

Regional Differences in Canadian SME Interest Rate Determination

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Introduction

In June of 2004, the Government of Canada was set to revise the merger guidelines for chartered banks in Canada. A general election was called and the proposed guidelines were put on hold. A few elections later, with a minority government currently in place, it is unlikely that such a politically sensitive issue will be addressed soon. If only for this reason, we should take full advantage of the opportunity to review the issue from a regional perspective.

The argument of whether Canada's chartered banks should be allowed to merge rests largely on whether or not one believes the global benefits of the mergers would outweigh the global costs. Proponents argue that it is important to permit mergers in order to allow domestic banks to operate at a more efficient scale, to compete better internationally and to save substantial amounts of money by closing and/or combining overlapping services (Mathewson and Quigley 1998;

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TABLE 1 Percentage of GDP of Selected Industries, 2003

	Atlantic	Ontario
Selected Primary ¹	3.5	1.2
Manufacturing	11.5	21.1
Banking ²	2.4	4
Retail Trade	6.3	5.1

Note: 1. Agriculture, Forestry, Fishing and Hunting
2. NAIC codes 5211 and 5221 (Deposit Accepting Institutions)

Source: Statistics Canada (Table 379-0025)

Clemens et al 1998; Milne and Neave 1998). Opponents counter that such measures would increase the market power of the banks in an already too concentrated market. They argue that many American studies have focused on the access to credit and lending conditions of small and medium sized enterprises (SMEs), showing a deterioration in lending conditions in markets where mergers have occurred since the 1990s (Haynes et al 1999; Berger et al 2001; Dunkelberg and Scott 2003; Prager and Hannan 1999).

There are also regional issues, as Canada's economic structure varies considerably from one region to another (Table 1). Our analysis focuses on Atlantic Canada and Ontario. Traditionally, Atlantic Canada has seen slower economic growth than Ontario (Desjardins 2005), relying relatively more on the primary and retail sectors and traditionally having a higher unemployment rate and lower per capita income.

A very important difference between Atlantic Canada and Ontario is the different degree of urbanization. In their 2002 publication, du Plessis et al (2002) present six definitions of rural. The percentage of Atlantic Canada's population characterized as rural varies – for 1996 data – from 46.2% to 74.3%, depending on the definition, while that of Ontario varies from 14.8% to 28.9%. These results are largely the result of the lack of major urban centres in Atlantic Canada. There are in Ontario six urban centres larger than Atlantic Canada's largest, Halifax. And Toronto is nearly 14 times bigger than Halifax (2006 Census data).

Several authors (e.g. Acs and Malecki 2003; Barkely 2003; Barry and Ellinger 1997; Brophy 1997; OECD 2006) have highlighted important differences between urban and rural firms when it comes to accessing capital. Any change in the financial environment can have very different consequences in urban and rural regions, and can be very different in Ontario than in Atlantic Canada.

We attempt to show in this paper whether or not differences exist in the way in which interest rates are determined in each region. It is important to know this because it could show how the effects of increased market concentration might affect each region differently. Data for the model is provided by the 2003 Canadian Federation of Independent Business (CFIB) Banking Survey, in which owners of independent small and medium-sized businesses were asked to provide information pertaining to credit conditions in their areas, providing various loan, relationship and market concentration variables. Mallet and Sen (2001) used the 1997 CFIB Banking Survey to test for local competition on interest rates on a national

level; this paper follows their approach to modeling interest rates but extends it to look at possible regional differences in Atlantic Canada and Ontario, focusing on relationship factors.

The next section provides a brief overview of the changes that have occurred in the market since the 1998 merger attempts. A review of competition policy in the next section is followed by an overview of the concept of relationship lending, the presentation of the data and methodology, the presentation of the results and the conclusion, including some policy considerations.

Since the 1998 Merger Attempts

While the 1998 proposed mergers of the BMO-Royal Bank and CIBC-TD were disallowed by then Finance Minister Paul Martin, it did not stop the banks' desire to increase their respective operations through mergers. In particular, in 1999 Toronto Dominion received clearance from the Finance Minister to purchase Canada Trust for \$8 billion. This merger was not surprising as Canada Trust was Canada's last independent trust company, the others having already been acquired by Canada's other major banks. The rest of the acquisitions by Canadian banks have been mostly at the international level (Table 2).

It is also important to note that the regulatory environment has changed, primarily through the passage of Bill C-8 in the House of Commons in 2001. The bill attempted to incorporate into law many of the recommendations put forward in the 1998 Task Force on Banking. Some of the primary changes were (Daniel 2002):

An individual is now allowed to own up to 20% of any class voting share, and 30% of non-voting share, of bank stocks. The purpose of this was to allow domestic banks to enter more easily into joint ventures and strategic alliances involving share exchanges.

Schedule I and Schedule II bank definitions were eliminated and replaced by a size classification:

- Large (equity over \$5 billion)
- Medium (equity between \$1 billion and \$5 billion) with 65% of shares allowed to be held individually, and 35% of voting shares held public
- Small (equity under 1 billion) with no ownership restrictions

Start up capital necessary to start a bank reduced to \$5 million from \$10 million.

New review framework for mergers of large banks: The Competition Bureau and Office of the Superintendent of Financial Institutions would review the bids and make recommendations to the Department of Finance. Furthermore, a full public review by a House of Commons Standing Committee on Finance and a Standing Senate Committee on Banking, Trade and Commerce would report to the Minister of Finance their findings on broad public interests.

The Financial Consumer Agency of Canada (FCAC) was established in 2001 to represent the interest of consumers – including small businesses – in their

TABLE 2 Chartered Bank Acquisitions 1999 - 2004

	BMO	CIBC	Royal Bank	National Bank	Scotia Bank	TD Bank
1999	--	--	--	First Manhattan (487 million US)	--	Can Trust (8 billion Can)
2000	Century Bank (520 million US)	--	- Prism Financial (115 million US) - Credit Card Unit of Bank One - Insurance Subsidiaries of Liberty Corporation	--	--	--
2001	--	Merrill Lynch Can. Retail Brokerage and Fund management	- Tucker Anthony Sutro (640 million US) - Centura Bank (2.3 billion US)	--	--	Stratford and Letco, securities tech. (280 million US)
2002	CSFBdirect (520 million US)	--	--	--	--	--
2003	--	--	--	--	--	--
2004	Merchantile Bancorp (164 million US)	--	Provident Financial Florida Branches (800 million US)	--	Hipotecaria Credito y Casa (Mexico) (200 million Can) Banco de Comercio (El Salvador) (180 million US)	BankNorth (3.8 billion US)

Source: Compiled by Authors from Newspaper Clippings

dealings with federally-regulated financial institutions.

It has allowed for credit unions (or *Caissees populaires* for francophones, financial institutions operating using cooperative principles, where clients are also owners) to operate under a new structure, in which local credit unions would continue to exist but there would be a national services entity. This was to allow credit unions to benefit from possible scale efficiencies otherwise unavailable.

Another regulatory change, in 1999, lessened foreign bank branch restrictions. Specifically, regulations pertaining to full service and lending branches were changed so as to allow them to operate in Canada under the same restrictions as domestic branches, with the exception that the former was not to take deposits of less than \$150,000 and the latter were not permitted to take any deposits from the public and are only allowed to borrow from other financial institutions.

While never made official, it was widely suspected that in 2001 the Bank of Nova Scotia and the Bank of Montreal were in advanced merger negotiations. The negotiations came to an end when it became clear that then Prime Minister Jean Chrétien would not agree to any proposed merger. In November of 2001, then Federal Finance Minister John Manley asked the House of Commons Standing Committee on Finance and the Standing Senate Committee on Banking, Trade and

Commerce to review the matter. Specifically, they were asked to provide clarification on what the public interest tests should be, as defined by Bill C-8. While the Senate Committee came out strongly in favour of mergers and the House of Commons Committee made numerous suggestions, the Finance Minister made it clear that further study would be necessary and the government would not accept *any* merger proposals until June 30, 2004, when the revised merger guidelines were to be released. These guidelines, however, have yet to be released.

Competition Policy

While decreased competition is typically viewed as having a negative effect on the economy, two important developments in economic theory suggest that overall welfare might be increased with fewer market participants, both of which depend on the existence of economies of scale and/or scope. We can describe economies of scale as occurring when average costs decline as the rate of output increases and economies of scope occurring when it is more efficient to produce two products together rather than separately (Ash 1983).

First, introduced by Baumol et al in 1982, contestability theory suggests that so long as there is a potential entrant, then the remaining firms will act as if the market were perfectly competitive. As economies of scale allow for the most efficient output to be produced with fewer firms and the market outcome is the same as that of the perfectly competitive one, it is therefore assumed that if the market is contestable then regulators should not worry about increased market concentration. Early empirical work by Nathan and Neave (1989) concluded that the Canadian financial market could be classified as contestable, but substantial changes to the market have occurred since and no studies have been undertaken to test for contestability.

Second, Farrell and Shapiro (1990) show that an increase in market concentration is not incompatible with an increase in overall welfare so long as sufficient synergies or economies of scale/scope are present. This was the case for McIntosh (2002), in which a general equilibrium model was used to simulate the proposed 1998 mergers. He found that output increased while price decreased for consumers. However, to arrive at his results the author had to make the restrictive assumption that banking in Canada is national and not local in nature. This assumption may have created a bias in his simulation results. Evidence of local competition affecting business loans in Canada was presented by Mallet and Sen (2001). For the US banking system, which does have a different market structure than Canada's, what usually defines a local market is not by states but by Metropolitan Statistical Areas (Simons and Stavins 1998). This was also the approach used by the Competition Bureau.

There have been numerous studies testing for economies of scale/scope in the banking industry and it should be noted that some earlier studies showed that economies of scale did exist in banking (Benston 1972; Clark 1984; Bensen et al 1982). These studies have since been criticized for their use of either a Cobb-Douglas or Trans-Log functional form for their cost equations in their estimations

(Humphrey 1990; McAllister and McManus 1993). More recently, the Fourier Flexible cost function was chosen by Mitchell and Onvural (1996), who used American data from the Call and Income Reports for 1986 and 1990 on banks having assets from between half a billion to a billion to test for scale and scope efficiencies. Little to no gains, in either scope or scale efficiencies, were found in either year studied. In another study, Humphrey and Vale (2003), also using the Fourier Flexible cost function, studied Norwegian banks for the period 1987 to 1998 and took into consideration the inferiority of the trans-log cost function. They found that no economies of scale existed amongst medium sized banks while some scale economies existed amongst large banks and large scale economies amongst small banks. However, no economies of scope were found present in any size bank. Using a different econometric technique and a Cobb Douglas cost equation, which might help avoid the problems of the American studies due to the reasonable homogeneity of the banks studied, McIntosh (2002) found the presence of economies of scale in Canadian banks when he studied time series data from 1976 to 1996.

Relationship Lending

The literature frequently makes reference to two types of information that lenders use when granting loans: *hard data* and *soft data* (Berger and Udell 2002; Nakamura 1994; Hendrickson and Rauch 2004; Elyasiani and Goldberg 2004). The former can be associated with the close scrutiny of the firm's financial statements and credit scoring models that use easily verifiable information about the borrower's credit history and personal characteristics. Recently, technological improvements have greatly improved the ability of banks and lending institutions to gather hard data on potential borrowers. Soft data, on the other hand, is based on information gathered over time through contact between loans officers, the borrower and the local community. While larger firms have access to credit markets and will, generally, have more public information available, the small business owner is likely to require private debt and have a paucity of information publicly available.

As relationship lending requires, by its nature, the delegation of authority to loans officers, an organizational problem occurs in large banks. There is an incentive on the part of the loans officer to occasionally over-extend credit, either due to a friendship with the firm's owner, the prospect of a job at the lending firm or because remuneration is often based on short-term revenues (Berger and Udell 2002; Udell 1989). This agency problem is more acute amongst larger firms because of the difficulty in monitoring employees and is occasionally overcome in the banking industry by stressing the use of hard data in their loan approval process (Williamson 1967). Numerous empirical studies in the United States have shown that small banks lend proportionately more to small enterprises than do large banks (Elyasiani and Goldberg 2004: 320) and we can assume that this is a result of the differences in the way loans are processed, with large banks relying more on hard data (Haynes et al 1999; Cole et al 1999).

Nakamura (1994) suggests that it is the presence of the small banks in the

local communities that allow them to deal more effectively with relationship banking than larger banks which often do not have a physical presence in smaller rural communities. That is to say, for example, that the small bank is able to cross-reference rumours of financial problems with their database and can step in to ensure the solvency of their loan, should it be in peril. The organizational structure, also, is such that it encourages the granting of more decision power to loans officers because of their expertise and the ease of monitoring their actions.

This begs the question: what is local? The geographic distance of the local lender is an important factor in relationship lending and studies have been mixed as to recent trends: has the distance been increasing or, to put it differently, have banks centralized their operations in more urban centres? Using the 1993 National Survey of Small Business Finance, Petersen and Rajan (2002) found that the distance had increased substantially but that it was mostly due to better use of technology in acquiring and using hard information. However, the theoretical model developed by Marquez and Hauswald (2000) predicts that as competition increases from firms who rely primarily on hard data in local markets, eating away at the profits of firms that rely on soft information, then the incumbent relationship banks will focus on their core market and compete with new entrants on the periphery of their domestic markets. Brevoort and Hannan (2004), using 1997 to 2001 data reported from the Community Reinvestment Act, find that distance is negatively associated with the likelihood of a local commercial loan being made and the negative impact of distance is inversely related with the size of the lending institution. This result, the authors note, is consistent with Marquez and Hauswald's model.

While most of the research undertaken so far has focused on the US banking system, recent Canadian research and empirical evidence are consistent with the American studies. Using a combination of linear programming and econometric techniques, Stanton (2002) studied the efficiency of the relationship lending approach from a unique data set from the CIBC. The data set covered the years 1990 to 1995 and was provided by the bank's relationship lending centres. It showed a substantial decline in this lending approach. Over this period, the total number of loans processed dropped from 21,838 to 12,156 and the dollar value dropped from 30.5 billion (1.4 million average) to 13.3 billion (1.1 million average) Canadian. The author used data envelope analysis to construct efficiency scores for loan managers, which could be used as dependent variables, followed by ordinary regression analysis to test various hypotheses.¹ Of interest here, the author found that estimated efficiency scores are higher when the manager dealt with a portfolio consisting of only a few large loans and is constant with the hypothesis that small loans required excessive monitoring times on the part of the managers. According to the author, this might explain the movement towards

1. "Data Envelope Analysis (DEA) is commonly used to evaluate the efficiency of a number of producers. A typical statistical approach uses a central tendency approach which evaluates producers relative to an average producer. In comparison, DEA uses an extreme point method and compares each producer with only the "best" producers." (<http://www.business-spreadsheets.com/solutions.asp?prod=189>)

credit scoring methods and a reliance on hard data when evaluating small business loans. If this is the case and relationship lending is still important, it would partially explain the findings of the 2003 CFIB survey which showed the steady increase in market share for Credit Unions/*Caisse populaires* (what could be considered through their widespread presence the US equivalent of small banks in Canada) of SME business between 1989 and 2003 (13.4% vs. 18%).

Relationship lending might also influence the rate of interest charged by a financial institution because there might be a premium that borrowers are willing to pay. Bergeron et al (2003) collected data from 306 companies across Canada and attempted to identify the determinants of loyalty to a financial institution. The competitiveness of the institution was one the ten factors that they identified, but there were far more relationship factors (rotation of loans officers, level of understanding of the firms business, quality of communication, trust and lending culture of the bank) and they were more robust in determining whether or not the borrower would remain with his/her financial institution.

Methodology and Data

This paper uses data from the 2003 Banking Survey conducted by the CFIB in which there were 9,565 responses nationwide, with 4,034 responses from Ontario and 1,110 from Atlantic Canada. Taking into account the fact that not all business owner respondents applied for bank financing, the valid responses for the question, in CFIB's survey, pertaining to interest rates totalled 833 for Ontario and 267 from Atlantic Canada.

The following empirical model is used (Table 3):

$$\begin{aligned} Inter_i = & b_0 + b_1 amount_i + b_2 GG_i + b_3 Nbus-B_i + b_4 Nbus-P_i \\ & + b_5 Col-D1_i + b_6 Col-D2_i + b_7 Comp_i + b_8 UrbRur_i \\ & + b_9 REL-D1_i + b_{10} REL-D2_i + b_{11} Nman_i + b_{12} Under_i \\ & + b_{13} Rev-D1_i + b_{14} Rev-D2_i + b_{15} Rev-D3_i + e_i \end{aligned}$$

where i refers to the i th individual and $i = 1, 2, 3, \dots, n$.

$Inter_i$ refers to the floating interest rate above prime on a small business loan. The floating interest rate was chosen over the fixed one because far more members had indicated that they had a floating interest rate (1175 vs. 211 of total responses). Atlantic Canada had an average interest rate higher than Ontario (prime plus 1.722 vs. Prime plus 1.406).

Broadly speaking, we expect that three major types of variables will determine the interest rate charged: financial variables, relationship variables and market concentration variables. We will use the variables that the CFIB included in the questionnaire as a proxy.

Intuitively, as the size of the loan increases we expect interest rates to de-

TABLE 3 Summary Statistics¹

Name	Atlantic (obs 210)			Ontario (obs 501)		
	Mean	Min	Max	Mean	Min	Max
<i>Inter</i>	1.7225	0.01	8.5	1.4058	0.01	8.9
<i>Amount</i> ²	278.337	0.01	50000	423.723	0.01	80000
<i>GG</i>	0.0619	0	1	0.0339	0	1
<i>Nbus_B</i>	3.9857	1	8	3.7086	0	7
<i>Nbus_P</i>	3.3095	0	7	2.6228	0	7
<i>Col_D1</i>	0.2238	0	1	0.2854	0	1
<i>Col_D2</i>	0.2524	0	1	0.2216	0	1
<i>Comp</i>	3.0143	1	4	2.986	1	4
<i>UrbRur</i>	.2571	0	1	.5768	0	1
<i>Rev_D1</i>	.2190	0	1	.2096	0	1
<i>Rev_D2</i>	.4286	0	1	.4012	0	1
<i>Rev_D3</i>	.2190	0	1	.2096	0	1
<i>Rel_D1</i>	0.3524	0	1	0.3533	0	1
<i>Rel_D2</i>	0.3381	0	1	0.3074	0	1
<i>NumMan</i>	1.881	1	4	1.8962	1	4
<i>Under</i>	2.8857	1	4	2.6886	1	4

Note: 1. For a more detailed explanation of variables, please see Appendix 1.
2. Scaled by one thousand

crease, all else being equal. There was a significant difference in the average size of the loan between Atlantic Canada and Ontario (\$278,000 vs. \$423,000) and this might explain some of the gap in average interest rates between the two regions. GG_i is a dummy variable which indicates whether or not the loan was guaranteed by a government program; this variable could act as insurance for the lender but could also indicate that the loan is relatively more risky and therefore this variable could be positively or negatively related to interest rates. Relatively few applicants participated in these programs - 13 in Atlantic Canada and 17 in Ontario.

Col_D1_i and Col_D2_i are dichotomous variables that indicate whether a loan is secured by between 50 – 150% of the loans value or over 150% of its value; it is interpreted against whether it is secured by less than 50% of the loan granted. Normally we would expect that one would see a lower interest rate if a loan is secured by at least the value lent but loans that require more than 150% collateral might be viewed as extremely risky and therefore be positively related with the dependent variable. The more accounts that a borrower has at his/her lending institution should lead to lower interest rates as the institution can easily verify the financial status of their client, lessening the asymmetric informational imbalance; therefore, we expect $Nbus_B_i$ and $Nbus_P_i$; variables that indicate how many personal and business accounts the owner and his/her business have at the lending institution, to be negatively related to interest rates.

Also, Rev_D1_i , Rev_D2_i and Rev_D3_i represent whether revenues did not

change significantly (-5% to 5%), grew moderately (6% to 20%) or grew significantly (+20%) and can be interpreted against whether revenues declined (-5%). Intuitively, we expect higher revenue growth rates to be negatively correlated with interest rates, all else equal.

Rel_D1_i and Rel_D2_i are dichotomous variables that indicate how long the applicant had banked at the institution where he/she was applying for credit; the first representing 10 – 19 years and the second representing 20 or more years and can be interpreted against less than 10 years. With time, the strength of the relationship should increase. We thus expect a negative relationship between this variable and interest rates.

The $Nman_i$ variable indicates how many managers the applicant dealt with in applying for the loan and we expect it to be positively related to interest rates as there might be information lost as managers change. Applicants were asked to indicate, on a scale of 1 to 4 with 1 being very dissatisfied and 4 being very satisfied, how well they felt that the lending institution understood their business; it is represented by the variable $Under_i$. Using $Under_i$ to proxy for soft information the lender might have about the applicant, we suspect this variable to be negatively related to interest rates.

We have two variables that proxy for market power: $UrbRur_i$ and $Comp_i$. $UrbRur_i$ is defined to be 1 if the applicant was from a census metropolitan area, 0 otherwise. As expected, a higher percentage of respondents in Ontario came from CMA regions than in Atlantic Canada, (58% vs. 26%). $Comp_i$ is a proxy for local competition, and it indicates whether there are one, two, three or four or more full service bank branches within a convenient commuting distance. We expect both variables to be negatively associated with interest rates.

Results

The results of the regression can be seen in Table 4. Column's A, B and C represent: the baseline competition variables, the financial variables added and finally the relationship variables are included.

The competition variable is of the expected sign and statistically significant in the Ontario regression. It is paradoxically insignificant and of the opposite sign in Atlantic Canada. In Ontario, the result can be interpreted as meaning that the presence of an additional branch is associated with a reduced interest rate of 8.5 basis points. This indicates that local competition still plays a part in the determination of interest rates and that technological improvement, such as internet banking, has not rendered local competition in this market as obsolete. Does this mean that competition is not as important in Atlantic Canada? This is a possibility, but it is also possible that borrowers in Atlantic Canada value relationship services more, making the relation between interest rate and local competition less significant.

When looking at regression B we notice that more of the loan specific variables are significant in the Ontario regression than the Atlantic one. Amount was significant and of the expected sign in both regressions. We also find that Col_D1_i

TABLE 4 OLS Output^{1,2,3}

	Atlantic			Ontario		
	A	B	C	A	B	C
UrbRur	-0.066 (-.319)	-0.085 (-.409)	-0.154 (-.746)	0.062 (.669)	-0.005 (-.051)	-0.035 (-.383)
Comp	0.009 (.090)	0.075 (.759)	0.112 (1.141)	-0.09 (-1.898)*	-0.076 (-1.654)*	-0.085 (-1.854)*
Amount	--	-3E-7 (-2.155)**	-2E-7 (-1.461)	--	-2E-7 (-4.496)***	-2E-7 (-4.282)***
GG	--	0.088 (.227)	0.1 (.268)	--	0.744 (3.033)***	0.69 (2.826)***
Col_D1	--	0.677 (2.951)***	0.461 (1.997)**	--	-0.047 (-.447)	-0.047 (-.451)
Col_D2	--	-0.137 (-.618)	-0.229 (-1.053)	--	-0.042 (-.374)	-0.069 (-.608)
Nbus_B	--	-0.085 (-1.173)	-0.048 (-.669)	--	-0.106 (-3.124)***	-0.096 (-2.823)***
Nbus_P	--	0.016 (.366)	0.03 (.720)	--	-0.016 (-.787)	-0.008 (-.387)
Rev_D1	--	-0.273 (-.835)	-0.315 (-1.986)	--	-0.274 (-1.931)*	-0.257 (-1.809)*
Rev_D2	--	-0.254 (-.886)	-0.365 (-1.296)	--	-0.087 (-.687)	-0.091 (-.722)
Rev_D3	--	-0.076 (-.237)	-0.238 (-.753)	--	-0.057 (-.402)	-0.123 (-.859)
Rel_D1	--	--	-0.399 (-1.754)*	--	--	-0.193 (-1.812)*
Rel_D2	--	--	-0.417 (-1.818)**	--	--	-0.385 (-3.411)***
NumMan	--	--	-0.002 (-.021)	--	--	-0.014 (-.271)
Under	--	--	-0.317 (-3.184)***	--	--	-0.04 (-.817)
R ²	0	0.089	0.158	0.008	0.103	0.126

Note: 1. The dependent variable is floating interest rate above prime and the error terms are tested for heteroskedasticity by way of the LM test, at the .025 significance level.
 2. * indicates 10 % statistical significance; ** indicates 5 % statistical significance; *** refers to 1 % statistical significance.
 3. Heading A: baseline competition variables; headline B: financial variables are added to A; Heading C: relationship variables are added to B.

is significant but not of the expected sign in Atlantic Canada but insignificant and of the expected sign in Ontario. This possibly indicates that collateral is positively associated with risk in Atlantic Canada. $Nbus_{B_i}$ and Rev_{DI_i} were significant in determining interest rates in Ontario and were of the expected signs. This suggests

that the more business accounts a client has with his/her manager the lower the expected interest rate will be and higher revenue growth is a good indication of loan repayment. Government backed loans, GG_i , was of the expected sign in both regressions but was insignificant in the Atlantic regression, suggesting that loans that require government backing might be considered very risky.

Lastly, when all of the relationship specific variables are included we notice that the variables indicating how long the client banked at his/her institution were both significant and of the expected signs in both regressions. However, the magnitude of the correlation coefficients is higher in the Atlantic regression. The variable representing the level of understanding the borrower felt that the lender had about his/her business was very significant and of the expected sign in the Atlantic regression, whereas it was of the expected sign but insignificant in the Ontario regression.

What is important to note is that in Atlantic Canada the most significant variable in determining the interest rate was that of how well it was felt the lender understood the borrower's business whereas it was statistically insignificant in Ontario. This might indicate an increased reliance on relationship banking in the more rural Atlantic area. Normally we would expect that our competition variables would be more significant, due to an increased reliance on relationship banking in Atlantic Canada; but their insignificance might, paradoxically, be the result of the reliance on relationship banking, making the client very loyal to their local creditor.

Conclusion and Policy Implications

We have set out to explore whether or not there were substantial differences in the way in which interest rates are determined between two very different regions in Canada. The results have important implications concerning further concentration in the banking industry as it may affect each region differently, considering that Atlantic Canada is more rural than Ontario. One should note – from a policy perspective – that our results should not only be considered from a provincial or regional perspective but also from an urban-rural perspective.

We were able to show that interest rates are more dependent on relationship variables in Atlantic Canada than Ontario. By far the most significant variable in determining interest rates in Atlantic Canada was the variable indicating how well the entrepreneur felt his/her business was understood by his/her lending institution, $Under_i$. This variable was used to proxy the amount of soft knowledge that the institution might have had and its significance means that any technological gains, which are useful in gathering hard information, are less relevant in terms of decreasing the reliance of the rural SME on the presence of their local branches. This has importance from a policy perspective: technology is far from being a perfect substitute for the presence of financial institutions in more rural communities. That said, we would have expected that this would have increased the significance of local competition but, as noted, the fact that they were not significant might be the result of an increased importance Atlantic entrepreneurs place in their institutions' understanding of their business, rather than just the interest charged.

According to our results, the loss of one branch in Ontario can be associated with an increase in the interest rate of 8.5 basis points. Conversely, $Under_i$ is insignificant in our Ontario regression. As a preponderance of loan specific variables were significant, this might indicate that the interest rate in Ontario for SME loans is based more on hard information than in Atlantic Canada. For policy makers, it is important to understand that any significant changes to the regulatory environment of financial institutions should be analyzed thoroughly, recognizing that the impact can be significant on the SME community and may also be geographically heterogeneous.

In both cases we can suspect that increased concentration would be harmful to the SME community. While we can predict how much higher interest rates would be in Ontario, should local banks close, it is impossible from our results to predict the precise magnitude in Atlantic Canada. However, given the evidence supporting the high reliance on relationship banking in Atlantic Canada we can suspect that the loss of personnel with specific knowledge of their clients' business in the communities will have a significantly negative effect on interest rates charged. Furthermore, if through consolidation of operations direct contacts between clients and bank employees are reduced, this could have negative impact on the region's SME community.

While one of the principle arguments put forward by proponents of bank mergers is that technology improvements have changed the relative market in banking, these improvements are important in how they collect hard data, not soft data. We have shown, however, that in the Atlantic Provinces soft data remains important in the determination of interest rates and that in Ontario interest rates still appear to be determined locally.

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Appendix 1: Information on Variables

$Inter_i$	The floating interest rate above prime.
Col_D1_i , Col_D2_i	The dollar amount of collateral was entered in by respondents. Here we compared the dollar value of the loan with the collateral. The D1 variable is a one if the collateral was between 50 and 150% of the total loan, 0 else, and D2 is 1, 0 else, if the loan is 150% or more.
GG_i	Respondents were asked whether or not the financing was guaranteed by a government program. They were given 3 choices : 1 = Yes, 2 = No and 3 = Don't Know. Non of the responses used in this paper indicated the third response.
$Nbus_B_i$	Members were asked to list which services of the following their business had at their lending institution : Account Services, Cash and coin, Loan, Line of credit, Commercial mortgage, Firm's RRSP/pension plan, Firm's payroll processing, Corporate credit card and other.
$Nbus_P_i$	Members were asked to list which services of the following they personally had at their lending institution : None, I use another institution for my personal banking (we were unable to take this response out due to aggregation), Own personal account and deposit service, Family's personal account (s), Personal RRSP and Investments, Personal credit card, Residential mortgage, Personal loan, auto loan, line of credit, on-line banking, other. This variable just lists how many responses were given.
Rev_D1_i , Rev_D2_i and Rev_D3_i	Members were asked to indicate, on average, how their gross sales revenues changed compared to 3 ye3ars ago: 1 = Declined (at least -5%), 2 = No significant change (-5% to +5%), 3 = Grew moderately (6% to 20%) and 4 = Grew Significantly (more than 20%). Here D1 is answer 2, 2 answer 3 and 3 answer 4.
Rel_D1_i , Rel_D2_i	Members were asked how long they had banked at their lending institution: 1 = Under one year, 2 = One to two years, 3 = Three to 9 years, 4 = 10 – 19 years and 5 = 20 years or more. Here D1 is one for answer 4, 0 else, and D2 is one for answer 5, 0 else. No responses used in this study indicated either 1 or 2.
$Nman_i$	Members were asked how many account managers they had : 1 = one, 2 = two, 3 = three and 4 = four or more.
$Under_i$	Members were asked how satisfied they were, as a business owner, with their financial institution's understanding of their business : 1 = Very Dissatisfied, 2 = Somewhat Dissatisfied, 3 = Somewhat Satisfied, 4 = Very Satisfied and 5 = Not Applicable. No applicants in the survey used here indicated number 5.
$UrbRur_i$	The home town of the business was listed. This variable was a 1 if the member came from a CMA, 0 if not.
$Comp_i$	Members were asked how many full service bank branches, excluding their own, were within a convenient commuting distance from their business: 1 = No Others, 2 = Only 1 Other, 3 = 2 or 3 Others and 4 = 4 or More Others.