live in the same province where the headquarters are located is higher than the mean of the sample, zero otherwise
SPROVIDUMMY	Dummy variable equals to one if the percentage of independent directors who live in the same province where the headquarters are located is higher than the mean of the sample, zero otherwise
ACSPROVDUMMY	Dummy variable equals to one if the percentage of audit committee members who live in the same province where the headquarters are located is higher than the mean of the sample, zero otherwise
C. Firm Characteristics	
ACCRUALDD	Absolute value of discretionary accruals calculated based on Dechow and Dichev model
RESTATEMENT	Dummy variable equals 1 if a firm has restatement for year t and 0 otherwise
CL	Dummy variable equals to 1 when a firm is cross listed and 0 otherwise
SIZE	Logarithm of total assets
CFO	Cash flow from operating activities scaled by lagged total assets
LEV	Total liabilities divided by total assets
ROA	Net income divided by total assets
LOSS	Dummy variable equals to 1 when net income is negative and 0 otherwise
CNI	Change in net income scaled by lagged total assets
CCFO	Change in cash flow scaled by lagged total assets
CSALE	Change in sales revenue scaled by lagged total assets
QCA_QC	Dummy variable equals to 1 when a firm is located in Quebec and is incorporated under Quebec incorporation law and 0 otherwise
BM	Book value to market value of common equity
TENURE	First factor based on factor analysis of all governance variable in part A of this table
BSIZE	Second factor based on factor analysis of all governance variable in part A of this table

<b>Table 3:</b> Variables' Definitions, C	Continued
Variable	Definition
INSTITUITIONAL	Third factor based on factor analysis of all governance variable in part A of this table
FAMILY	Fourth factor based on factor analysis of all governance variable in part A of this table
INTERLOCK	Fifth factor based on factor analysis of all governance variable in part A of this table
EXPERT	Sixth factor based on factor analysis of all governance variable in part A of this table
LOGMKV	Logarithm of lagged market value of a firm
AGE	The number of years form which a firm is listed in COMPUSTAT since 1977

 Table 4: Descriptive Statistics

Part A; Governance Variables	Mean	Median	SD	Min	Max	AB	ВС	MB	NB	NS	ON	QC	SK
Board Size	7.78	7	2.23	4	15	7.59	7.21	8.08	8	8.84	7.81	8.44	10.06
Institutional investors	10.38	0	15.32	0	70.6	10.38	7.1	10.22	17.2	28.84	11.04	11.85	0.85
Local Institutional investors	3.65	0	9.54	0	55.66	2.96	1.14	1.1	0	8.01	4.66	6.29	0
Family or Individual	10.68	0	21.35	0	90.9	7.1	6.27	12.03	0	17.62	13.31	17.78	0
Audit Committee Size	3.47	3	0.84	2	6	3.43	3.37	3.71	3.25	4.21	3.47	3.42	4.53
CEO Tenure	8.2	6	6.95	1	35	7.5	8.1	5.92	10.25	12	7.8	10.23	11.06
Number of other Directorship	1.39	1.2	1.06	0	5.2	1.58	1.63	1.04	1.82	1.53	1.21	1.2	1.04
Board Tenure	7.48	6.85	3.74	1.5	20.66	6.65	6.85	7.1	7.33	11.28	7.67	8.92	9.08
Independent Directors	0.74	0.75	0.13	0.4	0.93	0.74	0.74	0.71	0.87	0.79	0.72	0.76	0.79
CEO Chairman	0.22	0	0.41	0	1	0.21	0.25	0.13	0	0	0.23	0.22	0
Dual Class	0.09	0	0.29	0	1	0.04	0.02	0	0	0.37	0.12	0.21	0
Audit Committee Tenure	6.77	6	3.69	1	24.3	6.01	6.13	6.28	5.86	8.99	7.09	8.15	7.04
Financial Expert	0.34	0.33	0.24	0	1	0.31	0.32	0.4	0.54	0.31	0.35	0.36	0.35
Interlock with CEO	0.04	0	0.14	0	1	0.04	0.07	0.02	0	0.04	0.03	0.03	0
Audit	0.91	1	0.28	0	1	0.98	0.91	0.88	1	0.79	0.86	0.91	1
Part B: Diversity Variables	•	•	•		•	•	•	•	•	•	•	•	
PF	0.06	0	0.09	0	0.55	0.04	0.05	0.1	0.12	0.09	0.05	0.09	0.15
PFI	0.06	0	0.10	0	0.43	0.04	0.05	0.12	0.13	0.1	0.06	0.09	0.14
PFAC	0.06	0	0.13	0	0.67	0.04	0.07	0.07	0.15	0.08	0.06	0.07	0.13
SPROV	0.64	0.67	0.26	0	1	0.75	0.51	0.34	0.13	0.43	0.63	0.75	0.49
SPROVI	0.60	0.60	0.30	0	1	0.70	0.47	0.34	0	0.32	0.60	0.71	0.40
ACSPROV	0.63	0.67	0.32	0	1	0.72	0.47	0.38	0	0.33	0.63	0.76	0.45
ACFULLLOCAL	0.32	0	0.47	0	1	0.48	0.12	0.08	0.00	0.00	0.27	0.52	0.24
PFDUMMY	0.35	0	0.48	0	1	0.25	0.31	0.50	0.50	0.37	0.33	0.55	0.76
PFIDUMMY	0.30	0	0.46	0	1	0.22	0.26	0.50	0.50	0.37	0.28	0.50	0.71
PFACDUMMY	0.19	0	0.40	0	1	0.12	0.22	0.29	0.50	0.21	0.19	0.25	0.59
SPROVDUMMY	0.54	1	0.50	0	1	0.72	0.33	0.21	0.00	0.26	0.48	0.72	0.29
SPROVIDUMMY	0.49	0	0.50	0	1	0.61	0.31	0.25	0.00	0.16	0.48	0.64	0.29
ACSPROVDUMMY	0.59	1	0.49	0	1	0.69	0.38	0.29	0.00	0.21	0.61	0.75	0.29

 Table 4: Descriptive Statistics, Continued

Firm Characteristics	Mean	Median	SD	Min	Max	AB	BC	MB	NB	NS	ON	QC	SK
ABSACCRDDF	0.05	0.03	0.05	0.00	0.33	0.05	0.05	0.03	0.04	0.04	0.05	0.03	0.04
RESTATEMENT	0.08	0.00	0.28	0.00	1.00	0.06	0.13	0.29	0.00	0.00	0.09	0.02	0.18
TENURE	0.00	-0.16	1.00	-1.83	4.38	-0.20	-0.11	-0.17	0.12	0.72	0.03	0.37	0.33
BSIZE	0.00	-0.20	1.00	-2.41	3.36	-0.01	-0.14	0.09	0.26	0.80	-0.06	0.11	1.28
INSTITUITIONAL	0.00	-0.44	1.00	-0.90	5.41	-0.04	-0.26	-0.20	-0.01	0.92	0.08	0.22	-0.59
FAMILY	0.00	-0.29	1.00	-1.32	4.69	-0.15	-0.31	-0.06	-0.69	0.55	0.14	0.39	-0.40
INTERLOCK	0.00	-0.20	1.00	-1.89	5.83	0.16	0.20	-0.25	-0.03	0.02	-0.16	-0.13	-0.27
EXPERT	0.00	0.10	1.00	-3.20	2.90	-0.05	-0.12	0.20	0.99	-0.01	0.02	0.16	0.10
SIZE	2.57	2.50	0.83	1.09	4.58	2.70	2.46	2.74	2.70	2.75	2.47	2.57	3.25
LEV	0.38	0.36	0.20	0.04	0.91	0.40	0.34	0.42	0.26	0.48	0.35	0.43	0.44
ROA	-0.02	0.02	0.17	-0.71	0.36	0.00	-0.03	0.02	0.09	0.01	-0.03	-0.01	0.08
CNI	0.01	0.00	0.15	-0.39	0.71	0.01	0.02	0.02	0.01	-0.01	0.02	0.01	0.01
CCFO	0.02	0.01	0.12	-0.37	0.50	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.00
CSALE	0.07	0.04	0.22	-0.58	0.92	0.07	0.06	0.11	0.11	0.09	0.08	0.06	0.03
CL	0.31	0.00	0.48	0.00	2.00	0.21	0.52	0.04	0.00	0.00	0.36	0.19	0.76
LOSS	0.42	0.00	0.49	0.00	1.00	0.48	0.46	0.29	0.25	0.21	0.42	0.33	0.12
QC_QCA	0.05	0.00	0.22	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00
BM	0.94	0.65	1.32	0.03	25.35	1.20	0.81	0.67	0.59	0.80	0.94	0.71	0.83
CFO	0.07	0.08	0.17	-0.78	0.65	0.13	0.04	0.07	0.17	0.08	0.05	0.05	0.11
AGE	14.03	12.00	9.28	2.00	40.00	12.15	13.05	12.83	12.50	22.89	15.17	14.85	20.18
LOGMVK	5.73	5.59	1.95	1.12	10.95	5.74	5.68	6.30	6.59	5.99	5.62	5.72	7.59

**Table 5:** Correlation Table

VARIABLES	ABSACCRD DF	RESTATME NT	PFDUMM Y	PFIDUMM Y	PFACDUMM Y	PF	PFI	PFAC	SPROVDUMM Y	SPROVIDUMM Y	ACSPROVDUM MY	SPROV
ABSACCRDDF	1.000	0.071**	-0.104***	-0.104***	-0.064**	-0.109***	-0.111***	-0.048	-0.066**	-0.062**	-0.043	-0.061**
RESTATMENT		1.000	-0.001	-0.006	0.005	-0.012	-0.016	-0.013	-0.091***	-0.050*	-0.076**	-0.104***
PFDUMMY			1.000	0.902***	0.669***	0.877***	0.804***	0.615***	-0.093***	-0.110***	-0.135***	-0.114***
PFIDUMMY				1.000	0.741***	0.796***	0.891***	0.682***	-0.106***	-0.109***	-0.144***	-0.128***
PFACDUMMY					1.000	0.663***	0.742***	0.920***	-0.158***	-0.147***	-0.203***	-0.184***
PF						1.000	0.878***	0.681***	-0.088***	-0.088***	-0.139***	-0.111***
PFI							1.000	0.769***	-0.088***	-0.088***	-0.130***	-0.115***
PFAC								1.000	-0.131***	-0.119***	-0.159***	-0.159***
SPROVDUMMY									1.000	0.807***	0.659***	0.838***
SPROVIDUMMY										1.000	0.733***	0.787***
ACSPROVDUM MY											1.000	0.711***
SPROV												1.000

 Table 5: Correlation Table, Continued

VARIABLES	SPROVI	ACSPROV	ACFULLLOCAL	TENURE	BSIZE	INSTITUITIONAL	FAMILY	INTERLOCK	EXPERT	SIZE	LEV
ABSACCRDDF	-0.057*	-0.041	-0.045	-0.092***	-0.104***	-0.009	-0.090***	-0.012	-0.064**	-0.184***	-0.018
RESTATMENT	-0.089***	-0.105***	-0.114***	-0.066**	-0.033	-0.034	-0.019	0.016	0.008	-0.032	0.072**
PFDUMMY	-0.136***	-0.138***	-0.134***	0.179***	0.382***	-0.043	0.168***	0.014	0.109***	0.339***	0.275***
PFIDUMMY	-0.132***	-0.132***	-0.137***	0.083***	0.459***	-0.036	0.138***	0.013	0.147***	0.395***	0.249***
PFACDUMMY	-0.174***	-0.188***	-0.176***	-0.007	0.351***	-0.078***	0.056*	0.033	0.061**	0.253***	0.138***
PF	-0.135***	-0.127***	-0.126***	0.159***	0.318***	-0.076**	0.190***	-0.004	0.076**	0.285***	0.282****
PFI	-0.117***	-0.111***	-0.112***	0.067**	0.318***	-0.056*	0.145***	-0.007	0.118***	0.304***	0.236***
PFAC	-0.147***	-0.163***	-0.158***	-0.018	0.223***	-0.071**	0.038	0.001	0.079***	0.193***	0.114***
SPROVDUMMY	0.796***	0.714***	0.575***	0.076**	-0.164***	0.044	0.103***	-0.052*	0.084***	-0.096**	-0.003
SPROVIDUMMY	0.838***	0.754***	0.619***	0.045	-0.161***	0.054*	0.089***	-0.079***	0.096***	-0.103***	0.001
ACSPROVDUMMY	0.759***	0.863***	0.580***	0.081***	-0.276***	0.075**	0.060**	-0.075**	0.098***	-0.172***	-0.045
SPROV	0.929***	0.823***	0.650***	0.084***	-0.180***	0.102***	0.108***	-0.047	0.065**	-0.115**	-0.006
SPROVI	1.000	0.887***	0.707***	0.034	-0.175***	0.084**8	0.099**8	-0.091***	0.108***	-0.107***	0.009
ACSPROV		1.000	0.795***	0.047	-0.175***	0.077**	0.077***	-0.075**	0.088***	-0.117***	0.020
ACFULLLOCAL			1.000	0.009	-0.202***	0.056*	0.029	-0.034	0.109***	-0.112***	-0.002
TENURE				1.000	0.000	0.000	0.000	0.000	0.000	0.045	0.058**
BSIZE					1.000	0.000	0.000	0.000	0.000	0.552***	0.287***
INSTITUITIONAL						1.000	0.000	0.000	0.000	-0.131***	0.019
FAMILY							1.000	0.000	0.000	0.137***	0.199***
INTERLOCK								1.000	0.000	0.298***	-0.018
EXPERT									1.000	0.228***	0.061**
SIZE										1.000	0.289***
LEV											1.000

Table 5: Correlation Table, Continued

VARIABLES	ROA	CNI	CCFO	CSALE	CL	LOSS	QC_QCA	BM	AGE	CFO	LOGMVK
ABSACCRDDF	-0.091***	0.014	-0.008	0.061**	-0.012	0.084***	-0.026	-0.005	-0.152***	-0.058*	-0.120***
RESTATMENT	-0.095***	-0.032	-0.020	-0.051*	0.054*	0.085***	-0.069**	-0.030	-0.033	-0.085***	-0.031
PFDUMMY	0.040	-0.041	-0.061**	-0.044	0.081***	-0.130***	0.115***	-0.059**	0.396***	-0.026	0.325***
PFIDUMMY	0.077***	-0.035	-0.040	-0.009	0.132***	-0.172***	0.115***	-0.069**	0.404***	0.016	0.390***
PFACDUMMY	0.017	-0.023	-0.036	0.003	0.141***	-0.094***	0.022	-0.048	0.285***	-0.045	0.284***
PF	0.031	-0.043	-0.056*	-0.033	0.050*	-0.111***	0.078***	-0.068***	0.319***	-0.036	0.274***
PFI	0.051*	-0.040	-0.031	0.011	0.072**	-0.133***	0.067**	-0.063**	0.309***	-0.010	0.302***
PFAC	0.003	-0.026	-0.030	0.009	0.109***	-0.066**	0.006	-0.037	0.212***	-0.056*	0.223***
SPROVDUMMY	0.074**	-0.020	-0.002	0.014	-0.257***	-0.053*	0.105***	0.068**	-0.084***	0.104***	-0.134***
SPROVIDUMMY	0.063**	-0.005	0.025	0.050*	-0.250***	-0.059**	0.085***	0.057*	-0.077**	0.071**	-0.144**8
ACSPROVDUMMY	0.018	-0.035	0.036	0.064**	-0.204***	0.006	0.092***	0.055*	-0.097***	0.050*	-0.203***
SPROV	0.078***	-0.036	0.002	0.030	-0.299***	-0.045	0.120***	0.038	-0.064**	0.127***	-0.161***
SPROVI	0.055*	-0.018	0.023	0.063**	-0.247***	-0.050*	0.098***	0.046	-0.059**	0.105***	-0.160***
ACSPROV	0.014	-0.026	0.030	0.066**	-0.205***	-0.010	0.107***	0.052**	-0.046	0.062**	-0.170***
ACFULLLOCAL	0.022	-0.009	0.033	0.068**	-0.213***	0.018	0.112***	0.049	-0.056*	0.056*	-0.165***
TENURE	0.165***	-0.020	-0.033	-0.038	-0.038	-0.206***	0.133***	-0.034	0.341***	0.100***	0.070**
BSIZE	0.149***	-0.029	-0.023	-0.056*	0.270***	-0.245***	0.048	-0.065**	0.486***	0.120***	0.525***
INSTITUITIONAL	0.030	-0.012	0.012	0.042	-0.205**8	0.028	0.036	0.028	-0.035	0.045	-0.165***
FAMILY	0.072**	-0.021	-0.031	-0.039	-0.043	-0.119***	0.055*	0.036	0.204***	0.036	0.090***
INTERLOCK	0.078***	-0.039	-0.022	-0.040	0.113***	-0.020	-0.035	0.108***	0.049	0.088***	0.239***
EXPERT	0.111***	0.035	0.044	-0.008	0.070**	-0.112***	0.043	-0.061**	0.219***	0.109***	0.210***
SIZE	0.380***	-0.066**	-0.032	-0.020	0.342***	-0.370***	-0.046	-0.030	0.500***	0.335***	0.903***
LEV	-0.017	-0.004	0.032	0.068**	-0.016	-0.063**	-0.011	-0.053*	0.261***	0.028	0.154***
ROA	1.000	0.387***	0.238***	0.231***	0.017	-0.694***	0.000	-0.058*	0.183***	0.755***	0.324***
CNI		1.000	0.451***	0.253***	0.000	-0.264***	0.039	-0.086***	-0.013	0.188***	-0.103**8
CCFO			1.000	0.412***	-0.036	-0.142***	0.019	-0.041	-0.063**	0.472***	-0.038
CSALE				1.000	-0.038	-0.188***	0.016	-0.055*	-0.084***	0.269**8	0.014
CL					1.000	-0.052*	-0.030	-0.101***	0.249***	-0.022	0.406***
LOSS						1.000	-0.045	0.107***	-0.289**8	-0.467***	-0.360**8
QC_QCA							1.000	-0.053*	0.040	-0.032	-0.032
BM								1.000	-0.080***	-0.010	-0.144***
AGEE									1.000	0.093***	0.473**8
CFO										1.000	0.260***
LOGMVK											1.000

<sup>\*\*\*</sup> Significant at 0.01 \*\* Significant at 0.05 \* Significant at 0.10

 Table 6: Principal Factor Analysis

Factor	Eigenvalue	Percentage of Variance	Cumulative
TENURE	2.69	18%	18%
BSIZE	2.11	14%	32%
INSTITUITIONAL	1.68	11%	43%
FAMILY	1.35	9%	52%
INTERLOCK	1.12	8%	60%
EXPERT	1.02	7%	67%

	Rotated F	actor Patt	tern			
Variables	Factor	Factor	Factor	Factor	Factor	Factor
	1	2	3	4	5	6
Board Size	0.09	0.72	0.02	0.26	0.18	0.22
Institutional Investors	0.02	0.01	0.90	-0.09	-0.01	0.03
Local Institutional investors	-0.02	0.02	0.90	0.03	-0.04	0.03
Family or Individual	0.27	-0.16	-0.18	0.72	-0.15	-0.16
Audit Committee Size	0.04	0.86	-0.04	0.09	0.05	-0.18
CEO Tenure	0.75	-0.07	0.02	0.04	-0.06	-0.22
Number of other Directorships	-0.05	0.08	-0.06	-0.17	0.76	0.14
Board Tenure	0.91	0.05	-0.03	0.22	0.03	0.03
Independent Directors	-0.03	0.65	0.07	-0.27	-0.12	0.17
CEO Chairman	0.22	-0.30	-0.03	0.06	-0.04	-0.56
Dual Class	0.08	0.17	0.06	0.85	0.02	0.04
Audit Committee Tenure	0.87	0.10	0.01	0.06	0.02	0.08
Financial Expert	0.06	-0.08	0.04	-0.03	0.00	0.79
Interlock with CEO	0.05	-0.12	0.02	-0.01	0.78	-0.21
Audit	-0.02	0.16	0.00	0.14	0.29	0.18

**Table 7:** Multivariate Analysis-Accrual Quality

ndependent variable	Depend	ent variable: discretionary heteroscedasticity-consis		ichev model –
idependent variable	0.086***	0.084***	0.082***	0.080***
Intercept	(9.69)	(9.60)	(9.71)	(10.16)
тистовре	-0.012**	(>100)	(>1,1)	(====)
SPROV	(-2.15)			
STRO !	(2.12)	-0.011**		
SPROVI		(-2.16)		
		. ,	-0.007	
ACSPROV			(-1.58)	
				-0.007*
ACFULLLOCAI				(-2.24)
	-0.013			
PF	(-0.89)			
222		-0.014		
PFI		(-1.17)	0.001	0.0002
DEAG			0.001	0.0003
PFAC	0.025***	0.025***	(0.07) 0.025***	(0.030) 0.025***
LEM				
LEV	(2.77)	(2.76) -0.015***	(2.74) -0.015***	(2.78) -0.15***
SIZE	(-5.31)	(-5.19)	(-5.34)	(-5.34)
SIZE	-0.023	-0.022	-0.022	-0.022
CCFO	(-1.30)	(-1.28)	(-1.25)	(-1.26)
CCFO	0.008	0.009	0.008	0.008
CSALE	(1.01)	(1.11)	(1.05)	(1.06)
CSALE	0.002	0.003	0.003	0.003
CNI	(0.18)	(0.19)	(0.22)	(0.21)
CNI	-0.004	-0.004	-0.004	-0.004
LOSS	(-0.96)	(-1.03)	(-1.00)	(-0.95)
LOSS	0.003	0.003	0.004	0.004
CL	(0.93)	(1.04)	(1.30)	(1.18)
CL	-0.001	-0.002	-0.002	-0.001
ROA	(-0.06)	(-0.15)	(-0.15)	(-0.10)
Ron	-0.002	-0.002	-0.003	-0.002
QCA_QC	(-0.36)	(-0.39)	(-0.50)	(-0.39)
<u> </u>	-0.003*	-0.003**	-0.003*	-0.003**
TENURE	(-1.79)	(-1.98)	(-1.93)	(-1.99)
	0.001	0.001	0.001	0.0004
BSIZE	(0.49)	(0.45)	(0.39)	(0.29)
	-0.001	-0.001	-0.001	-0.001
INSTITUITIONAL	(-0.97)	(-0.96)	(-0.93)	(-0.98)
	-0.001	-0.001	-0.001	-0.002
FAMILY	(-1.14)	(-1.23)	(-1.38)	(-1.45)
	0.001	0.001	0.001	0.001
INTERLOCK	(0.60)	(0.49)	(0.55)	(0.58)
	0.0001	0.0002	0.0004	0.0002
EXPERT	(0.07)	(0.18)	(0.03)	(0.14)
INDUSTRY DUMMY	Included	Included	Included	Included
YEAR DUMMY	Included	Included	Included	Included
N	1131	1131	1131	1131
ADJ. R2	0.067	0.068	0.065	0.067

 Table 8: Multivariate Analysis-Restatement

Independent variable	Dependent var	iable: Restatement Model		
•	-1.433***	-1.551***	-1.472***	-1.706**
Intercept	(15.53)	(19.58)	(17.69)	(25.84)
•	-0.642***		,	
SPROV	(8.01)			
		-0.535***		
SPROVI		(6.94)		
			-0.636***	
ACSPROV			(12.10)	
				-0.576**
ACFULLLOCAI	0.421			(14.77)
DE	-0.431			
PF	(0.32)	0.522		
PFI		-0.522 (0.68)		
FFI		(0.08)	-0.498	-0.481
PFAC			(1.06)	(1.02)
TTAC	0.78**	0.78**	0.789***	0.817**
LEV	(6.63)	(6.61)	(6.66)	(7.04)
EL V	-0.040	-0.027	-0.036	-0.040
SIZE	(0.11)	(0.05)	(0.09)	(0.11)
SIZL	0.146	0.163	0.170	0.164
CCFO	(0.07)	(0.09)	(0.104)	(0.09)
0010	-0.46	-0.437	-0.422	-0.44
CSALE	(2.31)	(2.02)	(1.86)	(2.00)
COTTEL	-0.128	-0.108	-0.112	-0.094
CNI	(0.08)	(0.06)	(0.07)	(0.05)
<del></del>	0.142	0.129	0.135	0.139
LOSS	(0.74)	(0.61)	(0.66)	(0.70)
	0.153	0.176	0.177	0.155
CL	(1.38)	(1.87)	(1.92)	(1.43)
	-0.253	-0.321	-0.359	-0.354
ROA	(0.27)	(0.44)	(0.55)	(0.52)
-	-3.86	-3.86	-3.80	-4.008
QCA_QC	(0.001)	(0.001)	(0.001)	(0.001
<u> </u>	-0.135**	-0.148**	-0.150**	-0.159*
TENURE	(3.85)	(4.68)	(4.69)	(5.12)
	-0.155*	-0.157*	-0.160*	-0.158
BSIZE	(3.61)	(3.68)	(3.83)	(3.69)
	-0.044	-0.048	-0.045	-0.047
INSTITUITIONAL	(0.45)	(0.52)	(0.459)	(0.50)
	-0.034	-0.036	-0.042	-0.054
FAMILY	(0.24)	(0.27)	(0.372)	(0.60)
	0.075	0.065	0.068	0.070
INTERLOCK	(1.53)	(1.14)	(1.26)	(1.35)
	0.024	0.030	0.031	0.038
EXPERT	(0.16)	(0.25)	(0.26)	(0.40)
INDUSTRY Dummy	Included	Included	Included	Include
YEAR DUMMIES	Included	Included	Included	Include
N	1131	1131	1131	1131
R-Square	0.051	0.051	0.055	0.059
LR Statistic	59.605	58.687	63.759	68.354
P-Value	<.0001	<.0001	<.0001	<.0001

Table 9: Robustness Analysis – First - stage- Controlling for Endogeneity - Presence of Women

Indonendant vonichle	Dependent variable: Dummy variable for gender- Probit Model				
Independent variable	1 Tobit Wiodel				
	PFDUMMY	PFIDUMMY	PFACDUMMY		
	-2.772***	-3.614***	-3.303***		
Intercept	(118.08)	(168.05)	(131.17)		
	0.234***	0.303***	0.253***		
LOGMVK	(62.72)	(92.293)	(57.37)		
	-0.985***	-0.885***	-1.045***		
ROA	(12.73)	(9.35)	(11.82)		
	0.003	0.373*	0.395*		
CSALE	(0.00)	(2.85)	(2.81)		
	0.041	0.086*	0.072		
NUMBEROFOTHERDIRECTORSHIP	(0.74)	(3.05)	(1.82)		
	0.025***	0.020***	0.014**		
AGE	(18.01)	(11.35)	(4.62)		
	0.003	0.038	0.034		
BM	(0.01)	(1.06)	(0.77)		
INDUSTRY Dummy	Included	Included	Included		
YEAR DUMMIES	Included	Included	Included		
N	1130	1130	1130		
R-Square	0.269	0.287	0.182		
LR Statistic	354.338	382.383	227.331		
P-Value	<.0001	<.0001	<.0001		

<sup>\*\*\*</sup> Significant at 0.01

There are 1130 observations for this analysis. One observation has been deleted because of missing data for market value

<sup>\*\*</sup> Significant at 0.05

<sup>\*</sup> Significant at 0.10

**Table 10:** Robustness Analysis – Second stage- Controlling for Endogeneity - Women Presence – Abnormal Accruals

dependent variable	Dependent variable: Abnormal Accruals model – heteroscedasticity-consistent standard errors				
	0.109***	0.115***	0.142***	0.139**	
Intercept	(8.73)	(8.27)	(10.53)	(10.78)	
	-0.011**				
SPROV	(-1.97)				
		-0.009*			
SPROVI		(-1.91)	0.006		
A CCDD OV			-0.006		
ACSPROV			(-1.47)	-0.006*	
ACFULLLOCAI				(-2.06)	
THE CELEGETE	-0.002			( 2.00)	
PFDUMMY	(-0.50)				
1120000	( 0.00)	-0.001			
PFIDUMMY		(-0.26)			
			-0.004	-0.004	
PFACDUMMY			(-1.20)	(-1.20)	
	0.026***	0.028***	0.033***	0.033**	
LEV	(2.82)	(3.06)	(3.53)	(3.56)	
	-0.020***	-0.022***	-0.025***	-0.025*	
SIZE	(-5.80)	(-5.84)	(-7.52)	(-7.50	
CCEO	-0.022	-0.023	-0.023	-0.023	
CCFO	(-1.26) 0.009	(-1.29) 0.005	(-1.31) 0.001	(-1.31 0.001	
CSALE	(1.10)	(0.67)	(0.16)	(0.18)	
CSALE	(1.10)	(0.07)	(0.10)	0.014	
	0.007	0.007	0.014	(1.05)	
CNI	(0.49)	(0.53)	(1.04)		
	-0.004	-0.005	-0.006*	-0.005	
LOSS	(-1.36)	(-1.48)	(-1.72)	(-1.71	
	0.002	0.002	-0.0001	-0.001	
CL	(0.68)	(0.77)	(-0.05)	(-0.16	
INVEDGE MILL C DATIO	-0.013***	-0.014***	-0.028***	-0.028*	
INVERSE MILLS RATIO	(-2.86) -0.001	-2.86 -0.002	(-5.89) -0.001	(-5.86 -0.001	
QCA_QC	(-0.24)	(-0.35)	(-0.27)	(-0.17	
QCA_QC	-0.003**	-0.004**	-0.004**	-0.004*	
TENURE	(-2.36)	(-2.44)	(-2.58)	(-2.63	
	0.0002	0.00007	-0.0001	-0.000	
BSIZE	(0.16)	(0.04)	(-0.07)	(-0.16	
	-0.001	-0.001	-0.001	-0.001	
INSTITUITIONAL	(-0.92)	(-0.83)	(-0.75)	(-0.79	
	-0.001	-0.001	-0.0001	-0.000	
FAMILY	(-1.27)	(-1.20)	(-0.06)	(-0.12	
DIEDI OCK	0.0004	0.0001	-0.0003	-0.000	
INTERLOCK	(0.36)	(0.09)	(-0.28)	(-0.26	
EXPERT	-0.0004 (-0.30)	-0.0003 (-0.25)	-0.001 (-0.52)	-0.001 (-0.41)	
INDUSTRY Dummy	Included	Included (-0.23)	Included	Included	
	İ			Included	
YEAR DUMMY	Included	Included	Included		
N III C	1130	1130	1130	1130	
Adjusted R-Square	0.073	0.073	0.094	0.095	
P-Value ** Significant at 0.01 **	<.0001 Significant at 0.05	<.0001 * Significant at 0.10	<.0001	<.0001	

**Table 11:** Robustness Analysis – Second stage- Controlling for Endogeneity-Women Presence - Restatement Model

Independent variable	Dependent variable: Restatement model				
	-1.355***	-1.505***	-1.069*	-1.338**	
Intercept	(7.09)	(7.13)	(3.83)	(6.17)	
	-0.638***				
SPROV	(7.97)				
		-0.521**			
SPROVI		(6.62)			
			-0.616***		
ACSPROV			(11.34)		
A CELL LI OCAL				-0.561***	
ACFULLLOCAI	0.002			(14.09)	
PFDUMMY	(0.002				
FFDUMMT	(0.00)	-0.0002			
PFIDUMMY		(0.00)			
TTIDOWNTI		(0.00)	-0.064	-0.040	
PFACDUMMY			(0.152)	(0.06)	
+- +	0.799***	0.810***	0.878***	0.903***	
LEV	(7.02)	(7.07)	(8.27)	(8.66)	
	-0.082	-0.074	-0.137	-0.136	
SIZE	(0.39)	(0.26)	(1.12)	(1.10)	
	0.179	0.195	0.168	0.173	
CCFO	(0.11)	(0.13)	(0.10)	(0.10)	
	-0.482	-0.47	-0.489	-0.502	
CSALE	(2.50)	(2.31)	(2.45)	(2.56)	
	-0.197	-0.195	-0.133	-0.124	
CNI	(0.22)	(0.22)	(0.10)	(0.09)	
01.12	0.178	0.179	0.177	0.179	
LOSS	(1.58)	(1.60)	(1.54)	(1.57)	
	0.166	0.194	0.163	0.143	
CL	(1.63)	(2.27)	(1.54)	(1.16)	
	-0.021	0.002	-0.174	-0.154	
INVERSE MILLS RATIO	(0.00)	(0.00)	(0.68)	(0.53)	
	-3.886	-3.89	-3.822	-4.044	
QCA_QC	(0.00)	(0.001)	(0.00)	(0.001)	
	-0.144**	-0.153**	-0.159**	-0.167**	
TENURE	(4.25)	(4.92)	(5.22)	(5.63)	
	-0.159*	-0.158*	-0.162*	-0.161*	
BSIZE	(3.75)	(3.63)	(3.82)	(3.76)	
	-0.048	-0.053	-0.050	-0.052	
INSTITUITIONAL	(0.55)	(0.66)	(0.57)	(0.62)	
	-0.035	-0.035	-0.028	-0.040	
FAMILY	(0.27)	(0.27)	(0.16)	(0.33)	
	0.073	0.064	0.062	0.064	
INTERLOCK	(1.46)	(1.10)	(1.02)	(1.09)	
	0.025	0.031	0.026	0.034	
EXPERT	(0.17)	(0.27)	(0.19)	(0.31)	
INDUSTRY Dummy	Included	Included	Included	Included	
YEAR DUMMY	Included	Included	Included	Included	
N	1130	1130	1130	1130	
	0.051	0.050	0.054	0.054	
R-Square		II.			
LR Statistic P-Value	59.078 <.0001	57.661 <.0001	62.945 <.0001	67.503 <.0001	

<sup>\*\*\*</sup> Significant at 0.01

<sup>\*\*</sup> Significant at 0.05

<sup>\*</sup> Significant at 0.10

Table 12: Robustness Analysis – First Stage- Controlling for Endogeneity-Geographical Diversity

Independent variable	Dependent variable: Restatement model			
independent variable	SPROVDUMMY	SPROVIDUMMY	ACSPROVDUMMY	
	-0.214	-0.351	0.207	
Intercept	(0.88)	(2.36)	(0.83)	
	-0.036	-0.027	-0.082***	
LOGMVK	(1.54)	(0.84)	(8.10)	
	0.67**	0.410	0.083	
ROA	(6.52)	(2.46)	(0.10)	
COLVE	-0.035	0.294	0.420**	
CSALE	(0.03)	(2.30)	(4.37)	
NII WADED OF OWNED DIDE CHOOL GIVE	0.031	0.006	-0.023	
NUMBEROFOTHERDIRECTORSHIP	(0.51) 0.000	(0.02)	(0.29)	
AGE	(0.00)	-0.002 (0.10)	-0.001 (0.03)	
AGE	0.022	0.032	0.016	
BM	(0.38)	(0.87)	(0.21)	
DIVI	0.561***	0.537***	0.732***	
FINANCIAL EXPERT	(10.90)	(10.18)	(17.91)	
- 12	-0.434***	-0.436***	-0.154	
CL	(19.58)	(19.59)	(2.52)	
	0.007	0.006	0.007	
LOCAL INSTITUITIONAL INVESTORS	(2.30)	(2.15)	(2.53)	
	0.008***	0.004*	0.009***	
FAMILYORINDIVIDUAL	(12.58)	(3.83)	(16.01)	
25	-0.968*			
PF	(3.67)	1 04444		
PFI		-1.044**		
PFI		(5.66)	-1.379***	
PFAC			(16.85)	
INDUSTRY DUMMY	Included	Included	Included	
YEAR DUMMY	Included	Included	Included	
N N	1130	1130	1130	
R-Square	0.146	0.135	0.139	
LR Statistic	177.884	163.754	168.454	
P-Value	<.0001	<.0001	<.0001	

<sup>\*\*\*</sup> Significant at 0.01

<sup>\*\*</sup> Significant at 0.05

<sup>\*</sup> Significant at 0.10

**Table 13:** Robustness Analysis – Second stage- Controlling for Endogeneity - Geography – Abnormal Accruals

Indones dont vosichlo	Dependent variable: Abnormal Accruals model – heteroscedasticity-consistent standard errors				
Independent variable					
<b>T</b> .	0.087***	0.090***	0.080***		
Intercept	(9.61)	(9.96)	(9.53)		
app of the track	-0.008**				
SPROVDUMMY	(-2.51)	0.005/h/h			
CDD OVIDINA AV		-0.007**			
SPROVIDUMMY		(-2.51)			
			-0.005*		
ACSPROVDUMMY			(-1.72)		
	-0.008				
PF	(-0.48)				
		-0.004			
PFI		(-0.29)			
77.0			-0.002		
PFAC	0.007111	0.024444	(-0.17)		
* F37.	0.025***	0.024***	0.025***		
LEV	(2.63)	(2.60)	(2.70)		
CIZE	-0.015***	-0.015***	-0.016***		
SIZE	(-5.34)	(-5.17)	(-5.20)		
CCEO	-0.023	-0.022	-0.022		
CCFO	(-1.30)	(-1.27)	(-1.25)		
CSALE	0.008	0.006	0.009		
CSALE	(0.99)	(0.75)	(1.12)		
	0.002	0.002	0.002		
CNI	(0.150)	(0.17)	(0.15)		
	-0.003	-0.003	-0.004		
LOSS	(-1.01)	(-0.95)	(-1.10)		
	0.006	0.008**	0.003		
CL	(1.32)	(1.96)	(0.95)		
	-0.007	-0.013*	0.004		
INVERSE MILLS RATIO	(-0.96)	(-1.81)	(0.47)		
	-0.001	-0.001	-0.003		
QCA_QC	(-0.18)	(-0.16)	(-0.58)		
	-0.003*	-0.003**	-0.003*		
TENURE	(-1.87)	(-2.10)	(-1.79)		
DOLZE	0.001	0.001	0.0001		
BSIZE	(0.61)	(0.74)	(0.10)		
INSTITUITIONAL	-0.002	-0.002	-0.001		
INSTITUTIONAL	(-1.22) -0.002	(-1.37)	(-0.78)		
FAMILY	-0.002 (-1.42)	-0.002* (-1.93)	-0.001 (-1.09)		
TAMIL I	0.001	0.001	0.001		
INTERLOCK	(0.62)	(0.73)	(0.46)		
INTERLOCK	<u> </u>				
EVDEDT	-0.000	-0.000	0.000		
EXPERT	(-0.02)	(-0.25)	(0.20)		
INDUSTRY DUMMY	Included	Included	Included		
YEAR DUMMIY	Included	Included	Included		
N	1130	1130	1130		
Adjusted R-Square	0.069	0.070	0.066		
P-Value  *** Significant at 0.01  ** Signifi	<.0001 cant at 0.05 * Significant	<.0001	<.0001		

<sup>\*\*\*</sup> Significant at 0.01

<sup>\*\*</sup> Significant at 0.05

<sup>\*</sup> Significant at 0.1

Table 14: Robustness Analysis – Second stage- Controlling for Endogeneity - Geography – Restatement

Independent variable	Dependent variable: Restatement model			
independent variable	-2.013***	-1.966***	-1.816***	
Intercept	(27.50)	(25.23)	(24.39)	
тистеері	-0.246**	(23.23)	(24.37)	
SPROVDUMMY	(3.98)			
SI KO V DOWN I	(3.70)	-0.088		
SPROVIDUMMY		(0.52)		
SI KO VIDOMIVI I		(0.32)	-0.264**	
ACSPROVDUMMY			(4.54)	
Tiest No v Belviivi i	-0.797		(1.51)	
PF	(1.02)			
	(1.02)	-0.62		
PFI		(0.87)		
		(0.07)	-0.764	
PFAC			(1.97)	
	0.862***	0.811***	0.822***	
LEV	(8.14)	(7.25)	(7.38)	
,	-0.060	-0.060	-0.103	
SIZE	(0.28)	(0.28)	(0.81)	
SILL	0.138	0.186	0.213	
CCFO	(0.07)	(0.12)	(0.16)	
CCFO	-0.547*	-0.432	-0.39	
CCALE				
CSALE	(3.19)	(1.96)	(1.54)	
CNII	-0.087	-0.153	-0.210	
CNI	(0.04)	(0.13)	(0.26)	
1 000	0.157	0.179	0.184	
LOSS	(1.21)	(1.62)	(1.71)	
CT.	-0.045	0.100	0.124	
CL	(0.07)	(0.35)	(0.75)	
DIVIED OF LAW LO DAMES	0.557**	0.305	0.441	
INVERSE MILLS RATIO	(4.05)	(1.14)	(1.84)	
	-4.204	-3.998	-3.967	
QCA_QC	(0.00)	(0.001)	(0.00)	
	-0.142**	-0.160**	-0.155**	
TENURE	(4.23)	(5.47)	(4.97)	
	-0.166**	-0.147*	-0.182**	
BSIZE	(3.98)	(3.17)	(4.68)	
	-0.043	-0.047	-0.041	
INSTITUITIONAL	(0.43)	(0.51)	(0.38)	
	-0.001	-0.026	-0.016	
FAMILY	(0.00)	(0.14)	(0.05)	
	0.072	0.065	0.061	
INTERLOCK	(1.44)	(1.16)	(0.97)	
	0.044	0.030	0.053	
EXPERT	(0.52)	(0.24)	(0.72)	
INDUSTRY DUMMY	Included	Included	Included	
YEAR DUMMY	Included	Included	Included	
N	1130	1130	1130	
R-Square	0.053	0.046	0.051	
LR	61.501	53.505	59.308	
P-Value	<.0001	<.0001	<.0001	

\* Significant at 0.



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