ESSAYS ON DISCLOSURE AND LEGAL ORIGIN

by

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Find that both the content and the form meet acceptable presentation standards
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Essays on Disclosure and Legal Origin

Thesis directed by Associate Professor Bjorn N. Jorgensen

This dissertation consists of two essays.

Chapter 1:

I exploit a regulatory change that mandated Over-the-Counter Bulletin Board (OTCBB) firms to comply with the reporting requirements of the 1934 Securities Exchange Act to examine: 1) firm characteristics associated with voluntary disclosure of financial statement information, and 2) the valuation role of financial statement information in voluntary and mandatory reporting disclosure environments. Prior to this regulatory change, disclosure of financial statement information was voluntary for most OTCBB firms. I study firms that initiate filing with the SEC after this regulatory change, and classify these firms as disclosing and non-disclosing firms based on whether they voluntarily disclosed financial statement information to the public (but did not file with the SEC) prior to the regulatory change. In these firms' initial SEC filings I am able to observe *ex post* the prior year financial statement information even for non-disclosing firms that had previously withheld this information. I find that the choice to voluntary disclose financial statements is associated with firm characteristics related to lower proprietary costs, lower agency costs, and more useful accounting information in valuation. In association-based tests, I find evidence consistent with firms voluntarily disclosing financial statement information when the information is useful for valuation and otherwise not disclosing. My evidence also suggests that *non-disclosed* accounting information is reflected in stock prices in real time.

Chapter 2 (co-authored with Bjorn N. Jorgensen and Jeffrey C. Merrell):

This essay provides evidence on the link between legal origin and earnings attributes often associated with earnings quality. Prior studies perform country-level analyses and find evidence that earnings quality is higher in counties with common law (English legal origin) than in countries with civil law (which includes French legal origin). This paper takes a different approach and exploits within-country variation in Canada. Specifically our research is motivated by the observation that all Canadian providences have common law with the exception of Quebec which has civil law. We investigate whether common earnings attributes typically associated with earnings quality vary at the firm-level. We find that earnings attributes do vary with legal origin. Further, we analyze Canadian firms' decision regarding where to incorporate at either the Federal or province level. Our evidence suggests that Quebec firms' incorporation decision at either the Federal (common law) or province (civil law) leads to some differences in earnings quality, after controlling for differences in accounting standards hypothesized by Ball, Kothari and Robin (2000).

To my wife, Beca, and my son, Dayton –

Thank you for your love, patience and support.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1: Market Implications of Voluntary Accounting Disclosures in the Absence of a Mandatory Disclosure Requirement: Evidence from the OTCBB

Table

CHAPTER 2: Earnings Quality and Legal Origin: Evidence from Quebec

Table

CHAPTER 1

Market Implications of Voluntary Accounting Disclosures in the Absence of a Mandatory Disclosure Requirement: Evidence from the OTCBB

Introduction

Public trading of securities in the US typically requires mandatory disclosure of financial statement information. Prior to 1999, however, disclosure of financial statement information was voluntary for most firms traded on the Over-the-Counter Bulletin Board (OTCBB).[1] Consistent with predictions from the analytical literature on voluntary disclosure, some firm managers disclosed financial statement information while others did not. Nevertheless, prices are observable for all firms regardless of disclosure. I exploit a regulatory change on the OTCBB to observe *ex post* the financial statement information non-disclosing firms previously elected to withhold. Specifically, on January 4, 1999, the U.S. Securities and Exchange Commission (SEC) approved the Eligibility Rule, which required firms to comply with the periodic disclosure requirements of the 1934 Exchange Act to continue trading on the OTCBB. Those firms that chose to remain on the OTCBB began filing with the SEC and were required to provide current year information as well as at least one prior year of information (i.e., accounting information for the voluntary disclosure period).

I use this setting where disclosure is voluntary to first examine firm characteristics associated with voluntary disclosure. I find firms' likelihood of disclosure is negatively related to research and development activities, *Development Stage Enterprise* (*DSE*) firms[2], and ownership concentration. These results are consistent with firms guarding proprietary

[1] Technically, SEC Rule 15c2-11 required firms to provide a balance sheet, income statement, and retained earnings statement to a market maker *once* to initiate a quotation, but with no obligation to update that information. I control for this in my research design.

[2] *Development Stage Enterprises* are firms that in the process of commencing operations and have little to no revenues. Relative to non-*DSE* firms, *DSE* firms are valued almost entirely based on a growth option where accounting information is less likely to be useful in valuing these firms.

information, not disclosing when accounting information is less useful in valuation, and not disclosing when agency costs are likely lower. I also find that firms' likelihood of disclosure is positively associated with size, which is consistent with high firm size resulting in decreasing costs to disclosure, greater returns to information acquisition, and/or increased litigation risk.

Second, I use this setting to examine whether stock prices relate to disclosed and *non-disclosed* accounting information. Mandatory disclosure laws implicitly assume that: (1) financial statements provide useful information to investors, and (2) public disclosure of financial statement information is necessary for stock prices to reflect this information. In contrast, theoretical research suggests that in the absence of disclosure investors set prices that, on average, correctly infer non-disclosed information (e.g., Verrecchia 1983, Dye 1985). Further, alternative channels to public disclosure, such as insider trading, may partially or fully incorporate private information into stock prices (e.g., Kyle 1985, Manne 1966). Since many companies on the OTCBB are small, start-up enterprises, their financial statements may not provide useful information for investors' resource allocation decisions.

Understanding whether stock prices reflect accounting information in a voluntary disclosure setting provides insights about the effects of modern mandatory SEC disclosure regulation. Theoretical research suggests that the appropriate benchmark to evaluate the effects of mandatory disclosure is to first understand what firms would have voluntary disclosed in the absence of regulation (e.g., Dye 1990). Thus, this setting provides an observable benchmark to evaluate the effects of mandatory disclosure regulation. For firms that did not disclose prior to this regulatory change, which I label "non-disclosing" firms, mandatory SEC disclosure requirements impose a significant shift in the firms' information environment. In contrast, this regulatory change should have an immaterial direct effect on "disclosing" firms because they

voluntarily disclosed. Mandatory disclosure, however, may enhance the comparability and credibility of their disclosures since mandatory disclosure provides a credible commitment to reveal information independent of economic outcomes.

I find a weak association between prices and accounting information for non-disclosing firms both before and after the imposition of SEC disclosure requirements. The coefficient of book value becomes positive and significant during the period of mandatory disclosure and the adjusted R^2 increases consistent with mandatory disclosure providing some new information to investors. However, the overall weak association between stock prices and accounting information seems most consistent with accounting information playing a minimal role in valuation for the (previously) non-disclosing firms. In contrast, I find a strong association between prices and accounting information for disclosing firms both before and after the imposition of SEC disclosure requirements. Taken together, these results are consistent with firms voluntarily disclosing financial statement information when it is useful for valuation, and not disclosing otherwise.

I further evaluate the non-disclosing firms and partition non-disclosing firms by whether they are classified as *DSE* firms (Willenborg 1999). As Willenborg notes, from an *ex ante* perspective accounting information is less likely to be relevant for pricing *DSE*s. *DSE* firms primarily represent a growth option where accounting information is less likely to be useful in valuation. Consistent with his argument, I find no association between prices and accounting information for non-disclosing *DSE*s either before or after SEC disclosure requirements. In contrast, I find a weak association between prices and accounting information for non-disclosing non-DSE firms before and after the imposition of SEC regulation, but no increase in the association. These results are consistent with stock prices in the prior period reflecting non-

disclosed accounting information. Further, the results of this partition are consistent with non-disclosing firm managers withholding accounting information because it is not useful in valuation.

This paper makes the following contributions. First, it provides new insights to the role of accounting information in unregulated markets. Prior research studying the role of accounting information in unregulated markets focuses on how substantial discretion in accounting method choice affects the credibility of accounting information (e.g., Sivakumar and Waymire 1993, Ely and Waymire 1999, Barton and Waymire 2004). Because I am able to *ex post* observe the information the non-disclosing firms withheld, I study how discretion over *whether* or not to disclose accounting information relates to stock prices.

Second, a vast literature considers the economic consequences of mandated changes in accounting standards (Watts and Zimmerman 1986, Fields et al. 2001). As Bushee and Leuz (2005) point out, these studies occur in the already-rich SEC disclosure environment. These studies focus on changes in how firms report accounting information. My study examines a much more radical shift in financial reporting. I identify firms that did not previously disclose any financial statement information and then examine whether the imposition of SEC disclosure requirements enhances the association between stock prices and accounting information.[3]

Third, my study contributes to studies examining the OTCBB by providing specific evidence on the role of accounting in this market. Luft et al. (2001) and Luft and Levine (2004) focus on the market microstructure. They document that OTCBB securities yield lower returns with higher risk than securities on the major exchanges. They further document low liquidity

[3] Sivakumar and Waymire (2003) study the impact of the first federal accounting rules in US history on earnings attributes. The accounting rules were passed in 1907 and 1908 for regulation of US railroads. My study is distinct from this in that I study the impact of modern SEC disclosure requirements and study both non-disclosing and disclosing firms.

and high volatility, which they attribute to a lack of financial information and third party research. Bushee and Leuz (2005) study the economic consequences of the Eligibility Rule. They document specific costs and benefits for affected firms in terms of their market value and liquidity as well as some evidence of positive externalities (see Section 2 for a more detailed description). My study provides direct evidence on the *relationship* between stock prices and accounting information for OTCBB firms before and after the Eligibility Rule.

The paper proceeds as follows. Section 2 provides the historical background of US securities regulation and the institutional details of the OTCBB. Section 3 offers a literature review. I discuss Hypothesis development and research design in Section 4. Section 5 describes the data collection. In Section 6 I report on the association between stock prices and accounting information. In Section 7 I perform sensitivity analyses. Section 8 concludes.

1. History of US Securities Regulation and Institutional Setting of OTCBB

1.1 History of US Securities Regulation

Federal regulation of US securities began with the passage of the Securities Act of 1933 (1933 Act).[4] Existing state-level securities laws were largely superseded by federal regulation. Congress and the President passed the 1933 Act and the 1934 Act to remedy the lack of reliable information about securities, perceived to be the primary cause of the stock market crash of 1929. Congress and the President premised the Acts based on the principle of "full and fair" disclosure. Together the 1933 and 1934 Acts require exchange-listed companies to disclose audited financial statements and details about the company's business. Additionally, the Acts significantly increase civil liability for fraud.

[4] Interstate railroads and public utilities had been subject to federal regulation prior to the 1933 Act and the 1934 Securities Exchange Act (1934 Act).

The Acts pertained to exchange-listed companies, which left most firms in the OTC market free from federal regulation.[5] Two subsequent regulatory changes expanded the periodic reporting requirements of the 1934 Act to a significant number of OTC firms. The first change was passed in 1964 in response to concerns about fraud and the growth of the OTC market. Congress passed the 1964 Securities Amendments Acts (1964 Acts), which subjected OTC firms above a size and shareholder threshold ($1 million in assets and 500 shareholders, respectively) to the same disclosure requirements as exchange-listed firms. This resulted in a substantial change in the scope of firms required to comply with mandatory disclosure. The second change was also adopted in response to concerns about fraud in the OTC market as well. On January 4, 1999, the SEC approved Eligibility Rule requiring firms on the OTCBB to become reporting companies regardless of size or the number of shareholders.

Mandatory disclosure requirements and their enforcement are defining features of US securities markets. Many researchers question the necessity of mandatory disclosure to achieve well-functioning markets (e.g., Stigler 1964, Benston 1973). Others argue mandatory disclosure is essential to maintain efficient markets (e.g., Coffee 1984). For empirical researchers interested in understanding the impact of US federal securities regulation, the 1933 Act, the 1934 Act, the 1964 Acts, and the Eligibility Rule represent fertile (research) ground to gain such understanding.

1.2 Institutional Setting

To describe the OTCBB setting, I follow Bushee and Leuz's (2005) discussion of the salient features of the OTCBB market before and after the Eligibility Rule. In 1998, the OTCBB represented a sizable market segment with over 6,000 domestic issues, an average daily trading

[5] In 1936, Congress passed an amendment to the 1934 Act which required OTC firms to register with the SEC and begin filing periodic reports under the 1934 Act if the firms issued more than $2 million in a securities offering.

volume over $200 million and an estimated market capitalization of over $50 billion. Formed in response to the mandate of the Penny Stock Reform Act of 1990 to enhance price transparency in the OTC market, the OTCBB is an electronic quotation medium that collects and disseminates real-time quotes, transaction prices, and volume data for small-cap OTC securities.[6]

A key distinction between the OTCBB and the national exchanges is the absence of quantitative financial listing requirements (e.g., minimum net worth or market capitalization) for firms quoted on the OTCBB. Firms only need to find a broker/dealer willing to make a market in their stock to begin quotation and, in contrast to the national exchanges, firms do not have a formal relationship with the OTCBB. The National Association of Securities Dealers (NASD, now part of the Financial Industry Regulatory Authority) is entrusted with operating and regulating the OTCBB. During the period of this study, the NASD delegated the actual execution of operating and regulating this market to its subsidiary, NASDAQ. The OTCBB differs from the Pink Sheets, which is another OTC market segment. The Pink Sheets are characterized by less price transparency during the period of this study because it started electronic quotations in 1999 and a supporting web portal in 2000.

Prior to January 1999, approximately 3,500 firms on the OTCBB were not required to file periodic financial reports with the SEC. These firms were exempt from SEC regulation because they: (1) never issued securities under the 1933 Act, and (2) were below the size *or* "owners of record" thresholds stated in Section 12(g) of the 1934 Act. Issuers registering an offering under the 1933 Act trigger periodic reporting requirements in accordance with Section 15(d) of the 1934 Act. Firms frequently avoid registering under the 1933 Act by qualifying for an exemption. For example, Regulation D Rule 504 exempts offering up to $1 million in a 12-month period. Section 12(g) details the size and shareholder thresholds of the 1934 Act as firms

[6] In general, an OTC security is any security that is not listed or traded on a national exchange or NASDAQ.

exceeding $10 million in assets and with a class of securities held by more than 500 owners of record on the last day of the fiscal year register their securities under the 1934 Act. The actual number of individual shareholders often exceeds the owners of record because all shares held in "street name" by each brokerage firm or clearinghouse count as only one owner.

While exempt from the 1934 Act reporting requirements, these 3,500 firms were required to provide financial statement information *once*, upon initial quotation on the OTCBB. Specifically, SEC Rule 15c2-11 required the initial broker/dealer making a market in these securities to obtain current financial statement information (with no audit requirement) from issuers.[7] The market maker did not need to subsequently obtain updated information. Further, after thirty days, the "piggyback" exemption permitted other market makers to issue quotes without obtaining updated financial information. As a result, financial statement information was generally not publicly available for these firms.[8]

However, these lax requirements created some challenges in the OTCBB market. An article published by the Wall Street Journal on September 4, 1997 documented a surge of fraud and a lack of financial information on the OTCBB that marked the first of several events that would lead to the Eligibility Rule. Shortly thereafter, on September 22, 1997, the US Senate held a committee meeting on fraud in OTC markets. SEC Chairman, Arthur Levitt, Jr., testified before the committee that fraud was a problem in the OTC markets (S. Hrg. 105-226 9/22/97). The NASD also expressed concern about the OTCBB. Both the SEC and the NASD expressed concern that electronic quotation of real-time data provided on the OTCBB gave investors a

[7] Paragraph (g)(1) of Rule 15c2-11 defines current as six months. If the balance sheet provided is more than six months old at the initial quotation, then the firm must provide an income statement and retained earnings statement updated to a more current date.

[8] Bushee and Leuz (2005) confirmed this in interviews with officials from NASDAQ, the SEC and several OTCBB market makers. I also conducted interviews with OTCBB market makers who confirmed that financial statement information was not generally available during this time.

misleading impression about the reliability of firms traded on the OTCBB. Additionally, the NASD was deeply concerned about damage to the reputation of NASDAQ as the OTCBB was often linked to NASDAQ.[9]

Ultimately, the NASD and SEC increased the disclosure requirements of the OTCBB. On December 9, 1997, the NASD Board of Governors indicated it was considering requiring firms to file with the SEC to remain on the OTCBB. On February 13, 1998, the NASD Board of Governors proposed limiting the OTCBB to firms that filed period reports with the SEC. After a brief period for public comment, the NASD approved this restriction by passing the Eligibility Rule in May 1998 as amendments to NASD rules 6530 and 6540. The SEC announced its approval of the Eligibility Rule on January 4, 1999.

The Eligibility Rule required OTCBB firms to file the periodic reports specified in Section 13 and 15(d) of the 1934 Act with the SEC, except banks and insurance companies which were allowed to make filings with the appropriate regulatory authority rather than the SEC. The rule required firms to file a registration statement, Form 10, under the 1934 Act or a 10-K with equivalent information and the financial statements had to be audited. Each company's initial filing provided the current year's financial statement information and at least one year of prior information for small business filers and up to two years for non-small business filers. For firms that previously did not disclose financial statement information for the year preceding the Eligibility Rule, it now became possible to observe the information they elected not to disclose. After the initial filing, the rule required firms to file current reports, 10-Qs and 8-Ks, as well as annual reports, 10-Ks, to maintain their quotation on the OTCBB. Investors

[9] For example, Bedford Holdings, Inc. disclosed the following, "The Company's Common Stock is quoted under the symbol 'BFHI' on the NASDAQ Electronic Bulletin Board." This could confuse investors and blurs the line between NASDAQ and the OTCBB.

could easily access the filings on the SEC's EDGAR database. For most firms, this dramatically increased the amount of publicly available financial statement information. The amount of public and private enforcement also increased following firms' registration with the SEC. Firms were now under the scrutiny of the SEC, while Section 18 of the 1934 Act significantly increased firms' civil liability, making private enforcement easier for investors.

The Eligibility Rule was phased in on a monthly basis starting in July 1999 and ending June 2000 based on firms' ticker symbols on January 4, 1999. This gave firms from 6 to 18 months to prepare their SEC filings. Each month, the OTCBB reviewed approximately 100-300 firms for compliance with the Eligibility Rule. The phase-in schedule provided the OTCBB with adequate time to review compliance. One month prior to each phase-in date, the OTCBB reviewed firms' compliance and appended an 'E' to non-compliant firms' ticker symbols. When firms subsequently complied with the Rule, then the 'E' was removed. Otherwise, the firms were deleted from the OTCBB at the phase-in date.

The OTCBB reviewed 5,402 firms for compliance (see Table 1). The Eligibility Rule did not affect 1,899 firms because they had already registered and were filing with the SEC when the rule was passed (Already Compliant firms).[10] Of the 3,503 firms affected by the Eligibility Rule, approximately three quarters of these firms did not comply and were forced off the OTCBB (Noncompliant firms). Most of these firms moved to the Pink Sheets (Bushee and Leuz 2005). The remaining firms complied with the Eligibility Rule and continued quotation on the OTCBB (Newly Compliant firms).

[10] To facilitate comparison with Bushee and Leuz (2005), I use the same labels.

2. Literature Review

The guidance from theoretical research regarding the necessity of mandatory disclosure regulation is equivocal. The well-known "unraveling" result of early theoretical work predicts full disclosure of private information when disclosure is truthful and costless (Grossman 1981, Milgrom 1981). However, full disclosure is rarely observed in capital markets. Later work models a cost to truthful disclosure and predicts a partial disclosure equilibrium, where firms with (un)favorable information do (not) disclose (Verrecchia 1983).[11] In this framework, firms disclose information when the benefits exceed the costs and investors set prices that, on average, correctly infer non-disclosed information.

In addition, alternative information channels to public disclosure may result in stock prices reflecting non-disclosed information. Insiders trading in the stock will incorporate private information into their decisions to buy and sell (e.g., Manne 1966). Kyle (1985) suggests that without a public information signal, insiders reveal a portion of their private information. Jorgensen and Kirschenheiter (2010) show that investors infer non-disclosed information from disclosure by comparable firms.

From a theoretical perspective, the need for mandatory disclosure is not obvious. Nevertheless, mandatory disclosure requirements are observed around the world (Healy and Palepu 2001, Frost et al. 2006, Leuz 2010). The literature provides four main justifications for mandatory disclosure: (1) positive externalities, (2) market-wide cost savings, (3) insufficient private (or public) sanctions, and (4) dead-weight costs from agency conflicts and fraud (Leuz 2010).[12] Mandatory disclosure may create positive externalities, such as information transfers

[11] Other work also predicts a partial disclosure equilibrium when investors are uncertain about whether management is informed (Dye 1985, Jung and Kwon 1988). In my setting, investors likely believe that firms have financial statement information.

[12] For a comprehensive discussion of these justifications, see Leuz and Wysocki (2008).

and liquidity spillovers (Dye 1990, Admati and Pfleiderer 2000). However, negative externalities may arise from mandatory disclosure (e.g., Fishman and Hagerty 1989). Mandatory disclosure requirements can save costs to firms when they require disclosures almost all firms would voluntarily provide anyway (Ross 1979). Further, mandatory disclosure may provide firms with a more credible commitment device than they could otherwise contract privately. A credible commitment device can benefit firms by increasing market liquidity (Verrecchia 2001). Finally, mandatory disclosure may reduce agency conflicts by minimizing controlling insiders' consumption of private benefits.

Prior to mandatory disclosure, the empirical literature on the role of accounting information in unregulated markets focuses on how managerial discretion in financial reporting can affect its credibility and whether market forces enhance the credibility of reported numbers (e.g., Waymire and Sivakumar 1993, Ely and Waymire 1999, and Barton and Waymire 2004). For example, Waymire and Sivakumar (1993) study 51 NYSE industrials during 1905-1910 when managers had considerable flexibility in reporting earnings. They find negative earnings and dividend changes are associated with returns, but that positive earnings changes are only associated with returns for dividend-paying firms. The results are consistent with favorable earnings information being less credible than negative information. Collectively, these studies suggest financial reporting in a discretionary environment is informative to capital markets, but that the market discounts some favorable news (e.g., positive earnings changes and intangibles) as opportunistic reporting.

Empirical investigations of the impact of federal securities regulation began with Stigler (1964). He investigates whether investors are better off after the mandatory disclosure imposed by the 1933 Act. He examines two groups of NYSE issues: (1) new issues from 1923-1928 and

(2) new issues from 1949-1955. He finds that the returns on new issues after mandatory disclosure are the same as the returns on new issues before mandatory disclosure. He also finds that the variance of stock returns decreases after mandatory disclosure. Overall, he concludes that mandatory disclosure had little beneficial effect for new issues, and may have had a detrimental effect by excluding risky, new companies from accessing public capital. While controversial, subsequent studies using modern empirical techniques support Stigler's findings (i.e., Jarrell 1981, Simon 1989).[13]

Studies of the 1934 Act fail to document significant benefits. Benston (1973) is the first empirical investigation of the impact of the Securities Exchange Act of 1934. His study relies on the observation that prior to the 1934 Act, some firms on the NYSE disclosed sales information and some firms did not disclose sales information. After the 1934 Act, all firms were required to disclose sales information. His main finding is that the stock return residuals are similar for both groups both before and after the 1934 Act. He concludes that the mandatory disclosure requirements of the 1934 Act provided no discernible benefit to investors. Subsequent research on the 1934 Act documents no significant benefits either (i.e., Chow 1983, Daines and Jones 2005, Mahoney and Mei 2006). Mahoney and Mei (2006) argue that the contractual-based disclosure system of the NYSE already provided investors with equivalent information to the mandatory disclosure requirements of the 1934 Act. Their final conclusion is that in the context of a strong legal system, a securities regulator may not yield substantial benefits above voluntary and contractual disclosure.

Although studies of the 1933 Act and 1934 Act fail to document significant benefits from federal regulation, recent work examining the 1964 Acts and the Eligibility Rule documents

[13] Simon (1989) argues the reduced variance of returns is more consistent with better information reducing investor forecast errors than with the Stigler's crowding out argument.

significant costs and benefits associated with mandatory SEC disclosure. One difficulty in studying the Securities Acts is that the volatile market conditions of the 1930s may impede researchers' ability to precisely measure the impact of the Acts. Studying the 1964 Acts and the Eligibility Rule provide less volatile settings and natural control groups (companies already filing with the SEC) to better measure the impact of mandatory SEC disclosure regulation.

Greenstone, Oyer, and Vissing-Jorgensen (2006) exploit the 1964 Acts to study the effects of mandatory SEC disclosure regulation. They estimate that OTC firms that went from no SEC reporting to full SEC reporting earned abnormal excess returns ranging from 11.5 to 22.1 percent in the period between the initial proposal of the legislation and when it became law. They suggest that mandatory disclosure causes managers to better focus on maximizing shareholder value. In a concurrent paper around the adoption of the 1964 Acts, Ferrell (2007) finds that mandatory disclosure results in a reduction in the volatility of OTC stock returns.

Bushee and Leuz (2005) study the Eligibility Rule. They document significant costs and benefits associated with mandatory disclosure regulation. First, as discussed in Section 2, they document that approximately three quarters of the 3,503 affected firms (those not previously filing with the SEC) are forced into a less regulated market at a significant cost in terms of market value and liquidity. Second, stock returns suggest that the regulatory change was costly for the quarter of firms that chose to comply with the mandatory SEC disclosure obligations. These firms, however, did experience an increase in liquidity upon compliance. Finally, they find evidence of positive externalities that are likely due to liquidity spillovers or an enhanced reputation of the OTCBB. They are able to measure externalities by examining OTCBB firms already filing with the SEC that presumably should be unaffected by the Eligibility Rule, except for potential externalities.

The main justification for the 1933, 1934, 1964 Acts and the Eligibility Rule was a lack of current, reliable financial statement information about issuers. My study contributes to this literature by directly studying whether financial statement information is reflected in stock prices when disclosure of financial statement information is voluntary (i.e., no contractual or mandatory reporting obligations), and whether modern mandatory SEC disclosure requirements increase the association between stock prices and financial statement information.

3. Hypotheses Development and Research Design

My study focuses on the Newly Compliant firms that choose to begin filing periodic reports with the SEC. Prior to the Eligibility Rule, the costs of filing with the SEC exceeded the benefits, or these firms would have voluntarily filed with the SEC (Bushee and Leuz 2005). Forced to choose their second best alternative, these firms start filing with the SEC to remain on the OTCBB. My research design is similar to Berger and Hann (2003) and Botosan and Stanford (2005), who note that after mandatory change in segment reporting it is possible to observe *ex post* information firms chose not to disclose in real time. In my setting, I use Newly Compliant firms' initial SEC filings to observe *ex post* financial statement information many firms chose not to disclose in real time. Regardless of disclosure, however, investors traded in both sets of firms' stocks and prices are observable for all firms during the voluntary disclosure regime. The Newly Compliant firms allow me to examine the role of accounting information in both voluntary and mandatory reporting regimes.

I begin by examining firm characteristics associated with the choice to voluntarily disclose financial statement information in the voluntary disclosure period. A strength of this setting is that my proxy for voluntary disclosure does not also capture mandatory, a problem with

most empirical studies on voluntary disclosure (Beyer et al. 2010). The disclosure literature suggests important costs and benefits of voluntary disclosure include a higher valuation, liquidity, cost of capital, access to financing, proprietary costs, and agency costs. I use book-to-market, firm size, firm profitability, research and development expenditures, ownership structure, and industry concentration as proxies for these costs and benefits (e.g, Lang and Lundholm 1993, Healy and Palepu 2001, Bushee and Leuz 2005, Botosan and Stanford 2005). I also include an indicator variable for development stage enterprises to capture that financial statement information may be less useful in valuing these firms and lead to less disclosure of this information. I expect that book-to-market, research and development expenditures, development stage enterprise status, ownership concentration, and industry concentration (four-firm concentration ratio, where higher values indicate less competitive industries) to be negatively related to disclosure. I expect size to be positively related to disclosure. The expected sign on profitability depends on the importance of agency costs and proprietary cost considerations (Healy and Palepu 2001).

Next, I examine non-disclosing firms. Non-disclosing firms are of particular interest because they enable me to examine whether prices reflect non-disclosed accounting information. I consider four possibilities. First, the market may be strong-form efficient and incorporate the non-disclosed information fully into stock prices via alternative information channels to public disclosure such as insider trading (e.g., Manne 1966). Second, stock prices may only partially reflect non-disclosed information. In a model without public information (the period of nondisclosure in my setting), insiders are predicted to reveal only a portion of their private information (Kyle 1985). Investors may also be able to infer some accounting information from comparable firms that do disclose (Jorgensen and Kirschenheiter 2010). Third, insiders may

withhold valuable accounting information and stock prices are not associated with financial information. Finally, managers may not disclose financial statement information because the information is not useful for valuation. Formally, I hypothesize (null form):

H1: Under the voluntary disclosure regime, stock prices for non-disclosing firms are not associated with accounting information.

It is important to note that OTCBB firms are small with low analyst coverage. The best source of information is the firm itself; the literature on voluntary disclosure documents that increased voluntary disclosure benefits firms in low information environments (e.g., Botosan 1997, Blankespoor et al. 2010). Compliance with the Eligibility Rule causes a significant shift in the amount of financial statement disclosure for non-disclosing firms. Presumably, the imposition of mandatory disclosure should affect these firms the most. Further, studying the effects of mandatory disclosure should enable me to distinguish which of the four possibilities motivating Hypothesis 1 is most likely. This leads to my second hypothesis (null form):

H2: Mandatory disclosure does not increase the association between stock prices and accounting information for non-disclosing firms.

I also study the disclosing firms. Mandatory disclosure regulation may not have a material direct effect on disclosing firms because they voluntarily provided financial statement information in the voluntary regime. However, voluntary disclosure may not be credible because managers have incentives to issue self-serving disclosures. Voluntary disclosure of bad news is likely to be viewed as credible, but investors may be more skeptical of favorable news (e.g., Sivakumar and Waymire 1993). Mandatory disclosure may enable firm managers' to credibly commit to disclose both good and bad news (Verrecchia 2001). The addition of an audit requirement and increased civil liability under the 1934 Act may enhance the credibility of reported information as well. This leads to the following hypotheses (null form):

H3a: Under the voluntary disclosure regime, stock prices for disclosing firms are not associated with accounting information.

H3b: Mandatory disclosure does not increase the association between stock prices and accounting information for disclosing firms.

My research design follows prior research that examines the association of stock prices and accounting information (e.g., Francis and Schipper 1999, Ely and Waymire 1999, etc.). Specifically, I regress stock prices on book value and earnings in the following regression:

$$P_{it} = \alpha_0 + \alpha_1 BV_{it} + \alpha_2 EARN_{it} + \varepsilon_{it} \quad (1)$$

Where *P* is the share price six months after the fiscal year-end, *BV* is the book value per share and *EARN* is earnings per share. I adjust for stock splits as necessary. I use the price six months after the fiscal year-end to be consistent with how firms are classified as either disclosing or non-disclosing firms in the voluntary reporting regime. The operational definition of current disclosure in this market was defined by SEC Rule 15c2-11 as six months from a fiscal year-end.[14] Both the coefficients for BV and EARN as well as the adjusted R^2 from equation 1 provide information about how stock prices relate to accounting information.[15]

4. Data

4.1 Data Collection

Table 1 provides the details of my sample based on data obtained from the OTCBB.[16] On January 4, 1999, there were 6,513 securities quoted on the OTCBB. Of those, 417 securities were multiple issues (e.g., Class A and Class B common stock) for the same firm and 283 were

[14] Results are similar if I use the price four months after fiscal year-end.
[15] Brown et al. (1999) suggest deflating regression variables by past price to mitigate the effects of scale. I find qualitatively similar results to those presented when I scale by price as of six months after the preceding year-end.
[16] The initial list of securities quoted on the OTCBB on January 4, 1999 is available on the OTCBB website: www.otcbb.com. I then used daily lists of additions, deletions and changes, also available on the website, to determine compliance.

Table 1: Sample Selection

Panel A reconciles the securities listed on the OTCBB on January 4, 1999 to the number of firms actually reviewed by the OTCBB for compliance with the Eligibility Rule. Panel B classifies the firms reviewed for compliance as either firms that were already filing with the SEC in 1998 or firms that were not filing with the SEC in 1998. Panel C identifies the non-bank and non-insurance firms that were not filing with the SEC in 1998, but began filing with the SEC in compliance with the Eligibility Rule.

Panel A: Firms Reviewed by OTCBB at Phase-in Date	
Number of securities listed on OTCBB as of 1/4/99	6,513
Multiple issues for the same firm	(417)
Foreign firms and firms with only warrants or preferred stock on OTCBB	(283)
Number of firms with primary issues listed on OTCBB as of 1/4/99	5,813
Firms leaving OTCBB prior to phase-in date	(411)
Number of firms reviewed by OTCBB at phase-in date	5,402

Panel B: SEC Filing Status of Firms Reviewed by the OTCBB	
Firms reviewed by OTCBB	5,402
SEC Filers in 1998	1,899
Non-SEC Filers in 1998	3,503

Panel C: Newly Compliant Firms with Data	
Non-SEC Filers in 1998	3,503
Noncompliant with Eligibility Rule	(2,677)
Newly Compliant firms	826
Less banks and insurance firms	(227)
Non-bank and non-insurance firms	599
Less firms without registration statement or 10-K filing	(198)
Less shell companies	(233)
Less firms with no prior year data in filings	(45)
Newly Compliant firms	123

for foreign firms or firms with only warrants or preferred stock. Of the remaining 5,813 domestic issuers, 411 firms delisted from the OTCBB prior to their phase-in date for various reasons including mergers and acquisitions, bankruptcy, failure to comply with Rule 15c, inactivity, and listing on NASDAQ or a national exchange. This leaves 5,402 domestic firms that the OTCBB reviewed for compliance with the Eligibility Rule.

Of the 5,402 firms reviewed by the OTCBB for compliance, 1,899 firms filed with the SEC in 1998 while 3,503 firms did not. Of the Already Compliant firms, 539 firms become delinquent in their filings with the SEC or are terminated during 1999.

The main sample of interest for my study is the set of firms who were not filing with the SEC, but initiate filing with the SEC to comply with the Eligibility Rule. Of the 3,503 firms that were not filing with the SEC in 1998, 2,677 firms chose not to comply with the Eligibility Rule, leaving 826 Newly Compliant firms. I exclude banks and insurance companies because they are in regulated industries. This results in 599 Newly Compliant non-bank and non-insurance companies.

Of these 599 firms, I am unable to locate SEC filings for 198 firms. Of the remaining 393 firms' SEC filings, 233 firms were shell companies. These represent firms with minimal assets and no operations or specific business plan other than to identify suitable acquisitions. These companies likely choose to comply with the Eligibility Rule because the cost of compliance is low (i.e., minimal audit costs). For 45 firms, the current year of operations represented their first year of operations and so no data was available for the prior year. This leaves a final sample of 123 Newly Compliant firms with suitable data.

As noted earlier, disclosure of financial statement information prior to the Eligibility Rule was not entirely voluntary. SEC Rule 15c2-11 required firms to provide financial statement

information to the initial market maker upon initiating quotation on the OTCBB. For 30 firms, the year of prior period financial statement information that I observe in their SEC filing is the same information they would have provided to the market maker at their initial quotation. I exclude these firms leaving a final sample of 93 firms where disclosure of financial statement information is voluntary in the period prior to the Eligibility Rule and for which I am able to subsequently observe the information these firms would have had to disclose if under SEC disclosure during that period.

Table 2: Newly Compliant Firms' Disclosure Prior to the Eligibility Rule
Panel A identifies Newly Compliant firms from Table 1 Panel C where the prior year of financial statement information observable in a firm's first SEC filing was not provided to the initial market maker per SEC Rule 15c2-11. Panel B classifies firms as disclosing if firms publicly disclosed financial statement information within six months of their fiscal year-end, and non-disclosing otherwise.

Panel A: Voluntary vs. Mandatory Disclosing Firms	
Disclosure is voluntary	93
Disclosure is mandatory per SEC Rule 15c2-11	30
	123

Panel B: Voluntary Firms Public Disclosure Choices		
	Number	Percent
Non-Disclosing firms	66	71%
Disclosing firms	27	29%
	93	100%

Panel B of Table 2 details that of the 93 firms where disclosure was voluntary prior to the Eligibility Rule, 66 (71%) firms chose not to publicly disclose financial statement information while 27 (29%) firms publicly disclosed financial statement information. I classify firms as disclosing and non-disclosing firms based on a Lexis-Nexis search using each company's name. I then examined each article to determine whether a company disclosed financial statement

information. I also searched S&P Daily News, a low-cost method commonly used in the OTC markets to disseminate financial statement information. SEC Rule 15c2-11 Paragraph (g)(1) defines current financial statement information as six months. As this was the operational definition of "current" in this market, I adopt six months as my cut off for voluntary disclosure. Specifically, I classify any firm that publicly disclosed financial statement information within six months of its fiscal year-end as a disclosing firm, and as a non-disclosing firm otherwise.

I collect financial information from each firm's SEC filings. I obtain price data from FactSet. FactSet provides information about dividends and stock splits as well.

4.2 Disclosure and Firm Characteristics

In this section, I examine firm characteristics for non-disclosing firms and disclosing firms. Table 3 presents descriptive statistics for the 93 firms I study. The information in the Before columns is based on each firm's final year of information prior to the Eligibility Rule, except for the information for *DSE*, *Auditor*, *GC*, and *Ownership* which are only available for the mandatory disclosure period. The information in After columns is based on each firm's first year of information in the mandatory disclosure regime. Panels A and B reveal that both the non-disclosing and disclosing firms are small firms, whether measured by sales, assets or market value. Both non-disclosing and disclosing firms' operations on average generate negative earnings and operating cash flows. Panels A and B also reveal that the firms do not change dramatically after the Eligibility Rule. The primary exception to this observation is that market value roughly triples for non-disclosing firms (significant at the 5% level). Disclosing firms also experience a large increase in market value (median is significant at the 10% level).

When comparing non-disclosing firms to disclosing firms, unreported tests indicate disclosing firms are larger in terms of sales, gross margin, selling, general, and administrative

Table 3: Descriptive Statistics
This table presents descriptive statistics based on each firm's final year of information in the voluntary disclosure period (Before) and each firm's first year of information in the mandatory disclosure period (After). All variables are in thousands, except for ratios and dummy variables.

Panel A: Non-Disclosing Firms (66 firms)

	Before			After				
Variable	Mean	Median	Std Dev	Mean	Median	Std Dev		
Sales	546	51	1,622	698	53	1,704		
GM	207	7	727	267	20	695		
SG&A	625	367	810	916	827	840	**	##
R&D	78	0	219	78	0	165		
Earnings	(684)	(339)	987	(826)	(625)	1,081		
Profit	0.11	0.00	0.31	0.14	0.00	0.35		
CFO	(391)	(180)	557	(389)	(328)	721		
Assets	953	259	2,309	1,486	461	2,879		
SE	(936)	(51)	5,680	(590)	9	6,002		
MV	7,655	3,040	9,134	25,250	9,498	42,036	**	###
BM	-0.35	0.00	1.80	-0.13	0.00	0.73		
ROA	-1.41	-0.65	1.92	-1.49	-0.65	2.25		
D-to-A Ratio	1.64	0.85	2.01	1.46	0.84	1.81		
Industry Concentration	0.60	0.55	0.26	0.62	0.59	0.25		
DSE				0.47	0.00	0.50		
Auditor				0.05	0.00	0.21		
GC				0.55	1.00	0.50		
Ownership (%)				51	55	23		

***, **, * indicates *t*-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

GM is Sales minus cost of goods sold. *SG&A* is selling, general and administrative expenses. *R&D* is research and development expense. *Earnings* is net income. *Profit* is one if net income is postive, and zero otherwise. *CFO* is cash flows from operations. *SE* is stockholders' equity. *MV* is market value calculated as price at the fiscal year-end times common shares outstanding. *BM* is stockholders' equity divided by market value. *ROA* is net income divided by total assets. *D-to-A Ratio* is total liabilities divided by total assets. *Industry Concentration* is the four-firm concentration ratio based on 3-digit SIC sales. *DSE* is one if the entity is a Development Stage Enterprise, and zero otherwise. *Auditor* is one if the auditor is a Big N auditor, and zero otherwise. *GC* is one if the audit opinion is a going concern opinion, and zero otherwise. *Ownership* is the combined ownership of officers and directors and blockholders holding greater than 5%.

Table 3 (continued)

Panel B: Disclosing Firms (27 Firms)							
	Before			After			
Variable	Mean	Median	Std Dev	Mean	Median	Std Dev	
Sales	5,034	542	12,171	6,389	627	13,560	
GM	1,641	176	3,892	1,851	234	3,713	
SG&A	1,648	1,115	1,891	2,599	1,520	2,950	
R&D	8	0	37	8	0	38	
Earnings	(456)	(589)	2,098	(2,355)	(983)	4,363	*
Profit	0.17	0.00	0.36	0.17	0.00	0.36	
CFO	(255)	(426)	1,354	(994)	(641)	1,894	
Assets	5,650	1,162	10,453	4,890	1,519	8,730	
SE	2,303	284	7,351	2,145	566	7,507	
MV	19,343	12,969	25,621	34,752	23,224	56,223	#
BM	0.25	0.01	1.15	0.08	0.03	0.23	
ROA	-0.94	-0.58	1.79	-1.67	-1.00	1.97	
D-to-A Ratio	0.71	0.66	0.51	0.93	0.78	1.42	
Industry Concentration	0.65	0.61	0.23	0.65	0.59	0.23	
DSE				0.26	0.00	0.45	
Auditor				0.11	0.00	0.32	
GC				0.44	0.00	0.51	
Ownership (%)				43	41	26	

***, **, * indicates *t*-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

GM is Sales minus cost of goods sold. *SG&A* is selling, general and administrative expenses. *R&D* is research and development expense. *Earnings* is net income. *Profit* is one if net income is postive, and zero otherwise. *CFO* is cash flows from operations. *SE* is stockholders' equity. *MV* is market value calculated as price at the fiscal year-end times common shares outstanding. *BM* is stockholders' equity divided by market value. *ROA* is net income divided by total assets. *D-to-A Ratio* is total liabilities divided by total assets. *Industry Concentration* is the four-firm concentration ratio based on 3-digit SIC sales. *DSE* is one if the entity is a Development Stage Enterprise, and zero otherwise. *Auditor* is one if the auditor is a Big N auditor, and zero otherwise. *GC* is one if the audit opinion is a going concern opinion, and zero otherwise. *Ownership* is the combined ownership of officers and directors and blockholders holding greater than 5%.

Table 3 (continued)

Panel C: Industry Classification

	Non-Disclosing Firms (N=66)		Disclosing Firms (N=27)	
Industry (2-Digit SIC Code)	# of Firms	Percentage	# of Firms	Percentage
Agriculture, Forestry, and Fishing	1	2%	0	0%
Construction	1	2%	2	7%
Finance, Insurance, and Real Estate	7	11%	2	7%
Manufacturing	19	29%	4	15%
Mining	6	9%	2	7%
Public Administration	1	2%	0	0%
Retail Trade	0	0%	4	15%
Services	20	30%	7	26%
Transportation and Utilities	8	12%	4	15%
Wholesale Trade	3	5%	2	7%
	66	100%	27	100%

expenses, assets, stockholders' equity, and market value (differences significant at least at the 5% level). Non-disclosing firms invest more in research and development, which is consistent with a larger portion of the non-disclosing firms being *DSE*s (47%) than the disclosing firms (26%). *SFAS No. 7* classifies a company as a *DSE* when its efforts are focused on establishing new business and either its primary operations have not yet begun, or no significant revenues have been earned. Thus, a significant portion of these firms are start-up companies working on implementing their business plan.

Industry Concentration suggests that the average level of competition in the industries non-disclosing and disclosing firms operate in is similar. I calculate this measure of industry concentration following Botosan and Stanford (2005) as the sales of the top four firms relative to all firms sales in a 3-digit SIC code for a given year – higher levels of concentration indicate less competitive industries. *Ownership*, which represents the total ownership of both insiders and blockholders with more than 5% ownership of the company, is higher for non-disclosing firms. This likely reflects less demand for public disclosure in non-disclosing firms since insiders and blockholders own a larger portion of the firm. Only a small percentage of non-disclosing and disclosing firms employs a Big N auditor. The high incidence of going concern opinions (55% and 44% for non-disclosing and disclosing firms, respectively) indicates many firms are distressed and in need of additional capital for survival. Overall, the descriptive statistics paint a picture of non-disclosing and disclosing firms as small start-up companies pursuing new business ideas in an effort to become profitable.

Panel C of Table 3 shows the industry classifications for non-disclosing and disclosing firms. Approximately sixty percent of non-disclosing firms are in either manufacturing or

services. Disclosing firms are in four primary industries: manufacturing, retail trade, services, and transportation and utilities.

Table 4 presents Pearson and Spearman correlations between firms' disclosure choices and proxies for the costs and benefits of disclosure. The statistically significant positive correlation between *Disclosure* and the existence of research and development activities is consistent with firms guarding proprietary information.[17] The statistically significant positive correlation between size and disclosure is consistent with several interpretations. One is that disclosure costs decrease in firm size due to a fixed component to preparation and dissemination of financial statements (King, Pownall, and Waymire 1990). Another is the legal cost hypothesis (Skinner 1994) where disclosure increases in firm size because the dollar value of damages in securities litigation are a function of firm size. The statistically significant negative correlation between *Disclosure* and *DSE* status is consistent with *DSE* firms not disclosing financial statements to equity investors because this information is less useful in valuing these firms than non-*DSE* firms. The statistically significant negative association between higher ownership concentration and *Disclosure* may reflect lower demand for disclosure due to lower agency costs.

I further analyze firms' disclosure choices in a probit model. The results are reported in Table 5. Consistent with the Pearson/Spearman correlations, I find a statistically significant negative association between voluntarily disclosing financial statements and *R&D*, *DSE*, and *Ownership*, and a positive association with *Size*. I estimate the marginal effect using the average of marginal effects evaluated at each observation, except for dummy variables which are the

[17] I use an indicator variable for *Profit* and *R&D* because a suitable scalar is not readily available. Total assets suffers from a small denominator problem and many firms do not have sales. For R&D, I obtain similar results if I scale by total expenses.

Table 4: Correlations
This table presents the Pearson (Spearman) correlations above (below) the diagonal between *Disclose* and firm characteristics.

Variable	*Disclose*	*BM*	*Profit*	*R&D*	*Size*	*DSE*	*Ownership*	*Industry Concentration*
Disclose	1.00	-0.06	0.14	**-0.24**	**0.27**	**-0.18**	**-0.17**	0.02
		(0.57)	*(0.19)*	***(0.02)***	***(0.01)***	***(0.05)***	***(0.06)***	*(0.83)*
BM	0.14	1.00	0.00	**0.22**	**-0.27**	0.13	0.04	0.11
	(0.20)		*(1.00)*	***(0.04)***	***(0.01)***	*(0.25)*	*(0.72)*	*(0.33)*
Profit	0.14	**0.28**	1.00	-0.15	-0.15	**-0.27**	-0.02	0.02
	(0.19)	***(0.01)***		*(0.17)*	*(0.18)*	***(0.01)***	*(0.87)*	*(0.89)*
R&D	**-0.24**	-0.12	-0.15	1.00	0.03	0.17	-0.12	-0.12
	(0.02)	*(0.29)*	*(0.17)*		*(0.78)*	*(0.11)*	*(0.29)*	*(0.30)*
Size	**0.27**	-0.11	-0.07	0.03	1.00	-0.02	-0.18	0.04
	(0.01)	*(0.33)*	*(0.54)*	*(0.78)*		*(0.87)*	*(0.11)*	*(0.75)*
DSE	**-0.18**	-0.17	**-0.27**	0.17	0.00	1.00	-0.06	-0.08
	(0.05)	*(0.12)*	***(0.01)***	*(0.11)*	*(0.99)*		*(0.57)*	*(0.49)*
Ownership	**-0.19**	0.06	-0.05	-0.04	**-0.20**	-0.04	1.00	0.05
	(0.04)	*(0.61)*	*(0.68)*	*(0.70)*	***(0.04)***	*(0.71)*		*(0.68)*
Industry Concentration	0.02	**0.31**	0.00	-0.11	0.00	-0.08	0.03	1.00
	(0.86)	***(0.00)***	*(0.98)*	*(0.32)*	*(1.00)*	*(0.48)*	*(0.79)*	

p-values in *(italics)*. **Bold** represents significant correlation at least at the 10% significance level (one-tailed test when there is a prediction).

Disclose is equal to one if firms voluntarily disclosed financial statement information, and zero otherwise. *BM* is the book-to-market ratio defined as stockholders' equity divided by the market value of equity. *Profit* is equal to one if net income is positive, and zero otherwise. *R&D* is equal to one if a firm has research and development expenses, and zero otherwise. *Size* is the log of market value of equity at the beginning of the year. *DSE* is one if a firm is a Development Stage Enterprise, and zero otherwise. *Ownership* is the combined ownership percentage of insiders and blockholders. *Industry Concentration* is the four-firm concentration ratio calculated as the top four firms' sales in an industry year (3-Digit SIC) divided by total industry sales.

Table 5: Analysis of Firms' Voluntary Disclosure Choices
This table presents the results of probit regression of firms' disclosure choices in their final year of the voluntary disclosure regime. The marginal effect is the average marginal effect, computed as the mean of marginal effects evaluated at each observation.

Dependent Variable: *Disclose*

Variable	Expectation	Coefficient	Marginal Effect		p-value
Intercept		-4.29		**	0.02
BM	-	0.07	0.02		0.13
Profit	+/-	0.63	0.19		0.22
R&D	-	-0.27	-0.28	***	<0.01
Size	+	0.08	0.08	***	<0.01
DSE	-	-0.06	-0.10	*	0.10
Ownership	-	-0.32	-0.30	**	0.04
Industry Concentration	-	-0.20	-0.05		0.38
Likelihood Ratio		12.54			0.08
Pseudo R^2		0.19			
N		93			

***, **, * indicates statistical significance at the 1%, 5%, and 10% level (one-tailed tests where directional prediction), respectively, based on robust standard errors.

Disclose is equal to one if firms voluntarily disclosed financial statement information, and zero otherwise. *BM* is the book-to-market ratio defined as stockholders' equity divided by the market value of equity. *Profit* is equal to one if net income is positive, and zero otherwise. *R&D* is equal to one if a firm has research and development expenses, and zero otherwise. *Size* is the log of market value of equity at the beginning of the year. *DSE* is one if a firm is a Development Stage Enterprise, and zero otherwise. *Ownership* is the combined ownership percentage of insiders and blockholders. *Industry Concentration* is the four-firm concentration ratio calculated as the top four firms' sales in an industry year (3-Digit SIC) divided by total industry sales.

discrete changes in the quantities of interest as the dummy variable changes from 0 to 1.[18] Marginal effects indicate that a firm with research and development expense is 28% less likely to disclose, *DSE* firms are 10% less likely to disclose, and a unit change in *Ownership* a 30% lower probability of disclosure. A unit change in *Size* is associated with an 8% higher likelihood of disclosure.

5. Analysis of Stock Prices and Accounting Information

Column 1 of Table 6 presents results for the regression of stock prices on book value and earnings for the non-disclosing firms before and after mandatory SEC disclosure. In the period prior to mandatory disclosure, the coefficients on book value and earnings indicate accounting information lacks a strong association with stock prices. The adjusted R^2 of 1% corroborates this as well. Thus, I am unable to reject the null for Hypothesis 1. In isolation these results are difficult to interpret because the weak association could be due to nondisclosure of the accounting information or because accounting information is not useful for valuation. Using the period during mandatory disclosure provides insights to the likely answer.

In the period when public disclosure is mandatory for these firms (Column 2), the coefficient on book value is positive and significant at the 5% level (formal tests indicate the difference is statistically significant at the 10% level). The coefficient is larger than one, which is consistent with conservative accounting wherein the market values certain expenses, such as research and develop expenses and selling expenses, as assets (Hand 2003). The coefficient on earnings is statistically insignificant. The adjusted R^2 increases to 6%, which is a statistically

[18] Greene (2003, p. 668) states that averaging the individual marginal effects is the preferred method of estimating marginal effects for small samples.

Table 6: Regression of Price on Book Value and Earnings
This table presents the results of the following regression for non-disclosing and disclosing firms for the periods before and after mandatory SEC disclosure requirements:

$P_{i,t} = \alpha_0 + \alpha_1 BV_{i,t} + \alpha_2 EARN_{i,t} + \varepsilon_{i,t}$

	Non-Disclosing Firms		Disclosing Firms	
	Before	After	Before	After
Variable	(1)	(2)	(3)	(4)
Intercept	1.08 ***	1.64 ***	1.63 ***	1.43 ***
	(6.22)	*(5.10)*	*(3.92)*	*(3.89)*
BV	0.16	4.21 **	2.26 ***	0.87 **
	(0.67)	*(2.44)*	*(4.16)*	*(2.36)*
EARN	-0.30	-0.53	-0.84	0.30
	(-0.81)	*(-0.40)*	*(-0.45)*	*(0.43)*
N	87	87	34	34
Adjusted R^2	0.01	0.06	0.68	0.28
Z-Statistic:				
1 vs. 2, 3 vs. 4		2.20 **		-3.59 ***
1 vs. 3, 2 vs. 4			-7.52 ***	-3.15 ***

***, **, * indicates statistical significance at the 1%, 5%, and 10% level, respectively, based on robust standard errors. *t*-statistics in *(italics)*. Z-Statistic based on Cramer (1987).

Before and After represent the periods before and after mandatory SEC disclosure requirements, respectively. $P_{i,t}$ is the price six months after the fiscal year-end *t*. $BV_{i,t}$ is the book value divided by the common shares outstanding at fiscal year-end *t*. $EARN_{i,t}$ is earnings per share for fiscal year-end *t*.

significant increase at the 5% level (-2.20 Z-Statistic).[19] Accordingly, I reject the null of Hypothesis 2.

An adjusted R^2 of 6% is low for a regression of price on book value and earnings. In economic terms this low association suggests that accounting information is of limited use in valuing these firms. These results appear consistent with mandatory disclosure marginally increasing the amount of information in the market. One interpretation is that these firms did not disclose financial statement information prior to mandatory disclosure because the benefits were small relative to the perceived costs.

Column 3 of Table 6 presents results for the regression of stock prices on book values and earnings for disclosing firms before and after mandatory SEC disclosure. The coefficient on book value is positive and significant at the 1% level. As explained above, the coefficient greater than one is consistent with conservative accounting. The coefficient mapping earnings to stock prices is statistically insignificant, which is likely due to the high proportion of loss firms (Hayn 1995). The adjusted R^2 of 68% indicates that book value explains a large proportion of price. Therefore, I reject the null of Hypothesis 3a. The statistically significant coefficient on book value and the high adjusted R^2 are consistent with investors interpreting the voluntary disclosures of these firms as value-relevant in the unregulated disclosure environment. These findings, however, do not suggest that all firms would receive similar benefits from voluntarily disclosing financial statement information. The decision to disclose financial statements and any

[19] The statistical tests of differences in adjusted R^2 are based on Cramer (1987), which assumes asymptotic normal distributions. I perform boot-strap based tests of differences, which do not rely on distributional assumptions. These tests reveal some of my results are sensitive to this choice. Specifically, my boot-strap based tests indicate that the difference in adjusted R^2 is different between non-disclosing and disclosing firms in the voluntary disclosure regime and the mandatory disclosure regime; otherwise, the bootstrap tests indicate the other differences in adjusted R^2s are not statistically different.

resulting differences in association between stock prices and financial statement information are determined by firm-specific characteristics of a non-randomly selected group of firms.[20]

After mandatory SEC disclosure (Column 4), the coefficient mapping book value to prices continues to be positive and significant at the 5% level, but decreases from 2.26 to 0.87 (difference statistically significant at the 1% level). The change in the coefficient relating stock prices and book values provides evidence of a different relationship, not necessarily a stronger one. The adjusted R^2 provides better evidence about the strength of the association between stock prices and accounting information. The adjusted R^2 decreases to 28%, a significant drop from 68% in the period prior to the Eligibility Rule (statistically significant at the 1% level). The association is still quite strong, though, relative to the adjusted R^2 for non-disclosing firms (statistically different at the 1% level).

I note two main caveats in interpreting my results. First, I study firms that chose to comply with the Eligibility Rule. I am unable to conduct the same study for the Noncompliant firms that choose to leave the OTCBB. Thus, I identify a local effect that may not generalize to a broader cross-section of firms. Specifically, my results might be different if the firms that opted out of complying with the SEC disclosure requirements had instead been forced to comply. Second, my sample is small and the low association between stock prices and accounting information for non-disclosing firms could be due to insufficient power in my tests. However, I

[20] To mitigate potential bias due to self-selection, in unreported results I adjust for selectivity between disclosing and non-disclosing firms by using a first-stage probit model. This approach is a variant of Heckman's (1979) two-stage technique. The first-stage probit regression model is the same as in Table 5, where the decision to voluntarily disclose financial statement information is a function of growth opportunities (book-to-market ratio), R&D, profitability (a dummy if net income is positive, and zero otherwise), size (log of market value at the beginning of the year), DSE status, Ownership, and Industry Concentration. I then calculate the inverse Mill's ratio, which represents the probability of firms choosing to voluntarily disclose financial statement information, and include it in my regression of price on book value and earnings both for non-disclosing and disclosing firms. The results are similar to those reported in Table 4.

do find a statistically significant association for the disclosing firms where the sample size is less than one half of the non-disclosing firms sample.

6. Sensitivity Analyses

I further evaluate my main results by partitioning non-disclosing firms on *DSE* status, since accounting information should play a more important role in valuation for non-*DSE* firms. I also recognize that my main analysis is a joint test of my hypotheses and the valuation model I use. Since my firms are similar to internet firms in terms of losses, life stage, and capitalization in the late 1990s, I follow the literature on the valuation of internet firms (Trueman et al. 2000, Rajgopal et al. 2003, Keating et al. 2003) and regress price on book value and the components of earnings (e.g., sales, cost of goods sold, R&D expenses, etc.). This literature argues that the components of earnings for internet firms are differentially informative for price. The results for these analyses are presented below.

6.1 Development Stage Enterprise Partition

I further examine the non-disclosing firms by partitioning the firms on *DSE* status.[21] Willenborg (1999) argues from an *ex ante* perspective, that accounting information a more useful role for the valuation of non-*DSE* firms than for *DSE* firms. My intent is to identify non-disclosing firms where accounting information may play a more important role in valuation, and therefore, be associated with price even in the absence of disclosure. Table 7 presents the results. Consistent with expectations, stock prices of *DSE* firms exhibit almost no association with book value and earnings in either period. In both periods, the coefficients on book value and earnings are insignificant and the adjusted R^2 is only 1% (and not statistically different).

[21] I also partition disclosing firms on DSE status. For non-DSE firms, I find similar results to those presented in Columns 3 and 4 of Table 4. For DSE firms, there are only 8 firm-year observations and the estimates are not reliable with so few observations.

Table 7: Non-Disclosing Firms Partitioned on *DSE* Status
This table presents the results of the following regression for non-disclosing partitioned on *DSE* status for the periods before and after mandatory SEC disclosure requirements:

$P_{i,t} = \alpha_0 + \alpha_1 BV_{i,t} + \alpha_2 EARN_{i,t} + \varepsilon_{i,t}$

	DSE		Non-*DSE*	
	Before	After	Before	After
Variable	(1)	(2)	(3)	(4)
Intercept	0.96 ***	1.55 ***	1.28 ***	1.76 ***
	(4.14)	*(3.37)*	*(4.84)*	*(3.73)*
BV	-0.02	2.72	1.30 **	4.37 **
	(-0.20)	*(1.31)*	*(2.06)*	*(2.44)*
EARN	-0.28	0.34	-0.44	-1.21
	(-0.59)	*(0.25)*	*(-0.71)*	*(-0.52)*
N	43	43	44	44
Adjusted R^2	0.01	0.01	0.07	0.08
Z-Statistic:				
1 vs. 2, 3 vs. 4		0.10		0.24
1 vs. 3, 2 vs. 4			-1.75 *	1.90 *

***, **, * indicates statistical significance at the 1%, 5%, and 10% level, respectively, based on robust standard errors. *t*-statistics in *(italics)*. Z-Statistic based on Cramer (1987).

DSE stands for Development Stage Enterprise. Before and After represent the periods before and after mandatory SEC disclosure requirements, respectively. $P_{i,t}$ is the price six months after the fiscal year-end *t*. $BV_{i,t}$ is the book value divided by the common shares outstanding at fiscal year-end *t*. $EARN_{i,t}$ is earnings per share for fiscal year-end *t*.

In contrast, stock prices of non-*DSE* firms exhibit a low association with book value and earnings both before and after mandatory disclosure with adjusted R^2s of 7% and 8%, respectively (that are not statistically different). The significant association in the prior period provides evidence that stock prices do reflect non-disclosed accounting information. In fact, the association between non-disclosed accounting information and stock prices in the prior period (adjusted R^2 is 7%) is as strong as the association between disclosed accounting information and stock prices in the period of mandatory disclosure (adjusted R^2 is 8%). The low adjusted R^2 indicates accounting information plays a minimal role in valuation for these companies. The coefficient relating book value to stock prices does increase, but this only provides evidence of a different relationship, not necessarily a stronger one. Even after partitioning the non-disclosing firms to identify firms where accounting information is likely to play a more significant role, the evidence still suggests that accounting information only plays a modest role in valuation for non-disclosing firms. I tentatively conclude that firms did not disclose this information in the prior period because it was not particularly beneficial to do so. Further, it appears that stock prices do incorporate financial statement information even in the absence of disclosure.

6.2 Analysis of the Components of Earnings

The literature examining the valuation of internet companies finds a weak association between price and earnings (Trueman et al. 2000, Rajgopal et al. 2003, Keating et al. 2003, Hand 2003). However, these studies find that the components of earnings are strongly correlated with price. For example, Trueman et al. (2000) examine 217 firm-quarters for 63 internet firms and find an adjusted R^2 of 0% in a regression of market value on earnings. In a regression of market value on the components of earnings (gross profit, marketing expenses, R&D expense, and other expenses), they find an adjusted R^2 of 52%.

Following this literature, I regress price on book value, gross profit, R&D expense, and selling, general and administrative expenses. The tenor of the untabulated results is similar to the regression of price on book value and earnings (i.e., very similar adjusted R^2s). Of particular interest, I do not find a statistically significant association between price and research and development expenses. I also partition gross profit into sales and cost of goods sold. Sales is arguably more observable to the market than costs for non-disclosing firms. I do not find a statistically significant association between price and sales. This analysis suggests my main results are not driven by the valuation model.

7. Conclusion

I examine the role of accounting information in capital markets under voluntary and mandatory disclosure regimes for a sample of firms traded on the OTCBB. For the set of firms begin filing periodic reports with the SEC under the 1934 Act to comply with the Eligibility Rule, I observe at least one prior year of accounting information in their initial SEC filings. This enables me to observe the accounting information that non-disclosing firms previously withheld.

In the voluntary disclosure period, I first examine firm characteristics associated with voluntary disclosure. I find firms' disclosure choices are negatively related to research and development activities, *Development Stage Enterprise* (*DSE*) firms[22], and ownership concentration. These results are consistent with firms guarding proprietary information, not disclosing when accounting information is less useful in valuation, and not disclosing when agency costs are likely lower. I also find that firms' disclosure choices are positively associated

[22] *DSE* are firms that in the process of commencing operations and have little to no revenues. Relative to non-*DSE* firms, *DSE* firms are valued almost entirely based on a growth option where accounting information is less likely to be useful in valuing these firms.

with size, which is consistent with high firm size resulting in decreasing costs to disclosure, greater returns to information acquisition, and/or increased litigation risk.

Second, I examine how disclosure versus non-disclosure of accounting information impacts its association with stock prices in the voluntary disclosure regime. I find evidence consistent with firms voluntarily disclosing financial statement information when it is useful for valuation and not disclosing that information otherwise. Specifically, accounting information and stock prices are weakly associated both before and after mandatory regulation for non-disclosing firms. In contrast, stock prices are strongly associated with accounting information before and after mandatory disclosure regulation for disclosing firms. I find some evidence that the association between stock prices and accounting information increases after mandatory SEC disclosure requirements for non-disclosing firms.

I find evidence that non-disclosed accounting information is incorporated into stock prices when I partition firms on *DSE* status. For non-*DSE* (firms where accounting information is likely more useful for valuation), I find a similar association both before and after mandatory disclosure regulation. This is consistent with stock prices reflecting accounting information even though the information was not publicly disclosed.

This study focuses on one aspect of the impact of mandatory disclosure regulation – the relationship between stock prices and accounting information. I focus on financial statement information because the lack of reliable and current financial information about issuers was the main justification cited by the SEC in approving the Eligibility Rule. Future research might examine whether my results are robust to the inclusion of banks and insurance companies, which largely began filing with their respective industry regulatory authorities rather than the SEC.

Future research might also examine the value relevance of accounting information for *DSE*s more generally using a broader sample of firms.

CHAPTER 2

Earnings Quality and Legal Origin: Evidence from Quebec

Introduction

A number of papers document a link between a country's legal environment and firms' financial reporting outcomes. For example, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) document country-level association between countries' legal origin and the firms' average disclosures.[23] This line of research designates France as a civil law country while both the United States and Canada are common law countries. While common law prevails at the federal level, one US state has French legal origin, Louisiana. Similarly, while common law prevails at the country level, one Canadian province has French legal origin, Quebec. The U.S. Securities and Exchange Commission requires what firms must register their securities.[24] While securities regulation also arises in parallel at the state level, this is largely viewed as coordinated and subsumed by federal regulation. U.S. companies incorporate in a state and the majority chooses Delaware. While Canada has securities regulation at the country level, each province has its own securities regulator that maintains a larger degree of autonomy. Canadian companies face a choice in that they can either incorporate under the country-level Canada Business Corporations Act (CBCA) or at the province level under the Quebec Companies Act (QCA). One possible benefit of the Canadian regulatory system is that competition among standard setters can be beneficial and may lead to innovation in the legal environment and enforcement. However, one potential cost arises from differential enforcement across provinces or different

[23] See also La Porta, Lopez-de-Silanes, and Shleifer (2008), Ball, Kothari and Robin (2000), Bushman and Smith (2001), Hope (2003), Leuz, Nanda and Wysocky (2003).
[24] Under U.S. Securities and Exchange Acts of 1933 and 1934.

financial reporting incentives leads to heterogeneity and non-comparability in the reported Canadian GAAP numbers.

This paper exploits the unique aspects of Canadian incorporation and securities regulation to investigate the effect of incorporation and legal origin on financial reporting outcomes. First, we provide preliminary evidence on the firm characteristics that lead to incorporation decisions. Specifically, we investigate whether firms headquartered in the French legal origin province Quebec incorporate under CBCA or QCA. In as similar vein, we investigate whether firms based in a common legal province CBCA or the securities act of its province. Since the interpretation and enforcement of CBCA may differ across provinces, we also test for the effect of incorporation comparing Quebec to non-Quebec based firms.

Second, we investigate whether Canadian firms' earnings quality varies with legal origin or with level of incorporation. To proxy for earnings quality, we use the earnings attributes that are common in the accounting literature. Overall, our evidence suggests that earnings attributes do vary with legal origin (civil vs. common law).

Currently, Canadian firms report under either Canadian GAAP, IFRS, or US GAAP. First, the majority of publicly traded firms currently prepare audited financial statement under Canadian GAAP. Second, Canadian standard setters have announced a commitment to switch to IFRS effective for fiscal years or quarters starting after January 1, 2012. Early adoption is permitted and encouraged, yet only a handful of firms have exercised that option. Further, since Canadian GAAP and US GAAP are perceived as very similar accounting standards, Canadian firms are permitted to report using US GAAP. In fact, the US SEC does not require reconciliation from Canadian GAAP to US GAAP under the Multi-Jurisdictional Disclosure System. This exemption from reconciliation will continue once Canadian firms adopt IFRS,

since IFRS filers from other countries are also exempt from reconciliation to US GAAP. Nevertheless, some Canadian firms voluntarily provide reconciliation.

All firms included in this study disclose using Canadian GAAP. Hence, any differences that we find in earnings attributes are not attributable to accounting standards. Instead such differences are likely attributable to differences in financial reporting incentives faced by financial statement preparers and users. For example, audit quality may be lower for Quebec firms relative to non-Quebec firms.

The variation in earnings attributes that we document is of interest to financial statement users. Further, our results are also of interest to regulators who require or permit different levels of registration. Allowing heterogeneous incorporation procedures, as does Canada, need not be detrimental to investors. The reason is that it is possible that incorporation is a signaling mechanism through which firm managers communicate information.

The paper proceeds as follows. Section 1 gives the institutional background on Canada. Section 2 offers a literature review. Section 3 describes the common earnings attributes used in the accounting literature. Section 4 describes the data collection. Section 5 summarizes our findings for Canada regarding the choice of where to incorporate. Section 6 analyzes the earnings attributes for Canadian firms. Section 7 concludes and offers suggestions for future research. The (now untabulated) appendix analyzes earnings attributes for US firms comparing those based in Louisiana to similar firms based outside Louisiana.

1. Background on Canadian Securities Legislation

Like the other provinces in Canada, two corporate statues coexist in Quebec, one federal and one provincial: the CBCA enacted by the federal Parliament, and the QCA enacted by the

National Assembly of Quebec. Unlike the other provinces in Canada where the provincial statues closely mirror the CBCA, the differences between the CBCA and the QCA are significant along a number of important dimensions (Daniels, 1991; Bozec, Rousseau, and Laurin, 2008).[25] The primary differences between the QCA and CBCA pertain to minority shareholder rights, director and officer liability, and mergers. Significant differences in minority shareholder rights between the QCA and the CBCA include: the lack of an oppression remedy in the QCA, which under the CBCA allows security holders, creditors, directors or officers the right to apply to the court when the business or the affairs of the corporation are conducted or the directors' powers are being exercised in a manner that is oppressive or unfairly prejudicial; lesser rights with respect to shareholder meetings and voting under the QCA, particularly when enacting fundamental changes to the business; and the right of dissent where under the CBCA a shareholder may compel the corporation to buy her shares at fair value in the case of a fundamental change. The QCA also differs from the CBCA with respect to the duties and liabilities of directors. The QCA does not specifically require directors to act in the best interest of the corporation or to disclose special interests. Directors are not formally allowed the defenses of reasonable prudence and diligence (though Quebec jurisprudence recognizes this to a certain extent) and must cover their own expenses in any investigative proceeding against them.[26] One last major difference between the QCA and CBCA is that the QCA allows mergers only between companies governed by certain sections of the QCA, whereas, the CBCA is much

[25] We note that although the provincial corporate statutes in the rest of Canada are similar to the CBCA, the level and quality of enforcement of these statutes may differ from the enforcement of the CBCA. Thus, in our research design we do not treat the rest of Canada uniformly; we distinguish between firms incorporated at the province level and federal level for the rest of Canada as well as in Quebec.

[26] See Core (1997) for an analysis of the determinants of Canadian firms' decision to offer and purchase directors and officers insurance from a third party.

more flexible with respect to mergers and the incorporation statutes of the amalgamating companies.

In an effort to improve the competiveness of Quebec corporations and facilitate economic development in 2009 the Parliament of Quebec passed Bill 63, "Business Corporations Act" (Technical Paper 2009), which will replace the QCA in 2011. Bill 63 represents the first substantial reform of Quebec corporate law in nearly thirty years and aims to modernize Quebec corporate law. The Bill was developed in response to a general consensus that the QCA inadequately addresses the needs of businesses and fails to provide an efficient operating framework for business. A substantial number of Quebec companies were choosing to incorporate under the CBCA, a fact that the Quebec Minister of Finance cites as a primary motivation for the Bill. Essentially, the Bill harmonizes Quebec's corporate laws with the other provinces and the CBCA. Significant changes in the Bill include: increased minority shareholder rights including an oppression remedy and right of dissent; indemnification of directors; directors' duty to disclose conflicts of interest; and relaxation of the restrictive requirements governing mergers.

2. Literature Review

In an influential paper, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) argue that a country's legal origin affects various accounting, finance and corporate governance outcomes for firms in that country. They document cross-country variation in firms' average

disclosures with the legal origin.[27] Specifically, they find that firms in countries with a civil law legal origin provide less disclosure.

Ball, Kothari and Robin (2000) further the examination of a country's legal origin and accounting outcomes. They note that the origins and focus of common law is fundamentally different from civil law. Common law develops from individual action in the private sector and stresses legal procedure over rules where private enforcement plays a prominent role in resolving disputes between parties. Thus, the evolution of common law has focused on meeting the demands of contracting in markets. Ball et al. (2000) argue that accounting standards, like common law, arose from demands of contracting in markets rather than the government. They note that the dominant form of corporate governance is the 'shareholder' model in common law countries, where only shareholders elect board members. In contrast, the 'stakeholder' model is the dominant form of corporate governance in civil law countries where primary contracting parties (e.g., lenders and employees) typically have board representation. As such, Ball et al. (2000) argue that timely accounting income plays a greater role in resolving information asymmetry between contracting parties in common law countries than civil law countries because these parties operate at greater 'arm's length' from the firm.

Ball et al. (2000) note that civil law arises from collective planning in the public sector. Governmental bodies, not an accounting market, establish accounting standards and are responsible for enforcing these standards. As noted above, the 'stakeholder' model is the common form of corporate governance in civil law countries. For example, in Germany employees elect 50% of the supervisory board in German stock corporations. Banks exert significant control by voting on behalf of non-voting individual investors whose shares are

[27] See also Bushman and Smith (2001), Hope (2003), Leuz, Nanda and Wysocky (2003), and La Porta, Lopez-de-Silanes, and Shleifer (2008).

deposited with the banks. In these countries, firms maintain close relations with their primary contracting parties (i.e., debt holders, employees, customers and suppliers). Ball et al. (2000) argue that a natural consequence of this is that financial reporting plays less of a role in resolving information asymmetry between managers and financial statement users. They contend that the primary demand from the stakeholder model is for smooth income so as to reduce volatility of payouts to the various stakeholders of the firm.

Empirically, Ball et al. (2000) study four common law countries – Australia, Canada, the UK, and the US – and three code law countries – France, Germany, and Japan – and find that accounting income incorporates economic income in a more timely manner in common law countries than in civil law countries. Following Basu (1997), their evidence is based on the R^2 from cross-sectional pooled regressions of earnings on returns, a dummy for negative returns and the interaction of these two variables. Related work by Guenther and Young (2000) provides similar evidence via a different empirical specification. Guenther and Young find that aggregate earnings are more highly correlated with real economic activity (such as, GDP) in common law countries (the UK and US) than in civil law countries (France, Germany, and Japan).

The subsequent literature on earnings attributes and legal origin expands the list of earnings attributes and institutional features studied. Leuz, Nanda, and Wysocki (2003) classify 31 countries via cluster analysis and find three distinct clusters: (1) outsider economies with large stock markets, dispersed ownership, strong investor rights, and strong legal enforcement; (2) insider economies with less-developed stock markets, concentrated ownership, but strong legal enforcement; and, (3) insider economies with weak legal enforcement. They observe that these clusters closely reflect the partition achieved using common law (1) and civil law (2,3). They argue that the private benefits of managing earnings are greater in countries with weaker

outside investor rights and weaker legal enforcement. Using an aggregate measure of four proxies for earnings management, they find evidence consistent with their prediction.

Bushman and Piotroski (2006) examine the institutional structure of countries in detail to understand how they shape the demand for accounting conservatism. Specifically, they examine the following institutions: legal/judicial systems, the securities laws focusing on private versus public enforcement of these laws, the level of state involvement in the economy, and tax regimes. They find that these institutions shape managers' incentives to provide conservative accounting.

Recent work by Barton, Hansen and Pownall (2010) examines eight attributes commonly used to assess earnings quality in a cross-country study to determine which performance measures (i.e., sales, earnings, comprehensive income, and operating cash flows) investors appear to value most in each country. They find that performance measures towards the middle of the income statement (such as operating income) are more value relevant, but that this is less prevalent for firms in common law countries. In terms of attributes, performance measures that are smoother, more predictable and persistent, and less conservative reduce the value relevance of the performance measure and are less useful for valuation. In contrast, performance measures that are closer to current period cash flows, better predict next period's cash flows, and the timeliness in capturing bad news are more value relevant. These rankings are similar across common and civil law countries.

3. Earnings Attributes

Francis, LaFond, Olsson and Schipper (2004), henceforth FLOS, note the absence of one universally recognized measure of earnings quality and therefore employ multiple earnings

attributes as constructs that are commonly argued in prior literature to represent earnings quality. They classify their earnings attributes into two categories, intrinsic and extrinsic, where the former (latter) measures earnings attributes without (with) reference to stock market reaction. We compare firms' earnings quality for each of these earnings attributes as defined below.

3.1 Intrinsic Earnings Attributes

FLOS identify four intrinsic earnings attributes, Accrual Quality, Earnings Persistence, Earnings Predictability, and Earnings Smoothness.

Accrual Quality

While Richardson, Sloan, Soliman, and Tuna (2005) present evidence that less reliable accruals are associated with lower earnings persistence, FLOS provide evidence that firms' costs of debt and equity vary with accrual quality. Following FLOS, we use the Dechow and Dichev (2002) measure of accrual quality. Dechow and Dichev begin with the observation that accruals shift the recognition of cash flows over time so that the adjusted numbers (earnings) better measure firm performance than cash flows. The inherent trade-off in the use of accruals is the use of assumptions and estimates that when wrong, must be adjusted in future accruals and earnings. These estimation errors and their subsequent corrections are noise that reduces the value of accruals. Thus, Dechow and Dichev argue that the quality of accruals and earnings is decreasing in the magnitude of accrual estimation errors. Operationally, the rationale behind this measure is that non-discretionary current accruals in a period are expected to relate to cash receipts and disbursements from the previous, current and subsequent reporting period. The discretionary part of current accruals is therefore estimated as the residual (ε) from the following regression:

$$\frac{TCA_{j,t}}{Assets_{j,t}} = \delta_{0,j} + \delta_{1,j}\frac{CFO_{j,t-1}}{Assets_{j,t}} + \delta_{2,j}\frac{CFO_{j,t}}{Assets_{j,t}} + \delta_{3,j}\frac{CFO_{j,t+1}}{Assets_{j,t}} + \varepsilon_{j,t} \quad (1)$$

where TCA is the firm's total current accruals measured as (ΔCA – ΔCL – ΔCash + ΔSTDEBT), CA is current assets, CL is current liabilities and STDEBT is debt in current liabilities, CFO is cash flow from operations from the statement of cash flows, and Assets is the firm's total assets at the end of the annual period. The standard deviation of the residuals (ε) from equation (1) is the Dechow and Dichev (2002) measure of Accrual Quality. Large (small) values of Accrual Quality relate to poor (good) quality.

Earnings Persistence

The Hicksian income concept suggests that earnings should measure permanent income. From that perspective, prior research argued that earnings with large transitory components are likely to exhibit lower persistence and, hence, also be of lower quality. As is standard, we measure persistence as the slope coefficient in the regression of current earnings on lagged earnings, that is,

$$X_{j,t} = \phi_{0,j} + \phi_{1,j} X_{j,t-1} + \varepsilon_{j,t} \qquad (2)$$

where $X_{j,t}$ is firm j's annual split-adjusted earnings per share for period t (measured as firm j's net income before extraordinary items divided by the weighted average number of outstanding shares) and the coefficient $\phi_{1,j}$ is the measure of Persistence. Larger values of $\phi_{1,j}$ indicate more permanent earnings while lower values of $\phi_{1,j}$ indicate more transitory earnings.

Earnings Predictability

Following Lipe (1990), among others, earnings predictability is the ability to predict earnings based on its past value. Predictability is valued by security analysts and useful in security valuation (e.g., AIMR 1993; Lee 1999). Further, standard setters list predictability as one of three primary elements underlying relevance (FASB 1980). Following Lipe (1990) and Francis et al. (2004), we therefore measure Predictability as the standard deviation of the

residuals in equation (2). Larger (smaller) values of Predictability relate to less (more) predictable earnings.

Earnings Smoothness

Several prior papers suggest that smoothness in earnings is a desirable quality. Trueman and Titman (1988) propose that by smoothing income managers might be able to affect investors' perceptions about the volatility of the underlying earnings process, thereby decreasing the firm's cost of borrowing and improving its terms of trade with other parties. Goel and Thakor (2003) model a setting where smoothing encourages entry by uninformed investors, who would otherwise stay out of the market. Tucker and Zarowin (2006) find that smoothing increases the informativeness of earnings. Subramanyam (1996) suggests that smoothing improves the persistence and predictability of reported earnings. Similar to Leuz, Nanda, and Wysocki (2003) and Francis et al. (2004), we measure smoothness of earnings relative to that of cash flow from operations. Smoothness is defined as the ratio of the standard deviation of income before extraordinary items to the standard deviation of cash flows from operations. Larger values of Smoothness indicate less smooth earnings.

3.2 Extrinsic Earnings Attributes

Value Relevance of Earnings

As in FLOS, value relevance measures the statistical association between accounting information and long-window returns. This view of value relevance allows for the possibility that earnings is not the source of information used by market participants, but is only correlated with information used by investors. Viewed this way, value relevance measures the ability of earnings to capture or summarize information that affects stock returns. Empirically, we measure value relevance as the ability of levels and changes in earnings to explain returns over

the 12-month period beginning three months after the start of the annual period and ending three months after the end of the annual period. Specifically we use the R^2 from the following regression for each firm and each annual period as our measure of value relevance, Relevance.

$$RET_{j,t} = \gamma_{0,j} + \gamma_{1,j} EARN_{j,t} + \gamma_{2,j} \Delta EARN_{j,t} + \varepsilon_{j,t} \quad (4)$$

where $RET_{j,t}$ is firm j's 12-month return beginning three months after the start of fiscal period t and ending three months after the end of fiscal period t as firms are required to file their annual report with SEDAR within three months of year-end, $EARN_{j,t}$ is firm j's income before extraordinary items in year t, scaled by market value at end of annual period t-1, and $\Delta EARN_{j,t}$ is change in firm j's income before extraordinary items in annual period t, scaled by market value at end of annual period t-1. Larger values of Relevance indicate more value relevant earnings.

Timeliness of Earnings

Following Ball, Kothari and Robin (2000), Bushman, Chen, Engel, and Smith (2004) and Francis et al. (2004) our measure of timeliness of earnings is the R^2 from the reverse regression of earnings on returns which was first used in Basu (1997). The R^2 from the reverse regression is intended to capture how timely earnings are in reporting concurrently available good and bad news. The regression is as follows:

$$EARN_{j,t} = \alpha_{0,j} + \alpha_{1,j} NEG_{j,t} + \beta_{1,j} RET_{j,t} + \beta_{2,j} NEG_{j,t} \bullet RET_{j,t} + \varepsilon_{j,t} \quad (5)$$

where $NEG_{j,t} = 1$ if $RET_{j,t} < 0$ and 0 otherwise and other variables are as defined previously. Larger values of Timeliness imply that earnings concurrently report available good and bad news.

Earnings Conservatism

Watts (2003a, 2003b) argues that conservatism in earnings is a desirable property. Kim and Kross (2005) suggest that increasing accounting conservatism plays a role in the greater ability of earnings to predict future cash flows in recent years. Chen, Hemmer, and Zhang (2007) argue that conservative accounting may curbs earnings management because under conservative accounting lower earnings are less likely due to subpar economic performance and more likely due to conservative accounting rules hence lowering managers incentives to increase income through earnings management. We measure Conservatism based on the coefficient on the interaction term in equation (5), $\beta_{2,j}$.[28] Larger values of $\beta_{2,j}$ imply greater conservatism.

4. Data

To identify our sample, we first identified Canadian firms with at least one fiscal year ending between January 1997 and November 2009 on the Compustat Xpressfeed North America database. For these firms, we obtain all necessary financial statement information for all available firm-years (i.e., we include firm-years prior to 1997). We require a firm to have at least one fiscal year ending in January 1997 or later to ensure that we can obtain incorporation information from SEDAR, which provides Canadian public filings back to January 1997.[29] For each firm in our sample, we collect its incorporation history from the Annual Information Form filed on SEDAR, or the other appropriate filing in the event a company is exempt from filing an

[28] We note that US studies (e.g., Basu 1997, Pope and Walker 1999, Givoly and Hayn 2000 and Francis et al. 2004) typically measure conservatism as the ratio of bad news to good news with $(\beta_{1,j} + \beta_{2,j})/\beta_{1,j}$. However, as with cross-country studies examining Canada (e.g., Ball, Kothari and Robin 2000, Bushman and Piotroski, 2006) $\beta_{1,j}$ is very small and negative, making interpreting the ratio of good news to bad news unreliable. As such, we focus on $\beta_{2,j}$ as our measure of conservatism. We note that this measure of conservatism has been criticized in some recent papers including Dietrich, Muller and Riedl (2007), Givoly, Hayn and Natarajan (2007), and Patatoukas and Thomas (2010) as not always capturing conservatism.

[29] SEDAR in Canada is analogous to EDGAR in the US and is available at: www.sedar.com.

Annual Information Form. To construct annual returns, we obtain monthly returns data from the monthly security file on Compustat. We exclude firms in the financial or utilities industries (two-digit NAICS codes 52 and 22, respectively). The number of firms meeting these requirements is 1,397.

For our analysis of earnings attributes, we require that data on all seven attributes are available for each firm-year to mitigate concerns that differences in sample composition affect comparisons across attributes. We also exclude firms filing with the SEC or using US GAAP. US GAAP and Canadian GAAP are viewed as similar by regulators, as evidenced by the absence of a mandatory disclosure requirement of reconciliation of accounting differences under the Multi-jurisdictional Disclosure System (MJDS). Foreign private issuers in the US, that is non-US-based firms, that report under the accounting standards of their home country were required to explain to investors what their accounting income and shareholders' equity would have been under US GAAP. Since US GAAP and Canadian GAAP are similar, MJDS specifically exempted Canadian firms that report under Canadian GAAP and list in the US from having to do this reconciliation. This means that Canadian firms are permitted to report under either US GAAP or Canadian GAAP (some Canadian firms voluntarily report under both). Recently, the U.S. Securities and Exchange Commission exempted non-US-based firms that report under IFRS from reconciliation. As Canadian firms switch to IFRS, they will maintain the exemption from reconciliation requirements.

Notwithstanding the previous arguments, some differences in accounting rules between US GAAP and Canadian GAAP persisted during our sample period. Bandyopadhyay, Hanna, and Richardson (1994) investigate a sample of firms that were listed both on Toronto and a U.S. stock exchange between 1983 and 1989. Overall, they find that earnings scaled by market

capitalization are 2% lower under US GAAP than Canadian GAAP. Some of the main source of differences in accounting rules pertain to foreign exchange gains or losses on foreign long-term debt, early extinguishment of debt, extraordinary items, and interest capitalization of self-constructed assets [see Table 1 on page 265]. In our analyses below, we exclude US GAAP reporting Canadian firms and compare only firms that report audited Canadian GAAP statements. To the extent that differences in accounting standards are industry specific, our matching on industry mitigates this concern. After matching based on the procedures described below, our sample of Quebec firms comprises 738 firm-year observations for 167 firms (102 firms incorporate under the CBCA and 65 firms incorporate under the QCA).

Following prior research, we employ a matched sample to examine earnings attributes (Lang, Raedy, and Yetman, 2003; Lang, Raedy, and Wilson, 2006; Barth, Landsman, and Lang, 2008). Specifically, we match Quebec firms with non-Quebec firms on the level of incorporation (federal or provincial), size, and industry. First, matching on level of incorporation allows us to compare firms that made similar decisions regarding where to incorporate. Differences in earnings attributes among firms that incorporate under CBCA but are located in different provinces may persist, however, due to differences in enforcement between securities regulators in different provinces. Second, matching on size is intended to control for size-related differences such as the information environment. Third, matching on industry is intended to control for differences in earnings attributes that vary by industry.

We match the final year of each Quebec firm with a non-Quebec firm in the same year, same industry, and closest in market value without replacement. If a match is not found for a firm, we try to match prior years of the Quebec firm with a non-Quebec firm in the same year, same industry and closest in size. We then retain all overlapping firm years for the Quebec firms

and their matched non-Quebec firms. For example, if a Quebec firm has data from 1998 through 2007 and its matched non-Quebec firm has data from 2000 through 2008, we retain only data from 2000 through 2007 for both the Quebec firm and its matched non-Quebec firm.

5. Choice Between Federal and Provincial Incorporation

We formally examine firms' decisions to incorporate at the federal or provincial level to understand the decision and ensure our research design analyzing earnings attributes controls for any systematic differences across provinces. Since the incorporation decision is a relatively permanent decision, we retain only the final firm-year for each firm in our sample and examine whether the choice is associated with several important firm characteristics.[30,31] Our final sample consists of 1,397 firms. Panel A in table 1 indicates that a vast majority (96%) of firms are located in four provinces: Ontario (34%), Alberta (27%), British Columbia (19%), and Quebec (16%). It is also clear that a much larger proportion of Quebec firms incorporate under the CBCA relative to other provinces consistent with the Quebec Minister of Finance's concerns about the competiveness of the QCA. Panel B in table 1 shows significant industry concentration in the Mining, Quarrying, and Oil and Gas Extraction industry (35%) as well as industry concentration in the Manufacturing industry (31%). Based on panels A and B, we focus our analysis on these four provinces and include industry fixed effects in our analysis.

We performed a thorough review of reasons cited for incorporating either at the federal or provincial to examine in our analysis. The only consistent reason given is that firms operating across Canada or internationally are more likely to incorporate at the federal level (Carnaghan

[30] Approximately 5% of firms in our sample switch from provincial to federal incorporation and less than 0.01% switch from federal to provincial incorporation.
[31] Using the first firm-year for each firm year yields similar results. The first firm-year may better capture firm characteristics at the time the firm made its decision regarding where to incorporate.

and Gunz, 2007). Accordingly, we include size in our analysis. We also note that in Quebec mergers are supposedly easier to complete under the CBCA than under the QCA (Cloutier, 2009). We include intangible assets to capture a firms tendency engage in mergers as accounting rules only allow purchased intangibles to be recorded and mergers are typically when most intangibles are recorded. In addition to size and intangible assets, we also examine whether leverage, growth, filing status with the SEC, and auditor are associated with firms' decisions to incorporate at the federal or provincial level.[32] Panel C provides descriptive statistics for these variables and indicates that Quebec and non-Quebec firms are relatively similar in terms of size and leverage. Many more Quebec firms file under the CBCA than non-Quebec firms, while more non-Quebec firms file with the SEC and employ BigN auditors.

We employ the following logistic regression to analyze the decision:

$$CBCA_{it} = \alpha_0 + \alpha_1 Size_{it} + \alpha_2 Leverage_{it} + \alpha_3 Growth_{it} + \alpha_4 Intangibles_{it}$$
$$+\alpha_5 SEC\ Filer_{it} + \alpha_6 Auditor_{it} + Industry\ Effects + \varepsilon_{it}$$

[32] In untabulated results, we proxy for growth opportunities by including the book-to-market ratio which is not statistically significantly related to firms' incorporation decisions.

Table 1: Descriptive Statistics for Incorporation Decision

The sample for the analysis of firms' incorporation decisions consists of the last year each firm in our sample reports to System for Electronic Document Analysis and Retrieval (SEDAR) between January 1, 1997 and November 30, 2009. SEDAR data is not available prior to January 1, 1997 and Compustat data was not available after November 30, 2009 at the time we began our study. This results in a final sample of 1,397 firms.

Panel A: Province Breakdown

Province	Number of Firms	Percentage of Firms	Number of CBCA Firms	Percentage CBCA Firms
Alberta	382	27%	52	14%
British Columbia	267	19%	66	25%
Ontario	473	34%	171	36%
Quebec	226	16%	147	65%
Other Provinces	49	4%	25	51%
Total	1,397	100%	461	

A firm's province is determined by the location of its headquarters. Other Provinces includes Manitoba, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Saskatchewan. CBCA represents firms that incorporated under the Canadian Business Corporations Act, the federal incorporation statute in Canada.

Panel B: Industry Breakdown

NAICS Industry Classification (Two-Digit)	Number of Firms	Percentage of Firms	Number of CBCA Firms	Percentage CBCA Firms
Information	154	11%	65	42%
Manufacturing	443	31%	193	44%
Mining, Quarrying, and Oil and Gas Extraction	487	35%	88	18%
Professional, Scientific, and Technical Services	67	5%	24	36%
Real Estate and Rental and Leasing	42	3%	10	24%
Retail Trade	41	3%	20	49%
Wholesale Trade	36	3%	16	44%
Other Industries	127	9%	45	35%
Total	1,397	100%	461	

Other Industries consists of industries individually representing less than 3% of the sample.

Table 1: Descriptive Statistics for Incorporation Decision (continued)
Panel C: Variables Used in Analysis of Incorporation Decision

	Quebec (N = 226)			Non-Quebec (N = 1,171)			All Firms (N = 1,397)		
Variables	Mean	Median	Standard Deviation	Mean	Median	Standard Deviation	Mean	Median	Standard Deviation
Size	4.92	4.78	2.22	4.62*	4.65	2.24	4.67	4.66	2.24
Leverage	0.28	0.21	0.42	0.55	0.18	5.29	0.51	0.19	4.84
Growth	0.57	0.04	6.63	0.80	0.11###	6.46	0.77	0.08	6.49
Intangibles	0.16	0.05	0.21	0.08***	0.00###	0.15	0.09	0.00	0.16
SEC Filer	0.09	0.00	0.28	0.19***	0.00###	0.39	0.17	0.00	0.38
Auditor	0.62	1.00	0.49	0.75***	1.00###	0.43	0.73	1.00	0.45
CBCA	0.65	1.00	0.48	0.27***	0.00###	0.44	0.33	0.00	0.47

***, **, * indicates t-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Size is the log of total assets (AT). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentage change in sales (SALE). Intangibles is intangible assets (INTAN) scaled by total assets. SEC Filer is equal to one if the firm files with the U.S. Securities Exchange Commission, and zero otherwise. Auditor is equal to one if the firm uses a BigN auditor, and zero otherwise. CBCA is equal to one if the firm is incorporated under the Canadian Business Corporations Act, and zero otherwise.

Table 1: Descriptive Statistics for Incorporation Decision (continued)
Panel D: Pearson Correlation Table

Variables	Size	Leverage	Growth	Intangibles	SEC Filer	Auditor	CBCA
Size	1.000	-0.144	0.021	0.120	0.109	0.366	0.195
		0.000	*0.437*	*0.000*	*0.000*	*0.000*	*0.000*
Leverage		1.000	-0.013	0.009	0.031	-0.073	0.001
			0.634	*0.727*	*0.254*	*0.007*	*0.966*
Growth			1.000	0.016	0.025	0.013	-0.036
				0.545	*0.347*	*0.618*	*0.177*
Intangibles				1.000	0.042	-0.017	0.160
					0.121	*0.531*	*0.000*
SEC Filer					1.000	-0.009	0.038
						0.739	*0.152*
Auditor						1.000	0.040
							0.134
CBCA							1.000

p-values in italics.

Size is the log of total assets (AT). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentage change in sales (SALE). Intangibles is intangible assets (INTAN) scaled by total assets. SEC Filer is equal to one if the firm files with the U.S. Securities Exchange Commission, and zero otherwise. Auditor is equal to one if the firm uses a BigN auditor, and zero otherwise. CBCA is equal to one if the firm is incorporated under the Canadian Business Corporations Act, and zero otherwise.

Table 1: Descriptive Statistics for Incorporation Decision (continued)
Panel E: Incorporation Decision Conditional on Province

	Incorporation						
Province	ABCA	BCBCA	OBCA	QCA	OTHER	CBCA	Total
Alberta	308	8	9	0	5	52	382
1	22.05	0.57	0.64	0.00	0.36	3.72	27.34
2	80.63	2.09	2.36	0.00	1.31	13.61	
3	89.80	3.96	3.19	0.00	14.71	11.28	
British Columbia	14	173	8	0	6	66	267
1	1.00	12.38	0.57	0.00	0.43	4.72	19.11
2	5.24	64.79	3.00	0.00	2.25	24.72	
3	4.08	85.64	2.84	0.00	17.65	14.32	
Ontario	12	17	260	3	10	171	473
1	0.86	1.22	18.61	0.21	0.72	12.24	33.86
2	2.54	3.59	54.97	0.63	2.11	36.15	
3	3.50	8.42	92.20	4.00	29.41	37.09	
Quebec	2	2	4	71	0	147	226
1	0.14	0.14	0.29	5.08	0	10.52	16.18
2	0.88	0.88	1.77	31.42	0	65.04	
3	0.58	0.99	1.42	94.67	0.00	31.89	
Other Provinces	7	2	1	1	13	25	49
1	0.5	0.14	0.07	0.07	0.93	1.79	3.51
2	14.29	4.08	2.04	2.04	26.53	51.02	
3	2.04	0.99	0.35	1.33	38.24	5.42	
Total	343	202	282	75	34	461	1,397
	24.55	14.46	20.19	5.37	2.43	33.00	100.00

1 is the percentage of the sample. 2 is the row percentage. 3 is the column percentage.

Other Provinces includes Manitoba, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Saskatchewan. ABCA is the Alberta Business Corporations Act. BCBCA is the British Columbia Business Corporations Act. OBCA is the Ontario Business Corporations Act. QCA is the Quebec Companies Act. OTHER consists of the following provincial incorporation acts: Manitoba Corporations Act, New Brunswick Business Corporations Act, Newfoundland Corporations Act, Nova Scotia Companies Act, Saskatchewan Companies Act, and the Yukon Business Corporations Act. CBCA represents firms that incorporated under the Canadian Business Corporations Act, the federal incorporation statute in Canada.

Table 1: Descriptive Statistics for Incorporation Decision (continued)
Panel F: Accounting Standard Conditional on Province

	Accounting Standard		
Province	Canadian GAAP	US GAAP	Total
Alberta	378	4	382
1	27.06	0.29	27.34
2	98.95	1.05	
3	27.81	10.53	
British Columbia	257	10	267
1	18.40	0.72	19.11
2	96.25	3.75	
3	18.91	26.32	
Ontario	451	22	473
1	32.28	1.57	33.86
2	95.35	4.65	
3	33.19	57.89	
Quebec	224	2	226
1	16.03	0.14	16.18
2	99.12	0.88	
3	16.48	5.26	
Other Provinces	49	0	49
1	3.51	0.00	3.51
2	100.00	0.00	
3	3.61	0.00	
Total	1,359	38	1,397
	97.28	2.72	100.00

1 is the percentage of the sample. 2 is the row percentage. 3 is the column percentage.

Canadian firms are permitted to report under either Canadian Generally Accepted Accounting Principles (GAAP) or under US GAAP. Other Provinces includes Manitoba, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Saskatchewan.

Table 2 presents our analysis of firms' incorporation decisions. The positive and significant coefficient on size for most models indicates that larger firms are more likely to incorporate at the federal level. For brevity, we do not present industry effects, but note that various industries are associated both positively and negatively with incorporating at the federal level. This finding is consistent with our discussions with Canadian regulators who suggested that provincial incorporation is common in certain industries (i.e., mining and oil and gas). In our province of primary interest, Quebec, only industry effects are associated with the decision to incorporate under the CBCA. This analysis suggests that controlling for size and industry are important in our analysis of earnings attributes, which we address by matching on size and industry.

Table 2: Logistic Regression of Firm Incorporation Decision

The sample for the analysis of firms' incorporation decisions consists of the last year each firm in our sample reports to System for Electronic Document Analysis and Retrieval (SEDAR) between January 1, 1997 and November 30, 2009. SEDAR data is not available prior to January 1, 1997 and Compustat data was not available after November 30, 2009 at the time we began our study. This results in a final sample of 1,397 firms.

Panel A: Pooled Analysis

Variables	All Provinces	All Provinces	All Provinces	All Provinces
Intercept	-1.767***	-1.680*	-0.533**	-0.653
	(0.174)	(0.893)	(0.218)	(0.954)
Size	0.199***	0.219***	0.195***	0.210***
	(0.031)	(0.033)	(0.033)	(0.035)
Leverage	0.120	0.060	0.076	0.060
	(0.158)	(0.171)	(0.164)	(0.173)
Growth	-0.054	-0.025	-0.022	-0.012
	(0.036)	(0.034)	(0.034)	(0.034)
Intangibles	1.760***	0.797**	0.730*	0.420
	(0.352)	(0.397)	(0.383)	(0.420)
SEC Filer	0.043	0.046	0.170	0.167
	(0.157)	(0.165)	(0.170)	(0.175)
Auditor	-0.119	-0.118	0.144	0.117
	(0.145)	(0.149)	(0.156)	(0.158)
Alberta			-2.510***	-2.230***
			(0.216)	(0.234)
British Columbia			-1.591***	-1.449***
			(0.214)	(0.221)
Ontario			-1.226***	-1.167***
			(0.177)	(0.183)
Other Provinces			-0.714**	-0.640*
			(0.329)	(0.336)
Industry Fixed Effects	No	Yes	No	Yes
Observations	1,397	1,397	1,397	1,397
Log Likelihood	843.660***	797.933***	761.235***	744.777***
Pseudo R-squared	0.048	0.099	0.141	0.159

***, **, * indicates two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are in parentheses.

CBCA is equal to one if a firm is incorporated under the Canadian Business Corporations Act, and zero otherwise. Size is the log of total assets (AT). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentages changes in sales (SALE). Intangibles is intangible assets (INTAN) scaled by total assets. SEC Filer is equal to one if the firm files with the U.S. Securities Exchange Commission, and zero otherwise. Auditor is equal to one if the firm uses a BigN auditor, and zero otherwise. Alberta is equal to one if the firm is headquartered in Alberta, and zero otherwise. British Columbia is equal to one if the firm is headquartered in British Columbia, and zero otherwise. Ontario is equal to one if the firm is headquartered in Ontario, and zero otherwise. Quebec is equal to one if the firm is headquartered in Quebec, and zero otherwise. Other Provinces includes Manitoba, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Saskatchewan.

Table 2: Logistic Regression of Firm Incorporation Decision (continued)
Panel B: By Province Analysis with Industry Fixed Effects

Variables	Alberta	British Columbia	Ontario	Quebec	Other Provinces
Intercept	-3.585***	-2.100***	-2.683***	1.473*	1.603
	(0.907)	(0.665)	(0.731)	(0.862)	(1.956)
Size	0.265***	0.251***	0.174***	0.075	0.040
	(0.095)	(0.080)	(0.057)	(0.078)	(0.216)
Leverage	0.641	-0.001	-0.023	0.354	-1.487
	(0.861)	(0.039)	(0.128)	(0.387)	(1.210)
Growth	-0.409*	-0.013	-0.006	0.209	-0.666
	(0.247)	(0.030)	(0.025)	(0.193)	(0.473)
Intangibles	1.142	1.485	-0.076	0.185	3.725
	(1.370)	(1.073)	(0.654)	(0.794)	(2.696)
SEC Filer	0.805	0.067	0.308	0.032	-0.400
	(0.505)	(0.344)	(0.269)	(0.553)	(1.269)
Auditor	-0.329	0.312	0.377	0.056	-0.106
	(0.435)	(0.423)	(0.257)	(0.327)	(0.943)
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	382	267	473	226	49
Log Likelihood	134.471***	126.005***	292.950**	131.198**	26.592
Pseudo R-squared	0.115	0.152	0.053	0.104	0.218

***, **, * indicates two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are in parentheses.

CBCA is equal to one if a firm is incorporated under the Canadian Business Corporations Act, and zero otherwise. Size is the log of total assets (AT). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentage change in sales (SALE). Intangibles is intangible assets (INTAN) scaled by total assets. SEC Filer is equal to one if the firm files with the U.S. Securities Exchange Commission, and zero otherwise. Auditor is equal to one if the firm uses a BigN auditor, and zero otherwise.

Table 2: Logistic Regression of Firm Incorporation Decision (continued)
Panel C: By Province Analysis without Industry Fixed Effects

Variables	Alberta	British Columbia	Ontario	Quebec	Other Provinces
Intercept	-3.049***	-2.398***	-1.637***	-0.304	-0.329
	(0.565)	(0.392)	(0.305)	(0.391)	(1.064)
Size	0.245***	0.237***	0.169***	0.115	0.128
	(0.091)	(0.074)	(0.054)	(0.072)	(0.176)
Leverage	0.395	0.037	-0.142	0.618	-0.732
	(0.806)	(0.307)	(0.299)	(0.431)	(0.790)
Growth	-0.377	-0.031	0.019	0.139	-0.335
	(0.232)	(0.065)	(0.049)	(0.155)	(0.380)
Intangibles	1.516	2.455**	-0.189	0.857	1.898
	(1.216)	(0.975)	(0.598)	(0.757)	(1.956)
SEC Filer	1.013**	-0.215	0.281	-0.167	-0.542
	(0.459)	(0.321)	(0.261)	(0.510)	(1.046)
Auditor	-0.296	0.297	0.310	0.119	-0.108
	(0.428)	(0.397)	(0.251)	(0.305)	(0.733)
Industry Fixed Effects	No	No	No	No	No
Observations	382	267	473	226	49
Log Likelihood	137.623***	135.410***	299.418**	142.005	30.788
Pseudo R-squared	0.0945	0.0931	0.0325	0.0291	0.0932

***, **, * indicates two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are in parentheses.

CBCA is equal to one if a firm is incorporated under the Canadian Business Corporations Act, and zero otherwise. Size is the log of total assets (AT). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentage change in sales (SALE). Intangibles is intangible assets (INTAN) scaled by total assets. SEC Filer is equal to one if the firm files with the U.S. Securities Exchange Commission, and zero otherwise. Auditor is equal to one if the firm uses a BigN auditor, and zero otherwise.

Table 3: Descriptive Statistics for Matched-Pairs
The sample consists of all firms-years for the matched sample and consists of 167 unique Quebec firms and their matched pairs. Quebec firms are matched to non-Quebec firms on incorporation level, industry and market value and all overlapping firm-years are retained resulting in 738 firm-years.

Panel A: All Matched-Pairs

	Quebec (N = 738 firm-years)			Non-Quebec (N = 738 firm-years)				
Variables	Mean	Median	Standard Deviation	Mean		Median		Standard Deviation
Firm Characteristics:								
Size	5.389	5.516	1.871	5.297		5.463		2.242
MV	5.091	5.224	1.808	5.242		5.230		1.888
Sales	1,023	283	2,346	1,564	***	239		3,857
Growth	0.188	0.071	0.686	0.224		0.073		0.763
Leverage	0.246	0.224	0.241	0.262		0.221		0.486
Variables to Construct Earnings Attributes:								
TCA_t	-0.001	0.002	0.082	0.005		0.004		0.107
CFO_{t-1}	0.013	0.064	0.245	-0.060	***	0.050	###	0.380
CFO_t	0.023	0.075	0.230	-0.052	***	0.057	###	0.364
CFO_{t+1}	0.032	0.084	0.260	-0.067	***	0.057	###	0.458
X_{t-1}	0.237	0.260	1.268	0.172		0.184		2.108
X_t	0.245	0.260	1.255	0.228		0.184		2.054
$NIBE_t$	-0.030	0.037	0.276	-0.124	***	0.036		0.504
$CFOS_t$	0.018	0.078	0.299	-0.086	***	0.059	###	0.532
RET_t	0.139	0.015	0.659	0.179		0.060		0.753
$EARN_t$	0.002	0.052	0.238	-0.031	**	0.040	###	0.273
$\Delta EARN_t$	0.038	0.006	0.366	0.030		0.006		0.330
NEG_t	0.483	0.000	0.500	0.445		0.000		0.497

***, **, * indicates t-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Size is the log of total assets (AT). MV is the log of market value (CSHO*PRCC_F). Sales is the firm's sales (SALE). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentage change in sales (SALE). TCA_t is total current accruals scaled by average total assets. CFO_t is the cash flow from operations in year t calculated as income before extraordinary items (IB) less total accruals scaled by average total assets. X_t is the split-adjusted earnings per share calculated as income before extraordinary items in year t divided by the weighted average number of outstanding shares during year t. $NIBE_t$ is net income before extraordinary items scaled by beginning total assets. $CFOS_t$ is CFO_t scaled by beginning total assets. RET_t is the 12-month return ending three months after the end of fiscal year t. $EARN_t$ is income before extraordinary items scaled by market value at the end of year t-1. $\Delta EARN_t$ is the change in income before extraordinary items in year t scaled by market value at the end of year t-1. NEG_t is equal to one if $RET_t < 0$, and zero otherwise. All continuous variables are winsorized at the extreme percentiles.

Table 3: Descriptive Statistics for Matched-Pairs (continued)
The sample consists of all firms-years for the Quebec QCA matched sample and consists of 65 unique Quebec QCA firms and their matched pairs. Quebec QCA firms are matched to non-Quebec firms on incorporation level, industry and market value and all overlapping firm-years are retained resulting in 338 firm-years.

Panel B: Quebec QCA firms to Non-Quebec Provincial firms

	Quebec (N = 338 firm-years)			Non-Quebec (N = 338 firm-years)				
Variables	Mean	Median	Standard Deviation	Mean		Median		Standard Deviation
Firm Characteristics:								
Size	5.061	5.247	2.092	4.656	**	4.657	##	2.373
MV	4.789	4.989	1.873	4.777		4.846		1.942
Sales	1040	213	2334	838		113	##	2012
Growth	0.222	0.082	0.762	0.264		0.079		0.808
Leverage	0.272	0.240	0.290	0.284		0.214	##	0.679
Variables to Construct Earnings Attributes:								
TCA_t	0.000	0.003	0.083	0.007		0.006		0.006
CFO_{t-1}	-0.024	0.052	0.303	-0.129	***	0.031	##	0.031
CFO_t	-0.018	0.059	0.288	-0.121	***	0.044	##	0.044
CFO_{t+1}	0.006	0.065	0.284	-0.134	***	0.046	##	0.046
X_{t-1}	0.253	0.200	1.195	0.139		0.054		0.054
X_t	0.249	0.167	1.233	0.166		0.068	#	0.068
$NIBE_t$	-0.071	0.028	0.360	-0.206	***	0.022		0.022
$CFOS_t$	-0.033	0.061	0.401	-0.174	***	0.046	#	0.046
RET_t	0.117	-0.016	0.704	0.200		0.041		0.041
$EARN_t$	-0.019	0.050	0.275	-0.050		0.022	###	0.022
$\Delta EARN_t$	0.040	0.005	0.381	0.047		0.000		0.000
NEG_t	0.509	1.000	0.501	0.462		0.000		0.000

***, **, * indicates t-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

The sample consists of all firms-years for Quebec QCA firms are matched to non-Quebec firms incorporated at the provincial level on industry and market value. Size is the log of total assets (AT). MV is the log of market value (CSHO*PRCC_F). Sales is the firm's sales (SALE). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentages changes in sales (SALE). TCA_t is total current accruals scaled by average total assets. CFO_t is the cash flow from operations in year t calculated as income before extraordinary items (IB) less total accruals scaled by average total assets. X_t is the split-adjusted earnings per share calculated as income before extraordinary items in year t divided by the weighted average number of outstanding shares during year t. $NIBE_t$ is net income before extraordinary items scaled by beginning total assets. $CFOS_t$ is CFO_t scaled by beginning total assets. RET_t is the 12-month return ending three months after the end of fiscal year t. $EARN_t$ is income before extraordinary items scaled by market value at the end of year t-1. $\Delta EARN_t$ is the change in income before extraordinary items in year t scaled by market value at the end of year t-1. NEG_t is equal to one if $RET_t < 0$, and zero otherwise. All continuous variables are winsorized at the extreme percentiles.

Table 3: Descriptive Statistics for Matched-Pairs (continued)
The sample consists of all firms-years for the Quebec CBCA matched sample and consists of 102 unique Quebec CBCA firms and their matched pairs. Quebec CBCA firms are matched to non-Quebec firms on incorporation level, industry and market value and all overlapping firm-years are retained resulting in 405 firm-years.

Panel C: Quebec CBCA firms to Non-Quebec CBCA firms

	Quebec (N = 405 firm-years)			Non-Quebec (N = 405 firm-years)				
Variables	Mean	Median	Standard Deviation	Mean		Median		Standard Deviation
Firm Characteristics:								
Size	5.663	5.650	1.618	5.831		5.919	#	1.975
MV	5.342	5.388	1.714	5.630	**	5.420	##	1.752
Sales	1,010	349	2,359	2,169	***	435		4,811
Growth	0.161	0.065	0.620	0.193		0.070		0.727
Leverage	0.225	0.207	0.187	0.244		0.230		0.223
Variables to Construct Earnings Attributes:								
TCA_t	-0.002	0.001	0.080	0.004		0.003		0.089
CFO_{t-1}	0.044	0.077	0.178	-0.002	***	0.061	##	0.278
CFO_t	0.057	0.084	0.160	0.006	***	0.068	###	0.243
CFO_{t+1}	0.054	0.091	0.237	-0.011	***	0.068	###	0.325
X_t	0.241	0.300	1.275	0.280		0.341		2.286
X_{t-1}	0.224	0.290	1.327	0.199		0.340		2.352
$NIBE_t$	0.004	0.044	0.173	-0.056	***	0.039	#	0.337
$CFOS_t$	0.060	0.087	0.162	-0.013	***	0.070	###	0.356
RET_t	0.157	0.035	0.618	0.161		0.067		0.676
$EARN_t$	0.019	0.054	0.201	-0.016	**	0.053		0.261
$\Delta EARN_t$	0.037	0.006	0.353	0.017		0.008		0.259
NEG_t	0.462	0.000	0.499	0.432		0.000		0.496

***, **, * indicates t-test of means statistically different at the 1%, 5%, and 10% level, respectively (two-tailed). ###, ##, # indicates Wilcoxon test statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

The sample consists of all firms-years for Quebec CBCA firms are matched to non-Quebec CBCA firms on industry and market value. Size is the log of total assets (AT). MV is the log of market value (CSHO*PRCC_F). Sales is the firm's sales (SALE). Leverage is long-term debt (DLC+DLTT) divided by total assets. Growth is the annual percentages changes in sales (SALE). TCA_t is total current accruals scaled by average total assets. CFO_t is the cash flow from operations in year t calculated as income before extraordinary items (IB) less total accruals scaled by average total assets. X_t is the split-adjusted earnings per share calculated as income before extraordinary items in year t divided by the weighted average number of outstanding shares during year t. $NIBE_t$ is net income before extraordinary items scaled by beginning total assets. $CFOS_t$ is CFO_t scaled by beginning total assets. RET_t is the 12-month return ending three months after the end of fiscal year t. $EARN_t$ is income before extraordinary items scaled by market value at the end of year t-1. $\Delta EARN_t$ is the change in income before extraordinary items in year t scaled by market value at the end of year t-1. NEG_t is equal to one if $RET_t < 0$, and zero otherwise. All continuous variables are winsorized at the extreme percentiles.

Table 3: Descriptive Statistics for Matched-Pairs (continued)
Panel D: Pearson Correlation Table for Variables Used to Construct Earnings Attributes

Variable	TCA_t	CFO_{t-1}	CFO_t	CFO_{t+1}	X_t	X_{t-1}	$NIBE_t$	$CFOS_t$	RET_t	$EARN_t$	$\Delta EARN_t$	NEG_t
TCA_t	1.000	0.050	-0.180	0.068	0.115	0.033	0.090	-0.162	0.087	0.153	0.049	-0.082
		0.051	*<.0001*	*0.008*	*<.0001*	*0.196*	*0.001*	*<.0001*	*0.001*	*<.0001*	*0.055*	*0.001*
CFO_{t-1}		1.000	0.678	0.573	0.164	0.290	0.616	0.579	0.019	0.369	-0.250	-0.105
			<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*0.464*	*<.0001*	*<.0001*	*<.0001*
CFO_t			1.000	0.721	0.294	0.206	0.871	0.903	0.049	0.602	0.137	-0.127
				<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*0.055*	*<.0001*	*<.0001*	*<.0001*
CFO_{t+1}				1.000	0.176	0.154	0.723	0.704	-0.003	0.399	0.052	-0.103
					<.0001	*<.0001*	*<.0001*	*<.0001*	*0.896*	*<.0001*	*0.041*	*<.0001*
X_t					1.000	0.596	0.289	0.251	0.124	0.516	0.172	-0.184
						<.0001	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*	*<.0001*
X_{t-1}						1.000	0.188	0.167	-0.014	0.306	-0.308	-0.070
							<.0001	*<.0001*	*0.585*	*<.0001*	*<.0001*	*0.007*
$NIBE_t$							1.000	0.948	0.043	0.639	0.177	-0.116
								<.0001	*0.096*	*<.0001*	*<.0001*	*<.0001*
$CFOS_t$								1.000	0.006	0.590	0.164	-0.078
									0.820	*<.0001*	*<.0001*	*0.003*
RET_t									1.000	0.115	0.178	-0.601
										<.0001	*<.0001*	*<.0001*
$EARN_t$										1.000	0.236	-0.183
											<.0001	*<.0001*
$\Delta EARN_t$											1.000	-0.107
												<.0001
NEG_t												1.000

p-values in italics.

We pool Quebec and Non-Quebec firms for this analysis.

6. Analysis of Earnings Attributes

Following prior research, including Lang, Raedy, and Yetman (2003), Leuz (2003), Lang, Raedy, and Wilson (2006), Barth, Landsman, and Lang (2008), we construct our earnings attributes based on cross-sectional data.[33] To construct statistical tests of difference, we employ bootstrap-based tests, which use the sample data to generate a distribution for the test statistic. We follow the procedure outlined by Noreen (1989) referred to as "approximate randomization."[34] Dichev and Tang (2009) and Minnis (2010) use this procedure to test differences in R^2. A key advantage of this approach is that it does not require assumptions about the distribution of each earnings attribute. Our null hypothesis that there is no difference between Quebec and non-Quebec firms and approximate randomization examines how frequently the observed differences in earnings attributes would occur randomly. Specifically, we randomly assign firms as Quebec and non-Quebec firms. Then we calculate each earnings attribute for 'pseudo' Quebec and non-Quebec firms and record the difference in earnings attributes between the two groups. We then note if the differences in earnings attributes from the randomly generated sample is greater than the actual observed differences. We repeat these steps 10,000 and the p-value is the number of times the randomly generated difference in an earnings attribute is greater than the actual difference.

Table 4 reports the results from comparing the earnings attributes for 738 matched pairs of firm years. Recall that for each matched pair, one firm is located in Quebec, while the other firm is located in a province other than Quebec. Ball, Kothari and Robin (2000) hypothesize that financial reporting incentives shape the standards and provide evidence that accounting standards

[33] An alternative approach would be to estimate firm-specific earnings attributes using a time series of firm-specific data. We do not use this approach because it would severely limit our sample size due the length of the time series required to estimate the earnings attributes.
[34] We also perform bootstrap tests following Barth, Landsman, and Lang (2008) and find similar results.

differ between common law countries and civil law countries. To control for differences in accounting standards, we omit those Canadian firms that report under US GAAP, such that both Quebec and non-Quebec firms in our matched pairs report under Canadian GAAP. As a consequence, any differences in earnings attributes for our matched pairs, which we report below, are not due to accounting standards per se, but rather due to the underlying financial reporting incentives.

Panel A of Table 4 reports the tests for differences between Quebec and non-Quebec firms with regards to accounting-based earnings attributes. First, we find that Accrual Quality is statistically significantly higher for Quebec firms at the 1 percent significance level (as evidenced by the lower standard deviation of residuals from the accrual regression specified in equation (1)). Second, we find that Persistence is statistically significantly higher for non-Quebec firms at the 4 percent significance level. Third, we find that Predictability is statistically significantly for non-Quebec at the 2 percent level (as evidenced by the lower standard deviation). In summary, these three intrinsic accounting-based earnings attributes differ for similar Canadian firms located inside and outside Quebec.

Similarly, Panel B of Table 4 reports our tests for differences in market-based earnings attributes. We only find statistically significant differences with regards to Timeliness, which is statistically significantly higher for Quebec firms. Since Ball, Kothari, and Robin (2000) find that Timeliness is higher for common law countries, one would have expected the reverse result based on their hypothesized differences in accounting standards. As a consequence, our finding suggests the importance of controlling for differences in accounting standards when investigating the pure direct effect of financial reporting incentives on Timeliness.

Table 4: Comparison of Earnings Attributes Between Quebec and Matched Non-Quebec Firms

This table compares earnings attributes from Quebec firms to their non-Quebec matched pairs. The sample consists of all firms-years for the matched sample and consists of 167 unique Quebec firms and their matched pairs. Quebec firms are matched to non-Quebec firms on incorporation level, industry and market value and all overlapping firm-years are retained resulting in 738 firm-years. The statistical tests of differences are based on bootstrap-based tests (see Section 6 for details).

Panel A: Accounting-Based Earnings Attributes

Earnings Attributes	(1) Quebec	(2) Non-Quebec	(1) - (2) Difference	p-value	
Accrual Quality	0.076	0.095	-0.019	<0.01	***
Persistence	0.436	0.648	-0.212	0.04	**
Predictability	1.127	1.534	-0.407	0.02	**
Smoothness	0.924	0.948	-0.024	0.27	

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Accrual Quality is the standard deviation of the residuals from the regression of accruals on future year, current year, and previous year's cash flows from operations. Persistence is the estimated slope coefficient from an AR1 model of annual earnings. Predictability is the standard deviation of the residual from the Persistence regression. Smoothness is the ratio of the standard deviation of earnings before extraordinary items (scaled by assets) to the standard deviation of cash flows from operations (scaled by assets).

Table 4: Comparison of Earnings Attributes Between Quebec and Matched Non-Quebec Firms (continued)

Panel B: Market-Based Earnings Attributes

Earnings Attributes	(1) Quebec	(2) Non-Quebec	(1) - (2) Difference	p-value	
Relevance	0.031	0.061	-0.029	0.21	
Timeliness	0.115	0.070	0.044	0.09	*
Conservatism	0.431	0.424	0.007	0.46	

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Relevance is the adjusted R^2 from a regression of annual returns on the level and change in annual earnings (before extraordinary items). Timeliness is the adjusted R^2 from a regression of annual earnings (before extraordinary items) on an indicator variable equaling one if the company's annual return is negative and zero otherwise, the company's annual return, and the interaction of the annual return and the indicator variable. Conservatism is the estimated coefficient on the interaction variable from the Timeliness regression.

Given the self-selection issue raised in Table 2, with regards to managers' decision about where to incorporate, we also repeated our analysis after controlling for whether firms incorporated under either Federal statute (CBCA) or provincial statutes of incorporation. These results are reported in Table 5. Panel A of Table 5 makes pairwise comparisons of accounting-based earnings attributes for firms that incorporated under Federal and provincial statutes, respectively. First, we find that the differences reported in Panel A of Table 4 in Accrual Quality and Persistence are driven by matched pairs of firms that reported under provincial statute. Since our selection model for managers' incorporation decision outside Quebec – as reported in Table 2 – is driven by the two variables that we use for matching in this analysis, Size and Industry, we have no reason to believe that differences across non-Quebec provincial statutes constrain firm managers' subsequent financial reporting incentives. However, our model for managers' incorporation decision also reveals that Quebec firms' incorporation decision differs from that of non-Quebec firms. As a consequence, differences might persist when comparing provincial statutes simply due to unmodeled differences in the incorporation decision. Again, these differences could be explained by the fact that QCA lends lower degree of protection of minority shareholder rights than other non-Quebec provincial statutes.

Panel A of Table 5 also reports statistically significant differences in Predictability and Smoothness. These latter differences, however, are driven by matched pairs of firms that reported under the same Federal statute. As a consequence, these differences are not likely subject to the concern that incorporation decision differences fully explain the difference in subsequent financial reporting incentives. Panel B of Table 5 reports that our differences in Timeliness reported in Panel B of Table 4 appear to be driven by differences among matched pairs of firms which incorporated under the provincial statute.

Table 5: Pairwise Comparisons

This table compares earnings attributes from Quebec firms to their non-Quebec matched pairs partitioned on the level of incorporation. The sample consists of all firms-years for the matched sample and consists of 167 unique Quebec firms (65 QCA and 102 CBCA firms) and their matched pairs. Quebec firms are matched to non-Quebec firms on incorporation level, industry and market value and all overlapping firm-years are retained resulting in 738 firm-years (338 firm-years for QCA firms and 405 firm-years for CBCA firms). The statistical tests of differences are based on bootstrap-based tests (see Section 6 for details).

Panel A: Accounting-Based Earnings Attributes

Incorporation	Location				
	(1) Quebec	(2) Non-Quebec	(1) - (2) Difference	p-value	
	Accrual Quality				
CBCA	0.072	0.078	-0.006	0.22	
Provincial	0.079	0.112	-0.033	<0.01	***
	Persistence				
CBCA	0.484	0.638	-0.155	0.16	
Provincial	0.365	0.667	-0.301	0.07	*
	Predictability				
CBCA	1.102	1.724	-0.622	0.02	**
Provincial	1.153	1.271	-0.119	0.33	
	Smoothness				
CBCA	1.070	0.945	0.124	0.09	*
Provincial	0.896	0.949	-0.053	0.12	

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Accrual Quality is the standard deviation of the residuals from the regression of accruals on future year, current year, and previous year's cash flows from operations. Persistence is the estimated slope coefficient from an AR1 model of annual earnings. Predictability is the standard deviation of the residual from the Persistence regression. Smoothness is the ratio of the standard deviation of earnings before extraordinary items (scaled by assets) to the standard deviation of cash flows from operations (scaled by assets).

Table 5: Pairwise Comparisons (continued)

Panel B: Market-Based Earnings Attributes

Location	Incorporation				
	(1) Quebec	(2) Non-Quebec	(1) - (2) Difference	p-value	
	Relevance				
CBCA	0.052	0.111	-0.059	0.14	
Provincial	0.022	0.033	-0.011	0.39	
	Timeliness				
CBCA	0.121	0.109	0.012	0.42	
Provincial	0.110	0.037	0.074	0.06	*
	Conservatism				
CBCA	0.316	0.469	-0.153	0.11	
Provincial	0.551	0.382	0.169	0.14	

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Relevance is the adjusted R^2 from a regression of annual returns on the level and change in annual earnings (before extraordinary items). Timeliness is the adjusted R^2 from a regression of annual earnings (before extraordinary items) on an indicator variable equaling one if the company's annual return is negative and zero otherwise, the company's annual return, and the interaction of the annual return and the indicator variable. Conservatism is the estimated coefficient on the interaction variable from the Timeliness regression.

In summary, we find that differences in earnings attributes persist after controlling for the accounting standards. Our results also point to the importance of controlling for the incorporation decision. After controlling for both accounting standards and for the incorporation decision, we still find differences in earnings attributes.

7. Conclusion and Future Work

This paper investigates whether intra-country variation in legal origin manifests itself in variation in earnings attributes. Specifically, this paper documents variation among Canadian firms' earnings attributes along two dimensions: the location of firms' headquarters (inside or outside Quebec) and the incorporation either at the federal level (CBCA) or at the provincial level. Overall, our results suggest that managers' financial reporting incentives – perhaps driven by financial statement users' differential demand for earnings quality – may differ between civil law and common law regions of a country. On the one hand, Kedia and Rajgopal (2010) offer evidence consistent with geographical variation in financial reporting incentives within the US as they document that SEC enforcement varies with distance of firms' headquarters from the nearest SEC regional office. On the other hand, Bozec, Rousseau, and Laurin (2008) and Merrell (2010) document intra-country variation in ownership structure for Canada and US. Their findings could suggest that legal origin, ownership structure, and firms' incorporation decisions are codetermined and may jointly affect financial reporting incentives.

Kedia and Rajgopal (2009) document variation in the usage of stock options within the US. Future research might investigate whether executive compensation practices vary within Canada between Quebec and non-Quebec companies. While such variation in compensation practices could be attributable to legal origin, this variation might also arise due to partially

segmented labor markets due to language barriers. A French speaking executive in Quebec might be more likely to be hired by a company based in France than a company based in the US or the rest of Canada. Similarly, an English speaking Canadian executive working outside Quebec might be less likely to be hired by a Quebec-based firm where French is the working language than a US-based firm where English is the working language. Since Europe, in general, has lower pay than North America, we would expect lower labor mobility from Canada to France than to the US. Such differences in getting hired might arise from the demand or supply side of the labor market. The demand for executives are likely driven by the language and overall culture a firm and its board members. The supply of executives willing to move are likely guided by the immediate family's functional language and proximity to other family members. Of course, the research setting for such an experiment is not exclusive to Canada, since Belgium is a civil law country which has a similar partition with the north and south being culturally and language-wise closer to The Netherlands and France, respectively. Further, this experiment is more difficult because executive compensation has not traditionally been disclosed in a transparent and consistent manner across Europe. In summary, this paper suggests future research that may further develop and address intra-country variation in corporate governance outcomes.

CHAPTER 1 REFERENCES

Admati, A.R. and P. Pfleiderer. 2000. Forcing Firms to Talk: Financial Disclosure Regulation and Externalities. *The Review of Financial Studies* 13: 479-519.

Barton, J. and G. Waymire. 2004. Investor Protection Under Unregulated Financial Reporting. *Journal of Accounting and Economics* 38: 65-116.

Benston, G.J. 1973. Required Disclosure and the Stock Market: An Evaluation of the Securities Exchange Act of 1934. *The American Economic Review* 63: 132-155.

Berger, P.G. and R.N. Hann. 2003. The Impact of SFAS No. 131 on Information and Monitoring. *Journal of Accounting Research* 41: 163-223.

Beyer, A., D.A. Cohen, T.Z. Lys, and B.R. Walther. 2010. The Financial Reporting Environment: Review of the Recent Literature. *Journal of Accounting and Economics* 50: 296-343.

Blankespoor, E., G.S. Miller, and H.D. White. 2010. The Impact of Managerial Dissemination of Firm Disclosure. Working Paper, University of Michigan.

Botosan, C.A. 1997. Disclosure Level and the Cost of Equity Capital. *The Accounting Review* 72: 323-349.

Botosan, C.A. and M. Stanford. 2005. Managers' Motives to Withhold Segment Disclosures and the Effects of SFAS No. 131 on Analysts' Information Environment. *The Accounting Review* 80: 751-771.

Brown, S., K. Lo, and T. Lys. 1999. Use of R^2 in Accounting Research: Measuring Changes in Value Relevance Over the Last Four Decades. *Journal of Accounting and Economics* 28: 83-115.

Bushee, B.J. and C. Leuz. 2005. Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board. *Journal of Accounting and Economics* 39: 233-264.

Chow, C. 1983. The Impacts of Accounting Regulation on Bondholder and Shareholder Wealth: The Case of the Securities Acts. *The Accounting Review* 58: 485-520.

Coffee, J. 1984. Market Failure and the Economic Case for a Mandatory Disclosure System. *Virginia Law Review* 70: 717-753.

Cramer, J.S. 1987. Mean and Variance of R^2 in Small and Moderate Samples. *Journal of Econometrics* 35: 253-266.

Daines, R. and C.M. Jones. 2005. Mandatory Disclosure, Asymmetric Information and Liquidity: The Impact of the 1934 Act. Working Paper, Stanford University.

Dye, R.A. 1985. Disclosure of Nonproprietary Information. *Journal of Accounting Research* 23: 123-145.

Dye, R.A. 1990. Mandatory Versus Voluntary Disclosures: The Cases of Financial and Real Externalities. *The Accounting Review* 65: 1-24.

Ely, K. and G. Waymire. 1999. Intangible Assets and Stock Prices in the Per-*SEC* Era. *Journal of Accounting Research* 37: 17-44.

Ferrell, A. 2007. Mandatory Disclosure and Stock Returns: Evidence from the Over-the-Counter Market. *Journal of Legal Studies* 36: 213-251.

Fields, T.D., T.Z. Lys, and L. Vincent. 2001. Empirical Research on Accounting Choice. *Journal of Accounting and Economics* 31: 255-307.

Fishman, M.J. and K.M. Hagerty. 1989. Disclosure Decisions by Firms and the Competition for Price Efficiency. *Journal of Finance* 44: 633-646.

Francis, J. and K. Schipper. 1999. Have Financial Statements Lost Their Relevance*? Journal of Accounting Research* 37: 319-352.

Frost, C.A., E.A. Gordon, and A.F. Hayes. 2006. Stock Exchange Disclosure and Market Development: An Analysis of 50 International Exchanges. *Journal of Accounting Research* 44: 437–483.

Greene, W.H. 2003. *Econometric Analysis*, Fifth Edition, Prentice Hall.

Greenstone, M., P. Oyer, and A. Vissing-Jorgensen. 2006. Mandated Disclosure, Stock Returns, and the 1964 Securities Acts Amendments. *The Quarterly Journal of Economics* 121: 399-460.

Grossman, S.J. 1981. The Informational Role of Warranties and Private Disclosure about Product Quality. *Journal of Law and Economics* 24: 461-483.

Hand, J.R. 2003. Profits, Losses and the Nonlinear Pricing of Internet Stocks. J. Hand & B. Lev (Eds). *Intangible Assets: Values, Measures, and Risks* New York: Oxford University Press.

Hayn, C. 1995. The Information Content of Losses. *Journal of Accounting and Economics* 20: 125-153.

Healy, P.M. and K.G. Palepu. 2001. Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature. *Journal of Accounting and Economics* 31: 405-440.

Heckman, J., 1979. Sample Selection Bias as a Specification Error. *Econometrica* 47: 153–161.

Jarrell, G.A. 1981. The Economic Effects of Federal Regulation of the Market for New Security Issues. *Journal of Law and Economics* 24: 613-675.

Jorgensen, B.N. and M. Kirschenheiter. 2010. Interactive Discretionary Disclosures. *Forthcoming in Contemporary Accounting Research*.

Keating, E.K., T.Z. Lys, and R.P. Magee. 2003. Internet Downturn: Finding Valuation Factors in Spring 2000. *Journal of Accounting and Economics* 34: 189-236.

King, R., G. Pownall, and G. Waymire. 1990. Expectations Adjustments via Timely Management Forecasts: Review, Synthesis, and Suggestions for Future Research. *Journal of Accounting Literature* 9: 113-144.

Kyle, A.S. 1985. Continuous Auctions and Insider Trading. *Econometrica* 53: 1315-1335.

Lang, M. and R. Lundholm. 1993. Cross-sectional Determinants of Analyst Ratings of Corporate Disclosures. *Journal of Accounting Research* 31: 246-271.

Leuz, C. 2010. Different Approaches to Corporate Reporting Regulation: How Jurisdictions Differ and Why. *Accounting and Business Research* 40: 229-256.

Leuz, C. and P. Wysocki. 2009. Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research. Working Paper, University of Chicago.

Luft, C. and L.M. Levine. 2004. Over the Counter Bulletin Board Exchange: The Impact of Liquidity and Size to Return, Volatility, and Bid/Ask Spread. *The Journal of Alternative Investments* 4: 95-106.

Luft, C., L.M. Levine, and S. Larson. 2001. Over the Counter Bulletin Board Exchange: Market Structure, Risk, and Return. *The Journal of Alternative Investments* 4: 33-42.

Mahoney, P.G. and J. Mei. 2006. Mandatory vs. Contractual Disclosure in Securities Markets: Evidence from the 1930s. Working Paper, University of Virginia.

Manne, H.G. 1966. In Defense of Insider Trading. *Harvard Business Review* 44: 113-122.

Milgrom, P.R. 1981. Good News and Bad News: Representation Theorems and Applications. *Bell Journal of Economics* 12: 380-391.

Rajgopal, S., M. Vankatachalam, and S. Kotha. 2003. The Value Relevance of Network Advantages: The Case of E-Commerce Firms. *Journal of Accounting Research* 41: 135-162.

Ross, S. 1979. Disclosure Regulation in Financial Markets: Implications of Modern Finance Theory and Signaling Theory, *Issues in Financial Regulation* F. Edwards (ed.), McGraw-Hill, New York.

Simon, C.J. 1989. The Effect of the 1933 Securities Act on Investor Information and the Performance of New Issues. *The American Economic Review* 79: 295-318.

Sivakumar, K.N. and G. Waymire. 1993. The Information Content of Earnings in a Discretionary Reporting Environment: Evidence from NYSE Industrials, 1905-10. *Journal of Accounting Research* 31: 62-91.

Sivkumar, K.N. and G. Waymire. 2003. Enforceable Accounting rules and Income Measurement by Early 20th Century Railroads. *Journal of Accounting Research* 41: 397-432.

Skinner, D. 1994. Why Firms Voluntarily Disclose Bad News. *Journal of Accounting Research* 32: 38-60.

Stigler, G.J. 1964. Public Regulation of the Securities Markets. *Journal of Business* 37: 117-142.

Trueman, B., M.H. Wong, and X.J. Zhang. 2000. The Eyeballs Have It: Searching for the Value in Internet Stocks. *Journal of Accounting Research* 28: 137-162.

Verrecchia, R.E. 1983. Discretionary Disclosure. *Journal of Accounting and Economics* 5: 179-194.

Verrecchia, R.E. 2001. Essays on Disclosure. *Journal of Accounting and Economics* 32: 91-180.

Watts, R.L. and J.L. Zimmerman. 1986. Positive Accounting Theory. Prentice-Hall, Englewood Cliffs, New Jersey.

Willenborg, M. 1999. Empirical Analysis of the Economic Demand for Auditing in the Initial Public Offerings Market. *Journal of Accounting Research* 37: 225-238.

CHAPTER 2 REFERENCES

Aiken, M. 2004. Comment: A Minority Shareholder's Rights in Dissension – How Does Delaware Do It and What Can Louisiana Learn? Loyola Law Review 50 Loy L. Rev. 231.

Ball, R., Kothari, S.P., and Robin, A. 2000. The Effect of Institutional Factors on Properties of Accounting Earnings. Journal of Accounting and Economics 29 (February): 1-51.

Bandyopadhyay, S.P., Hanna, J.D., and Richardson, G. 1994. Capital Market Effects of U.S.-Canada GAAP Differences. Journal of Accounting Research 32 (2): 262-277.

Barth, M., Landsman, W., and Lang, M. 2008. International Accounting Standards and Accounting Quality. Journal of Accounting Research 46: 467-498.

Barton, J., Hansen, T.B., and Pownall, G. 2010. Which Performance Measures Do Investors Around the World Value the Most – and Why? The Accounting Review 85: 753-789.

Basu, S. 1997. The Conservatism Principle and the Asymmetric Timeliness of Earnings," Journal of Accounting and Economics 24: 3-37.

Bozec, Y., Rousseau, S., and Laurin, C., 2008. Law of Incorporation and Firm Ownership Structure: The Law and Finance Theory Revisited. International Review of Law and Economics 28: 140-149.

Bushman, R.M., and Smith, A.J. 2001. Financial Accounting Information and Corporate Governance. Journal of Accounting and Economics 32 (1-3): 237-333.

Bushman, R., Chen, Q., Engel, E., and Smith, A. J. 2004. Financial Accounting Information, Organizational Complexity and Corporate Governance Systems. Journal of Accounting and Economics 37 (June): 139-201.

Bushman, R.M. and Piotroski, J.D. 2006. Financial Reporting Incentives for Conservative Accounting: The Influence of Legal and Political Institutions. Journal of Accounting and Economics 42: 107-148.

Carnaghan, C., and Gunz, S. P. 2007. Recent Changes in the Regulation of Financial Markets and Reporting in Canada. Canadian Accounting Perspectives 6: 55-94.

Cloutier, M. 2009. Bill 63: Business Corporations Act. Available at: http://www.industrymailout.com/Industry/LandingPage.aspx?id=451233&p=1

Core, J. 1997. On the Corporate Demand for Directors' and Officers' Insurance. Journal of Risk and Insurance 64: 63-87.

Daniels, R.J. 1991. Should Provinces Compete? The Case for a Competitive Corporate Law Market. Revue de droit de McGill 36: 130.

Dennis, J.L.S. 2003. Louisiana Bicentenary: A Fusion of Legal Culture 1803-2003, A Symposium Article. Louisiana Law Review.

Dichev, I. and V. Tang. 2009. Earnings Volatility and Earning Predictability. Journal of Accounting and Economics 47: 160-181.

Dietrich, J.R., Muller, K.A., and Riedl, E. J. 2007. Asymmetric Timeliness Tests of Accounting Conservatism. Review of Accounting Studies 12 (March): 95-124.

Dyck, A., and Zingales, L. 2004. Private Benefits of Control: An International Comparison. Journal of Finance. 59: 537-600.

Francis, J., LaFond, R., Olsson, P.M., and Schipper, K. 2004. The Costs of Equity and Earnings Attributes. The Accounting Review 79 (October): 967-1010.

Givoly, D., and Hayn, C. 2000. The Changing Time-Series Properties of Earnings, Cash Flows and Accruals: Has Financial Reporting Become More Conservative? Journal of Accounting and Economics 29 (June): 287-320.

Givoly, D., Hayn, C., and Natarajan, A. 2007. Measuring Reporting Conservatism. The Accounting Research 82 (January): 65-106.

Goel, A.M., and Thakor, A. 2003. Why do Firms Smooth Earnings? Journal of Business 76 (January): 151-192.

Henry, P.B., and Miller, C. 2009. Institutions vs. Policies: A Tale of Two Islands. American Economic Review 99 (2): 235-272.

Hope, O. 2003. Disclosure Practices, Enforcement of Accounting Standards and Analysts' Forecasts Accuracy: An International Study. Journal of Accounting Research 41 (2): 235-272.

Kedia, S., and Rajgopal, S. 2009. Neighborhood Matters: The Impact of Location of Broad-based Option Plans. Journal of Financial Economics 92 (April): 109-127

Kedia, S., and Shivaram, R. 2010. The Influence of Geography on Financial Misreporting. Working paper, Rutgers University.

La Porta, R., Lopez-de-Silanes, F., and Shleifer, A., 2008. The Economic Consequences of Legal Origins. Journal of Economic Literature 46 (2): 285–332.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R.W., 1998. Law and Finance. Journal of Political Economy 106 (6): 1113–1155.

Lang, M., Raedy, J. and Wilson, W. 2006. Earnings Management and Cross Listing: Are Reconciled Earnings Comparable to US Earnings? Journal of Accounting and Economics 42: 255-283.

Lang, M., Raedy, J. and Yetman, M. 2003. How Representative are Firms that are Cross Listed in the United States? An Analysis of Accounting Quality. Journal of Accounting Research 41: 363-386.

Leuz, C. 2003. IAS versus U.S. GAAP: Information Asymmetry-based Evidence from Germany's New Market. Journal of Accounting Research 41: 445-427.

Leuz, C., Nanda, D., and Wysocki, P.D., 2003. Earnings Management and Investor Protection: An International Comparison. Journal of Financial Economics 69: 505-527.

Merrell, J.C. 2011. Ownership and Legal Origin: Evidence from Louisiana. Working Paper, United States Air Force Academy.

Minnis, M.C. 2010. The Value of Financial Statement Verification in Debt Financing: Evidence from Private U.S. Firms. Working Paper, University of Chicago.

Moretau, O. 2008. The future of civil codes in France and Louisiana. Essays in Honor of Saul Litvinoff. Baton Rouge.

Noreen, E. 1989. Computer-intensive Methods for Testing Hypothesis: An Introduction. New York, NY: Wiley.

Palmer, V. 1999. Louisiana: Microcosm of a Mixed Jurisdiction. Carolina Academic Press. Durham, North Carolina.

Patatoukas, P.N. and Thomas, J.K. 2010. More Evidence of Bias in Basu (1997) Estimates of Conditional Conservatism. Working Paper, Yale University.

Pope, P.F., and Walker, M. 1999. International Differences in the Timeliness, Conservatism, and Classification of Earnings. Journal of Accounting Research 37 (Supplement): 53-87.

Quebec Minister of Finance. 2009. Technical Paper: Bill Respecting Business Corporations.

Seligman, J. 1983. The Historical Need for a Mandatory Disclosure System. The Journal of Corporation Law 9 (Fall): 1-61.

Subramanyam, K.R. 1996. The Pricing of Discretionary Accruals. Journal of Accounting and Economics 22 (August-December): 249-281.

Trueman, B., and Titman, S. 1988. An Explanation for Accounting Income Smoothing. Journal of Accounting Research 26 (Supplement): 127-139.

Tucker, J., and Zarowin, P. 2006. Does Income Smoothing Improve Earnings Informativeness? The Accounting Review 81 (January): 251-270.

CHAPTER 1 APPENDIX

Example of Firm's Voluntary Disclosure Prior to the Eligibility Rule

On June 20, 1998 Knox Nursery Inc. (OTCBB Ticker: KNUR) disclosed its income statement and balance sheet for the year ended December 31, 1997. Knox Nursery Inc. made this disclosure through S&P Daily News. As its names suggests, Knox Nursery Inc. sells plants.

Income Statement (Thous. $)	Yr. Ended 12/31/1997
Net Sales	5,647
Costs & Expenses	5,803
Operating Income	(156)
Interest Income	8
Gain on Sale of Equipment	5
Other Income	(15)
Total Income	(158)
Depreciation & Amortization	675
Interest Expense	462
Capitalized Interest	(32)
Income Tax	(129)
Net Income	(1,134)
EPS	(0.14)
Average Shares	8,001

CHAPTER 1 APPENDIX (continued)

Balance Sheet (Thous. $)	12/31/1997
Assets:	
Cash & Equivalents	44
Accounts Receivable, net	431
Inventories	893
Due from Officer	40
Other Current Assets	110
Total Current Assets	1,518
Investments	14
Net Property	6,782
Deferred Loan Costs	68
Total Assets	8,382
Liabilities*:	
Current Debt Maturing	864
Accounts Payable	981
Accruals	250
Total Current Liabilities	2,095
Long Term Debt	4,313
Long Term Deferred Income Tax	512
Due to Stockholders	85
Common Stock (p. $0.001)	8
Paid-in Capital	306
Retained Earnings	1,063
Total Liabilities	8,382

* The balance sheet format used by S&P Daily News labeled the Liabilities and Stockholders' Equity section as Liabilities.

CHAPTER 2 APPENDIX A

Provincial and Federal Corporate Acts and Regulators

Province	Corporate Law	Regulator
Alberta	*Alberta Business Corporations Act*	Alberta Securities Commission
British Columbia	*British Columbia Business Corporations Act*	British Columbia Securities Commission
Manitoba	*Manitoba Corporations Act*	Manitoba Securities Commission
New Brunswick	*New Brunswick Business Corporations Act*	New Brunswick Securities Commission
Newfoundland and Labrador	*Newfoundland Corporations Act*	Newfoundland and Labrador, Securities Division
Nova Scotia	*Nova Scotia Companies Act*	Nova Scotia Securities Commission
Ontario	*Ontario Business Corporations Act*	Ontario Securities Commission
Prince Edward Island	*Prince Edward Island Companies Act*	
Quebec	*Quebec Companies Act*	Autorité des Marchés Financiers
Saskatchewan	*Saskatchewan Companies Act*	Saskatchewan Securities Commission
Yukon Territory	*Yukon Business Corporations Act*	Registrar of Securities, Yukon Territory
Federal	*Canadian Business Corporate Act*	

CHAPTER 2 APPENDIX B: Evidence from Louisiana

In the US, common law prevails at the federal level and at the state level, except for one state which has a French legal origin, Louisiana. The U.S. Securities and Exchange Commission requires what firms must register their securities.[35] While securities regulation also arises in parallel at the state level, this is largely viewed as coordinated and subsumed by federal regulation. In contrast to Canada, no incorporation statute, which affects corporate governance and shareholder rights, exists at the federal level. U.S. companies must incorporate in a state and the majority chooses Delaware. We note that some companies elect to incorporate in Louisiana. While Louisiana corporate law has integrated much of the common law structure, differences still remain (Merrell 2011).

A common criticism of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) (and other across country studies) is that other factors might be causing the differences in the corporate governance outcomes that they document. Religion, culture, language, and other factors are offered as alternative explanations for differences in ownership concentration. Examining ownership concentration in Louisiana provides a novel setting where religion, culture and language vary little when compared to other U.S. states. By comparing the earnings attributes of firms in Louisiana, we are able to control for important confounding factors and further the literature on the effects of legal origin by potentially ruling out these alternative explanations.

[35] Under the U.S. Securities and Exchange Acts of 1933 and 1934.

Background on Louisiana Law

Comparisons between Louisiana's Code and other states' laws can be difficult to enumerate. There are two factors that make delineating the distinction difficult. First, The Code is not meant to be a straight jacket but more of a set of safeguards (Moreteau 2008). It might be more appropriate to compare The Code to The Constitution in this respect, particularly The Bill of Rights. For instance, The Code specifies, "Everyone has the right to respect for his private life" and "Everyone has the right to respect of the presumption of innocence." Second, Louisiana is a state in the US and, therefore, is subject to the US Constitution and other federal laws. Even though Louisiana law is melding closely with other state laws, there still remain non-trivial variations that could potentially effect investor protections.

Today, Louisiana is a decidedly mixed jurisdiction based on civil and common law in which "civil law and common law meet, merge and interact at the level of legal rules, institutions and reasoning methods" (Palmer 1999). Though mixed with common law, the civil code of Louisiana is still functioning. As Louisiana Judge Dennis wrote in 2003, "[O]ur Civil Code endures and generally governs the all important area of Louisiana's private law" (Dennis 2003).

An example of how investor protections, specifically minority shareholder rights, may differ under the Louisiana Civil Code can be found in the case Yuspeh v. Koch. In this case, Koch, a majority shareholder of Certified Security Systems, attempted to gain full control of the company via a freeze-out merger with a set cash price to buy out minority shareholders. Yuseph and minority shareholders sued for what they deemed to be an inadequate stock price. Further the minority shareholders had not been informed of Koch's increased ownership of the company which was through unissued stock purchases via a loan restructuring agreement and, therefore, sued for fraud and breach of fiduciary duty. Koch filed an exception of no right of action

arguing that Louisiana Revised Statute section 12:131 (from Louisiana's Civil Code) was the sole remedy for obtaining the fair value for their shares. This would have required Yuspeh to have used an injunction to slow the merger process and receive fair value for their shares. The Fifth Circuit Court of Appeals ruled that the Louisiana statue is not the exclusive remedy because it does not address fraud or breach of fiduciary responsibility. Although the court ruled that no fraud was committed, it ruled there was a breach of fiduciary responsibility by not informing shareholders of the additional stock purchase. This breach was a direct cause for the plaintiffs not being able to utilize the statue to obtain fair value for their positions. Although the ruling helped align Louisiana's protection of minority shareholder's rights in this case (specifically similar to Delaware's Weinberger v. UOP, Inc. decision), calls for a statute to better identify these protections remain. "A new Louisiana appraisal rights statute should include a requirement that a minority shareholder be given proper shareholder notice before and after the merger vote to provide him with greater knowledge of his rights and responsibilities" (Aiken 2004).

Data

To identify our sample, we first identified firms incorporated or located in Louisiana on the Compustat Xpressfeed North America database from 1970 to 2009. We retain all firms with necessary financial statement information to construct all seven attributes are available for each firm-year to mitigate concerns that differences in sample composition affect comparisons across attributes. To construct annual returns, we obtain monthly returns data from CRSP. We exclude firms in the financial and utilities industries. The number of firms meeting these requirements is 51.

We follow the same matching procedure as in the Quebec portion of our study, except that we match Louisiana firms with non-Louisiana firms (firms that are neither located or incorporated in Louisiana) on size and industry. We do not match on the level of incorporation because unlike the Quebec portion of our study, no federal incorporation statute exists in the US. Following this procedure, we obtain a sample of 51 Louisiana firms (22 firms incorporated in Louisiana and 29 firms located but not incorporated in Louisiana) with 475 firm-year observations. Untabulated results confirm an effective match on size.

Earnings Attributes

Table B1 compares all Louisiana firms, whether incorporated or located in Louisiana, to their non-Louisiana matched pairs. We find that Conservatism is higher in firms with a French legal origin than a common law legal origin, consistent with our Quebec findings, and inconsistent with the hypothesis from Ball, Kothari and Robin (2000). In general, however, we fail to document significant differences across the various earnings attributes. This may be due to low statistical from our small sample size. Alternatively, the presence of a strong federal regulator, the SEC, and federal securities regulation in the US may lead to comparable earnings quality across firms from common and civil law states.

Further, the inclusion of firms located, but not incorporated in Louisiana, may add noise to our tests if only incorporation law, and not other aspects of Louisiana law, affects earnings quality. In this case, comparing firms incorporated in Louisiana to their non-Louisiana matched pairs should provide the most powerful test for differences in earnings quality across civil and common law states. Table B2 presents the earnings attributes for firms incorporated in Louisiana and their non-Louisiana matched pairs. We find that Relevance is higher for the

Louisiana firms than for non-Louisiana firms. However, in general we fail to find significant difference across the various earnings attributes. As before, the lack of results may be attributable to the small sample size, or may be due to the strong federal regulatory environment in the US that results in similar earnings quality across common and civil law states.

Table B1: Comparison of Earnings Attributes Between Louisiana and Matched Non-Louisiana Firms

This table compares earnings attributes from Louisiana firms to their non-Louisiana matched pairs. The sample consists of all firms-years for the matched sample and consists of 51 unique Louisiana firms and their matched pairs. Louisiana firms are matched to non-Louisiana firms on industry and market value and all overlapping firm-years are retained resulting in 475 firm-years. The statistical tests of differences are based on bootstrap-based tests (see Section 6 for details).

Panel A: Accounting-Based Earnings Attributes

Earnings Attributes	(1) Louisiana	(2) Non-Louisiana	(1) - (2) Difference	p-value
Accrual Quality	0.070	0.063	0.007	0.15
Persistence	0.555	0.797	-0.242	0.18
Predictability	7.580	6.277	1.303	0.26
Smoothness	1.265	1.181	0.084	0.36

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Accrual Quality is the standard deviation of the residuals from the regression of accruals on future year, current year, and previous year's cash flows from operations. Persistence is the estimated slope coefficient from an AR1 model of annual earnings. Predictability is the standard deviation of the residual from the Persistence regression. Smoothness is the ratio of the standard deviation of earnings before extraordinary items (scaled by assets) to the standard deviation of cash flows from operations (scaled by assets).

Table B1: Comparison of Earnings Attributes Between Louisiana and Matched Non-Louisiana Firms (continued)

Panel B: Market-Based Earnings Attributes

Earnings Attributes	(1) Louisiana	(2) Non-Louisiana	(1) - (2) Difference	p-value	
Relevance	0.104	0.047	0.057	0.19	
Timeliness	0.087	0.093	-0.006	0.43	
Conservatism	0.695	0.282	0.413	0.04	**

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Relevance is the adjusted R^2 from a regression of annual returns on the level and change in annual earnings (before extraordinary items). Timeliness is the adjusted R^2 from a regression of annual earnings (before extraordinary items) on an indicator variable equaling one if the company's annual return is negative and zero otherwise, the company's annual return, and the interaction of the annual return and the indicator variable. Conservatism is the estimated coefficient on the interaction variable from the Timeliness regression.

Table B2: Comparison of Earnings Attributes Between Louisiana and Matched Non-Louisiana Firms – Firms Incorporated in Louisiana

This table compares earnings attributes from Louisiana firms that are incorporated in Louisiana to their non-Louisiana matched pairs. The sample consists of all firms-years for the matched sample and consists of 22 unique Louisiana firms and their matched pairs. Louisiana firms are matched to non-Louisiana firms on industry and market value and all overlapping firm-years are retained resulting in 209 firm-years. The statistical tests of differences are based on bootstrap-based tests (see Section 6 for details).

Panel A: Accounting-Based Earnings Attributes

Earnings Attributes	(1) Louisiana	(2) Non-Louisiana	(1) - (2) Difference	p-value
Accrual Quality	0.066	0.077	-0.011	0.13
Persistence	0.555	0.801	-0.246	0.19
Predictability	10.552	8.944	1.607	0.31
Smoothness	1.546	1.254	0.292	0.14

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Accrual Quality is the standard deviation of the residuals from the regression of accruals on future year, current year, and previous year's cash flows from operations. Persistence is the estimated slope coefficient from an AR1 model of annual earnings. Predictability is the standard deviation of the residual from the Persistence regression. Smoothness is the ratio of the standard deviation of earnings before extraordinary items (scaled by assets) to the standard deviation of cash flows from operations (scaled by assets).

Table B2: Comparison of Earnings Attributes Between Louisiana and Matched Non-Louisiana Firms – Firms Incorporated in Louisiana (continued)

Panel B: Market-Based Earnings Attributes

Earnings Attributes	(1) Louisiana	(2) Non-Louisiana	(1) - (2) Difference	p-value	
Relevance	0.051	0.027	0.024	0.01	***
Timeliness	0.073	0.050	0.023	0.32	
Conservatism	0.518	0.243	0.275	0.16	

***, **, * indicates statistically different at the 1%, 5%, and 10% level, respectively (two-tailed).

Relevance is the adjusted R^2 from a regression of annual returns on the level and change in annual earnings (before extraordinary items). Timeliness is the adjusted R^2 from a regression of annual earnings (before extraordinary items) on an indicator variable equaling one if the company's annual return is negative and zero otherwise, the company's annual return, and the interaction of the annual return and the indicator variable. Conservatism is the estimated coefficient on the interaction variable from the Timeliness regression.