

# Corporate Linkages and Bank Lending in Canada: Some First Results

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## Introduction

Economists have directed attention to the role of corporate governance in determining the performance of business enterprises well before the issue was thrust into prominence by the troubles of Enron, WorldCom, and others. Much of this literature examines the consequences of different mechanisms for corporate control. An important part of this literature stresses the role of banks in corporate governance.

Banks can participate in and influence the governance of corporations through both a *credit* and a *governance* relation. The credit relation arises because banks, in their role as delegated monitors, serve as more than passive lenders and involve themselves in shaping the activities of borrowers through being screeners, monitors, and enforcers of loans. Through the sum of their individual loan decisions, banks decide collectively which corporate projects gain bank finance.

The governance relation arises where, as in some countries, banks participate in the management of firms through shareholdings and voting powers that place bank representatives on corporate boards. Bank representatives may also serve on corporate boards without their banks having significant ownership ties or voting rights.

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Together, the credit and governance effects can come into direct conflict. Kroszner and Strahan (2001, 416) observe:

The potential for conflict becomes clear when a bank executive is on the board of a non-financial firm. The fiduciary duty of directors to promote the interests of shareholders can lead to a conflict with the bank-director's role as lender or potential lender due to different payoff structures of debt and equity. . . .

The governance relation may also run from corporations to banks. Corporate officers themselves serve on the boards of banks. Like bank officers on corporate boards, other officers serving on banks' boards face the same potential for conflict. While their fiduciary duty as bank directors obliges them to promote the interest of bank shareholders, this duty can conflict with the corporation's interest as a potential borrower from the bank. In addition to corporate officers, directors may also serve on the boards of banks and on the boards of other corporations. To the extent that these corporations rely on the same banks for finance, directors serving on the boards of both must also juggle the different interests.

The governance of banks can be expected to be more vital to the economy than the governance of other parts of the corporate sector. Bank decisions can affect the allocation of investable resources to a greater degree than those in other sectors. Poor judgments of investment prospects elsewhere often need the validation of finance in order to proceed. To the extent that banks exercise good judgment in their lending decisions, they confirm the good decisions made elsewhere and overrule the bad. To the extent that they judge poorly, they exacerbate the poor judgments and negate the good ones made elsewhere in the economy. Bank denial of credit can prevent the fruition of either sound or unsound investments.

The governance of banks also matters because their services require the public to have confidence in the system. Since banks offer liquid deposits backed in part by illiquid loans with limited markets, this confidence depends to a large degree on the quality of the banks' investment choices, including their loans decisions. This paper investigates one dimension through which governance of banks may affect their lending decisions: the influence on bank lending of links between bank boards and corporate boards.

This paper was inspired by the work of Kroszner and Strahan (2001) and similarly motivated studies of bank-corporate links for other countries, especially Germany and Japan. Kroszner and Strahan focused on the trade-off between the monitoring benefits from the presence of bank officers on the boards of non-financial corporations and the possible conflicts of interest

arising from the dual role of bank officers in their duties to their bank and in their duties as directors of other corporations. As will be seen, the focus of the study shifted, because of features of the Canadian banking system, from bank officers serving on other boards to the effects of officers of other firms and directors serving on bank and non-financial boards.

## **1 The Canadian Environment**

Despite the number of studies that examine the influence of corporate interlocks on bank lending in other countries, a study of the Canadian experience can be justified because of distinctive features of the Canadian economy, especially in terms of the structure and organization of its financial sector.

### **1.1 Number of banks**

While the top five of the 10,500 banks in 1999 accounted for just 20.8 per cent of U.S. banking assets (Barth, Caprio, and Levine 2001), the top five in Canada were much more dominant, accounting for 88 per cent of total banking assets. This difference in structure between the two systems creates the prospect of far fewer board links between banks and non-financial corporations in Canada than in the United States.

### **1.2 Bond market development**

A further difference between the two countries is the degree of development of the corporate bond market. Mathieson and Schinasi (2001) report that in 2000, U.S. non-financial corporate issuers had US\$2,900 billion bonds outstanding (\$500 billion international and \$2,400 billion domestic). At that time, their Canadian counterparts had only \$121 billion (\$50 billion international and \$71 billion domestic). To give further perspective, outstanding corporate bonds stood at 29 per cent of GDP in the United States and just 16 per cent of GDP in Canada.

The other side of this difference is reflected in the reliance of business on bank loans. Outstanding business loans of Can\$130 billion equalled 18 per cent of GDP in Canada, while commercial and industrial loans of US\$1,050 billion comprised less than 11 per cent of GDP in the United States. Canadian corporations, consequently, rely more heavily on bank finance, making banks' lending decisions more crucial for the efficiency of investment in Canada.

### **1.3 Ownership ceiling for banks**

Canadian banks differ from other banks in industrialized economies in terms of legal restrictions on their ownership. Throughout the period of the study, large Canadian banks were generally subject to a 10 per cent ceiling on the share of their ownership that can be held by any one interest. In addition, a widely understood prohibition on mergers of varying degrees of explicitness has existed since the mid-1980s.

One economist has characterized these measures as having “mutualized” the Canadian banking industry. Both measures insulate bank management from pressures that shareholder revolts and the threat of takeovers exert to achieve maximum performance on behalf of shareholders. The absence of such pressures makes the rents derived from banking activities contestable, with managers and customers among the possible contestants.

## **2 Banks and Corporate Governance**

### **2.1 Bank officer links**

The basic conflict for bank directors on other boards, as identified by Kroszner and Strahan, arises from the differences in the income streams to debt and equity. A bank officer on the board of a corporate borrower as a lender will be concerned with maximizing the probability that the borrower will meet its obligations to repay the loan. In contrast, the bank officer as a director of the borrowing corporation will be concerned with maximizing the expected returns to the corporation’s shareholders.

Kroszner and Strahan identified possible benefits both to the bank and the borrower that arise from the link through the bank officer to the corporate board. For the bank, the presence of an officer on the board may bring it information about the lender that would be difficult or costly to obtain otherwise. The value of this information may extend beyond the borrower itself, in that the bank may gain understanding of the corporation’s industry that will aid the bank in lending to others in the industry. The appointment of an officer to the board also may benefit the officer’s corporation by signaling that the firm is unlikely to suffer financial distress.

The participation of bank officers in the affairs of banks’ creditors, as Kroszner and Strahan note, also carries a risk to the bank. Under the principle of equitable subordination, a lender that has participated in the affairs of the debtor may find its credit priority downgraded if it is judged as having acted to improve its credit standing relative to other claimants.

Kroszner and Strahan investigate these influences in several ways. They find that bank officers tend to be on boards of large and stable firms. They also find that there is a non-linear relation between firm volatility and the likelihood of bankers serving on boards, and they interpret a positive relation at low levels of risk as supporting the positive signal of such participation. The negative relation at higher levels suggests rising concern about conflict of interest and lender liability for riskier enterprises. Kroszner and Strahan also find that corporations tend not to be linked with their “main lending” bank.

The differences in banking structure between Canada and the United States limit the usefulness of examining the consequences of bank officers serving on corporate boards. At maximum, only 13 bank officers served on the boards of the five large Canadian banks in the years of the study.<sup>1</sup> Of these, only five officers had seats on any other corporate board and, among them, they held in total no more than 16 directorships at other corporations.

The difference between the role of bank officers in Canada and that of officers in other countries is shown in Table 1. Only 9 per cent of the 100 largest Canadian firms have bank officers on their boards. Not only is this a fraction of the proportion in Germany and Japan, it is far below the level in the United States, which itself is much below the levels in Japan and Germany. Table 1 also shows that Canadian firms are less likely than those in Germany or the United States to use a bank linked through a bank officer as its main bank. This small number of links between banks and other corporations through the banks’ officers makes it not very useful to duplicate the Kroszner and Strahan study for Canada.

## **2.2 Corporate officer links**

The links between banks and other corporations through the officers of the other corporations raise different issues than the links through bank officers. Even though bank officers who serve on other boards may provide their banks with informational advantages that could contribute to their lending decisions, there is unlikely to be the same informational advantage to the bank flowing from the presence of a corporate officer on a bank’s board, because the officer’s primary loyalty will likely be to the corporation and not to the bank.

The key issue raised by corporate officer links results from the division of ownership and control in most modern corporations. As has long been

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1. The Royal Bank of Canada had only one of its officers serving on its board. The Canadian Imperial Bank of Commerce and the Toronto-Dominion Bank both had three officers on their boards in at least one of the years in the study.

**Table 1**  
**Frequency of commercial bankers on the boards of large non-financial firms in Canada, Germany, Japan, and the United States**

		Canada (1996–98)		Germany (1974)	Japan (1992)	U.S. (1992)
Large firms with a banker on the board		9%		75%	53%	32%
Large firms with an executive of their main bank lender on their board	1996	1997	1998 <sup>1</sup>			
	0.0%	1%	2%	n/a	43%	6%

Sources: Kroszner and Strahan (2001); *The Globe and Mail*; and *Financial Post Directory of Directors*.

1. Two banks were listed as lead banks for one of the loans.

Notes: Main lender is largest lender to a firm for all countries except Canada. For Canada, the main lender was the lead banker for at least one transaction reported in the DealScan data.

Canada: Top 100 firms (excluding foreign subsidiaries) by assets from *The Globe and Mail, Report on Business, Top 1000* (businesses).

Germany: Top 100 largest traded firms.

Japan: The 761 firms listed in the section of the Tokyo Stock Exchange in 1992.

United States: All firms listed in the Forbes 500 for 1992.

recognized, this division creates tension between the owners of a corporation and their managers. Dispersed ownership gives managers greater leeway with respect to the division of the rents produced by a corporation's operations. The scope for management to control the rents is, however, subject to limits. The corporate takeover mechanism means that if managers divert too much of the rents away from the owners, other potential owners will be attracted by the possibility of purchasing control of the enterprise and recapturing the rents.

These principal-agent problems will be accentuated for Canadian banks relative to other banks and corporations, because both the ownership rules and the ban on mergers disable the usual corrective mechanisms. The ownership rules prevent the emergence of a substantial ownership interest to discipline managers. Similarly, the ban on mergers prevents takeovers directed towards recapturing rents from the managers. Generally, the principal-agent problem is viewed as a conflict between owners and management over the rents from the enterprise. When the usual enforcement mechanisms are disabled, possible contestants need not be so limited. Other

parties, including employees in general and even customers such as borrowers and depositors, may contest the rent in these circumstances.<sup>2</sup>

The ownership limit and merger ban do not leave the managers of Canadian banks totally unconstrained in controlling the rents. They must retain the acceptance, if not the approval, of their boards of directors to remain in place. Common among the bank boards are the officers and directors of other corporations. Their presence strengthens the position of corporate borrowers in contesting the rents from banking.

The information function identified by Kroszner and Strahan for bank officer links may also exist for corporate officer links, though in a different form. The presence of such a link might allow borrowing firms to convey information about themselves more efficiently and credibly than otherwise possible. The presence of officers from corporations may also provide the bank with information about the economic sector in which the corporation operates that may be useful to the bank for dealing with other potential borrowers from the sector. In both cases, however, banks must treat the information cautiously in light of the interests of the providers.

The issues arising from corporate officers' service on bank boards are likely to be more relevant to the Canadian banking system than bank officer links. Table 2 shows that 59 officers of 87 non-financial corporations served on bank boards during 1998. Corporations with officers on bank boards received 12 bank loans in 1996, 15 in 1997, and 5 in 1998 that were reported by DealScan (Table 3).

### **2.3 Director links**

The consequences of bank-corporate links through common directors can be expected to differ from those through bank officers or corporate officers. Officers can be expected to identify their interest more closely with the entity where they hold their office.<sup>3</sup> Directors serving both banks and other corporations, on the other hand, would not be expected to weigh their interest in one over the other. Common directors may still serve to bridge informational barriers between banks and potential corporate borrowers. Any influences identified with bank and corporate officers that would favour associated corporate borrowers will be attenuated with directors.

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2. See Chant (1979) for a discussion of the different claimants to banking rents resulting from the dispersed ownership of Canadian banks.

3. Kroszner and Strahan (2001) point out that bankers serving as directors will not be considered as independent directors when their bank has a material interest.

**Table 2**  
**Bank and corporate boards: 1996–98**

	1996	1997	1998
<b>1. Bank officers</b>			
Bank officers	10	10	12
Bank officers on corporate boards	5	6	6
Companies with bank officers on board	17	18	18
<b>2. Corporate officers</b>			
External officers on bank boards <sup>1</sup>	56	58	59
Companies with officers on bank boards	93	84	91
<b>3. External directors</b>			
External directors on bank boards <sup>1</sup>	75	70	70
Companies with directors on bank boards	210	207	209

1. Includes Canadian residents only.

Source: *Financial Post Directory of Directors*, various issues.

## 2.4 Links and lending

The degree to which interlocking boards with corporate borrowers affect the lending behaviour of banks can be addressed through a series of questions. Were corporate loans gained disproportionately from the bank where the corporate officer serves as director? How did the terms of the loans compare with loans with similar qualities? How did these loans, once they were made, perform relative to other loans? The first and third of these questions will be covered in this paper.

## 3 Data for the Study

This study requires three types of data: (i) the other offices held by board members of Canadian chartered banks; (ii) the corporate loans made by chartered banks to major Canadian corporations; and (iii) the credit ratings for Canadian corporations receiving corporate loans from the banks. Each of these sets of data was found in separate sources.

### 3.1 Board links

The *Financial Post Directory of Directors* provides listings for 1,800 Canadian companies that show the composition of their boards. They also show over 15,000 personal listings of board affiliations for all directors of these companies residing in Canada.

The resident directors of Canadian banks for each year were identified from the listings for the banks in the company section, and then the other

corporate offices and directorships held by these bank directors were determined from each director's personal listing to give the linkages between bank and corporate boards.

### **3.2 Corporate loans**

The Loan Pricing Corporation's DealScan service provided the data relating to corporate loans. The DealScan data set includes over 110,000 observations (over 1,800 for Canadian borrowers) of the global corporate loan market from 1988 onward, including data on lenders, borrowers, size of loan, rating, and spreads for loans and other transactions. Strahan (1999) describes some of the key features of the DealScan data. Securities and Exchange Commission files are the primary source, supplemented by data from loan syndicators and from a staff of reporters. Coverage apparently includes most loans made to large, publicly traded corporations.

The number of loans to Canadian companies reported by DealScan has grown substantially since 1988. This increased coverage could be the result of either increased corporate lending activity or an increase in the proportion of deals reported. The coverage appears to have stabilized near its ultimate level by the period selected for the current study (1996 through 1998). Two of the years represent the highest values of reported loans, with one showing the highest number of deals. This period was also chosen to provide a sufficient period after the granting of the loans to observe the subsequent performance in terms of credit ratings.

The present study considers only a subset of the deals reported in DealScan's summary statistics. Whereas DealScan sometimes counts credit tranches negotiated at the same time from the same lenders as separate deals, the current study treats them as a single loan transaction. In addition, loans made to governments, non-profit agencies and authorities, and financial corporations were excluded from the list. With these revisions, the relevant transactions were 137 for 1996, 218 for 1997, and 182 for 1998, or 537 for the entire period.

Comparison of the DealScan sample with the largest Canadian corporations by assets suggests that the sample includes broad coverage of the largest corporations. The 537 separate loan transactions documented by DealScan over the period 1996–98 involved 348 separate corporate entities. These corporations include 123 of the 200 largest Canadian non-financial firms as measured by assets in 1997. Among these firms are 7 of the top 10, 68 of the top 100, and 55 of the second 100 largest non-financial corporations, as measured by assets.

### 3.3 Ratings

The credit ratings used to track the subsequent performance of loans came from a variety of sources. The Standard and Poor's credit ratings published in the *Financial Post FB Bonds: Corporate* were the primary source and were supplemented to expand the sample by two other sources: other Standard and Poor's credit ratings that were reported in some DealScan reports and those Canadian Bond Rating Service's ratings that are also reported in the *FP Bond: Corporate*.

## 4 Interlocks and Bank Lending

The evidence with respect to corporate interlocks and bank lending is examined at the levels of corporate officer and joint director links. These linkages are treated separately because their predicted influence, if any, on bank lending is expected to differ.

A common method is used for each level:

- The directorship data identify interlocks between bank boards and the boards of other corporations.
- The loan data show the borrowing of corporations that share officers or directors with banks and indicate those cases where the borrowing has come from the bank with the shared directors or officers.
- The information from these sources is used to determine whether the distribution of loans among linked and unlinked borrowers is consistent with a random distribution of loans.

The analysis is undertaken with both the borrowing enterprise and loans as the unit of observation.

The tables present data on a number of different bases in order to deal with issues of interpretation. Data are presented for all of 1996–98, as well as for each year. More weight will be placed on the data for the entire period, because the longer period provides a better test of the distribution of loans with respect to randomness.

The data are also presented in two ways with respect to the relation between the borrower and the bank. The first presents the results for all borrowers and all loans. This approach has the shortcoming of identifying a borrower or loan as being from a linked bank even when the borrower has several links. In the extreme case, a borrower with directors from each of the five banks could not avoid being labelled as borrowing from a linked bank. Similarly, a bank borrowing from a syndicate that has several lead banks would also be labelled as being linked, despite having a link with only one

of the multiple leads. To avoid problems arising from multiple links, data are presented in which all transactions with links to more than one bank on the lending side or board side have been removed from both the group of corporations borrowing from linked banks and the control group of banks with which they are compared.

#### **4.1 Lending and corporate officer links**

As might be expected, the greater frequency of links between banks and other corporations through corporate officers produced more loan transactions between banks and companies than links through bank officers. Tables 3 and 4 show that 19 corporations with officers serving on bank boards received 41 bank loans during 1996–98. More than half of these borrowers received their loans from the banks where their officers served, and almost half of the loans that they received came from the banks where they had links. Removing multiple links still leaves 14 borrowers that accounted for 30 loans.<sup>4</sup> Eight of these borrowers received loans from the banks where they had links, and 12 of the loans came from linked banks. The final columns of Tables 3 and 4 show that in all cases, the distribution of borrowers and loans between linked and unlinked banks has less than a 1 per cent chance of coming from a random distribution, given the 0.2 per cent probability that a specific bank would be the lender for any particular loan.

#### **4.2 Lending and director links**

The large number of corporate directors relative to officers means that there are more companies and more loans linked to banks through common directors. Table 5 shows that 25 of the 53 companies sharing directors with banks borrowed from the bank with which they were linked. Similarly, Table 6 shows that 36 of the 108 loans received by corporations linked by common directors were from banks with which the corporation shared a director. A large number of bank directors create, as might be expected, a large number of multiple links where companies share directors with more than one bank. Thirty-four borrowers receiving 59 loans remain in the sample once multiple links are removed. Twelve of these borrowers received a total of 15 loans from banks linked through directors. This distribution of borrowers among banks would have a probability of less than 5 per cent of occurring under a random allocation. On the other hand, use of loans as the unit of observation

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4. The results in the lower half of the tables reflect adjustments for two types of multiple links. Cases where either a borrowing corporation had links with multiple banks through its officers or multiple lead lenders were identified with the loan were removed from the analysis.

**Table 3**  
**External officers and bank lending by company**

Period	Borrowers with an officer serving on a bank board	Borrowers from bank where officer serves	Significance p = 0.2
<b>1. All companies</b>			
1996–98	19	10	1%
1998	5	4	1%
1997	15	9	1%
1996	12	6	1%
<b>2. Without multiple link and lenders</b>			
1996–98	14	8	1%
1998	4	2	5%
1997	11	5	5%
1996	10	4	5%

Sources: DealScan and *Financial Post Directory of Directors*.

**Table 4**  
**External officers and bank lending by loans**

Period	Loans by borrowers with officers serving on bank boards	Loans from bank where officers serve	Significance p = 0.2
<b>1. All companies</b>			
1996–98	41	19	1%
1998	8	4	5%
1997	21	9	1%
1996	12	6	1%
<b>2. Without multiple link and lenders</b>			
1996–98	30	11	1%
1998	6	2	10%
1997	15	5	10%
1996	10	5	1%

Sources: DealScan and *Financial Post Directory of Directors*.

**Table 5**  
**Directors and bank lending by company**

Period	All borrowers with directors serving on bank board	Borrowing from bank where directors serve	Significance p = 0.2
<b>1. All companies</b>			
1996–98	53	25	1%
1998	21	7	5%
1997	34	15	1%
1996	23	11	1%
<b>2. Without multiple link and lenders</b>			
1996–98	34	12	5%
1998	12	2	Not significant
1997	24	7	10%
1996	12	4	10%

Sources: DealScan and *Financial Post Directory of Directors*.

**Table 6**  
**Directors and bank lending by loan**

Period	Loans by borrowers with directors serving on bank board	Loans from bank where directors serve	Significance p = 0.2
<b>1. All companies</b>			
1996–98	108	36	1%
1998	25	9	5%
1997	53	17	5%
1996	28	10	1%
<b>2. Without multiple link and lenders</b>			
1996–98	59	15	Not significant
1998	11	3	Not significant
1997	33	8	Not significant
1996	15	4	Not significant

Sources: DealScan and *Financial Post Directory of Directors*.

shows that the distribution of loans between linked and unlinked banks is not significantly different from a random allocation.

### **4.3 Links and lending**

The evidence presented here suggests that board links between banks and non-financial corporations do appear to affect the distribution of loans between banks. Of the possible links, the links through bank officers are not very important because of the small number of bank officers and the small number of boards on which these officers sit. Evidence of influence appears at the level of shared directors. Companies tend to borrow from those banks with which they share directors to a greater extent than would be expected from a random pattern of lending to companies with bank directors. The evidence is stronger where corporate officers serve on bank boards. Here the degree of lending to linked corporations takes place to a degree unlikely to occur by chance.

## **5 Performance of Linked Borrowers**

The tendency of banks to lend to enterprises with which they are linked raises a second set of questions: How do the qualities of these loans compare with those of loans banks make to other borrowers? Among the qualities on which linked loans may differ from others are the interest costs and the risks that they pose to the lenders. In this section, we explore the latter issue by examining the credit quality performance of corporations after they receive loans from banks with which they share board members.

The change in a corporation's credit rating in the period following the receipt of a bank loan provides the benchmark for analyzing the change in credit quality of bank borrowers. In this part of the study, the borrowers' credit ratings at the end of 2001 were compared with those at the time they received loans in order to provide the observations for the change in credit rating.

Seventy-four borrowers that received 111 of the loans reported in DealScan had credit ratings both when they received the loans and later in 2001. These firms experienced 25 reductions and 23 increases in their ratings, with 26 remaining unchanged.

A benchmark is needed to evaluate the performance of these loans in terms of rating changes that took place after the loans were made. For this purpose, the loans are compared with all other loans to corporations with credit ratings for the same years in terms of change in credit rating between the date of the loan and the latest rating in 2001. The intervening time period

was chosen to be sufficiently long to allow any weakness at the time of the loan to become apparent, and sufficiently short to limit the number of subsequent events that could affect credit ratings.

Two different bases were used for determining the control groups to be compared with the linked borrowers. The first control group consisted of the group of rated borrowers that did not share the same type of board link with the lending bank as the class of borrowers being considered. The other control group consisted of rated borrowers that did not share any links at all, either through officers or through directors.

### **5.1 Officers and performance**

The analysis of loan performance of borrowers linked by officers was limited by a small number of observations. Only eight bank borrowers that were linked to their lending banks through officers also had a credit rating both at the time they borrowed and in 2001. Table 7 shows that five of these suffered decreased credit ratings, three had their credit ratings remain unchanged, and only one improved its credit rating.

Table 7 reports the results of chi square tests with respect to the difference in credit rating performance for both the linked borrowers and the control group. A 3 (rating raised, lowered, or unchanged) x 2 (linked borrowers and control group) comparison had too many cells with entries that fell below the advised limit for this test. To overcome this problem, borrowers experiencing improved credit ratings were combined with those experiencing no change in ratings to form a single category to be compared with the borrowers having decreased credit ratings, giving a 2 x 2 comparison. The difference in credit rating performance between the linked borrowers and each of the two control groups (no director/officer link and no officer link) was significant at the 10 per cent level in both cases: borrowers linked through officers were more likely to suffer downgrades.

### **5.2 Directors and performance**

The comparisons for borrowers linked by directors suffered from the same problems as those for directors. Only 14 of the borrowers linked in this way had credit ratings at both times: five experienced decreased ratings, four had no change in ratings, and five had rating improvements. Table 8 shows that the chi square measure indicates that the credit performance of borrowers linked to lending banks by common directors was not significantly different from that of other borrowers.

**Table 7**  
**Rating performance: borrowers linked through officers**

	Linked	Other rated companies
<b>1. Control: no officer or director link</b>		
Credit rating lowered	5	17
No change in credit rating	2	18
Credit rating raised	1	18
Total	8	53
Cells too small for chi square		
<b>2. Control: no officer links</b>		
Credit rating lowered	5	21
No change in credit rating	2	21
Credit rating raised	1	22
Total	8	64
Cells too small for chi square		
<b>3. Control: no director or officer links</b>		
Credit rating lowered	5	17
Credit rating not lowered	3	36
Total	8	53
Chi square statistic: 2.79 df = 1 Significant at 10%		
<b>4. Control: no officer links</b>		
Credit rating lowered	5	21
Credit rating not lowered	3	43
Total	8	64
Chi square statistic = 2.72 df = 1 Significant at 10%		

Sources: DealScan and *Financial Post Directory of Directors*, and *FP Bonds: Corporate*, various years.

Note: df = degrees of freedom.

### 5.3 Performance: summary

The performance comparisons of linked borrowers with others bear out the conjecture that officer links would be more influential than director links. The evidence from the small number of linked borrowers that have credit ratings suggests that the performance of borrowers linked through directors does not differ from that of other borrowers. The evidence is stronger for borrowers linked through their officers. The data for loans made from 1996 to 1998 indicate some influence, though at a relatively low level. These results suggest that further work would be useful to expand the sample to more than three years to clarify whether the credit performance of borrowers is affected by bank links through their own officers.

**Table 8**  
**Rating performance: borrowers linked through directors**

	Linked	Other rated companies
<b>1. Control: no officer or director link</b>		
Credit rating lowered	5	17
No change in credit rating	4	18
Credit rating raised	5	18
Total	14	53
Chi square = 0.15 df = 2 Not significant		
<b>2. Control: no officer links</b>		
Credit rating lowered	5	20
No change in credit rating	4	21
Credit rating raised	5	18
Total	14	59
Chi square = 0.27 df = 2 Not significant		
<b>3. Control: no director or officer links</b>		
Credit rating lowered	5	17
Credit rating not lowered	9	36
Total	14	53
Chi square statistic: 0.06 df = 1 Not significant		
<b>4. Control: no director links</b>		
Credit rating lowered	5	20
Credit rating not lowered	9	39
Total	14	59
Chi square statistic = 0.02 df = 1 Not significant		

Sources: DealScan and *Financial Post Directory of Directors*.

Note: df = degrees of freedom.

## Conclusions

This paper has examined the role of governance on bank lending activity. In particular, it has asked whether linkages between bank boards and boards of non-financial corporations influence the pattern and performance of bank lending. The empirical analysis report in the study offers the following results.

- Canadian banks are more likely to lend to corporations with which they share board linkages than to corporations linked with other banks.
- The tendency to lend to linked corporations is stronger where the link involves a corporate officer than where it consists of shared directors.
- Weak evidence suggests that corporations that receive loans from banks linked by officers have a higher probability of experiencing a downgraded credit rating than corporate borrowers in general.
- No evidence suggests that the credit rating experience of borrowers linked to lending bank through directors differs from other borrowers.

These results have been derived for a relatively short period and in some cases with few observations. Further research will be undertaken to determine whether the results are robust for more extended periods.

The analysis of bank governance and lending in this paper took place against a background of hypotheses regarding the influence of corporate linkages on bank lending. Indeed, the analysis could have better differentiated among the various hypotheses had the results been different. The absence of any difference in the lending pattern to linked borrowers would have undermined both the possibility of information advantages to banks arising from corporate links or the successful capturing of rents by linked borrowers. As it is, the tendency of enterprises to borrow from linked banks is consistent with both. While the greater probability of ratings downgrades for loans made to linked enterprises might appear to support the rent capture hypothesis, these downgrades may have been anticipated and reflected in the initial terms of the loans. The results, as they are, point to a need for further research to complete the puzzle. Evidence on the rate spreads paid by linked banks would provide information that could serve to differentiate among the possible influences.

The analysis strongly suggests that board links between banks and companies through the company officers does influence bank lending. Some perspective needs to be placed on the size of this effect in terms of total bank lending. Overall, 41, or 7.7 per cent, of the 537 total loans considered in this study were made to companies having officers on the board of any Canadian bank, and of these, 3.6 per cent of the total were made to a bank linked to the board of the borrower through an officer. In value terms, \$8,347 million loans of the total \$89,098 million loans reported by DealScan for the years 1996 to 1998 were made to banks with board links through officers of the borrower.<sup>5</sup> This proportion of bank lending to linked corporations should not be attributed only to the reticence of companies to borrow from linked banks or the reluctance of banks to lend to linked companies. To the contrary, borrowers showed a greater tendency than could be explained by chance to borrow from banks whose boards included their officers. The relatively small level of linked lending also reflects a structural feature of Canadian banking. The small number of banks results in limited opportunities for corporate officers to serve on bank boards.

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5. DealScan reports only an unknown fraction of total new loans extended by the large banks over a period. The linked loans identified here would be an even smaller fraction of the total new loans of the banks. On the other hand, there may also be loans made to linked corporations that are not reported in DealScan.

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