Shareholder or Management Rights Plan?

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ABSTRACT

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This dissertation analyses the market reaction upon the announcement of corporations' intent to adopt a poison pill, in Canada and in the United States. The two neighbouring countries have different takeover landscapes and dissimilar regulatory requirements faced by targets in light of the defense adoption. Two hypotheses are put forward in this study: the managerial entrenchment and the shareholders' wealth maximization. Data on all poison pill announcements between January 1st, 1983 and December 31st, 2010 was collected, yielding 672 and 8,862 Canadian and U.S. announcements, respectively. Event study methodology was employed to identify the existence of market reaction around the announcement news. Empirical results support the shareholders' wealth maximization hypothesis for both the U.S. and the Canadian sample characterized by significantly positive cumulative abnormal returns during the event window, with the Canadian sample demonstrating more positive abnormal returns. Additionally, the U.S. sample of issuing companies is examined further and a transition from a negative market reaction in the early 1980s to significantly positive abnormal returns in 1990s and 2000s is documented. A multiple regression analysis revealed that the proportion of institutional investors in target firms announcing the adoption of poison pills positively benefited the target by being partially responsible for more positive market reaction in light of the announcement news.

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1. Introduction

Poison pills, also referred to as shareholder rights plans, are a form of antitakeover defence tactic that became widely used by corporations since their introduction by a U.S. corporate lawyer, Martin Lipton, in 1982. Since their inception and the affirmation of their legality by the Delaware Supreme Court in 1985, their use grew throughout the world and made its way into a corporate landscape of many American and international corporations. The primary motivation for the shareholder rights plans' adoption was to "provide a target board with negotiating leverage in the face of a hostile takeover attempt" (Bab & Neenan, 2011). One of the first countries following the example of the United States was Canada. The first poison pill was introduced to Canadian financial markets by Inco Limited (ticker: N) in October, 1988. The pill immediately sparked the debate between critics and proponents of the mechanism and continues to trouble the financial world up until today. The proponents of this dilatory measure believe that it is a well-built defense against coercive tactics as it " discourages hostile bids, and if one is made, they force the bidder to negotiate with the target's board of directors and permit the board to obtain a higher price for shareholders by allowing it to initiate an auction for corporate control" (Coleman, 1988). As the result, poison pills are believed to increase shareholders' wealth. Conversely, their opponents consider that a poison pill is a managerial entrenchment device giving incumbent managers the power to deter hostile bids and preserve managerial tenure for their own benefits, with their abusive actions resulting in a negative impact on the share price.

There remains no dominant view on the motivation behind the adoption of shareholder rights plans. Nevertheless, their importance in global financial markets needs not to be understated. It is believed that the introduction of these widespread defense tactics played an important role in ending the merger wave of the 1980s (Hebb & MacLean, 2006).

A poison pill can be viewed as a call option which gives the shareholders of the target firm the right to purchase shares of common stock, in a target or acquiring firm, at a significant discount. The discount usually accounts for 50% off the market price. These special rights can be exercised by a triggering event, such as the accumulation of specified percentage of target shares by the acquirer or the announcement of a tender offer. Furthermore, they can take on different forms; nevertheless, their ultimate goal is to prevent hostile raiders from taking control of the target firm. The greater the difference between the market and the exercise price, the more dilutive is the pill. As such, the main objective of this anti-takeover defense is to impose a significant "dilution" on the hostile acquirer, increase the potential cost of acquisition and encourage the corporate raider to negotiate the terms and conditions with the target board of directors (Bruner, 1991).

There exist different types of poison pills, such as flip-in, back-end and flip-over pills, among many others. Flip-in pills enable shareholders to purchase target's shares, once the pill is triggered, at a considerable discount. On the other hand, flip-over pills grant shareholders with the special rights to purchase bidder's shares at a discount. More specifically, these rights enable them to purchase discounted shares in a merged firm. Back-end pills allow the holders of the pill to exchange their shares for a price that the board of director judges to be fair, which usually is above the market price.

Poison pills have proven to be a robust takeover defense tactic introduced as a response to innovative and coercive financing techniques discriminating among target company's shareholders, one of the instruments being the two-tier, front-end loaded bid. By the end of 1980s more than a thousand American organizations had adopted the defense plan. In Canada, takeover activity was and remains less common, yet a significant number of organizations choose to institute anti-takeover amendments to protect themselves against hostile raids. Despite the close geographic proximity, legal and regulatory environments in the United States and Canada are subject to much dissimilarity. In the United States, directors can adopt poison pills without shareholders' consent, however, they need to justify that they are doing it in the best interest of the shareholders and not for their own entrenchment. In Canada, rights plans are also well established and share many common features with their U.S. neighbours, yet some radical differences do exist. First, the questions whether a poison pills can continue to be deployed in the face of a hostile bid is dealt with by provincial securities regulators, as a matter of securities regulatory laws, not in court as a matter of corporate law concerning the division of powers between shareholders and directors. Additionally, in contrast to United States, where takeover bid decisions are made by the incumbent management, Canadian securities regulatory law requires target shareholders to decide “whether to entertain a hostile acquisition proposal”. Interestingly enough, target management of U.S. corporations having a shareholder rights plan in place has a right to simply refuse the offer, while in Canada the question of change of control is inevitable and it is just a matter of time it takes to elicit a better bid. However, recent decisions taken by provincial courts risk to initiate a transition from the current Canadian landscape to a more U.S. oriented approach.

Due to a wide specter of differences between American and Canadian regulations in respect to the defense mechanisms, it is worthwhile to investigate whether the motivations behind the adoption of shareholder rights plans could be affected by these dissimilarities. This study is unique in that it contrasts and compares the use and the market impact of poison pill announcements in the United States and Canada. Furthermore, to my knowledge, it is the only study encompassing such a long period and large sample of companies that have announced their intent to adopt the defense measure between 1982 and 2010. Additionally, no recent studies have been conducted to contrast the market reaction to poison pills adoption in both the American and Canadian markets.

Prior literature focusing on shareholder rights plans reaches controversial conclusions. Early U.S. studies analysing the adoption of the defense plans in 1980s demonstrate a negative market reaction to the announcement news, thus providing support for the managerial entrenchment hypothesis, while other studies find no significant market reaction upon the announcement of poison pills. Canadian literature dealing with poison pills is far less abundant. Bizjak, Case and Mahajan (2000), show that Canadian firms experience an insignificantly positive abnormal return of 0.21% upon the adoption of poison pills.

The empirical results demonstrated in this study reveal that a difference in market reaction upon announcement news exists between the Canadian and the U.S. landscape. It is shown that Canadian companies adopting a poison pill exhibit more positive abnormal returns upon announcement news than their American counterparts. This is largely explained by a more shareholders friendly environment in Canada, where decisions are made by target shareholders and not the board of directors, which is the case in the

United States. Furthermore, a shift from negative market reaction in the early 1980s to positive market reactions in 1990s and 2000s is observed for U.S. target companies announcing the adoption of defense measures. This swing can be partially explained by an increasing number of institutional investors in these firms, giving rise to more control and scrutiny of the management team.

The remainder of the paper is organized as follows. Section 2 focuses on the literature review; section 3 defines and describes different forms of poison pill defenses. The following section 4 puts forward the opposing hypothesis tested in this study. Section 5 and 6 concentrate on data collection and methodology. The remaining part focuses on the empirical results.

2. Literature Review

2.1. U.S. Market

A number of U.S. studies analyzing the impact of the adoption of poison pills was conducted in the late 1980's, scrutinizing the new phenomenon in the M&A field. Two opposing theories were put forward to explain the reaction of stock prices to the pill announcement: the managerial entrenchment hypothesis and the shareholders' wealth maximization hypothesis (Ryngaert, 1988; Malatesta and Walking, 1988; Strong and Meyer, 1990). The managerial entrenchment hypothesis states that management may initiate a pill defense for their benefits, to prevent a change in control, consequently having a negative impact on the share price. On the other hand, the shareholders interest hypothesis argues that pills are adopted in an attempt to maximize shareholders' wealth

by increasing the takeover premium. In this scenario, the adoption of the pill is predicted to be accompanied by an increase in stock price of the target company.

Jarrell and Poulsen (1986) were among the first authors to document the impact of poison pill adoption on the issuing company's stock price. By dividing the sample companies into two distinct groups, based on takeover speculation activity, the authors' empirical results succeed in demonstrating the existence of a statistically significant difference in the price reaction of two groups. For firms with no takeover speculations the effect of the adoption announcement is zero, while the sample subject to takeover activity demonstrates significantly negative abnormal returns around the event, thus rejecting the shareholders' wealth maximization hypothesis.

Despite the widespread use of the defense tactics, most of the American literature documents a negative impact of the adoption on shareholders' wealth, thus supporting the managerial entrenchment theory. Ryngaert (1988) examines a sample of 380 firms that announced the adoption of poison pills between January 1982 and December 25, 1986. The empirical results reveal that upon the adoption news, company's stock price demonstrated a negative response with an average abnormal return being -0.03%, when an entire sample is considered. In addition, Ryngaert shows that firms that successfully prevented hostile takeovers by initiating poison pill defenses suffered a decline of 14.42%, on average, in the six months following the defeat. More importantly, the author distinguishes between many types of these defense tactics and argues that not all pills entrench management, but only the most restrictive versions of these defenses negatively affect shareholders' wealth.

Similar to other studies during the late eighties, Malatesta and Walking (1988) examine the effects of poison pill implementation on shareholders' wealth as well as the characteristics of firms that decide to adopt these antitakeover defence mechanisms. The results obtained from analysing a sample of 118 cases from December 1982 through March 1986, reveal a significant decrease in stockholders' wealth upon the announcement, thus ruling in favor of the managerial entrenchment hypothesis. The authors additionally demonstrate that firms adopting a pill are more likely to have been or become subject to takeover activity than the non-adopting counterparts. They also report interesting results in regard to publications in which the announcement appears. The authors demonstrate that the more popular the source of publication is, such as the Wall Street Journal or the New York Times, the more negative would be the impact of the announcement on shareholder's wealth.

Strong and Meyer (1990) further examined the adoption of shareholder right plans by 146 corporations and their effect on security prices. They demonstrate that firms, which experienced control-related changes within six months following the adoption, experienced a 2.73% increase on average, in the month prior to the adoption. A possible explanation of a significant rise in stock prices could be the takeover speculations taking place during that period. Conversely, the adoption of a poison pill was found to trigger a 2.06% decline in stock prices, leading to a conclusion that poison pills are managerial entrenchment devices. Additional analysis revealed that if changes in control or restructuring were to take place after the defense adoption, it would be accompanied by positive returns subsequent the event. An event study of the control group, including firms that were not active targets of takeover speculations, revealed slightly different

results. The announcement effects were found to be somewhat negative, but not statistically significant. In the six months prior to the announcement, average market-adjusted returns suffered a decline of 3.0%. In addition, in the six months subsequent to the event, the average cumulative effect was found to be -4.5%. Nevertheless, it is reported that exactly half of the companies experienced positive abnormal returns on the announcement date.

2.2 Canadian Market

The Canadian takeover defense landscape differs from the U.S. environment in several ways. The current Canadian regime views shareholder rights plans as temporary measures allowing a target company to seek value-maximizing alternatives to a hostile bid, thus making a change in control a matter of time rather than a choice. In contrast to the U.S., where challenges associated with shareholder rights plans and the separation of control between shareholders and management are scrutinized by the courts, in Canada the responsibilities for controlling the use of defense tactics are laid upon provincial securities regulators. Furthermore, in Canada, in contrast to the U.S. where the decisions can be undertaken by target management without shareholders' approval, the adoption decisions are made by the target shareholders. This discrepancy between the two neighbouring countries' regimes may be the founding stone explaining the difference in the abnormal returns upon the defense announcements.

Unlike a great popularity of poison pills in the American literature of the last century, Canadian studies focusing on these anti-takeover defenses are less common. Studies of the share price reaction to the adoption of poison pills demonstrate opposing results than those obtained in early U.S. empirical tests. In the working paper Bizjak, Case, &

Mahajan, 2000, show that Canadian firms experience an insignificantly positive abnormal return of 0.21% upon the adoption of poison pills. The differing reactions of Canadian and American markets to the adoption of the anti-takeover tactics are the result of existing differences in the structure of poison pills and their regulatory environment.

A study by Hebb and MacLean (2006) concentrates entirely on the Canadian market and aims at understanding whether the adoption of poison pills has an impact on the financial performance of Canadian corporations. Thirty publicly traded Canadian firms that adopted poison pills between the years of 1988 and 1995 were considered. When examining the operating income, empirical results indicate insignificant positive changes in each of the five years following the adoption, thus concluding that the adoption of anti-takeover defense tactics by Canadian corporation had no significant effect on their performance. In fact, the analysis of all other ratios lends support to the "hypothesis that poison pills do little to affect management decision-making". Drastically different results are reached by Johnson & Rao (1997) in their study of the impact of poison pill defenses on the financial performance of American corporations. In the conducted experiment, the authors analyse the influence of anti-takeover amendments " on four major aspects of managerial decision-making: earning power, expenses, investment, and capital structure". Despite the conclusion pointing to the overall lack of negative impact of anti-takeover amendments on the performance of the organization, the authors find an increase in debt structure of the organization upon the adoption of poison pills leading to a significant decrease in the net income ratios. Hebb and MacLean (2006) believe that a few dissimilarities obtained in the two studies are mainly due to the existing differences between the nature of Canadian and American shareholder rights plans.

3. The Description of Poison Pills

Poison pills are highly controversial developments of financial market of the 20th century. Although these securities can take on various shapes and coatings, the main ingredients are fairly the same. The mechanisms aim at economically “poisoning” determined and control-seeking raiders and protect the company from innovative discriminatory take-over bids. A poison pill is defined by Ryngaert (1988) as “any financial device that is triggered by a particular action of an acquirer and results in the assumption of unwanted financial obligations by an acquirer, dilution of an acquirer's equity holdings or loss of the acquirer's voting rights." The shareholders' rights cannot be detached from the shares; neither can they be exercised before the triggering event. The triggering event usually occurs under two circumstances: an acquiring party must get hold of a predefined percentage of common shares (usually varying from 20% to 50%) or a specified number of days must elapse after a raider has launched a take-over bid designed to acquire the defined percentage (Dey & Yalden, 1990-1991). There are four main types of poison pills adopted by American and Canadian corporations: (1) preferred stock plans, also referred to as original plans, (2) flip-over plans, (3) back-end plans and (4) voting plans.

3.1. Preferred stock plans

The first movers in the adoption of poison pills were documented to employ the preferred stock plans. Under this scenario, a dividend of convertible preferred stock is issued to all common stockholders of the potential target. Similarly to holders of common stock, preferred stock holders are entitled to voting rights, translated into one vote per share. Despite that the regular common dividend is reduced in value in order to compensate for

the cost associated with the preferred dividend, the preferred dividend is increased, thus motivating the stockholders to continue holding the preferred stock instead of converting it to common. Upon the triggering of the event (raider acquiring a substantial position, usually between 20% and 50% of common stock), holders are entitled to redeem their preferred stock for cash "at the highest price the acquirer paid for the firm's common or preferred stock in the past year" (Ryngaert, 1988), unless a merger occurs within a short, predefined period of time. In the event of a merger, the rights can be exchanged for the acquirer's voting securities, of the same value. The raider in search of corporate control may encounter a number of substantial problems if its target has a preferred stock plan under its sleeve. If the redemption of preferred shares were to occur, it would have a drastically negative impact on acquirer's wealth. There exists a positive correlation between the tender price and the preferred stock redemption value and a negative relation with acquirer's wealth. Thus, the higher the tender price, the higher the redemption value would be and more losses the raider will suffer. As a result, the existence of these rights would most likely discourage corporate raiders.

3.2. Flip-over plans

Flip-over plans entitle the company to issue shareholders rights allowing for the purchase of its own securities, usually preferred or common stock, at an exercisable price set far beyond its market value. These newly issued rights cannot be exercised until approximately 10-14 days after the raider has acquired or made a bid to acquire a substantial position. Following the accumulation of a predefined triggering amount of targets' common stock, the rights become exercisable. They are then separated from common stock and are no longer redeemable. These plans are particularly harmful to

acquiring parties contemplating a takeover. In the event of a change in control, the right holders can purchase shares in the new company at a significant discount, in some cases reaching 90%, thus making a merger fairly expensive. In some cases, a large shareholder may simply forego the acquisition by first acquiring the control of target company and then transferring target's assets. This approached is referred to as "self-dealing". Yet throughout the years, target companies have found ways to prevent these manipulations by adopting a self-dealing flip-in clause. In this case, "right holders could purchase target stock at a substantial discount, thus partially expropriating the block holder's equity in the target" (Malatesta & Walking, 1988).

Another clause that the target company may decide to adopt is the ownership flip-in clause. This provision allows right holders to buy target stock at a significant discount if the acquirer accumulates a stock amount in excess of the predetermined threshold (usually between 20% and 50% of company's common stock). Consequently, the acquiring party's rights become void and its equity is diluted.

3.3. Back-end plans

Similarly to flip-over plans, back-end plans entitle shareholders of the adopting company with redeemable rights exchangeable for cash or securities with a value exceeding the current stock price. The triggering event allowing the rights to be exercised occurs upon the acquiring party's accumulation of a substantial amount of target's shares. The rights are exchangeable for a back-end price predetermined by the board of directors and found in the rights agreement.

3.4. Voting plans

These specific rights are found to be the most straightforward by Malatesta and Walking (1988), in that they aim at preventing a single party from gaining control of the target firm. In this scenario, the firm issues a preferred stock with voting rights similar to all common stock holders. If one party is to accumulate a predefined ownership threshold, preferred holders, except the acquiring party, would be entitled to supervoting privileges. As a result, the acquirer's vote rights would decrease and he would be prevented from exercising voting control.

3.5. Poison Pills in United States and Canada

With the structure of poison pills continuously evolving, it is salient to mention that different regulatory environments observed in the United States and Canada favour the use of diverse types of poison pills. In fact, a relatively new development, according to Dey and Yalden (1990) that has taken a big spin in the Canadian corporate landscape is the permitted bid provision. The provision allows the acquiring party to bypass the target management and to negotiate directly with target shareholders. “It requires that the bid then be accepted by a majority of the shares not owned by the bidder to avoid triggering a flip-in" (Dey & Yalden, 1990-1991). While the permitted bid provision is widely used by Canadian organizations similarly to the U.S., the procedures that deal with the defense mechanisms have their dissimilarities.

One of the main differences between the two neighbouring countries is the power to control the use of the deterrence mechanism. In the United States incumbent management controls and decides on whether the pill should be issued and redeemed, while in Canada

the decision power lies with target firm's shareholders. In fact, in the United States nearly all plans were adopted by incumbent management without shareholders' approval or government intervention. Conversely, Canadian government grants shareholders with the power of decision concerning anti-takeover defenses and reserves itself the right to confront any organization adopting poison pills without shareholders' approval. Hebb and Maclean (2006) mention that approximately 76% of all Canadian organization adopting a poison pill seek shareholder approval, while the proportion of American firms pursuing a similar strategy is far less overwhelming.

Another important difference between the regulatory tactics in regard of the defense mechanisms is the target's rights to refuse to come to a bargaining table with corporate raiders. U.S. boards of directors are granted with the ability to refuse the offers from potential acquirers by "just saying no". Yet, the board has to stand ready to prove that it does not breach its fiduciary duty by refusing to negotiate with the raider and its decision is in the best interest of its company's shareholders. In some circumstances, a court may conclude that the board's decision is inadequate and prevents shareholders from responding to a wealth maximizing bid. On the other hand, in Canada, the pill serves simply as a delaying tactic which allows the incumbent management to seek out value maximizing alternatives to a hostile bid (Raglan, Gray, & Tory, 2011). More specifically, "a Canadian board of directors cannot just say no, thus once a Canadian target company is put in play, a change in control transaction is likely to occur" (Osler, 2011). Consequently, Canadian boards can be portrayed as agents, seeking the most wealth maximizing offers once the auction for corporate control is initiated.

Since U.S. management has the ability to issue a poison pill without shareholder consent and can reject any offer made by the acquiring parties, many opponents believe that the defenses are adopted in management's best interest that often diverge with shareholders' benefits. On the other hand, the Canadian regime being less lenient towards the incumbent management is considered to benefit the shareholders of the target company which decide to institute the defense mechanism.

It is also worthwhile noting that the market for corporate control in the United States is extremely large; in fact from January 1, 1982 to January 1, 2011, 4,681 companies had adopted 8,874 poison pills. The takeover market in Canada is far less abundant than in the United States with 481 companies adopting 674 poison pills from January 1, 1988 to January 1, 2011. Dey and Yalden (1990-1991) have demonstrated two reasons for that phenomenon: the share-ownership profile and the takeover bid regime. The authors show that in 1983, approximately 80% of the companies that traded on the Toronto Stock Exchange had a shareholder with legal or effective control, thus allowing only 20% of the publicly traded companies to become a potential target.

In Canada, provincial security regulators are responsible for dealing with the proper conduct of takeover bids and poison pill defenses, as opposed to the United States where securities legislation falls within federal jurisdiction, where the court's main focus is the division of power between shareholders and the board of directors. The National Policy No. 38 issued in 1986 and the subsequently issued National Policy 62-2002 aim to protect the bona fide interests of target shareholders in Canada and have influenced the decisions of various Canadian securities commissions. The takeover bid regime in Canada has played a primary role in prohibiting the use of several discriminatory

acquisition tactics, such as two-tier front-end loaded bid, and has promoted equal and fair treatment of target shareholders. Despite the code's aim at equal shareholders treatment it fails to provide a guarantee that shareholders will receive a fair offer in a time allocated to them. For instance, the Ontario Securities Act code" prohibits all post-bid acquisitions during a 20-day period after the bid" (Dey & Yalden, 1990-1991), thus providing target shareholders with only 21 days to bring any interested parties to the bargaining table and reach a wealth maximizing agreement.

A few recent destabilizing decisions made by Alberta Securities Commission (ASC) and Ontario Securities Commission (OSC) had taken an unexpected departure from the traditional Canadian approach. More specifically, the *Pulse Data* and the subsequent *Neo Materials* cases demonstrated that the provincial securities commissions allowed a poison pill to remain in place for an extended period of time, " thereby suggesting that it was no longer a question of when, but if the poison pills will be terminated" (McGlaughlin, 2012), a decision that took an astonishing swing towards the U.S. approach.

4. Hypotheses

In line with previous academic research on poison pills, two opposing hypotheses are put forward in order to analyse the impact that the announcement of poison pills has on the adopting company's share price. The shareholder rights agreements have been spurring a heated debate from all sides on whether they facilitate or hamper shareholders' wealth maximization. Critics argue that poison pills make hostile takeovers too costly, denying shareholders the appropriate premiums for their transactions and thus entrenching the management. Conversely, proponents claim that the mechanism enables managers to

obtain the best possible offer for shareholders in control transactions. Management continuously claim that shareholders' wealth maximization is their primary purpose when adopting the defense instruments. Nevertheless, the opponents believe that managers purposely misstate their true motivations and contend that pills are adopted to serve their personal goals. Thus, the two hypothesis put forward in the study are: the managerial entrenchment hypothesis and the shareholders interest hypothesis.

4.1 Managerial Entrenchment Hypothesis

The managerial entrenchment hypothesis accentuates the conflict of interest arising between the incumbent management and the firm's shareholders when the takeover could lead to a potential displacement of the management team or a loss in compensation. In cases where management feels that the takeover could result in a loss of their benefits, it may decide to adopt the defense mechanism despite the value increasing changes in control. It is argued that the benefits of adopting a defense mechanism have to be higher than the costs associated with the procedure. Managers that have a large percentage of stock ownership could be reluctant at adopting the pill, due to its negative impact on the share price. Thus, under the managerial entrenchment hypothesis, during the adoption decision, the benefits associated with “reducing the probability of a takeover" should always outweigh the costs the incumbent management bears due to stock price decline. Since markets are believed to be efficient and rational, all available information will be immediately incorporated into stock prices. As a result, under the managerial entrenchment hypothesis, the announcement of poison pill’s adoption should be accompanied by a decline in shareholders' wealth, leading to a downward plunge of the target company's stock price.

In the United States the decision behind the poison pill defense adoption lies with the directors and is rarely subjected to shareholder vote, implying that the plans can be adopted without shareholders' approval, possibly for wrongful motives serving managerial interests. Consequently, it could be hypothesized that the announcement news will be associated with a negative stock price return for the sample of U.S. companies.

4.2 Shareholders' wealth maximization Hypothesis

The shareholders' interest or otherwise known as the shareholder's wealth maximization hypothesis supports the idea that company's managers engage in control transactions that would maximize the value shareholders receive in exchange for their shares. In this scenario, the pill is adopted in order to negotiate value maximizing deals for the stockholders and secure higher control premium in an event of a takeover. It is therefore assumed that firms with poison pills are successful at obtaining higher premium paid in takeovers. In the United States where two-tier takeovers are possible, the pill can act as a deterrent mechanism to prevent shareholders from selling their shares at a lower price than could be otherwise obtained in the process. When two-tier takeovers are possible, shareholders could be caught up in a prisoner's dilemma. Thus, poison pills could be used against two-tier of partial tender offers for control and enable managers to act as agents in negotiating wealth maximizing deals for their company's stockholders.

Oppositely to the regulations in the United States, Canadian security law regulators allocate the decision power concerning the adoption of poison pills to firm's shareholders. In fact, in Canada once a company receives a takeover bid, the change in control is almost unavoidable, thus eliminating any possibility of managerial entrenchment. Therefore, it would be safe to assume that the decisions regarding the defense adoption

are in line with shareholders' interest and thus support the wealth maximization hypothesis. Under this hypothesis, the announcement event should be accompanied by increase in target firm's stock price.

5. Data Collection

Data on all poison pills issued between January 1st, 1983 and December 31st, 2010 was collected for American and Canadian corporations. A total of 672 poison pill announcements by Canadian organizations and 8,862 poison pill announcements by American companies were documented. The first U.S. poison pill was introduced by Martin Lipton, a well-known takeover defender in December 1982. In Canada, this defense strategy arrived a few years later, in October 1988 when first used by Inco Limited and instantaneously sparked a heated debate on the conduct of target companies in the face of a hostile bid.

Out of the total number of poison pill announcements, 452 were first time plans adopted in Canada and 4,238 first issue poison pills adopted in the United States. A significant number of companies in the U.S. were classified as second-time adopters, which either replaced or extended the pill scheduled to expire.

All poison pill cases were retrieved from Securities Data Company (SDC) Mergers and Acquisitions database along with the announcement and adoption dates. Table 1 contains information on the shareholder rights plans sample. In 12 U.S. cases, the adoption date and the tender offer date were less than two weeks apart, thus the tender offer event could have had an impact on the abnormal returns associated with the announcement event. In order to avoid any inaccuracies associated with confounding events, we exclude all cases

for which the adoption and the tender offer date are less than 14 days apart. The same exercise is performed on the Canadian sample, where 2 events are removed.

Table 2 and 2a demonstrate the total number of poison pills announced during each year in the sample period. In the United States nearly 44% of total number of defenses in the sample are announced from 1990 to 1999, while in Canada most of the events occurred from 2000 to 2010, nearly 82%. Compared to the United States, only 1.34% of poison pill announcements took place in the 1980s, while 20.45% of the events occurred in the United States during the same time period. This discrepancy can be explained by the earlier introduction of poison pill defenses in the U.S. financial markets with the first one being adopted in early 1983 as opposed to the first Canadian pill being adopted by Inco in 1988.

The event study for the United States cases was conducted using the Eventus Software from Wharton Research Data Services, where the daily returns for all companies in the sample were obtained from Center for Research in Securities Prices (CRSP) database. Daily returns for the Canadian sample were obtained from the CFMRC/TSX database. Stock prices for companies missing in the database were obtained from Yahoo Finance. Return data was calculated using daily closing prices adjusted for stock splits and dividends. As a proxy for Canadian market portfolio, the daily return on the S&P/TSX Composite index was used. In line with previous empirical tests, the market model technique is used to estimate abnormal returns on the announcement day. The estimation period is set to 255 trading days and ends 46 days before the event date, thus eliminating any effects that may be associated with the event itself.

In order to conduct the analysis of takeover activity following the poison pill adoption, all disclosed and undisclosed M&A transactions and specifically tender offer transactions were obtained from Securities Data Company (SDC) Mergers and Acquisitions database for all American and Canadian companies that have adopted a poison pill within the studied period. Other types of transactions, including leverage buyouts, exchange offers, spinoffs, self-tenders, etc. were excluded from the analysis.

6. Event Study Methodology

To test the two contrasting theories, the managerial entrenchment and the shareholders wealth maximization hypotheses, an event study methodology is employed to capture the initial market reaction to the announcement of shareholder rights plans by U.S. and Canadian targets.

This method is widely used by academics and practitioners and can be also employed in order to test the market efficiency hypothesis which states that all available information is incorporated into stock prices in a timely manner. Assuming markets are rational, the effect of the event will be reflected in security prices immediately, the short-term study will therefore be sufficient to analyse whether the pill is a wealth maximizing or dismantling tool. For each firm included in the sample an event window that captures the announcement effect is identified. Day t=0 represents the date of the announcement of an intent to adopt a poison pill by the target company. As previously mentioned, under the managerial entrenchment hypothesis, the announcement or the adoption of the poison pill is associated with a decline in stock price, thus demonstrating that management can employ a deterrence mechanism in order to defeat value increasing changes of control.

Conversely, the shareholders' wealth maximization theory implies an increase in stock return upon the announcement or adoption of the defense measure.

6.1. Event Windows and Estimation Period

Event window determines the period length (measured in days) over which the abnormal return associated with the event os measured. If the chosen event window is too long, we may not be able to capture the impact of the specific event. It is important to examine whether the mean abnormal returns for the periods around the event are equal to zero. For instance, if the event is anticipated, some abnormal returns associated with the event in question can be detected in the pre-event period. It is also salient to consider the day after the announcement because information might have been released after the market close and reached the shareholders just then. Due to that phenomenon, the information will be reflected in the prices the following day.

It is also crucial to test for market efficiency, and more specifically how quickly the information revealed at the time of the event is incorporated into the stock prices. If nonzero abnormal returns are found in the post-event periods, this will constitute the evidence for market inefficiency and give rise to a profitable trading strategy.

The estimation period used in the study is set to 255 trading days and ends 46 days before the event date in order to eliminate any effects that may be associated with the event itself.

6.2. Abnormal returns calculations

To examine the effect of the announcement of the adoption of poison pills, the abnormal returns during the predefined event windows are calculated. Abnormal return is defined

as the difference between the actual and expected returns, where expected returns are normal returns under the consideration that the event did not take place. Therefore, abnormal return is considered to be a measure of the change in shareholders' wealth associated with the event. The following formula is used to calculate abnormal returns (following the methodology of Kothari & Warner, 2006).

$$e_{it} = R_{it} - K_{it} \qquad (1)$$

Where e_{it} is the abnormal return of stock *i* on time *t*, R_{it} is the actual return of stock *i* on time *t* **and** K_{it} is the expected return of stock *i* on time *t*.

In order to estimate the expected returns on a security, the market model is used. In addition, both equally weighted and value weighted indices, representing the market returns, are used to test for the robustness of the results. The market model states that the return on security is dependent on the returns of the market portfolio. The extent to which the variation in actual returns is captured by the returns of market portfolio is measured by β. The market model is:

$$R_{i,t} = \alpha_i + \beta R_{m,t} + \varepsilon_{it} \qquad (2)$$

$$\textit{Where } \mathbf{E}(\varepsilon_{it}) = 0 \textbf{ and Var } [\varepsilon_{it}] = \sigma^2 \qquad (3)$$

Where $R_{i,t}$ is the expected return on security *i* on time *t*; $R_{m,t}$ is the return of the market portfolio and ε_{it} is the error term.

The cumulative average residual method (CAR) is used to obtain the abnormal performance measure during the event window. First, cumulative abnormal return that is

defined as the sum of the abnormal returns for the total period in the event window is calculated using the following formula:

$$CAR_i = AR_{i;t+1} + \ldots + AR_{i;\,t2} \qquad (4)$$

From this formula, it follows that the cumulative average abnormal return is:

$$CAAR = \frac{1}{N}\sum_{i=1}^{N} CARi \qquad (5)$$

In order to check for the robustness of the results, the market- adjusted model is used, once again making use of both equally-weighted and value-weighted indices. The model calculates above market returns using the following formula:

$$AR_{it} = R_{it} - R_{mt.} \qquad (6)$$

6.3. Statistical tests

The Patell Z test as well as the sign test is conducted in this event study, in order to capture the results of both parametric and non-parametric tests in determining the statistical significance of mean cumulative abnormal returns. Parametric tests, such as the Patell Z test, rely on the assumption that individual firms' abnormal returns are normally distributed. The rank test is a non-parametric test that enables us to account for the magnitude of abnormal returns; however, it does not require the normal distribution assumption that is needed for the t-statistic test to be valid.

7. Empirical Analysis and Results

7.1. Stock Price Reaction to Poison Pill Announcement

7.1.1. U.S. Entire Sample Analysis

The entire U.S. sample comprises of 8,862 events of poison pill announcement from January 1, 1983 to January 1, 2011. A total of 932 security events were dropped due to lack of return data and 12 events were disregarded due to the presence of confounding tender offer events, leaving 7,918 useable events. A market model along with the value-weighted index is used to test the hypotheses. Table 3 presents excess returns for the sample of U.S. poison pill announcements with Panel A displaying the results for all U.S. issues. For 7,918 events, the average cumulative abnormal return (CAR) is 2.57% with a t-statistic of 35.62 for a 3 days window centered on the announcement event. Firms' positive excess returns associated with poison pill adoption news support the shareholders' wealth maximization hypothesis, arguing that the pill increases management's bargaining power in response to takeover bids, thus allowing the target to search for a higher control premium with the ultimate purpose of maximizing shareholders' wealth. These results are contrary to the findings of the early literature focusing on the adoption of poison pills by American corporations. As previously noted, negative CARs are observed for the early adopters suggesting the presence of managerial entrenchment (Ryngaert, 1988, Malatesta and Walking, 1988). Yet, these studies focused on analysing the effect of poison pills adopted in the early 1980s; therefore, an analysis of market reaction during different time periods is necessary to explain a shift in market response. For a longer event window [-2; 2], abnormal returns are more positive, 2.93%

and significant at a 0.001 level. Panel B presents the results solely for first-time U.S. issues. The sample size is reduced to 3,780 adopting companies and the associated cumulative abnormal returns are found to be less than for the entire sample. For a 3 days event window, centered on the announcement, the mean cumulative abnormal return is 0.63% with a corresponding t-statistic of 5.493. Yet again, the strongly positive results demonstrate a powerful support for the shareholders' wealth maximization hypothesis. For the sample of second-time issuers, demonstrated in Panel C, strongly positive excess returns of 4.34% (t-value= 43.007) are associated with the event. According to Johnson & Meade (1996), if the pill was adopted after the target firm had any anti-takeover amendments in place the market has already "impounded its assessment of the cost of management entrenchment into the stock price at the time of the initial defense adoption". Furthermore, the authors document an existence of a statistically significant difference between two groups of companies, with targets with no prior anti-takeover defenses having more negative reactions. Consequently, in our case, we can confirm that companies adopting a poison pill for the second time are subject to more positive abnormal returns upon the announcement event.

7.1.2. U.S. Sub-Periods Analysis

To understand whether negative excess returns were in fact associated with early adopters, average excess returns for firms announcing poison pill defenses from January 1983 to March 1986 are measured, replicating the same period used in the Malatesta and Walking study. For a total of 127 firms, I find that the 5 days mean cumulative abnormal returns are in fact negative, -0.84% with a t-value of -2.335, significant at a 1% level, thus indicating that on average the announcement news in the early 1980s were

associated with the reduction in shareholders' wealth. The results are shown in Table 4. In line with early research on poison pills, relatively negative excess returns support the managerial entrenchment hypothesis indicating that these measures are adopted in the best interest of the incumbent management. Considering the fact that in the United States, the management can take the decision in regard to the adoption of the defense without shareholders' approval, negative excess returns are not surprising given the ongoing clash between the two groups. By adopting antitakeover amendments, target management reduces its employment risk and insulates itself from competition in the takeover market (Kesner & Dolton, 1985) (Mahoney & Mahoney, 1993).

Mean cumulative abnormal returns for the sub-period of 1983 to 1989 are more positive (Table 4, Panel A). For the 5 days event window centered on the announcement date, mean CAR is slightly positive, 0.40% with a t-value of 3.196, significant at a 1% level. Numerous poison pills were adopted from 1986 to 1989; the sample size between the first sub-period spanning from January 1983 to March 1986 and the second sub-period from January 1983 to December 1989 differs by 1,585 events.

For the period of 1990 to 1999 and a sample of 3,482 events, the mean cumulative abnormal return during the 5 days event window is significantly positive, 2.50% with a t-value of 19.699. Furthermore, the mean CAR for the period of 2000 to 2010 and a 5 days event window is 5.07% with a t-value of 24.914. The results suggest that throughout the years, excess returns become significantly more positive and thus more aligned with shareholders' wealth maximization hypothesis. Despite the fact that in the United States shareholders' approval for the adoption of poison pills is not necessary, the results in Table 4 indicate that during more recent periods, managers acted in the bona fide of the

shareholders. Similarly to full sample results in Table 3, first-time issues demonstrate lower abnormal returns upon the announcement than the second-time adopters. In order to understand this phenomenon, I run an event study analysis for the Canadian sample taking into consideration that in Canada the legislation requires a poison pill to be approved by firm's shareholders, a main distinction from the U.S. market.

7.1.3. Canada Full Sample Analysis

The Canadian sample comprises of 672 poison pill announcements. To capture the overall effect of shareholder rights plans announcement on shareholders' wealth, mean cumulative abnormal returns for the entire Canadian sample are calculated using the market model and the S&P/TSX composite index. It is important to acknowledge that 97 events were dropped from the event study due to the lack of necessary data, leaving 573 security-events with useable returns. Time is measured from the event day, which is the announcement of the intent to adopt the defence mechanism. The results are shown in Table 5. For the event window period [-1, 1], centered on the announcement date, the mean cumulative abnormal return is 3.78%, significant at 0.1% level (t-value=4.477). Consequently, the null hypothesis, stating that abnormal returns around the event are equal to zero, is rejected. The positive value of the abnormal returns supports the shareholders' wealth maximization hypothesis, reporting that managers act in the best interest of shareholders provoking a positive market reaction upon the announcement of a poison pill. The results are in accordance with the nature of poison pills regime in Canada, where target shareholders are granted with the decision making power concerning the adoption of the defense mechanisms. Consequently, significantly positive returns around the announcement event can be directly attributed to the Canadian

regulatory regime aiming at shareholders' protection. Over a 5 days window, the excess returns are reported to be greater, 4.05% with a t-value of 5.100. The Canadian sample's abnormal returns are also higher than their U.S. counterparts, potentially implying that Canada has a more shareholder friendly environment. Unlike the U.S., where poison pill adoption decisions are made by incumbent management, Canadian companies give full decision power to its shareholders, thus establishing a more shareholders' value-maximizing approach.

7.1.4. Canada Sub-Periods Analysis

To further analyze the Canadian approach, I run an event study for different sub-periods. The results are presented in Table 6. For the entire Canadian sample, the results are presented in Panel A. The first period spanning from the first poison pill announcement by Inco in 1988 to the end of 1989 contains only 6 useable security-events. As a result, the returns could be affected by outliers. Mean cumulative abnormal returns for 3 or 5 days windows, centered on the announcement date, are 3.69% with t-values of 2.840 and 2.131 respectively. For the sub-period of 1990 to 1999, the sample consists of 95 events and mean excess returns are relatively lower, 1.04% for (-2; 2) event window. For the most recent period, 2000 to 2010, abnormal returns are the highest, being 4.66% for the 5 days event window with a t-value of 4.281 significant at a 0.0001 level. Panel B demonstrates the results solely for the first-time Canadian issues. Average excess return for the period of 2000 to 2010 is higher when compared to two other sub-periods. For the event window spanning from 2 days before to 2 days after the announcement of a poison pill, the mean excess return is 6.12% with a t-value of 3.835. In all analyses, the weakest abnormal returns occur in the 1990s.

7.2. Institutional Ownership

In the past decades, a concept of shareholder activism has emerged in the U.S. financial market environment. According to Gillan and Starks (2000) the primary role of activist shareholders has been to pressure the management of struggling firms to improve on their performance, thus striving to increase shareholders value. Shareholder activism by institutional investors has become particularly prominent with institutional ownership increasing from approximately 24.2% in 1980 to almost 50% by the end of 1994 (Sias & Starks, 1998). Consequently, large blockholders were found to take on a progressively a more active role as shareholders in U.S. financial markets. With institutional investors holding a majority of shares in public U.S. companies, a number of market constraints were imposed on target's ability to use poison pills as a means to maintain company's independence. A growing number of institutional investors revised their passive shareholders role to become more active players in the "governance of their corporate holdings" (Gillan and Starks, 2000). It has been demonstrated by Jensen & Meckling (1976) that the role of institutional shareholder activism arises due to the conflict of interest between company's managers and shareholders. Revolutionary rules passed by the Securities Exchange Commission in 1992 allowed for a direct communication between company's shareholders, thus rejecting a vital need for expensive proxy proposals. These measures have also pushed the shareholders to have more direct negotiations with company's management instead of heavily relaying on proxy proposals. The evolution of institutional ownership in the U.S. financial market landscape was often examined in the context of Berle-Means corporate model. The key characteristic of this model is that " as a company's equity is held in ever diminishing amounts by ever more

numerous shareholders, the fragmentation effectively results in a surrender of control of a company by the shareholders to its management" (Wingerson & Dorn, 1992).

An increasing importance of shareholder activism along with a more scrutinized approach undertaken by institutional investors could have influenced the poison pill adoption process in the United States. Market constraints imposed by institutional shareholders on target's ability to use poison pills and block hostile bids out of self-interest could have altered the perceived role of poison pills from shareholders' harming device to a bargaining tool. Previous event study results, demonstrate a shift in market reaction to poison pill announcement from relatively negative returns over a 5 days window centered on the announcement date from 1983 to 1986 period, to strongly growing positive abnormal returns in the 1990s and 2000s. Additionally, the increase in institutional ownership throughout the years is indisputable. Graph 1 demonstrates the mean proportion of institutional ownership in sample target companies in the quarter before the announcement date. The increase is non-monotonic, yet on average, in the 1980s the mean institutional ownership was 38.15%, rising to 40.44% in the 1990s and reaching 46.68% in the 2000s. Institutional ownership increased from about 30% in 1983 to nearly 50% in 2009, a trend similar to that observed in Sias and Starks (1998). As noted in the event study results, the highest 5 days CAR of 5.07% is found in the period of 2000 to 2010. For the same event window, the abnormal returns for the period of 1990 to 1999 were determined to be 2.50% and 0.40% for the period of 1980-1989.

A test to establish a possible relationship between the abnormal returns associated with the announcement of poison pills and the level of institutional ownership in the adopting companies is therefore necessary.

Investor disclosure in public companies is mandatory as required by securities market regulations. The data on institutional holdings of stocks are based on the quarterly reports in Form 13F filled to the Securities Exchange Commission (SEC). It is retrieved from Thomson-Reuters Institutional Holdings (13F) database, formerly known as CDA/Spectrum 3 4 database and contains ownership information by institutional managers with $100 million or more in assets under management. Institutional investors included in the database are insurance companies, investment companies such as mutual funds, investment advisors, pension funds, and university endowment funds. Thomson Reuters database divides all institutions into five different types:

Type 1- Commercial Banks;

Type 2- Insurance Companies;

Type 3- Investment companies, mainly mutual fund management companies;

Type 4- Independent Investment Advisors, such as investment banks, asset management companies, brokers private wealth management companies, others;

Type 5- Others (pension funds, university endowment funds, most of hedge funds, etc).

The U.S. institutional ownership data spans from the first quarter of 1983 to the last quarter of 2010. Only stock described as COM, CMA, CMB and CMC are included in the sample.

7.2.1. Influence of Institutional Investors' ownership and firm characteristics on firm's cumulative abnormal returns

To establish whether a statistical relationship exists between the proportion of institutional investors in the target firm and the cumulative abnormal returns associated

with poison pill adoption, I run a number of regressions, controlling for firm's performance and characteristics as well as for governance variables in the fiscal year before the poison pill announcement year. The U.S. poison pill sample consists of 2,744 adoptions of original pills for the period of 1983 to 2010 for which the institutional ownership data exists on Thomson-Reuters Institutional Holdings (13F) database. In order to avoid any discrepancies in the sample events, companies with an institutional ownership of less than 5% and more than 100% are removed. Furthermore, the outlier observations of cumulative abnormal returns (CARs) of more than 30% during 5 days window centered on the announcement date and less than -30% were left out from the study. In the analysis, I use solely the first-time issues in order to mitigate any effects associated with the second-time adoption by the same target company.

To control for company specific and governance related variables, a second model with seven explanatory variables is employed.

7.2.1.1. Firm Performance and Control Variables

Compustat and Center for Research in Security Prices (CRSP) data is used to obtain firm specific performance variables. Annual accounting data is utilized to calculate the return-on- assets (*ROA*) ratio and Tobin's Q (*Tobin_q*). ROA is calculated as the operating income before depreciation divided by firm's total assets (Bhagat and Bolton, 2008; Barber & Lyon, 1996)

Tobin's Q is the market value of firm's equity and the book value of liabilities divided by firm's total assets (Schligemann, Stultz and Walking, 2002; Loughran and Wellman, 2009).

Consistent with previous research by Khanna and Tice (2005), Bebchuk, Cohen and Ferrell (2004), the leverage is computed as total long term debt divided by market value of the company.

A proxy for firm size (*Size*) is calculated by taking the natural logarithm of firm's total assets. It is particularly important to control for firm size since different antitakeover provisions can influence the takeovers of large firms (Agrawal & Mendelker, 1990). Additionally, a variable accounting for the amount of dividends (*DVT)* paid by the target firm is included in the analysis. By paying out dividends, firms shield themselves from potential agency problems, since the retention of earnings would have given incumbent managers access to large sums without access to investment opportunities and no additional monitoring.

All firm specific characteristics are taken from the fiscal year proceeding the poison pill announcement year.

7.2.1.2. Governance Variables

Institutional ownership has been the center of many research papers focusing on shareholders activism. It has been argued that it can influence the stock reaction to antitakeover proposals (Brickley, Lease and Smith, 1994). It is therefore expected that the higher level of institutional shareholders will positively affect the stock price reaction upon the announcement (Jarrell and Poulsen, 1987; Brickley, Lease and Smith, 1994). Large institutional investors invest more capital in monitoring expenses and thus increase their chance in "uncovering the intended motive for the antitakeover provision" (Sundaramurthy, Mahoney, & Mahoney, 1997). Institutional ownership (*Instown*) is defined as the proportion of the firm's outstanding shares held by institutional investors at

the end of the quarter before the poison pill announcement event took place. Total shares outstanding (*Shrout3)* are defined as company's total shares outstanding as of file date (*fdate)*.I expect that the abnormal returns associated with the announcement of poison pills will be greater for firms with higher proportion of institutional shareholders.

Governance E index is also included in the multiple regression analysis. Developed by Bebchuk et al. (2004), the E index is an entrenchment index based on six provisions: staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments. A strong negative statistical relationship was documented between the entrenchment index and large abnormal returns from 1990 to 2003. Each company is assigned a score varying from 0 to 6, depending on the number of provisions that the company has in place during a given year. Additionally, the authors established an existence of a strong negative correlation between IRRC provisions and firm's stockholder returns during the period of 1990 to 2003. Based on the nature of the index, I believe it can be used to establish an association between shareholders' wealth and the decision to adopt a poison pill. I hypothesize a negative association between mean cumulative abnormal returns (*CARs*) and the E-Index, implying that higher levels of entrenching provisions would cause lower abnormal returns on the announcement date.

Summary Statistics are shown in Table 7. The sample size is reduced to 266 observations due to inclusion of the E index, for which data spans from 1990 to 2003, additionally; all control and governance variables are recorded for the year preceding the announcement of poison pill, which reduces the sample size even further.

An OLS regression is run to analyse a relationship between companies' cumulative abnormal returns (*CARs*) and the proportion of shares held by institutional owners (*InstOwn*) in the target company. The dependant variable, *CARs*, is the cumulative abnormal return over a 5 days window (-2; 2) centered on the announcement event. The explanatory variable, *InstOwn,* is the proportion of company's shares held by institutional investors in the adopting company.

$$\mathbf{CARs} = \alpha + \beta_1 (\mathbf{InstOwn}) + \varepsilon, \qquad (7)$$

Additionally, a multiple regression, controlling for firm specific variables and taking into account governance variables is run.

$$\mathbf{CARs} = \alpha + \beta_1 (\mathbf{InstOwn}) + \beta_2 (\mathbf{Tobin's\_Q}) + \beta_3 (\mathbf{Size}) + \beta_4 (\mathbf{LTD}) + \beta_5 (\mathbf{ROA}) + \beta_6 (\mathbf{DVT}) + \beta_7 (\mathbf{E\_Index}) + \varepsilon, \qquad (8)$$

7.2.2. Empirical Results

The results for a simple OLS regression demonstrated in Table 7a indicate that the coefficient of the explanatory variable, *InstOwn*, is 0.00727 with a t-value of 1.88. The coefficient is positive and marginally significant at a 6% level, suggesting an existence of a positive relationship between the abnormal returns documented upon poison pill announcement and the proportion of institutional investors in the adopting firm. These results lead us to believe that higher levels of institutional ownership in a firm are associated with higher abnormal returns on the announcement day. The market perceives firms with a higher proportion of institutional investors to be more shareholders oriented and thus to have a less significant gap between managers' and shareholders' interests.

The results are in line with the shareholders' wealth maximization hypothesis suggesting that poison pills are adopted to increase the bargaining power of the target and benefit its shareholders. It can be hypothesized that the rise of institutional ownership in target corporations, over the years, positively affected the decisions behind poison pill adoption. In other words, better communication which diminished the existing barrier between shareholders and the management team resulted in enhanced incentive alignment.

Model 2 includes solely firm-specific control variables, yielding the results for 1660 target companies. Only the size *(Size)* and the long-term debt (*LTD)* variables appear to be significant with a negative coefficient of -0.00321 and a t-value of -1.77 and a positive coefficient of 0.01333 and a t-value of 1.70 respectively. Larger firms are often faced with greater agency problems indicating a stronger divergence between the interests of firm's shareholders and its management. As suggested by Sundaramurthy et al. (1997), large target companies are subject to more negative stock market reaction upon the announcement of antitakeover provisions than their smaller counterparts. In fact, empirical results suggest that the market may regard various antitakeover provisions to "be particularly effective in lowering the probability of a takeover" (Sundaramurthy, Mahoney, & Mahoney, 1997). Furthermore, our study suggests that target firms with a greater proportion of leverage (*LTD*) are subject to larger abnormal returns upon the announcement of poison pills. James and Bonnie (2003) analyzing the way in which poison pill securities and long-term debt affect the level of shareholders wealth also find a positive association between CARs and long-term debt, thus suggesting that managers who employ both a poison pill and higher debt levels benefit from greater bargaining power. More specifically, hostile raiders will be required to disburse a higher amount for

targets with large levels of debt either through higher premiums to target shareholders or direct payments to target bondholders. Additionally, Stulz (1988) demonstrates that target shareholders "receive higher bids as debt levels increase". A positive association found in our study is therefore in line with previous empirical results.

Model 3 is a multiple regression which includes firm-specific and governance variables, except for the institutional ownership (*InstOwn*) explanatory variable. The sample size comprises of 259 events due to the inclusion of the entrenchment index (*E_Index*). A negative coefficient of Tobin's Q, β= -0.00310 with a t-value of -2.68, significant at a 1% level establishes a negative relation between the explanatory variable and the dependent abnormal returns variable (*CARs*).

Alongside, the entrenchment index *(E_Index*) has a negative coefficient of -0.00316 with a t-value of -2.00, significant at a 5% level. The negative relation confirms the hypothesized association between the explanatory and the dependant variable, indicating that higher amount of defensive provisions in the target firm result in lower abnormal returns upon poison pill announcement.

Model 5 includes all company-specific and governance explanatory variables. A great number of events are dropped due to the inclusion of the E-Index, leaving 259 useable CARs. The regression results for model 5, described in Table 7a, suggest that the coefficient of the institutional ownership *(InstOwn)* became more significant β_1=0.02131 with a t-value of 2.59. A strong statistical relationship between the proportion of institutional investors and the abnormal returns around the announcement date could potentially explain the increase in CARs from earlier 1990s to 2000s. Additionally,

Graph 1 suggests a rising trend in the percentage of institutional investors in poison pill adopting companies. I expect that higher entrenchment index scores will be associated with more negative abnormal returns during the announcement window. True to the hypothesis, a negative statistically significant coefficient of the E Index (β= -0.00310) with a t-value of -1.98, significant at a 5% level, confirms an existence of a negative relationship between the abnormal returns and the entrenchment index. Higher E index scores indicate a higher degree of managerial protection from the discipline of the takeover market (John & Litov, 2010), thus higher levels are related to stronger managerial entrenchment. The regression results confirm that firms with lower abnormal returns around the poison pill adoption date are characterized by a highly entrenched incumbent management. The R^2 along with the adjusted R^2 for Model 5 are 7.34% and 4.75% respectively, while the model is significant at a 1% level with the F-value of 2.84.

Simple and multiple regressions employing a dummy for institutional ownership variable are run as robustness tests in order to control for linearity. Table 7b, shows the regression results for two scenarios:

1) Institutional Ownership is equal to 1 if *Instown* ≥ 50%, meaning that at least 50% of target firm's outstanding shares are held by institutional investors; and is equal to 0 if the proportion of institutional investors is less than 50% (*Instown* < 50%);

2) Institutional Ownership is equal to 1 if *Instown* ≥ 43%, which is the median institutional ownership proportion in our sample and is equal to 0 if the proportion of institutional investors is less than the median proportion of 43% (*Instown* < 43%).

The robustness results indicate that when the institutional ownership's dummy uses a threshold of 50%, in the simple OLS regression, the explanatory variable is positive with a coefficient of 0.00338 and t-value of 1.97, statistically significant at a 5% level. These results are consistent with the ones obtained for Model 1, where *Instown* is the proportion of target's outstanding shares owned by institutional shareholders. Conversely, when the dummy is used with a threshold being the median institutional ownership of 43%, regression results are not found to be significant (Model 1b).

After establishing that a positive statistical relationship exists between the abnormal company returns and the proportion of institutional shareholders in the adopting company, additional event study analysis, distinguishing between firms with minority and majority institutional ownership is performed in order to analyze the extent to which a higher proportion of institutional shareholders affect company's excess returns around the announcement dates. The results are presented in Table 8. For firms where institutional investors hold between 5% and 49% of company's shares (minority group), the mean cumulative abnormal return during a 5 days window centered on the announcement date is 0.91% with a t-value of 4.398, significant at a 0.001 significance level. Conversely, mean cumulative abnormal return for companies where institutional shareholders are dominant (more than 50%), is 1.37% with a t-value of 4.487 for the same event window. These results suggest higher excess returns for firms with majority institutional investors when compared with firms with a lower level of institutional shareholders. The mean differences t-test is performed to establish whether any statistical difference between the results of the two groups exists. The results from Table 8a indicate that the difference between the results of the two groups present not significant.

7.3. Takeover activity prior to and following poison pill adoption by target companies

The American M&A market is far more buoyant than the Canadian landscape. The statistics demonstrated in Table 9 suggest that 134 American companies which adopted a poison pill between January 1980 and December 2010 received at least one tender offer in the 12 months preceding the adoption date, while 119 U.S. companies received at least one tender offer in the 12 months following the adoption of the takeover defense mechanism. Conversely, only 15 Canadian companies were subject to a tender offer in the 12 months prior to the adoption date and 13 companies in the year following the poison pill adoption.

It is salient to note that U.S. tender offers received in the pre-adoption period mainly had a friendly attitude (71.64%) implying that the raider generally informs the board of directors about the forthcoming offer made for the outstanding shares of the target company. Following the tip, the target board of directors can advise its shareholders on the future steps regarding bid acceptance or rejection. If target shareholders are advised to accept the offer made by the acquirer, the tender offer is considered to be of a friendly fashion. The amount of friendly tender offers in the United States increased from 72% in the pre-adoption period to nearly 90% in the post-adoption phase. The growth of friendly tender offers is logical as once the pill is put in place it is more expensive for the raider to acquire all remaining outstanding shares of the company without the consent of target board of directors. In the United States, unlike Canada, the board is in full control of the poison pill that they adopt and therefore can decide whether the pill should be triggered or not. Bypassing the target board could lead to a significant cost to the acquirer. Thus,

the raider would be more inclined to negotiate with the management in a friendly fashion to avoid swallowing the pill. A decline in the number of hostile and unsolicited tenders offers in the United States highlights the nature of poison pill landscape in the country. The number of hostile tender offers decreased from 31% to 6.72% of the total number of tender offers received by the target in the United States. A hostile tender offer involves the acquirer to make an offer for all controlling shares in the target company directly to target shareholders. A key characteristic of the hostile tender offer as opposed to the friendly nature of the bid is the target management's resistance to the offer. As a result, in order to prevent the occurrence of hostile tender offers, the target management would often issue defense mechanisms, such as poison pill. It is believed that with the defense in place, the raiders would be more likely to enter in conversation directly with the target management to avoid bearing any significant acquisition costs. The proportion of unsolicited bids remains relatively the same for the American sample, so does the proportion of neutral tender offers.

The Canadian sample presents different results. The proportion of friendly tender offers decreased from nearly 87% in the pre-adoption period to 69% in the post-adoption period, while the proportion of hostile offers increased by 23%. This distinction in the takeover landscape of the two countries can be explained by the difference in the policies associated with poison pill defense strategies. In Canada, as opposed to the United States, target shareholders play the main role in the defense adoption process, meaning that it is the shareholders who decide whether to entertain a hostile acquisition proposal. Additionally, in Canada, it is not possible for the target to "just say no" to the hostile acquirer, thus it is a matter of time before the change in control occurs. In the hostile

tender offer, the raiders bypass the target management by communicating directly with the shareholders. As the result, an increase in hostile tender offers and a decline of friendly offers is entirely justified for firms that have put a defense mechanism in place. A poison pill pushed the raider to negotiate directly with the shareholders, bypassing the management team, since in Canada all decisions associated with the defense adoption are undertaken by firm's shareholders. These results support the earlier introduced hypothesis about different environments and poison pill adoption processes in the United States and Canada.

8. Conclusion

Since the emergence of shareholder rights plans in 1982 in the United States, they came into widespread practice around the globe allowing corporations to protect themselves against hostile raiders. Despite the optimistic idea behind the defense usage, an important proportion of financial world believes that by swallowing the pill, target corporations are doomed to experience negative effects. This ongoing debate sparked the birth of two opposing hypotheses: the managerial entrenchment hypothesis, which states that upon the defense adoption managers act in their best interest causing the announcement news to ignite a negative market reaction; and the shareholders' wealth maximization hypotheses arguing that the pill is adopted in the best interest of target shareholders and thus causes a positive market reaction upon announcement news.

The ultimate goal of poison pills is to protect target shareholders from hostile bidders and potentially increase the takeover premium received by the shareholders. Regulatory and

legal regimes greatly influence the use and the nature of the defenses. In the United States, the decision power regarding the adoption of poison pills lies with incumbent management, which can choose to adopt the pill without shareholders' consent. Conversely, in the Canadian market, the final decision on whether to adopt the pill is taken by target shareholders. Event studies demonstrating abnormal returns upon the announcement of poison pills by U.S. and Canadian corporations revealed that in fact the market reaction in Canada is positive and is stronger than in the U.S. sample arguing that the Canadian landscape is more shareholders oriented and the shareholder rights plans are adopted with the purpose of increasing the takeover premium received from corporate raiders.

Another interesting observations lies in the U.S. sample results. Early literature focusing on poison pill adoption documented a negative reaction on the announcement day. I find that in the early 1980s the market reacted negatively to poison pill adoption news, supporting the managerial entrenchment hypothesis, yet the event study results demonstrate that in 1990s and 2000s a shift towards more positive abnormal returns, thus favoring the shareholders wealth maximization hypothesis.

A regression analysis reveals that higher level of institutional ownership is partially responsible for more positive abnormal returns upon the announcement of poison pills. The higher the level of institutional investors in the target firm, the more positive the abnormal events are for the U.S. first time defense adopters.

I believe that this study demonstrates revolutionary results on the U.S. and Canadian takeover landscape. Future studies could concentrate on the takeover activity following

the adoption of poison pills by the U.S. and Canadian corporations to further investigate whether the implementation of these defenses positively affected the target shareholders. Furthermore, other factors potentially affecting the switch to positive market reaction in the United States could be investigated, such as the managerial compensation and other governance variables that could influence the incumbent management's decision making process.

9. References

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10. Appendix

Table 1

Number of poison pill announcements from January 1st, 1983 through December 31st, 2010 in Canada and United States

	United States	Canada
Total number of poison pill announcements, as retrieved from the SDC database	8,862	672
Total number of events deleted because of overlap with tender offer events	12	2
Total number of events dropped during the event study due to the lack of stock returns data	932	97
Total number of poison pill announcements used for analysis	7,918	573
Total number of first issue poison pills less unusable events	3,780	381
Total Number of Second and Third Issue Poison Pills	4,138	192

Table 2

Total number of poison pill announcements from January 1983 to December 2010, broken down by year

	United States		Canada	
Year	**Total Number of Poison Pill Announcements**	**% of Sample**	**Total Number of Poison Pill Announcements**	**% of Sample**
1983	3	0.03%	0	0.00%
1984	7	0.08%	0	0.00%
1985	42	0.47%	0	0.00%
1986	352	3.97%	0	0.00%
1987	196	2.21%	0	0.00%
1988	593	6.69%	2	0.30%
1989	619	6.98%	7	1.04%
1990	361	4.07%	5	0.74%
1991	196	2.21%	2	0.30%
1992	117	1.32%	7	1.04%
1993	107	1.21%	3	0.45%
1994	183	2.06%	3	0.45%
1995	325	3.67%	9	1.34%
1996	599	6.76%	15	2.23%
1997	551	6.22%	24	3.57%
1998	740	8.35%	27	4.02%
1999	680	7.67%	21	3.13%
2000	481	5.43%	13	1.93%
2001	524	5.91%	20	2.98%
2002	422	4.76%	20	2.98%
2003	302	3.41%	13	1.93%
2004	192	2.17%	22	3.27%
2005	197	2.22%	45	6.70%
2006	218	2.46%	70	10.42%
2007	197	2.22%	75	11.16%
2008	251	2.83%	99	14.73%
2009	240	2.71%	65	9.67%
2010	167	1.88%	105	15.63%
Total	**8,862**	**100.00%**	**672**	**100.00%**

*The sample includes both first-time and second-time adopters of shareholder rights plans for the sample period of 1983 to 2010

Table 2a

Total number of poison pill announcements from January 1983 to December 2010, broken down by sub-period

	United States		Canada	
Sub-Period	**Number of Poison Pill Announcements**	**% of Sample**	**Number of Poison Pill Announcements**	**% of Sample**
1983-1989	1,812	20.45%	9	1.34%
1990-1999	3,859	43.55%	116	17.26%
2000-2010	3,191	36.01%	547	81.40%

Table 3

Mean Cumulative Abnormal Returns for U.S. sample at the announcement of poison pills in the period of 1983-2010
(Market Model and Value-Weighted Index)

Event Window	N	Mean Cumulative Abnormal Return	Precision Weighted CAAR	Patell Z	Portfolio Time-Series t
(A) All U.S. Issues					
(-1,+1)	7918	2.57%	1.92%	40.824***	35.620***
(-2,+2)	7918	2.93%	2.19%	36.045***	31.380***
(+3,+10)	7903	0.44%	0.20%	2.670**	3.738**
(B) First-Time U.S. Issues					
(-1,+1)	3780	0.63%	0.39%	5.502***	5.493***
(-2,+2)	3780	0.96%	0.61%	6.626***	6.435***
(+3,+10)	3779	0.61%	0.36%	3.112*	3.327*
(C) Non-First-Time U.S. Issues					
(-1,+1)	4138	4.34%	3.19%	51.139***	43.007***
(-2,+2)	4138	4.72%	3.51%	43.471***	36.221***
(+3,+10)	4132	0.28%	0.07%	0.698	1.704$

* "All U.S. Issues" group includes first-time and second-time U.S. poison pill announcements. First-time adopters are firms which had not previously adopted any poison pills. Non-first-time issuers are companies that either replaced or extended the pill scheduled to expire. Mean cumulative abnormal returns are stock returns of the firm less the value weighted index. The symbols $,*, **, and *** denote statistical significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. The symbols (,< or),> etc. correspond to $,* and show the direction and generic one-tail significance of the generalized sign test.

Table 4

Mean Cumulative Abnormal Returns per Sub-Period
(Market Model and Value-Weighted Index)

Event Window	Mean CARs	t-value	Mean CARs	t-value	Mean CARs	t-value	Mean CARs	t-value
(A) All U.S. Issues								
Subperiod	**1983- March 1986 (Replica of Malatesta Study N=127)**		**1983-1989 (N=1713)**		**1990-1999 (N=3482)**		**2000-2010 (N=2723)**	
(-40,-2)	3.41%	3.400**	3.94%	11.338***	1.78%	5.015***	1.91%	3.364***
(-1,+1)	-0.27%	-0.963	0.32%	3.280**	2.09%	21.280***	4.61%	29.278***
(-2,+2)	-0.84%	-2.335**	0.40%	3.196**	2.50%	19.699***	5.07%	24.914***
(+3,+10)	0.44%	0.964	0.24%	1.505	0.23%	1.425	0.84%	3.274**
(B) First-Time U.S. Issues								
Subperiod	**1983- March 1986 (Replica of Malatesta Study N=2)**		**1983-1989 (N=1193)**		**1990-1999 (N=1782)**		**2000-2010 (N=805)**	
(-40,-2)	-5.78%	0.5597	3.49%	7.982***	0.00%	0.008	0.91%	0.740
(-1,+1)	1.66%	0.5456	0.21%	1.727$	0.62%	3.767***	1.68%	3.830***
(-2,+2)	-3.70%	0.2968	0.25%	1.580$	1.11%	5.240***	1.30%	3.824***
(+3,+10)	-9.55%	0.0334**	0.35%	1.541	0.54%	2.005*	1.17%	2.109*
(C) Non-First-Time U.S. Issues								
Subperiod	**1983- March 1986 (Replica of Malatesta Study N=125)**		**1983-1989 (N=520)**		**1990-1999 (N=1700)**		**2000-2010 (N=1918)**	
(-40,-2)	3.61%	0.0002**	4.86%	8.131***	3.66%	8.121***	2.32%	3.619**
(-1,+1)	-0.28%	0.2980	0.56%	3.397**	3.63%	29.048***	5.99%	33.666***
(-2,+2)	-0.64%	0.0690*	0.75%	3.496**	3.95%	24.478***	6.48%	28.185***
(+3,+10)	0.51%	0.2547	-0.04%	-0.135	-0.09%	-0.458	0.70%	2.404*

Mean cumulative abnormal returns are stock returns of the firm less the value weighted index. First-Time U.S. Adopters sample consists uniquely of first poison pill issues by corporations included in the sample. Non-first-time U.S. adopters sample encompasses all events recorded as non-first time plans. The symbols $,*,**, and *** denote statistical significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. The symbols (,< or),> etc. correspond to $,* and show the direction and generic one-tail significance of the generalized sign test.

Table 5

Mean Cumulative Abnormal Returns for the Canadian sample in the period of 1988-2010
(Market Model and Value-Weighted Index)

Event Window	Mean Cumulative Abnormal Return	Precision Weighted CAAR	Patell Z	Rank Test Z	Calendar time t
(A) All Canadian events (N= 573)					
(-1,+1)	3.78%	1.99%	8.150***	2.760**	4.477***
(-2,+2)	4.05%	2.39%	7.578***	2.842**	5.100***
(+3,+10)	1.12%	1.20%	3.005**	1.205	2.348**
(B) First-Time Issues (N=381)					
(-1,+1)	4.81%	2.34%	7.029***	3.552***	4.090***
(-2,+2)	5.04%	2.80%	6.488***	3.446***	4.561***
(+3,+10)	1.38%	1.29%	2.362**	0.767	2.029*
(C) Non-First-Time Issues (N=192)					
(-1,+1)	1.76%	1.47%	4.182***	1.290$	2.298*
(-2,+2)	2.09%	1.80%	3.957***	1.580$	2.553**
(+3,+10)	0.60%	1.08%	1.862*	1.465$	1.767*

Mean cumulative abnormal returns are stock returns of the firm less the value weighted index. First-Time Canadian adopters sample consists uniquely of first poison pill issues by corporations included in the sample. Non-first-time Canadian adopters sample encompasses all events recorded as non-first time plans. The symbols $,*,**, and *** denote statistical significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. The symbols (,< or),> etc. correspond to $,* and show the direction and generic one-tail significance of the generalized sign test.

Table 6

Mean Cumulative Abnormal Returns for Canadian firms divided by sub-period
(Market Model and Value-Weighted Index)

Event Window	Mean CAR	t-value	Mean CAR	t-value	Mean CAR	t-value
(A) All Canadian Events						
Event Window/Subperiod	**1988-1989 (N=6)**		**1990-1999 (N=95)**		**2000-2010 (N=472)**	
(-1,+1)	3.69%	2.840**	0.69%	2.013**	4.39%	3.839***
(-2,+2)	3.69%	2.131**	1.04%	2.657**	4.66%	4.281***
(+3,+10)	-0.88%	-0.522	1.43%	1.554$	1.08%	1.957*
(B) First-Time Issues						
Event Window/Subperiod	**1988-1989 (N=5)**		**1990-1999 (N=75)**		**2000-2010 (N=301)**	
(-1,+1)	4.17%	2.709**	0.60%	1.745*	5.38%	3.483***
(-2,+2)	4.46%	2.356**	0.76%	2.133*	6.12%	3.835***
(+3,+10)	-1.18%	-0.619	0.92%	1.145	1.53%	1.801*
(C) Non-First-Time Issues						
Event Window/Subperiod	**1988-1989 (N=1)**		**1990-1999 (N=20)**		**2000-2010 (N=171)**	
(-1,+1)	1.30%	.	1.02%	1.074	1.85%	2.076*
(-2,+2)	-0.15%	.	2.08%	1.671$	2.10%	2.194*
(+3,+10)	0.58%	.	3.35%	1.099	0.28%	1.468$

Mean cumulative abnormal returns are stock returns of the firm less the value weighted index. First-Time Canadian adopters sample consists uniquely of first poison pill issues by corporations included in the sample. Non-first-time Canadian adopters sample encompasses all events recorded as non-first time plans. The symbols $,*,**, and *** denote statistical significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. The symbols (,< or),> etc. correspond to $,* and show the direction and generic one-tail significance of the generalized sign test.

Graph 1

Average proportion of institutional ownership in U.S. targets

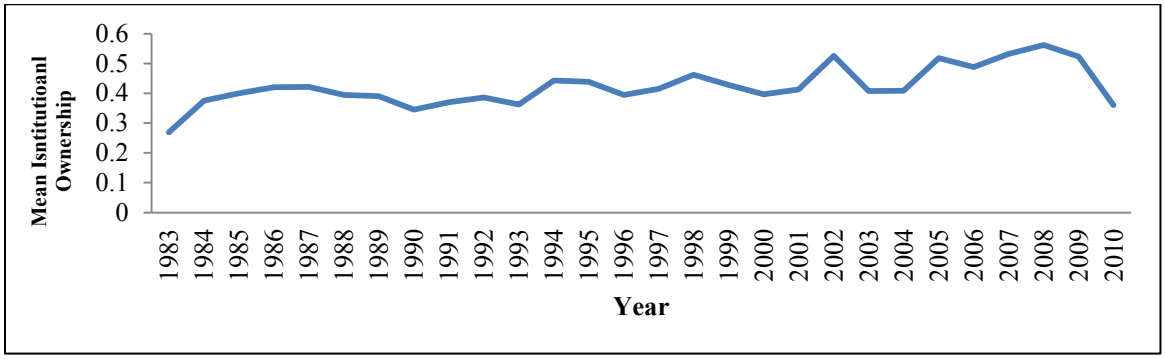

Table 7

Summary statistics of firm specific variables for first-time U.S. issues for the period of January 1982 to December 2010

Variable	N	Mean	Std Dev	Minimum	Maximum
CAR	266	-0.002	0.0302	-0.1148	0.1040
Institutional ownership	266	0.4148	0.2253	0.05	0.9710
Tobin_Q	265	2.1816	1.8685	0.6036	14.4789
Size	266	2.8408	0.527	1.6456	4.5032
LTDscaled	265	0.1286	0.1298	0	0.5804
E_Index	266	1.6391	1.2214	0	6
DVT	266	14.925	32.681	0	179.323
ROA	263	0.1327	0.1219	-0.3107	0.8211

Table 7a

Multiple Regression Analysis

Model 1 is the simple least-square regression showing the mean shareholders' wealth effect of initial poison pill issues announced in the period of 1983-2011. The announcement dates were taken from the SDC database. The dependent variable is the cumulative abnormal return (CARs) over a 5 days window (2;2) centred on the announcement day. To estimate the CARs a market model along with the CRSP value-weighted market portfolio during the year (trading days - 255 to - 46) prior to the pill adoption was used. An independent variable measures the proportion of institutional investor's ownership in the adopting company in the quarter before the adoption date (*Instown).*

Model 5 is a multiple regression, controlling for company specific characteristics, as well as for the governance related E index. Among firm specific, control variables, are the long-term debt scaled by the market value of company (*LTD)* , a proxy for firm size (*Size*) calculated by taking the natural logarithm of firm's total assets. Firm's growth (*Tobin's q)*, is calculated as the sum of market value of firm's equity and the book value of liabilities divided by firm's total assets. Firm's level of profitability *(ROA)* is calculated as the operating income before depreciation divided by firm's total assets

The dividends (*DVT*) variable represents the amount of dividends paid by the target firm. The entrenchment index (*E_Index*) is an index developed by Bebchuk et al. (2004) and represents the level of managerial entrenchment with its values varying from 0 to 6, depending on the number of provisions.

All firm specific characteristics are taken from the fiscal year preceding the announcement year.

Variable	Model 1: Simple OLS Regression	Model 2: Multiple Regression, excluding Instown and E Index	Model 3: Multiple Regression, excluding Instown	Model 4: Multiple Regression, excluding E Index	Model 5: Multiple Regression, including E Index
Intercept	β = -0.00154 t-value = -0.84 (0.4001)	β = 0.00819 t-value=1.78 (0.0758)	β = -0.00349 t-value= -0.28 (0.7821)	β = 0.00506 t-value= 1.02 (0.3101)	β = -0.01478 t-value= -1.12 (0.2637)
InstOwn	**β = 0.00727 t-value = 1.88 (0.0597)**	.	.	**β = 0.00779 t-value= 1.65 (0.0994)**	**β = 0.02131 t-value= 2.59 (0.0100)**
Tobin's Q_{t-1}	.	β = -0.00073197 t-value= -1.17 (p-value=0.2423)	**β = -0.00310 t-value = -2.68 (0.0079)**	β = -0.00093019 t-value= -1.53 (0.2072)	**β = -0.00308 t-value = -2.69 (0.0077)**
$Size_{t-1}$	.	**β = -0.00321 t-value=-1.77 (0.0772)**	β = 0.00564 t-value = 1.33 (0.1847)	**β = -0.00079061 t-value=-1.77 (0.0768)**	β = 0.00635 t-value = 1.51 (0.1319)
LTD_{t-1}	.	**β = 0.01333 t-value= 1.70 (0.0893)**	β = -0.01749 t-value = -1.31 (0.2649)	**β = 0.01300 t-value= 1.66 (0.0974)**	β = -0.01658 t-value = -1.07 (0.2852)
ROA_{t-1}	.	β = -0.00549 t-value= -1.01 (0.3128)	β = -0.00035684 t-value = -1.12 (0.9827)	β = -0.00553 t-value= -1.02 (0.3087)	β = -0.00162 t-value =- 0.10 (0.9208)
DVT_{t-1}	.	β = 0.00004736 t-value= 1.00 (0.3189)	β = -0.00003307 t-value= -0.41 (0.6800)	β = 0.00004659 t-value= -1.26 (0.3265)	β = -0.00004426 t-value= -0.56 (0.5772)
E Index	.	.	**β = -0.00316 t-value= -2.00 (0.0470)**	.	**β = -0.00310 t-value = -1.98 (0.0487)**
N	2744	1660	259	1660	259
F-value	3.55 (0.0597)	1.66 (0.1409)	2.14 (0.0491)	1.84 (0.0882)	2.84 (0.0073)
Adj.R^2	0.0009	0.0020	0.0259	0.0030	0.0475
R^2	0.0013	0.0050	0.0486	0.0066	0.0734

*Outlaying values of *DVT*, *ROA* and *Tobin_q* were deleted from the sample.

Table 7b

Robustness table: Institutional Ownership as a dummy variable

Model 1 is the simple least-square regression showing the mean shareholders' wealth effect of initial poison pill issues announced in the period of 1983-2011. The announcement dates were taken from the SDC database. The dependent variable is the cumulative abnormal return (CARs) over a 5 days window (2;2) centred on the announcement of the poison pill. To estimate the CARs a market model along with the CRSP value-weighted market portfolio during the year (trading days - 255 to - 46) prior to the pill adoption was used.

An independent variable measures the proportion of institutional investor's ownership in the adopting company in the quarter before the adoption date (*Instown).*

Model 1a: Institutional Ownership dummy is equal to 1 if institutional ownership is greater than 50% and 0 otherwise.

Model 1b: Institutional Ownership dummy is equal to 1 if institutional ownership is greater than the median value of 43% and is 0 otherwise.

Model 4a and Model 5a use the institutional ownership dummy where the dummy is equal to 1 if institutional ownership is greater than the median of 43% and 0 otherwise.

Model 4b and Model 5b use the institutional ownership dummy where the dummy is equal to 1 if institutional ownership is greater than 50% and 0 otherwise.

Models 4a, 4b, 5a and 5b are multiple regressions, controlling for company specific characteristics, as well as for the governance related E index. Among firm specific, control variables, are the long-term debt scaled by the market value of company (*LTD)* , a proxy for firm size (*Size*) calculated by taking the natural logarithm of firm's total assets. Firm's growth (*Tobin's q)*, is calculated as the sum of marketvalue of firm's equity and the book value of liabilities divided by firm's total assets. Firm's level of profitability *(ROA)* is calculated as the operating income before depreciation divided by firm's total assets

The dividends (*DVT*) variable represents the amount of dividends paid by the target firm in the fiscal year proceeding the announcement year. The entrenchment index (*E_Index*) is an index developed by Bebchuk et al. (2004) and represents the level of managerial entrenchment with its values varying from 0 to 6, depending on the number of provisions.

All firm specific characteristics are taken from the fiscal year preceding the announcement year.

Variable	Model 1a: Simple OLS Regression with InstOwn as dummy (50% threshold)	Model 1b: Simple OLS Regression with InstOwn as dummy (median)	Model 4a: Multiple Regression (50% threshold)	Model 5a: Multiple Regression (50% threshold)	Model 4b: Multiple Regression (median threshold)	Model 5b: Multiple Regression (median threshold)
Intercept	β =0.00029515 t-value = 0.28 (0.7766)	β = 0.00033841 t-value = 0.29 (0.7719)	β = 0.00724 t-value =1.56 (0.1200)	β = -0.00677 t-value = -0.54 (0.5922)	β = 0.00688 t-value = 1.47 (0.1424)	β = -0.00621 t-value = -0.49 (0.6255)
InstOwn (dummy)	**β = 0.00338 t-value = 1.97 (0.0486)**	β = 0.00241 t-value = 1.46 (0.1449)	β = 0.00299 t-value =1.44 (0.1509)	**β = 0.00715 t-value = 1.86 (0.0635)**	β = 0.00309 t-value = 1.53 (0.1256)	β = 0.00540 t-value = 1.45 (0.1487)
Tobin's Q_{t-1}	.		β = -0.00078343 t-value=-1.25 (0.2113)	**β = -0.00305 t-value = -2.69 (0.0076)**	β = -0.00077714 t-value = -1.24 (0.2148)	**β = -0.00306 t-value = -2.69 (0.0076)**
$Size_{t-1}$ Log(TA)	.		**β = -0.00323 t-value=-1.78 (0.0755)**	β = 0.00561 t-value = 1.34 (0.1799)	**β = -0.00321 t-value = -1.77 (0.0777)**	β = 0.00553 t-value = 1.32 (0.1872)

Variable	Model 1a: Simple OLS Regression with InstOwn as dummy (50% threshold)	Model 1b: Simple OLS Regression with InstOwn as dummy (median)	Model 4a: Multiple Regression (50% threshold)	Model 5a: Multiple Regression (50% threshold)	Model 4b: Multiple Regression (median threshold)	Model 5b: Multiple Regression (median threshold)
LTD_{t-1} (LTD/MV of Firm)	.		**β = 0.01298 t-value=1.66 (0.0979)**	β = -0.01768 t-value = -1.15 (0.2521)	β = 0.01277 t-value = 1.63 (0.1039)	β = -0.01846 t-value = -1.20 (0.2330)
$Profitability_{t-1}$ (OIBD/TA)	.		β = -0.00523 t-value=-0.98 (0.3258)	β = 0.00230 t-value = 0.14 (0.8879)	β = -0.00563 t-value = -1.04 (0.3007)	β = 0.00200 t-value = 0.12 (0.9030)
$Dividends_{t-1}$			β = 0.00004610 t-value=0.97 (0.3316)	β = -0.00000746 t-value = -0.11 (0.9117)	β = 0.00004701 t-value = 0.99 (0.3223)	β = -0.00000733 t-value = -0.11 (0.9135)
E Index	.		.	**β = -0.00309 t-value = -1.98 (0.0485)**	.	**β = -0.00310 t-value = -1.98 (0.0484)**
Number of Observations	2744	2744	1661		1660	262
F-value	3.89 (0.0486)	2.13 (0.1449)	1.71 (0.1139)	2.32 (0.0263)	1.78 (0.1002)	2.11 (0.0430)
Adj.R^2	0.0011	0.0004	0.0026	0.0341	0.0028	0.0289
R^2	0.0014	0.0008	0.0062	0.0600	0.0064	0.0550

*Outlaying values of *DVT*, *ROA* and *Tobin_q* were deleted from the sample.

Table 8

Mean Cumulative Abnormal Returns for U.S. first-time issues at the announcement of poison pills in the period of 1983-2010, broken down by the level of institutional ownership
(Market Model and Value-Weighted Index)

Event Window	N	Mean Cumulative Abnormal Return	Portfolio Time-Series t	Patell Z
(A) Event Study Results for firms with minority institutional ownership (5% - 49%)				
(-2;2)	1695	0.91%	4.398***	3.734***
(-1;1)	1695	0.53%	3.358**	3.009**
(0; 0)	1695	0.07%	0.723	0.636
(B) Event Study Results for firms with majority institutional ownership (50% - 100%)				
(-2;2)	1054	1.37%	4.487***	4.487***
(-1;1)	1054	0.85%	3.125**	3.612***
(0; 0)	1054	0.37%	2.789**	2.652**

Firms with minority institutional ownership are those where institutional shareholders hold between 5% and 49% of company's shares. Firms with majority institutional ownership are those where institutional shareholders hold between 50% and 100% of company's shares. Mean cumulative abnormal returns are stock returns of the firm less the value weighted index. The symbols $,*, **, and *** denote statistical significance at the 0.10, 0.05, 0.01 and 0.001 levels, respectively, using a generic one-tail test. The symbols (,< or),> etc. correspond to $,* and show the direction and generic one-tail significance of the generalized sign test.

Table 8a

Means Difference t-test

Event Window	Average Majority InstOwn	Average Minority InstOwn	Difference	t-value	Folded F-value
(0; 0)	0.37%	0.07%	0.30%	Equal var: -1.54 (0.1234) Unequal var: -1.55 (0.1218)	1.04 (0.5160)
(-1;1)	0.85%	0.53%	0.32%	Equal var: 1.05 (0.2921) Unequal var: 1.05(0.2921)	1.01 (0.8844)
(-2;2)	1.37%	0.91%	0.46%	Equal var: 1.22 (0.2331) Unequal var: 1.18(0.2417)	1.17 (0.0044)

Table 9

Attitude of Tender Offers Received by Target Firms Prior to and Post Poison Pill Adoption

Deal Attitude	Canada		United States	
(A) Pre-Adoption Period: Tender Offers Received up to 12 months before the adoption of a poison pill				
Friendly	13	*86.67%*	96	*71.64%*
Hostile	0	*0.00%*	31	*23.13%*
Unsolicited	2	*13.33%*	3	*2.24%*
Neutral	0	*0.00%*	4	*2.99%*
Total	**15**	***100.00%***	**134**	***100.00%***
(B) Post-Adoption Period: Tender Offers Received up to 12 months after the adoption of a poison pill				
Friendly	9	*69.23%*	106	*89.08%*
Hostile	3	*23.08%*	8	*6.72%*
Unsolicited	1	*7.69%*	3	*2.52%*
Neutral	0	*0.00%*	2	*1.68%*
Total	**13**	***100.00%***	**119**	***100.00%***

Table 10

Takeover Activity of Target Firms Following the Adoption of Poison Pills

	Canada	United States
Total Number of Companies in the sample	452 companies	4,238 companies
Total number of poison pills announcements/adoptions in the sample	672 announcements/adoptions*	8,862 announcements/adoptions*
Total Number of Companies for which only second time adoption data is available	24 companies	454 companies
Total number of companies which received at least one tender offer within 12 months of the adoption	13 companies (12/452= 2.88%)	119 companies (119/4,238=2.81%)
Total number of companies which received one tender offer within 12 months of poison pill adoption	13 companies (12/452=2.88%)	116 companies (116/4,238=2.73%)
Total number of companies which received two tender offers within 12 months of poison pill adoption	0 companies (0/452=0.00%)	3 companies (3/4,238=0.07%)
Total Number of Companies which received at least one tender offer within 12 months prior to the adoption	15 companies (15/452=3.32%)	134 companies (134/4,238=3.16%)

* A total of 452 Canadian companies and 4,238 American companies were found to adopt a poison pill. Some companies were found to adopt more than one pill throughout the sample period, thus yielding 672 poison pill adoptions by Canadian companies and 8,862 adoptions by American companies.