



Conflict of interest in commercial bank security underwritings: Canadian evidence

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Abstract

The recent repeal of the Glass–Steagall Act in the US has cleared the way for commercial banks to enter the securities underwriting business. Many of the concerns that resulted in the original passage of the Glass–Steagall Act, however, still exist. One of these is the possible conflict of interest a universal bank faces. This paper provides evidence on this issue from the experience of Canada following its removal of restrictions on chartered bank ownership of investment dealers. Both ex ante bond yield comparisons between commercial and investment bank underwritten issues and equity price reactions to bond issue announcements provide no evidence of a conflict of interest.

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1. Introduction

The recent blurring of the distinctions between commercial and investment banks has raised a number of concerns. These include concerns over macro effects on the stability of the financial system, including the risk of bank failure and contagion,

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and micro effects on the pricing of individual securities issues. One of the principal concerns over securities pricing effects has focused on the inherent potential for a conflict of interest in an organization that combines the roles of lender and underwriter.

Combining lending and underwriting may affect securities pricing in a variety of ways. While there are many potential securities pricing effects, including effects on competition and through differences in the relative monitoring abilities of commercial and investment banks, most of the literature has grouped these effects under two hypotheses: the conflict of interest hypothesis and the information advantage hypothesis.

The conflict of interest hypothesis argues that a joint bank/underwriter might underwrite a securities issue for a corporation in which it has a loan outstanding and whose default risk has increased. If the corporation has not yet missed any payments or violated any of the debt covenants, the bank has limited options to attempt to be compensated for this additional risk. One option is to underwrite a bond issue for the corporation and require the firm to use the proceeds to repay the loan, thereby shifting the increased default risk from itself to the securities market. While perhaps this is most significant for bank loans to lower quality firms, all firms (both high and low quality) that have increasing default risk would create a potential conflict of interest for the bank/underwriter. To the extent that this conflict of interest hypothesis is valid, mingling commercial and investment banking should increase securities yields as potential buyers react to this perceived risk.

Scope economies and informational advantages associated with a commercial bank establishing one relationship as both lender and underwriter may exist, however, which would lead in a competitive market to lower securities yields. Because of additional information the bank/underwriter has regarding the issuing firm from previous dealings (information that an investment bank underwriter does not have) the market may perceive commercial bank underwritten securities as less risky. This is the information advantage hypothesis.

The effect of mixing commercial and investment banking on securities yields depends on the relative strengths of the conflict of interest and information advantage hypotheses. This is fundamentally an empirical issue. Prior research from the US experience suggests that the information advantage dominates. Most of that research (Kroszner and Rajan, 1994; Ang and Richardson, 1994; Puri, 1994; Puri, 1996) use pre-1933 data prior to passage of the Glass–Steagall Act. However, more recent data from the 1990s (Gande et al., 1997; Hebb, 2000) provide evidence consistent with these results.

We provide insight into the potential effects of the coalescing of commercial and investment banking from recent Canadian experience. Canada revoked the law separating commercial and investment banking in the late 1980s. Following this legislative change, Canadian chartered banks moved very quickly to dominate the securities business. Our evidence from both the debt and equity markets suggest that the informational advantage effects dominated in affecting securities pricing and thus provides no support for the conflict of interest hypothesis. We thus confirm the results from studies of the US markets.

Our evidence provides additional, independent insight into the effects of mixing commercial and investment banking on securities pricing. Beyond providing results from a different financial system, however, our evidence may have implications for the evolution of the US financial system following the 1999 repeal of Glass–Steagall. There are, in fact, a number of similarities between the structure of the US investment banking industry and the Canadian structure prior to financial reform. For example, the Canadian investment banking industry prior to 1987 had a small number of dominant national firms with a larger number of regional firms, a pattern similar to that in the US.

The rest of the paper is organized as follows. Section 2 describes the Canadian banking structure and its movement toward universal banking. Section 3 describes the hypotheses and the methodology used to test them, while Section 4 contains information on the sample. Section 5 provides the empirical results and conclusions are given in Section 6.

2. Canadian banking structure

The Canadian chartered bank system has traditionally been very concentrated. Unlike the US and its large number of small banks, the Canadian banking system has relatively few banks. As of March 1998, there were eight Schedule I banks, three domestically owned Schedule II banks, and 43 foreign Schedule II banks.¹ Schedule I banks are domestically owned and must be widely held (no more than 10% by one party). Schedule II banks include all foreign banks as well as closely held Canadian-owned banks. The large size of the chartered banks results partly from unrestricted branching. Canadian banks are permitted to branch throughout the country with no restriction on crossing provincial borders. This has led to the “Big 6” Schedule I banks controlling over 80% of all banking assets.

2.1. Universal banking in Canada

2.1.1. Pre-1987

Prior to 1980, Canadian banks were restricted in their involvement in the securities industry by custom and tradition. Although not expressly forbidden, chartered banks were not active in the securities business. This reliance on tradition to prevent bank entry into the securities business changed with the Bank Act of 1980. While allowing banks to own corporate securities for portfolio purposes (subject to a 10% voting share limit), the Act prohibited chartered banks from underwriting corporate securities and engaging in investment counseling. The main rationale for this limitation was the alleged excessive risk of permitting banks to underwrite securities and the potential for a conflict of interest (Freedman, 1992). Amoako-Adu and Smith (1995) examine the change in risk to the banking industry in Canada and find that

¹ Canadian Bank Facts 1997/1998 published by the Canadian Bankers Association.

permitting banks to purchase investment dealers did not significantly increase the systematic risk of the banks. To our knowledge, our study provides the first direct test of the conflict of interest hypothesis in Canada.

As competition from non-bank financial firms increased, banks lobbied for expanded securities power. The Canadian government also believed that Canadian securities firms needed a larger capital base in order to compete internationally (Ursel and Ljucovic, 1998). In 1986, the top five Canadian investment dealers had an average capital base of C\$165 million, only 2.6% of the average capital base of \$C6.4 billion for the top international investment banks.² An obvious solution to these issues was to permit chartered bank entry into the securities industry. This would allow the banks to diversify as well as to inject badly needed capital into the investment banks. This entry was permitted with the passage of the Bank Act of 1987. The Act opened the securities industry to both Canadian chartered banks and foreign banks (Freedman, 1992).

2.1.2. *Post-1987*

The new Bank Act caused a regulatory control battle because investment firms were the regulatory domain of the provinces while chartered banks were regulated by the federal government. The end result was that while chartered banks were permitted to purchase investment firms, any securities activities relating to the underwriting of corporate debt and equity had to be conducted through a subsidiary or affiliate that would be regulated by the provinces. Unlike the system in the US, however, the securities firm could be a direct subsidiary of the bank and not just the bank holding company. This allows for a more direct relationship between Canadian banks and their securities affiliates than US banks and their Section 20 subsidiaries.

The passage of this act resulted in 5 of the 6 major chartered banks purchasing investment firms (see Table 1 for a history of chartered bank acquisitions of investment banks). The sixth bank started a securities affiliate *de novo*. Whereas commercial bank entry into the securities industry in the US has been relatively moderate, only one major domestic securities firms in Canada remained independent as of the mid-1990s. By 1997 over 80% of the corporate bond issues were underwritten by affiliates of chartered banks.

Foreign Schedule II banks initially also entered the investment banking industry. Between July 1987 and September 1990, five foreign-owned banks purchased all or part of five Canadian securities firms. Over this time period, nine foreign-owned banks formed their own investment bank subsidiaries in Canada. The majority of these were American money center banks such as Citibank, JP Morgan, and Bankers Trust. However, other foreign banks such as Credit Suisse and Paribas also established their own investment bank subsidiaries.

American investment banks have aggressively entered the Canadian market. Several, such as Goldman Sachs, Morgan Stanley, and Salomon Brothers, have established Canadian subsidiaries. In order to gain market share, many of these invest-

² Sources: Financial Post 500, Summer 1987; Moody's Banking and Finance Manual.

Table 1
Chartered bank acquisitions of major investment banks^{a,b}

Chartered bank acquirer	Investment bank target	Announcement date	Effective date
Bank of Montreal	Nesbitt Thomson	8/13/87	10/31/87
Bank of Nova Scotia	McLeod Young Weir	9/30/87	3/30/88
Royal Bank of Canada	Dominion Securities	11/16/87	7/18/88
Canadian Imperial Bank of Commerce	Wood Gundy Corp.	1/26/88	6/13/88
National Bank of Canada	Levesque Beaubien	7/4/88	12/13/88
National Bank of Canada	Geoffrion Leclerc	2/6/89	7/1/89
Canadian Imperial Bank of Commerce	Merrill Lynch Canada	1/3/90	1/15/90
Bank of Montreal	Burns Fry Holdings	7/18/94	9/1/94
Royal Bank of Canada	Richardson Greenshields	8/29/96	11/1/96

^a Source: Securities Data Corporation Mergers & Acquisitions Database.

^b The 1987 Bank Act permitted, for the first time, chartered bank ownership of investment dealers. Five of the six major chartered banks in Canada quickly acquired investment dealer subsidiaries. This table lists the dates of these acquisitions.

ment banks are purchasing established Canadian investment firms. In fact, Merrill Lynch recently purchased the last major independent Canadian investment firm, Midland Walwyn.³

3. Hypotheses and methodology

3.1. Methodology

We test the relative importance of the conflict of interest and the information advantage hypotheses first by examining the pricing of new bond issues, referred to as *ex ante* bond pricing, and secondly, by examining the equity price reaction to a company's debt issue. If the conflict of interest hypothesis is dominant, we would expect that commercial bank underwritten debt issues would, *ceteris paribus*, have higher *ex ante* yields than investment bank underwritten issues. In addition, if the conflict of interest hypothesis is dominant, the market reaction to a debt offering underwritten by a commercial bank would be more negative than the reaction to an investment bank underwritten issue.

3.1.1. *Ex ante* bond pricing

Similar to Puri (1996), after controlling for factors that should affect the initial yield of a security, we compare the initial spread of commercial bank affiliate underwritten bonds with investment bank underwritten bonds. Initial spread is defined as

³ Canadian bank laws have continued to be revised and the system is continuing its move towards a more universal banking system.

the difference in the ex ante yield to maturity of the bond at issuance and the yield to maturity of a benchmark government bond of equal maturity on the day of issuance.

A bond issue is classified based on the type of underwriter. In 46 of the issues, the bonds were underwritten by a sole underwriter. If this underwriter is as chartered bank affiliate, the issue is classified as commercial bank underwritten, investment bank underwritten otherwise. For the remaining 310 issues, the bonds were underwritten by syndicates. These bonds are classified based upon the affiliation of the lead underwriter. This classification system is consistent with previous studies (e.g. Kroszner and Rajan, 1994; Puri, 1996).

The pricing of bonds is assumed to be determined by issue characteristics, issuer characteristics, market conditions, and underwriter characteristics. Specifically, the following factors are assumed to affect initial bond yields:

- Issue size – the natural log of the dollar size (in millions) of the issue.
- Issue maturity – the natural log of the number of years until maturity.
- Quality spread – the average spread between long-term domestic corporate and government bonds in the month the bond is issued. This helps control for economic conditions at the time of issuance.
- Call features – a dummy variable that takes the value of 1 if the bond is callable.
- Sinking fund provisions – a dummy variable that takes the value of 1 if the bond has a sinking fund.
- Secured bond – a dummy variable that takes the value of 1 if the bond is secured by real assets.
- Guaranteed bond – a dummy variable that takes the value of 1 if the bond is guaranteed (typically by a parent corporation).
- New issue bond – a dummy variable that takes the value of 1 if the bond is the first bond issue for the firm.
- Credit rating of bond – a set of four dummies is used to measure the credit rating of the bond: AA (consisting of AA (high), AA, AA (low)), A (consisting of A (high), A, A (low)), BBB (consisting of BBB (high), BBB, BBB (low)), BB (consisting of BB (high) and lower).
- Reputation of underwriter – the percentage of total value of bonds in the sample underwritten by the underwriter each year.⁴

3.1.2. *Stock price reaction*

Ang and Richardson (1994) suggest that equity price reaction may reflect the market's reaction to a company's debt issue better than debt prices. Eckbo (1986) and James (1987) find that there is a non-positive reaction to the announcement of a public debt offering. Equity prices are not complicated by other issue specific factors as

⁴ There is a potential multicollinearity problem between the reputation measure and the investment bank lead underwriter dummy variable as investment banks tends to be small in Canada. The regressions were run excluding the reputation variable as well as using the orthogonalized residuals obtained from regressing the reputation measure on the investment bank dummy. The results were virtually identical to those reported in the table.

are debt prices. If the market truly perceives that chartered banks have a conflict of interest, then an announcement of a chartered-bank underwritten security should provide a more negative signal about the firm than an investment bank underwritten announcement.

We perform an event-study analysis of the publicly traded companies in the sample. Abnormal returns are calculated over a 2-day window (–1 to 0 where day 0 is the date of the announcement), reflecting the problem of not knowing the time of day the announcement became public. The market model estimates are calculated using a –255 to –10 day estimation period. The TSE 300 index is used as the market index. As a robustness test, a market-adjusted model is also computed.

Short-run stock price reactions are assumed to follow a one-factor model where the one factor is the market return. The formal model is expressed as

$$r_{jt} = a_j + b_{mj}r_{mt} + e_{jt},$$

where r_{jt} is the return on the stock of firm j on day t ; r_{mt} the return on the market portfolio on day t ; b_{mj} the measure of market risk; e_{jt} the error term for firm j on day t .

As a robustness check, stock reactions are also tested using a market-adjusted model in the form of

$$r_{jt} = a_j + r_{mt} + e_{jt},$$

where r_{jt} is the return on the stock of firm j on day t ; r_{mt} the return on the market portfolio on day t ; e_{jt} the error term for firm j on day t .

4. Sample

The sample consists of all newly issued, publicly placed, domestic Canadian corporate bonds issued between 1987 and 1997. Only non-convertible bonds are used in order to eliminate any pricing effects due to the convertibility. Bond issues of crown corporations (i.e. government owned firms) and banks are excluded as it is not clear that these firms face the same potential for a conflict of interest as regular corporate firms.

Data on corporate bond issues is collected from the Record of New Issues published yearly by the Financial Post Information Services Corp. This publication lists all new corporate debt issues along with issue characteristics. Bond ratings are gathered from the Corporate Bond Record (also published by FPIS) as well as news announcements. Initial announcements of each bond offering are collected from Lexus–Nexus in the Canadian publications library. The majority of the announcements are either in the Financial Post of Canada or on the Canadian News Wire. In cases where more than one announcement was made, the date of the first announcement is used. Stock prices and market returns for all publicly traded firms are gathered from Datastream International. Bond prices are also collected from Canadian Bond Prices (published by the Financial Post Corporation Service Group).

5. Results

5.1. Sample characteristics

The entire Canadian sample consists of 356 public corporate bonds issued between 1987 and 1997. Of the 356, 78 were underwritten by investment banks and the remaining 278 were underwritten by chartered bank affiliates. Descriptive statistics for the sample are provided in Table 2, panels A and B.

Table 2
Descriptive statistics^a

	Total underwritten	Chartered bank underwritten	Investment bank underwritten	
<i>Panel A: Bond issues by year</i>				
1987	18	1	17	
1988	23	10	13	
1989	30	22	8	
1990	28	21	7	
1991	26	22	4	
1992	23	19	4	
1993	30	26	4	
1994	24	22	2	
1995	58	55	3	
1996	46	39	7	
1997	50	41	9	
Total	356	278	78	
	Total sample	Chartered bank underwritten	Investment bank underwritten	P-value of difference
<i>Panel B: Univariate statistics</i>				
# of issues	356	278	78	
Spread over Govt. bond	0.849%	0.814%	0.972%	0.0165**
Size of issue (\$ million)	107.86	104.25	120.73	0.0421**
Years to maturity	13.33	13.13	14.03	0.5163
% rated AA	23.88%	19.78%	38.46%	0.000***
% rated A	54.21%	60.07%	33.33%	0.000***
% rated BBB	12.36%	10.43%	19.23%	0.129 ^b
% rated BB and lower	0.84%	1.08%	0%	
% unrated	8.71%	8.63%	8.97%	

^a Panel A of this table breaks down, by year and type of underwriter, the distribution of the sample. Panel B contains the summary statistics of the sample.

^b The last three groups of ratings must be combined when testing the significance of the difference in proportions in order to have a large enough sample for the test to be valid.

** Significant at the 5% level.

*** Significant at the 1% level.

The yearly breakdown in panel A clearly demonstrates the quick dominance achieved by the Canadian commercial banks in the underwriting market. Within three years of the regulatory change, commercial bank underwriters went from 0% market share to 73% market share. By 1997, this market share had increased to 82%.

Panel B of Table 2 shows a large and statistically significant difference (at the 5% level) in the ex ante yield spreads between the commercial bank and the investment bank underwritten issues. In fact, the commercial bank underwritten issues average 16 basis points less spread (16.4%) than the investment bank underwritten issues. Yet substantial differences in the composition of the samples suggest that it is necessary to control for these differences before making conclusions regarding the spread. For example, the average size of the bond issues underwritten by chartered banks is significantly smaller than those underwritten by investment banks. Similarly, the ratings for the underwritten issues also differ. The percentage of bonds underwritten by investment banks that were rated AA by the Dominion Bond Rating Service (this includes AA (high), AA, and AA (low) is significantly higher ($P=0.000$) than the proportion of AA chartered bank underwritten bonds. This suggests that high quality firms, wishing to avoid the perception of a conflict of interest, may have chosen investment bank underwriters during this period.

5.2. OLS regressions

Table 3 provides the results for the regressions of initial yields (as measured by the spread over a comparable government security) controlling for factors that should affect this spread and correcting for heteroskedasticity. The results in column one indicate that even after controlling for these other factors, the presence of a commercial bank underwriter reduces the risk of the issue and leads to a lower yield of 19.82 basis points. The commercial bank underwritten bonds have a significantly lower spread over government bonds indicating that the market is willing to pay more for these securities. Not only is this statistically significant but given an overall mean issue size of \$110 million, this suggests that commercial bank underwritten securities will have approximately \$200,000 less in interest payments each year.

A conflict of interest is most likely to exist when the commercial bank underwriting the security has a banking relationship with the firm. Canadian Compact Disclosure contains banking relationship information for certain Canadian firms. Of the 356 bond issues in the sample, banking relationship information is available for 253 of the issues (203 of the chartered bank underwritten sample and 50 for the investment bank underwritten sample.) 91 of the 203 issues (44.8%) underwritten by commercial bank affiliates have had a previous relationship with the parent bank. Column 2 of Table 3 includes a dummy variable for a previous banking relationship with the parent of the commercial bank affiliate for the 253 firms that had banking information available. The dummy variable is not significant, indicating that the market does not believe that the previous relationship increases the probability of a conflict of interest. It should be noted that Compact Disclosure only indicates the primary banking relationship of a firm. The factors necessary to be classified as a “primary” bank are not defined. It is, therefore, not possible to determine if

Table 3
Regression analysis of bond pricing^{a,b}

Independent variables	Total sample	Sample with prior banking relationship information available
	(1)	(2)
LN (size)	-0.0422 0.038947	0.0159 (0.0406)
LN (year to maturity)	0.0642* (0.0336)	0.0450 (0.0396)
Quality spread	0.8553*** (0.1467)	0.8253*** (0.1816)
Secured	-0.0364 (0.1378)	-0.0729 (0.1278)
Guaranteed	-0.1601 (0.1249)	-0.1791 (0.1278)
Sinking fund	0.1324 (0.1776)	0.0306 (0.1864)
AA	-0.5737*** (0.1946)	-1.0510*** (0.3848)
A	-0.4237** (0.1948)	-0.8628** (0.3877)
BBB	-0.1110 (0.2051)	-0.7000* (0.3950)
BB	1.1565*** (0.4015)	0.8666 (0.5442)
Previous issue	-0.1250 (0.1050)	-0.1631 (0.1374)
Callable bond	0.0344 (0.0592)	0.0086 (0.0729)
Reputation of underwriter	0.1700 (0.2415)	-0.3585 (0.2866)
Investment bank underwriter	0.1982*** (0.0693)	0.1885** (0.0740)
Previous relationship		0.0860 (0.0709)
Constant	0.6069** (0.2397)	0.9933*** (0.3792)
R ²	0.2541	0.3402
# of obs.	356	253

^a Robust standard errors are in brackets.

^b Column (1) contains the regression of the initial spread of each bond over a comparable government security on several control variables and an investment bank underwriter dummy variable. Column (2) also includes a variable to capture the effect if there has been a previous relationship with the charter bank parent of the underwriter.

* Significant at the 10% level.

** Significant at the 5% level.

*** Significant at the 1% level.

the loan exposure a firm has with the parent bank changes (or if there even was loan exposure) after the underwriting. While this may bias our results (by definition a con-

flict of interest can only exist if there are loans outstanding), any bias that exists would make it less likely to find significant results.

5.3. *Bond rating effects*

The conflict of interest hypothesis developed in the introduction relies on the default risk of the issuing firm increasing after the firm borrows from the bank/underwriter. It is possible that the probability of default risk increasing is not constant for all firms. Higher quality firms are, perhaps, less likely to experience problems that would increase default risk compared to lower quality firms. For this reason, the potential for a conflict of interest may be different for firms of different qualities. To test for this, we subdivide our sample based on bond ratings.

Gande et al. (1997) find that the certification effect from a commercial bank underwriter is most prevalent in lower quality securities. In other words, commercial bank underwriters provide the most information to the market when underwriting securities that are more information sensitive. Our results shown in Table 4 do not confirm this conjecture. In fact, the opposite appears to be true in Canada.

Table 4 divides our sample into three subsamples – bonds rated AA or A, bonds rated BBB or BB, and unrated bonds. The pricing regressions are then rerun on each of the subsamples. For the highly rated bonds, having a chartered bank underwriter results in significantly lower yields, at the 1% level (column 1). This suggests that the benefits of having a chartered bank underwriter more than offsets any perceived conflict of interest. For bonds rated BBB, BB or not rated (columns 2 and 3), however, there is no significant difference in the yields of bonds underwritten by chartered banks versus investment banks. It is possible that, in the Canadian environment, the market perceives the benefits of bank participation to be offset by the potential for a conflict of interest when the bond is more information sensitive (as proxied by the lower, or lack of, bond rating). The relatively small number of low rated (47) and unrated (31) bonds as compared to the large number of highly rated bonds (278) may also play a role in these results.

5.4. *Time effects*

Given the substantial and rapid changes that took place following the entry by Canadian commercial banks into investment banking, it is certainly possible that the securities pricing effects may have changed over the time of our analysis. For example, market perceptions of a conflict of interest may have been reduced (or indeed increased) as commercial banks actually brought securities to market. Moreover, commercial bank entry may have had effects over time on the market level of underwriting fees and on the nature of the issues brought to market. While capturing these diverse influences is, at best, difficult, we provide some evidence on changes in perceptions by separately analyzing the 1987–1991 period and the 1991–1997 period and by comparing the importance of the determinants of bond yields in these two periods.

Table 4

Bond pricing regressions based on bond ratings and year of issue^{a,b}

Independent variables	Highly rated (AA or A) (1)	Low rated (BBB or BB) (2)	Unrated (3)	1987–1991 (4)	1992–1997 (5)
LN (size)	-0.0703* (0.0358)	-0.0025 (0.1683)	-0.0320 (0.2546)	-0.1267* (0.0738)	-0.0591 (0.0433)
LN (year to maturity)	0.0615* (0.0332)	0.2103 (0.1646)	0.1403 (0.2490)	0.1288 ** (0.0544)	0.0180 (0.0473)
Quality spread	1.1653*** (0.1177)	0.4475 (0.3404)	-0.8981 (0.8787)	0.3676 (0.2311)	0.6519** (0.2665)
Secured	-0.1064 (0.0999)		1.1750*** (0.3098)	-0.3567*** (0.1206)	0.2277 (0.1656)
Guaranteed	-0.2031* (0.1224)	0.3402 (0.2440)		-0.4116 (0.3910)	-0.2013 (0.1342)
Sinking fund	0.0065 (0.1870)	0.4861** (0.1945)	-3.2544*** (0.8802)	0.1634 (0.1814)	-0.7 804 (0.5718)
AA	-0.1840*** (0.0523)			0.1964 (0.2148)	-0.7336*** (0.2558)
A				0.1119 (0.2254)	-0.5682** (0.2559)
BBB		-1.3548*** (0.3777)		0.0866 (0.2322)	-0.2130 (0.2712)
BB					0.5709** (0.2851)
Previous issue	-0.1563 (0.0994)	-0.0943 (0.1382)	-0.0588 (0.3196)	-0.0889 (0.1675)	-0.1888 (0.1362)
Callable bond	0.0283 (0.0466)	-0.1659 (0.1142)	0.6441 (0.6100)	-0.0508 (0.0625)	0.1167 (0.0907)
Reputation of underwriter	0.0719 (0.2114)	0.5395 (0.5222)	0.4936 (1.5674)	0.6149 (0.4125)	0.1442 (0.2893)
Investment bank underwriter	0.1964*** (0.0687)	0.1858 (0.1414)	0.4148 (0.3928)	0.2079* (0.1110)	0.1975** (0.0988)
Constant	0.1277 (0.1863)	1.5897 (0.9446)	1.3529 (1.2966)	0.9101** (0.4227)	1.0324*** (0.3633)
R ²	0.3114	0.5690	0.3341	0.2879	0.3322
# of obs.	278	47	31	148	208

^a Robust standard errors are in brackets.^b Column (1) divides the total sample into only those issues that were rated AA or A by the Dominion Bond Rating Service. Column (2) contains those rated BBB or BB while column (3) contains all those issues not rated by DBRS. Column (4) contains all bonds issued between 1987 and 1991 while column (5) contains bonds issued between 1992 and 1997.

* Significant at 10% level.

** Significant at 5% level.

*** Significant at 1% level.

The results in columns (3) and (4) of Table 4 do not support the argument that the impact of commercial bank entry was more (or less) for the two periods. Column 1 indicates that during the period 1987–1992, investment bank underwritten bonds had a 0.1811 larger spread than commercial bank bonds (significant at the 10% level). Over the 1993–1997 period, investment bank spreads are virtually the same

Table 5
Stock price reaction to announcement of bond issue^a

	<i>N</i>	Mean CAR (%)	Median CAR (%)	<i>T</i>	Pos:Neg	Gen. <i>Z</i> score
<i>Panel A: Market model</i>						
Investment bank announcements	21	-0.26	-0.11	-0.62	10:11	0.12
Commercial bank announcements	109	-0.33	-0.35	-1.72*	41:67	-1.80*
<i>Panel B: Market-adjusted model</i>						
Investment bank announcements	21	-0.36	-0.23	-0.83	8:13	-0.83
Commercial bank announcements	109	-0.25	-0.45	-1.28	43:65	-1.56*

^a Panel A contains a market-model event study on the announcement of the bond issues for both those underwritten by investment banks and by chartered bank affiliates. Panel B contains a similar event study based on a market-adjusted model.

* Significant at 10% level.

with a coefficient of 0.1812 (again significant at the 10% level). Thus, Canadian bond buyers placed a premium (i.e. were willing to accept a lower yield) on commercial bank underwritten bonds immediately after the regulatory change.⁵

5.5. Stock return results

Lexus–Nexus was searched for all announcements of corporate debt offerings in Canada. There were 21 investment bank announcements and 109 commercial bank announcements. Table 5 contains the results of an equally weighted market-model event study and a market-adjusted test.

For the Canadian sample, firms that announce investment bank underwritten bonds have a negative stock price reaction to the announcement of debt issues (mean CAR = -0.26%), but this reaction is not significant ($t = -0.62$, generalized $z = 0.12$). Firms announcing commercial bank underwritten bonds have a -0.33% mean CAR stock price reaction to the announcement. This reaction is significant at the 10% level using parametric statistics (as well using non-parametric tests – generalized $z = -1.80$). These results are broadly consistent with Athanassakos and Schnabel (1996) who find that domestic Canadian bonds issued between 1983 and 1990 had a negative but not statistically significant stock price reaction. However, using a difference of means test, the mean CAR for these announcements of debt issues is not significantly different between the two types of underwriters ($P = 0.883$). This

⁵ We also test the sample for the April 1990–March 1992 time period. These are the official dates as of the last Canadian recession classified by Statistics Canada. It is possible that the likelihood of a conflict of interest would be greater during an economic downturn. No significant difference exists in the pricing of chartered bank and investment bank underwritten securities during this period. The authors would like to thank Dogan Tirtiroglu for this suggestion. Results are available from authors upon request.

indicates that the market does not perceive any additional information regarding the firm's future prospects from the type of underwriter. Our results are consistent using the market-adjusted model. Hence, we conclude that this evidence is not supportive of the conflict of interest hypothesis. These results thus suggest that the market does not obtain any additional information regarding a firm or its security issue from the type of underwriter.

6. Conclusion

The Canadian experience with integrating commercial and investment banking is interesting and important from a number of dimensions. Standing alone, it provides additional evidence on the potential conflict of interest problems associated with merging investment and commercial banking. Our failure to find any evidence of a conflict of interest using modern Canadian data, evidence that is consistent with that from the US, provides additional support for the movement to universal banking. Indeed, our finding that *ex ante* bond yields are lower for commercial bank underwritten issues suggests a net benefit from melding commercial and investment banking, and suggests that commercial banks may have an advantage in the bond underwriting process. This is particularly interesting in view of the relatively high concentration in Canada created by the melding of commercial and investment banking, which might have been expected to produce higher rather than lower bond yields.

The Canadian experience following the removal of restrictions on commercial banks also may serve as a laboratory to provide insights into financial market developments in the US following the repeal of Glass–Steagall. Whether the rapid domination by commercial banks of the investment banking industry that occurred in Canada will be repeated in the US can only be conjectured and certainly we would not expect US developments to exactly duplicate those in Canada. Yet the fact that Canadian commercial banks quickly dominated the investment banking industry and at the same time underwrote bonds with lower *ex ante* yields may have important public policy implications.

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