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The Wealth Effects of Reducing Private Placement Resale Restrictions

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Abstract

Recently, the US Securities and Exchange Commission reduced resale restrictions on Rule 144 private placements from 12 months to 6 months with the intention of lowering the cost of equity capital for issuing firms. In Canada, similar regulatory changes were adopted several years ago, providing a unique opportunity to test the wealth effects of reducing private placement resale restrictions. We find that shortening resale restrictions reduces the liquidity portion of offer price discounts, and thus lowers the cost of equity capital for issuing firms, but has no significant effect on announcement-period abnormal returns after controlling for issuer type. However, there is a fundamental shift in the types of firms making private placements of common stock after the legislation-induced easing of resale restrictions. Specifically, we find that smaller firms and firms with greater information asymmetry are less likely to issue privately placed common stock after the legislative change, suggesting that the easing of resale restrictions reduces the

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costly signal that helps to overcome the Myers and Majluf (1984) underinvestment problem.

Keywords: *private placements*, *special warrants*, *offer price discount*, *announcement effects*

JEL classification: *G*32, *G*28, *G*14

1. Introduction

Private placements are an important source of raising equity capital for smaller firms and firms with high information asymmetry (Chemmanur and Fulghieri, 1999; Wu, 2004; Cronqvist and Nilsson, 2005). Unlike public equity offerings, private placements of common stock by publicly listed companies are typically associated with positive announcement effects and are issued at considerable discounts from the issuing firm's stock market price.[1] The monitoring and certification hypotheses are the most widely cited explanations for these findings. According to the monitoring hypothesis (Wruck, 1989), the positive announcement effects are a consequence of reduced agency costs motivated by the private placement induced increase in ownership concentration. Private placement discounts reflect compensation for monitoring services provided by private investors. Under the certification hypothesis, Hertzel and Smith (1993) extend the Myers and Majluf (1984) model of information asymmetry between managers and outside investors regarding the firm's true value and show that private placement discounts and the positive stock price effects reflect the resolution of this asymmetry.

An alternative hypothesis is managerial entrenchment (Barclay *et al*., 2007). According to this hypothesis, management places stock with friendly investors at a discount so that they will not 'rock the boat'; positive announcement effects are mainly driven by private investors that become active investors in firm affairs.

Another factor in the determination of private placement discounts is the existence of restrictions on the resale of the shares, imposing illiquidity on the investors (Silber, 1991). Recently, securities regulators in various jurisdictions have been easing private placement resale restrictions with the intention of making private placements more attractive to investors, and also to reduce the cost of equity capital for issuers by reducing the liquidity discount. For example, the US Securities and Exchange Commission (SEC) on 15 February 2008 amended resale restrictions associated with Rule 144 private placements, effectively reducing the resale restriction period from 12 months to 6 months.[2] In Canada, similar regulatory changes were adopted several years earlier, on 30 November 2001, providing a unique opportunity to examine the wealth effects associated with legislation-induced reductions in private placement resale restrictions.

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[1] We use the pairs of terms 'common share' and 'common stock', and 'discount' and 'offer price discount' interchangeably throughout the paper.

[2] The Securities and Exchange Commission, in their final report on making the change in resale restrictions effective, state: 'We believe that the amendments will increase the liquidity of privately sold securities, make capital investment more attractive, and decrease the cost of capital for all issuers without compromising investor protection' (Release No. 33-8869; File No. S7-11-07).

Using a unique sample of 1,173 private placements of equity from Canada, this paper provides evidence that shortening resale restrictions reduces the liquidity portion of offer price discounts, and thus lowers the cost of equity capital for issuing firms, but has no significant effect on announcement-period abnormal returns after controlling for issuer type. However, we document a fundamental shift in the types of firms making private placements of common stock after the legislation-induced shortening of resale restrictions. Specifically, we find that smaller firms and firms with greater information asymmetry are less likely to issue privately placed common stock after the legislative change, suggesting that the easing of resale restrictions reduces the costly signal that helps to overcome the Myers and Majluf (1984) underinvestment problem.

The Canadian experience with past institutional and regulatory changes provides insights into what regulators, firms, and investors can potentially expect in the USA and other markets that are considering adopting similar rule changes.

The rules governing private placements of equity by Canadian publicly listed companies are similar to US equity private placements issued under Regulation D of Rule 144. In both countries, privately placed equity issues can only be sold to qualified investors and those investors face restrictions on the resale of the shares.

In addition to privately placed common stock, Canadian public companies also issue a second type of privately placed equity, known as *special warrants*. As with all Canadian private placements of equity, special warrants are issued without a prospectus and sold only to qualified investors. Unlike regular stock warrants, special warrants have an exercise price of zero, making them exchangeable for common stock of the issuer at no additional cost. However, the issuer promises to file a prospectus so that when the special warrants are exercised, the newly issued common stock are freely tradable. In a typical special warrant offering, the issuer promises that the warrants will be exercisable into freely traded common stock within 4 months. A special warrant deal provides the speed of a private placement to the issuer and at the same time offers investors the promise that they are buying stock with a shorter restricted period than a regular private placement of common stock.[3] Special warrants are in effect hybrid private/public offerings.

The Canadian regulations governing the resale of private placements of equity by publicly listed companies have undergone significant change.[4] From the start of the sample period, 1 January 1993, until 29 November 2001, any privately placed equity of Canadian publicly listed companies was subject to a 12 month restricted period, unless issuers circumvented the restricted period with a special warrant offering. Therefore, investors were prohibited from reselling the privately placed common stock in the public market for 12 months after their issuance. On 30 November 2001, Multilateral Instrument 45-102 (MI, henceforth) was implemented, shortening the resale restriction period from 12 months to 4 months for private placements of common stock by public companies.

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[3] These are like US PIPE issues, which also eliminate resale restrictions by requiring the issuer to register the shares received by private investors through the PIPE within 30 days after the deal closes. Once the registration becomes effective, the shares can be publicly traded – typically within 90 days of registration (see Chaplinsky and Haushalter, 2010). Interestingly, PIPEs were introduced in the USA in the mid 1990s, while special warrants have been around in Canada since the early 1980s.

[4] To avoid confusion we define 'private placements of equity' as the broad sample of private placements which includes 'private placements of common stock' and 'special warrants', the latter two being the sub-groups of private placements we examine.

We document a major decrease in the issuance of special warrants after resale restrictions were reduced on 30 November 2001. Special warrants, which comprised approximately 82% of total private equity placements to passive investors from 1 January 1993 to 29 November 2001, became almost nonexistent after MI came into effect on 30 November 2001, reflecting a strong desire for liquid shares by investors.[5] We also find that issuers making special warrant offerings, similar to issuers making public offerings, are larger firms and firms with less information asymmetry than common stock private placement issuers. Since MI came into effect, issuers making common stock private placements are also larger firms and firms with less information asymmetry than issuers making common stock private placements in the pre-MI period, implying that the legislation-induced reduction in resale restrictions changed the types of firms making private placements.

We first examine the wealth effects of having private placements associated with different resale restriction lengths in the marketplace. We find substantially higher offer price discounts for private placements of common stock than special warrants before MI came into effect by about 6.0% to 7.0%, reflecting the longer resale restrictions on the privately placed common stock than the effective restricted period for special warrants. However, announcement-period abnormal returns are significantly more positive for private placements of common stock than special warrants, reflecting the more costly signal associated with longer resale restrictions. These differences are similar to prior US studies comparing unregistered and registered private placements (Wruck, 1989; Hertzel and Smith, 1993). Once we control for the endogenous choice of private placement type, however, the differences in discounts and announcement-period abnormal returns disappear. This suggests that there are unobserved issuer and/or issue characteristics that are driving these differences.

Next, we examine the wealth effects of the regulatory easing of resale restrictions. We find lower discounts for common stock private placements in the period 30 November 2001–31 December 2005, after the legislative change, for which resale restrictions are 4 months, compared to the period before, 1 January 1993–29 November 2001, when resale restrictions were 12 months, by about 8.0% to 9.0%. The regulatory change in resale restrictions therefore reduced the cost of capital associated with private placements, in part, by reducing the liquidity discount. We do not, however, document a significant change in announcement-period abnormal returns for common stock private placements in the post-MI period compared to the pre-MI period after controlling for issuer type.

At first glance, it would appear that issuing firms are better off because the shortening of resale restrictions reduced the liquidity discount and hence the cost of capital, yet there is no value destruction to the market value of existing shareholders' stock holdings as measured by announcement-period abnormal returns. However, we document a fundamental shift in the types of firms making private placements of equity post-MI. Firms making common stock private placements in the post-MI period are larger firms and firms with less information asymmetry, much like firms making special warrant issues in the pre-MI period.

Therefore, private placements with longer resale restrictions serve an important purpose. In particular, they provide smaller firms and firms with greater information

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[5] We categorise the buyers of private placements as *passive*, *strategic*, *active*, *insiders* and *venture/private capital* in the spirit of Barclay *et al*. (2007). This paper focuses on *passive* investors.

asymmetry a mechanism by which to provide more costly signalling. By reducing private placement resale restrictions and ultimately driving special warrants out of the market, firms that previously relied on the costlier signal are less likely to issue privately placed equity. We formally test this by implying probabilities in the post-MI period based on the parameter estimates from a logistic regression that determines the choice of offering type in the pre-MI period, special warrant or private placement of common stock. We show that the majority of firms would be special warrant issuers in the post-MI period had the legislation-induced shortening of resale restrictions not come into effect. Therefore, the easing of resale restrictions augments the Myers and Majluf (1984) underinvestment problem that the private placement market had partially circumvented (see Hertzel and Smith, 1993).

Our results imply that post-MI, common stock private placement issuers enjoy trivial economic benefits from resale restrictions, since they are larger and with lower information asymmetry. Thus, there is little gain from the costly signal by resale restrictions. The trivial economic benefits during the post-MI period cause the reduced announcement-period abnormal returns, which disappear when we control for the issuer type. In contrast, the pre-MI common stock private placement issuers enjoy non-trivial economic benefits from resale restrictions, since they are smaller and with higher information asymmetry. Therefore, there is gain from the costly signal by resale restrictions. The non-trivial economic benefits during the pre-MI period lead to more positive announcement-period abnormal returns, which also disappear when we control for the issuer type.

The remainder of the paper is organised into the following sections. Section 2 describes the Canadian private placement market. Section 3 discusses the information hypothesis. Section 4 describes the data and presents descriptive statistics. Section 5 presents our empirical tests and findings. Conclusions are drawn in Section 6.

2. A Brief Background on Canadian Private Placements

Private placements are an alternative to public equity offerings. They are offerings made through certain statutory exemptions which allow the securities to be sold without a prospectus.

Under Canadian securities law the sales of private placements are limited to various prescribed accredited purchasers. The definition of such purchasers generally refers to sophisticated and knowledgeable investors with substantial funds, including financial institutions, corporations and wealthy individuals. Limiting prospectus-exempt offers to accredited investors is intended to protect unsuspecting investors from being taken advantage of by unscrupulous issuers. In addition, in order to prevent the use of private placements as 'backdoor public offerings', bypassing the more costly prospectus offering, private placements are subject to restrictions on resale. Consequently, until the end of the statutory restricted period, privately placed shares can only be sold to other accredited investors. After the elapse of the restricted period, the privately placed equity can be resold to any and all investors in the marketplace.

The restricted period for privately placed securities of publicly listed companies (also known as 'reporting issuers') has experienced substantial change in Canada. Prior to 30 November 2001, the restricted period for a private placement of equity by a publicly listed company was 12 months. On 30 November 2001 the restricted period for private placements of all stocks that were listed for trading on a recognised stock exchange was

cut to 4 months. The change was implemented through Multilateral Instrument 45-102 (MI).

Special warrants are a type of equity private placement unique to Canada. They are private/public hybrid transactions, designed to provide an issuer with the quick access to funds normally associated with private placements, while providing purchasers with freely tradable securities sooner than the 12 month restricted period associated with regular private placements.

Special warrants are also sold for cash under an exemption from the prospectus requirements. The special warrants are convertible into common stock and the conversion is qualified pursuant to a prospectus being filed. The proceeds from the sale of the special warrants are either received on the closing date of the special warrants or may be held in escrow pending clearance of the prospectus. The special warrants are usually refundable to the purchasers of the special warrants if a receipt for the prospectus is not obtained from the securities regulator by a stated deadline (usually 120 days or 4 months following the purchase of the special warrants). Alternatively, interest may be charged for each day that a receipt for the prospectus is not obtained following the agreed upon deadline. Therefore, under a special warrant transaction the restricted period associated with the underlying shares is the length of time necessary to prepare and obtain a receipt for a prospectus. Prior to 30 November 2001 when the restricted period for common stock private placements was 12 months, the effective restricted period for special warrants was substantially shorter (up to 4 months).

One might ask why a prospectus cannot be filed to qualify securities previously issued in a private placement, thereby eliminating the need to use special warrants to allow for the shares to become freely tradable. Unlike in the USA where the regulatory system requires the registration or qualification of actual securities, the Canadian system requires qualification by prospectus of *distributions*.[6] Therefore, under the various securities laws in Canada it is not possible to issue securities on a private placement and then subsequently file a prospectus to qualify its resale prior to the expiration of the applicable restricted period.[7] Securities commissions forcefully point out that once a private placement offering takes place, there is no distribution to be qualified by a prospectus, since the distribution was already completed in the initial placement. In the special warrant transaction, the issuance of the underlying shares upon the exercise of the special warrant is considered to be a first trade and a distribution which a prospectus may qualify. As a result, the shares obtained through the exercising of the special warrants are freely tradable.

3. Resale Restrictions and the Information Hypothesis

Myers and Majluf (1984) demonstrate that equity issues convey management's belief that the firm is overvalued. Therefore, managers of undervalued firms with profitable investment opportunities but lacking financial slack will choose not to issue equity whenever the share of existing assets transferred to new stockholders exceeds the share of increased firm value retained by existing stockholders. By not issuing, managers

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[6] This simply means the first trade of securities.

[7] As noted securities laws are provincially regulated in Canada. Therefore, no one law covers all of Canada but the provincial laws share some similarities and in some cases have adopted national standards.

are choosing to forego the investment opportunities. This 'underinvestment problem' disappears if managers can costlessly convey their private information to the market.

Hertzel and Smith (1993) extend the Myers and Majluf (1984) framework and show that private placements mitigate the underinvestment problem and even signal undervaluation. They show that private placement discounts reflect information costs borne by private investors and positive announcement-day abnormal returns reflect the willingness of private placement investors to commit funds to the firm, thereby signalling management's belief that the firm is undervalued.

In order for the signal of undervaluation to be credible, the prospect of false signalling must be precluded so that overvalued firms cannot benefit by placing shares with private investors who then resell these shares in the public market before the true state of nature is revealed. The resale restrictions in private placements provide one such guarantee by making the signal costly.

Given the costly signal implied by resale restrictions, an interesting question is whether the recent easing of resale restrictions by securities regulators is beneficial or harmful to issuing firms? On the one hand, shortening resale restrictions may reduce the cost of capital by providing more liquid shares. On the other hand, certain firms may be forced to pass up positive net present value (NPV) investment opportunities because of the loss of costly signalling.

The recent experience in Canada provides a unique setting to test the value impact of reduced resale restrictions on private placements for shareholders. Special warrants were created to bypass the 12 month restricted period for private placements of equity. They are in effect like US PIPEs that offer guaranteed registration. Special warrants are associated with resale restrictions of up to 4 months while private placements of common stock were associated with resale restrictions of 12 months prior to 30 November 2001. Therefore, the discount should be higher for common stock private placements than special warrants in the pre-MI period, since a longer required holding period provides an incentive for private placement investors to incur additional costs to assess firm prospects and also because of a larger liquidity discount. However, as noted above, longer resale restrictions make signalling more costly because of the lower likelihood of opportunistic resale. Therefore, common stock private placements should also have more positive announcement effects than special warrants in the pre-MI period. This implies that private placements with different resale restriction lengths serve an important purpose by providing an alternative flotation method with costlier signalling.

MI reduced resale restrictions on privately placed common stock from 12 months to 4 months. Based on the information and liquidity costs noted above, offer price discounts for common stock private placements should be smaller in the post-MI period, when the restricted period dropped from 12 months to 4 months, consistent with a reduced cost of capital. However, the easing of resale restrictions should also lead to less positive announcement effects for common stock private placements post-MI than common stock private placements pre-MI, a cost borne by existing shareholders of issuing firms.

The legislation-induced easing of resale restrictions eliminated the costly signal associated with the 12 month restricted period for common stock private placements pre-MI. Based on the theoretical work of Chemmanur and Fulghieri (1999), Wu (2004) and Cronqvist and Nilsson (2005) show that smaller firms and firms with more information asymmetry are more likely to make private placement offerings than public offerings due to the higher information production costs associated with public offerings. Extending this framework to the current context, private placements with fewer restrictions on resale should have higher information production costs than private placements with

longer restrictions on resale. Therefore, firms making special warrant offerings in the pre-MI period should be larger firms and firms with less information asymmetry than firms making common stock private placements. Furthermore, firms making common stock private placements post-MI should be larger firms and firms with less information asymmetry than firms making common stock private placements pre-MI, suggesting that smaller firms and firms with more information asymmetry are less likely to issue privately placed equity after the legislative change.

4. Data and Descriptive Statistics

4.1. *Data*

Data on private placements of common stock, special warrants, and public seasoned equity offerings (SEOs) by companies listed on the Toronto Stock Exchange (TSX) announced between 1 January 1993 and 31 December 2005 are collected from the Financial Post (FP) Advisor database, which provides detailed offer characteristics. Firm attributes such as market capitalisation and stock returns are obtained from the TSX/CFMRC database. To ensure that pure secondary offerings do not bias certain results, the sample includes only primary and combined primary and secondary offerings.[8]

Information on the identity of the private placement investors is collected from the press reports in Factiva and LexisNexis for each offering. We also verify offering details such as announcement dates, closing dates, offer price, and the number of shares offered.

We exclude from our sample unit offerings, flow through shares, and offerings with missing announcement dates, pricing dates and/or closing dates. This leaves us with an overall sample of 2,010 offerings, consisting of privately placed common stock, special warrants, and public SEOs.

Table 1 reports the number of issues and proceeds raised segmented by the type of offering and by the announcement year. Focusing on the common stock private placements and special warrants, several findings are noteworthy. Out of the 1,173 private placement offerings, 56% are special warrants, raising about $14.1 billion, approximately $6.6 billion more than privately placed common stock.

A closer examination of Table 1 reveals a clear time trend. In particular, 93% of the 656 special warrants are offered pre-MI. Special warrants are almost non-existent post-MI. This irregularity is not coincidental. As discussed earlier, MI came into effect on 30 November 2001 shortening the restricted period for all private placements of common stock from 12 months to 4 months. The dramatic drop in the use of special warrants and corresponding increase in privately placed common stock suggests that special warrants were created to bypass the pre-MI 12 month restricted period for privately placed common stock. This highlights the desire for liquidity by private placement investors.

Table 1 also indicates that public SEOs outnumber private placements of common stock and special warrants, respectively, over the entire sample period. However, adding together types of private placements, private placements outnumber public SEOs each year, and from 1993 to 1996, special warrants outnumber public SEOs. This suggests that

[8] For robustness, we also conducted all of our analysis exclusively for primary offerings. Our results remain qualitatively the same.

Table 1

Number of private placements of common stock, special warrants, public SEOs, and proceeds raised by year, 1 Jan 1993–31 Dec 2005

This table reports the annual number of privately placed common stock (PP Stock), special warrants (SW), public SEOs and proceeds raised by TSX-listed firms between 1 Jan 1993 and 31 Dec 2005. Only primary and combined primary and secondary offerings are included. Pure secondary offerings are excluded.

	PP Stock		SW		Public SEOs		Total	
Year	N	Proceeds ($MM)	N	Proceeds ($MM)	N	Proceeds ($MM)	N	Proceeds ($MM)
1993	32	111.26	147	2,720.23	62	5,393.46	241	8,224.95
1994	35	141.99	47	968.07	42	3,438.66	124	4,548.71
1995	27	161.82	56	788.71	40	2,838.45	123	3,788.97
1996	24	195.18	104	2,327.07	91	7,081.31	219	9,603.56
1997	31	264.34	93	2,420.96	96	10,322.87	220	13,008.17
1998	18	324.06	46	1,400.08	61	5,712.91	125	7,437.05
1999	19	273.68	43	672.33	62	10,405.13	124	11,351.14
2000	33	193.29	47	1,223.29	61	6,901.34	141	8,317.92
2001	27	215.30	27	367.22	63	6,667.41	117	7,249.94
2002	47	548.69	24	551.84	59	8,769.85	130	9,870.39
2003	80	1,982.35	8	221.10	75	6,093.22	163	8,296.67
2004	62	1,136.89	10	282.47	69	6,577.80	141	7,997.16
2005	82	1,989.39	4	184.41	56	3,681.34	142	5,855.14
Total	517	7,538.23	656	14,127.78	837	83,883.76	2,010	105,549.77

private placements are a popular source of financing for Canadian companies. We note that although the number of private placements is large, proceeds raised are substantially less than for public SEOs. Over the entire sample period, 1 January 1993–31 December 2005, firms making public common stock offerings raised about six times more cash than special warrants, and about 11 times more than common stock private placements.

As noted above, the identity of the purchasers of the private placements is collected from the press reports for each offering. Our procedure for categorising private placement investors is in the spirit of Barclay *et al*. (2007). Table 2 lists the five categories of private placement investors that are identified: (1) *Passive investors* (identity of investor is not disclosed in press report), (2) *Strategic investors* (strategic alliance partners, joint venture partners, and/or customers), (3) *Active investors* (nominated to the board of directors upon purchase of the private placement), (4) *Insiders* (managers and/or existing shareholders), (5) *Venture/Private Capital* (purchase by a single venture capitalist or private equity firm).

Panel A shows that in the period 1 January 1993–31 December 2005, passive investors are the representative sample, making up 87% of all private placements. This is very similar to the proportion of passive investors reported in Barclay *et al*. (2007) for US private placements. In their sample, passive investors represent 83% of the sample. In addition, Panel A shows that 97% of the special warrants are made to passive investors. The relatively high number of special warrant issues sold to passive investors suggests that liquidity is most important for this group of investors.

Table 2
Summary statistics for the purchasers of common stock private placements and special warrants

This table reports summary statistics for our sample of 1,173 common stock private placements (PP Stock) and special warrants (SW) segmented by the time period and the type of purchaser. Panel A reports offerings between 1 Jan 1993 and 31 Dec 2005. Panel B reports offerings between 1 Jan 1993 and 29 Nov 2001. Panel C reports offerings between 30 Nov 2001 and 31 Dec 2005. *Passive* refers to purchasers that are undisclosed, arm's length investors. *Strategic* refers to purchasers that are strategic alliance partners, joint venture partners and/or customers. *Active* refers to purchasers that are nominated to the board of directors upon purchase of the private placement. *Insider* refers to purchasers that are managers and/or existing shareholders. *Venture/Private Capital* refers to a purchase by a single venture capitalist or private equity firm.

Purchaser Type	PP Stock	% of Purchaser Type	SW	% of Purchaser Type	Total	% of Total Purchasers
Panel A: 1 Jan 1993–31 Dec 2005						
Passive	387	37.8	638	61.9	1,025	87.4
Strategic	26	92.9	2	7.1	28	2.4
Active	27	84.4	5	15.6	32	2.7
Insider	43	84.3	8	15.7	51	4.3
Venture/Private Capital	34	91.9	3	8.1	37	3.2
Total	517		656		1,173	100.0
Panel B: 1 Jan 1993–29 Nov 2001						
Passive	128	17.8	593	82.2	721	85.2
Strategic	23	92.0	2	8.0	25	3.0
Active	23	82.1	5	17.9	28	3.3
Insider	33	82.5	7	17.5	40	4.7
Venture/Private Capital	31	96.9	1	3.1	32	3.8
Total	238		608		846	100.0
Panel C: 30 Nov 2001–31 Dec 2005						
Passive	259	85.2	45	14.8	304	93.0
Strategic	3	100.0	–	0.0	3	0.9
Active	4	100.0	–	0.0	4	1.2
Insider	10	90.9	1	9.1	11	3.4
Venture/Private Capital	3	60.0	2	40.0	5	1.5
Total	279		48		327	100.0

We focus on passive investors in the remainder of the paper because they are arm's length investors. Therefore, we exclude 148 private placements where purchasers are classified as either *strategic*, *active*, *insiders*, or *venture capital/private equity*. Since the purpose of this paper is to document the wealth effects of the legislation-induced easing of resale restrictions, including non-arm's length offerings would confound the empirical analysis. The recent private placement literature has shown that the announcement effects and discounts for non-arm's length private placements are indeed different than the announcement effects and discounts for arm's length private placements. For example, Wruck and Wu (2009) show that many new relationships are formed through the private placement agreement and that these relationships drive the positive stock

price response at announcement; placements lacking new relationships are non-events. Wruck and Wu (2009) also show that private placement price discounts vary based on relationships.

Furthermore, Krishnamurthy *et al*. (2005) show that price discounts are smaller and announcement effects are more positive in private placements to affiliated versus unaffiliated investors, and Barclay *et al*. (2007) find that price discounts are smaller and announcement effects are more positive in placements to active versus passive investors.

As pointed out in Barclay *et al*. (2007), our categorisation has its limitations. In particular, finding no information on the purchasers in the press reports does not guarantee arm's length transactions. We note, however, that all of the offerings in our sample received press coverage. Also, to the extent that we have misclassified some placements so that non-disclosure is actually not an arm's length transaction, then this should not pose a problem if misclassification is randomly distributed among common stock private placements and special warrants in the pre-MI period, and among common stock private placements before and after the legislative change in resale restrictions.[9]

Finally, we exclude 180 observations due to one or more unpopulated variables for the empirical tests. This leaves us with a final sample of 942 private placements and 740 public SEOs sold to passive investors.

Figure 1 graphs the yearly number of privately placed common stock, special warrants, and public SEOs to passive investors. The time trend noted above is clearly visible. Before MI came into effect on 30 November 2001, special warrants outnumber privately placed common stock each year. There is a sharp decline in the number of special warrants post-MI and a corresponding increase in the number of privately placed common stock offerings. This is consistent with special warrants being created to provide investors with more liquid private placement offerings. The number of public SEOs is relatively stable over the entire sample period.

4.2. *Descriptive statistics*

Table 3 presents descriptive statistics for the various controls used throughout the paper. Statistics are reported for private placements of common stock and special warrants pre-MI and for private placements of common stock post-MI.

Focusing on the pre–MI period, the average proceeds raised (PROCEEDS) for the special warrant sample is $20.1 million, compared to average proceeds of $6.2 million for the privately placed common stock sample. Measured in the month prior to the issue, the average market capitalisation (MV) of firms issuing special warrants is $102.5 million compared to $78.7 million for firms making private placements of common stock. We also compute the relative issue size, RELSIZE, which is defined as the

[9] For robustness, we also examined price discounts and announcement returns for the non-arm's length investors that we identified. Consistent with prior studies (e.g., Wruck and Wu, 2009; Barclay et al., 2007; Krishnamurthy et al., 2005) we find mixed results with generally smaller price discounts, and in many cases premiums, from the previous day's market closing price. In addition, announcement effects are generally more positive. For brevity, we do not include these results in the paper, but would gladly make these results available to the interested reader upon request.

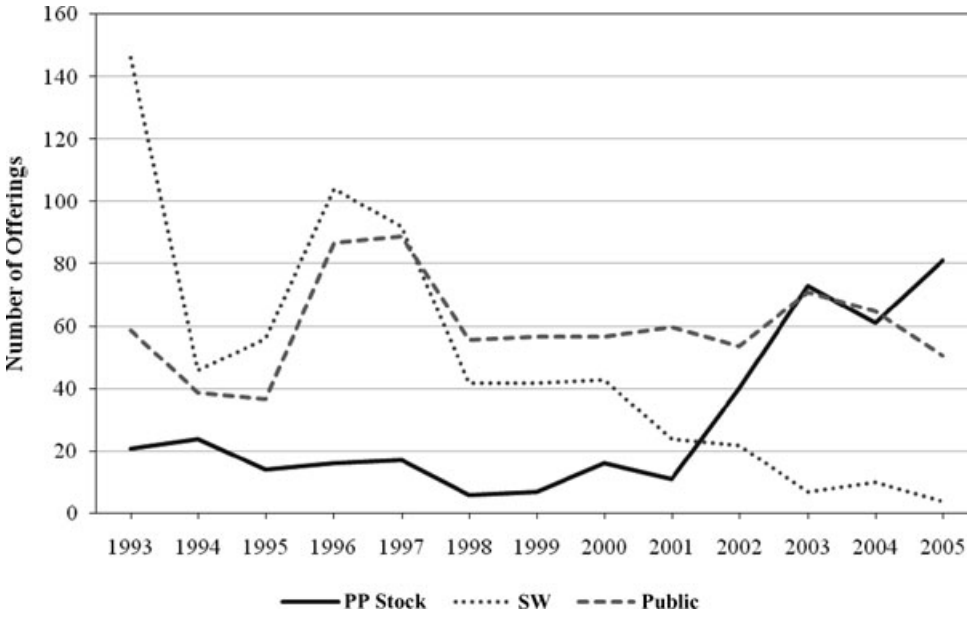

Fig. 1. Yearly number of privately placed common stock, special warrants and public SEOs

This figure displays the yearly number of offerings for our sample of 1,807 private placements of common stock (PP Stock), special warrants (SW), and public SEOs (Public) sold to passive investors from 1 Jan 1993–31 Dec 2005 by TSX-listed firms.

number of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering.[10] Although the mean difference is statistically insignificant, the median difference is statistically significant and larger for special warrants.

We use two main proxies for information asymmetry: (1) RVOL, the standard deviation of market-model residuals measured over a 230-day period prior to the announcement of the equity offering; and (2) SPREAD, the average percentage bid-ask spread scaled by the midpoint of the two quotes over a 60-day period prior to the announcement of the equity offering. We also use the logarithm of the firm's market capitalisation (Ln(MV)) as an additional proxy in our empirical tests.[11] In the pre-MI period, RVOL is 7.3% for the equity of firms making private placements of common stock compared to 5.1% for special warrants. Similarly, SPREAD is 6.3% for the equity of firms making private placements of common stock compared to 3.9% for special warrants. The descriptive statistics for our information asymmetry proxies suggest that firms making private placements of common stock are associated with greater information asymmetry than firms making special warrants.

[10] RELSIZE is similarly defined in prior studies (e.g. Hertzel and Smith, 1993; Jeanneret, 2005).

[11] One or more of these measures has been used in prior studies (e.g. Blackwell *et al*., 1990; Denis, 1991; Chollet and Ginglinger, 2001; Bühner and Kaserer, 2002; Wu, 2004; Bethel and Krigman, 2008).

Table 3

Descriptive statistics of issuer and offering characteristics

This table reports descriptive statistics for common stock private placements and special warrants segmented by the time period. MV is the market value of equity and is calculated as the stock price at the end of the month prior to the announcement of the equity offering multiplied by the number of shares outstanding at that time. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the equity offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. PROCEEDS is the total amount raised from the issue, before deduction of issue expenses and cash fees, excluding the proceeds from any over-allotment taken. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. DISCOUNT is the percentage difference between the offer price and the firm's stock price the day before the pricing date. CAR is the 3-day cumulative announcement-period abnormal return. The column entitled Test of Differences reports p-values based on simple two sample t-tests for differences in means, and Wilcoxon-Mann-Whitney test for differences in medians.

		Pre-MI 1 Jan 1993–29 Nov 2001		Post-MI 30 Nov 2001–31 Dec 2005	Test of Differences	Test of Differences
		PP Stock (1)	SW (2)	PP Stock (3)	(1) and (2)	(1) and (3)
Panel A: Issuer characteristics						
MV ($MM)	Mean	78.66	102.49	121.99	0.08	0.06
	Median	31.76	63.20	67.25	0.00	0.00
RVOL (%)	Mean	7.34	5.09	4.46	0.00	0.00
	Median	5.79	4.32	3.99	0.00	0.00
SPREAD (%)	Mean	6.32	3.90	3.36	0.00	0.00
	Median	4.48	3.07	2.51	0.00	0.00
TURNOVER (%)	Mean	0.23	0.29	0.28	0.06	0.11
	Median	0.16	0.20	0.21	0.05	0.09
BETA	Mean	0.44	0.66	0.70	0.14	0.16
	Median	0.58	0.65	0.57	0.53	0.75
MVOL (%)	Mean	0.73	0.68	0.61	0.20	0.00
	Median	0.57	0.57	0.56	0.52	0.84
Panel B: Offering characteristics						
PROCEEDS ($MM)	Mean	6.24	20.13	17.81	0.00	0.00
	Median	3.60	13.00	10.05	0.00	0.00
RELSIZE (%)	Mean	20.89	31.15	19.77	0.19	0.69
	Median	12.90	20.74	13.71	0.00	0.21
DISCOUNT (%)	Mean	19.00	7.44	8.25	0.00	0.00
	Median	11.01	5.36	5.19	0.00	0.00
$CAR_{(-1,1)}$ (%)	Mean	6.46	1.81	1.24	0.00	0.01
	Median	1.14	−0.23	−0.31	0.05	0.05
	N	116	551	231		

As in Bethel and Krigman (2008) we also control for the order processing and inventory components of bid-ask spreads by including share turnover (TURNOVER), defined as daily trading volume as a percentage of shares outstanding measured over the 60 trading days prior to the announcement date. TURNOVER is lower for common stock private placements compared to special warrants (0.2% versus 0.3%, respectively).

Systematic (market) risk, BETA, is estimated using the market-model from day −250 through day −20 that precede each announcement (day 0). We find that BETA is higher for special warrants compared to common stock private placements (0.7 compared to 0.4, respectively), but this difference is statistically insignificant. We also control for market volatility, MVOL, measured over the 60 trading days prior to the announcement of the equity offer. We find MVOL to be about the same for common stock private placements and special warrants (0.7%).

The offer price discount (DISCOUNT), measured as the percentage difference from the offer price to the firm's market price the day before the pricing date of the offering reveals stark differences.[12] Private placements of common stock are issued with an average DISCOUNT of 19.0% while special warrants are issued with an average DISCOUNT of 7.4%, a difference of about 12 percentage points for a difference in the restricted period of approximately 8 months. These differences may be due to liquidity or to certification or a combination of both.

Announcement effects (CAR) are measured as the cumulative abnormal return based on the conventional market-model event-study methodology. The model is estimated with a linear regression of the firm's stock returns on the TSX/CFMRC value weighted return index. The estimation period includes day −250 through day −20, with day 0 being the initial public announcement of the private placement. Abnormal returns are calculated for each event day and cumulative abnormal returns are formed by summing and then averaging the daily abnormal returns. Based on a 3-day event window, (−1, 1), we find significantly more positive announcement effects for common stock private placements (6.5%) than special warrants (1.8%). This is consistent with the idea that longer resale restrictions provide more credible signals of firm value.

Table 3 also reports descriptive statistics for private placements of common stock in the post-MI period, when the restricted period for common stock private placements was reduced from 12 months to 4 months. We find higher average proceeds (PROCEEDS), firm size (MV), and TURNOVER for common stock private placements after the legislative reduction in the restricted period. We also find firms making private placements of common stock after MI are associated with lower information asymmetry, as proxied by RVOL and SPREAD. This suggests a shift in the types of firms making private placements of common stock post-MI.

The average DISCOUNT for common stock private placements is 8.3% post-MI, compared to 19.0% pre-MI. Note also that post-MI, the average DISCOUNT for private placements of common stock is similar to the average DISCOUNT for special warrants in the pre-MI period (7.4%), when the restricted period of the special warrants was also about 4 months. The difference in DISCOUNT for common stock private placements

[12] Specifically, the offer price discount is defined as $(P_{-1} - P_{offer})/P_{offer}$, which is scaled up by a factor of 100, where P_{-1} is the market price the day before the pricing date and P_{offer} is the offer price.

pre-MI versus post-MI suggests that the legislation-induced reduction in resale restrictions lowered the cost of equity capital for issuing firms. However, comparing the mean CAR post-MI of 1.2% with the mean CAR pre-MI of 6.5%, we find that existing shareholder wealth also declined after the legislative shortening of resale restrictions for common stock private placements, due to the loss of costly signalling.

5. Empirical Results

5.1. *The determinants of private placement type*

The descriptive statistics in Table 3 indicate that firms offering common stock private placements are smaller and have greater information asymmetry than firms offering special warrants in the Pre-MI period, and similarly, firms offering common stock private placements pre-MI are smaller and have greater information asymmetry than firms offering common stock private placements post-MI. This suggests that MI affected the types of firms now making common stock private placements. To provide further insight, we turn to multivariate logistic regressions that control for these various firm and offer characteristics. To minimise the effect of outliers we winsorise all continuous variables hereafter at the 1% level.[13]

The logistic regressions in Table 4 model the choice of offering, privately placed common stock or special warrant, in the pre-MI period, as a function of a set of independent variables reflecting firm and offer characteristics that determine this choice. The dependent variable takes on a value of one if privately placed common stock is offered, and 0 if special warrants are offered.

The results presented in Table 4 are consistent with our univariate findings; the coefficients on our information asymmetry proxies, RVOL and SPREAD, are statistically significant and positive. This says that firms with greater information asymmetry are more likely to issue private placements of common stock than special warrants. This is consistent with the theoretical model of Chemmanur and Fulghieri (1999) and the empirical findings in Wu (2004) and Cronqvist and Nilsson (2005) that firms characterised by high information asymmetry choose private placements instead of public offerings in order to reduce information production costs. The intuition straightforwardly extends to the current context since special warrants are like hybrid private/public offerings. Therefore, we would expect the information production costs for special warrants to be greater than for common stock private placements.

We also find RELSIZE and Ln(MV) to be significantly negative. This says that larger firms that issue relatively more shares are more likely to issue special warrants. This result is also intuitive. If information asymmetries are smaller in larger firms, then larger firms would be more likely to offer special warrants. Also, it may be practically more difficult for firms to issue a larger fraction of illiquid stock. Therefore firms making larger fractional placements would be more likely to issue special warrants.

Table 5 presents logistic regressions that model the determinants of offering type, private placement of common stock post-MI versus private placement of common stock pre-MI. The dependent variable takes on a value of one if privately placed common stock is offered in the post-MI period, and 0 if privately placed common stock is offered in the

[13] This includes both dependent and independent variables. Scenarios with other cut-off points are also examined, yielding similar results.

Table 4

Logistic regression of the choice of offer type, common stock private placement versus special warrant, Pre-MI (1 Jan 1993–29 Nov 2001)

The dependent variable in each model equals one if a firm issues privately placed common stock, and 0 if the firm issues special warrants. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. χ^2-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3
RELSIZE	−0.03***	−0.04***	−0.04***
	(16.69)	(23.80)	(22.75)
RVOL	0.25***		
	(42.74)		
SPREAD		0.31***	
		(55.13)	
Ln(MV)			−0.97***
			(51.57)
TURNOVER	−1.60***	−0.05	−0.40
	(10.08)	(0.01)	(0.61)
PRIOR	0.31**	0.37***	0.42***
	(6.22)	(8.54)	(10.52)
BETA	−0.10	−0.06	−0.05
	(1.09)	(0.43)	(0.22)
MVOL	−0.22	−0.06	0.23
	(0.54)	(0.04)	(0.59)
INTERCEPT	−1.88***	−2.19***	16.18***
	(32.79)	(41.17)	(44.96)
N	667	667	667
Pseudo-R^2	0.09	0.11	0.11

pre-MI period. These results are also consistent with the univariate results presented in Table 3, and highlight a fundamental shift in the types of firms making private placements of common stock post-MI versus pre-MI. Once resale restrictions were reduced from 12 months to 4 months, firms making common stock private placements are associated with lower information asymmetry, as indicated by the highly and significantly negative coefficients on RVOL and SPREAD in Models 1 and 2, respectively. Moreover, RELSIZE is significantly positive in each of the specifications, and Ln(MV) is also positive and

Table 5

Logistic regression of common stock private placement post-MI (30 Nov 2001–31 Dec 2005) versus common stock private placement pre-MI (1 Jan 1993–29 Nov 2001)

The dependent variable in each model equals one if a firm issues privately placed common stock post-MI, and 0 if the firm issues privately placed common stock pre-MI. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. χ^2-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3
RELSIZE	0.02**	0.02**	0.02***
	(6.21)	(6.10)	(6.68)
RVOL	−0.32***		
	(33.98)		
SPREAD		−0.27***	
		(31.12)	
Ln(MV)			0.76***
			(27.22)
TURNOVER	0.38	−0.35	−0.20
	(0.40)	(0.36)	(0.12)
PRIOR	0.10	0.04	−0.06***
	(0.64)	(0.10)	(0.17)
BETA	0.18	−0.01	0.06
	(1.88)	(0.01)	(0.23)
MVOL	−0.89**	−0.94**	−1.20***
	(4.12)	(4.65)	(8.06)
INTERCEPT	2.37***	2.16***	−12.34***
	(31.52)	(27.63)	(22.18)
N	347	347	347
Pseudo-R^2	0.15	0.14	0.12

significant. Therefore, much like special warrant offerings pre-MI, larger firms that issue relatively more shares are more likely to issue common stock private placements post-MI versus pre-MI. This says that the legislation-induced easing of private placement resale restrictions lead smaller firms and firms associated with greater information asymmetry to be less likely to issue equity in the post-MI period. We turn to multivatrate tests of DISCOUNT and CAR to determine whether this is due to the lack of costly signalling in the post-MI period.

5.2. *The wealth effects of private placements of common stock versus special warrants, 1 January 1993–29 November 2001*

In order to determine the wealth effects of the legislative shortening of resale restrictions, we first need to understand the wealth effects of having two types of private placements in the marketplace, one associated with longer resale restrictions than the other. Therefore, in this section we seek to determine the wealth effects of common stock private placements versus special warrant private placements in the pre-MI period, when the only method of bypassing the 12 month restricted period for private placements was by making a special warrant offering. Only after examining these differences can we determine the value impact of the legislation-induced easing of resale restrictions.

5.2.1. *Private placement discounts*. The univariate statistics in Table 3 suggest that private placements of common stock are issued with substantially higher offer price discounts than special warrants in the pre-MI period. However, in the previous subsection we showed that there are significant differences in firm and offer characteristics depending on the type of issue. Therefore, in this section we use multivariate tests to examine the difference in private placement discounts (DISCOUNT) while controlling for the various firm and offer characteristics.

The controls are the same as those defined in Section 4. In addition, we include a binary variable, PPSTOCK, taking on the value of one for private placements of common stock, and a value of zero for special warrants. The coefficient on PPSTOCK measures the liquidity discount and compensation for higher information costs borne by private investors. This follows since common stock private placements have resale restrictions of 12 months and special warrants have resale restrictions of up to 4 months. Therefore, the coefficient on PPSTOCK is expected to be positive.

The OLS regression results are presented in Models 1–3 of Table 6. We estimate specifications for each information asymmetry proxy, RVOL and SPREAD, as well as the natural logarithm of firm size, Ln(MV). Our variable of interest is PPSTOCK. The coefficient on PPSTOCK is between 6.0% and 7.0%, depending on the specification, and highly significant in each specification. Therefore, consistent with the univariate results in Table 3, private placements of common stock, which are restricted from resale in the public market for 12 months, are associated with substantially higher discounts than special warrants, which are restricted from resale for a period of up to 4 months. This is after controlling for other variables which are statistically significant and found to be important determinants of discounts in the literature.

Hertzel and Smith (1993) use RELSIZE as a proxy for information costs, arguing that if new investments are more difficult to value than assets in place, then it is likely that the cost of information is potentially higher and investors will expend more resources to determine firm value, requiring a higher discount. Alternatively, issuing a larger fraction of illiquid stock may be practically more difficult from a firm's perspective so that a higher discount may be needed to compensate purchasers of private placements. We find a significantly positive coefficient on RELSIZE in each specification.

The coefficients on RVOL and SPREAD are positive and statistically significant in Models 1 and 2. This is consistent with the idea that since issuing firms with higher information asymmetry are harder to value, private placement purchasers will require a higher discount as compensation. Similarly, we find a significantly negative coefficient on Ln(MV) in Model 3, suggesting that offerings by larger firms, which presumably have lower information asymmetry, are associated with smaller discounts.

Table 6

Determinants of the offer price discount, 1 Jan 1993–29 Nov 2001

This table reports OLS regression results with the offer price discount as the dependent variable. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. PPSTOCK is a binary variable taking on the value of one for private placements of common stock, and 0 for special warrants. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offer. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. IMR is the inverse Mills ratio computed from the first-stage logistic regressions presented in Table 4. The second-stage Heckman (1979) OLS regressions are reported in Models 4–6. Robust t-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS			Heckman		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
RELSIZE	0.07***	0.07***	0.08***	−0.00	0.00	0.05*
	(3.17)	(2.81)	(3.20)	(−0.01)	(0.04)	(1.74)
PPSTOCK	6.46***	6.61***	7.22***	−18.36**	−10.31	0.31
	(4.40)	(4.64)	(4.97)	(−2.05)	(−1.27)	(0.04)
RVOL	0.98***			1.82***		
	(4.71)			(5.43)		
SPREAD		0.79***			1.53***	
		(3.33)			(4.19)	
Ln(MV)			−1.50***			0.05*
			(−3.00)			(1.74)
TURNOVER	2.39	6.31***	5.27***	−2.43	6.19***	4.92***
	(1.35)	(3.34)	(2.81)	(−1.15)	(3.32)	(2.59)
PRIOR	−0.92*	−0.87	−0.91	0.24	0.02	−0.54
	(−1.76)	(−1.63)	(−1.64)	(0.38)	(0.03)	(−0.80)
BETA	0.59	0.80*	0.80*	0.21	0.65	0.75*
	(1.30)	(1.76)	(1.78)	(0.45)	(1.42)	(1.67)
MVOL	3.03**	4.03***	4.70***	2.01	3.74***	4.91***
	(2.37)	(3.17)	(3.68)	(1.58)	(3.02)	(3.79)
IMR				7.85***	5.35**	2.20
				(2.84)	(2.20)	(1.00)
INTERCEPT	−2.01*	−1.95	27.57***	1.52	−0.39	44.16***
	(−1.66)	(−1.54)	(2.93)	(0.90)	(−0.27)	(2.75)
N	667	667	667	667	667	667
Adjusted R^2	0.19	0.17	0.15	0.20	0.17	0.15

We also find a significantly positive coefficient on MVOL. Since issuing firms are harder to value when markets are more volatile, a higher discount is required by investors.

We also include the variable PRIOR, defined as the number equity issues that the firm had between 1 January 1993 and the current issue. This is included since D'Mello *et al*. (2003) show that subsequent announcements of equity offerings reduce adverse selection costs. The coefficient on PRIOR is negative and marginally significant. This says that equity offerings by firms that have issued equity before are offered at smaller price discounts. The smaller discounts for subsequent offers can be attributed to reduced adverse selection costs.

The coefficient on BETA is positive and marginally significant. Therefore, firms that have higher systematic risk issue equity with higher price discounts. This result is intuitive, since investors require greater compensation (i.e. higher offer price discounts) for agreeing to purchase equity from a firm that has more systematic risk. Our results are therefore robust to the inclusion of various controls.

A potential problem with OLS estimation using the dichotomous common stock private placement variable, PPSTOCK, as an explanatory variable is the possibility of selection bias. If the observed choice of common stock private placement is endogenous, then serious biases may result. To resolve this selection problem, we use Heckman's (1979) two-stage estimation procedure. The first stage involves estimating a logit model of the choice of private placement type, private placement of common stock or special warrant. From this, the inverse Mills ratio (IMR) is computed and added as a right-hand-side variable in the second stage OLS regressions, yielding consistent estimates.

Models 4–6 of Table 6 present the second stage OLS regression results. The first stage logit regression is based on the estimation in Table 4. The inverse Mills ratio, IMR, is significantly positive in Models 4 and 5, implying that self selection is a problem. Specifically, there are unobserved firm and/or offer characteristics that increase the likelihood of a privately placed common stock offering that lead to higher offer price discounts. Interestingly, the coefficient on PPSTOCK becomes either significantly negative (Model 4) or insignificant (Models 5 and 6). The two-stage results suggest that the difference in discounts between common stock private placements and special warrants is driven by the differences in the types of firms choosing to make each type of issue. This should not be surprising given the differences found between common stock private placement issuers and special warrant issuers.

5.2.2. *Announcement-period abnormal returns*. The previous sub-section showed that common stock private placements are issued with higher price discounts than special warrants. However, the univariate results in Table 3 also show that common stock private placements are associated with substantially higher announcement-period abnormal returns than special warrants. In this section we examine announcement-period abnormal returns using multivariate tests to control for various firm and offer characteristics.

Models 1–3 of Table 7 report OLS regressions with abnormal stock returns from day −3 to day 3 as the dependent variable.[14] The variable names are as defined in the previous sub-section. The coefficient on PPSTOCK is positive and statistically significant in each

[14] We use the 7-day event window in our multivariate tests instead of the 3-day event window reported in Table 3 in order to highlight that our results are robust to various event windows. The OLS regressions are robust to various event windows.

Table 7

Determinants of cumulative abnormal returns, 1 Jan 1993–29 Nov 2001

This table reports OLS regression results with the 7-day cumulative abnormal return (CAR) as the dependent variable. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. PPSTOCK is a binary variable taking on the value of one for private placements of common stock, and 0 for special warrants. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. IMR is the inverse Mills ratio computed from the first-stage logistic regressions presented in Table 4. The second-stage Heckman (1979) OLS regressions are reported in Models 4–6. Robust t-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS			Heckman		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
RELSIZE	0.12***	0.10**	0.10***	0.10**	0.08	0.08**
	(2.97)	(2.51)	(2.60)	(2.37)	(1.49)	(1.98)
PPSTOCK	4.66**	4.07**	4.23**	0.14	−1.79	−1.51
	(2.48)	(2.20)	(2.22)	(0.01)	(−0.13)	(−0.16)
RVOL	0.18			0.33		
	(0.53)			(0.60)		
SPREAD		0.44			0.69	
		(1.21)			(1.02)	
Ln(MV)			−1.07*			−1.76
			(−1.66)			(−1.26)
TURNOVER	−6.90**	−5.56**	−6.02**	−7.78**	−5.60**	−6.31**
	(−2.51)	(−2.03)	(−2.26)	(−2.15)	(−2.04)	(−2.33)
PRIOR	−0.82	−0.69	−0.67	−0.61	−0.39	−0.36
	(−1.13)	(−0.95)	(−0.91)	(−0.59)	(−0.36)	(−0.38)
BETA	−0.65	−0.59	−0.58	−0.72	−0.64	−0.62
	(−0.88)	(−0.81)	(−0.80)	(−0.99)	(−0.88)	(−0.86)
MVOL	1.75	1.74	2.14	1.56	1.64	2.31
	(0.88)	(0.90)	(1.08)	(0.76)	(0.83)	(1.15)
IMR				1.43	1.86	1.82
				(0.31)	(0.42)	(0.58)
INTERCEPT	−0.30	−1.12	19.59	0.34	−0.57	33.36
	(−0.14)	(−0.48)	(1.62)	(0.13)	(−0.23)	(1.24)
N	667	667	667	667	667	667
Adjusted R^2	0.06	0.06	0.06	0.05	0.06	0.06

specification, after controlling for firm and offer characteristics. This says that the market reaction is more positive for announcements of common stock private placements than special warrants. Intuitively, private placements of common stock in the pre-MI period (1 January 1993–29 November 2001) are associated with longer resale restrictions than special warrants so that private placements of common stock convey a more credible signal of firm value leading to more positive announcement effects. Therefore, existing shareholders gain from the more positive stock reaction because the market value of their share holdings increases. This also explains why firms might want to issue private placements of common stock instead of special warrants, even with the significantly higher discounts. Although firms raise less in proceeds, there is a net increase in existing shareholder wealth due to the more positive signal of firm value.

The coefficient on RELSIZE is positive and statistically significant in each specification. This says that the market reacts more positively for larger fractional placements. Hertzel and Smith (1993) use RELSIZE as a proxy for the degree of undervaluation. Therefore, the positive coefficient is consistent with the information hypothesis. The coefficient on TURNOVER is negative and significant in each specification. If share turnover reflects higher transactions costs then the market should react more negatively to the announcement of a new equity offering.

As in the previous subsection for the offer price discount, we control for the potential selection bias using Heckman's (1979) two-stage procedure. Models 4–6 of Table 7 present the second stage OLS regression results. We find that the inverse Mills ratio, IMR, is insignificant, suggesting that self selection is not a problem. However, the inclusion of IMR does take away the significance of PPSTOCK, implying that cumulative abnormal returns are more driven by the types of firms choosing to make common stock private placement offerings versus special warrant offerings.

The results imply that pre-MI, common stock private placement issuers enjoy non-trivial economic benefits from costly signalling, since they are smaller firms and firms with higher information asymmetry. Therefore, there is gain from the costly signal by resale restrictions. The non-trivial economic benefits pre-MI is supported by the more positive announcement-period abnormal returns, which disappear once we control for the issuer type.[15] Therefore, a private placement market with securities of different resale restriction lengths serves an important purpose by providing an alternative flotation method with costlier signalling for smaller firms and firms with higher information asymmetry.

5.3. *The wealth effects of MI 45-102*

The descriptive statistics in Table 3 and the logistic regression results in Table 5 show that the characteristics of firms making common stock private placements in the post-MI period are not the same as the characteristics of firms making common stock private placements in the pre-MI period. As previously noted, in the Myers and Majluf (1984) framework high-quality firms have incentives to reveal their qualities to increase their market values through costly signalling. Hertzel and Smith (1993) show that private placements provide this costly signal. In the current context, the opportunity for firms to

[15] These results are consistent with the prior literature. For example, Wruck (1989) and Hertzel and Smith (1993) document more positive announcement effects for unregistered private placements versus registered private placements in the USA.

Table 8

Implied number of equity private placements and special warrant private placements in the period 30 Nov 2001–31 Dec 2005

This table reports the implied number of common stock private placements (PPSTOCK) and special warrant private placements (SW) in the period 30 Nov 2001–31 Dec 2005, had MI 45-102 not come into effect. The implied frequency is computed from predicted probabilities based on parameter estimates from a logistic regression in the period 1 Jan 1993–29 Nov 2001. The implied number of PPSTOCK and SW are presented for various probability cutoff points where P(SW) represents the predicted probability that the issue is a special warrant.

Probability	Implied Number of PPSTOCK	Implied Number of SW
P(SW) > 0.50	13	218
P(SW) > 0.60	26	205
P(SW) > 0.70	34	197
P(SW) > 0.80	70	161
P(SW) > 0.90	137	94

issue common stock private placements instead of special warrants prior to MI provided smaller and higher information asymmetry firms a flotation method that conveyed a costlier signal.

The shortening of resale restrictions from a 12 month restricted period to a 4 month restricted period eliminated the benefits of an alternative flotation method that reduced costly information asymmetry, since presently all common stock private placements are associated with a 4 month restricted period and the use of special warrants has all but disappeared. Since firms with greater information costs relied on the costlier signal, these issuers in particular suffer from the legislation-induced easing of resale restrictions, potentially causing these firms to forego positive net present value investment projects.

The legislation-induced easing of resale restrictions appears to have driven firms that offered common stock private placements pre-MI out of the market. Table 8 offers further insight into this conjecture. First, we estimate a logistic regression in the pre-MI period to determine the likelihood of making a special warrant offering versus a common stock private placement. We use the parameter estimates from this logistic regression and imply predicted probabilities of firms that would issue special warrants in the post-MI period, had MI 45-102 not come into effect. The results are presented for various cut-off points. Predicted probabilities below the cut-off point are treated as predictors of common stock private placements and predicted probabilities at or above the cut-off point are considered to be predictors of special warrants. A cut-off point of 0.50 is often chosen. Consistent with our intuition, the results illustrate that the majority of the offerings would be special warrant private placements if MI 45-102 did not come into effect. For example, for a cut-off probability of 0.5, there would be 218 special warrants compared to only 13 private placements of common stock. Therefore, 94.4% of the post-MI private placement issues would be special warrants if MI 45-102 did not come into effect. This is important from a policy perspective because the legislative change suppressed an important signalling mechanism, and the cohort of firms most negatively affected is smaller firms and firms with greater information asymmetry.

5.3.1. *Univariate results: Offer price discount and announcement-period abnormal returns.* Securities regulators reduced private placement resale restrictions with the intention of

making private placements more attractive to investors and to reduce the liquidity portion of offer price discounts, and thus reducing the cost of capital for issuing firms. In this section we use a differences-in-differences estimation methodology to test whether the shortening of the resale restricted period by the adoption of MI resulted in a reduction in common stock private placement offer price discounts and announcement-period abnormal returns.[16]

As noted above, common stock private placement issuers post-MI are inherently different than common stock private placement issuers pre-MI. In order to examine the difference in discounts and announcement-period abnormal returns for private placements of common stock before and after the legislative change, we must compare a similar cohort of firms. We use the propensity score matching approach from above and identify common stock private placements post-MI that match the characteristics of common stock private placements pre-MI. We use a cut-off probability of 0.75 to determine which post-MI common stock private placement issues are similar to pre-MI common stock private placement issues. We identify 50 such common stock private placement issues post-MI.[17]

The univariate differences-in-differences for the offer price discount are presented in Panel A of Table 9. Since MI affected common stock private placements, we refer to the sample of private placements of common stock as the treatment group. In the first level of differences, we subtract the average discount measured before the legislative change from the average discount measured after the legislation for the sample of private common stock placements: $\Delta^{Private}_{Discount}$ (=7.5% − 14.9% = −7.4%), revealing about a 7 percentage point decrease in the offer price discount. However, taken on its own, $\Delta^{Private}_{Discount}$ could be a misleading estimator of the legislation's impact since other changes contemporaneous with the legislative change affect this estimate. In order to deal with this, we select a control group, the sample of public SEOs, since the legislative change did not affect public offerings. The change in average offer price discount for the public equity control group measured before and after the legislative change, $\Delta^{Public}_{Discount}$, captures the impact of contemporaneous shocks affecting the control group: $\Delta^{Public}_{Discount}$ (= 5.1% − 3.4% = 1.7%). If these shocks affect the treatment and control groups in similar ways, then we can use the difference in the public discount, $\Delta^{Public}_{Discount}$, to capture the impact of the contemporaneous shocks on privately placed common stock. Therefore, the difference between $\Delta^{Public}_{Discount}$ and $\Delta^{Private}_{Discount}$ nets out these contemporaneous shocks allowing us to identify the impact of the legislative change on common stock private placement discounts: $\Delta^{Private}_{Discount} - \Delta^{Public}_{Discount}$ (= −7.4% − 1.7% = −9.1%).

Netting out the difference in discounts from the control sample, the differences-in-differences produces a statistically significant 9 percentage point decrease in discounts for common stock private placements due to the legislative change. The substantial decrease in the net discount provides evidence that the easing of resale restrictions reduced the cost of capital for issuers.

To understand the wealth effects of MI on existing shareholder wealth we also need to examine announcements-period abnormal returns on common stock private

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[16] See Bertrand and Mullainathan (1999) for a practical illustration of the differences-in-differences methodology.

[17] Our results are robust to various cut-off points. Also, in unreported tests, we examine summary statistics of firm and offer characteristics for the two cohorts of private placements, pre- and post-MI, and the characteristics are quite similar.

Table 9

Univariate differences-in-differences estimation for the offer price discount, 1 Jan 1993–31 Dec 2005

This table reports univariate differences-in-differences estimation results for the offer price discount and cumulative abnormal returns. DISCOUNT is defined as $(P_{-1} - P_{offer})/P_{offer}$, which is scaled up by a factor of 100, where P_{-1} is the market price the day before the pricing date and P_{offer} is the offer price. CAR is the 7-day cumulative abnormal return. PRIVATE refers to private placements of common stock and PUBLIC refers to public equity offerings. Private placements of common stock post-MI are propensity score-matched to private placements of common stock pre-MI. We identify 50 common stock private placements post-MI that are similar to common stock private placements pre-MI. T-statistics are reported in parentheses.

	Pre-MI 1 Jan 1993–29 Nov 2001	Post-MI 30 Nov 2001–31 Dec 2005	Difference
Panel A: DISCOUNT			
PRIVATE	14.85	7.49	−7.35
	(9.55)	(4.81)	(−2.85)
PUBLIC	3.37	5.09	1.72
	(18.54)	(15.40)	(4.94)
Difference	11.47	2.40	−9.07
	(13.68)	(2.37)	(−6.36)
Panel B: CAR			
PRIVATE	6.66	5.89	−0.76
	(3.58)	(3.03)	(−0.25)
PUBLIC	−0.98	−2.86	−1.88
	(−2.22)	(−4.76)	(−2.48)
Difference	7.64	8.76	1.12
	(5.96)	(5.50)	(0.51)

placements pre-MI versus post-MI. Panel B of Table 9 presents the univariate differences-in-differences estimation results for announcement-period abnormal returns. We find positive announcement effects for common stock private placements in both the pre-MI and post-MI periods. These results are consistent with what others have documented for private placements of equity (e.g. Wruck, 1989; Hertzel and Smith, 1993). The announcement-period abnormal returns for public equity offerings on the other hand are found to be negative. The negative announcement effects for public equity offerings is consistent with the Myers and Majluf (1984) information hypothesis that public equity offerings signal overvalued shares.[18]

We glean insight on the legislative shortening of resale restrictions by comparing the announcement effects of common stock private placements in the pre-MI versus post-MI period. The results show that announcement-period abnormal returns are very similar and insignificantly different pre-MI versus post-MI (6.7% compared to 5.9%, respectively). The differences-in-differences estimate of the impact of MI ($= \Delta_{CAR}^{Private} - \Delta_{CAR}^{Public}$) is 1.1% and also insignificant. This says that the legislative shortening of resale restrictions did

[18] Several papers document negative announcement effects for public equity offerings. See for example, Asquith and Mullins, 1986; Masulis and Korwar, 1986; Eckbo and Masulis, 1992; Heron and Lie, 2004; Bethel and Krigman, 2008.

not have an effect on the announcement-period abnormal returns of common stock private placements when we control for the change in the types of firms making private placements of common stock post-MI.[19]

It is worthwhile to note again that we are using a matched sample of common stock private placements post-MI, using a generous cut-off probability of 0.75. However, the majority of issues are in fact by larger firms and firms with lower information asymmetry. In unreported tests, we also compute the differences-in-differences using the full sample of post-MI common stock private placements, and the impact of MI ($= \Delta_{CAR}^{Private} - \Delta_{CAR}^{Public}$) is a statistically significant −5.1%. This says that the legislative change reduced the positive announcement-period abnormal returns, but that the driver is the change in the types of firms issuing privately placed common stock post-MI.

5.3.2. *Multivariate results: Offer price discount and announcement-period abnormal returns.* Although the univariate results are insightful, a more robust test is to implement the differences-in-differences approach in a regression framework, allowing us to control for firm and offer characteristics the literature has found to be important determinants of private placement discounts and announcement effects. Therefore, we estimate:

$$Y_j = \beta_0 + \beta_1 \, TIME_j + \beta_2 \, PRIVATE_j + \beta_3 \, PRIVATE_j * TIME_j + \gamma_i X_{ij} + \varepsilon_j \quad (1)$$

where the dependent variable, Y_j is the offer price discount (DISCOUNT), or the cumulative abnormal return (CAR), as defined above, X_i are controls for firm and offer characteristics, with i indexing controls $i = 1, \ldots, n$. TIME, is a binary variable taking on the value of one for offerings between 30 November 2001 and 31 December 2005, and zero for offerings between 1 January 1993 and 29 November 2001. PRIVATE is a binary variable taking on the value of one for private placements of common stock, and zero for public SEOs. β_1 represents the difference in discounts or CARs for public equity offerings before and after the legislative change. β_2 represents the difference in discounts or CARs between common stock private placements and public SEOs in the period 1 January 1993–29 November 2001. Our estimate of the impact of the legislative change, MI 45-102, on discounts or CARs is β_3, the coefficient on the interaction term, PRIVATE $*$ TIME. It captures the difference in the changes of the discounts or CARs over time,

$$\begin{cases} \Delta_{Discount}^{Private} - \Delta_{Discount}^{Public} \\ \text{or} \quad \Delta_{CAR}^{Private} - \Delta_{CAR}^{Public} \end{cases}$$

The regression results for DISCOUNT are presented in Table 10. We estimate specifications for each information asymmetry proxy, RVOL and SPREAD, as well as Ln(MV). The basic results are presented in Models 1–3. Several findings are noteworthy. First, the coefficient on TIME is positive and statistically significant. This says that for the sample of public equity offerings, the average discount is significantly higher in the period 30 November 2001–31 December 2005 than in the period 1 January 1993–29 November 2001. Therefore, although the legislative change did not affect public SEOs, there appears to be a general increase in discounts. The increase in discounts through

[19] The mean DISCOUNT and CAR reported in Table 9 is different than the mean DISCOUNT and CAR reported in Table 3 due to winsorising. Also, CAR is computed for different event windows in Table 9 and Table 3, respectively. The conclusions remain the same for unwinsorised variables and for various event windows of CAR.

Table 10

Multivariate differences-in-differences estimation for the offer price discount, 1 Jan 1993–31 Dec 2005

This table reports OLS regression results with the offer price discount as the dependent variable. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. TIME is a binary variable taking on the value of one for offerings between 30 Nov 2001 and 31 Dec 2005, and 0 for offerings between 1 Jan 1993 and 29 Nov 2001. PRIVATE is a binary variable taking on the value of one for private placements of common stock, and 0 for public equity offerings. Private placements of common stock post-MI are propensity score-matched to private placements of common stock pre-MI. We identify 50 common stock private placements post-MI that are similar to common stock private placements pre-MI. Robust t-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3
RELSIZE	0.07***	0.07***	0.08***
	(2.91)	(2.81)	(2.77)
RVOL	1.05***		
	(4.80)		
SPREAD		0.87***	
		(2.99)	
Ln(MV)			−1.10***
			(−4.32)
TURNOVER	−2.20*	1.06	0.13
	(−1.86)	(0.87)	(0.11)
PRIOR	0.08	0.17	0.12
	(0.48)	(1.04)	(0.72)
BETA	0.44	0.93*	0.95*
	(0.81)	(1.76)	(1.74)
MVOL	−0.23	0.53	1.17
	(−0.30)	(0.70)	(1.60)
TIME	1.07**	1.82***	1.58***
	(2.55)	(4.09)	(3.71)
PRIVATE	7.65***	8.25***	8.94***
	(5.42)	(5.71)	(6.25)
PRIVATE * TIME	−8.38***	−9.09***	−8.67***
	(−4.11)	(−4.30)	(−4.12)
INTERCEPT	−0.71	−1.05	22.02***
	(−0.68)	(−0.95)	(4.09)
N	906	906	906
Adjusted R^2	0.28	0.27	0.25

time for public SEOs is consistent with the prior literature (e.g. Altınkılıç and Hansen, 2003; Corwin, 2003). Second, the coefficient on PRIVATE is positive and statistically significant. This says that in the period 1 January 1993–29 November 2001, the average discount for private placements of common stock was higher than the average discount for public equity offerings, which are not associated with restrictions on resale. Third, the coefficient on the interaction term PRIVATE ∗ TIME, the estimate of the legislation's effect is negative and statistically significant. Therefore, consistent with our univariate results, MI reduced the average discount for common stock private placements by about 8.0%–9.0%, after controlling for firm and offer characteristics, depending on the specification.

We document a positive coefficient on RELSIZE, indicating that when the cost of information is higher, private placement investors require larger discounts. The coefficients on RVOL and SPREAD are also positive and statistically significant. This says that investors purchasing shares from a firm with greater information asymmetry, as measured by RVOL and SPREAD, require a higher discount as compensation for purchasing shares from a firm that is more difficult to value. We also find a significantly negative coefficient on Ln(MV), suggesting that offerings by larger firms, which presumably have lower information asymmetry, are associated with smaller discounts.

The differences-in-differences results show that MI, which reduced resale restrictions from 12 months to 4 months, reduced the discounts on common stock private placements. These results provide strong evidence that liquidity represents a portion of private placement discounts and that the legislative easing of resale restrictions reduced the cost of capital for issuing firms.

We also use a multivariate differences-in-differences estimation to examine the impact of the change in resale restrictions on announcement-period abnormal returns. The OLS regression results are presented in Table 11. The coefficient on TIME, the difference in announcement-period abnormal returns for public equity offerings post-MI versus pre-MI, is negative and statistically significant. This says that for public equity offerings, announcement effects are more negative post-MI than pre-MI. This could be attributed to the economic climate post-MI. The coefficient on PRIVATE is positive and statistically significant in each specification. This captures the difference in announcement effects between common stock private placements and public equity offerings in the pre-MI period. It should not be surprising that private placements are associated with higher announcement effects than public equity offerings based on the findings in this paper and the prior literature (e.g. Hertzel and Smith, 1993; Wruck, 1989). After controlling for firm and offer characteristics, the coefficient on TIME∗PRIVATE is insignificant, similar to the univariate findings. This says that there is no reduction in positive announcement-period abnormal returns in the post-MI period after controlling for specific firm and offer characteristics and the types of firms choosing to make common stock private placements post-MI.

It is important to note once again that we are using a matched sample of common stock private placements post-MI, and that the majority of issues are in fact larger firms and firms with lower information asymmetry. Therefore, the results at first glance may appear to suggest that firms are better off because the easing of resale restrictions reduced the liquidity discount and hence the cost of capital, yet there is no value destruction on the market value of existing shareholders' stock holdings as measured by announcement-period abnormal returns. However, the legislative change caused a fundamental shift in the types of firms making common stock private placements, which are driving these results.

Table 11

Multivariate differences-in-differences estimation for cumulative abnormal returns, 1 Jan 1993–31 Dec 2005

This table reports OLS regression results with the 7-day cumulative abnormal return (CAR) as the dependent variable. RELSIZE is the amount of shares offered scaled by the firm's total number of shares outstanding in the month prior to the announcement of the equity offering, scaled up by a factor of 100. RVOL is the standard deviation of market-model residuals measured over a 230-day period beginning 250 days prior to the announcement of the offering. SPREAD is defined as the average percentage bid-ask spread scaled by the midpoint of the two quotes that define the spread over a 60-day period prior to the announcement of the equity offering. Ln(MV) is the logarithm of the firm's market capitalisation in the month prior to the announcement of the equity offering. TURNOVER is defined as the average daily trading volume as a percent of shares outstanding measured over the 60 trading days prior to the announcement of the equity offering. PRIOR is defined as the number of issues that the firm had between 1 Jan 1993 and the current issue, where the issues were of the same type as the current issue. BETA is estimated from the market-model over a 230-day period beginning 250 days prior to the announcement of the offering. MVOL is the standard deviation of the CFMRC/TSX value-weighted market return index over the 60 trading days prior to the announcement of the equity offering. TIME is a binary variable taking on the value of one for offerings between 30 Nov 2001 and 31 Dec 2005, and 0 for offerings between 1 Jan 1993 and 29 Nov 2001. PRIVATE is a binary variable taking on the value of one for private placements of common stock, and 0 for public equity offerings. Private placements of common stock post-MI are propensity score-matched to private placements of common stock pre-MI. We identify 50 common stock private placements post-MI that are similar to common stock private placements pre-MI. Robust t-statistics are in parentheses. *, **, *** represent statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3
RELSIZE	0.08*	0.06	0.11**
	(1.92)	(1.50)	(2.21)
RVOL	0.75**		
	(2.17)		
SPREAD		1.06***	
		(2.79)	
Ln(MV)			−0.19
			(−0.51)
TURNOVER	−3.47	−0.49	−1.98
	(−1.62)	(−0.24)	(−0.99)
PRIOR	0.49*	0.60**	0.49*
	(1.73)	(2.11)	(1.74)
BETA	−0.88	−0.48	−0.56
	(−1.05)	(−0.60)	(−0.70)
MVOL	−1.38	−1.11	−0.43
	(−1.24)	(−1.06)	(−0.40)
TIME	−2.61***	−2.04**	−2.14**
	(−2.95)	(−2.39)	(−2.51)
PRIVATE	4.59***	3.44**	6.89***
	(2.69)	(2.01)	(3.46)
PRIVATE * TIME	1.89	1.09	1.77
	(0.73)	(0.42)	(0.67)
INTERCEPT	−2.52	−3.23*	1.64
	(−1.48)	(−1.79)	(0.21)
N	906	906	906
Adjusted R^2	0.10	0.11	0.09

Our results imply that post-MI, common stock private placement issuers enjoy trivial economic benefits from resale restrictions, since they are larger and with lower information asymmetry. Thus, there is little gain from the costly signal by resale restrictions. The trivial economic benefits during the post-MI period cause the reduced announcement-period abnormal returns, which disappear when we control for the issuer type.

6. Conclusions

This paper highlights how the easing of resale restrictions by regulators affects shareholder wealth. We use a sample of 1,173 private placements of equity from Canada to examine the impact of Multilateral Instrument 45-102 (MI), a legislative change that came into effect on 30 November 2001 and shortened resale restrictions on privately placed common stock.

We show that before MI came into effect, special warrants, a unique type of private placement in Canada created to bypass the longer 12 month restricted period for common stock private placements, comprised approximately 82% of all private equity placements to passive investors. This indicates the desire for liquid shares by private placement investors. We further show that firms making special warrant private placements in the pre-MI period are larger and associated with less information asymmetry than firms making common stock private placements. Moreover, firms making common stock private placements in the post-MI period are also larger and associated with less information asymmetry than firms making common stock private placements in the pre-MI period. Therefore, the legislation-induced shortening of resale restrictions affected the types of firms currently making private placement offerings in favour of larger firms and firms with less information asymmetry.

We compare private placement discounts between common stock private placements and special warrants in the pre-MI period (1 January 1993–29 November 2001). During this period, private placements of common stock were restricted from resale in the public market for 12 months, while special warrants were restricted from resale in the public market for only 4 months. After controlling for various firm and offer characteristics found to be important determinants of private placement discounts in the literature, we find substantially higher offer price discounts for private placements of common stock than special warrants. The difference in discounts ranges between 6.0% and 7.0% depending on the model used to control for firm and other offer characteristics. In addition, announcement effects are significantly more positive for common stock private placements compared to special warrants in the pre-MI period, consistent with longer resale restrictions providing more costly signalling. However, once we control for the endogenous choice of private placement type, these differences in discounts and announcement effects disappear, suggesting that costly signalling is a function of issuer and/or issue characteristics.

We next examine the wealth effects of MI. Using a differences-in-differences test we document lower discounts for common stock private placements post-MI versus pre-MI, when resale restrictions were shortened by 8 months. Using a sample of public SEOs as the control group, the results are robust to both univariate and multivariate tests. The difference in discounts ranges between 8.0% and 9.0% depending on the model. We do not document reduced mean announcement-period abnormal returns for common stock private placements in the post-MI period compared to the pre-MI period. This says that

the reduction in announcement-period abnormal returns is more driven by the types of firms making common stock private placements in the post-MI period.

The results may appear to suggest that firms are better off because the easing of resale restrictions reduced the liquidity discount and hence the cost of capital, yet there is no value destruction on the market value of existing shareholders' stock holdings as measured by announcement-period abnormal returns. However, the legislative change caused a fundamental shift in the types of firms making common stock private placements. In particular, our evidence shows that after the legislation-induced shortening of resale restrictions, smaller firms and firms with greater information asymmetry are less likely to issue privately placed common stock, which may augment the underinvestment problem the private placement market previously circumvented. We provide support for this by implying the number of special warrant issues post-MI had MI 45-102 not come into effect. We find that the majority of issues would be special warrants. Therefore, firms that in the pre-MI period issued common stock private placements – smaller firms and firms with greater information asymmetry – are made worse off by the change in legislation since they can no longer convey quality through costly signalling. The easing of resale restrictions augments the underinvestment problem pointed out in Myers and Majluf (1984).

Our results imply that post-MI, common stock private placement issuers enjoy trivial economic benefits from resale restrictions, since they are larger and with lower information asymmetry. Thus, there is little gain from the costly signal by resale restrictions. The trivial economic benefits during the post-MI period cause the reduced announcement-period abnormal returns, which disappear when we control for the issuer type. In contrast, the pre-MI common stock private placement issuers enjoy non-trivial economic benefits from resale restrictions, since they are smaller and with higher information asymmetry. Therefore, there is gain from the costly signal by resale restrictions. The non-trivial economic benefits during the pre-MI period lead to more positive announcement-period abnormal returns, which also disappear when we control for the issuer type.

This paper has important economic and policy implications. The Canadian experience with past institutional and regulatory changes provides insights into what regulators, firms, and investors can potentially expect in the USA, and other markets that are considering adopting similar rule changes.

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