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Bank Lending and Entrepreneurial Finance—The Performance of Canadian Banks

John Chant with Keith Godin

Contents

Executive summary.....	3
Introduction	5
1 Banks and the financing of entrepreneurial businesses	7
2 How do others see Canadian bank performance?	10
3 Bank performance in financing entrepreneurial activity	17
4 Other perspectives on bank performance.....	23
5 Influences on bank performance	27
Bank performance—conclusions and recommendations	36
References	38
About the authors.....	40
Acknowledgments	41

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Executive summary

With this study, The Fraser Institute launches a project, *Financing Entrepreneurship: The Canadian Experience*, under its Centre for Entrepreneurship and Markets, which will consist of a series of studies aiming to assess the performance of Canadian financial markets and institutions with respect to financing entrepreneurial activity.

Just as entrepreneurial businesses differ in what they do, so also do they differ in their financial needs. A small start-up in a traditional area of business has different financial needs than a high tech innovator, and both have different needs than a large private corporation. Because of these differences, no single segment of the financial industry can be the exclusive source of financing for entrepreneurs. Accordingly, the coverage of the *Financing Entrepreneurship* series will be broad and will include many financial activities that are not generally identified with entrepreneurial finance.

This inaugural study examines the performance of Canadian banks in financing entrepreneurship. While banks are not typically identified with entrepreneurial finance, the loans, lines of credit, and other products they provide are among the most important external sources of finance for small and medium-sized enterprises (SMEs)—the majority of entrepreneurial businesses. As such, it is critical to assess how well the banking system is functioning in terms of financing these important contributors to job creation, innovation, and economic growth.

International research reveals that Canada performs reasonably well in terms of the overall health of its banking system. However, its performance in terms of financing entrepreneurs is weaker. For example, according to the Milken Institute's capital access reports, which take into account a broad spectrum of measures, Canada is a leader in all aspects of finance and the performance of Canadian banks ranks in the top quarter of industrialized countries. However, the reports also find that Canadian banks lag behind industry leaders in the two most important measures relating to entrepreneurial businesses: the amount of bank lending (in terms of the quantity of funds) and the terms by which that lending is provided.

Financing terms matter because they indicate how efficient banks are in performing their role as intermediaries by transferring funds from the ultimate providers to the ultimate users of these funds. More costly intermediation has a direct impact on entrepreneurs by raising the costs of financing their businesses. In this area, Canada ranks 10th out of 22 industrialized countries.

The amount of lending is also important to entrepreneurial businesses. As economic research shows, financial constraints remain one of the most important impediments to growth for SMEs. In terms of private sector bank lending as a percentage of Gross Domestic Product (GDP), Canada ranks 20th out of 22 industrialized countries. This ranking only improves to 16th when all private sector institutional lending (i.e., lending by credit unions) is included.

There may be several reasons why Canada lags behind in terms of entrepreneurial finance, such as difficulties relating to the structural characteristics of the market or the degree of competition in the banking market. An analysis of the structural influences suggests that environmental features, such as the scale of the economy, the size of the banks, and the degree of concentration of the banking system, cannot explain the differences in bank performance between Canada and other industrialized countries.

However, the degree of competition may explain, at least in part, Canada's lagging performance. The degree of competition, or, more accurately, the degree of potential competition, is determined by the ease with which new competitors can enter the banking market. If entry barriers are high, then there will be little opportunity for new competitors to enter the market. If barriers are low, then the prospect of new entry will put competitive pressure on banks that are already in business. Data from the Organisation for Economic Co-operation and Development (OECD) show that Canada has average barriers to entry into the banking market for domestic banks and above average barriers to entry for foreign banks. According to the OECD, Canada ranks 18th out of 21 industrialized countries in terms of the share of loans (in terms of total amount loaned) made by foreign banks. In other words, Canada has relatively high barriers to entry and relatively low levels of foreign participation in the domestic loan market compared to other industrialized countries.

Overall, the evidence concerning Canadian banks' performance with respect to supplying credit to entrepreneurs is mixed. Such circumstances call for permissive measures that will encourage the flow of credit to entrepreneurs if necessary. Economic research shows that the best way to improve banking performance is to remove barriers to entry and increase competition. While some may argue that foreign banks already have a presence in Canada, their activity is limited. Currently, foreign banks can only enter the banking market through a stand-alone subsidiary that has its own capital separate from its parent bank, or through branches that are restricted in raising funds to deposits of less than \$150,000. As a result, foreign banks are forced to operate in an institutional setting that prevents them from competing fully with Canadian banks. Further relaxing obstacles to foreign bank entry would help to assure our banking system meets entrepreneurs' credit needs at reasonable prices.

Introduction

Entrepreneurs come in all shapes and sizes. After being downsized from her job at an airline, a mother designed a new shoe for her infant son and marketed it. Just 12 years later, the company she founded registered \$15 million in sales. After arriving with just \$25 in his pocket, a new Canadian built his own line of high speed injection molding machines. His company now employs 3,000 people and has revenues of close to \$1 billion. A dynamic young car sales manager set out on his own after being rebuffed in his efforts to gain an ownership stake. He now controls a multi-billion dollar company with interests in transportation, communication, food products, packaging, and financial services. At first glance these entrepreneurs appear to have little in common. The first entrepreneur saw the need for a new product, the second devised a new technique, and the third applied his management insights to traditional businesses. However, all three had a common inspiration: they had visions of what they wanted to achieve and how they wanted to achieve it.

While no rigid definition can capture the essence of entrepreneurship^[1], entrepreneurial firms differ from public corporations in that they are owned by individuals who actively guide the business. They differ from large public companies in their ability to respond to opportunities created by new knowledge. Their size and simpler command structure makes them agile in translating knowledge into marketable products and more effective processes. A healthy environment for entrepreneurial businesses contributes to a vibrant and productive economy.

Financing is especially vital for entrepreneurial businesses because of the way in which they differ from other businesses. Paul Gompers and William Sahlman identify the essence of entrepreneurship as “the relentless pursuit of opportunities without regard to resources currently controlled” (2001: 1). The identification of entrepreneurship with the use of external funds highlights the significance of finance for entrepreneurial activity. While no amount of finance can make up for a lack of initiative, entrepreneurs are limited to only their own resources if they do not have access to external finance.

It is now recognized that finance plays an important role in economic growth and that the financing of business firms is an important channel of finance’s influence on growth (Levine 2005: 85). Moreover, research by Thorsten Beck and his associates (2005) shows that relaxing the financial constraints for smaller firms is an important part of the link between financial development and economic growth. Smaller firms are where the bulk of entrepreneurial enterprises are found.

This study focuses on bank lending as a source of finance for entrepreneurial businesses. This emphasis may seem surprising to some. Government programs and venture capital have much higher profiles in entrepreneurial finance sector, partly because of their association with high technology businesses. Yet, many entrepreneurs are not creating businesses that are on the cutting edge of technology. As our examples show, they are developing improvements on every day products, devising superior production techniques, and applying better management

¹ See Godin and Clemens (forthcoming) for a discussion of the different conceptual frameworks of entrepreneurship.

techniques to traditional businesses. These activities may not need sophisticated suppliers of venture capital. As we will show, even innovative firms may need the types of financing that are associated with banks, such as commercial mortgages and financing for inventory, accounts receivable, and leasing.

1 Banks and the financing of entrepreneurial businesses

Different entrepreneurial businesses seek different sources of financing according to their age, size, and past performance. The success of start-ups and entrepreneurial businesses seeking to become small and medium businesses will in many cases depend on their ability to attract funding. Larger entrepreneurial businesses with credible track records can draw on a broader range of financing than others because their success shows that they are less likely to default. Unfortunately, available statistics do not distinguish entrepreneurial business activity and its financing from other types of business activity and their financing. Accordingly, this study uses different types of information to assess the performance of Canadian banks in the area of lending to entrepreneurial businesses.

This study will focus on the financial needs of small and medium sized businesses because most entrepreneurial businesses are found in this group. These businesses face the greatest difficulties in terms of obtaining finance to sustain their enterprise or move it forward. Thus, we will use information about the financing of small and medium-sized enterprises (SMEs) in general as a proxy for the financing experience of entrepreneurial businesses within that group.^[2] In addition, this study will use data from broad, international comparisons of bank performance with respect to the terms and volume of private sector financing undertaken by a country's banking system.

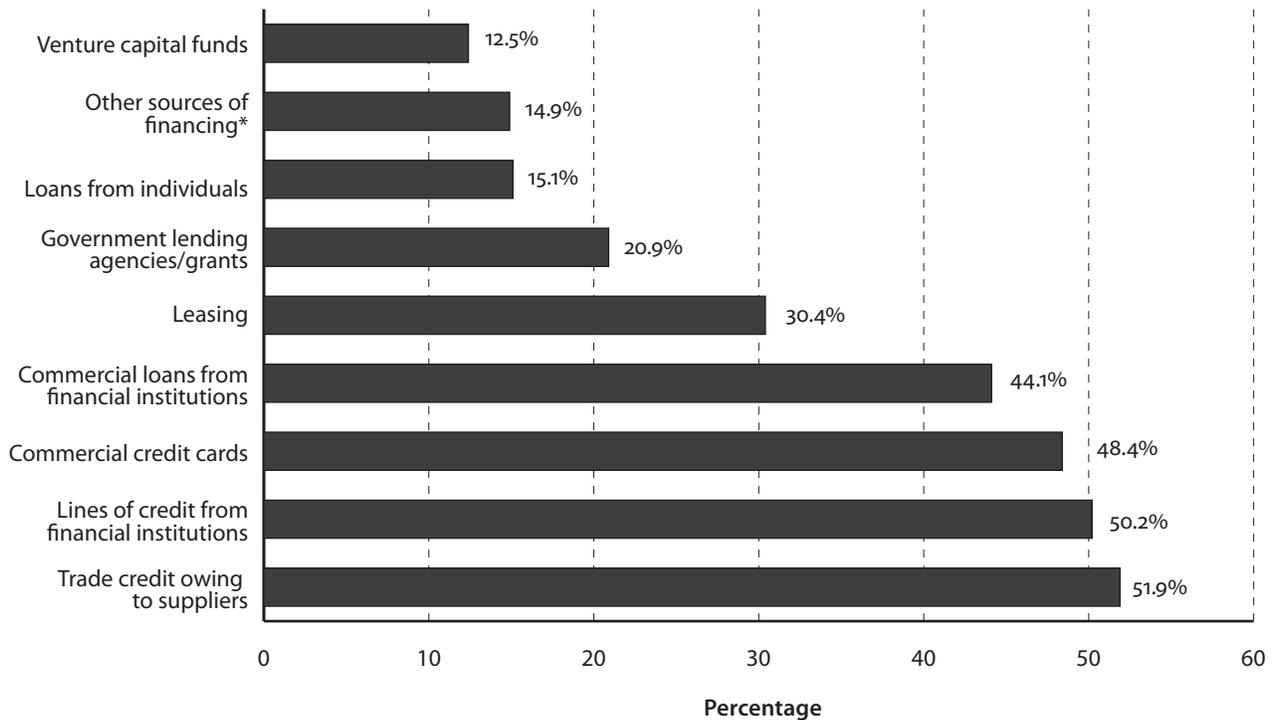
The study concentrates on the performance of Canadian (domestic) banks, as well as branches and subsidiaries of foreign banks, in terms of supplying finance to the Canadian private sector. Such a study is justified because Canadian banks are the major suppliers of commercial lines of credit and commercial loans, two of the most important sources of external finance for SMEs.

Bank loans and the funding of entrepreneurial business

The importance of different sources of finance for entrepreneurial businesses is difficult to gauge directly because of the diversity of these businesses. Statistics Canada (2006) examined the sources of external funding used by all SMEs in 2004 (figure 1). The survey showed that commercial lines of credit, used by 50.2% of SMEs, are the most used sources of external funding, followed by commercial credit cards (48.4%) and commercial loans (44.1%). Government grants and loans are used by only 20.9% of SMEs. Venture capital funds, used by only 12.4% of SMEs, may be, despite their magnitude, vital to businesses that carry out innovation (Kortum and Lerner, 2000: 307). Leasing and commercial mortgages and commercial credit cards, as well as accounts receivable and inventory financing—the three most used financing methods for many entrepreneurial businesses—are provided by banks.

2 Our data are drawn from Key Small Business Financing Statistics published by the Small and Medium-Sized Enterprise Financing Data Initiative (SME FDI) of Statistics Canada, Industry Canada and the Department of Finance. SME FDI defines small and medium-sized enterprises as those with fewer than 500 employees and with annual revenues of less than \$50 million.

Figure 1: Sources of external funding used by SMEs, 2004*



*Note: Other sources of financing does not include retained earnings, loans from employees, personal savings, personal lines of credit, personal credit cards, and loans from friends and family.
 Source: Government of Canada, Small Business and Special Survey Division (2006); calculations by author.

Do innovative firms have different funding needs?

A series of studies by Dr. John Baldwin and his team at Statistics Canada has advanced our knowledge of the differences between the financing needs of entrepreneurial firms and other kinds of firms. In an early study, Baldwin and Johnson (1996) found that innovative firms place greater emphasis on their financing strategy than non-innovative firms, and that their growth is more dependent on the cost of funding and their access to capital.³ As well, innovative firms are more outward looking in their financing, using public equity markets, venture capital, and funding from parent companies more than financing from other firms. Despite this greater use of varied sources, innovative firms still use credit from financial institutions more frequently than any other source of external financing.

In a later study, Baldwin *et al.* (2002) focused on the financing of successful new firms—the 20% that are able to stay in business for ten years. These firms tend to acquire less debt than

3 The authors classified firms as innovative by analyzing survey responses with respect to 16 innovative strategies and three innovative activities. An example of the former is the extent of a firm’s research and development (R&D) spending relative to that of its competitors. An example of the latter is the percent of a firm’s employees devoted to R&D relative to the percentages in other firms. See Baldwin and Johnson (1996) for a full list of criteria.

non-financial corporations (corporations whose principal activity is the production of market goods or non-financial services) as a whole. Successful new firms in knowledge-intensive environments rely even less on debt financing than other firms. In light of this finding, Baldwin *et al.* also examined the relationship between financial structure, research and development (R&D), and innovation, to find out if innovative firms prefer not to use debt-financing because they wish to avoid debt finance or because they are constrained by funding gaps. They suggest a two-way relationship between knowledge intensity and capital structure. Firms in knowledge industries tend to rely more on equity finance than other firms; firms that rely on debt are less likely to undertake innovative activity. On the basis of this evidence, they concluded that financial strategies are an integral part of the innovative strategies of successful firms.

In summary, Baldwin *et al.* (2002) found that innovative firms do exhibit different financing patterns than others, preferring equity finance to other types of finance. The results of the study indicate a different emphasis in financing for knowledge-based firms. Despite this difference in emphasis among innovative firms, bank credit still remains the source of external finance they use most often.

2 How do others see Canadian bank performance?

This study is not the first to assess the performance of Canadian financial institutions—in particular, the banking system—with that of other countries. It follows the example of the Milken Institute’s substantial annual Capital Access Index (CA Index).[4]

The Milken Institute Capital Access Index

The Milken Institute’s Capital Access Index ranks countries according to the ability of new and existing entrepreneurs to finance their strategies and investments for job creation and capital formation on the basis of quantitative measures derived from a variety of sources (Barth *et al.*, 2006). The most recent version of the CA Index ranked 122 countries on the basis of their overall performance and their performance in subcategories relating to:

- the macroeconomic environment;
- economic institutions;
- the banking sector;
- equity markets;
- bond markets;
- alternative sources of funds; and,
- international access.

A country’s ranking on the CA Index is determined by a weighted index of the country’s scores on these items.[5]

Overall, the Milken Institute ranked Canada 4th out of all countries surveyed in 2006 and 2nd among 22 industrialized economies (table 1). This 2006 performance reflects a strong improvement from Canada’s 2005 ranking. Between 2000 and 2005, Canada never ranked higher than 5th among industrialized countries and ranked as low as 11th in 2004 (figure 2 and table 2).[6]

Between 2005 and 2006, Canada improved its overall standing in all measures of the CA Index except for Bonds and Equity (table 3). The largest changes, and most likely the greatest contributors to Canada’s improvement, were in the areas of alternative sources of capital, where Canada rose to 15th from 30th, and international access, where Canada jumped to 18th from 40th.[7]

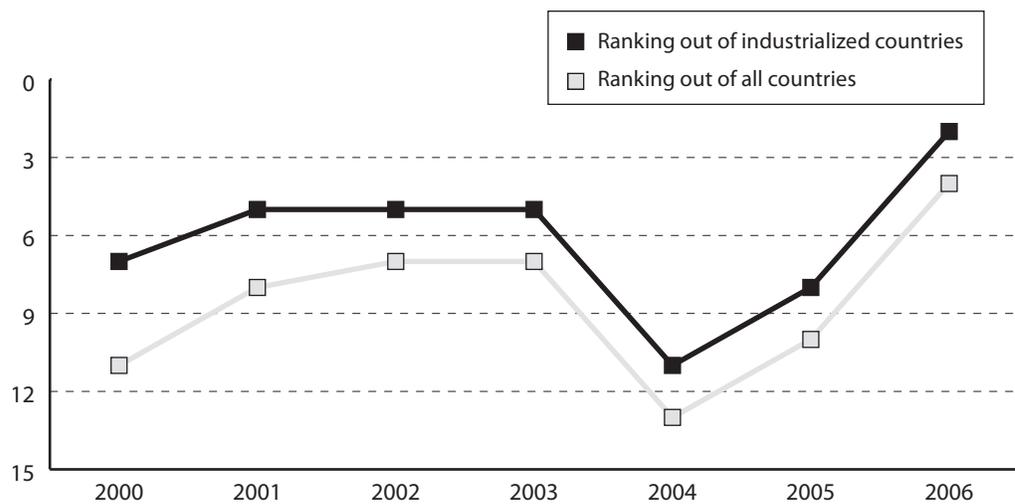
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- 4 The Milken Institute Capital Access Index for various years can be found at www.milkeninstitute.org.
 - 5 The weights given to the items may differ from item to item. The Milken Institute does not make public the weights attached to each item.
 - 6 The annual rankings are not strictly comparable because the components making up the Index and their definitions have changed several times between 2000 and 2006.
 - 7 Changes in the composition of the Index make it difficult to determine the sources of changes for years other than 2005 and 2006.

Table 1: Milken Institute Capital Access Index rankings for industrialized countries, 2006

Rank	Country	Score
1	United Kingdom	7.79
2	Canada	7.61
3	United States	7.59
4	Australia	7.55
5	Switzerland	7.52
6	Netherlands	7.50
7	Ireland	7.46
8	Sweden	7.35
9	Norway	7.16
10	Finland	7.09
11	Denmark	6.99
12	Germany	6.92
13	Japan	6.88
13	New Zealand	6.88
15	South Korea	6.58
16	Austria	6.53
17	France	6.44
18	Spain	6.42
19	Portugal	6.37
20	Belgium	6.05
21	Italy	5.63
22	Greece	5.25

Source: Barth *et al.* (2006).

Figure 2: Canada's rank in the Milken Institute Capital Access Index, 2000-2006



Sources: Yago *et al.* (2000), Yago *et al.* (2001), Barth *et al.* (2002), Barth *et al.* (2003), Barth *et al.* (2004), Barth *et al.* (2005), and Barth *et al.* (2006).

Table 2: Milken Institute Capital Access Index rankings for industrialized countries, 2000-2006

2006 ^a		2005 ^b		2004 ^c	
Rank	Country	Rank	Country	Rank	Country
1	UK	1	UK	1	Netherlands
2	Canada	2	US	2	UK
3	US	3	Sweden	3	Switzerland
4	Australia	4	Denmark	4	US
5	Switzerland	5	Australia	4	Australia
6	Netherlands	6	Norway	6	Finland
7	Ireland	6	Finland	7	Germany
7	Sweden	8	Canada	8	Denmark
7	Norway	9	Ireland	9	New Zealand
7	Finland	10	Switzerland	10	Ireland
11	Denmark	11	Netherlands	11	Canada
12	Germany	12	New Zealand	12	Sweden
13	Japan	13	Germany	13	Spain
14	New Zealand	14	Spain	14	France
15	South Korea	15	Japan	15	Japan
16	Austria	16	France	16	Austria
17	France	17	Austria	17	Belgium
18	Spain	18	South Korea	18	Portugal
19	Portugal	19	Portugal	19	South Korea
20	Belgium	20	Belgium	20	Norway
21	Italy	21	Greece	21	Italy
22	Greece	22	Italy	22	Greece

Notes:

^a Ranked out of a total of 122 countries.

^b Ranked out of a total of 121 countries.

^c Ranked out of a total of 88 countries.

^d Ranked out of a total of 89 countries.

^e Ranked out of a total of 98 countries.

^f Ranked out of a total of 83 countries.

^g Ranked out of a total of 81 countries.

Sources: Yago *et al.* (2000), Yago *et al.* (2001), Barth *et al.* (2002), Barth *et al.* (2003), Barth *et al.* (2004), Barth *et al.* (2005), and Barth *et al.* (2006).

2003 ^d		2002 ^e		2001 ^f		2000 ^g	
Rank	Country	Rank	Country	Rank	Country	Rank	Country
1	UK	1	UK	1	US	1	US
2	US	2	US	2	UK	2	Switzerland
3	Netherlands	3	Switzerland	3	Netherlands	3	UK
4	Switzerland	4	Netherlands	4	Switzerland	4	Netherlands
5	Canada	5	Canada	5	Canada	5	New Zealand
6	New Zealand	6	New Zealand	6	New Zealand	6	Australia
7	Denmark	7	Australia	7	Ireland	7	Canada
8	Ireland	7	Finland	8	Germany	8	Germany
9	Australia	9	Ireland	9	Australia	9	Finland
10	Germany	10	Germany	10	Finland	10	Spain
11	Finland	11	Denmark	11	Sweden	11	Ireland
12	Spain	12	Japan	12	Spain	12	Sweden
13	Sweden	13	Sweden	13	Japan	13	France
14	South Korea	14	South Korea	14	France	14	Japan
15	Japan	15	Spain	15	Belgium	15	Denmark
16	France	16	Belgium	16	Denmark	16	South Korea
17	Austria	17	Portugal	17	Austria	17	Italy
18	Belgium	18	France	18	Portugal	18	Portugal
19	Portugal	19	Austria	19	South Korea	19	Belgium
20	Norway	20	Norway	20	Norway	20	Norway
21	Italy	21	Italy	21	Italy	21	Austria
22	Greece	22	Greece	22	Greece	22	Greece

**Table 3: Milken Institute Capital Access Index—
changes in Canada’s ranking, 2005-2006**

Measure	Rank out of all countries		Change in Ranking
	2006 ^a	2005 ^b	
Overall	4	10	+6
Macroeconomic	2	3	+1
Institutional	5	9	+4
Finance and banking institutions	6	8	+2
Equity	9	6	-3
Bonds	34	26	-8
Alternative sources of capital	15	30	+15
International access	18	40	+22

Notes:

^a Ranked out of a total of 122 countries.

^b Ranked out of a total of 121 countries.

Sources: Barth *et al.* (2005) and Barth *et al.* (2006).

The Milken Institute bank performance measures

The Banking and Financial Index (BF Index), a subcategory of the Capital Access Index that is important to this study, assesses the contribution of a country’s financial institutions to entrepreneurial finance on the basis of the following banking performance measures:

- Claims on non-financial firms as a percentage of GDP;
- Bank assets as a percentage of GDP;
- Ratio of domestic assets to foreign assets;
- Moody’s deposit ratings;
- Net interest margin;
- Syndicated loans as a percentage of GDP;
- Actual reserves as a percentage of assets;
- Soundness of banks;
- Access to credit; and,
- Ease of access to loans.

The breadth of the banking measures used by the BF Index means that the items included differ substantially in terms of their relevance to the contribution of a country to entrepreneurial finance. Two measures, Moody’s deposit rating and soundness of banks, are important indicators of banking system health, but they do not bear directly on entrepreneurial financing. Similarly, other measures, though related to banking activity, are not direct measures of credit flows to entrepreneurs. For example, banking assets as a percentage of GDP indicates the size of the banking system relative to the economy and indicates the capacity of the banking system to supply financing to the private sector. However, it is at best an indirect measure because it does not capture the degree to which the banking system realizes its potential. A high domestic to foreign

assets ratio is also by itself ambiguous; it can indicate that banks neglected their domestic market or that they successfully applied their expertise to international markets. Syndicated loans as a percentage of GDP measures the banks' participation in arrangements through which a number of banks collectively provide joint financing to a single borrower. However, it indicates the use of a particular technique and not the total flow of credit to private economic activity.

The most critical measures of entrepreneurial finance are those that measure the cost of bank financing (net interest rate spreads) and the volume of bank lending to the size of the economy (claims on non-financial firms as a percentage of GDP). In this study, we will direct our focus on these key indicators of banking performance.

Canada's performance according to the Banking and Financial Index

In 2006, Canada ranked 6th on the BF Index among all countries and industrialized countries (table 4). This was an improvement from Canada's ranking (8th) in 2005.^[8]

Canada's banks have not always scored as strongly on the BF Index as they did in 2005 and 2006. But strict comparisons over the years are limited because of changes in the methodology of the CA Index. Prior to 2005, the Index included different measures of bank performance such as banking depth (2001-04), governance (2001-04), regulation (2001), and repression (2002-04).

Table 5 shows that, from 2001 to 2004, the Canadian banking system scored as high as possible with respect to the absence of repression, reasonably well with respect to regulation, erratically with respect to governance, and relatively poorly with respect to banking depth.

Changes in the coverage of the BF Index account for some of the movement in Canada's ranking. All measures of bank repression, a category in which Canada did well, have been dropped. At the same time, several measures based on the executive surveys undertaken by the World Economic Forum have been added. These changes have tended to increase the relevance of the Milken Institute's CA Index to industrialized economies.

8 This ranking is substantially different from previous years in which Canada ranked in the 20s in the banking depth category. This difference can be accounted for by the revision of the measures used for banking and financial institutions.

Table 4: Milken Institute Capital Access Index rankings—banking and financial institutions in industrialized countries, 2006

Rank	Country
1	New Zealand
2	Australia
3	Ireland
4	Norway
5	Switzerland
6	Canada
7	Netherlands
7	Sweden
7	Denmark
7	France
11	United Kingdom
12	United States
12	Spain
14	Japan
15	Finland
16	South Korea
17	Belgium
18	Portugal
19	Greece
20	Austria
21	Germany
22	Italy

Source: Barth *et al.* (2006).

Table 5: Milken Institute Capital Access Index—Canada’s rank per bank performance measure, 2001-2006

Component	Rank out of all countries					
	2006 ^a	2005 ^b	2004 ^c	2003 ^d	2002 ^e	2001 ^f
Banking and financial institutions	6	8	n/a	n/a	n/a	n/a
Banking depth	n/a	n/a	29	28	25	23
Governance	n/a	n/a	42	14	14	19
Repression	n/a	n/a	1	1	1	8

Notes:

^a Ranked out of a total of 122 countries.

^b Ranked out of a total of 121 countries.

^c Ranked out of a total of 88 countries.

^d Ranked out of a total of 89 countries.

^e Ranked out of a total of 98 countries.

^f Ranked out of a total of 83 countries.

Sources: Yago *et al.* (2001), Barth *et al.* (2002), Barth *et al.* (2003), Barth *et al.* (2004), Barth *et al.* (2005), and Barth *et al.* (2006).

3 Bank performance in financing entrepreneurial activity

Two basic questions provide a starting point from which to measure a banking system's performance in financing entrepreneurship: how much credit did the banking system provide to entrepreneurial businesses, and what were the terms on which this financing was provided?

Answering the first question is straightforward conceptually for we can examine the amount of lending (in terms of the quantity of funds) that went to entrepreneurial businesses. Economists typically answer the second question by examining interest rate spreads—the net difference between the interest that banks receive and the interest that they pay, expressed as a percentage of their total earning assets. Each of these measures of bank performance is important in different ways. We will consider each in turn.

The impact that interest rate spreads can have on entrepreneurial businesses is apparent. Bank spreads are important because they indicate the level of efficiency at which banks perform their role as intermediaries by transferring funds from the ultimate providers to the ultimate users of these funds. Costly intermediation has a direct impact on entrepreneurs because it raises the cost of financing their business.

The significance of bank performance with respect to the volume of private sector lending is less clear. Some entrepreneurial businesses—specifically, technology firms with the highest profiles—seek types of finance other than those that are usually associated with banks. Many other entrepreneurial businesses, on the other hand, need precisely the kinds of finance identified with banks. A recent study for the World Bank study by Beck and his colleagues (2005) examined obstacles to the growth of business firms across a group of developing and industrialized countries. They concluded that the difficulties firms had dealing with banks, such as excessive paperwork and bureaucracy, as well as the need for firms to have special connections with banks, constrained firm growth. These difficulties were significant regardless of a firm's level of financial development (Beck *et al.*, 2005: 171). Furthermore, they found that financial constraints mattered most to the growth of small and medium-sized firms, which many entrepreneurial businesses are.

Data on interest rate spreads and the volume of private sector lending for 211 countries are presented in the World Bank's Financial Structure Dataset (FSD) (Beck and Al-Hussainy, 2007). This study will focus on the 22 industrialized economies that are most comparable to Canada.

Bank lending

The FSD measures a banking system's performance in terms of private sector lending as a percentage of GDP (table 6). There are considerable differences between countries in this area, with percentages ranging from 44.1% for the United States to 157.3% for Switzerland.

Private sector bank lending in Canada is equal to 69.6% of its GDP. In this area, Canada ranks 20th out of 22 industrialized countries, surpassing only Finland and the United States. The differences between Canada and the leading countries are substantial. The bank credit to GDP ratio for Canada is less than half the ratio for each of the top six countries.

Table 6: Bank performance in terms of private sector lending by banks as a percentage of GDP, 2004

Rank	Country	Percentage of GDP
1	Switzerland	157.3
2	Netherlands	152.3
3	Denmark	152.0
4	United Kingdom	145.8
5	Portugal	138.7
6	Ireland	122.3
7	New Zealand	115.6
8	Spain	115.1
9	Germany	112.8
10	Austria	102.4
11	Sweden	102.1
12	Japan	101.3
13	Australia	97.6
14	South Korea	89.1
15	France	87.6
16	Italy	82.6
17	Norway	75.4
18	Belgium	71.8
19	Greece	71.1
20	Canada	69.6
21	Finland	64.6
22	United States	44.1

Source: Beck and Al-Hussainy (2007).

This measure of bank lending should be treated with some caution because the institutional frameworks through which credit is channeled to the private sector differ from country to country. For example, American banks have been constrained historically by a restrictive legislative and regulatory framework that has allowed other institutions to fill the gaps left by the banks.

To reflect institutional differences, the FSD also presents a broader measure that includes private sector credit granted by all financial institutions (table 7). The lending ratios of only four countries—the United States, Korea, Canada, and Norway—are affected by the addition of lending by other financial institutions. This adjustment moves the United States from last to 1st place among the 22 industrialized countries. Canada performs somewhat better in this broader measure: private sector lending rises from 69.6% of GDP for banks alone to 100.3% of GDP for all institutions, moving Canada up to 16th place among industrialized countries. While this adjustment narrows the gap between Canada and the top-ranked countries, Canada's ratio is still less than half that of any of the top six countries.

Table 7: Bank performance in terms of private sector lending by banks and other financial institutions as a percentage of GDP, 2004

Rank	Country	Percentage of GDP
1	United States	216.9
2	Switzerland	157.3
3	Netherlands	152.3
4	Denmark	152.0
5	United Kingdom	145.8
6	Portugal	138.7
7	Korea, Rep.	125.4
8	Ireland	122.3
9	New Zealand	115.6
10	Spain	115.1
11	Germany	112.8
12	Austria	102.4
13	Sweden	102.1
14	Japan	101.3
15	Norway	100.8
16	Canada	100.3
17	Australia	97.6
18	France	87.6
19	Italy	82.6
20	Belgium	71.8
21	Greece	71.1
22	Finland	64.6

Source: Beck and Al-Hussainy (2007).

Interest rate spreads

Interest rate spreads provide another indication of the performance of a country's bank lending market. The net interest spread between the interest banks receive and the interest they pay, expressed as percentage of their total earning assets, is a commonly used measure of the cost of banking services. This measure has the benefit of abstracting from the general level of interest rates in an economy, which is related to a country's saving/investment balance, its inflationary environment, and its openness to investment from abroad, which is beyond the control of its commercial banks. This spread is intended to capture the level of efficiency at which financial institutions channel funds between the suppliers of funds and the users of these funds. A low interest spread indicates that banks lend at rates that are close to the rates they pay. A low interest spread benefits entrepreneurs and other users of bank credit by lowering their borrowing costs. In effect, a low interest spread means that banks pass on the funds they have gathered from the community to their borrowers with only a small "markup." A higher interest spread raises the cost of borrowing for entrepreneurs and other users of bank credit.

Table 8: Bank performance in terms of interest rate spreads in industrialized countries, 2004

Rank	Country	Interest rate spread (%)
1	Ireland	1.2
2	Finland	1.4
3	Netherlands	1.4
4	Switzerland	1.6
5	Japan	1.7
6	Belgium	1.7
7	New Zealand	1.8
8	Austria	2.1
9	Australia	2.2
10	Canada	2.4
11	Italy	2.5
12	France	2.5
13	Norway	2.6
14	United Kingdom	2.6
15	Germany	2.6
16	Greece	2.7
17	Korea, Rep.	3.1
18	Sweden	3.2
19	Portugal	3.5
20	Denmark	3.6
21	United States	4.0
22	Spain	4.4

Source: Beck and Al-Hussainy (2007).

Table 8 shows the interest rate spreads for industrialized countries. The difference in interest rate spreads is substantial, as spreads range from 1.2% for Ireland to 4.4% for Spain. Canada, with a net interest spread of 2.4%, ranks 10th out of the 22 industrialized countries. Canada's spread is at least one percentage point higher than that of Ireland, Finland, and the Netherlands.

Like other measures, interest rate spreads by themselves may be misleading by reflecting influences other than the efficiency of a banking system in terms of supplying credit. In particular, different types of risks that banks take through their lending will influence the spread. Banks that make riskier loans will charge higher interest rates to compensate for the higher possibility of default. This influence may be responsible for the higher interest margins of American banks. Because of the restrictions placed on American banks, corporate borrowers can outgrow a bank's capacity to supply them with credit.⁹ As a result, businesses seeking funding would be forced to turn to alternative sources of credit at an earlier stage in their development than businesses

9 In the past, geographical restrictions have limited the size and lending capacity of American banks, and rules about concentration of loans have limited the amount that a bank can lend to one interest.

Table 9: Loss experience of Canadian banks, 2000-2005

Year	Debt financing (\$ millions)	Debt losses (\$ millions)	Debt losses as a percentage of loans
2000	206,025.3	709.7	0.34
2001	200,453.6	922.1	0.46
2002	195,982.1	988.7	0.50
2003	191,685.7	949.0	0.50
2004	196,026.6	550.5	0.28
2005	210,024.4	404.0	0.19

Source: Statistics Canada (2005); calculations by author.

in other countries.^[10] The higher bank margins in the United States may be explainable to the extent that bank portfolios were, as a result, concentrated on loans to smaller, less established businesses to a greater degree than in other countries.

The relatively high interest spreads charged by Canadian banks relative to banks in other industrialized countries could be explainable if Canadian banks were undertaking riskier lending than their counterparts elsewhere. To address this possibility properly, we would need to know the loan loss experience for Canada and the other industrialized countries used in our comparisons. Unfortunately, data for the other countries are not readily available. According to Canadian data, the loss experience of Canadian banks between 2000 and 2005 ranged from a high of 0.5% in 2002 and 2003 to a low of 0.19% in 2005 (table 9). Using these data and assuming that Canada was the only country in which banks experienced losses, Canada's ranking would only improve from 12th to 8th if the highest loan loss experience of 2002 or 2003 were assumed, and would remain unchanged if the loan loss experience of 2005 were assumed. These comparisons suggest that loan loss experience by itself cannot explain the ranking of Canadian banks with respect to interest spreads.

Bank credit and interest rate spreads—conclusions

When key measures of bank performance in lending to private businesses for a group of industrialized countries are considered, the results indicate that Canadian banks lag behind the best performing banks with respect to the amounts of credit they provide to the private sector and the cost of this credit in terms of Canadian banks' high interest rate spreads.

However, these results can be no more than suggestive. There is no rule that private lending by banks must reach a specified level of a country's GDP in order to satisfy the legitimate needs of business. Nor does any generalization suggest that interest spreads should not

10 The limitations on bank lending helped foster the development of alternative sources of funds to a greater degree than elsewhere. The well developed high-yield bond market in the United States, as well as the business lending of other financial institutions, may be a consequence of the past restrictions on the banking system.

exceed a given level. Rather, the scope of bank lending and the size of interest spreads reflect the conditions in the bank loan market at any time. Canadian banks may be meeting the legitimate needs of Canadian business for credit and may be meeting them on reasonable terms. To put this performance in perspective, we must ask two questions. First, is there other evidence that shows whether Canadian banks are meeting the credit needs of entrepreneurs? And second, does the Canadian economy have structural features that could influence the lending activity of its commercial banks? We will consider each of these questions in turn.

4 Other perspectives on bank lending performance

Neither international indexes nor credit and spread performance indicators provide conclusive judgments about the performance of banks with respect to meeting the credit needs of entrepreneurs. This section provides alternative perspectives on the performance of banks in terms of supplying credit to entrepreneurial businesses that are based on the perceptions of business leaders and the results of surveys of borrowers and lenders undertaken by Statistics Canada.

Perceptions of business leaders

The perceptions of business leaders provide further evidence with respect to the performance of a country's financial system in its financing the private sector. The World Economic Forum (WEF) canvasses these perceptions through its Executive Opinion Survey for its *Global Competitiveness Report* (WEF, 2006). This survey asks business leaders from 117 countries a wide range of questions about their country and its economy. For our present purposes, we will focus on one question about the performance of a country's banks with respect to supplying credit to entrepreneurial businesses: how easy is it to obtain a bank loan with only a good business plan and no collateral?^[11]

The WEF survey provides a perspective that is different from our measures and from the Milken Capital Access Index by surveying business executives who are in a good position to judge the bank lending conditions in their own country because of their day-to-day experience. When asked how easy is it to obtain a bank loan with only a good business plan and no collateral, executives were able to choose within a range of one ("impossible") to seven ("easy").

Results of the 2006 WEF survey of executives from industrialized countries (table 10) ranged from 5.4 for Finland and Denmark to less than 3.5 for Japan and Italy. The 126 Canadian business leaders who answered this question gave Canada a 4.2, roughly the middle of the range between "impossible" and "easy." With this result, Canada placed 17th among the 117 countries surveyed and just 16th among the 22 industrialized countries. This result is more consistent with the analysis of the volume of credit and interest spreads than the Milken Institute Capital Access Index.

The judgments reached on the basis of our previously discussed measures of Canadian bank performance—interest rate spreads and volume of private sector lending—appear to gain support from the WEF survey of business executives. According to our measures and the WEF survey, the performance of Canadian banks lags behind those of the best performing industrialized countries with respect to financing entrepreneurial business. In terms of its place among other countries, Canada ranks in the middle with respect to interest spreads and near the bottom with respect to private sector lending and the executives' judgments.

11 The survey does ask one other question about credit: "During the past year, obtaining credit for your company has become more difficult/easier?" The answer to this question gives the direction of change and, by itself, offers no indication of the current credit conditions.

Table 10: Business executives' opinions on credit availability in industrialized countries, 2006*

Rank	Country	Score
1	Finland	5.4
2	Denmark	5.4
3	United Kingdom	5.2
4	Ireland	5.0
5	United States	4.9
6	Norway	4.9
7	Netherlands	4.9
8	Australia	4.8
9	New Zealand	4.8
10	Sweden	4.7
11	Portugal	4.5
12	Belgium	4.5
13	Austria	4.4
14	France	4.4
15	Switzerland	4.2
16	Canada	4.2
17	Germany	4.1
18	Greece	4.0
19	Spain	3.9
20	South Korea	3.5
21	Japan	3.4
22	Italy	2.8

*Note: The question posed to the executives was, "How easy is it to obtain a bank loan in your country with only a good business plan and no collateral?" Executives were asked to answer using a rating scale of one ("impossible") to seven ("easy").

Source: World Economic Forum (2006).

Loan approvals and use of credit lines

A different perspective on bank lending in Canada has been provided by Clemens *et al.* (1998) who examined loan approval rates and the degree to which businesses draw on their lines of credit. They found that from 1996 to 1998, 84% to 93% of loan applications were approved. They also discovered that in 1998 almost 70% of the lines of credit up to \$1,000,000 that were authorized to businesses remained unused. The authors concluded that "[t]he notion that there is a lack of commercial credit is not supported by the facts" (1998: 26).

The *Survey of Suppliers of Business Financing* carried out by Statistics Canada (2005) provides comprehensive data similar to that used by Clemens *et al.* (1998). Table 11 shows the amounts of authorized and the outstanding credit for business borrowers in 2005, grouped by the size of their authorizations. Overall, outstanding credit accounts for less than one half of the total

Table 11: Loans to enterprises—amounts authorized and outstanding, 2005

Size of borrower by authorization	Amounts authorized (\$ millions)	Amount outstanding (\$ millions)	Outstanding amount as a percentage of authorizations
Less than \$25,000	7,521	3,731	49.6
\$25,000 to \$49,999	8,575	4,902	57.2
\$50,000 to \$99,000	17,457	10,275	58.9
\$100,000 to \$249,999	36,634	23,959	65.4
\$250,000 to \$499,999	37,691	26,162	69.4
\$500,000 to \$999,999	45,247	31,733	70.1
\$1,000,000 to \$4,999,999	130,281	91,804	70.5
\$5,000,000 and more	584,740	218,923	37.4
All borrowers	868,146	411,489	47.4

Source: Statistics Canada (2007); calculations by authors.

Table 12: Credit applications by small and medium-sized enterprises (SMEs), 2004

Size of SME (number of employees)	Percentage of SMEs that attempted to obtain external financing	Percentage of SMEs that did not apply because they had no need for financing	Percentage of credit applications turned down ^a
0	18.7	91.9	12.0
0.5 to 4	26.9	89.7	12.1
5 to 19	30.4	89.1	13.3
20 to 99	40.4	94.7	14.5
100 to 499	n/a	99.4	n/a
All SMEs	23.6	90.9	11.8

^a The percent of credit applications turned down times the percent of applications where no credit was authorized. Credit may not have been authorized because the application was still under review or because the application was withdrawn.

Source: Statistics Canada, Small Business and Special Survey Division (2006); calculations by author.

credit authorizations, but the rates of use differ substantially by the size of the authorizations. Authorizations in excess of \$5,000,000 experienced the lowest use of outstanding authorizations (37.4%). This result should not be surprising because lenders could be expected to make such large authorizations mainly to businesses with good prospects for repayment. The next lowest rates of outstanding authorizations were for the two smallest groups of business borrowers: less than \$25,000 authorized (49.6%) and \$25,000 to \$49,999 authorized (57.2%), the levels at which the difficulty of obtaining credit would be expected to be the greatest.

Data on approval rates of credit applications made by businesses found in the *Survey of Financing of Small and Medium Enterprises* (Statistics Canada, 2006) support the earlier analysis by Clemens *et al.* (1998). In 2004, only 23.6% of SMEs applied for credit (table 12). The smallest businesses, those with no employees (excluding the owner of the business), were least likely to apply:

only 18.7% of these businesses attempted to obtain credit. The *Survey* found that the proportion of businesses seeking credit increases with the size of the business. Over 40% of businesses with 20 to 99 employees made credit applications. At the time they were surveyed, over 90% of all businesses reported that they did not need additional finance.

Data from the *Survey* also shows that, overall, less than 15% of credit applications made by all sizes of SMEs were turned down. Smaller enterprises (for which data were available) were more successful with their credit applications.^[12] The percentage of credit applications that were turned down (12.0%) was lowest for the smallest sized enterprises and increased with the size of the enterprise to a high of 14.5% for enterprises with 20 to 99 employees.

More recent data gives results similar to the Clemens *et al.* (1998) study. The success rate of loan applications made by SMEs and the remaining capacity on lines of credit for SMEs both remain high. This evidence from Statistics Canada's surveys of loan approvals for SMEs and the utilization of lines of credit by SMEs supports a favourable view of the performance of Canadian banks in their lending to entrepreneurial businesses.

12 Data were not available for businesses with 100 to 499 employees. The fact that the rate of credit application rejections for SMEs as a whole was lower than that for any of the categories reported indicates that the rejection rate was lowest for enterprises with 100 to 499 employees.

5 Influences on bank performance

The performance of banks can be heavily influenced by the environment in which they operate. Inasmuch as Canada differs in many ways from the countries with which it has been compared, the performance of Canadian banks may reflect features of the Canadian economy and the framework in which these banks operate. We will now examine how these features may have influenced the performance of the Canadian banks in their financing of private business. In particular, we will consider the degree to which the performance of a country's banking system may be shaped by the environment in which it operates—the “structural influences”—and the degree to which it is shaped by factors specific to the banking sector. The implications of the influences on Canada's bank performance will differ in accordance with the source of the influences. If environmental factors outside the banking sector could explain Canada's performance, then there would be little to be gained from changing policies with respect to banking. But if Canada's performance cannot be attributed to the environment in which the banks operate, then we need to examine the policies that govern banking to see if measures can be implemented to improve bank performance.

Structural influences on the availability of credit

Among the structural features of the banking system that may influence the performance of banks in their providing credit to entrepreneurs are:

- Size of the domestic market for banking services;
- Domestic policies with respect to bank mergers;
- Degree of concentration of the banking market; and,
- Extent of foreign control in the economy.

Do these structural factors account for the performance of the Canadian banking system with respect to private sector lending and interest margins? We will discuss the possible influence of these factors and analyze their overall effect on Canada's performance.

Size of the domestic market for banking services

The size of a country's market for banking services may influence the efficiency of its banking system. A small banking market may limit the ability of a country's banks to reach an efficient size without leading to the domination of the market by a few large banks. A country's GDP provides a good measure of the overall size of its banking market. Canada's GDP ranks 7th among industrialized countries (table 13).^[13] Despite this high rank, Canada's GDP is less than one-tenth of the United States' GDP and one-quarter of Japan's GDP.

13 GDP data for 2004 is used to be comparable to the data used to measure bank performance.

Table 13: Influences on bank performance

Gross Domestic Product, 2004 (\$USD billions)			Bank size—Average assets of a country's three largest banks, 2004 (\$USD millions)		
Rank	Country	Value	Rank	Country	Value
1	United States	10,937	1	United Kingdom	1,250
2	Japan	4,398	2	United States	1,129
3	Germany	2,300	3	France	1,098
4	United Kingdom	1,759	4	Japan	1,057
5	France	1,681	5	Switzerland	\$864
6	Italy	1,372	6	Germany	787
7	Canada	860	7	Netherlands	772
8	Spain	794	8	Belgium	509
9	South Korea	603	9	Spain	454
10	Australia	494	10	Italy	342
11	Netherlands	477	11	Sweden	274
12	Switzerland	295	12	Canada	273
13	Belgium	287	13	Denmark	223
14	Sweden	286	14	Australia	219
15	Austria	239	15	Ireland	184
16	Norway	214	16	Austria	160
17	Denmark	200	17	Korea, Rep.	145
18	Greece	173	18	Portugal	86
19	Finland	152	19	Finland	76
20	Ireland	142	20	Norway	57
21	Portugal	138	21	Greece	53
22	New Zealand	74	22	New Zealand	36

Notes:

^a Bank concentration ratios measure the assets of three largest banks as a share of the assets of all commercial banks.

Sources: World Bank (2007); Beck and Al-Hussainy (2007); *The Banker* (2006); and, Lane and Milesi-Ferretti (2006).

Domestic policies with respect to bank mergers

It could be the case that the Canadian government's policy of preventing mergers among major banks has placed them at a disadvantage to their larger international competitors. Canadian banks are considerably smaller than the largest in the world. With respect to bank size, which is measured in terms of the average assets of its three largest banks, Canada ranks 12th out of 22 industrialized countries (table 13). The difference between the size of the largest Canadian banks and the largest world banks is substantial. The largest Canadian banks are less than a third of the size of the largest banks in the United Kingdom, United States, France, and Japan.

Bank concentration ratio ^a , 2004			Foreign direct investment liabilities as a percentage of GDP, 2004		
Rank	Country	Value (%)	Rank	Country	Value (%)
1	United States	29.5	1	Belgium	1.34
2	Italy	30.8	2	Ireland	1.29
3	Japan	41.1	3	Netherlands	0.87
4	Ireland	46.3	4	Switzerland	0.64
5	United Kingdom	48.8	5	New Zealand	0.56
6	South Korea	49.8	6	Sweden	0.51
7	Canada	53.5	7	France	0.47
8	France	56.9	8	Denmark	0.46
9	Netherlands	62.0	9	Australia	0.43
10	Australia	64.0	10	Portugal	0.39
11	Germany	65.5	11	Spain	0.38
12	Austria	65.9	12	United Kingdom	0.35
13	Greece	66.3	13	Canada	0.31
14	New Zealand	76.3	14	Finland	0.29
15	Denmark	79.4	15	Germany	0.25
16	Belgium	80.8	16	United States	0.23
17	Spain	86.2	17	Austria	0.23
18	Switzerland	87.6	18	Norway	0.21
19	Norway	94.2	19	Greece	0.13
20	Portugal	94.4	20	Italy	0.13
21	Sweden	95.6	21	South Korea	0.09
22	Finland	98.3	22	Japan	0.02

Degree of concentration of the banking market

A banking market where few banks dominate may not serve the needs of entrepreneurial business as well as markets where many banks compete with each other for this business. There are substantial differences among industrialized countries in terms of their bank concentration ratios.^[14] Overall, four countries had concentration ratios above 90.0% and another five had

14 Bank concentration ratios measure the assets of three largest banks as a share of the assets of all commercial banks. Concentration ratios provide only a first look at the degree of competition in a country's banking markets and their limitations should be recognized. Many small and medium-sized businesses rely on suppliers in their local markets for loans and, as a result, the concentration in their local markets will be important to them. This weakness is illustrated by the United States. The American banking system

concentration ratios between 70.0% and 90.0% (table 13). Canada had a fairly low concentration ratio (53.5%).

Extent of foreign control of economy

Foreign-controlled businesses may differ from domestic businesses in terms of their reliance on domestic sources of finance. They may instead draw on funding from their parent businesses or from financial institutions in their parents' home countries. If this is the case, differences in the degree of foreign control could partly explain the differences between countries in their private lending relative to GDP. Countries with high levels of foreign control would be expected to have lower levels of private bank lending relative to GDP than countries with low levels of foreign control.

The level of foreign direct investment (FDI) liabilities in an economy indicates the degree to which its businesses are under foreign control. Canada ranks 13th among the 22 industrialized economies with a 0.31 ratio of FDI liabilities to GDP (table 13). This level is less than a third of that of Belgium and Ireland, the countries with the highest levels.

Overall influences on private sector credit

The possible structural influence on bank performance may not act separately but instead may interact with each other in their effects. The following section will provide analysis of the overall effects of the various influences on bank performance that have been identified.

Structural influences and interest rate spreads

Dimirguc-Kunt and his colleagues (2004) of the World Bank conducted a comprehensive analysis of the determinants of interest rate spreads, one of our measures for bank performance, for over 1,400 banks in 72 different countries. The authors' analysis is broad and considers the regulatory framework for banking as well as measures of a country's economic freedom and property rights. They found that higher levels of bank concentration raises interest spreads in some estimates, and that larger bank size exerts a downward influence on interest spreads in all estimates.^[15]

The broad coverage of the World Bank study (Dimirguc-Kunt *et al.*, 2004) limits its applicability to comparisons between Canada and other industrialized countries. The influence of measures such as economic freedom and property rights differs substantially among countries in the study's sample, although differences would be smaller among the industrialized countries. As a result, the effects of structural measures such as bank size and concentration may not be the same for industrial countries as for the whole group of countries. To mitigate this possibility, our study examines banking performance and its determinants for 22 industrialized countries only.

Our study's approach differs from that of the World Bank (Dimirguc-Kunt *et al.*, 2004) in one significant respect. Rather than using the data for over 1,400 individual banks, as the World Bank study does, this study uses aggregated data for each of the 22 industrialized countries' bank-

is among the least concentrated of all countries when such concentration is measured on a national level. Yet, despite deregulation and the resulting consolidation over the past 20 years, former restrictions still leave a legacy in which many local markets are dominated by few banks.

15 Dimirguc-Kunt *et al.* (2004) did not test the influence of market size on bank interest spreads.

Table 14: Influences on interest rate spreads in industrialized countries

Variable		Relationship with interest rate spreads
Structural variables	Bank concentration	Occasional unfavourable effect for all countries and when US is omitted
	Bank size	Never significant
GDP		Unfavourable effect for all countries; not significant when US is omitted
Banking regulation	Entry restrictions	Not significant
	Activity restrictions	Not significant
Economic freedom and property rights		Not significant

Source: Dimirguc-Kunt *et al.* (2004); author's estimates.

ing systems as a whole. Using aggregate data instead of individual bank data should not affect the results substantially.¹⁶ In addition to this change, the data in this present study is current to 2004, the latest year for which data are available and comparable.

When interest rate spreads data for the 22 industrialized countries are considered (table 14), the results differ from the World Bank's results for 72 countries. Variables representing a country's economic freedom and property rights did not appear to be significant determinants of spreads, an unsurprising result because of the smaller variation among industrialized countries with respect to these features. The effects of banking structure on interest spreads also differ from those found by Dimirguc-Kunt *et al.* (2004). In contrast to their results, bank size did not appear to influence interest spreads in any of their results. Consistent with their results, this study found that higher levels of bank concentration occasionally appeared to be associated with higher interest spreads.

Private sector credit

Our approach to examining the relationship between private sector lending and structural influences on banking performance uses private bank lending rather than the private lending to GDP ratio as the variable to be explained (table 15). This avoids problems that arise from having GDP as part of the variable to be explained and as an explanatory variable. In addition, the size of the banking system cannot be used as an explanatory variable because the size of a country's largest banks is highly correlated with the size of its banking system as a whole. The resulting estimate of the effects of bank size differs from equation to equation and depends on the other variables included in the equation and the form of the equation. In the instances where it is significant, larger bank size is associated with higher levels of bank credit. Banking concentration, however, does not exert a significant effect on the level of private bank credit. Similar to the analysis of

16 The World Bank study offered one set of estimates based on aggregate data that differed little from their original estimates with respect to the effects of the variables of interest.

Table 15: Influences on private bank lending in industrialized countries

Variable	Relationship with private bank lending	
Structural variables	Bank concentration	Not significant
	Bank size	Upward influence in some cases
GDP	Negative and significant for all 22 countries	
Banking regulation	Entry restrictions	Not significant
	Activity restrictions	Not significant
Economic freedom and property rights	Not significant	
Foreign direct investment	Not significant	

Source: Dimirguc-Kunt *et al.* (2004); author's estimates.

spreads, variables representing economic freedom and property rights are not significant determinants of private sector lending.

Structural influences—conclusions

The analysis of the structural influences suggests that environmental features such as the scale of the economy, the size of the banks, and the degree of bank concentration cannot explain the differences in bank performance between Canada and other industrialized countries. Consequently, the causes must be sought elsewhere. In the following section, we will consider the level of potential competition banks in Canada face from international banks.

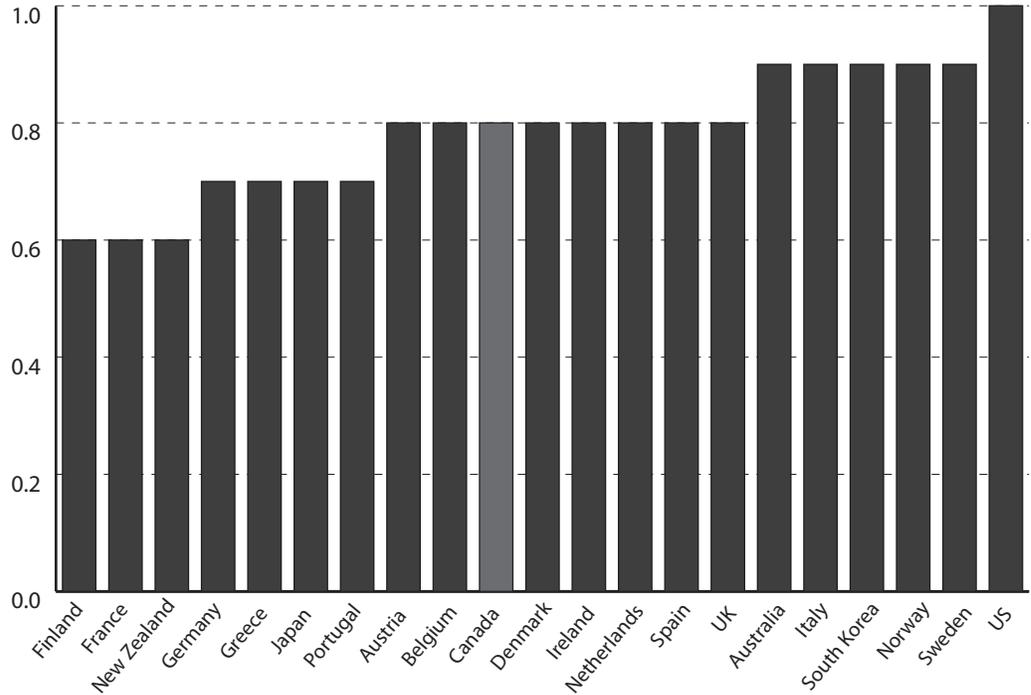
The influence of potential competition

Economists believe that potential competition may be as important an influence on performance as actual current market conditions.^[17] Potential competition is determined by the ease with which new competitors can enter a particular market. If entry barriers are high, then there will be little opportunity for new competitors to enter the market. Low entry barriers mean that prospect of new entry will put competitive pressure on businesses already in the industry.

A study by the Organisation for Economic Co-operation and Development (OECD, 2006), *Going for Growth*, presents measures of the obstacles facing both domestic and foreign entrants into banking markets based on analysis of the laws and regulations governing the industry in member countries. These measures show that Canada had average barriers to domestic entrants into banking (figure 3), and higher than average barriers to foreign entrants (figure 4).

17 Joseph Schumpeter (1942) was one of the first to suggest that the mere threat of competition (assuming no barriers to market entry and exit) would force existing firms to act competitive. This idea was later formalized by William Baumol (1982) and is referred to as a contestable market.

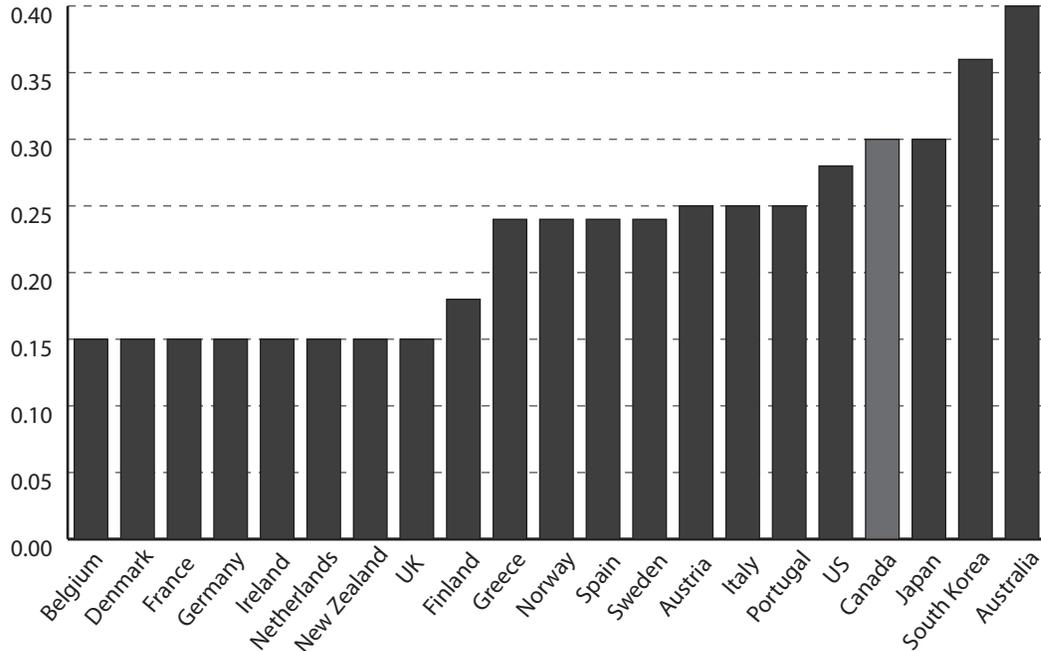
Figure 3: Level of banking regulation barriers faced by domestic entrants into the banking market, 2003*



*Note: The scale of the indicator is 0 to 1, from least to most restrictive. A higher value indicates more competition-restraining regulation.

Source: OECD (2006).

Figure 4: Level of banking regulation barriers faced by foreign entrants into the banking market, 2003*



*Note: The scale of the indicator is 0 to 1 from least to most restrictive. A higher value indicates more competition-restraining regulation.

Source: OECD (2006).

Table 16: Average foreign bank lending in domestic markets as a percentage of all bank loans (in local currency), 2000-2003*

Rank	Country	Percentage of foreign bank lending
1	Ireland	35.7
2	Greece	31.0
3	Finland	24.7
4	Netherlands	22.1
5	Italy	20.0
6	Belgium	19.0
7	Sweden	19.0
8	Portugal	15.4
9	Norway	14.0
10	United States	11.8
11	Austria	11.6
12	United Kingdom	11.6
13	Spain	11.1
14	France	10.6
15	Benmark	9.2
16	Germany	8.6
17	New Zealand	8.3
18	Canada	8.1
19	Australia	7.5
20	South Korea	3.3
21	Japan	2.0

*Note: This percentage is foreign banks' local lending in local currencies as a percentage of all commercial banks' local lending in non-bank sectors (i.e., household, non-bank corporations, and public sectors). Since the data on local claims in local currencies are not broken down by sector, they include lending to banks as well as to non-bank sectors. As a result, this measure over-estimates the underlying rate of foreign penetration in the non-bank domestic loan market.

Source: OECD (2006).

Of the two types of barriers, those on foreign entry may be the most detrimental to the performance of a banking system as they discourage entry from established institutions which are likely to provide more vigorous competition than domestic start-ups.

Data with respect to foreign bank activity in different countries suggest that barriers to foreign entry have affected the participation of foreign banks in Canada. These data (table 16) show that Canada ranks 18th out of 21 countries in terms of the share of local loans made in local currency by foreign banks.^[18]

18 The OECD notes that this measure includes loans to banks as well as to non-bank sectors and, as a result, overestimates the underlying foreign penetration of the non-bank loan market. The OECD also presents data on foreign bank cross-border claims on non-banks. This measure reflects openness to financial flows rather than ease of foreign bank entry.

By itself, a low level of foreign bank participation in Canadian loan markets would not be a concern if Canadian banks served these markets so effectively that foreign institutions had little incentive to enter. The evidence regarding bank performance presented in this study is mixed. Some evidence suggests that bank performance has not been as strong in Canada as in some other countries and raises the possibility that barriers to entry may have deterred participation by foreign banks in the Canadian market. All countries with larger foreign activity in their banking markets than Canada had lower barriers to foreign entry. A major factor influencing foreign bank activity in other industrialized countries appears to be the European Union's common banking market: all countries in the European Union have higher foreign bank participation in their domestic loan markets than Canada has in its domestic markets.

Bank performance—conclusions and recommendations

This study compared the performance of Canadian banks in their financing of entrepreneurs with the performance of banks in other industrialized countries. This approach represents a departure from previous studies in which Canadian banks have been favourably compared to banks in the United States. By comparing Canadian banking performance with that of other countries, this study sets a higher standard.

The evidence with respect to bank performance has been mixed. Bank performance in Canada has not been strong with respect to either the volume of private sector credit or the cost of that credit compared to other industrialized countries. Moreover, this performance does not appear to result from Canada's relatively small banking market, the small size of its banks relative to the world's biggest banks, the level of banking concentration, or the level of foreign control of the Canadian economy. These findings are generally similar to the views of Canadian business executives canvassed by the WEF who view the lending performance of their country's banks less favourably than executives in other industrialized countries. A more favourable view of Canadian bank performance can be gained from the Statistics Canada surveys of loan approvals and usage of credit lines.

The mixed evidence with respect to bank performance raises the following questions:

- To what degree do other types of lending supplement bank performance?
- Are there measures that can be taken to assure that bank lending meets the needs of entrepreneurial businesses?

Other sources of entrepreneurial finance

This study focused on the performance of only one possible source of lending to entrepreneurial businesses: commercial banks. But different sources of finance are substitutes for each other and the weak performance of one segment of the financial system can be compensated for by stronger performance of other segments of the market. We have seen that even though the United States ranked last among industrialized countries with respect to bank lending to the private sector, other parts of the financial system responded to opportunities resulting from restrictions on American banks. The lending of other financial institutions compensated to such a degree that American financial institutions together provide the highest level of private sector credit relative to the size of the economy among industrialized countries. In addition, the American bond market responded to the needs of companies that could no longer be served by their banks, creating a well developed high yield bond market in the United States that includes emerging businesses that use the market to raise funds, as well as the "fallen angels" that characterize other high-yield bond markets.^[19]

There have not been comparable developments in Canada. When other financial institutions in addition to banks were included in our measure of private sector lending, the effect

19 A "fallen angel" refers to a once popular investment that has decreased in value and lost investor interest.

was not dramatic as it was for the United States. Though private sector lending increased from 70% to 100% of GDP when other financial institutions were taken into account, Canada rose no higher than 16th place among the 22 industrialized countries by this measure (tables 6 and 7). In addition, the Canadian bond market has not developed to the same degree as the American market. While the bond market will be covered in a later study in this series, it is unlikely that our analysis will alter substantially the Milken Institute's study which ranked Canada's bond market 21st out of 22 industrialized countries.

Improving bank performance

The performance of the Canadian banking system in its financing of entrepreneurial businesses may be the result of any number of causes. This study suggests that the most obvious environmental factors are not the culprits. Still, we cannot rule out the possibility that the levels of lending and bank spreads are a reflection of the different financial needs of businesses in Canada. Without clear evidence pointing to the sources of Canada's performance, it would be wise to avoid prescriptive measures as they may do more harm than good. Instead, this study will recommend permissive measures that remove possible obstacles to the flow of bank credit to entrepreneurial businesses.

Openness to foreign competition appears to be a common feature of countries that exhibited a strong performance according to our banking measures. A study by Stijn Claessens and D. Klingebiel (2001) summarized recent research with respect to the impact of foreign entry on a country's banking markets. The authors claimed that foreign entry has positive effects on banking efficiency and concluded that "foreign bank entry can improve the function of national banking markets, through putting additional pressure on domestic firms to improve their productivity and services, and allowing firms access to foreign technologies and ideas to help them raise efficiency" (2001: 22).

Canada has relatively high barriers to foreign entry to and relatively low levels of foreign participation in the domestic loan market compared to other industrialized countries. Foreign participation in Canadian credit markets is restricted by the requirement that foreign banks establish either branches or subsidiaries in order to undertake any banking-type services in Canada. Some may argue that allowing these forms of entry is sufficient and that any further easing of restrictions on foreign banks is unnecessary.

Certainly, a well-defined regulatory regime is needed for foreign banks if they accept deposits from the public, as the activity in question could pose a threat to confidence in the Canadian banking system. But the limitation to these forms of entry has little justification when applied to normal lending activities, and serves to restrict the sources of credit available to Canadian businesses.

The Canadian government recently eliminated the approval requirement for non-bank foreign financial institutions providing financial services that would otherwise be unregulated. While this measure is a positive step, the supply of credit in Canada would be further enhanced if this measure were extended to foreign banks that conduct only lending activities in Canada. Given the importance of foreign entry to bank performance, all remaining obstacles to foreign bank participation in Canada that are not based on prudential concerns should be removed. This action raises the possibility for improving the borrowing conditions for Canadian entrepreneurial businesses.

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