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Private Regulation of Insider Trading in the Shadow of Lax Public Enforcement: Evidence from Canadian Firms

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PRIVATE REGULATION OF INSIDER TRADING IN THE SHADOW OF LAX PUBLIC ENFORCEMENT: EVIDENCE FROM CANADIAN FIRMS

Laura Nyantung Beny and Anita Anand*

ABSTRACT

Like firms in the United States, many Canadian firms voluntarily restrict trading by corporate insiders beyond the requirements of insider trading laws (i.e., super-compliance). Thus, we aim to understand the determinants of firms' private insider trading policies (ITPs), which are quasi-contractual devices. Based on the assumption that firms that face greater costs from insider trading (or greater benefits from restricting insider trading) ought to be more inclined than other firms to adopt more stringent ITPs, we develop several testable hypotheses. We test our hypotheses using data from a sample of firms included in the Toronto Stock Exchange/Standard and Poor's (TSX/S&P) Index. Our empirical results suggest that Canadian firms do not randomly restrict insider trading, but rather do so predictably and with a predictable level of intensity, suggesting that some firms wish to control insider trading to enhance corporate performance. Our most robust finding is that firms with a greater prevalence of controlling shareholders are more likely to have adopted a super-compliant ITP than firms with fewer such shareholders, implying that influential shareholders may oppose insider trading and challenging the claim that private restrictions of insider trading would not arise in the absence of insider trading laws.

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INTRODUCTION

Despite legal prohibitions on trading by corporate insiders who have material, non-public information, many United States and Canadian firms have implemented private insider trading policies (ITPs) that restrict trading by their executives and other employees. In many cases, these ITPs are more stringent than the host country's insider trading laws. Although insider trad-

ing laws are the subject of several recent comparative empirical studies,¹ very few studies examine firms' voluntary regulation of insider trading through ITPs. Bettis et al. find that voluntary ITPs are widespread in the United States and often more restrictive than U.S. insider trading law.² Similarly, as we demonstrate in this article, many publicly-traded Canadian firms have private ITPs that are frequently more restrictive than Canadian insider trading laws.

ITPs implicate an influential empirical claim in the law and economics literature on insider trading, namely that shareholders seldom, if ever, negotiated private contracts banning insider trading when it was legal.³ Some scholars argue that the historical absence of such contracts proves that shareholders do not object to insider trading and thus the prohibition of insider trading is unnecessary and even efficiency-reducing.⁴ One may thus wonder why insider trading laws exist at all, assuming that statutory laws reflect the bargain that private parties would reach in the absence of such laws. One

¹ See, e.g., Laura Nyantung Beny, *The Political Economy of Insider Trading Laws and Enforcement: Law v. Politics?* *International Evidence*, in INSIDER TRADING RESEARCH HANDBOOK (forthcoming 2013); Laura Nyantung Beny, *Do Investors in Controlled Firms Value Insider Trading Laws?* *International Evidence*, 4 J.L. ECON. & POL'Y 267 (2008); Laura Nyantung Beny, *Insider Trading Laws and Stock Markets around the World: An Empirical Contribution to the Theoretical Law and Economics Debate*, 32 J. CORP. L. 237 (2007); Laura Nyantung Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, 7 AM. L. & ECON. REV. 144 (2005); Utpal Bhattacharya & Hazem Daouk, *The World Price of Insider Trading*, 57 J. FIN. 75 (2002); Arturo Bris, *Do Insider Trading Laws Work?*, 11 EUR. FIN. MGMT. 267 (2005); Robert M. Bushman et al., *Insider Trading Restrictions and Analysts' Incentives to Follow Firms*, 60 J. FIN. 35 (2005); Art A. Durnev & Amrita S. Nain, *Does Insider Trading Regulation Deter Private Information Trading? International Evidence*, 15 PAC.-BASIN FIN. J. 409 (2007); Nuno Fernandes & Miguel A. Ferreira, *Insider Trading Laws and Stock Price Informativeness*, 22 REV. FIN. STUD. 1845 (2009); Adriana Korczak & M. Ameziane Lasfer, *Does Cross-Listing Mitigate Insider Trading?* (2008) (unpublished manuscript), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1102130; Ernst G. Maug et al., *Insider Trading Legislation and Acquisition Announcements: Do Laws Matter?*, (2008) (unpublished manuscript), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=868708;

² J.C. Bettis et al., *Corporate Policies Restricting Trading by Insiders*, 57 J. FIN. ECON. 191, 192, 218 (2000).

³ Dennis W. Carlton & Daniel R. Fischel, *The Regulation of Insider Trading*, 35 STAN. L. REV. 857, 858 (1983).

⁴ Some legal scholars argue that the fact that there were few private contracts prohibiting insider trading in the United States prior to the legal prohibition suggests that firms and shareholders had no desire to restrict insider trading. *Id.* at 894. From this, they conclude that insider trading is not inefficient. These scholars implicitly dismiss the possibility that shareholders lacked the capacity to negotiate such contracts because of information deficiencies, asymmetric bargaining power, and insider self-dealing. James D. Cox, *Insider Trading and Contracting: A Critical Response to the Chicago School*, 1986 DUKE L.J. 628, 653–55 (1986); Frank Easterbrook, *Insider Trading as an Agency Problem*, in PRINCIPALS AND AGENTS: THE STRUCTURE OF BUSINESS (John W. Pratt & Richard J. Zeckhauser, eds., 1991). Thus, they ignore the possibility that the absence of a ban made stock markets and firms less efficient than they otherwise might have been. In addition, contractual restrictions would probably be unenforceable even today absent regulatory intervention. Computerized surveillance is the most efficient means to detect insider trading. Public or quasi-public regulators have access to such technology, but corporations generally are not in the business of trade surveillance, let alone self-reporting of insider trading violations. Before 1934, difficulties in spotting insider trading surely were even greater and efforts to disguise it easier than today.

may also wonder why firms voluntarily adopt ITPs when insider trading is already illegal, especially if hypothetical private bargaining would permit such trading.

Focusing on the latter question, we can identify at least four reasons why firms establish ITPs. The first and most obvious is that firms may adopt ITPs to demonstrate legal compliance and thus avoid corporate liability, since having an ITP in place may shield a corporation from insider trading liability.⁵ This explanation resolves the apparent inconsistency between the claim that firms did not desire to restrict insider trading when it was legal and the fact that many firms privately restrict insider trading now that it is illegal. Second, firms may adopt ITPs to reduce trading costs and thus increase the liquidity of their shares, since evidence suggests that insider trading increases trading costs.⁶ Third, firms may adopt ITPs to reduce agency costs, i.e., the costs that arise from the divergence of interests between managers and shareholders and the consequent need for shareholders to monitor managers.⁷ Several proponents of insider trading restrictions argue that insider trading distorts managers' and dominant shareholders' incentives to the detriment of corporate value and small outside shareholders.⁸

The first explanation, the compliance/liability avoidance rationale, does not necessarily imply that firms perceive insider trading per se to be economically harmful. In contrast, the second and third explanations suggest that firms privately restrict insider trading to enhance economic efficiency (corporate performance) and thus challenge the twin claims that shareholders do not dislike insider trading and would not restrict it but for the law. These explanations are not mutually exclusive, and a firm may adopt an ITP for one or more of the foregoing reasons.

A fourth explanation is that ITPs are mere "window dressing", assuming they are costless for firms to enact and publicize. Under the window dressing rationale, firms adopt intentionally toothless ITPs to curry favor with outside investors, who may view insider trading as unfair or inefficient and mistakenly believe that an ITP offers real additional protection. Bettis et al. suggest, however, that ITPs are effective among U.S. firms that have

⁵ Alan D. Jagolinzer & Darren T. Roulstone, *Litigation Risk and the Timing of Insiders' Trades around Earnings Announcements* (2007) (unpublished working paper); Bettis et al., *supra* note 2, at 192.

⁶ Bhattacharya & Daouk, *supra* note 1, at 78; Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, *supra* note 1, at 144, 146; Thomas E. Copeland & Dan Galai, *Information Effects on the Bid-Ask Spread*, 38 J. FIN. 1457, 1457-58, 1460 (1983); Lawrence R. Glosten & Lawrence E. Harris, *Estimating the Components of the Bid/Ask Spread*, 21 J. FIN. ECON. 123, 140-41 (1988).

⁷ Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 323 (1976).

⁸ See, e.g., Reinier H. Kraakman, *The Legal Theory of Insider Trading Regulation in the United States*, in EUROPEAN INSIDER DEALING: LAW AND PRACTICE (Klaus J. Hopt & Eddy Wymeersch eds., 1991); Ernst G. Maug, *Insider Trading Legislation and Corporate Governance*, 46 EUR. ECON. REV. 1569, 1570, 1588 (2002).

adopted them.⁹ They find that even in the U.S., where insider trading laws are vigorously enforced, ITPs suppress insider trading.¹⁰ They find that bid-ask spreads are lower, i.e., liquidity is higher, during black-out periods, i.e., periods in which insiders are forbidden to trade pursuant to an ITP. Their results suggest that U.S. firms adopt ITPs at least partly to enhance corporate performance.¹¹

Bettis et al. take ITPs as given, however, and do not investigate whether some firms are more inclined to adopt ITPs or to adopt more stringent ITPs than other firms. Roulstone, however, does investigate firm-level determinants of private restrictions on insider trading among U.S. firms and finds that larger firms and firms with greater analyst following (publicity), greater institutional ownership, and past experience of insider trading litigation are more likely to adopt private insider trading restrictions.¹² Like Bettis et al., though, Roulstone does not exploit variation in ITP stringency across firms.¹³

In this study, we take the next step and investigate firm-level determinants of ITP stringency. This investigation will, we hope, help shed light on firms' motives for adopting ITPs and thus inform the insider trading debate. We develop and test five hypotheses based on the assumption that firms that face greater costs from insider trading (or greater benefits from restricting insider trading) will be more inclined than other firms to adopt ITPs that are more restrictive than existing insider trading law, which we refer to as super-compliant ITPs. Therefore, we hypothesize that ITP stringency is positively associated with: (1) firm size, (2) a firm's market-to-book ratio, (3) concentrated share ownership/control, (4) firm-specific stock return volatility, and (5) cross-listing on a U.S. stock exchange. We explain these hypotheses in greater detail below.

We investigate our hypotheses using a sample of 181 firms that were included in the Toronto Stock Exchange/Standard & Poor's (TSX/S&P) Index as of December 31, 2005. The TSX is Canada's largest stock exchange, accounting for over 80% of Canada's equity trading volume between 1987 and 2000,¹⁴ so it is fairly representative of Canadian public corporations. For each firm in our sample, we examine whether the firm has an ITP and the substance of the firm's ITP, if one exists, including whether it is more stringent than Canadian insider trading law. We use firm-specific characteristics to test our predictions about the relative strictness of a given firm's ITP. We

⁹ Bettis et al., *supra* note 2, at 209.

¹⁰ Indeed, they suggest that ITPs and public enforcement may be more effective at suppressing insider trading than public enforcement alone. *Id.* at 193.

¹¹ *Id.*

¹² Darren T. Roulstone, *The Relation between Insider-Trading Restrictions and Executive Compensation*, 41 J. ACCT. RES. 525, 536, 544 (2003).

¹³ See *id.*; see also Bettis et al., *supra* note 2.

¹⁴ William J. McNally & Brian F. Smith, *Do Insiders Play by the Rules?*, 29 CAN. PUB. POL'Y-ANALYSE DE POLITIQUE 125, 128 (2003).

are able to test our hypotheses because of interfirm variation in ITP stringency relative to Canadian insider trading law.

The Canadian stock market provides a good setting for testing our hypotheses. As we elaborate in greater detail below, insider trading enforcement is relatively lax in Canada.¹⁵ If firms view insider trading as economically harmful, this ought to give Canadian firms an incentive to adopt ITPs, and quite possibly ITPs that are more stringent than Canadian insider trading law, i.e., super-compliant ITPs. Conversely, if firms view insider trading as economically beneficial, lax enforcement ought to create an incentive for Canadian firms to forego ITPs or limit them merely to what the law already requires.

In addition, Canadian firms tend to have more concentrated share ownership, and thus are more likely to have controlling shareholders, than U.S. firms.¹⁶ Controlling shareholders may be able to engage in insider trading more readily than other shareholders because of their ready access to private information.¹⁷ Lax enforcement and a greater prevalence of controlling shareholders suggest that insider trading may be relatively more prevalent in Canada than in the U.S. or some other countries.

Voluntary ITPs are common among firms on the TSX/S&P Index. Ninety-two percent of the firms in our sample have an ITP and 41% of these have an ITP that is more stringent than Canadian law. Our empirical analysis supports several of our hypotheses. Our results suggest that neither window dressing, legal compliance/liability avoidance, nor U.S. regulatory imperialism fully explains Canadian firms' adoption of ITPs. TSX/S&P firms display a range of private approaches to insider trading that roughly correlate, we argue, with the private costs and benefits of restricting insider trading. Thus, our findings suggest that at least some firms wish to control insider trading to enhance corporate performance. Importantly, our results also suggest that influential shareholders oppose insider trading. Our single most robust result is that firms with a greater prevalence of controlling shareholders are more likely to have adopted a super-compliant ITP.

The remainder of the article proceeds as follows. Part I discusses the motivation for this study and briefly reviews relevant literature. Part II describes Canadian law and recommended best practices on insider trading, highlighting the more important differences between the Canadian and U.S. insider trading regimes. Part III presents our hypotheses regarding the kinds of firms that are likely to adopt an ITP that is stricter than Canadian insider

¹⁵ *Id.* Although enforcement appears to have improved in the past five years or so, it was certainly less stringent during the time period of this study. See generally CANADIAN SEC. ADMIN., 2012 ENFORCEMENT REPORT (2013).

¹⁶ R.J. Daniels, & E.M. Iacobucci, *Some of the Causes and Consequences of Corporate Ownership in Canada*, in CONCENTRATED CORPORATE OWNERSHIP (R. Morck, ed., 2000); CORPORATE DECISION-MAKING IN CANADA (R.J. Daniels & R. Morck, eds., 1995).

¹⁷ Maug, *supra* note 8, at 1570; cf. Amar Bhide, *The Hidden Costs of Stock Market Liquidity*, 34 J. FIN. ECON. 31, 33, 37 (1993); Harold Demsetz, *Corporate Control, Insider Trading, and Rates of Return*, 76 AM. ECON. REV. 313, 313-14 (1986).

trading law. Part IV describes our data and empirical methodology and presents the results. We then conclude.

I. MOTIVATION AND LITERATURE REVIEW

Even though insider trading is generally illegal,¹⁸ the debate among legal and financial scholars about whether insider trading ought to be regulated has persisted since the 1960s. What is at stake in the debate is the appropriate allocation of rights to benefit from corporate information.¹⁹ The question that legal scholars pose is whether such rights ought to be available equally to outside investors and corporate insiders (and their tippees), or whether the latter ought to be able to benefit, at least for a period of time, from their privileged access to such information. The fact that insider trading is illegal, at least on the books, in virtually every country with a stock market suggests that lawmakers around the world, unlike some scholars, believe the better policy is to make rights to trade on corporate information more equally available.²⁰

The debate initially centered on whether insider trading is unfair to public investors not privy to private corporate information.²¹ In the late 1960s, the terms of the debate shifted from the fairness of insider trading to its economic efficiency when Professor Manne published his influential book, *Insider Trading and the Stock Market*, in which he argued that insider trading is efficient and hence desirable.²² He justified his conclusion by arguing that the ability to engage in insider trading motivates insiders to be more entrepreneurial and leads to more accurate stock prices, i.e., stock prices that reflect all current information about a stock's "true" value and not merely public information.²³

¹⁸ See Bhattacharya & Daouk, *supra* note 1, at 88–89.

¹⁹ JONATHAN R. MACEY, *INSIDER TRADING: ECONOMICS, POLITICS, AND POLICY* (1991). Macey likens this right to a property right in corporate information. *Id.* However, it is not exactly a property right because insiders cannot summon the law to protect corporate information from others, even when trading on inside information is legal. Likewise, outsiders cannot use the law to monopolize such information. Arrow's characterization of business information as a public good is a more apt description, though like many other public goods some parties are in a far better position to exploit it. Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609 (Nat'l Bureau of Econ. Research, ed. 1962). See Beny, *The Political Economy of Insider Trading Laws and Enforcement: Law v. Politics? International Evidence*, *supra* note 1, for a political economy analysis of insider trading legislation and enforcement.

²⁰ Lawmakers have rejected full equality of access, however, because of the infeasibility and likely inefficiency of full equality. See, e.g., *Chiarella v. United States*, 445 U.S. 222, 233 (1980).

²¹ Roy A. Schotland, *Unsafe at Any Price: A Reply to Manne, Insider Trading and the Stock Market*, 53 VA. L. REV. 1425, 1433–35 (1967); see also Victor Brudney, *Insiders, Outsiders, and Informational Advantages under the Federal Securities Laws*, 93 HARV. L. REV. 322, 334 (1979).

²² HENRY G. MANNE, *INSIDER TRADING AND THE STOCK MARKET* (1966).

²³ *Id.*

In the course of the insider trading debate, a third, intermediate position emerged. This intermediate position maintains that insider trading is efficient for some firms and inefficient for others.²⁴ Proponents of the intermediate position believe that corporate efficiency would be maximized if regulators allowed firms, shareholders and corporate insiders to contract privately over whether to allow or to prohibit insider trading within a firm. The market, they maintain, will ensure that the appropriate bargain will be struck for each firm, prohibiting insider trading by contract in cases where it is inefficient and allowing insider trading where it is efficient.²⁵ This theoretical debate resists resolution because, as noted above, insider trading is illegal in virtually every stock market.

Thus, in a departure from the pure Coasian theme, ITPs are adopted in the shadow of insider trading laws. This means that ITPs will tend to be skewed toward greater strictness than existing law because if they are less strict, they add nothing to the law's rigor and may even create legal liability for under-compliant firms. Indeed, U.S. and Canadian ITPs are left-censored, i.e., they are either equally or more restrictive, and are never more permissive, than what the respective insider trading laws require. Still, ITPs are somewhat like contractual choices to prohibit insider trading, except that companies may adopt them unilaterally, i.e., without outside consent, and they may not always spring from direct negotiations between insiders and public shareholders. We aim to understand the firm-level determinants of these quasi-contractual choices in relation to Canadian insider trading law and thereby inform the perennial theoretical debate.

This article contributes to the recent wave of comparative empirical research on insider trading regulation, with a focus on the Canadian stock market, which is heavily influenced by economic and regulatory developments in the U.S. This recent scholarship attempts to understand the efficiency consequences of insider trading laws by exploiting statistical variation in such laws across countries.²⁶ Thus far, the evidence seems to support the regulatory stance rather than the deregulatory position. Beny, for example, finds that more stringent insider trading laws are associated with more dispersed equity ownership, more accurate stock prices, and greater stock market liquidity.²⁷ Bhattacharya and Daouk, using data from all coun-

²⁴ Richard Epstein, *In Defense of the Corporation*, 2004 N.Z. L. REV. 707, 713–14 (2004); David D. Haddock & Jonathan R. Macey, *Coasian Model of Insider Trading*, 80 Nw. U. L. REV. 1449, 1467–68 (1987).

²⁵ See Haddock & Macey, *supra* note 24, at 1467–68; Carlton & Fischel, *supra* note 3, at 863.

²⁶ Although it is not possible to compare markets without regulation to markets with regulation, since insider trading is illegal in almost every stock market, it is possible to compare markets with varying degrees of regulation and enforcement. This is what the recent literature does.

²⁷ Beny, *Insider Trading Laws and Stock Markets around the World: An Empirical Contribution to the Theoretical Law and Economics Debate*, *supra* note 1, at 240; Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, *supra* note 1, at 146.

tries with stock markets, find that stock market liquidity systematically increased after insider trading regulation was enacted and that the cost of equity fell significantly after the first incidence of enforcement.²⁸ Bushman et al. find that investment analyst attention, which is widely thought to be beneficial to stock market efficiency, increases after a country enforces its insider trading laws.²⁹ Beny also finds that insider trading laws are associated with greater corporate valuation among firms with a controlling shareholder in common law countries.³⁰

Our research also contributes to the recent empirical literature on voluntary corporate governance. The bulk of this literature investigates whether corporate performance is affected by voluntary governance practices.³¹ There is relatively less focus on which factors predict a firm's adoption of governance standards. Durnev and Kim, however, examine this issue.³² They find that investment opportunities, external financing, and ownership structure significantly influence voluntary governance practices and that the strength of their influence depends in part on a country's legal environment.³³ In addition, Anand et al. find that many Canadian firms voluntarily adopt governance practices beyond those required by Canadian corporate law and the number of Canadian firms voluntarily adopting such practices is growing.³⁴ They also find that it is not only the home country's governance regime that influences the stringency of the governance practices adopted but also the corporate governance standards of the United States, where many Canadian firms seek external finance.³⁵ Since ITPs are a kind of voluntary corporate governance standard, this article contributes to this literature as well. By exploring the characteristics that lead Canadian firms to adopt super-compliant ITPs, we illuminate the determinants of an important subset of corporate governance rules.

²⁸ Bhattacharya & Daouk, *supra* note 1, at 91–93, 104.

²⁹ Bushman et al., *supra* note 1, at 60.

³⁰ Beny, *Do Investors in Controlled Firms Value Insider Trading Laws? International Evidence*, *supra* note 1, at 267, 291.

³¹ See Jerilyn W. Coles et al., *An Examination of the Relationship of Governance Mechanisms to Performance*, 27 J. MGMT. 23 (2001); Craig Doidge et al., *Why Are Foreign Firms Listed in the U.S. Worth More?*, 71 J. FIN. ECON. 205 (2004); Bernard S. Black et al., *Does Corporate Governance Predict Firms' Market Values? Evidence from Korea*, 22 J.L., ECON. & ORG. 366 (2006).

³² Art Durnev & E. Han Kim, *To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation*, 60 J. FIN. 1461 (2005).

³³ *Id.* at 1476–78.

³⁴ Anita I. Anand et al., *Domestic and International Influences on Firm-Level Governance: Evidence from Canada*, 14 AM. L & ECON. REV. 68, 82, 103 (2012).

³⁵ *Id.* at 106.

II. A COMPARISON BETWEEN THE CANADIAN AND U.S. INSIDER TRADING REGIMES

Canada does not have a national securities regulator.³⁶ Securities laws, including insider trading laws, are enacted and enforced at the provincial and territorial levels, unlike in the U.S. where securities laws are federally enacted and enforced. In this section, we focus on the insider trading law of the province of Ontario, which is home to Canada's deepest capital markets and the Toronto Stock Exchange, and thus governs all of the firms in our sample. However, insider trading law is generally consistent across Canadian jurisdictions.

In Ontario, the basic rules on insider trading are set forth in a statute that regulates both legal and illegal insider trading.³⁷ In terms of illegal insider trading, "insiders" (a defined class) may purchase or sell securities, provided that their trades are not based on undisclosed (non-public) material information and are reported within ten days from the date of the trade. The relevant legal provision states, "No person or company in a *special relationship* with a reporting issuer shall purchase or sell securities of the reporting issuer with the knowledge of a *material fact* or *material change* with respect to the reporting issuer *that has not been generally disclosed*."³⁸ The precise legal elements of illegal insider trading in Ontario are thus: a) a *special relationship* between the insider and the issuing corporation; b) *material fact or material change*; and c) *not generally disclosed*. Tipping, defined as informing any other person of a material fact or material change that is not generally disclosed other than in the necessary course of business is also prohibited under the statute.³⁹ While Canadian firms are not legally required to adopt an ITP, it is a recommended best practice for them to do so. National Policy 51-201, "Disclosure Standards," contains best practices relating to disclosure, and recommends that firms:

- (1) appoint a senior officer to approve and monitor trading by all insiders,
- (2) prohibit insiders and employees from trading while in possession of material non-public information,
- (3) specify blackout periods (explicit periods during which all trading is prohibited) that apply to insiders, officers and employees,⁴⁰ and
- (4) establish procedures by which insiders, officers and

³⁶ *Reference Re Securities Act*, 2011 SCC 66, [2011] 3 S.C.R. 837. See also WISE PERSON'S COMM. TO REV. THE STRUCTURE OF SEC. REGULATION IN CAN., IT'S TIME 15 (2003), available at <http://www.wise-averties.ca/reports/WPC%20Final.pdf>.

³⁷ Securities Act (Ontario), R.S.O. 1990, c. S.5, s. 76, 107 (Can.).

³⁸ R.S.O. 1990, c. S.5, s. 76(1) (emphasis added).

³⁹ R.S.O. 1990, c. S.5, s. 76(2).

⁴⁰ A blackout period, for example, may extend from one month before the firm's earnings release—the period in which the firm is preparing its financial statements, management discussion and analysis (MD&A) and other material, non-public information—to two days after the firm publicly issues its earnings release—to give the market time to disseminate and incorporate the new information into the firm's share price. See, e.g., Jagolinzer & Roulstone, *supra* note 5; Roulstone, *supra* note 12, at 544; Bettis et al., *supra* note 2, at 197–98, 218. ITPs may also contain a *brownout period*, a period during which some but not all insiders are restricted

employees must apply for approval to trade during blackout periods.⁴¹ While not a recommended best practice per se, firms may also adopt internal (i.e., private) enforcement or disciplinary mechanisms in their ITPs consisting of such measures as unpaid leave, suspension or even dismissal for those who violate the rules.

In addition to the foregoing recommended best practices, National Policy 58-201 sets forth various corporate governance guidelines (as opposed to mandatory rules), including a recommendation that boards adopt a “code of business conduct and ethics.”⁴² Some Canadian firms choose to implement an ITP as part of this code.⁴³ Although Canadian firms are not required to adopt such a code, once a firm adopts one, it must file the code and disclosure regarding the code’s contents is mandatory. However, the firm is not required to include the details of its ITP in such disclosure. Most importantly, the choice of whether to adopt an ITP is ultimately voluntary in Canada. None of the post-Sarbanes Oxley corporate governance legislation implemented in Canada requires firms to adopt an ITP.⁴⁴ In addition, relative to other optional corporate governance standards, Canadian securities regulators have not pressed firms to adopt these policies.⁴⁵

U.S. insider trading laws differ from Canadian insider trading laws in several respects. First, as noted above, Canadian provincial securities statutes explicitly forbid insiders from purchasing or selling securities based on material information that has not been publicly disclosed. By contrast, in the U.S., Rule 10b-5 of the Securities Exchange Act of 1934 is a general anti-fraud provision that prohibits the use of “any device, scheme, or artifice” or any “act, practice or course of business” to defraud or deceive “in connection with the purchase or sale of any security.”⁴⁶ On its face, Rule 10b-5

from trading. For example, an ITP may bar the persons who are part of a “deal team” working on a significant transaction involving the firm from trading until the deal is publicly disclosed.

⁴¹ NATIONAL POLICY 51-201 – DISCLOSURE STANDARDS, s. 6.10, available at <http://www.osc.gov.on.ca/en/20970.htm>.

⁴² NATIONAL POLICY 58-201 – CORPORATE GOVERNANCE GUIDELINES, available at <http://www.osc.gov.on.ca/en/14206.htm>. National Policy statements provide guidance on “best practices” and thus are not meant to be binding on firms. The extent of insider trading regulation that operates through National Policy statements demonstrates the voluntary nature of the Canadian regulatory regime; this suggests that our results may understate the prevalence of voluntary ITPs among Canadian firms to the extent that some firms have such policies but choose not to report them.

⁴³ NATIONAL INSTRUMENT 58-101 – DISCLOSURE OF CORPORATE GOVERNANCE PRACTICES, available at <http://www.osc.gov.on.ca/en/14198.htm>.

⁴⁴ In 2004, subsequent to the Sarbanes-Oxley reforms in the U.S., Canadian securities regulators adopted mandatory corporate governance rules requiring certification of financial statements and audit committee composition. See MULTILATERAL INSTRUMENT 52-109 – CERTIFICATION OF DISCLOSURE IN ISSUERS’ ANNUAL AND INTERIM FILINGS, available at <http://www.osc.gov.on.ca/en/13542.htm>; see also MULTILATERAL INSTRUMENT 52-110 – AUDIT COMMITTEES, available at <http://www.osc.gov.on.ca/en/13550.htm>.

⁴⁵ In a few cases, however, the Ontario Securities Commission (OSC) required the firm to adopt an ITP in a legal settlement of insider trading claims against the firm. See, e.g., DX-Storm.Com Inc. (Re). 2007 LNONOSC 364 at para. 10.

⁴⁶ 17 C.F.R. § 240.10b-5 (1951).

does not prohibit insider trading. Since the 1960s, however, U.S. courts have consistently interpreted the rule as prohibiting corporate insiders from trading on the basis of material, nonpublic information unless they publicly disclose such information prior to trading.⁴⁷ Effectively, then, the basic Canadian and U.S. insider trading prohibitions are the same, even though the U.S. prohibition does not explicitly address insider trading as such. In both countries, insiders may trade their firms' securities if such trading is not based on material undisclosed information. In addition, in both countries, insiders must disclose changes in the ownership of their positions, including all purchases and dispositions of the firm's securities.

Second, short-swing profits are permissible in Canada but prohibited in the U.S. In the U.S., Section 16(b) of the Securities Exchange Act of 1934 requires an insider who buys (sells) the securities of the issuer and sells (buys) them within six months to give the resulting profits to the company.⁴⁸ Section 16(b), unlike Rule 10b-5, covers only directors, officers, or stockholders owning more than 10% of the firm's shares. In addition, as a prophylactic rule, Section 16(b) applies regardless of whether an insider trades on immaterial or public information, arguably over-detering insider trading.⁴⁹ In contrast, Canada does not prohibit short-swing profits. Moreover, foreign firms (including Canadian firms) that are cross-listed in the U.S. are exempt from Section 16(b).⁵⁰

Third, U.S. and Canadian insider trading laws differ in how they define an "insider." In Canada, the insider trading prohibition applies to individuals who are in a "special relationship" with the reporting issuer.⁵¹ The statutory definition of special relationship in Canadian law is broad and includes a number of persons who would not fall under the U.S.'s formal definition of

⁴⁷ This is the so-called "disclose or abstain" rule. A seminal early case was *SEC v. Texas Gulf Sulphur Co.*, 401 F.2d 833 (2d Cir. 1968), cert. denied, 394 U.S. 976 (1969). U.S. federal case law treats insider trading as a violation of common law fiduciary duties. *See, e.g.*, *Chiarella v. United States*, 445 U.S. 222, 223, 228 (1980); *Dirks v. SEC*, 463 U.S. 646, 647, 654-55 (1983).

⁴⁸ 17 C.F.R. § 240.16b (2011). It is straightforward to see how an insider might profit from buying and then selling her company's shares within a six-month period. A profit will result if she buys the shares at a lower price than the price at which she subsequently sells them. It is less obvious how she might profit from selling and then buying her company's shares within a six month period. A "profit" will result, however, in the form of "loss avoidance," if she sells the shares at a higher price than the price at which she subsequently buys them back. For example, if the insider sells the shares on January 1 for \$20 and then buys them back on March 1 for \$5, she will have avoided a loss of \$15. Another way in which she might profit from a sell-buy transaction is by selling the shares short (i.e., borrowing the shares and then selling them) at the current market price which is higher than the price at which she subsequently will buy them back in order to return the shares to the lender and close the contract. Insiders are prohibited from short-selling in the U.S. under Section 16(b), but Canada does not have a comparable rule. *Id.*

⁴⁹ *Id.* For a critique of Section 16b from a Canadian perspective, see Bernard J. Davies, *Canadian and American Attitudes on Insider Trading*, 25 U. TORONTO L.J. 215 (1975).

⁵⁰ 17 C.F.R. § 240.16b (2011).

⁵¹ R.S.O. 1990, c. S.5, s. 76(5) (Can.).

“insider.”⁵² In the U.S., Section 16(a)(1) of the Securities and Exchange Act of 1934 indirectly defines insiders as officers, directors and 10% shareholders.⁵³ Although this definition is not as broad as its Canadian statutory counterpart, U.S. case law articulates a broad range of additional individuals who are subject to the basic insider trading prohibition and who would fall within the Canadian definition of “special relationship.” For example, tippees are prohibited from trading in the U.S., even though they are neither insiders nor in any special relationship with the firm.⁵⁴ In addition, U.S. case law extends the insider trading prohibition to so-called “constructive” or “secondary” insiders, a class that includes the firm’s lawyers, investment bankers, accountants, and others in possession of confidential corporate information.⁵⁵ Finally, the misappropriation theory, an American judicial doctrine, extends the insider trading prohibition to persons who do not have a fiduciary duty to the firm or its shareholders, but who have a fiduciary duty to the source of the information.⁵⁶ Thus, there is little effective difference between Canada and the U.S. concerning the scope of the basic insider trading prohibition.

Finally, unlike in Canada, it is not a recommended best practice for U.S. firms to adopt ITPs. Nevertheless, U.S. law provides a strong incentive for firms to adopt private codes governing insider trading because under Section 20A of the Securities and Exchange Act of 1934 (“The Insider Trading and Securities Fraud Enforcement Act of 1988”) a firm may be held derivatively liable for its employees’ illegal insider trading unless the firm can prove that it acted in good faith and did not induce such trading.⁵⁷ One way a firm can provide evidence of good faith and non-inducement is to show that it had an ITP in place prior to the alleged illegal trading and that the employees traded in spite of the internal prohibition (e.g., a blackout period).⁵⁸

The most important differences between the U.S. and Canadian insider trading regimes concern enforcement. The U.S. has both a longer history and greater intensity of insider trading enforcement than Canada. The Ontario Securities Commission (OSC) conducted its first insider trading prosecution in 1973, while the first U.S. insider trading case occurred more than a dec-

⁵² Insiders include not only people in a special relationship with the firm but also parties making a takeover bid or engaged in some other proposed transaction with the issuer. Directors, officers and employees are considered insiders, as are individuals who learned of a material fact or change from any of these individuals. Insiders include any person who learns of a material fact or change from anyone described in the statutory definition and who ought to have known that the person from whom she received such information was in a special relationship with the issuer. *Id.*

⁵³ 17 C.F.R. § 240.16a (2011). Moreover, Rule 16a-1(f) defines “officer.” *Id.*

⁵⁴ *See, e.g., Dirks v. SEC*, 463 U.S. 646, 647, 659, 660 (1983).

⁵⁵ *See, e.g., Dirks*, 463 U.S. at 677, n.14; *SEC v. Lund*, 570 F. Supp. 1397, 1493 (C.D. Cal. 1983).

⁵⁶ *See, e.g., United States v. O’Hagan*, 521 U.S. 642, 659 (1997).

⁵⁷ The Insider Trading and Securities Fraud Enforcement Act of 1988, 15 U.S.C. §§ 78u-1, 80b-4a, 78t-1 (2006) (as amended).

⁵⁸ *Id.*

ade earlier. In sharp contrast with the United States, there have been few insider trading convictions and no successful tipping convictions in Canada.⁵⁹ According to McNally and Smith, “[o]n average, there has been less than one insider trading conviction a year since 1980 [and] only two cases where insiders were charged with failure to report their trading activity.”⁶⁰ By comparison, over the same period the U.S. Securities and Exchange Commission (SEC) settled or prosecuted over 550 insider trading cases.⁶¹ Two reasons for the difficulty of obtaining insider trading convictions in Canada (especially in quasi-criminal cases brought by the regulator in provincial court) are the relatively high burden of proving scienter⁶² and apparent ambiguities in interpreting the applicable materiality standard.⁶³ Another reason is Canada’s relatively thin budget for insider trading enforcement.⁶⁴

The U.S. and Canadian comparative insider trading enforcement patterns are consistent with their general comparative securities enforcement profiles.⁶⁵ Jackson compares U.S. and Canadian enforcement budgets and staffing levels and “enforcement intensity,” which he defines as “the frequency and severity with which a country’s legal regime imposes sanctions on capital market participants.” He finds that “Canadian enforcement activity is less intensive [in many areas] than U.S. enforcement activity.”⁶⁶ Between 2002 and 2004, the differences between the two countries were “so huge that they swamp[ed] any possible scaling adjustment [for market size].”⁶⁷ While public enforcement activity in Canada has increased in recent years, Jackson reports that it is still lower than U.S. activity even taking into account scaling issues.⁶⁸ Jackson’s findings suggest that Canadian firms cross-listed in the U.S. face a greater threat of enforcement than non-cross-listed Canadian firms.

⁵⁹ *R. v. Rankin*, [2006] O.J. No. 4579 (Can.) (overturning the first successful conviction of tipping under the Ontario Securities Act [2005] O.J. No. 3202 (Can.)). See also McNally & Smith, *supra* note 14, at 129.

⁶⁰ McNally & Smith, *supra* note 14, at 136.

⁶¹ *Id.* at 135. For more recent U.S. enforcement data, see Laura Nyantung Beny & H. Nejat Seyhun, *Has Insider Trading Become More Rampant in the United States? Evidence from Takeovers*, in *Insider Trading Research Handbook* (Stephen Bainbridge, ed., 2013).

⁶² Davies, *supra* note 49, at 231–32; CANADIAN INSIDER TRADING TASK FORCE, *ILLEGAL INSIDER TRADING IN CANADA: RECOMMENDATIONS ON PREVENTION, DETECTION AND DETERRENCE* 39 (2003), available at http://www.investorvoice.ca/Research/CSA_InsiderTradingTaskForce_12Nov03.pdf.

⁶³ The key recent Canadian case highlighting these substantive issues is *R. v. Felderhof* [2007] ONCJ345 (Can.).

⁶⁴ WISE PERSON’S COMM. TO REV. THE STRUCTURE OF SEC. REGULATION IN CAN., *supra* note 36, at 27.

⁶⁵ *Cf. id.* at 25, 27; HOWELL E. JACKSON, *REGULATORY INTENSITY IN THE REGULATION OF CAPITAL MARKETS: A PRELIMINARY COMPARISON OF CANADIAN AND U.S. APPROACHES* 98 (2006), available at <http://thievesofbaystreet.ca/wp-content/uploads/2012/02/Howell-Jackson-Study-on-Resources.pdf>.

⁶⁶ JACKSON, *supra* note 65, at 81, 82, 99.

⁶⁷ *Id.* at 83.

⁶⁸ *Id.*

Because of lax public enforcement and the rarity of private enforcement,⁶⁹ insider trading has been viewed as being relatively prevalent in Canada.⁷⁰ Indeed, McNally and Smith present “large-scale” evidence of insider trading and reporting violations in Canada.⁷¹ Similarly, Bris finds that insider trading profits prior to the public announcement of mergers are the highest in Canada among the 52 countries in his study.⁷² Thus, if Canadian firms perceive insider trading as economically harmful, they may be inclined to enact private restrictions via ITPs, particularly super-compliant ITPs, to fill the enforcement gap. We empirically investigate this possibility in Part IV, after presenting our hypotheses and methodology in Part III.

III. HYPOTHESES AND EMPIRICAL METHODOLOGY

Some scholars argue that shareholders do not disapprove of insider trading, claiming that U.S. firms did not voluntarily prohibit insider trading prior to its legal prohibition.⁷³ While most firms may not have voluntarily prohibited insider trading prior to legal intervention, this history-based argument assumes perfectly efficient markets. However, markets are not perfectly efficient, thus rendering extralegal Coasian bargains over insider trading policy between firms and dispersed public shareholders problematic, if not impossible.⁷⁴ Moreover, historical claims aside, the reality is that many U.S. and Canadian firms do show a desire to control insider trading by adopting super-compliant ITPs that supplement mandatory insider trading laws. In the empirical portion of this article, we examine the characteristics of firms that adopt super-compliant ITPs. Our analysis does not directly examine the efficiency of insider trading regulation but does bear on it and suggests, as we explain below, that at least some shareholders may not perceive unregulated insider trading to be innocuous, let alone efficient.

⁶⁹ Theoretically, shareholders may privately enforce Canadian insider trading legislation by bringing class action lawsuits. Shareholder class actions are rare in Canada, however, mainly because of the rejection of the “fraud on the market” doctrine in Ontario. *Carom v. Bre-X Minerals Ltd.*, [2000] 51 O.R.3d 236 (Can.). Canadian shareholders in theory may also launch an oppression remedy stemming from breach of an ITP by insiders. Corporate statutes in Canadian provinces allow complainants to apply to a court for an order that would remedy any action of a corporation, its affiliates or its directors that is “oppressive or unfairly prejudicial to or that unfairly disregards the interests of any security holder, creditor, director or officer.” To our knowledge, however, such a case (i.e., for breach of an ITP) has never been brought.

⁷⁰ Editorial, *When Insiders Go Bad*, *GLOBE AND MAIL*, Oct. 23, 2001, at A16; cf. CANADIAN INSIDER TRADING TASK FORCE, *supra* note 62, at 4.

⁷¹ See McNally & Smith, *supra* note 14, at 129.

⁷² Bris, *supra* note 1, at 287, 301.

⁷³ Carlton & Fischel, *supra* note 3, at 894; but see Robert A. Prentice & Dain Donelson, *Insider Trading as a Signaling Device*, 47 *AM. BUS. L. J.* 1 (2010) (presenting counter-evidence to the claim that insider trading restrictions were not desired prior to the insider trading prohibition).

⁷⁴ See Cox, *supra* note 4.

For the purpose of predicting which firm characteristics are associated with the adoption of a super-compliant ITP, we assume that, other things equal, a firm is more likely to have an ITP that is stricter than what Canadian law requires: (1) the greater the opportunity/incentive for insider trading, (2) the greater the potential costs of insider trading, and/or (3) the greater the potential benefits from preventing insider trading. These assumptions motivate our specific hypotheses, which, in summary form, are that ITP existence and ITP stringency are positively associated with: (1) firm size, (2) a firm's market-to-book ratio, (3) concentrated share ownership/control, (4) firm-specific stock return volatility, and (5) cross-listing on a U.S. stock exchange. Before turning to our data and analysis, we explain these hypothesized relationships in greater detail.

A. Hypothesis 1: Larger firms are more likely to adopt a super-compliant ITP than smaller firms

There are several reasons, not mutually exclusive, why larger firms may be more likely to have a super-compliant ITP than smaller firms. First, as Bettis et al. suggest, larger firms are likely to have greater numbers of insiders than smaller firms, making insider trading a more salient issue for the former than for the latter firms.⁷⁵ Second, “[l]arger firms are more likely [than smaller firms] to have the organizational [or bureaucratic] ability to monitor and restrict insiders.”⁷⁶ Thus, building ITP monitoring and enforcement into organizational procedures will be easier for larger firms than for smaller firms. Third, larger firms tend to have more powerful outside shareholders (e.g., pension funds and other institutional investors) than smaller firms,⁷⁷ so insider trading may occur at the expense of more powerful outside interests in the former firms. Finally, larger firms face a higher level of public scrutiny from analysts and the broader investing public than smaller firms.⁷⁸ Consequently, they may be more susceptible to negative publicity stemming from the perceived unfairness or potential criminality of insider trading. This can harm a firm's image and its business generally.

Demonstrating compliance with insider trading laws by adopting a super-compliant ITP may make a firm more attractive to investors who know that corporate scandals can lead to sharp falls in share prices, or who fear being on the losing end of inside trades. Relatedly, larger firms may see themselves as business leaders and thus may want to adopt ITPs, since they are considered best practices, especially if they are pressured to do so by institutional investors who tend to be more prevalent among larger firms.⁷⁹

⁷⁵ Bettis et al., *supra* note 2, at 203.

⁷⁶ Roulstone, *supra* note 12, at 544.

⁷⁷ O'Brien & Bhushan, *Analyst Following and Institutional Ownership*, 28 J. ACCT. RES. 55, 58 (1990).

⁷⁸ *Id.* at 72.

⁷⁹ *Id.* at 58.

B. Hypothesis 2: Firms with higher market-to-book ratios are more likely to adopt a super-compliant ITP than firms with lower market-to-book ratios.

We predict that firms with higher market-to-book ratios—stock price relative to book value per share⁸⁰—are more likely to adopt super-compliant ITPs. This is because they tend to have greater asymmetric information and growth opportunities, both of which increase insider trading opportunities. These firms tend to have a greater proportion of intangible assets, like intellectual property, which makes it harder for outsiders to evaluate them and gives insiders a distinct informational advantage vis-à-vis outsiders, thus increasing the potential profitability of insider trading. By contrast, a mature business with a lower growth profile and relatively predictable earnings should present fewer opportunities for insider trading, other things equal. Consistent with Hypothesis 2, Bettis et al. find that insider trading activity is positively related to a firm's market-to-book ratio.⁸¹ Thus, if firms view insider trading as harmful to their interests, they ought to be more inclined to adopt a super-compliant ITP the higher their market-to-book ratio due to greater insider trading opportunities among such firms.

C. Hypothesis 3: Firms with more influential outside investors are more likely to adopt a super-compliant ITP than firms with fewer such investors.

In Canada, large shareholders may be directly or indirectly subject to the insider trading prohibition. First, Ontario law defines a shareholder as an insider if the shareholder owns 10% or more of the firm's voting securities.⁸² Thus, 10% shareholders are directly subject to the insider trading prohibition. Second, large shareholders who are officers or directors of the firm are also directly subject to the prohibition by virtue of their officer or director status, even if they own less than 10% of a firm's shares.⁸³ Finally, large shareholders who are not directly subject to the prohibition are indirectly subject to it by virtue of the fact that insiders are not allowed to tip outsiders, including large shareholders who may otherwise solicit or receive tips from insiders. One could argue that these factors ought to diminish rather than increase corporate efforts to control insider trading via super-compliant

⁸⁰ A high market-to-book ratio means that the company's market valuation is greater than the value of its assets. Firms with high market-to-book ratios tend to have a greater degree of intellectual property, which is inherently more speculative and thus more difficult to value than physical assets.

⁸¹ Bettis et al., *supra* note 2, at 203.

⁸² R.S.O. 1990, c. S.5, s. 1.1 (Can.).

⁸³ In Canada, many large shareholders are also officers or directors. CORPORATE DECISION-MAKING IN CANADA, *supra* note 15.

ITPs. Indeed, there are competing theoretical perspectives on the attitude of large influential shareholders toward insider trading restrictions.

Demsetz and Bhidé argue that concentrated ownership is desirable because large shareholders engage in valuable corporate monitoring, reducing agency costs. However, they must be compensated for their monitoring activities and for the risks of holding undiversified portfolios. Insider trading profits are an efficient way to compensate these shareholders, they argue.⁸⁴ Such profits, in the view of these theorists, are not unfair or inefficient windfalls but rather appropriate compensation. Restricting such compensation by prohibiting insider trading will reduce large shareholders' incentives to monitor,⁸⁵ by raising the costs and liabilities of active shareholding and monitoring.⁸⁶ This implies that firms that value large shareholder monitoring may tend to shun super-compliant ITPs or at least exempt outside controlling shareholders from the policy's super-compliant provisions.

In contrast, Maug cautions that large shareholders may serve their own interests at the expense of minority shareholders if they are permitted to engage in insider trading.⁸⁷ He argues that allowing insider trading may lead large shareholders to seek profits not by monitoring managers in ways that advance the interests of most investors but by using private knowledge to expropriate wealth from outside investors. Maug argues that allowing insider trading may enable managers to "bribe" dominant shareholders to forego monitoring the firm when it is performing poorly by sharing private information with them. If the firm's stock is sufficiently liquid, trading on such information will provide greater profits than can be gained through close monitoring and efforts to improve firm performance.⁸⁸

Thus, firms with concentrated ownership may desire insider trading restrictions to reduce agency costs and encourage minority shareholders to invest in the firm. Contrary to the prediction that would seem to follow from Demsetz' and Bhidé's analyses, this logic implies that firms with concentrated ownership may be more likely to adopt a super-compliant ITP than firms with diffuse ownership, thus pre-committing to restrict trading by

⁸⁴ Demsetz, *supra* note 17, at 314, 315; Bhidé, *supra* note 17, at 43–44.

⁸⁵ Demsetz, *supra* note 17, at 313, 314; Bhidé, *supra* note 17, at 46–47.

⁸⁶ Bhidé, *supra* note 17, at 33, 46–47. Both Demsetz and Bhidé oppose insider trading restrictions for precisely this reason.

⁸⁷ Maug, *supra* note 8, at 1570, 1588. Along similar lines, La Porta et al. suggest that the primary agency problem in firms with controlling shareholders is the expropriation of minority shareholders. Rafael La Porta et al., *Corporate Ownership Around the World*, 54 J. FIN. 471, 511 (1999). The implication is that the law ought to be concerned not only with preventing managerial value diversion but also with containing expropriation by large shareholders. See, e.g., *id.* at 512; Rafael La Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113, 1145, 1151 (1998); Mike Burkart & Fausto Panunzi, *Agency Conflicts, Ownership Concentration, and Legal Shareholder Protection*, 15 J. FIN. INTERMEDIATION 1, 23 (2006).

⁸⁸ Maug, *supra* note 8, at 1579–80, 1582–83. He demonstrates that, conditional on the stock's liquidity, when insider trading is legal, dominant shareholders are more likely to collude with managers at the expense of minority shareholders in exchange for trading profits, whereas when insider trading is illegal, dominant shareholders are more likely to monitor managers than to trade. *Id.* at 1582–83.

dominant shareholders at the expense of minority shareholders. In addition, non-insider controlling shareholders (e.g., institutional investors such as mutual funds, pension funds, and the like) may wish to prevent insider trading to reduce managerial agency costs.

The argument that large shareholders would prefer a super-compliant ITP over a merely compliant ITP or none seems more compelling to us for several reasons. First, Bhidé opposes insider trading laws as a disincentive to large shareholder monitoring. However, it is not clear that large shareholders are insufficiently diversified such that they must be compensated in the form of trading profits. Many large shareholders are institutional investors for whom diversification is not a serious issue.⁸⁹ Second, it would seem that control premia (and incentive pay for officers and directors) provide sufficient compensation for playing a positive role in corporate governance.⁹⁰ Third, large shareholders may prefer stringent insider trading restrictions if they are not privy to inside information, which, again, is likely if they are outside investors. In that case, they may often be on the losing end of inside trades. Finally, large outside shareholders are likely to wield considerable influence over rent-seeking insiders who may be opposed to the firm adopting a super-compliant ITP.⁹¹ Given the potential costs of insider trading, moreover, they may wish to go beyond the law by adopting super-compliant ITPs.⁹²

D. Hypothesis 4: Firms with greater firm-specific stock return volatility are more likely to adopt a super-compliant ITP than firms with less firm-specific stock return volatility.

Firms with a higher degree of firm-specific (or idiosyncratic) volatility of their stock returns relative to the total volatility of their stock returns have a greater flow of firm-specific news into their share prices.⁹³ These firms are likely to present more profitable insider trading opportunities than firms with relatively lower firm-specific volatility as a share of total volatility. According to Demsetz:

Firm-specific risk . . . is a plausible measure of the profit potential of insider trading High firm-specific risk firms are those whose fortunes tend to be tied to factors that do not influence

⁸⁹ Andrei Shleifer & Robert W. Vishny, *A Survey of Corporate Governance*, 52 J. FIN. 737 (1997).

⁹⁰ See generally Lucian A. Bebchuk, *Efficient and Inefficient Sales of Corporate Control*, 109 Q. J. ECON. 957 (1994).

⁹¹ See Shleifer & Vishny, *supra* note 89.

⁹² Furthermore, large shareholders must operate within the current legal framework. Thus, even if they might like to engage in insider trading, the law does not permit them to.

⁹³ Randall Morck et al., *The Information Content of Stock Markets: Why Do Emerging Markets Have Synchronous Stock Price Movements?*, 58 J. FIN. ECON. 215, 255–56, 258 (2000); Merritt B. Fox et al., *Law, Share Price Accuracy, and Economic Performance: The New Evidence*, 102 MICH. L. REV. 331, 375–76 (2003).

many other firms. Information about common factors . . . will be known in advance to many persons in many firms that stay in contact with capital markets. Profiting from this information is difficult because intensive competition to do so is faced from all who are well positioned to have the same information. In contrast . . . advanced knowledge about a successful closing in a new large contract is more likely to be restricted to persons in firms doing the contracting. *Trading on the basis of such firm-specific information is likely to be less competitive and more profitable. It is information that impacts the fortunes of a specific firm that provides the best opportunity to profit. Such information is most frequently encountered in those firms exhibiting high firm-specific risk.*⁹⁴

There is some ambiguity here, however. On the one hand, because insider trading opportunities are likely to be more plentiful in firms characterized by relatively greater firm-specific risk, these firms will be more prone to adopt a super-compliant ITP, other things equal. In that case, we expect to observe a positive relationship between ITP stringency and firm-specific risk. On the other hand, to the extent that insider trading increases the flow of firm-specific information into stock prices, as Manne and Carlton and Fischel claim,⁹⁵ overly restricting insider trading will result in stock prices that reflect less firm-specific information. Firms that think that over time this will harm markets in their stock or other financial instruments may feel they would be disadvantaged by adopting an ITP, especially a super-compliant one. In the latter case, if firm-specific volatility is endogenous to the ITP, we expect to observe a negative relationship between firm-specific volatility ITP strictness.

While cognizant of the potential ambiguity here, we find the prediction of a positive relationship between firm-specific volatility and proclivity to adopt a super-compliant ITP more compelling than the opposite prediction. The positive prediction seems more plausible in light of recent empirical research showing that insider trading laws do not reduce but rather increase the flow of firm-specific information into stock prices.⁹⁶ Thus, we hypothesize that greater firm-specific return volatility increases the likelihood that a firm will adopt a super-compliant ITP.

⁹⁴ Demsetz, *supra* note 16, at 314–15 (emphasis added). Consistent with this, Demsetz finds a strong positive correlation between insider trading and firm-specific risk. *Id.*

⁹⁵ See MANNE, *supra* note 22; Dennis W. Carlton & Daniel R. Fischel, *supra* note 3, at 868.

⁹⁶ See Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, *supra* note 1, at 146, 174 (presenting evidence suggesting that stock prices reflect more firm-specific information in markets that have more stringent insider trading regulations). Cf. Nuno Fernandes & Miguel A. Ferreira, *supra* note 1, at 1880–81 (reporting similar findings).

E. *Hypothesis 5: Firms that are cross-listed in the U.S. are more likely to adopt a super-compliant ITP than firms that are not cross-listed in the U.S.*

The “bonding” hypothesis posits that firms from jurisdictions with weaker shareholder protections have a strong incentive to cross-list their shares into foreign markets with stronger shareholder protections.⁹⁷ By bonding themselves to a more stringent regulatory regime, firms may reduce their agency costs and attract greater outside investment. Korczak and Lasfer demonstrate that insiders of U.K. firms cross-listed in the U.S. are less inclined to trade on private information than non-cross-listed U.K. firms because of their dual exposure to U.S. and U.K. insider trading regulations.⁹⁸ Furthermore, evidence suggests that firms cross-listed on a stock exchange in a foreign country with a more stringent regulatory regime than the home country’s are more likely to adopt super-compliant governance standards than non-cross-listed firms.⁹⁹ We expect a similar pattern to hold for voluntary adoption of ITPs among Canadian firms cross-listed into the U.S. because the probability that insider trading laws will be publicly enforced is greater in the U.S. than in Canada and, as noted above, ITPs are a defense to corporate liability in the U.S. Canadian firms cross-listed into the U.S. also face a greater risk of a secondary market class action lawsuits (i.e., private suits) than non-cross-listed Canadian firms.¹⁰⁰ Super-compliant ITPs can be a useful defense to class actions by negating corporate scienter, an element that must be proven in securities class action lawsuits in the U.S.¹⁰¹ but, notably, not in Canada. Arguably, the more stringent the ITP, the greater the public and private liability shield.

In summary, our hypotheses predict what types of firms, among firms that have an ITP, will have an ITP that is stricter than Canadian insider trading law. Table 1 summarizes our hypotheses. We test our hypotheses in the next Part after presenting our empirical methodology and data.

⁹⁷ See, e.g., William A Reese & Michael S Weisbach, *Protection of Minority Shareholder Interests, Cross-Listings in the United States, and Subsequent Equity Offerings*, 66 J. FIN. ECON. 65, 101, 102 (2002); John C. Coffee, Jr., *Racing towards the Top: The Impact of Cross-Listing and Stock Market Competition on International Corporate Governance*, 102 COLUM. L. REV. 1757, 1780 (2002); Craig Doidge et al., *Why Do Countries Matter So Much for Corporate Governance?*, 86 J. FIN. ECON. 1, 34 (2007); Doidge et al., *supra* note 31, at 235.

⁹⁸ Korczak & Lasfer, *supra* note 1, at 21.

⁹⁹ Anand et al., *supra* note 34, at 84–85.

¹⁰⁰ See the discussion in note 69, *supra*.

¹⁰¹ See, e.g., *City of Monroe Emp. Ret. Sys. v. Bridgestone Corp.*, 387 F.3d 468, 485 (6th Cir. 2004).

IV. DATA, EMPIRICAL METHODOLOGY AND RESULTS

A. *Data Overview*

Our initial sample consisted of firms included in the TSX/S&P Index as of December 31, 2005. We obtained the list of firms from the Market Data group at the Toronto Stock Exchange. We were able to collect data on 202 of the 206 firms (or 98%) in the index. We then excluded financial firms and income trusts from our analysis, yielding a final sample of 181 firms.¹⁰² Our variables fall into two categories. The first category consists of variables describing whether a firm has an ITP and the features of the firm's ITP, if it has one. The second category consists of various firm characteristics that we use to test our hypotheses. Descriptions of both categories of variables follow.

B. *Characteristics of Firms' Insider Trading Policies*

Our first task was to determine whether or not each firm has an ITP by referring to the System for Electronic Document Analysis and Retrieval (SEDAR), which is available online, and to firms' websites.¹⁰³ If we found evidence of an ITP, we gave the variable *ITP* the value one and, if not, we gave it the value zero. We could not get reliable data on undisclosed private ITPs. We assume, however, that if they exist they are few in number because they would not play the signaling role of reassurance to outside investors or legal compliance that are probably two important reasons for adopting ITPs.

After determining whether a firm has an ITP, we collected additional information on each ITP. First, we coded whether the ITP is a separate public document or is contained in a published code of conduct or another publicly available document. In some cases, the ITP is described in a required disclosure document, such as an information (or proxy) circular. In other cases, the ITP is referenced but is not described or discussed in the disclosure document.

We also recorded whether the firm's ITP is more stringent than Canadian legal requirements or whether it simply restates Canadian insider trad-

¹⁰² In excluding financial firms, we follow standard practice in the corporate finance literature. See, e.g., Rafael La Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113, 1117, 1145 (1998). We excluded unit trusts because their structure differs significantly from the corporate structure of the other firms in our sample. Specifically, the business of the trust continues in an underlying operating corporation and the trust holds all of the debt of the corporation but exists primarily as an investment vehicle whose governance structure is not regulated by corporate law.

¹⁰³ The website www.sedar.com contains most of the public documents and information filed by Canadian public companies and investment funds with the Canadian Securities Administrators (CSA) in the SEDAR filing system. See *SEDAR Frequently Asked Questions*, SEDAR, http://sedar.com/sedar/faq_en.htm (last visited July 3, 2013). SEDAR online is the Canadian equivalent of EDGAR online for U.S. public corporations.

ing law. We measure stringency with two variables. Our first measure of ITP stringency is the variable *Stringent*, which we coded as one if a firm's ITP contains a blackout period(s), provides for the appointment of an internal trading officer or monitor, and/or includes a procedure for employees to apply to trade during the blackout period, none of which is required by Canadian law.¹⁰⁴ If an ITP contains none of these provisions and merely mimics the requirements of Canadian law, we coded *Stringent* as zero.¹⁰⁵ If an ITP is ambiguous or unclear for any reason (e.g., if the publicly available documents contain only a vague description of the policy or none at all), we code *Stringent* as a missing value.¹⁰⁶ Our second measure of ITP stringency is whether an ITP contains a clause under which the firm can levy its own (i.e., private) penalties against insiders who have breached the firm's ITP or Canadian insider trading law. If so, the variable *Private Penalty* equals one and, if not, *Private Penalty* equals zero.

C. Firm-Specific Characteristics

To test our hypotheses about the kinds of Canadian firms that are likely to have ITPs, we collected the following firm-specific information for each firm: three measures of the firm's size (stock market capitalization, net sales, and total assets); the firm's market-to-book ratio; the number of shareholders who own more than 10% of the firm's voting shares (i.e., the number of controlling shareholders) as a proxy for the likelihood that the firm's large shareholders are outsiders, rather than insiders; the firm's monthly closing stock prices from January, 2002 through December, 2005 (inclusive), which we used to calculate monthly stock returns and the firm-specific volatility of such returns, as described below; and, finally, whether the firm's shares are cross-listed on a U.S. stock exchange. We downloaded the accounting measures and information on U.S. cross-listing from the Standard & Poor's Compustat database, which is available online. To verify our information on cross-listing, we also checked SEDAR and company websites. We calculated the ownership and control variables based on information supplied by firms through their public disclosures (proxy circular or annual information form) that are available on SEDAR. We gathered monthly stock prices from Standard & Poors Compustat. In a few cases, we supplemented these data with stock prices reported by Datastream or Yahoo.com.

¹⁰⁴ These three characteristics are all suggested best practices in National Policy 51-101, as noted above. We do not distinguish ITPs by the number of ways in which they exceed Canadian legal requirements.

¹⁰⁵ For example, if an ITP contains only a prohibition on trading while an "insider" is in possession of material nonpublic information, but no additional requirements over and above this legal requirement, we classified the policy as being as strict as Canadian law.

¹⁰⁶ We tested for the possibility that we ought to have coded *Stringent* as a zero if a firm's ITP is ambiguous or unclear, since a firm has an incentive to reveal that it follows a recommended best practice and to communicate extra protection to investors. Our results do not change in any important respect if we replace missing values of *Stringent* with zero.

In our multivariate regressions, we also control for a firm's industry, as defined by the North American Industry Classification System (NAICS), to account for the fact that firms in some industries may be more prone to insider trading because of the nature of their assets. For example, firms with a greater proportion of intangible assets relative to total assets ought to be more likely to have ITPs than firms with a lower proportion of such assets because the former firms are characterized by a relatively greater degree of asymmetric information, which increases the opportunities for insider trading.¹⁰⁷ Controlling for industry addresses this issue to the extent that the nature of corporate assets differs systematically across industries.

D. Volatility of Stock Returns

In order to examine the relationship between ITP stringency and firm-specific volatility, we use Roll's methodology for estimating firm-specific stock return volatility.¹⁰⁸ The measure varies from 0 to 1, with a value of 1 indicating that 100% of the variation in a firm's returns can be attributed to firm-specific considerations and a value of 0 indicating that none of the variation in a firm's returns can be attributed to firm-specific factors or, equivalently, 100% of the variation in a firm's returns is explainable by changes in the market return.¹⁰⁹

We describe our data and their sources in Table 2.

E. Descriptive Statistics

Table 3 presents data on the prevalence of ITPs among the firms in our sample. Of the 181 firms in our final sample of TSX/S&P firms, we were able to identify the existence of an ITP for 167 firms (about 92% of the sample). We were unable to identify an ITP for 14 firms (about 8% of the sample). In striking similarity, Bettis et al. find that 92% of their sample U.S. firms have an ITP.¹¹⁰

As noted, we classify a firm's ITP as stricter than Canadian insider trading law if the policy contains blackout period(s), provides for the appointment of an internal trading officer or monitor and/or consists of a procedure for employees to apply to trade during the blackout period(s). These provisions are optional best practices, not legal requirements in Ontario. In contrast, we classify an ITP as being as strict as Canadian insider trading law

¹⁰⁷ Firms with a greater degree of intangible assets have greater asymmetric information because these assets are harder for outsiders to value than tangible assets.

¹⁰⁸ Richard Roll, *R²*, 43 J. FIN. 541, 557-58 (1988).

¹⁰⁹ *Id.* at 563-65. In brief, firm-specific stock return volatility is calculated as $1 - R^2$ from the "market model" ordinary least squares regression of the firm's monthly stock returns on the market index. See the Appendix for a description of how we calculate firm-specific stock return volatility.

¹¹⁰ Bettis et al., *supra* note 2, at 192, 218.

(i.e., merely compliant) if it mimics or simply restates existing law. We also determine whether an ITP permits the firm to levy private penalties (e.g., unpaid leave, dismissal, or fines) against insiders who breach the firm's ITP or Canadian insider trading law.)

Of the 167 firms we identify as having an ITP, we are able to discern ITP stringency for 146 of them. Of the latter, 76 (or 52%) have a merely compliant ITP, while 70 (or 48%) of them have a super-compliant ITP. In comparison, Bettis et al. find that 78% of their sample U.S. firms have a super-compliant ITP.¹¹¹ We are unable to determine ITP stringency for 21 of the firms we identify as having an ITP. In addition, we are able to identify the existence or non-existence of private penalties for 152 of the 167 firms with an identified ITP.¹¹² The majority of these firms provide for private penalties (112 out of 152, or 74%). It thus appears that firms, once having adopted an ITP, tend to adopt mechanisms to enforce them. This is some, though not dispositive, evidence that many firms that have ITPs do not necessarily see them as mere window dressing.

Table 4 presents cross-tabulations between ITP stringency and private penalties. The data in Table 4 suggest that firms with ITPs that demand more than required by Canadian law (i.e., super-compliant ITPs) are not more inclined to have private penalties for violations than firms with merely compliant ITPs. Consequently, the ITPs of the latter firms may be viewed as more stringent than Canadian insider trading law since they provide for additional penalties over and above the statutory penalties. We address the latter issue in the ordered probit regressions below.

Table 5 presents summary statistics for our explanatory variables, i.e., the firm-specific characteristics. As we expected, because they are firms in the TSX/S&P Index, the firms in our sample are very large. Just over two-thirds¹¹³ of the firms have a controlling shareholder (i.e., shareholder who owns more than 10% of outstanding shares) and the average number of controlling shareholders per firm is about one, although some firms have several large shareholders. For the firms for which we could determine share ownership of the controlling shareholder(s), such shareholder(s) own an average of 41% of the firm's voting shares, which translates into an average of about 32% of the voting shares per controlling shareholder per firm.¹¹⁴ The average firm-specific volatility of monthly returns is 92% (i.e., general market

¹¹¹ Bettis et al., *supra* note 2, at 192.

¹¹² Not all firms that we identified as having an ITP provided information about internal enforcement devices.

¹¹³ This result is consistent with prior studies that find that corporate ownership concentration is relatively high in Canada. See, e.g., CORPORATE DECISION-MAKING IN CANADA, *supra* note 16, at 5.

¹¹⁴ Because we have so few observations on share ownership of controlling shareholders, we do not use ownership stakes in the regression analyses below.

changes explain an average of only 8% of monthly return volatility among the firms in our sample).¹¹⁵

Table 6 compares firm-specific characteristics by ITP strictness – compliant vs. super-compliant. Only the average number of controlling shareholders differs significantly between the two groups of firms. Consistent with Hypothesis 3, the firms with super-compliant ITPs have, on average, a greater number of controlling shareholders than the firms with merely compliant ITPs. The difference is significant at the 1% level. Super-compliant firms also have greater average market- to-book-ratios and firm-specific return volatility than merely compliant firms, in accord with Hypotheses 2 and 4, respectively, but the differences are statistically insignificant. Finally, as predicted by Hypothesis 5, firms with super-compliant ITP are more likely to be cross-listed in the U.S. than firms with merely compliant ITPs. Again, however, the difference is insignificant.

Table 7 presents bivariate correlation coefficients for our dependent and explanatory variables. The directions of the relationships between ITP stringency and firm characteristics are generally as seen in Table 6. However, the correlation coefficients in Table 7 give us an idea of the strength of these relationships. Even when they are significant, which is rare, the strengths of these correlations are low to, at best, moderate, ranging from an absolute value of 0.01 to an absolute value of 0.23. It is interesting to note, however, that the larger firms are more likely (while the firms with greater firm-specific volatility are less likely) to be cross-listed in the U.S.

Our descriptive statistics provide initial insight into the types of Canadian firms that are likely to adopt a super-compliant ITP. They tell a mixed story. Some factors that we hypothesize are associated with super-compliant ITPs show a significant association. The magnitude of the association is often small, however. Moreover, several of the relationships are statistically insignificant. These bivariate relationships may, however, be sharpened when we simultaneously control for possible causal factors. Thus, we turn to our multivariate analysis, which explores the effect of our explanatory variables net of each other.

F. Empirical Methodology

We use two multivariate models to explore the data. Our first approach is an ordinary probit model.¹¹⁶ The dependent variable, Y equals 1 if the firm's ITP is more restrictive than Canadian insider trading law and 0 if it does no more than match the requirements of Canadian insider trading law. Since the dependent variable is dichotomous, i.e., equal to either 0 or 1, we

¹¹⁵ Although the average value of the firm-specific volatility measure (1 minus adjusted R-squared) seems quite high, at .92, it is roughly consistent with Roll's findings. Roll, *supra* note 108, at 561–62, 564.

¹¹⁶ See JACK JOHNSTON & JOHN DINARDO, *ECONOMETRIC METHODS* 419–424 (1997).

use a probit model to estimate the conditional probability that it equals 1, that is:

$$\Pr(Y = 1 | X = x) = \Phi(x'\beta),$$

where Φ is the cumulative distribution function of the standard normal distribution, x is a vector of explanatory variables, and β is a vector of regression coefficients that explain the relationship between the dependent variable and the explanatory variables. The probit model posits that the probability that the dependent variable equals one (i.e., ITP is stricter than Canadian insider trading law) is a function of the explanatory variables, which in our case are the firm-specific characteristics described above.

The preceding simple dichotomization of ITP stringency may not quite capture the relative stringency of corporate policies. For instance, a firm with an ITP that does not go beyond Canadian statutory requirements but provides for internal (private) sanctions may nevertheless have a more stringent corporate policy on insider trading than a firm that has similar rules but does not provide for internal (private) sanctions. Or, a firm with a merely compliant ITP that provides for private sanctions may effectively have a more stringent policy than a firm that has a super-compliant ITP but no private sanctions. Thus, in addition to the standard probit analysis described above, we also conduct an ordered probit analysis, to accommodate a more refined ordinal ranking of a firm's ITP policy options. The ordered probit model takes the following form:

$$\Pr(Y = 1, 2, 3, \dots, n | X = x) = \Phi(x'\beta)$$

where the dependent variable, Y , equals a discrete value between 1 and n , with higher values of Y indicating a more stringent corporate policy toward insider trading. In this model, the probability that the dependent variable equals 1, 2, 3 . . . , or n is again a function of the firm-specific characteristics described above. We describe the ordinal ranking of the dependent variable, which is a function of both formal corporate rules and private sanctions, below.

G. Multivariate Regression Results

As described above, we first estimate an ordinary probit regression for the dependent variable ITP strictness relative to Canadian insider trading law ($Y = 1$ if ITP is super-compliant and 0 otherwise). The reader will recall that we presented five testable hypotheses predicting ITP existence and stringency; they are summarized in Table 1. The explanatory variables—log of stock market capitalization,¹¹⁷ market-to-book ratio, the number of control-

¹¹⁷ In the interest of space, all of the regressions reported in this section use the log of stock market capitalization as the measure of firm size. However, the results are similar if we substitute either the log of sales or the log of assets for the log of stock market capitalization as a measure of firm size.

ling shareholders, firm-specific volatility of returns,¹¹⁸ and a dummy (0,1) variable if the firm is cross-listed in the U.S.—test Hypotheses 1 through 5, respectively.

Table 8 presents the results. The coefficients are reported as marginal effects, calculated at the mean values of the independent variables.¹¹⁹ In column (1), the results are as follows. There is no support for Hypotheses 1 and 2, as the coefficients on the log of market capitalization and the market-to-book ratio are statistically insignificant (although they are positive as we predicted). By contrast, there is support in column (1) for our remaining hypotheses. Consistent with Hypothesis 3, having a greater number of controlling shareholders is associated with a greater probability of adopting a super-compliant ITP. The marginal effect is 0.20, which implies that increasing the number of controlling shareholders by one is associated with a 20% increase in the probability of having a super-compliant as opposed to merely compliant ITP for the average firm in our sample. The coefficient is significant at the 1% level. Similarly the marginal coefficients on firm-specific return volatility and cross-listing in the U.S. are both positive and statistically significant at the 10% level. These results are consistent with Hypotheses 4 and 5, respectively. The marginal coefficient on cross-listing is 0.19, for instance, which implies that for the average firm in our sample, switching from non-cross-listed status to cross-listed status is associated with a 19% increase in the probability of having a super-compliant ITP.

In column (2), we augment the regressions with three control variables that are likely related to the probability of having an ITP in order to provide a clearer view of the effects of the variables of interest. First, share turnover, a liquidity measure, gives a sense of the ease with which informed traders can hide their informed trades. On the one hand, if insiders may easily hide their trades they may have less fear of liability and thus be inclined not to adopt a super-compliant ITP. On the other hand, if insider trading is viewed as harmful to the firm, higher turnover may increase the likelihood of a super-compliant ITP. Turnover is measured as the number of shares traded divided by the number of shares outstanding.

Second, we control for total return volatility because higher overall volatility may enable insiders to mask their trades more effectively.¹²⁰ If insiders are able to mask their trades, other things equal, insider trading will be more profitable and therefore more likely. However, again, we have no a priori directional expectations. Firms with greater total return volatility may be more inclined to restrict insider trading than firms with lower total return volatility because there is a greater chance it will happen. Conversely, a lower danger of discovery and hence scandal may make a firm less likely to

¹¹⁸ We do not report the results for total return volatility in any of the regressions below and, at any rate, total return volatility is always insignificant in our regressions.

¹¹⁹ See JOHNSTON & DiNARDO, *supra* note 116, at 424.

¹²⁰ See, e.g., Kraakman, *supra* note 8.

adopt an ITP, particularly since insiders who determine whether to adopt an ITP will see a good chance of avoiding detection by external monitors in situations of high total volatility but will have more to fear if there is internal monitoring as well. We calculate the total volatility of monthly returns as the average standard deviation of monthly returns. Finally, we control for the average return on assets, a measure of past performance that may influence the degree of pressure a firm faces to improve its corporate governance. Other things equal, a firm with poor recent performance may feel greater pressure to adopt a super-compliant ITP as well as other corporate governance measures to allay criticism.

Including the additional controls in column (2) reinforces and even augments the results in column (1). The coefficients on the number of controlling shareholders (Hypothesis 3), firm-specific volatility (Hypothesis 4), and cross-listed in the U.S. (Hypothesis 5) do not change, except that they are stronger. Moreover, with the additional controls in column 2, the marginal coefficient (0.05) on the market-to-book ratio becomes statistically significant. Consistent with Hypothesis 2, this result suggests that a one unit increase in the market-to-book ratio results in a 5% increase in the probability of having a super-compliant ITP for the average firm in our sample. Figures 1-3 graphically depict these results.

FIGURE 1. PROBABILITY OF STRINGENT ITP, BY NUMBER OF CONTROLLING SHAREHOLDERS AND CROSS-LISTED STATUS

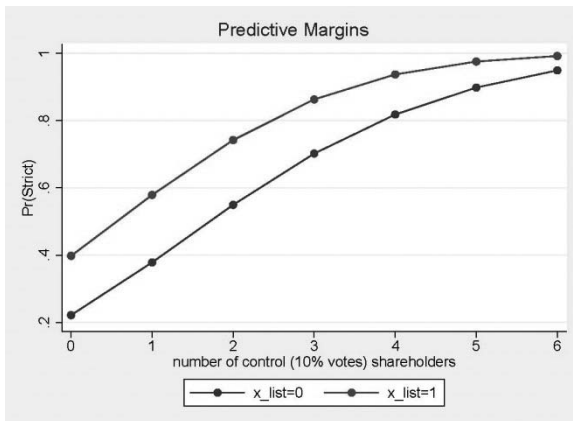


FIGURE 2. PROBABILITY OF STRINGENT ITP, BY FIRM-SPECIFIC VOLATILITY AND CROSS-LISTED STATUS

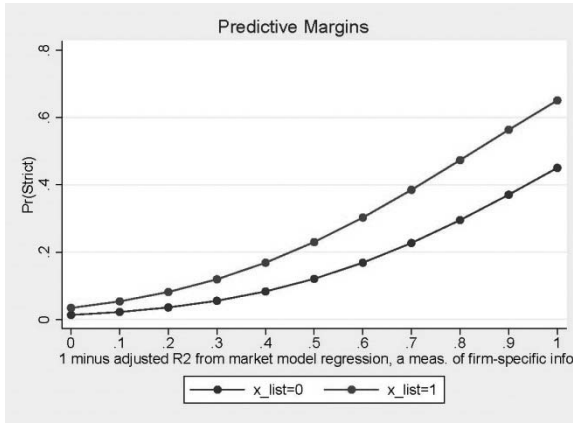
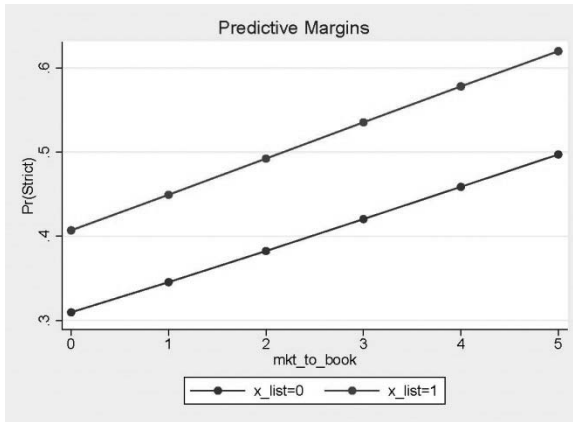


FIGURE 3. PROBABILITY OF STRINGENT ITP, BY BOOK-TO-MARKET RATIO AND CROSS-LISTED STATUS



In summary, the ordinary probit results support four of our five hypotheses about the determinants of Canadian/TSX firms’ adoption of a super-compliant ITP. As noted above, however, our initial categorization of ITP stringency may not fully capture the relative stringency of corporate policies. Thus, we construct a more nuanced ordinal ranking of ITP stringency and use this ranking to estimate an ordered probit model.¹²¹ The dependent variable, *Ordered_Stringency*, equals 1, 2, 3, or 4 with the value increasing in ITP restrictiveness. Thus, *Ordered_Stringency* equals 1 if the firm does not have

¹²¹ See JOHNSTON & DiNARDO, *supra* note 116, at 434–36.

an ITP, 2 if the firm has an ITP but no provision for private sanctions, 3 if either the firm has an ITP and may impose private sanctions or the firm's ITP is more restrictive than Canadian insider trading law but does not provide for private sanctions,¹²² and 4 if the firm's ITP is more restrictive than Canadian insider trading law and the firm may impose private sanctions.

Table 9 presents the ordered probit results, where the reported coefficients are standard probit coefficients, not marginal effects. A positive coefficient on a variable implies that an increase in the value of that variable is associated with an increase in the probability of a more stringent ITP (per our ranking).¹²³ The results in column (1) support Hypotheses 1, 3 and 5. That is, the reported coefficients suggest that the probability of a more stringent ITP (per our ordering) is increasing with firm size, the number of controlling shareholders, and cross-listed status. When we add the additional control variables (return on assets, turnover and total volatility of returns) in column (2), however, only the number of controlling shareholders remains significant at the 1% level.

There are a few possible explanations for the weakness of the ordered probit results as compared to the ordinary probit results. First, the ordered probit model imposes greater restrictions on the data than the ordinary probit model.¹²⁴ Second, we suspect that our coding of internal sanctions is plagued by measurement error, thus reducing the precision of our regression estimates.¹²⁵ There would be measurement error, for instance, if firms tend to publicize their ITPs, but not corporate mechanisms for privately enforcing them. Third, in the unlikely event that we have measured internal sanctions with few errors, it is possible that our ranking of stringency is incorrect. That would seem to be the case, for example, if having an ITP that is equally strict as the law and an internal enforcement mechanism does not offer a firm much more (e.g., in deterrence or liability avoidance) than Canadian insider trading law already offers, while having an ITP that is stricter than Canadian law, albeit without provision for private sanctions, offers more than existing law. Another possibility is that private sanctions are less relevant than public sanctions because private parties (including firms) are less able to detect insider trading than a public regulator with sophisticated surveillance technology, like the SEC.¹²⁶

¹²² We construct category 3 in this manner in order to avoid making any assumption about the relative importance of formal restrictions and private enforcement, as it may be impossible to rank the two in any meaningful sense.

¹²³ See JOHNSTON & DiNARDO, *supra* note 116, at 435–36.

¹²⁴ *Id.*

¹²⁵ See *id.* at 399–401.

¹²⁶ Michael P. Dooley, *Enforcement of Insider Trading Restrictions*, 66 VA. L. REV. 1, 16–17 (1980). Glaeser et al. also address the general issue of public versus private regulation of stock markets. Edward Glaeser et al., *Coase Versus the Coasians*, 116 Q.J. ECON. 853 (2001).

CONCLUSION

While voluminous, the literature on insider trading provides little empirical evidence on firms' motives for privately regulating insider trading in the context of the near ubiquitous legal prohibition. In this article, we forge new ground by providing empirical evidence on this issue in a market where insider trading laws exist but are not vigorously enforced. Using data on Canadian firms included in the TSX/S&P Index, we attempt to understand the types, and indirectly the motives, of Canadian firms that privately regulate insider trading beyond the requirements of Canadian law in spite of, or perhaps because of, lax public enforcement.

Our empirical investigation supports four of our five hypotheses.¹²⁷ In particular, the probability of a Canadian firm having a super-compliant insider trading policy is increasing in such firm's market-to-book ratio, number of controlling shareholders, firm-specific return volatility, and being cross-listed in the U.S. We find that Canadian firms with greater market-to-book valuations and firms whose stock returns exhibit greater firm-specific variation, both of which may imply greater insider trading opportunities, are more likely to have super-compliant ITPs than firms with lower market-to-book valuations and firms whose stock prices are more predictable based on general market trends. We also find that firms with a greater number of controlling shareholders and firms that are cross-listed in the United States, where insider trading laws are more vigorously enforced, are more likely to have super-compliant ITPs.

Our findings have several intriguing implications. First, while we cannot entirely rule out window dressing or the simple proclivity to enact and publicize ITPs, our results suggest there is more to the story than that. If window dressing fully explains ITPs, most, if not all, TSX/S&P firms ought to have super-compliant ITPs because the stronger the policy, the more attractive the window. We find, however, that TSX/S&P firms exhibit a range of organizational approaches to insider trading and that their choices are largely consistent with hypothesized (private) cost-benefit considerations. That is, ITP stringency is associated with firm-specific characteristics that plausibly correlate with latent private costs and benefits of restricting insider trading.

Second, our results are consistent with the compliance/liability avoidance rationale for ITPs. The clearest support for this is our finding that cross-listed firms are more likely to have super-compliant ITPs than non-cross-listed firms, suggesting that the stringent U.S. enforcement regime has a non-trivial extraterritorial effect on Canadian firms. Insider trading laws are

¹²⁷ This discussion focuses on our ordinary probit regression results. When we run probit regressions on our more nuanced ordinal ranking, the only variable that is significant in the hypothesized direction is the number of controlling shareholders. But, for reasons discussed above, our ordinal approach is somewhat more problematic and should be interpreted with caution.

more likely to be enforced in the U.S. against corporate insiders and firms, the latter pursuant to a theory of derivative liability, than in Canada. Canadian firms subject to the U.S. securities enforcement regime may shield themselves from liability by adopting ITPs and, we suspect, the more stringent the ITP, the more powerful the legal shield, as a court may be less inclined to disregard a maximal corporate policy than a *de minimis* one. A cynic may argue, however, that the cross-listing effect demonstrates, at best, that firms will only do what the law requires and, at worst, the “imperialism” of U.S. securities enforcement.¹²⁸

But compliance/liability avoidance does not fully explain our results, nor does U.S. regulatory imperialism. In light of the lax Canadian enforcement regime, if compliance/liability avoidance were the sole *raison d'être* of private insider trading restrictions, we would expect firm characteristics, except cross-listing status, to be insignificant. Yet, as noted above, our data do not show this and cross-listing is not the only factor relevant to ITP existence and stringency. On the contrary, controlling for cross-listing status, we find that several additional firm-specific characteristics that correlate with a firm's risk of insider trading are significantly associated with ITP stringency. This suggests there are reasons for ITP enactment beyond pure window dressing and pure compliance/liability avoidance. We interpret the residual purpose for ITPs as the desire of at least some firms to control insider trading to enhance corporate performance. Seen in this light, the cross-listing effect may reflect voluntary bonding for economic benefits rather than mere compliance/liability avoidance or, worse, U.S. regulatory imperialism.

Third, our (most robust) finding that firms with more controlling shareholders are more likely to have a super-compliant ITP than firms with fewer controlling shareholders suggests that influential shareholders may oppose insider trading. More specifically, influential shareholders may dislike insider trading when others are in as good a position to benefit from insider trading as they are, thereby reducing their trading profits. It also suggests that reality may be more nuanced than Bhidé and Demsetz contemplate.¹²⁹ In particular, controlling shareholders may prefer collectively tying their hands over competing among themselves for dissipating insider trading profits. Alternatively, consistent with Maug's analysis,¹³⁰ some controlling shareholders may be outsiders (e.g., institutional investors) who wish to keep both insider controlling shareholders and managers in check (i.e., reduce agency costs) by prohibiting them from engaging in insider trading.¹³¹ The latter interpreta-

¹²⁸ For a critique of U.S. regulatory “imperialism”, see Roberta Romano, *The Need for Competition in International Securities Regulation*, 2 THEORETICAL INQUIRIES L. 387 (2001).

¹²⁹ Bhidé, *supra* note 17; Demsetz, *supra* note 17.

¹³⁰ See Maug, *supra* note 8.

¹³¹ See, e.g., Roulstone, *supra* note 12, at 536. The greater the number of controlling shareholders, the more likely some of them are to be outsiders. More cynically, dominant shareholders may prefer ITPs because they prevent insiders from trading, giving these shareholders a monopoly on trading profits. We doubt this explanation, however, because outside

tion is consistent with Beny's finding of a positive relationship between insider trading law stringency and corporate valuation among firms with a controlling shareholder in common law countries.¹³²

Finally, this article contributes to the longstanding debate about the efficiency of insider trading regulation insofar as an influential claim in that debate is that firms do not desire to restrict insider trading. We document that some firms do wish to limit insider trading, often beyond what the law requires, and do so voluntarily in an environment where they face relatively little risk of public or private enforcement. Indeed, we think that, on net, our empirical results add to the case made by those who see insider trading as possibly economically harmful.¹³³ We concede, however, that our data do not prove this. Still, if there are strong negative effects to insider trading bans, as some have argued, nothing about the behavior of the firms in our data suggests this.

Overall, our results may be viewed as supporting the intermediate position in the insider trading debate—i.e., the claim that firms will pursue privately optimal approaches to insider trading.¹³⁴ Our findings only partially support the intermediate position, however, because that position suggests that in some cases permitting insider trading may be optimal. Yet, the existence of the insider prohibition means that firms rationally will not choose ITPs that allow insider trading (left censorship), even if it would be privately optimal for them to do so, because such ITPs would violate the law. By contrast, our results call into question the deregulatory position—i.e., the claim that private restrictions of insider trading would never arise in the absence of the prohibition¹³⁵—because they show that many Canadian firms privately restrict insider trading even though they face little threat of insider trading liability.¹³⁶

dominant shareholders' ability to profitably trade often depends on their receiving tips from insiders.

¹³² Beny, *Do Investors in Controlled Firms Value Insider Trading Laws? International Evidence*, *supra* note 1, at 291. The results discussed in this article suggest that outside investors may value the protection vis-à-vis insiders, and possibly also dominant shareholders, that strong insider trading laws provide.

¹³³ As noted, our data support several of our hypotheses, which predict ITP stringency on the assumption that insider trading on balance hurts firms and hurts those most vulnerable to insider trading the most. The marginal insignificance of some of our results may result from small sample size, the possibility that our judgments about how our variables would affect the likelihood of insider trading are mistaken, or the possibility that although our judgments about the variables' implications are correct, firms that are more vulnerable to insider trading fail to perceive this.

¹³⁴ Epstein, *supra* note 24, at 314; Haddock & Macey, *supra* note 25, at 1467–68.

¹³⁵ Carlton & Fischel, *supra* note 3, at 894.

¹³⁶ The intermediate position is not fully empirically testable because we cannot observe the left-tail, i.e., whether some firms would privately permit insider trading (if that were the optimal approach for them). We can only observe the right-tail, i.e., that some firms restrict insider trading beyond what the law requires and with varying degrees of intensity. Taking the law as given, however, the data more strongly support the intermediate position than the fully negative (deregulatory) position. We are completely unable to test the fully positive (regulatory) position for the reasons noted above.

Several important questions for emerge from our study. One question is the identity of the dominant shareholders who appear to have a significant influence upon the adoption of super-compliant ITPs, which is data difficult to obtain. Do these shareholders tend to be insiders or outsiders? If they are outsiders, they are likely to be institutional investors who are better able than dispersed public shareholders to overcome the collective action problem that impedes direct bargaining between corporate insiders and shareholders at large. Whether they are insider or outsiders, what are these dominant shareholders' primary motivations for desiring corporate insider trading policies (along with other corporate governance measures)? Do the motives vary between dominant insiders and outsiders? Another open question concerns the adoption process of corporate insider trading policies. Do corporations adopt them unilaterally to attract external investors (as well as comply with the law) or do such policies emerge from a process of negotiation between corporate policymakers and influential shareholders? Finally, it would be interesting to study both the effectiveness and enforcement propensities of corporate insider policies, to the extent these data are available.

We leave these questions and others to future empirical research.

APPENDIX 1: TABLES

TABLE 1: SUMMARY OF HYPOTHESES

Hypothesis	Summary
Hypothesis 1	Larger firms are more likely to adopt a super-compliant ITP than smaller firms
Hypothesis 2	Firms with higher market-to-book ratios are more likely to adopt a super-compliant ITP than firms with lower market-to-book ratios
Hypothesis 3	Firms with more influential outside investors are more likely to adopt a super-compliant ITP than firms with fewer such investors
Hypothesis 4	Firms with more firm-specific volatility of stock returns are more likely to adopt a super-compliant ITP than firms with lower firm-specific volatility of stock returns
Hypothesis 5	Firms that are cross-listed in the U.S. are more likely to have a compliant or super-compliant ITP than firms that are not cross-listed in the U.S.

TABLE 2: DESCRIPTION OF VARIABLES

Variable	Description
	Variables Related to Insider Trading Policies
ITP	This variable equals 1 if the company has an ITP that is publicly available, i.e., the company's ITP appears or is mentioned in any paper or web-based document published on the company's website or SEDAR, and 0 otherwise. Source: SEDAR and firms' websites.
Stringent	This variable equals 1 if the company's ITP is stricter than existing insider trading law, i.e., the company's ITP stipulates a blackout period(s), requires the appointment of an internal trading officer or monitor, or requires application to trade during the blackout period(s). Conversely, this variable equals 0 if the company's ITP is as strict as existing insider trading law, i.e., the company's ITP merely contains a prohibition on trading while in possession of material nonpublic information). Source: SEDAR and firms' websites.
Private Penalty	This variable equals 1 if the company's ITP provides that the company will levy its own penalty in the event of breach of the ITP or insider trading laws, and 0 otherwise. Source: SEDAR and firms' websites.

	Firm-Specific Characteristics
Stock Market Capitalization	This variable is the company's stock market capitalization, the closing stock price multiplied by the number of outstanding shares in 2005. It is a measure of the firm's size. Source: Standard & Poor's Compustat.
Sales Revenue	This variable is the company's net sales in 2005. It is a second measure of the firm's size. Source: Standard & Poor's Compustat.
Assets	This variable is the company's total assets in 2005. It is a third measure of firm size. Source: Standard & Poor's Compustat.
Market-to-Book Ratio	This variable is the ratio of the company's market value (common shares outstanding multiplied by the stock price) to its book value of equity in 2005. Source: Standard & Poor's Compustat.
Number of Controlling Shareholders	This variable is the number of shareholders who owned more than 10% of the firm's voting shares in 2005. Source: SEDAR.
Cross-Listed in the U.S.	This variable equals 1 if the company's shares were cross-listed on a U.S. exchange in 2005, and 0 otherwise. Source: SEDAR, Standard & Poor's Compustat and firms' websites.
Firm-Specific Volatility of Stock Returns	This variable equals one minus the adjusted R^2 from the market model of stock returns. It measures the variation in a firm's monthly returns that cannot be explained by general changes in the market. Source: monthly stock prices came from Standard & Poor's Compustat. In a few cases, we supplemented these data with monthly stock prices from Datastream or Yahoo.com.
Industry Codes	Source: Standard and Poor's Compustat.

TABLE 3: PREVALENCE OF ITPs IN THE SAMPLE

ITP	No ITP	Total
167	14	181
92.3%	7.7%	100%

TABLE 4: CROSS-TABULATION OF ITP STRINGENCY AND EXISTENCE OF PRIVATE PENALTY

Type	Firm does not have Private Penalty	Firm has Private Penalty	Total Number of Firms
ITP Equally as Strict as Canadian Law (Stringent equals 0)	19 (11.4%)	57 (34.1%)	76 (45.5%)
ITP More Strict than Canadian Law (Stringent equals 1)	19 (11.4%)	50 (29.9%)	69 (41.3%)
Total Number of Firms	38 (22.7%)	107 (64.1%)	145 (86.8%)

The numbers in parentheses are percentages of all firms that have an ITP that exhibit the given characteristic.

TABLE 5: SUMMARY STATISTICS FOR EXPLANATORY VARIABLES
All variables described in Table 2.

Characteristic	No. Obs.	Mean (Median)	Standard Deviation
Market Capitalization (millions)	181	\$4,900 (\$1,720)	\$7,720
Market-to-Book Ratio	168	3.31 (2.53)	2.81
Number of Controlling Shareholders	176	0.95 (1.0)	0.95
Firm-Specific Volatility of Returns (1- adjusted R ² from Market Model Regression)	167	0.92 (0.97)	0.13
Cross-listed in the U.S. (0 or 1)	174	0.49 (0.0)	0.50

TABLE 6: DIFFERENCE IN MEANS
CHARACTERISTICS OF FIRMS BY STRICTNESS OF ITPs

Characteristic	Equally Strict as Law (<i>Stringent</i> equals 0)	Stricter Than Law (<i>Stringent</i> equals 1)	t-statistic* (difference in means)
Market Capitalization (millions)	\$5,740	\$5,520	0.15
Market-to-Book Ratio	3.11	3.42	-0.64
Number of Controlling Shareholders	0.79	1.24	-2.72 ^a
Firm-Specific Volatility of Returns (1- adjusted R ² from Market Model Regression)	90%	93%	-1.61
Cross-listed in the U.S.	48%	56%	-1.02

*Superscript a denotes statistical significance at the 1% level. All variables are described in Table 2.

TABLE 7: BIVARIATE CORRELATIONS

	Stricter than Law	Stock Market Cap.	Market-to- Book Ratio	No. of Cont. Sh'rs	Firm- Specific Volatility	Cross- Listed in the U.S.
Stricter than Law	1.00					
Stock Market Capitalization	-0.01 (0.88)	1.00				
Market-to-Book Ratio	0.05 (0.52)	0.08 (0.31)	1.00			
Number of Controlling Shareholders	0.22 (0.01)	-0.16 (0.03)	-0.20 (0.01)	1.00		
Firm-Specific Volatility of Returns	0.14 (0.11)	0.07 (0.37)	0.09 (0.26)	-0.04 (0.62)	1.00	
Cross-Listed in the U.S.	0.08 (0.31)	0.22 ^b (0.00)	-0.02 (0.78)	-0.15 (0.04)	-0.23 ^c (0.00)	1.00

The superscripts b and c denote statistical significance at the 5% and 10% levels, respectively. Standard errors are in parentheses. All variables are described in Table 2.

TABLE 8: PROBIT REGRESSIONS
DETERMINANTS OF HAVING AN ITP THAT IS STRICTER THAN ONTARIO
INSIDER TRADING LAW (I.E., SUPER-COMPLIANT ITP)

This table presents probit regressions on the determinants of ITP strictness. The dependent variable, *Stringent*, equals 1 if the ITP is stricter than Ontario

insider trading law, and 0 otherwise. The coefficients on explanatory variables are reported as marginal effects (calculated at the mean values of the independent variables). Superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively. Robust standard errors are reported in parentheses. All variables are described in Table 2.

Explanatory Variable	(1)	(2)
Log of Market Capitalization	0.01 (0.42)	-0.005 (0.05)
Market-to-Book Ratio	0.02 (0.02)	0.05 ^c (0.03)
Number of Controlling Shareholders	0.20 ^a (0.06)	0.21 ^a (0.06)
Firm-Specific Volatility (1- adjusted R ² from Market Model Regression)	0.81 ^c (0.44)	1.04 ^b (0.47)
Cross-listed in the U.S.	0.19 ^c (0.11)	0.20 ^c (0.18)
Return on Assets		-0.24 (0.81)
Turnover		-0.03 (0.18)
Total Return Volatility		-0.00 (0.01)
Industry Dummies	Yes	Yes
Number of Observations	127	120
Pseudo R ²	0.18	0.20
χ ²	21.86	23.40
Prob > χ ²	0.01	0.04

TABLE 9: ORDERED PROBIT REGRESSIONS

This table presents ordered probit regressions on the determinants of ITP strictness. The dependent variable, *Ordered_Stringency*, equals 1 if the firm does not have an ITP ($ITP = 0$); 2 if the firm has an ITP ($ITP = 1$) but no mechanism for imposing private sanctions ($Private\ Penalty = 0$); 3 if the firm has an ITP ($ITP = 1$) and may impose private sanctions ($Private\ Penalty = 1$); 3 if the firm's ITP is more restrictive than Canadian insider trading law ($Stringent = 1$) but the firm does not have a mechanism for imposing private sanctions ($Private\ Penalty = 0$); and 4 if the firm's ITP is more restrictive than Canadian insider trading law ($Stringent = 1$) and the firm may impose private sanctions ($Private\ Penalty = 1$). Reported coefficients are standard probit coefficients, not marginal effects. Superscripts a, b, and c denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Robust standard errors are reported in parentheses. All variables are described in Table 2.

Explanatory Variable	(1)	(2)
Log of Market Capitalization	0.18 ^b (0.08)	0.16 (0.10)
Market-to-Book Ratio	0.02 (0.03)	0.08 (0.06)
Number of Controlling Shareholders	0.36 ^a (0.11)	0.34 ^a (0.11)
Firm-Specific Volatility (1- adjusted R ² from Market Model Regression)	0.58 (0.78)	1.00 (0.81)
Cross-listed in the U.S.	0.34 ^c (0.21)	0.28 (0.23)
Return on Assets		-0.87 (2.08)
Turnover		0.13 (0.37)
Total Return Volatility		-0.02 (0.02)
Industry Dummies	Yes	Yes
Number of Observations	134	126
Pseudo R ²	0.07	0.07
χ ²	27.00	27.02
Prob > χ ²	0.00	0.00

APPENDIX 2:

ECONOMETRIC ESTIMATION OF FIRM-SPECIFIC STOCK RETURN VOLATILITY

To estimate firm-specific stock return volatility, we estimated the “market model” ordinary least squares (OLS) regression of the firm’s monthly returns on the monthly returns to the market index:

$$r_{i,t} = \alpha_{i,t} + \beta_i r_{m,t} + \varepsilon_{i,t},$$

where $r_{i,t}$ is the total return on stock i in period t , $r_{m,t}$ is the total return on the market index over the same period, t , the α 's and the β 's are the estimated OLS regression coefficients, and $\varepsilon_{i,t}$ is the “unexplained”/unique/firm-specific component of stock i 's return in period t . We estimate the market model using monthly returns, which we calculate from closing monthly stock prices (adjusted for dividends and stock splits) from January 2002 through December 31, 2005. We use Standard and Poor's Composite TSX Composite Index as the market index. The adjusted R^2 from this regression measures the fraction of the variation in a firm's monthly returns that is explainable by changes in the market return. The remainder, i.e., the unexplained fraction of the variation in a firm's monthly returns, can be attributed to unique information about the firm. Thus, 1- adjusted R^2 is a proxy for firm-specific volatility.