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SUMMARY OF THE ANALYSIS OF THE POTENTIAL EFFECTS OF COMMERCIAL INSOLVENCY LEGISLATION ON THE TERMS AND CONDITIONS OF EXTERNAL FINANCING FOR SMEs

STUDY CONDUCTED FOR THE

OFFICE OF THE SUPERINTENDENT OF BANKRUPTCY

By
Jocelyne Gosselin
Benoit Mario Papillon
Sébastien Deschênes

October 2007

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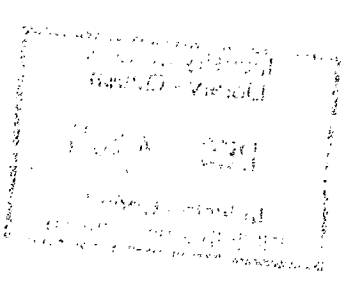

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1. INTRODUCTION

1.1 Purpose and scope of the research

This research project explores the possible links between the provisions of commercial insolvency legislation in Canada and access to bank and trade credit. It will provide for developing a certain number of research assumptions regarding the impact on SME access to capital of the current provisions of the commercial insolvency legislation and of their amendments as envisaged in Bill C-55.[1] The project is also intended to provide a preliminary assessment of these assumptions and of the model proposed by some practitioners in the area of bank and trade credit.

Insolvency legislation may pursue a variety of objectives, such as seeking a balance between the parties involved, and more specifically, arbitrating among their interests.[2] Public choice theory reminds us that these parties may organize and become parties to the legislative reform process. This research project falls outside, or ahead of, considerations on this process. A recurring theme in public debates about the legislative reform process deals with the effects of certain provisions of the legislation, or amendments to them, on SMEs' access to capital; this project provides a compilation of some of the opinions and observations on the issue.

For purposes of this research, the term "SME" will be used to designate a business that does not have public access to savings, i.e., a business whose debt or equity units are not traded on organized financial markets. In other words, the expression "SME" covers businesses for whom the cost of issuing negotiable instruments on a secondary market would be prohibitive, or at the very least, higher than the cost of financing through financial intermediaries. The expression "access to capital" therefore becomes synonymous with "access to credit". While financial institutions constitute a specific category of businesses, the term "business" is used here to designate businesses producing non-financial goods or services. In addition, the qualifier "bank" is used generically, and refers equally to banks, in the legal sense of the word, and credit unions, which also play a role as financial intermediaries. The expressions "bank credit" and "trade credit" were chosen for their clarity, although they are sometimes replaced by the expressions "commercial credit" and "interfirm credit" respectively in certain reference texts.

1. At the time this research was undertaken in the summer of 2006, Bill C-55 was under review. It has since been integrated into the Statutes of Canada, Chapter 47, and is awaiting enactment. We refer to "C-47" in this report.
2. A participant at a conference held in 2003 (in *The Initiative for Policy Dialogue Bankruptcy Task Force Meeting, Columbia University*) refers to the balance between ex-post protection of the debtor and the ex-ante cost of credit: "There are key trade-offs between ex-post debtor protection and ex-ante cost of credit. If the system gives a lot of protection to the debtor ex-post, then the debtor can be worse off ex-ante because the cost of credit will be very high. Striking the right balance between the two is a topic of hot debate at the moment."

The scope of the research is modest for a number of reasons. Firstly, the analysis is in large measure positive; it is aimed at understanding access to credit in order to predict the direction of the changes that C-47 is likely to provoke. It is not normative, in the sense of comprehending for purposes of determining whether the changes proposed by C-47 are desirable. A normative analysis would necessitate selecting a criterion and evaluating the current situation based on that criterion.[3] If, for example, the criterion were efficiency in allocating commercial credit, the first step would be to evaluate the current situation in terms of efficiency and then determine whether the changes would correct inefficiencies in the present situation, or render it inefficient if it is not so already.[4]

Secondly, the study does not consider the other legislative variables, nor economic policies targeting SME access to credit; for example, the various loan and loan guarantee programs offered by provincial and federal governments. This research does not analyze the interaction between C-47 and those variables, nor does it attempt to assess overall consistency.

A third limitation to the scope of the research involves the methodology used. Asymmetry of information is a fundamental given in economic activity in today's society. Generally speaking, the parties to a transaction are not equally informed as to each other's determinants of profits and costs for that transaction; this is particularly true with lenders and borrowers. Over the last few decades, the legal and economic sciences have developed a body of knowledge enabling us to better understand and evaluate how different parties deal with asymmetry of information in their operations. "Contract theory" is a term that will sometimes be used to designate this body of knowledge.[5] Modeling the effects of C-47 using the standards of contract theory research would be beyond the scope and capabilities of this study.[6] Various teachings from this theory will nevertheless be used to develop a descriptive model aimed at developing an inventory of the possible effects of C-47 on SMEs' access to credit.

3. In its 2003 report entitled *Debtors and creditors sharing the burden* (a review of the Bankruptcy and Insolvency Act and the Companies' Creditors Arrangement Act), the Senate Standing Committee on Banking, Trade and Commerce identifies a number of criteria that should be satisfied by the Canadian insolvency system.
4. For purposes of illustration, we have assumed that the situation could be either efficient or inefficient. As explained in the literature on "second best", the situation may actually be somewhere in between.
5. This field of knowledge largely includes what is also designated by the transaction cost theory, the business theory and the agency theory. Using reasonable assumptions about the behaviour of agents, the nature of competion between financial institutions, the characteristics of borrowers and the specific situation of information asymmetry in question, and given the laws defining certain contractual rules and obligations in advance, a research project on contract theory might, for example, attempt to deduce the other contractual clauses used by the parties to conduct business among themselves. Taking the same type of exercise again, but this time ignoring *Law I*, the research attempts to use the same procedure to deduce the new contractual clauses selected by the parties. Comparing the roles played and the costs borne by the parties, based on each scenario, the research will evaluate the appropriateness of *Law I*. Accessibility of credit could constitute one criterion for evaluation.
6. The article by E. Berkovitch and I. Ronen (1999) is a good example of modeling using these standards for subjects similar to those being discussed here ("Optimal Bankruptcy Laws Across Different Economic Systems," *The Review of Financial Studies*, 12 (2), 347-377).

1.2 Objective of the report

This report constitutes the last of the three deliverables listed in research contract (BSF06-004). It is aimed first of all at identifying the various elements that can be used to predict the effects of C-47 on SMEs' access to credit, and secondly, at using this descriptive model to identify all possible effects. Of all the possible relationships between C-47 and SMEs' access to credit, some may be more likely than others based on the assumptions made about the behaviour and practices of the parties involved. These assumptions were discussed during interviews with practitioners working in the fields of bank and trade credit.

1.3 Amendments to the law relating to the research subject

C-47 anticipates amendments to the Canadian laws governing insolvency, i.e., *The Bankruptcy and Insolvency Act (BIA)* and the *Companies' Creditors Arrangement Act*, as well as the creation of a Wage Earner Protection Program (WEPP). Not all of the amendments proposed in C-47 are looked at in this research; only those likely to have some direct impact on SMEs' access to credit.

The first involves the super-priority accorded to claims for unpaid wages[7] for services rendered in the six months preceding a bankruptcy or receivership. In order to compensate wage earners quickly and not weigh down the administration of insolvency files, a WEPP will be put in place.[8] The *BIA* will also be amended to accord priority over all other claims or securities, to a maximum of $2,000.[9] Each affected employee may therefore recover unpaid wages from the WEPP, to a maximum corresponding to the higher of the following:

- Four times the maximum weekly insurable earnings under the *Employment Insurance Act*,
- $3,000.

The federal government is subsequently subrogated to the rights of the employee against the bankrupt or insolvent employer and it holds a priority claim on the current assets to a maximum of $2,000 per employee. This change will lower the priority ranking of the other creditors. For those who would otherwise have received a bankruptcy dividend, this will lead to increased losses on their claims. This increase in losses will

7. This is a generic expression to cover any compensation for services rendered. In particular, unpaid wages include vacation pay and sales commissions, but exclude severance pay.
8. In a news release issued November 17, 2005, the Canadian Bar Association supported the creation of the WEPP, as had the Landry Committee (1981) and the Coulter Committee (1986). Source: *The CBA lauds Wage Earner Protection Program in C-55* [On-line document consulted October 17, 2007: http://www.cba.org/CBA/News/2005_Releases/2005-11-17_bankruptcy.aspx],
9. *Questions and Answers on the amendments to the Bankruptcy and Insolvency Act and the Companies' Creditors Arrangements Act*, Corporate and Insolvency Law Policy. [On-line document consulted October 17, 2007: http://strategis.ic.gc.ca/epic/site/cilp-pdci.nsf/en/cl00782e.html].

depend on the number of employees who hold claims for unpaid wages, and the value of those claims.

The second change deals with employees' pension plans. In the case of employer bankruptcy, receivership or proposal proceedings under the *BIA,* employee contributions received but not submitted, as well as the contributions required of the employer that are due but not paid, and not the amount required to meet the actuarial deficit, will have priority over all assets.

> "This secured claim ranks above every other claim, right, charge or security against the debtor's current assets, regardless of when that other claim, right, charge or security arose, but does not rank ahead of: (i) the 30-day goods rights of suppliers; (ii) the special priority rights afforded to farmers/fishermen/acquaculturists; (iii) source deductions deemed trust amounts; and (iv) the wage claim security referred to above."[10]

The effects of this change on expected dividends for other categories of creditor are similar to those of the super-priority for unpaid wages, with the notable difference that all the assets, both current and long-term, are included in this change of priority.

The third change proposed in C-47 concerns clarification of the right of unpaid suppliers in case of the bankruptcy or receivership of a debtor. One of the objectives of this change is to facilitate application of section 81.1 of the *BIA* with regard to the right of suppliers to repossess goods delivered in the 30 days preceding an application for repossession. This change is likely to reduce losses for suppliers of goods, but increase those of other creditors, who may be grouped into two categories: those who hold a security on the category of assets in which the goods returned to the suppliers would have fallen; and if these goods had been free of any charge, the creditors based on the order of distribution set out in the *BIA.*

The preceding assertion with regard to the losses of some creditors and the gains of others constitutes a scenario that takes for granted that the conditions for accessing credit and decisions affecting the level of employment in businesses in financial difficulty remain unchanged. It is more reasonable to assume that the C-47 amendment to the rules for distributing the assets of businesses in receivership or bankruptcy will impact on the terms of access to credit and decisions affecting employment levels. There has been some conjecture as to that impact. For example, the Insolvency Institute of Canada maintains that "There could be a significant negative impact on Canadian productivity and employment since businesses, particularly small and medium sized, will have a tougher time getting financing and their costs will rise dramatically."[11],[12] This quote highlights

10. Osler, *Insolvency Law Reform: A Certain But Unknown Future,* January 18, 2006. [On-line document consulted October 14, 2007: http://www.osler.com/resources.aspx?id=10685].
11. News release issued November 17, 2005. This viewpoint reflects that expressed several years ago by the Canadian Bankers Association with regard to amendments similar to those of the second change mentioned: "it would limit the ability of Canadian businesses (particularly small businesses) to obtain credit based on a security interest over their inventory. In other words, because at any time, a portion, perhaps a significant one, of a company's inventory would now be subject to being reclaimed by the

two of the variables in a credit transaction: the cost of financing and the amount accorded by the lender or supplier. There are other factors at play as well in a credit transaction.

Part 2 of this report identifies seven variables that characterize a credit transaction. This characterization is the first component of the proposed model, a model of transaction costs in a context of information asymmetry, aimed at identifying the possible effects of C-47. The second component is a cost curve for bank financing providing for a graphic representation of the accessibility of bank credit. Part 2 then deals with the distinctive features of trade credit, and expands on the concept of credit accessibility to include what happens when businesses are in financial difficulty.[13] Part 3 makes the connection between the variables involved in a credit transaction and on the one hand, certain characteristics of SMEs, and on the other, the cost/revenue structure for financial institutions and suppliers that provide credit. Part 4 presents applications of the model for identifying the possible effects of C-47 on SMEs' access to credit at different levels of analysis.

unpaid suppliers, the company would not be able to borrow from the bank on the security of that inventory," [J. Carhart (1995), *The Business Owner's Guide to Bankruptcy Insolvency Law in* Canada. John Wiley & Sons, Etobicoke: 1995, p. 90.]

12. Law literature has also been interested for quite some time in the merits of legal provisions ensuring priority to creditors holding security. The following few texts from a special edition of the *Virginia Law Review* (1994, vol. 80), present a synthesis of that literature, including opposing viewpoints: LoPucki, L.M., "The Unsecured Creditor's Bargain", Schwartz, A., "Taking the Analysis of Security Seriously" and Baird, D., "Security Interests Reconsidered".
13. While the approach adopted here is not normative, and no analysis criteria are introduced to determine the merits of C-47, application of the model is based among other things on the assumption that the parties involved in credit transactions are concerned with minimizing costs, i.e., they care about efficiency. Given the general level of competition characterizing the type of economic system in effect in Canada, this assumption appears reasonable for purposes of identifying possible effects.

2. CREDIT TRANSACTION AND INFORMATION ASYMMETRY

The issue of business access to credit, including a possible rationing for certain categories of business, like SMEs, has long been of interest in policy analysis and the literature on business financing. It is a question that has come up regularly, over the last thirty years, in debates about various proposals to reform or amend commercial insolvency legislation.

2.1 The variables characterizing the transaction

A company's access to credit, which may be defined as its capacity to find sources of funding in order to finance projects or operating activities, comprises numerous elements. This access will be determined by the terms and conditions that the creditor and debtor agree to include in the contract that binds them. In order to clearly understand the terms of a company's access to credit, it is useful to first identify all of the variables, one-dimensional and multidimensional, that characterize a credit transaction. Table 1 presents these variables, as well as the direction of their relationship with access to credit. For each variable, a plus sign means that an increase in its value is associated with greater access, while a minus sign signifies that an increase in its value is associated with more restricted business access to credit.

The first variable, called D1, involves the amount of the loan. An increase in a company's capacity to obtain a higher loan amount for the financing of a given project is indicative of freer access to credit, and the reverse would be indicative of more restricted access to credit.

The interest rate on a loan constitutes the second variable (D2) and is negatively associated with access to credit. Therefore, when a company must assume a higher rate of financing for a given project, its access to credit is more limited. This is a price restriction.

A third variable (D3) involves the term of loans. From the borrower's point of view, and all other things being equal, a loan payable upon demand creates more uncertainty than a short-term loan, and the latter creates more uncertainty than a long-term loan. This variable is therefore positively associated with access to credit.

A fourth variable (D4), which is multidimensional, encompasses various requirements and constraints to which the borrower is subjected. This variable is broken down into at least four types of clause. First, a business wishing to obtain a loan must often provide security to the lender, in the form of the owner's personal assets (D4.1), the company's current assets (D4.2) or its long-term assets (D4.3). Finally, loans to businesses are often subjected to contractual clauses (D4.4) that restrict financial management or include requirements such as regular reporting to lenders on certain financial variables or taking out an insurance policy, either on the life of the owner, or to

protect from fire the assets provided as security. This fourth variable is negatively linked to access to credit.

The fifth variable (D5) for a credit transaction deals with the lender's attitude towards a borrower that is experiencing financial difficulties. The expression "lender flexibility" refers specifically here to its patience with respect to late payments (D5.1) and its willingness to inject new funds (D5.2). Lender flexibility is positively linked to access to credit.

The sixth variable (D6), is also multidimensional, and refers to explicit costs other than the interest rate with which a credit transaction is associated, such as the fees for evaluating the file and loan-renewal fees. From the perspective of access to credit, this variable compares with price variable D2, and as is the case for D2, higher values are synonymous here with more restricted access to credit.

The costs covered by D6 include those explicitly mentioned in the terms of the transaction, while variable (D7) covers all other costs of the transaction, i.e., all other costs involved with concluding a transaction between a lender and a borrower. Examination or certification costs by an accountant, assumed by a business in order to guarantee its bank loan application, are an example of these transaction costs. D4 might include security registration fees, and with regard to D3, it should be pointed out that a shorter term will lead to additional transaction costs for the lender and the borrower, for example, the time required for renegotiation. Simultaneously, a shorter term may reduce transaction costs for the lender in terms of follow-up on the loan. This raises the question of sharing the transaction costs and gains between the parties involved.[14]

Credit may be seen as a rental service for an amount of savings. Like any good or service traded, the terms of the exchange determine the sharing of the net gain from the exchange between the parties involved in the transaction, where net gain is defined as the total gain less transaction costs. Similarly, the specific values of the price variables in Table 1 (D2 and D6) for a given credit transaction determine the sharing of the net gain from the exchange between the lender and the borrower in the transaction, given the value of D7 and its distribution between these same parties. From that perspective, the signs indicated in the right-hand column to indicate the direction of the relationship between variables D2 and D6 and access to credit could just as well indicate the effect of the variables on the borrower's share of the total gain from the exchange generated by a credit transaction.

Fairness was one of the criteria that emerged from the Parliamentary debates and government reports preceding adoption of C-47.[15] The factors discussed in the preceding paragraph could serve as a basis for analyzing the impact of C-47 on the relationship

14. For a brief discussion of the constraints of such sharing, see Milgrom P. and Roberts, J. (1997). *Économie, organisation et management.* Grenoble, Presses Universitaires de Grenoble. Chapter 2.
15. Senate Standing Committee on Banking, Trade and Commerce (2003). *Debtors and creditors sharing the burden (a review of the Bankruptcy and Insolvency Act and the Companies' Creditors Arrangement Act).*

between lenders and borrowers from the perspective of that criterion. But that is not the objective of the variables identified in Table 1. This exercise is aimed first at identifying the possible effects of C-47 on accessibility of credit, and more specifically, at determining whether C-47 could end up reducing that accessibility.

The decision to accord credit is taken in a context of uncertainty, as is the case with transactions whose costs and benefits emerge over time. This uncertainty flows in part from the uncertainty surrounding the potential value of the activities that the credit enables the debtor to conduct, and in part from the uncertainty associated with the relationship between the debtor and the lender. Because the lender does not always have firsthand information regarding the debtor's use of the borrowed funds, the first source of uncertainty is, from the lender's point of view, an element of the second. In other words, while specific activities and assets are being financed, the financing itself is provided to a business, and more specifically, its management.

Situations of information asymmetry can give rise to two types of problem that can compromise the success of otherwise beneficial transactions. There is the problem of *moral hazard*, when one of the parties to the transaction "cannot observe the behaviour of the other" and the problem of *adverse selection,* when one of the parties "cannot observe the "type" or quality" of the thing offered in exchange by the other party." In the first case, the literature refers to a problem of "hidden behaviour" and in the second, to a problem of "hidden type".[16] The two parties to a credit transaction will generally be aware of the situation of information asymmetry in which they find themselves. The values of the variables in Table 1 reflect the steps taken by agents, creditors and debtors to deal with that situation.[17]

2.2 The bank credit accessibility model

As was mentioned in the introduction, the model developed here is a descriptive one based on transaction costs in order to determine the possible impacts of C-47 on the external financing of SMEs. In this model, the accessibility of credit will be represented by a zone of opportunities for external financing (ZOF) within which it is beneficial for creditors and debtors to conclude a credit transaction. Of the two types of external financing for SMEs contemplated in this analysis, i.e., bank credit and trade credit, the latter is not the result of a credit transaction but in fact a transaction involving goods or

16. For a more detailed discussion, see H.R. Varian (1997), *Introduction à la microéconomie*. Paris: De Boeck. 758 p. Chapter 35.
17. In response to the article by Akerlof G.A. (1970) ["The market for "lemons": quality uncertainty and the market mechanism." *The Quarterly Journal of Economics* 84, 488-500], several authors began asking themselves whether, in the presence of a great deal of information asymmetry, an a priori beneficial transaction can take place. Empirical research revealed that even in the classic case invoked by Akerlof of trades of used cars, all sorts of initiatives will be taken by each side as well as by intermediaries to resolve the problem of information asymmetry such that a priori beneficial transactions can take place. (See D.W. Carlton and J.M. Perloff (1998), *Économie industrielle*. Paris: De Boeck. 1086 p. Chapter 14.)

services accompanied by very temporary credit between a supplier and a client business. As a result, the analysis of the accessibility of trade credit will not involve the concept of a zone of opportunities for external financing, but will be based on considerations drawn in particular from the notion of the costs of transactions on the market for goods and services. The ZOF therefore becomes synonymous with the zone of opportunities for bank financing. The initial concept of the ZOF integrates the current solution that is jointly instituted by creditors and debtors to address the problem resulting from the situation of information asymmetry in which these parties find themselves. This solution reflects a variety of technological, organizational and legal factors, including the commercial insolvency legislation prior to C-47.

In order to construct a ZOF, Figure 2.1 represents the net return expected from an amount of external financing, in terms of net rate of return on the amount of credit for operations or an investment project. The net rate of return indicated on the vertical axis designates the return after deduction of all costs other than the costs of financing.[18] The amount of credit is expressed as a percentage of the total assets of the debtor business. An insufficient amount of credit or loan will not allow for full profitability of the activities in question, but as the amount increases, profitability increases, up to a maximum beyond which it begins to decrease. This decrease is the consequence of one or more factors, including the limited current capacity of management, i.e., of coordination and motivation, within the business, and decreasing returns. In a more detailed model, it would be possible to draw separate profitability curves based on how the credit accorded to the business is used: financing for operating funds, financing of a recovery proposal for a business in financial difficulty, investment in replacement capital, investment in a project to expand production capacity, investment in staff training, or investment in research and development of new products.[19, 20]

Figure 2.2 represents the cost of external financing for the business and the cost of capital for different amounts of credit in proportion to different business sizes. The horizontal axis no longer measures an amount of credit as a percentage of the size of a typical business as in Figure 2.1, but rather the size of businesses, ranging from the smallest to the largest. For each business size shown on the horizontal axis, the vertical axis indicates the amount of credit that maximizes net returns. The first curve starting

18. The variable "amount of credit" in the scenario of credit used for investing in a project is defined as a stock rather than a flow. In a more complete model of profitability of investment projects, it would be necessary to define this variable as a flow, to indicate both the cost of the project and its profitability because, for example, if an amount is invested very quickly, the cost will be higher (due to overtime for staff, the higher price of certain factors that become more scarce, etc.).
19. As the saying goes, a dollar is a dollar, and therefore beyond the reason stated by a business in its application for external financing, this business will allocate the funds obtained to the activities it deems the most beneficial; a more detailed model using these distinctions would therefore not add a great deal. A counter argument is that a good number of financing transactions are accompanied by constraints in order to reduce costs to the debt agent, obligating the business to make these distinctions in its management.
20. The use of Figure 2.1 to describe financing activities in the economy would require producing separate sets of curves for various sectors or industries of the economy, depending on the extent of the barriers to entry and exit, as well as other determinants of intensity of competition between businesses within a sector.

from the horizontal axis represents the cost of capital measured by the prime rate. This rate is a reference for the entire economy, and does not vary with business size or activity financed; it measures the opportunity cost of savings in the economy. The second curve, immediately above this curve, represents the cost of capital, including the fees of financial intermediaries for compiling varying amounts of savings available from an infinite number of households and businesses. This is the cost of capital with financial intermediation or banker's reserve price for renting the services of the capital it has collected from savers.

The third curve represents the cost of external financing for the business. External financing may come from different sources. The curve assumes that the source selected in the various size intervals represented on the horizontal axis is the one that minimizes this type of financing cost. For small- and medium-sized businesses, within the meaning set out in the report, external financing becomes synonymous with bank financing. When the business attains a sufficiently large size to issue market bonds on a secondary market, savings become accessible without necessarily having to go through financial institutions.

For the interval of business sizes for which the bank is the least costly source of external financing, the positive gap between the second and third curve measures the transaction costs resulting from the situation of information asymmetry between the business that borrows and the lender of external funding; these costs include both those borne by the borrower and those borne by the lender. With reference to the variables in Table 1, this gap corresponds to the sum of D6 and D7. It goes without saying that this third curve cannot be observed directly.

The curve of external financing for the business is composed of three sections. The first two sections cover the interval of business sizes for which the bank is the least costly source of external financing. The very first section corresponds to bank financing provided to small businesses, and the second section corresponds to bank financing provided to medium-sized businesses. In the first case, the "technology"[21] used is that of loans to households ("consumerizing"); the owner's personal property (for example, a residence) is taken as collateral, and the company's activities are hardly or not at all taken into consideration. In the second case, the "technology" used is that of the bank loan to the SME, sometimes referred to as commercial SME. There is an account manager for the business, and its assets constitute the basis for determining the maximum amount of bank financing that may be accorded. In moving from one technology to the other, there is a grey zone in which the owner's personal property continues to be taken as security, together with the company's assets, in order to reduce debt agency costs, particularly the transaction costs resulting from the problem of moral hazard.

The existence of fixed costs for producing the information required to limit the effects of information asymmetry – such as the costs of preliminary assessment flowing from the problem of adverse selection – explains the downward slope, which is steeper at the beginning, on every section of the curve of external financing costs, both the first two

21. The term "technology" is used here to refer to all ways of doing things used by lenders with respect to their credit activity.

sections for bank financing and the third section for external business financing without the intermediation of a bank.

Figure 2.3 represents SMEs' zone of opportunities for bank financing (ZOF), i.e., credit transactions to finance activities or projects whose net return is higher than their cost of external financing. The curve called MnR indicates maximum net return. Maximum net returns correspond to the maximum values attained on the vertical axis of figures like 2.1; the indicator of size of business on the horizontal axis of Figure 2.3 is the same as that used for Figure 2.2; i.e., the amounts of credit maximizing net return in figures like 2.1; this choice of indicator of size is guided by the need to represent an MnR curve.[22] The shaded area between the two curves represents the zone of opportunities for bank financing.[23]

Figure 2.4 completes the presentation of the model by illustrating an application. Using the personal property of a company's executives as security was mentioned earlier as a means of reducing the costs of arranging debt. This practice is at the root of the "technology" reserved for the bank financing of small businesses, i.e., the first section of the external financing curve in Figures 2.2 and 2.3. If an amendment to insolvency legislation allowed an insolvent debtor to ask that property included in a rather long list of personal assets be exempted from seizure by his or her creditor, the creditor providing secured financing would likely reduce the amount of financing accordingly.[24] One or both parties would then have to resort to more costly means of limiting the effects of the problem of moral hazard, such as increased preliminary assessment of applications and analysis of credit history. The first section of the curve of bank financing costs will move upwards accordingly, reducing the size of the ZOF, i.e., the accessibility of credit, by the same amount because of the now prohibitive cost.

Some credit transactions, as analyzed in the preceding paragraphs, do not involve a financial institution, but rather a non-financial business, i.e., a business whose first concern is selling goods intended for sale and not offering a service of renting out savings. This is the case, for example, for manufacturers of heavy equipment who sell

22. The MnR curve, compared with the nR curves in Figure 2.1, is comparable to a curve of medium- to long-term costs in production theory; compared with the medium- to short-term curves; the MnR curve encapsulates the nRs.
23. To the right of the vertical boundary between SME and LE, Figure 2.3 also indicates a zone of opportunities for bank or external financing that is not shaded. For certain values of business size to the right of this boundary, the Figure even indicates the possibility of larger gaps between MnR and C.o. EF and therefore credit transactions could be more beneficial for large businesses than for SMEs beyond this boundary. The objective here is not to identify the sizes of businesses to which external financing is allocated on a priority basis, and Figure 2.3 is not adapted to deal with this type of question; it is not intended to represent market equilibrium.
24. This reasoning is inspired by Gropp R., Scholz J.K. and White M.J. (1997). ["Personal Bankruptcy and Credit Supply and Demand." *The Quarterly Journal of Economics* 112, 217-251]. By comparing the laws in place in certain American states in terms of the provisions providing exemptions for goods that cannot be seized in a consumer bankruptcy procedure, the authors show that the amount of the exempted asset is positively linked to the probability of being refused a loan. The results also show that households with fewer assets have fewer debts, and pay a higher rate of interest. This reasoning can be transferred to bank financing for small businesses.

their merchandise on credit. This type of financing differs from trade credit as analyzed in Section 2.3. Unlike trade credit, and given the amounts of money involved and the "investment" nature, the non-financial company's concern for sales is coupled with the purchaser's concern for facility of financing. The merchandise, which becomes a long-term asset from the perspective of the purchaser, is systematically given as security in the financing contracts in question. The credit transaction is therefore very similar to that concluded by a financial institution for an SME, and we could analyze such credit transactions using the bank financing model. The variables in Table 1 will all, or almost all, be involved, and we can therefore develop a curve for the costs of external financing for this type of credit. Some elements of C-47 may directly affect this access to credit. In identifying these impacts, it is important to remember the nature of any business, and in this case, the debtor business, as a network of contracts with fluid boundaries.[25]

2.3 Factors involved in trade credit

While trade credit represents an important source of external financing for SMEs, and the availability of this credit source reduces constraints in terms of financial management, the supplier's reason for being is not to act as a financial intermediary. In some sectors of activity, trade credit is an inevitable practice, for example, because it serves clients who have adopted just-in-time procurement practices. Without trade credit, sales in sectors where that is the current practice would become highly unlikely.

If we look at trade credit as the result of a credit transaction, several of the variables in Table 1, which was designed to describe such transactions, are not present. In terms of variable (D3), trade credit may be compared with a bank credit margin, within a term generally not exceeding 90 days.[26] In addition, variables (D5.1) and (D5.2) could be used to describe the behaviour of the supplier whose client encounters financial difficulty. But the analogy with a credit transaction ends there.

The amount of trade credit included in the liabilities of the debtor business does not correspond to a loan amount (D1). The debtor does not receive a sum of cash that it may spend more or less freely. The element that triggers this credit is rather the purchase of goods or services, and the amount of financing fluctuates accordingly. There is not a single rate for (D2), but rather one that varies depending on the circumstances of payment for the goods delivered or the services consumed, and it can even be negative if the supplier offers payment discounts. For example, with a term of 2/10, n30, if the credit

25. This implies, for example, that the business that uses the equipment replaces the purchase contract with a rental contract through equipment rental companies acting in certain respects as specialized financial intermediaries.

26. There may be variations depending on the sector; for example, some suppliers in the food industry require payment within seven days, while some suppliers in the garden centre industry offer payment terms sometimes as long as six months. Sale conditions are also common, such as 2/10, n30, which means that there are no fees if the purchaser pays within 30 days of delivery, and payment within ten days leads to a rebate of 2%. For payments beyond 30 days, an interest rate of 2% per month may be charged. (Beaulieu, L. et al. *Crédit et recouvrement au Québec*, Les éditions Transcontinentales, Montréal: 1993).

associated with a purchase is used in less than ten days, i.e., the debtor pays for the goods and services obtained with credit within that period, it will be entitled to a discount. The trade credit, as a credit transaction, would then involve a negative interest rate.[27] Finally, variables D4 and D6 do not have equivalents when dealing with trade credit. Given the numerous references to transaction costs encountered in the literature on trade credit, variable D7 could be a source of confusion.

When the literature refers to transaction costs to explain the widespread habit in numerous sectors of the economy of selling goods and services on credit, these costs are not, unlike with a credit transaction, also exclusively linked to problems flowing from a situation of information asymmetry. From the purchaser's point of view, and for several categories of goods and services, the fact of not having to pay for each unit of goods or services each time they are acquired or consumed allows the employees directly involved to save time on a number of fronts. For example, an auto parts distributor is in almost constant contact with its numerous suppliers to order very specific parts; the cost of being invoiced and making payment upon delivery of each individual part would be completely prohibitive and could even exceed its gross profit margin on resale of the part. In addition, there are frequent returns to suppliers because parts are sometimes not accurately identified and only when the client receives them is there confirmation of the correspondence between what was ordered and what was delivered. Another consideration is the fact that the piece will sometimes be delivered directly to the distributor's client, without the distributor ever having possession of it. From the supplier's point of view, the ability to take stock at a fixed date and invoice for all parts delivered and not returned by the client will therefore represent significant savings in such sectors of activity.

If we now introduce information asymmetry into the analysis of trade credit, we can distinguish two levels. As with bank credit, there is information asymmetry in terms of the purchaser's credit rating; the client business has information that is not directly or easily available to the supplier, particularly if the purchaser is a new business without a track record in credit relations. A second level of asymmetry concerns the quality of goods and services sold on credit; the supplier has information that is not directly or easily accessible to the purchaser; the asymmetry at this level may be particularly significant when the supplier sells a new service or is a new business. Selling on credit allows for preliminary testing of the good or service and on this front, trade credit may be deemed to be promotional activity, just as advertising expenses, for which the vendor assumes the costs. By offering the purchaser the opportunity to delay payment, the supplier may be indicating that it will agree to take back the merchandise without a lot of red tape. Trade credit can even be seen as a complement to or substitute for a guarantee of satisfaction.

In summary, the situation of information asymmetry and the problems of moral hazard and adverse selection flowing from it significantly contribute to the cost of business financing from a financial institution or from savers. There is a little of that, but

27. The cost becomes negative as long as the supplier has not set a sale price higher than that set for cash sales, as explained in Footnote 29.

very little, when analyzing trade credit. Of note is the fact that suppliers are not specialists in assessing credit files, nor in collecting on overdue accounts. One of the consequences of this lack of specialization can be seen in the tendency for suppliers to operate in a dichotomous fashion and to apply a one-price policy; very few suppliers have a sliding scale of credit based on the risk associated with the client.[28]

As a result, the terms of trade credit are not interpreted as being the result of a strict financing negotiation, but rather as a way for a supplier to minimize its sales transaction costs, to differentiate its product, or to increase sales. The supplier will want to limit the term of the financing to the minimum necessary to enable it to pocket the profits in the form of spinoffs from production activities and savings in the transaction costs of the sales that trade credit enables it to conclude. For the supplier, trade credit is a tool, while it is more at the heart of the financial institution's activities. In addition, it will be difficult to distinguish the profitability of providing supply credit from that of the principal activity. In numerous sectors, trade credit is a necessary condition for making sales. In addition, suppliers can coordinate the terms of credit and the prices of goods and services intended for sale in order to practise more effective price discrimination, with a view to increasing sales revenues and maximizing the value of their businesses.[29]

The supplier who accords credit must finance it, and offering trade credit is as common among SMEs as large businesses. The elements of C-47 affecting the bank financing of SMEs may therefore have an impact on trade credit. But these effects will be indirect. In analyzing the sections of C-47 directly related to trade credit, particularly the sections aimed at clarifying the rights of unpaid suppliers, it will be important to bear in mind that for the supplier, sales on credit, and especially, the expenditures associated with this practice, are not justified in and of themselves. They are there as support for the promotion of its goods intended for sale, and sometimes as a "technique" to reduce the costs associated with a sales transaction. A priori, it would appear that the impact would be modest in terms of direct impacts.

Moreover, the supplier has firsthand information about the financial situation of its client businesses that could be very valuable to financial institutions. Firstly, the consistency of a client's purchases informs as to its competitive position. Secondly, given the generally high cost of trade credit beyond the discount period,[30] the use of a longer term by a client business, or delays in payment, are almost systematically a sign of financial difficulty. Thirdly, in sectors of activity in which sales people employed by the

28. See Petersen, M.A. and Rajan, R. R. (1997). "Trade credit: Theories and Evidence." *The Review of Financial Studies* 10 (3), 661-691.
29. Mian S.L. and Clifford W.S. JR. (1992). ["Accounts Receivable Management Policy: Theory and Evidence." *The Journal of Finance* 47, 169-200] illustrates this reality through the example of car dealerships. By posting sale prices that aren't marked down, the dealership concludes sales transactions at this price with more "fortunate" clients who do not purchase dealer financing. Moreover, by offering better credit conditions than those of the market, while maintaining the sales price, it will attract less fortunate clients who could not otherwise buy the car.
30. For example, the 2%-disount for payment within ten days includes an implicit financing rate of 120% annually for the business that does not take advantage of it. To that can be added a rate of 24% annually if the supplier demands interest of 2% per month when payment is delayed beyond 30 days.

supplier visit clients to promote the sale of their goods and services, these salespeople can learn a lot about the clients during these visits. If the supplier can not only make these observations at little cost, but also do so much earlier than the financial institution when its client business is an SME, then it has something that may be of value to the institution. In that case, this something has the potential to reduce the cost of bank financing for the SMEs, i.e., lower the second section of the CoEF curve in Figure 2.3, thereby increasing the area of the ZOF, all other things being equal. The result is increased SME accessibility to this type of credit. On the one hand, in the current environment, if suppliers and financial institutions are not able to trade this information, and on the other hand, certain elements of C-47 affecting trade credit are such that they will facilitate such transactions, then significant impacts are possible in terms of bank credit.

2.4 Businesses in financial difficulty or insolvency, and accessibility of credit

Figure 2.5 is intended to represent, in terms of variable D5, other situations involving the issue of accessibility of credit. Starting on the date on which the company's financial difficulties (t_d) begin, lender flexibility will mean that credit is accessible if sufficient external financing continues to be provided when profitability evolves along the curve bc. Flexibility may also be considered in that situation when the difficulties are caused by a cash shortage, but the project's profitability continues to exceed its financing costs. Flexibility will mean that credit is accessible if the lender sees that possibility rather than concluding that the project is already evolving on a bd portion of the profitability curve. In analyzing the effects of C-47 on accessibility of bank credit for businesses in financial difficulty or insolvency, the development of another ZOF based on a complementary analysis of the costs of bank financing could be envisaged. It should nevertheless be borne in mind that the constraints confronting the financial institution in managing this eventuality determine the terms of credit both when this eventuality occurs and at the time of the first credit transaction, while the outlook for the business is deemed to be positive.

3. CERTAIN CHARACTERISTICS OF PARTIES BOUND BY AN EXTERNAL FINANCING TRANSACTION, AND THEIR EFFECTS ON THE TRANSACTION

3.1 SMEs

It is reasonable to assume that certain characteristics of SMEs, compared with larger businesses, have implications for the terms of their external financing. Table 2 presents these characteristics and their consequences for external financing.

Firstly, SMEs have fewer tangible assets, all other things being equal. This implies that they have less collateral to offer for the financing of each dollar of value created.

Secondly, the origin of the value of production of SMEs is less diversified. Because the liquidation value of assets depends among other things on the stability of sales, and because some liquidation costs are fixed, there is a higher percentage loss of asset value for an SME being liquidated.[31] These two elements imply that a dollar of tangible assets held by an SME has less value as collateral.

The amount of external financing sought by SMEs is less than that sought by larger businesses. Given that some of the lender's costs, such as the costs of assessment, contract negotiation, follow-up, seizure or adjustment, are fixed, the result, thirdly, is that the average cost to the lender per dollar loaned to an SME is higher. This reality motivates lenders to find a "technology" that is less costly in terms of their credit activity for SMEs.

Fourthly, the cost of external equity financing is prohibitive for SMEs, which leads to them seeking their external financing on the credit market, with the resulting higher debt/equity ratio.

The preceding characteristic is accompanied, fifthly, by a concentration of ownership of the business in the hands of a few executives/owners. This concentration, combined with the absence of a secondary market where the ownership shares of SMEs are traded, implies that the performance of the SME's executive is less subject to evaluation by a community of investors and financial analysts and as a result, his or her conduct is less constrained by the effects of reputation.

31. Warner, cited by Ang J.S., Chua J.H. and McConnell J.J. (1982. "The Administrative Costs of Corporate Bankruptcy: A note." *The Journal of Finance* 37, 219-226), deals with the effect of scale in the costs of bankruptcy. The costs would represent a concave function of the market value of the business. On average, they would amount to 5.3% of market value, from 9.1% for the smallest businesses to 1.7% for the largest business in the sampling. The results of Ang *et al.* confirm the effects of scale observed by Warner; the direct costs in their sampling represent on average 7.5% of the value of the business (median of 1.7%).

Concentration in terms of ownership leads in turn to an organizational structure characterized by few decision-making levels. Compared with the manager in a large business, the manager in an SME makes decisions based more on firsthand knowledge of activities (proximity management) rather than a well-structured system of information. The latter is often too costly to establish, given that the production and verification of financial data involves fixed costs; when there is a high number of users, the cost can be shared among them.[32] We now move from an internal perspective to an external perspective. There are numerous users for the financial data of a large business listed on the stock exchange, such as investment funds and individual investors. In the case of a closely held SME, the number of users is much more limited; other than the managing owner, the company's banker will often be the only other user. The result, sixthly, is greater information asymmetry between lenders to SMEs and the managers of SMEs, as well as a lack of direct and reliable measures of the profitability of the activities of SMEs. This information asymmetry constitutes in some way a wall of mistrust that separates creditors and the debtor business.[33]

The preceding statements are only intended to outline what generally distinguishes the financing of SMEs from that of large businesses. In reality, SMEs are very heterogeneous from several perspectives. Some of the preceding corollaries vary for subsets of SMEs, based, for example, on size, age, sector, history, or characteristics of the owner.

Figure 3.1 presents the links between each of these corollaries and the variables of a credit transaction. Variable D7, which measures total transaction costs other than D6, is not represented in this figure because transaction costs are omnipresent and all of the other variables are set against them.

3.2 Financial institutions

With a view to making a profit from the resources entrusted to them, financial institutions optimize the distribution of their resources among their various activities, such as estate management, investment services and services to business. In terms of commercial credit, they allocate part of their resources to assessing the quality of projects to be financed, while maintaining follow-up costs at an optimal level.

The total amount of bank credit available for SMEs is a result first of all of decisions affecting the allocation of financial institutions' available capital among their various activities, themselves subject to the requirements of banking regulations concerning the rate of capitalization to maintain; and in terms of their lending activities,

32. This is true for the production or uncovering of information in general [Romer, P.M. (1990), "Endogeneous Technological Change", *Journal of Political Economy*, 98(5), 71-102, cited in L. Veldkamp (2006), "Media Frenzies in Markets for Financial Information", *American Economic Review* 96(3), 577-601].
33. Giammarino, R.M. (1989). "The Resolution of Financial Distress" *The review of financial studies* 2(1), 25-47.

decisions affecting allocations between different categories of borrowers. An analysis of the functions of the revenues and costs for financial institutions provides for a better understanding of the context in which these decisions are taken.

The profitability of financial institutions on a loan portfolio may be expressed by Equation (1), for which certain terms are set out in more detail in Equations (2) and (3).

(1) $P_{FI} = (R_{int} - C_{int} - C_{follow}) + [(R_{rs} - C_{rs}) \times NbC_{PF}] + [(R_{obs} - C_{obs}) \times NbC_{PF}]$, where

- P_{FI}: Profitability of a financial institution's loan portfolio
- R_{int}: Interest revenue
- C_{int}: Interest costs
- C_{follow}: Follow-up costs
- R_{rs}: Revenues from related services
- C_{rs}: Costs of services related to loans, such as initial analysis costs
- NbC_{PF}: Number of clients comprising a loan portfolio
- R_{obs}: Revenues from other banking services purchased by client borrowers
- C_{obs}: Costs of other banking services

(2) $C_{follow} = C_{mamage} + L_{bd}$, where

- C_{manage}: Costs of management (depending on the "technology" used)
- L_{bd}: Loss on bad debts (based on the probability of the borrower defaulting)[34]

(3) $L_{bd} = \$_{loan} - V_{resale} + C_{liquid}$, where

- $\$_{loan}$: Value of the unrecoverable loan
- V_{resale}: Resale value of the seized assets
- C_{liquid}: Cost to liquidate the seized assets

While Equation (1) may seem simplistic at first glance, it does illustrate the principal components of the profitability of financial institutions. It is the inherent uncertainty of the risk of borrower default and the risk of loss that creates the complexity of the bank credit supply.

Financial institutions draw their revenues from SME credit activity (P_{FI}) from three sources, corresponding to the three terms of Equation (1). The first source corresponds to interest revenues on the amounts borrowed (R_{int}). All other things being equal, these revenues increase with the amount of the loan (D1) and the interest rate (D2). Financial institutions also generate revenues from related services (R_{rs}), such as files analysis fees, which are invoiced to the borrower, and are often called commissions on credit activity. These revenues are relatively insignificant; representing approximately

34. As mentioned previously, Warner D. (1977) ["Bankruptcy Costs: Some Evidence" *The Journal of Finance* 32, 337-347] maintains that the direct costs of bankruptcy are minimal. His contribution consists in particular to reconciling these costs with the value of the business before bankruptcy, therefore a value that is closer to what existed when the creditors were analyzing the loan applications.

1% of the value of loans.[35] Interviews with practitioners in the banking industry suggest that these revenues only serve to cover the costs of analysis. Banks would refuse to increase them to compensate for additional risk related to the underlying loan. Finally, financial institutions generate revenues on other banking services (R_{obs}) purchased by borrowers. We can include here by way of example revenues for managing current accounts or safeguarding shares held by borrowers. Discussions with bankers indicated that some financial institutions depend a great deal on these other services to increase profitability.

As indicated by Equation (1), net revenues on related services, although not significant, and those on other banking services, are related to the number of clients comprising the loan portfolio (NbC_{PF}). A financial institution that refuses a loan to a borrower risks losing not only interest revenues, but also the two other sources of revenue.

There are costs associated with each of these sources of revenue. To generate interest revenues, financial institutions must bear the interest costs (C_{int}) and the follow-up costs (C_{follow}). Interest costs correspond in part to the interest paid by financial institutions on savers' deposits, while the costs of follow-up include management costs (C_{manage}) and losses on bad debts (L_{bd}), as expressed in Equation (2).

The costs of ongoing management of a loan include the salaries paid to account managers and the other employees involved, for example, in verifying respect for contract terms. Certain characteristics of loans are reflected in the management costs. Thus, when the term of the loan is short, there is a higher frequency of loan renegotiation, which leads to additional transaction costs. Follow-up costs also include losses on loans in case of default on the part of the borrower. The amount of these losses is not exogenous to the credit relationship, but flows from arbitration among the different contractual clauses. When the number of loans increases, net revenues probably increase less quickly because the quality of each additional loan may tend to decline,[36] which leads to an increase in follow-up costs. In the context of loans that have become doubtful, financial institutions may exercise their security on the borrower's assets and redeem the resale value of these assets. The amount of losses on loans, expressed in Equation (3), corresponds to the difference between the balance of the loan ($\$_{loan}$) and the product of the sale of the asset used as security (V_{resale}), less the fees for liquidating the asset (C_{liquid}).

Coming back to Equation (1), the second term includes the costs of analyzing loan applications (C_{rs}), themselves sometimes invoiced to borrowers through commissions on credit activities. The objective of the financial institution being to determine the borrower's credit risk, these costs will be proportional to the information asymmetry between lenders and borrowers.

35. This estimate is given by Wynant L. and Hatch J. (1991). [*Banks and small business borrowers.* London (CDN): The Western Business School (University of Western Ontario)].
36. We were able to verify such a relationship with one of the bankers we met.

Financial institutions have a number of options for minimizing certain costs for follow-up or initial analysis. One of these options involves taking security on the assets of the borrowing business, or the assets of the business owners.[37] Given that Chapter C-47 is likely to amend the portion of the value of security returned to lenders, it is appropriate to determine the effect of security on the cost function.

A first role of security is to reduce the lender's losses in case of default by the borrower. The lender who holds security obtains priority ranking above other creditors, which reduces its losses. This is an important role of security, but clearly not the only one. As confirmed by the bankers we met, security is also useful in terms of assessment and follow-up. A borrower that agrees to give security on its assets sends a signal to the lender as to the quality of the project being financed. In this sense, security contributes to reducing the costs of initial analysis of loan applications and the problems of adverse selection. In addition, a borrower who agrees to give security on its assets reduces its own capacity for further borrowing, and even its freedom to manage. It cannot dispose of the asset without informing the banker. In this sense, security contributes to reducing the risks of moral hazard, which promotes the attaining of low-cost credit.[38]. In terms of the model of accessibility to bank credit that was presented earlier,[39] these considerations apply more specifically to the first section of the cost of external financing curve and the grey area between this first section and the second.

The three equations presented above will serve to identify, in Section 4, the possible effects of C-47 on bank financing. If all other things remain equal, C-47, by lowering the priority ranking of financial institutions, will increase losses on loans in case of debtor default; these losses themselves being a component of follow-up costs. Figure 3.2 shows certain relationships between the determinants of bank profitability and the variables characterizing a credit transaction.

3.3 Suppliers

Section 2 of this report describes the principal distinctions between trade credit and bank credit. From the supplier's point of view, credit activities remain incidental to its principal operating activity. To identify the possible effects of C-47 on access to trade credit, it would be helpful to identify the contribution of trade credit to the supplier's profitability. Equation (4) proposes a breakdown of this contribution, while Equation (5) details the components of losses on bad debts.

(4) $P_{Sar} = (S_{Sadd} - C_{Sadd}) + (R_{Sint} - C_{Sfin} - C_{Sman} - L_{Sbd})$, where

P_{Sar}: Supplier's profitability on its portfolio of accounts receivable

37. See for example Bester H. (1994). ["The Role of Collateral in a Model of Debt Renegotiation." *Journal of Money, Credit and Banking* 26, 72-86] and Longhofer SD, Santos JAC. (2000). ["The Importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89].
38. Manove M., Padilla A.J. and Pagano M. (2001). "Collateral versus project screening: a model of lazy banks." *The RAND Journal of Economics* 32, 726-744.
39. Section 2.2 and Figure 2.2.

S_{Sadd}: Additional sales linked to credit
C_{Sadd}: Cost of additional sales
R_{Sint}: Interest revenue
C_{Sfin}: Cost of financing customer accounts
C_{Sman}: Cost of managing customer accounts, less savings on transaction costs
L_{Sbd}: Losses on bad debts

(5) $L_{Sbd} = \$_{accnt} - V_{resaleS} + C_{liquidS}$, where

$\$_{accnt}$: Value of the customer account that is unrecoverable
$V_{resaleS}$: Resale value of merchandise seized by the supplier
$C_{liquidS}$: Cost to liquidate the seized merchandise

Some clarification is required with regard to Equation (4). In sectors in which trade credit is an established practice, the supplier's sales on credit would constitute practically all of its sales, and refusal to sell on credit would lead to a loss of market share. It can therefore be said that the supply of credit leads to positive spinoffs for sales, as expressed in the first term of the equation. The result is that the two terms of this equation should not be perceived as two factors independent of the supply of credit, but rather as two strongly interrelated elements. In the first term, the element S_{Sadd} refers to an increase in sales, whether it be in terms of volume or sale price, resulting from the supply of trade credit. Our interviews with those responsible for the supply of trade credit confirm that the terms of credit are often managed strategically by the supplier in order to win market share, to favour customers showing strong growth potential, or to practise price discrimination[40] with a view to increasing sales revenues. The element C_{Sadd} refers to the costs of additional sales.

The second term of Equation (4) is more directly linked to the credit aspect. It involves fewer elements than the equation applying to financial institutions because unlike financial institutions, suppliers are not specialists in assessing credit files, nor in collecting on overdue accounts. One of the consequences of this lack of specialization is seen in suppliers' tendency to operate dichotomously; research indicates that very few suppliers use a sliding scale of credit based on the risk associated with the client.[41]. Our interviews also showed that suppliers often turn to specialized agencies, such as credit bureaus, to analyze customers' credit risk.

Interest revenue (R_{Sint}) corresponds to the amounts collected by the supplier in addition to the sale price for sales on which payment is deferred. These revenues are often insignificant because many suppliers waive fees for deferred payments.

With regard to cost elements directly linked to credit, one involves the supplier's own ability to source the financing needed to support its accounts receivable, which leads to financing costs (C_{Sfin}). While banks generally agree to finance up to 75% of the actual value of accounts receivable, some SMEs do not have access to this source of financing,

40. See footnote 29.
41. See Petersen and Rajan, 1997, op cit.

for example, when they allow their customers payment periods that the banks deem to be too long. These businesses must use more costly internal financing. For the SMEs that finance their accounts receivable with bank credit, the effect of C-47 is to restrict their access to said credit, which could lead to an increase in their financing costs.

The supplier also bears the management costs (C_{Sman}), which are composed of administrative and operational expenses associated with providing credit; for example, the costs to reconcile purchase orders and account statements, say monthly, as well as the costs associated with collections. Some suppliers feel the need to take out credit insurance on their largest customer accounts, and the cost of that insurance is included in management costs. However, providing credit may also serve to reduce the transaction costs associated with sales, as explained in Section 2.3 with the example of the auto parts distributor.

Finally, the supplier's profitability is affected by losses on bad debts (L_{Sbd}). Like financial institutions, the amount of these losses, detailed in Equation (5), corresponds to the balance on the customer account that is not recoverable ($\$_{accnt}$), less the resale value of the seized merchandise ($S_{resaleS}$), plus the cost to liquidate that merchandise ($C_{liquidS}$). In case of customer insolvency and the seizure of merchandise, the latter may have greater value for the supplier than for the financial institution, because the supplier can easily resell it. However, seizing merchandise in accordance with the provisions of the *BIA* dealing with the rights of unpaid suppliers probably happens less frequently with manufacturing clients than wholesale or retail clients. Manufacturers are more likely to quickly transform the merchandise they obtain, thereby rendering seizure impossible. Unlike financial institutions, suppliers infrequently seize merchandise, either because their clients quickly process the goods they have purchased, the goods sold were manufactured according to the customer's specifications, or they are perishable.

It should be borne in mind that since providing credit is an activity in support of business development, the values of the variables included in the second term of Equation (4) are generally low compared with sales figures, and the second term in itself could very well be negative.

4. APPLICATIONS OF THE MODEL TO IDENTIFY THE EFFECTS OF C- 47

In the model presented in Part 2 (Figure 2.3), accessibility of credit is measured by the size of a zone of opportunities for financing (ZOF) within which it is worthwhile for financial institutions, as lenders, and for SMEs, as borrowers, to do business. The ZOF is bordered on top by a maximum net returns curve (MnR) of activities and projects an SME wants to finance externally, and on the lower portion, by a financing costs curve combining the costs that are explicitly included in the credit transaction contract, and all other unlisted transaction costs that are borne by financial institutions or SMEs.

The shape of the MnR curve, like those for net earnings before the costs of financing, suggests that C-47 does not affect the position of the MnR; the study of the impacts of C-47 can therefore focus on the impact of the legal amendments made by C-47 in terms of the costs of financing curve. Compared with the ZOF representing the current state of affairs in terms of accessibility of bank financing for SMEs, Part 4 of this report is intended to illustrate how and why the amendments made by C-47 could move the costs of financing curve, thereby changing the size of the ZOF, i.e., accessibility of credit. An upward movement of the costs of financing curve would reduce accessibility of credit, while a downward move would increase it.

Given the general competition among businesses, including all categories of business size and financial institutions, both in terms of the goods and services they try to sell and the resources they attempt to procure, companies and institutions that remain in business must constantly seek to turn a profit on their operations. This means that for planned production levels, they will minimize their costs within the internal and external, technological, contractual or legal constraints with which they are confronted. This implies that the ZOF representing the current state of affairs (ZOF-csa) will be as large as possible within current constraints.

The analysis presented in Part 3 was aimed at more concretely identifying, as determinants of the ZOF-csa, the constraints flowing from certain characteristics of SMEs. Figure 3.1 established the correspondence between the corollaries of these characteristics in terms of financing of SMEs and the variables identified in Table 1 to characterize a credit transaction. Figure 3.2 established the correspondence between the various categories of costs and revenues associated with lending to businesses from the standpoint of a financial institution, and the same set of variables from Table 1. Financial institutions and SMEs interact based on the anticipation of a mutually beneficial transaction, and the specific values of Table 1 for the transaction that they conclude will result in optimization on both sides, given their respective constraints and capacities.

As demonstrated in the models of optimization under constraints, if a legal change serves to introduce new effective constraints, the ZOF produced in this new environment will be smaller, i.e., accessibility of credit will be lower than in the current state of affairs. At a first level of analysis, any law or regulation constitutes a new constraint.

However, economic analysis suggests that in certain trade contexts, the net effect of a new law or regulation could also translate into a reduction of constraints or existing costs.

At a first-level of analysis of C-47, current practices will remain unchanged, as will administrative directives given to the personnel of financial institutions or suppliers directly involved in providing credit to businesses. The effects of C-47 operate through the parameters found in the definition of these directives and practices. Section 4.1 illustrates this level of analysis, in view of the effects of C-47 on the parameter "liquidation value of security". To limit analysis to that level, we would have to assume that the current combination of methods, elements and tools that make up a credit transaction is fixed; in other words, that there is no possibility of substitution between the different variables in Table 1 characterizing a credit transaction. It would be difficult to defend such an assumption. The adjustment of businesses to change, whether it be legal, technological or other, mainly involves substituting new resources or methods for current ones that have become more costly, less adequate, or less effective by reason of the change.

Equations (1) to (3) presented in Section 3.2 indicate the elements that are partly under the control of financial institutions and among which the institutions could make substitutions in order to minimize the impact of C-47 on their profitability. As Figure 3.2 indicates, these elements are quite often directly linked to the variables characterizing a credit transaction. Research suggests that such substitutions are not only possible, but are already part of current practice. For example, a study by the Canadian Federation of Independent Business[42] shows that approval rates, the interest rate premium and loan amounts are positively linked to the Security/Amount of loan ratio. Section 4.2 illustrates this level of analysis by setting out the possible substitution between a higher rate of interest and a lower value of securities for the debtor company that has become insolvent. The analysis also speculates on the effect of elements of C-47 involving the rights of unpaid suppliers on the cost of trade credit. Section 4.3 illustrates a third level of analysis, with substitutions involving more profound changes in practices and in the nature of the relationships between creditors and debtors. This third level of analysis may be approached by assuming that distinct sources of credit, i.e., financial institutions on the one hand and suppliers on the other, do not interact among themselves, or by making less restrictive assumptions.

Time is an important dimension of any adjustment process. The first level of analysis is associated with possible immediate effects. As the level of analysis rises, the possible effects anticipated involve more and more research through trial and error of the best-adapted approaches to the new legal environment.

4.1 A change in the amount of credit

The three amendments proposed in C-47 that were mentioned in the Introduction could have an impact on the quantity of available credit by reducing the dividend

42. CFIB. (2003). *Banking on Competition.* pp 1-27: Canadian Federation of Independent Business.

expected from the liquidation of current or long-term assets that financial institutions accept as collateral to reduce their losses on bad debts. A reduction in the expected dividend means a corresponding increase in these losses, which, in the formulation of the cost and revenue functions for financial institutions presented in Part 3, are included under follow-up costs. It should be recalled that in addition to possibly reducing losses, collateral is also useful in terms of assessment and follow-up.

To compensate for increased follow-up costs, financial institutions have indicated that they will be decreasing the SME lending base by an equal amount. Some research projects[43] have explored the consequences of this reaction, and we summarize the results here with an example.[44] Assume that an SME has current assets on which the bank creditor estimates a "lending base" of $100,000 as the insolvency legislation now stands. If C-47 were applied, the financial institution would not be able to recover that amount, despite having taken security on these assets. Knowing that the maximum of unpaid wages eligible for the super-priority in case of the borrower's bankruptcy or receivership totals $20,000, the financial institution would only agree to consider $80,000 as the lending base. In other words, financial institutions have indicated that they would reduce the lending base by the amount accorded as super-priority to unpaid wages or unpaid pension plan contributions.[45]

With regard to Equation (1) in Part 3, the reaction announced by financial institutions would no doubt maintain follow-up costs at current levels, but would serve to decrease other sources of revenue (R_{int}, R_{rs} and R_{obs}). This decrease would exceed the total amount of unpaid wages. It is difficult to predict the effect of the C-47 amendments on this amount, which results from the product of the number of employees involved times the amount of each individual claim, subject to an upper limit. The total amount of unpaid wages is a function of the time elapsed between the date on which the business in financial difficulty stopped paying its employees and the date on which they stopped working. The latter is very much at the discretion of the business and employee: employees may be more or less patient with regard to their employer's tardiness in paying their salaries, and the business may choose to keep employees that it cannot pay at the moment on the payroll for several days or weeks, in the hopes of an imminent return to profitability.

With regard to a financial institution or a wage earner protection program, the employees and their employer are internal players for the business. The amount of wage

43. For example, Davis K. and Ziegel J. (1998). Assessing The Economic Impacts of a New Priority Scheme for Unpaid Wage Earners and Suppliers of Goods and Services. Corporate and Insolvency Law Policy Directorate. [Document consulted on line October 17, 2007: http://strategis.ic.gc.ca/epic/site/cilp-pdci.nsf/en/h_cl00204e.html]
44. This reaction was also confirmed during discussions with one of the bankers we met in the context of the project.
45. Gropp R., Scholz J.K. and White M.J. (1997). ["Personal Bankruptcy and Credit Supply and Demand." *The Quarterly Journal of Economics* 112, 217-251] observed a similar reaction on the part of financial institutions following changes made to the American laws govering consumer insolvency. More specifically, they noted that the amount of exempted assets is positively linked to the probability that the borrower will be refused a loan.

claims results from their contractual relationship and is a function of costs and benefits for each party. Keeping employees working in order to be able to take advantage of an upswing in sales is a risky strategy. But the entrepreneur who has become insolvent sees only possible gains, or few losses, because he or she will probably have already lost everything there is to lose. Likewise, for a good number of employees who could be unemployed for some time before finding a new job, salaries that are unpaid, but are below the maximum amount established pursuant to the wage earners' protection program, would likely reduce their lost revenue between the current job and the next. There is therefore an incentive for the business and its employees to attempt to take maximum advantage of the WEPP. It is therefore possible that the amount of unpaid wages eligible for the WEPP following implementation of the program will increase exponentially compared with the current level of unpaid wages.[46] Some elements of the contractual association between financial institutions and the company executives they finance could nevertheless reduce the scope of this catastrophic scenario.

The practice of financial institutions to require personal security from the executives of companies they finance is intended to ensure the executive's cooperation when the business becomes insolvent. When this eventuality does occur, the institution has the option of demanding all or part of the security. Given that the extent of its losses can be greatly influenced by the conduct of the executive, the security provides the financial institution with a mechanism for influencing that conduct in the direction of its interests.

Given these considerations, a decrease by financial institutions in the amount of credit (D1) would mean that they may withdraw a portion of loans from SMEs, particularly those operating in labour-intensive industries.

The model for accessibility of bank credit developed in Section 2 of the report helps put this credit-rationing scenario into perspective. The terms of C-47 apply to the intermediate section, i.e., the ME interval in Figure 2.3 representing the model. C-47's super-priorities mean that, for all categories of interval size, current transactional procedures used by the business and the source of external financing to minimize transaction costs will no longer be fully applicable. The same minimization exercise with the addition of new constraints implies that transaction costs will now be higher all along that interval. The area of the ZOF decreases accordingly, and the loss of opportunities is represented in Figure 4.1. However, C-47 does not affect transactional procedures for the SE and LE sections of the interval. It is therefore likely that on a size interval that includes the smallest SMEs, the latter and their source of external financing will agree to do business according to the SE world, as that is now the way, as represented by Figure 4.1, of minimizing the costs of external financing. Similarly, it is likely that in the

46. The idea of a WEPP goes back at least a few decades. The proposals made in the Colter report included certain conditions for limiting the incentives that could cause an undue increase in claims for unpaid wages. For a discussion of these considerations and an alternate proposal that controls these incentives while making use of employees' knowledge about their company's future prospects in order to decide the fate of the latter, see B.M. Papillon (1990) [*Enjeux des propositions récentes de réforme de la loi sur la faillite*. Document n° 367, Economic Council of Canada, Section 4 on protecting employees.]

interval of sizes that comprises the largest SMEs, these latter will act like LEs and seek external financing without going through financial intermediaries. These adjustments at the border of the interval of sizes of SMEs directly affected by C-47 would serve to reduce the scope of the effects of rationing.

As the variables in Table 1 indicate, security is only one feature of credit transactions. It would be difficult to claim a priori that there is no possible substitution between this feature and another; hence the need to move to a second level of analysis in order to explore certain adjustments in the conduct of the parties once C-47 has come into effect.

The super-priority of unpaid wages on the debtor's current assets and the priority of unpaid pension plan contributions on all the debtor's assets are very likely to leave suppliers indifferent because, in the vast majority of business liquidations, suppliers' bankruptcy dividend is practically zero. On the other hand, clarifying the rights of unpaid suppliers with regard to merchandise delivered in the thirty days preceding the bankruptcy or receivership of their client would likely reduce losses on bad debts, at least for some of them. One possible effect is to make suppliers less hesitant when it comes to providing merchandise on credit, on condition that C-47 does not lead to an increase in their own financing costs. In order to render the provisions of C-47 even more advantageous with regard to the right to repossess merchandise, suppliers may be tempted, if competitors do likewise, to increase incentives for clients to pay them within thirty days.

4.2 An increase in interest rates

Rather than limiting themselves to adjusting the loan amount (D1) based on the expected value of a security (D4), after deducting the estimated amount of unpaid wages, financial institutions could choose to compensate for estimated losses on bad debts with a slight increase in the interest rates (D2) that determine their interest revenues. Given that this element is more directly linked to a potential increase in follow-up costs, it would probably be the first substitution adjustment made by financial institutions.

According to a major research project into financial institutions and SME loans, 1% of these loans from financial institutions terminate with the seizure of property given as security, and of that 1%, the losses amount to about 30%.[47] Even if these losses were to increase by 20 or 30%, the amount of total losses, spread across all SMEs, would translate into a slight increase in interest rates. This would enable financial institutions to maintain the net income between their interest revenues and their follow-up costs, because by maintaining their level of loan activities to SMEs, the income from their related services and other banking services would remain unchanged. If the practice of

47. Wynant L. and Hatch J. (1991), op. cit.

demanding security continues to be as advantageous in terms of assessment and follow-up, the cost of related services would also remain unchanged.[48]

To evaluate the probability of such a scenario, we must also bear in mind the impact of super-priorities on the risk level of loans, given that risk is taken into consideration in the regulatory requirements of most Canadian provinces with regard to the level of capitalization that banks must maintain.[49]

If suppliers adjusted their rates in reaction to the advantageous effects of C-47 with regard to the right to seize merchandise that has not been paid for, they could do so by reducing the interest rate or increasing the rebate given for early payment.[50] However, such an adjustment is unlikely according to the interviews we held with business practitioners.

4.3 A change in how business is conducted

It is quite easy to envisage adjustments on the part of financial institutions and suppliers in terms of price and quantity variables. The effects of C-47 on the other variables that characterize a credit transaction generally involve changes in how business is conducted; these sometimes more radical changes would require more time. International comparisons of banking practices are a good source for speculating on these changes. In this literature, two approaches can be identified in terms of the relationship between a financial institution and a business (FI-B relationship): the so-called transactional approach and the so-called relational approach.

The extent of the FI-B relationship would be relatively limited in a transactional approach; the financial institution is particularly attentive when the loan application is accepted and will tend to refuse the loan if there is any doubt about the quality of the company's credit. To deal with the possibility that some loans will become problematic, the financial institution takes security in order to minimize its losses. With this approach, the financial institution will tend to group loans, treating them like a homogenous portfolio and assessing the probability of default and potential losses from default at the

48. According to an argument developed by some authors, the inability of lenders to identify all relevant characteristics of the borrower would lead to a higher level of financing than the optimal level for maximizing collective wealth. If we follow that logic, the increase in the interest rate assumed here could allow for returning to an optimal level of the amount of financing allocated to businesses. However, an increase in the interest rate on loans to all businesses in order to compensate for a financial institution's lost revenues from bankruptcy dividends in its capacity as secured creditor of businesses that become insolvent, implies an implicit form of taxation on profitable businesses and a subsidy for unprofitable businesses.
49. This could explain in part the fact that banks prefer to refuse to lend to a risky client rather than increasing the interest rate charged to that client.
50. In this case, the implicit taxation and subsidy would be in the opposite direction of that mentioned in note 48, with a decrease in the rate (implicit subsidy) to profitable businesses and an increase in the rate (implicit taxation) to unprofitable businesses.

portfolio level. Some authors maintain that the transactional approach would be used more by large financial institutions that are less active in terms of SME loans.[51]

Small financial institutions would tend to favour a more relational approach.[52] The justification for this approach is based on the assumption that the intrinsic quality of the project to be financed can be determined from an analysis of the related forecasts, as well as from management expertise and the entrepreneur's motivation.[53] The relationship with the business in question would enable the financial institution to obtain information on the entrepreneur's motivation, which cannot be assessed exclusively on the basis of the company's financial data.[54] With the relational approach, financial institutions rely on the fact that the borrower will entrust management of all its bank accounts and the safeguarding of all its securities to the same bank branch. These other services would generate information providing for faster identification of the signs of potential default on the part of the borrower. For example, in managing the borrower's operating account or line of credit, the financial institution has access to firsthand information about the company's cash flow through an analysis of deposits and withdrawals. An analysis of the line of credit may also reveal a chronic financing problem if it is used on an ongoing basis. The financial institution may thereby quickly identify a deteriorating financial situation and intervene promptly in order to reduce follow-up costs. Research has documented various advantages to the relational approach.[55]

The role of security in the relational approach is much debated in the literature, and the effects of C-47 in terms of changing how business is done depend on the author's point of view. On the one hand, some authors maintain that financial institutions, as

51. See Berger A.N. and Udell G.F. (1995) ["Relationship Lending and Lines of Credit in Small Firm Finance." *The Journal of Business* 68, 351- 381] and Petersen M.A. and Rajan R.G. (1994) ["The Benefits of Lending Relationship: Evidence from Small Business Data." *The Journal of Finance* 49, 3-37]. One of the bankers interviewed confirmed this viewpoint.
52. Feldman R. (1997). *Small Business Loans, Small Banks and a Big Change in Technology Called Credit Scoring*. Minneapolis: Federal Reserve Bank of Minneapolis.
53. Voir Longhofer and Santos, 2000, op. cit.
54. Representatives of Robert Morris Association note that the quality of SME loans depends less on the company itself than the credit history of its owners.
55. In his review of the literature, Boot AWA. (2000). ["Relationship Banking; What Do We Know?" *Journal of Financial Intermediation* 9, 7-25] draws three conclusions. Firstly, research shows that the duration of the financial institution/borrower relationship has a positive effect on the availability of credit (Petersen and Rajan, 1994; Berger and Udell, 1995). Secondly, contract conditions improve for the borrower over the duration of the relationship: interest rates and security decrease. Thirdly, the easing of contractual conditions over time helps to increase the availability of funding for start-up companies (Petersen and Rajan, 1994; 1995). Still according to Boot, the relational approach would improve the exchange of information between the financial institution and the business, would allow for more flexibility, reduce agency costs, facilitate monitoring of bank security and could enable the financial institution to grant loans that are unprofitable in the short term but that are potentially profitable if the relationship with the business lasts long enough. According to Kremps É. (1999). ["Modes de financement des entreprises allemandes et françaises." *Bulletin de la Banque de France* 70, 99-121], establishing privileged relationships between German businesses and their financial institutions (Hausbank policy) promotes the granting of credit to SMEs (...) In case of financial difficulty, the financial institution plays an active role in helping to maintain operations by strengthening bank capital, cancelling or restructuring debts, and granting new credit. One of the bankers interviewed confirmed that his institution used that approach.

producers of information, are in an excellent position to assess the profitability of a project, but that if they hold too much security, they won't perform that assessment. Security and assessment would be substitutes for each other.[56] On the other hand, the security system accords priority to bank loans, and according to other authors, that would be an important factor in encouraging financial institutions to establish and maintain a relationship with borrowers. According to the argument developed by these authors, priority creditors would be motivated to support borrowers through difficult periods in order to help them improve profitability. Without that priority, financial institutions would have little incentive to provide additional credit in times of difficulty, and as a result, little incentive to build a relationship that helps them determine the value of such an additional investment. Therefore, the priority ranking of bank loans improves incentives for developing a stable relationship, which enables financial intermediaries to fulfill their role in analyzing project quality.[57] In addition, the financial institution could be more flexible with a business experiencing financial difficult (D5), if the latter uses other related services and other banking services that generate net revenue, even after writing off losses on bad debts.

If it turns out that C-47 promotes the relational approach,[58] this change may be accompanied by a shorter lending term (D3) for all SMEs. This decrease would, however, be linked to a financial institution's ability to assume increased follow-up costs, and more specifically, renegotiation costs. Generally speaking, it would be reasonable to argue that C-47 will serve to increase the value of information that enables financial institutions to more quickly detect businesses in financial difficulty. If security continues to play an important role in bank loans to SMEs, it is also reasonable to assume that bank lenders will want to include in the terms of financing contracts mechanisms to enable them to minimize claims that become super-priorities with C-47. There again, their ability to render these mechanisms effective will be conditional on the availability of sufficient information on the financial health of their clients. The cost to the financial institution of exerting control over employment decisions that determine the amount of unpaid wage claims could quickly become prohibitive, given the many factors affecting employment levels in addition to financial difficulties, particularly in the case of SMEs, where employees are generally less unionized and the employer therefore has more flexibility in labour relations.

Financial institutions and suppliers, in their respective credit decisions, would apparently function fairly independently. The quantity of information they each hold, given the costs incurred in uncovering information, is perhaps less than it could be. For

56. See Manove M., Padilla A.J. and Pagano M. (2001), op. cit. According to these authors, there would be more project assessments in jurisdictions where borrowers can limit the amount of security provided, and the average rate of default would be higher where lenders' rights are greater, because fewer projects would then be assessed.
57. This involves changing the relative importance and not eliminating security. In fact, the model by Longhofer and Santos (op. cit.) provides for understanding how the priority given to bank loans may be an important factor in encouraging financial institutions to establish and maintain relationships with borrowers.
58. This effect could be realized through a change of approach by the large financial institutions or by increased market share of SME loans for smaller financial institutions.

purposes of illustration, we can imagine that a discrete way for a business in difficulty to obtain financing without arousing the banker's suspicions and risking its line of credit would be to use more trade credit, even if that is more expensive. Such conduct, if it persists, is a pretty clear indication to the supplier that there are financial difficulties. If it is reasonable to assume that this signal may be clear to the supplier long before the financial institution realizes that its client is experiencing financial difficulty, such information is then of great value to the latter. As long as trade credit provides for increasing the value of the security held by financial institutions, the FI-B relationship can hardly be in a cooperative mode that allows for mutual credibility in the exchange of information. If C-47, in pushing financial institutions into a similar status as suppliers, encourages cooperation, the information available on either side could be of mutual use, thereby reducing the costs associated with information, and as a result, the costs of external financing. According to that assumption, the C.o.E.F. curve in Figure 2.3 would decrease; if that decrease is greater than the possible increases resulting from the preceding considerations, there could be an expansion of the area of the ZOF, and therefore, accessibility of credit.

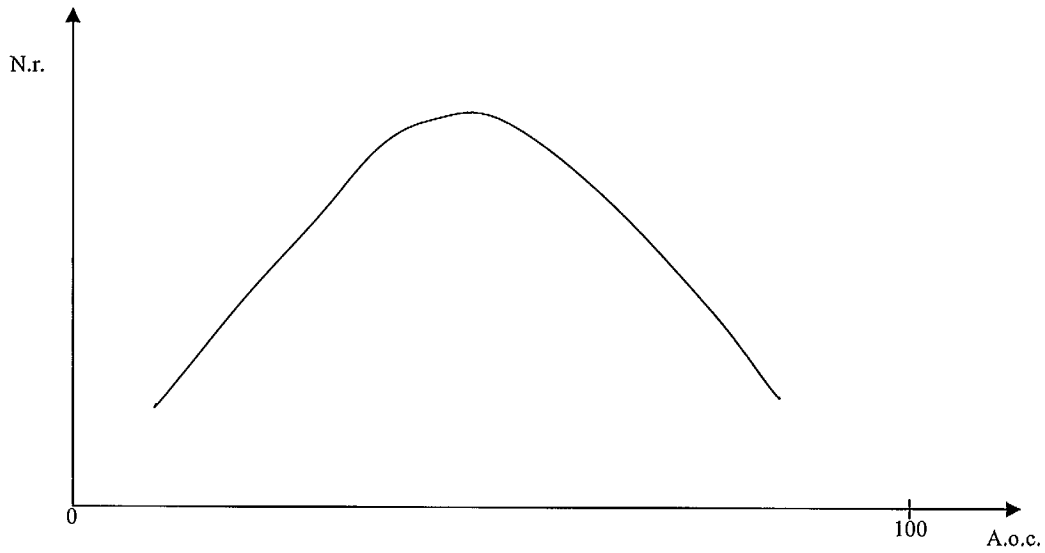
CONCLUSION

The effects of the legislation on access to capital are crucial. This research paper is intended to establish the terms by which we must consider the possible effects of the provisions of commercial insolvency legislation on SME access to credit from the two main sources of external financing: bank credit and trade credit. In light of the available literature and interviews conducted with bankers and SME executives, we have developed certain assumptions concerning the possible effects of the various legal provisions on the relative efficiency of SME access to credit.

It appears that the amendments introduced in C-47 will mainly have repercussions for bank credit. While it is impossible to reject the assumption that banks will react to the super-priorities of unpaid wages and unpaid contributions to pension plans by reducing the amount of loans they approve, this is not the only possible reaction. An increase in interest rates would enable banks to maintain their loan portfolios and generate income on other bank services provided to SMEs. In the longer term, the large banks could decide to adopt the relational approach to dealing with their SME clients. Given the increasing share of SMEs in the Canadian economy, this reaction cannot be rejected out of hand.

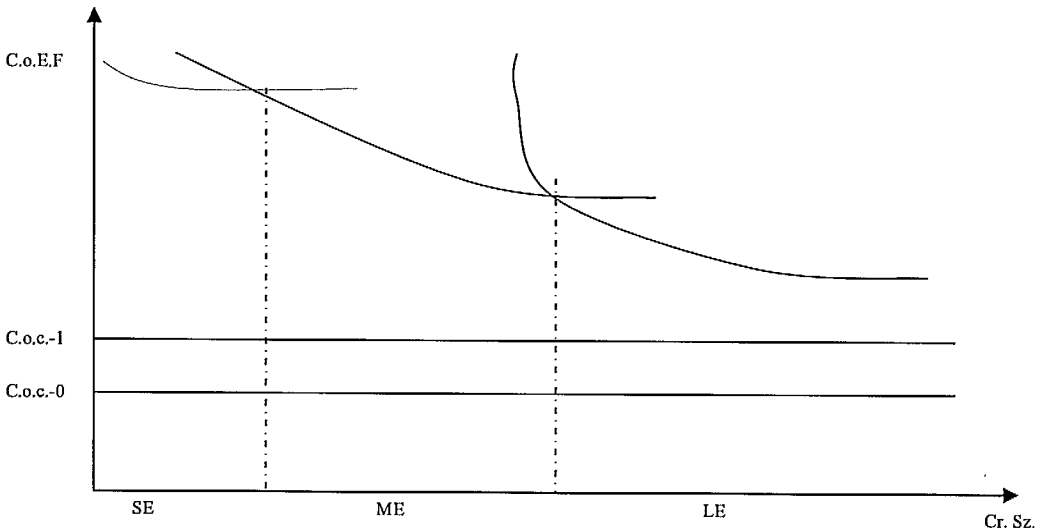
Finally, we found little support, either in the literature or among businesses, for the argument that the amendments to the *BIA* dealing with the rights of unpaid suppliers would have significant repercussions on trade credit.

Figure 2.1
Net return expected from an amount of external financing



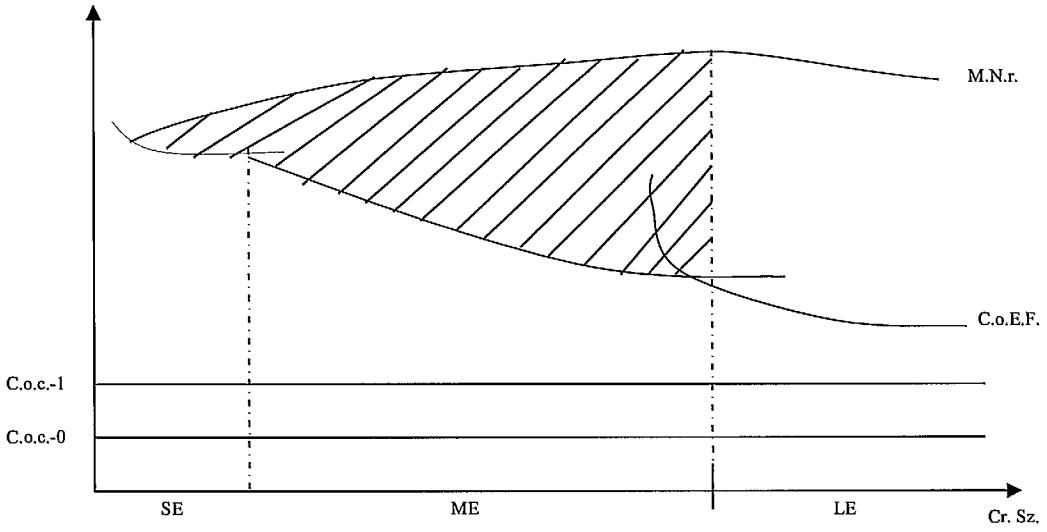
N.r.: Net return
A.o.c.: Amount of credit as a percentage of a given business size

Figure 2.2
Cost of external financing and cost of capital



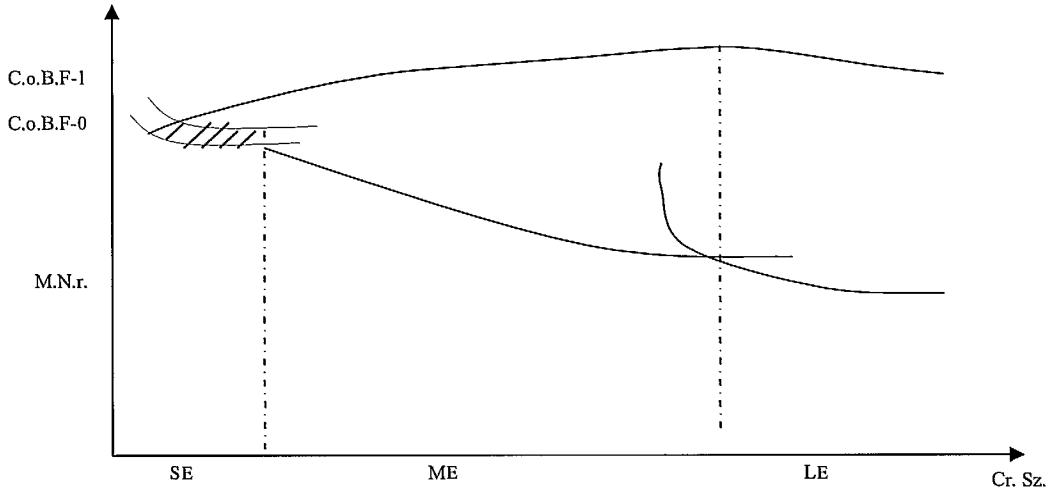
C.o.E.F. : Cost of external financing
C.o.c. – 1 : Cost of capital with intermediation
C.o.c. – 0 : Cost of capital without intermediation
Cr. Sz.: Dollar amount of credit maximizing net returns for different business sizes
SE: Small enterprises
ME: Medium enterprises
LE: Large enterprises

Figure 2.3
SMEs' zone of opportunities for bank financing



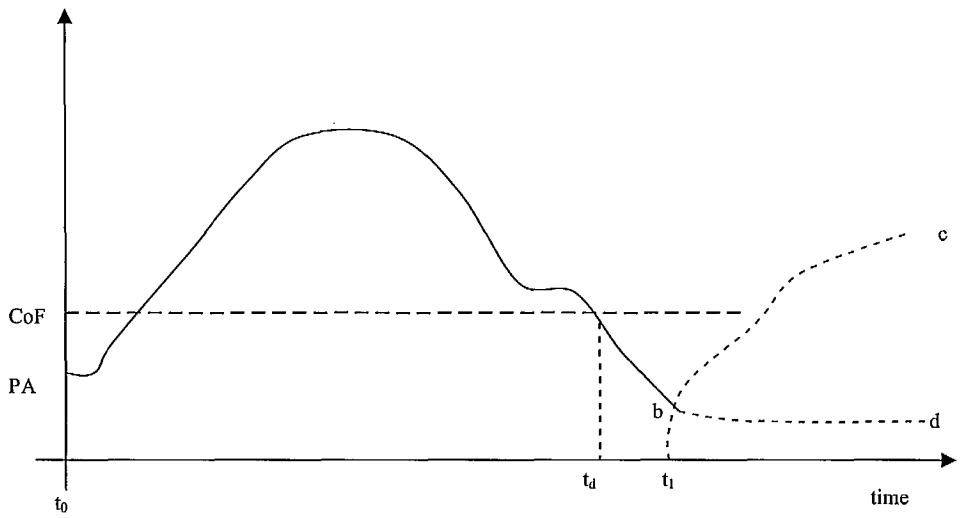
SE: Small enterprises
ME: Medium enterprises
LE: Large enterprises
Cr. Sz. : Dollar amount of credit maximizing net returns for different business sizes

Figure 2.4
SMEs' lost opportunities for bank financing due to
legal provisions shielding personal assets from creditors



C.o.B.F.-0: Cost of bank financing, based among other things on recourse to personal security
C.o.B.F.-1: Cost of bank financing in the absence of personal security

Figure 2.5
Scenario of financial difficulties



CdF: Cost of financing:
PA: Profitability achieved: ———
Profitability expected: ----------
t_0: Date of investment
t_d: Date of onset of financial difficulties
t_1: Date when the lender reassessed the quality of the borrower's credit

Figure 3.1
Links between the corollaries and the variables characterizing a credit transaction

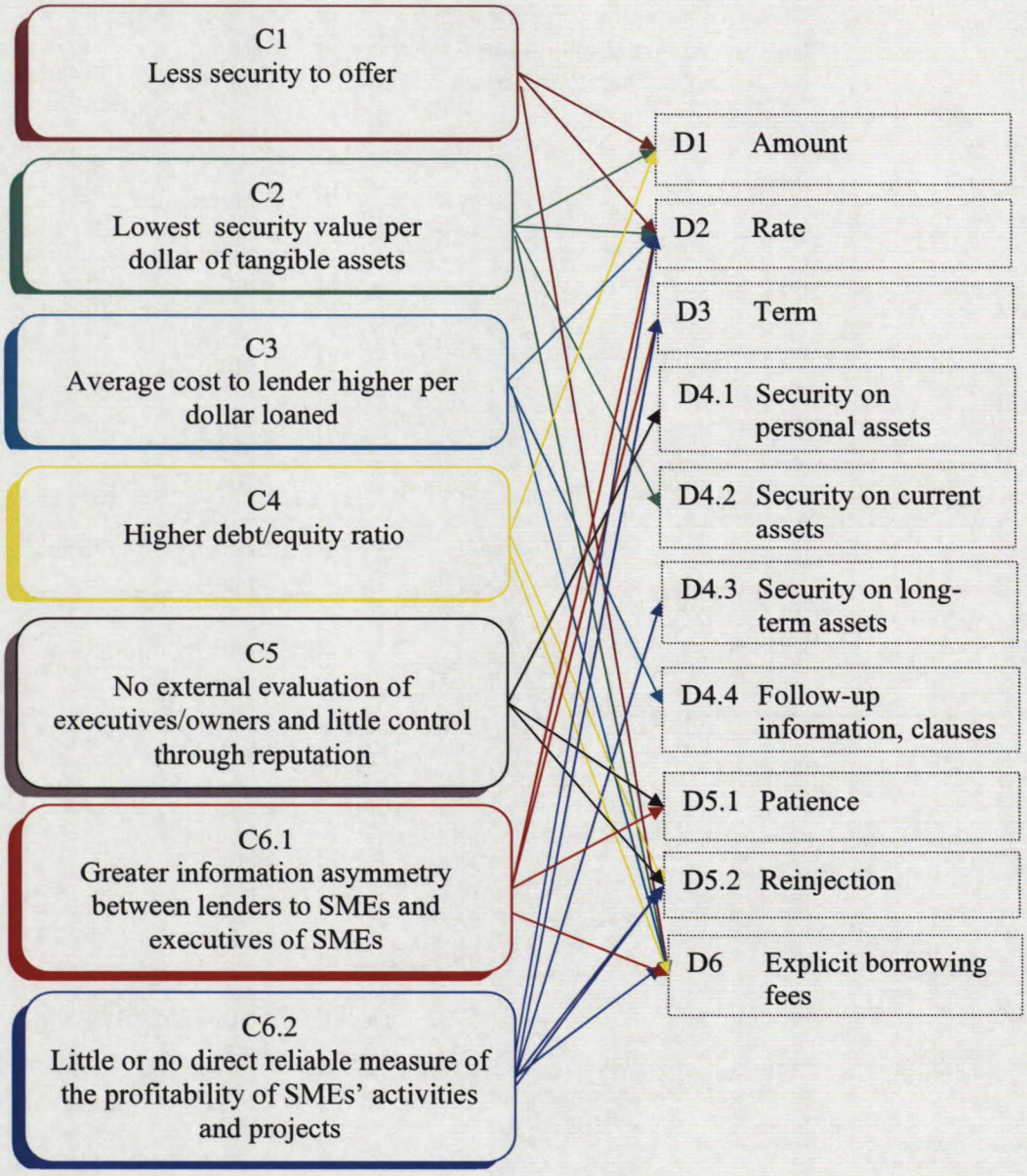


Figure 3.2
Links between financial institutions' revenues and costs, and the variables characterizing a credit transaction

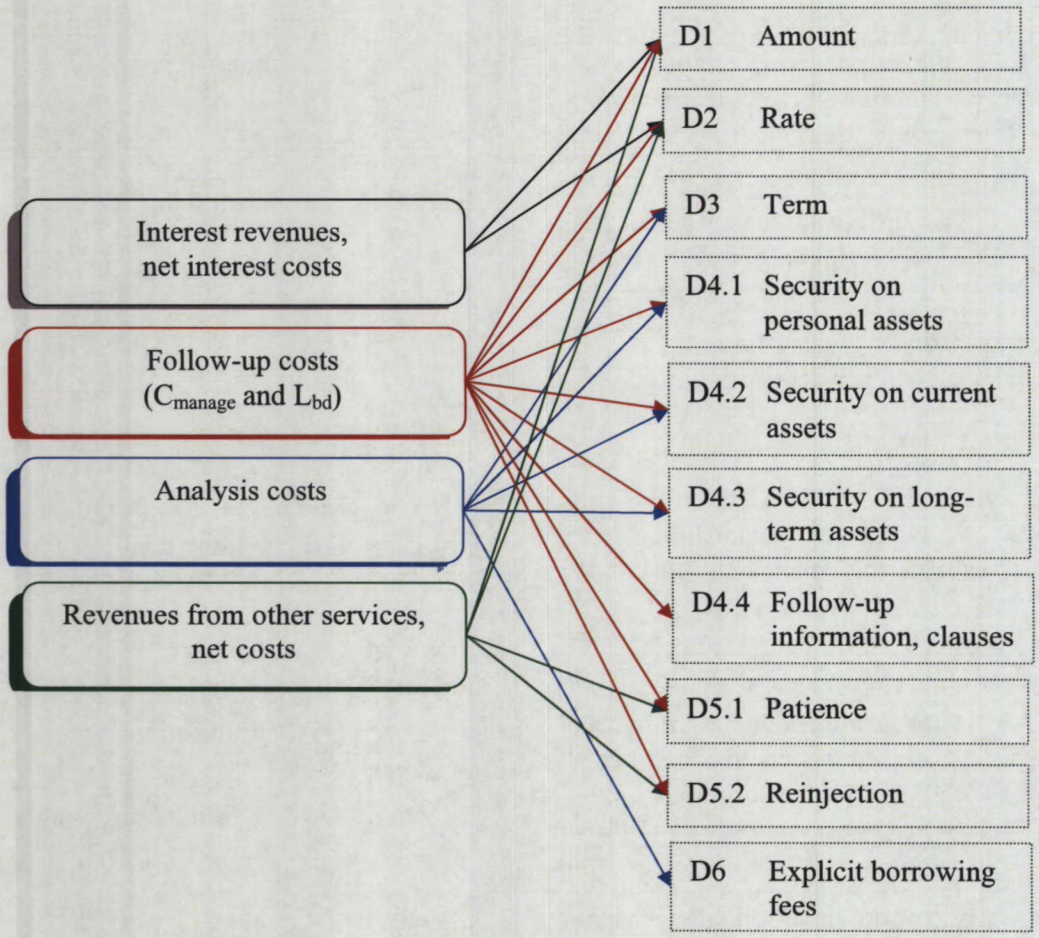


Figure 3.3
Links between suppliers' revenues and costs and the variables characterizing a credit transaction

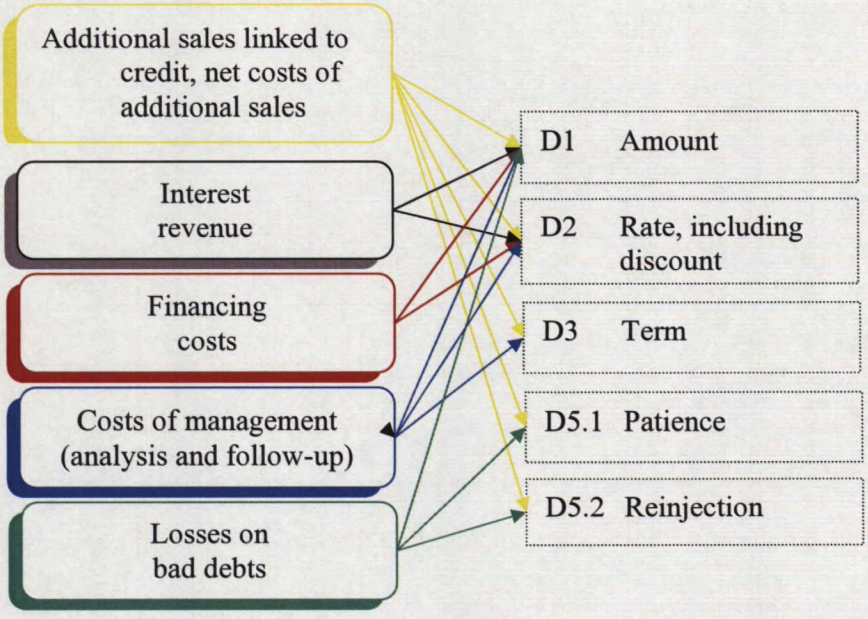
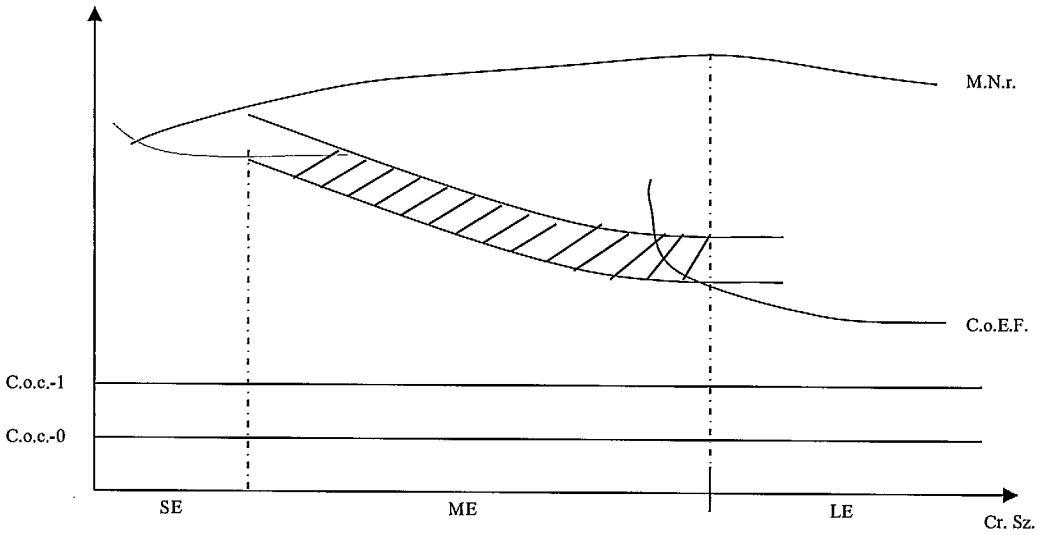


Figure 4.1
MEs' lost opportunities for bank financing



SE: Small enterprises
ME: Medium enterprises
LE: Large enterprises
Cr. Sz.: Dollar amount of credit maximizing net gain for different business sizes

Table 1
Variables characterizing a credit transaction

Number	Description of variable	Direction of relationship to access to credit
D1	Amount of loan	+
D2	Interest rate	-
D3	Term (demand, short term, long term)	+
D4	Requirements and constraints	-
D4.1	Security / personal assets	
D4.2	Security / current assets	
D4.3	Security / long-term assets	
D4.4	Follow-up information, contractual terms...	
D5	Lender flexibility	+
D5.1	Patience if delay in payment	
D5.2	Agreement to inject new funds	
D6	Explicit borrowing fees other than D2	-
D7	Transaction costs, other than D6	-

Table 2
Characteristics unique to SMEs and their corollaries for financing

Characteristics unique to SMEs		Corollaries for financing
1. Fewer tangible assets	C1	Less security to offer
2. Less-diversified production value	C2	Less security value per dollar of tangible assets
3. Smaller scale of investment projects and lower value of requested loans	C3	Given that several of the lender's costs are fixed, average cost to the lender is higher per dollar loaned, hence an incentive to use less costly "technology"
4. Prohibitive cost of external equity financing	C4	Higher debt/equity ratio
5. Concentration of ownership of the business	C5	Little external evaluation of SME managers and indirectly, little control through reputation
6. Simplified organizational structure	C6.1	Greater information asymmetry between lenders to SMEs and executives of SMEs
	C6.2	Given that the production and verification of financial data entails fixed costs, little or no reliable direct measures of the profitability of SME activities and projects

APPENDIX A

FACTORS PERTAINING TO THE PROVISION OF CREDIT TO SMEs BY FINANCIAL INSTITUTIONS AND SUPPLIERS

By
Sébastien Deschênes

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1. Introduction

Commercial credit enables businesses to exceed the limits imposed by the reinvestment of profits and the issuing of new shares. Its importance is illustrated by the fact that in 1993, nearly 50% of the assets of American SMEs were financed by debt (Berger and Udell, 1998). More specifically, credit provided by financial institutions and suppliers represented 27% and 16% respectively of the assets of SMEs (Berger and Udell, 1998). In the Canadian context, the study conducted by St-Pierre et *al.* (2002) of more than 2 000 SMEs reveals that 45% of them had applied for a line of credit, and 28% had applied for medium- or long-term financing in the preceding three years. These numbers highlight the importance of external sources of financing for SMEs.

Financial institutions provide credit to SMEs by acting as financial intermediaries between economic agents with a cash flow surplus and those wishing to borrow money. Their remuneration takes the form of fees for examining files and the difference between the rates applied to loans and deposits. The application is analyzed based on credit risk and expected return. A higher risk must be compensated for with a higher interest rate, more restrictive credit conditions, additional security or a combination of these elements. Suppliers are an alternative source of external financing for SMEs. The provision of credit is in part determined by financial capability and business strategy.

The first section of this appendix deals with the provision of bank credit, the second with how banks manage the files of businesses in financial difficulty, and the third with the provision of credit by suppliers.

2. The financial institution as source of credit

Financial institutions that provide credit to businesses are subjected to cyclical risks tied to economic cycles and to the more specific risk arising from the particular characteristics of each debtor business. As an example of the impact of economic cycles, the Schwarz article (2004) shows that following the bursting of the technological bubble, the revenues of financial institutions associated with their commercial credit activities decreased significantly between 2000 and 2002 (North America: -20%, Asia Pacific: -18% and Europe: -6%). Inversely, during the economic upswing of the last five years, European and North American financial institutions have wiped out their losses and are now posting an upward trend, compared with 2002, in their revenues associated with credit to business. Asian financial institutions, meanwhile, have almost made up for their lost ground.[1]

With a view to maximizing profitability, financial institutions gear their development towards the most profitable sectors. Based on this premise, the supply of bank credit to SMEs is determined by that market segment's attractiveness compared with the other activities of financial institutions. Schwarz (2004) highlights the strong potential for profitability of the

1. Asian under-performance can be explained by the weakness of the Japanese banking industry.

small- and medium-sized business segments. According to his study, these businesses generate a return on equity of 21% and 15% respectively, compared with 7% for services provided to large businesses.[2] [3]

2.1 The impact of bank characteristics on the provision of credit to SMEs

2.1.1 The competitive environment

The competitive environment acts on the conditions of credit provided to SMEs. First, in terms of access, we see that the percentage of approval of credit applications varies across regions of Canada. As for lines of credit, the highest approval rate is 89.4% in Manitoba and Saskatchewan and the lowest is 70.4% in British Columbia and the territories (St-Pierre et *al.*, 2002). As for applications for long-term financing, the approval rate climbs to 94.6% in the Atlantic provinces and hits a minimum of 75.2% in Ontario (St-Pierre et *al.*, 2002).

Table 1. Approval rates for credit applications based on region of Canada

	Percentage of applications approved based on the location of the business					
Type of loan	Atlantic	Quebec	Ontario	Man/ Sask	Alberta	British Columbia and Territories
Line of credit	88.9%	86.0%	76.9%	89.4%	72.5%	70.4%
Medium- and long-term loans	94.6%	93.7%	75.2%	84.5%	80.3%	79.5%

Source: St-Pierre et *al.*, 2002

With the exception of the province of Quebec, the percentage of credit application approvals is generally higher for the regions of Canada that do not contain a large metropolis (Toronto, Vancouver, Ottawa, Calgary). Indeed, the approval rate for credit applications is higher for the Atlantic and Manitoba/Saskatchewan regions than for Ontario, Alberta and British Columbia. Based on that, weaker competition is not a disadvantage to SMEs in urban and rural areas compared with those in large centres. In addition, the regression calculated by St-Pierre et *al.* (2002) indicates that location (large metropolis, urban, rural) is significant for explaining the approval rate for credit applications.

In terms of conditions of credit, research suggests that interest rates assumed by SMEs are higher in markets where there is less competition (Hannan, 1991; Berger and Hannan, 1997;

2. Small businesses have sales under 25 million American dollars, medium-sized businesses are defined by sales of between 25 and 250 million American dollars, while large businesses post sales higher than 250 million American dollars.
3. This lower profitability can be explained by overestimated cross-selling and less aversion to the risk of credit given the potential impact on a poorly diversified portfolio. (Schwarz, 2004).

Corvoisier and Groop, 2002 *in* Berger *et al.,* 2007). Evidence gathered from account managers confirms that this practice exists among certain financial institutions. Extending these results to other variables of a credit transaction suggests that contract terms are less advantageous for the borrower where there is a lack of strong competition.

2.1.2 The size of the lender and the technology used

Berger et *al.,* (2001) put forward the assumption that there is a negative relationship between the size of financial institutions and their propensity to lend to SMEs. Their arguments were the high cost of decentralized management of files and the transactional approach to the client. The results of their study, conducted in Argentina, do not invalidate the assumption that large financial institutions would be less sympathetic to lending to SMEs. In an American context, assuming that loans under a million dollars are in large proportion granted to SMEs, financial institutions appear to have been less interested in this market in the last half of the 1990s. In fact, according to Ely and Robinson (2001), the share of their assets devoted to this market niche dropped by 8.75% between 1994 and 1999, going from 13.03% in 1994 to 11.89% in 1999. This is a surprising observation given the profitability of loans to SMEs, as demonstrated by Schwarz (2004). Combining the results of the two abovementioned studies, the higher profitability of the small loans market segment could be explained by a less competitive market.

Table 2 Variation of the ratio of small commercial loans to the total assets of American banks between 1994 and 1999 (American dollars)

	All banks	**Banks with assets under 300 million**	**Banks with assets between 300 million and 1 billion**	**Banks with assets between 1 billion and 5 billion**	**Banks with assets over 5 billion**
Loans under $100,000	-20.57%	-16.15%	-10.67%	-10.52%	-4.73%
Loans between $100,000 and $250,000	-5.80%	7.84%	8.59%	20.05%	-10.11%
Loans between $250,000 and $1,000,000	-1.77%	22.12%	10.44%	19.60%	-8.09%
All loans under $1,000,000	-8.75%	-0.03%	3.52%	10.87%	-7.65%

Source: Ely and Robinson (2001)

Upon closer analysis of the statistics presented by Ely and Robinson (2001), it appears that the large banks (assets above five million American dollars) reduced the proportion of their assets held in the form of small loans, while the medium-sized banks (assets between one and five billion American dollars) increased it. However, we cannot conclude from those figures that

the large American banks are withdrawing from the loans to SMEs market, because in reality, between 1994 and 1999, their share of the market went from 47% to 51%. It can therefore be said that growth in loans to SMEs is lower than that posted by financial institutions' other sectors of activity. If the American context can be extrapolated to Canada, Canadian SMEs may have seen their access to bank financing decrease, given the relative concentration of the banking sector.[4]

Table 3 Market share of small loan segments based on bank size in the United States (American dollars)

Size of bank based on assets	**1994**	**1999**
Less than 300 million	28%	23%
Between 300 million and 1 billion	13%	13%
Between 1 and 5 billion	12%	12%
More than 5 billion	47%	51%

Source: Ely and Robinson (2001)

Large banks' increased market share in the small commercial loans sector, despite a decrease in the relative importance of this market segment, can be explained in part by consolidation in the banking sector in the United States, which enables merged banks to offer larger loans while maintaining healthy diversification.

Traditionally, large financial institutions would adopt a transactional approach to their loan activities with SMEs, while the smaller ones would tend more towards a relational approach (Berger et *al.,* (2007). For Ferrary (2003), the importance of taking into account the characteristics of the management team when dealing with SMEs means that the transactional approach would be less effective because it would be geared too much toward quantifiable financial information. The need to consider qualitative information would mean that business loans constitute the least automated sector of activity (Pinckney, 2006). Large financial institutions would have difficulty operating on a relational approach because it can be hard for them to circulate qualitative information within the organization (Berger et *al.,* (2001).[5] This is why they favour the use of quantitative financial information (Cole et al., 2004) *in* (Berger et *al.,* (2007), which is less subjective and more easily shared within the organization (Berger et *al.,* (2007). The result is that large financial institutions would tend to develop their SME credit activities by according more weight to security compared with smaller financial institutions (Berger et *al.,* (2007). The recent work by Berger et *al.,* (2007) is very critical of the suggestion that large financial institutions would be disadvantaged in serving the SME market.[6] They conclude rather that large institutions devote a smaller share of their assets to this market, have less risky portfolios of loans to SMEs, and require a lower risk premium than their smaller

4. The country's seventh bank (Laurentian Bank) had assets of 17 billion.
5. Unquestionably, foreign financial institutions would not be very active or effective in granting loans to small businesses given the difficulty of establishing a relational business relationship.
6. The superior technology used by large financial institutions would compensate for the less developed relational aspect.

competitors. In the final analysis, these authors do not manage to establish that either category of financial institution has an advantage in terms of loans to SMEs. However, even if the performance of large financial institutions is comparable to small ones for the services-to-SMEs segment, their operating procedures do not allow for allocating resources to the entrepreneurs presenting the best projects (Manove et *al., 2001).*[7] This tends to favour the entrepreneurs with the most security to offer.[8]

2.1.3 The lender's financial situation

The financial situation of the financial institution could also have an impact on its ability to lend to SMEs and to assume risks. For a financial institution with less solid financial footing, providing loans to SMEs would be less attractive because it would increase the risk in the eyes of the regulatory authorities. Berger et *al.,* (2001) tested this hypothesis with a sampling of Argentinean financial institutions, but could not conclude that there was any rationing of credit by financial institutions in difficulty. On the other hand, SMEs would tend to avoid financial institutions experiencing financial difficulty due to the importance they accord to the banker/company relationship for obtaining new financing (Berger et *al.,* 2001).

Lenders' financial situations should not be a very great source of concern with regard to Canadian SMEs' access to credit. In fact, the six largest Canadian banks all have credit ratings of A or higher. The seventh largest bank is rated triple B.

Table 4 Credit ratings of some Canadian chartered banks

	Standard & Poor's	**Dominion Bond Rating Service**
Royal Bank	AA	AA
Toronto Dominion Bank	A+	AA
Bank of Nova Scotia	AA-	AA
CIBC bank	A+	AA (low)
Bank of Montreal	AA-	N/A
National Bank	A	AA (low)
Laurentian Bank	BBB	BBB

Source: 2006 annual report of each bank

The financial situation of credit unions is presented differently, as each local institution must render accounts. Even if the network as a whole indicates a solid financial situation, that may not be the case for some of its components, and a local credit union in financial difficulty

7. The article by Voordeckers and Steijvers (2006) presents results suggesting that the value of security would not affect the effort that goes into reviewing credit applications. These results therefore contradict those of Manove et *al.,* (2001).
8. This should not be seen as suggesting that there is opposition between the quality of projects and the security provided. On the contrary, an entrepreneur who agrees to provide security is signalling to the bank that he or she is confident about the company's success.

will be less likely to make commercial loans. However, because these cooperatives are part of networks, this problem is largely resolved by sharing the risk among all member unions.

2.2 The impact of the relationship between the banker and the business on the provision of credit to SMEs

As seen in Section 2.1.2, the literature contrasts two ways to approach lending activities to SMEs. In reality, financial institutions adopt mixed strategies, with one approach predominating. Several studies seem to demonstrate the effectiveness of adopting a relational approach to making commercial loans. The results indicate that the length of the relationship reduces the costs of credit (Berger and Udell, 1995; Harhoff and Körting, 1998; Degryse and Cayseele, 2000) and allows the borrower to benefit from more stable interest rates throughout the various phases of the economic cycle (Berlin and Mester, 1999; Ferri and Messori, 2000) *in* (Berger et *al.,* (2007). In addition, the Boot article (2000) presents some factors that facilitate granting credit where there is a banker/company relationship. This includes knowledge of the borrower's business, modulating the risk premium to the length of the business relationship, the profitability of other banking services, and a reduction in information asymmetry.

The advantage of the relational approach can be explained by a reduction in information asymmetry. Knowledge of the SME's affairs is facilitated if all of its business is conducted with the financial institution reviewing the credit application. The institution is thus in a better position to evaluate its credit risk, and can share the cost of gathering information among the various services provided to the SME (Petersen and Rajan, 1994). The most useful sources of information are the daily operations account and the line of credit. Analyzing the credit line can reveal a cash flow problem if it is used sporadically, or a chronic financing problem if it is used on an ongoing basis. It is therefore possible for the financial institution to identify a deteriorating financial situation. Likewise, the daily operations account gives a picture of receipts and expenditures. This is a way to validate the sales figures and monitor purchasing. It would also be possible to identify stripping of capital, i.e., significant withdrawals by the owner. Similarly, if the owner's personal banking is also conducted with the financial institution, this constitutes an invaluable source of information for assessing his or her lifestyle, financial health and quality of credit. These factors all have an impact on the value of the SME and on the personal security provided by the entrepreneur. The reality is that the value of an SME often rests with the know-how of the owner-operator, whether it be client contacts or expertise with regard to production (Ferrary, 2003). For example, if the owner became incapacitated or died, the value of the SME and the personal security could diminish sharply.

Another advantage to a banker/company relationship is the fact that the financial institution will probably assess the credit application with a view to the profitability of the other services it provides and long-term recurring revenues. In addition, it will consider the possibility of the loan being renewed, and increased business with the company whose file is being assessed (Boot, 2000). These considerations will have a higher marginal effect on the decision to approve credit if there is weak competition in the banking market (Petersen et Rajan, 1994) or if there is little chance of a change of financial institution.

For Lane and Quack (2001), British lenders would tend to be more geared towards transactions, and tend to avoid risk taking, while their German counterparts would be the opposite, more inclined to establish a long-term relationship and to seek to diversify the risk. It is also interesting to note that in Germany, there are differences between the way banks, mutual savings banks and financial cooperatives operate, with banks favouring a more transactional approach. It is possible that similar distinctions can be observed between Canadian banks and credit unions, as suggested by credit unions' higher approval rate of loan applications. According to the study by St-Pierre et *al.* (2002), credit unions approve 85.8% of applications for lines of credit, compared with 80.4% for banks. The difference is even more marked for applications for medium- to long-term financing, as the approval rates of credit unions and banks are 93.6% and 83.2% respectively.

In recent years, several financial institutions have promoted the idea of strengthening the banker/company relationship with account managers. They have had to change their personnel management practices in order to accomplish this. According to Ferrary (2003): 1) they provided more decision-making authority in terms of the amount of credit that could be accorded without higher approval, 2) they made account managers accountable for bad debts and 3) they encouraged less staff turnover by increasing salaries, varying compensation and recruiting personnel with less market value.

The new requirements of financial institutions mean that account managers must integrate professional life with private life (Ferrary, 2003). This proximity to the borrower may raise problems of independence. The costs associated with the account manager's empathy for a borrower are sometimes evident when the debtor is experiencing financial difficulty. The risk for the financial institution stems from the possibility that the account manager will be too quick to make concessions in the contractual terms, or advance additional funds inappropriately (Boot, 2000). Even without the banker/company relationship, research shows a favourable bias on the part of account managers who have already agreed to a loan to approve another application from the same business (Brody and Kimberley, 1998).

2.3 Assessing a loan application: probability of repayment

2.3.1 Analyzing the going concern

Assessing a company's financial ability involves a historical review (analysis of financial statements from previous years) and some forecasting (analysis of the business plan and financial projections).

Before analyzing the financial information related to a business applying for a loan, designated hereinafter by the expression "potential client", the account manager assesses the integrity, the credit practices and the management skills of the owner/operator of the business in order to determine the level of credibility of that financial information. Where there is no banker/company relationship established over several years, the account manager depends on the information obtained through a meeting or meetings with the owner/operator and available

references. In terms of references, the account manager will want to contact the credit bureau to learn about the potential client's payment history. The account manager will also contact the financial institution that was previously involved with the potential client and probably some of its major suppliers. From the point of view of borrowers wanting to switch financial institutions, this communication reduces the new financial institution's mistrust.[9] The study by Jappelli and Pagano (2002) shows that access to credit and loan losses are lower in countries where lenders exchange information.

Once the credibility level of the financial information has been established, the account manager undertakes the actual analysis. The financial information helps the lender to assess the potential client's financial situation. A number of research projects, including those of Altman (1968) and Ohlson (1980), submit that an analysis of accounting information often provides for predicting whether a company will experience financial difficulty. On that front, the lender is interested in the following critical variables: 1) profitability, 2) sales, and 3) operating funds.

The banker is not only interested in the potential client's past. He or she will often ask the client to provide projections for its future financial situation. To be credible, these projections must take into consideration the entrepreneur's business plan, i.e., the impact of the use of the borrowed funds must be reflected in the document presented to the financial institution. Careful preparation of this financial information is important for showing that the application is serious.

2.3.2 Security

Another factor that promotes the obtaining of a loan is the possibility of the SME providing assets as security. Security reassures the lender in two ways. Firstly, it serves to reduce losses in case of liquidation, and secondly, it decreases the entrepreneur's propensity to adopt opportunistic behaviour to the detriment of the bank (moral hazard) (Chen, 2006) and (Bertocco, 2003). Where there is security, financial institutions would be less scrupulous with regard to business and financial risk (Ferrary, 2003). According to Voordeckers and Steijvers (2006), lenders would tend to demand security more when dealing with family-run businesses.[10] On the contrary, when competition between financial institutions is strong, or there is a well established banker/company relationship, there would be fewer requirements for security (Voordeckers and Steijvers, 2006).

An entrepreneur wanting to make a more credible credit application should send a clear signal with regard to the effort he or she will deploy for the success of the project and the

9. Reciprocity is essential to the functioning of exchanging references between financial institutions. Without it, no lender would bother lauding the merits of good debtors, because not doing so would mean increased profitability from keeping captive debtors because of too many concerns on the part of other financial institutions. In addition, it could draw an economic rent through a higher operating spread given the lack of alternatives for the debtor. However, by refusing to cooperate with other lenders, this financial institution would quickly be excluded from information sharing, which would mean that assuming a higher risk of adverse selection.
10. By acting in this way, financial institutions seek to protect themselves against a family partnership that may want to keep an ineffective management team in place, or against the transfer of powers to heirs with less demonstrated ability to manage the business.

confidence he or she has about its potential for success. To do this, he or she may agree to provide personal security or to inject new funds. The financial institution will interpret this signal as a guarantee that the entrepreneur's inside information about the company's future is positive (Joyce and Woehrle, 2001). The additional contribution of capital also attenuates the financial risk by limiting the increase in the debt ratio.

AN SME whose risk profile is too high to satisfy the criteria of a financial institution may try to obtain a government bond. In Canada, through an interest premium of 1.75%, the *Small Business Loans Act* allows for providing a government bond to the financial institution covering 90% of the value of the debt. The eligibility criteria are relatively restrictive, however. Among other things, the amount of the loan may not exceed $250,000 and the company may not have revenues over 5 million (Riding and Haines, 2001). The program is nevertheless very popular, and the outstanding volume of loans covered by the program exceeded 10 billion in 1997 (Riding and Haines, 2001).[11]

3. Financial difficulties and insolvency of the business

3.1 Identifying the causes

As indicated in Section 2.3.1, there are advance indicators that a debtor company's financial situation is deteriorating. The account manager is on the lookout for indicators of such a development. The justification for constant monitoring of files stems from the fact that reducing the delay in diagnosing the problem increases possibilities for intervention, thereby potentially reducing the losses that must be assumed by the financial institution.

Behrens (1983) divides into five categories the reasons that a financial institution would end up with loan losses: 1) deficiencies in terms of managing the business, 2) too-rapid growth of the debtor business, 3) economic cycles, 4) fraud, and 5) stripping of capital by the entrepreneur.[12] The largest financial institutions would be particularly vulnerable to deficiencies

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11. On average, these loans are much more risky than those comprising a financial institution's regular portfolio because the lowest rate of bad debts exceeds 3%, and rises to 7% for loans whose value is over $200,000, as demonstrated by the following statistics:

Amount of loan	Rate of default: April 1993 to December 1995
Less than $25,000	3.4%
$25,000 to $50,000	5.2%
$50 000 to $75,000	6.0%
$75,000 to $100,000	5.1%
$100,000 to $150,000	5.7%
$150,000 to $200,000	6.7%
More than $200,000	7.0%

12. In his volume, Behrens (1983) presents statistics on the frequency of these different reasons and the volume of losses associated with them in the United States. Although there are a few decades old (1971), we should indicate that 61% of bank losses could be attributed to management deficiencies, 15% to too-rapid growth, 10%

in management, while the smallest would tend to suffer more losses from fraud. These conclusions are in keeping with a transactional approach by the large financial institutions, as they place less emphasis on operations and more on security. As for fraud perpetrated by the clients of small financial institutions, this can be explained by a relational approach whereby the account manager who is empathetic to the debtor is less meticulous about monitoring the file, and closes his or her eyes to certain troubling elements.

Following a diagnosis of the causes of the financial difficulties, the lender establishes a strategy for handling the file. In addition to considerations unique to the file, the manager takes into account the institution's reputation in the community, because the economic players in a region or industry are in a position to observe how it deals with a business in financial difficulty. A financial institution that demonstrates leniency towards problem debtors will attract the sympathy of borrowers. Knowing that it is possible to obtain concessions in the event of financial difficulties, borrowers will be more inclined to ask for credit from a financial institution with a reputation for tolerance. The latter may thereby be able to gain market share. However, the reverse side to such a policy is that it can compromise long-term profitability, the lender's largesse not being in any way a guarantee that the business will survive. As a result, if the business deteriorates, the financial institution could lose more than if it had acted less tolerantly. Tolerance also leads to indirect costs: other borrowers will demand the same flexibility with regard to the financial health of their businesses (Bester, 1994) and the quality of new credit applications could deteriorate, because there will be more entrepreneurs with doubts about the profitability of their projects approaching the financial institution.

Once a financial institution has established its "policy of tolerance", it will organize the monitoring of files along one or the other of the schools of thought described in the literature. The first involves leaving the file in the hands of the account manager who is already involved in the file, and the second, transferring it to a team that specializes in working with businesses in financial difficulty.

3.1.1 The generalist account manager managing the files of businesses in financial difficulty

Keeping the account manager on the file when there are financial difficulties can be defended by more a direct accountability that is likely to increase selectivity when assigning files. In addition, managing these files is an inherent component of commercial credit. It is therefore beneficial for the staff involved in this area of activity to know how to deal with the files of businesses in financial difficulty (Behrens, 1983). Specific knowledge of the debtor's business could also turn out to be a very important asset for identifying the most appropriate solutions.

There are two important problems with this approach: the possibility that the account manager is too conciliatory with the debtor due to a lack of independence, and the lack of specialization on the part of the account manager, which is likely to cause him or her to make

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resulted from the economic situation or uncontrollable circumstances, 8% from fraud and 6% from stripping of capital by the entrepreneur.

mistakes based on inexperience. This second gap will be discussed in Section 3.1.2 as a point in favour of transferring the file to a team of specialists.

The risks associated with the lack of independence on the part of account managers are often evident when a debtor is grappling with financial difficulties. In fact, an account manager could be too lenient about concessions to the contract terms, or advance additional funds inappropriately (Boot, 2000). Beyond the banker/company relationship, research has demonstrated a favourable bias on the part of account managers who have already approved another application from the same business (Broody and Kimberley, 1998). According to these authors, there are three factors that would increase the risk: 1) frequent assessments or decisions are made on the action to be taken, 2) the decision maker is responsible for past decisions, and 3) the previous decision is perceived as being irrevocable.

3.1.2 Files are transferred to a team specialized in managing the files of businesses in financial difficulty

According to Behrens (1983), the advantage of transferring the files of businesses in financial difficulty stems mainly from the expertise of those who will be involved in the file, while the most obvious disadvantage is the difficulty of these specialists in interacting directly with the debtor. The expected expertise includes participating in company turnaround, the ability to seize and resell security and a good knowledge of laws and practices in the area of commercial insolvency.

In reality, financial institutions tend more to favour mixed solutions. If the account director remains responsible for the file, he or she may be assigned the consultant services of specialized staff. On the other hand, if responsibility is transferred, the account manager who was previously responsible will continue to interface with the debtor and share his or her knowledge of the debtor's business with the team specializing in commercial insolvency.

Regardless of the choice of personnel assigned to manage the file, the challenges will remain the same: 1) help the debtor to manage its current affairs, 2) implement a reorganization by renegotiating the contract, 3) realize and liquidate the security, and 4) defend the interests of the financial institution throughout the insolvency procedures. The following sections will deal one by one with the components of a financial institution's intervention with a debtor in financial difficulty.

3.2 Assistance at the management level

The account manager who observes that a borrower is likely to experience financial difficulty will seek to aid the client in returning to profitability and to protect the interests of the financial institution by intervening to minimize losses on the debt. A prerequisite condition to this assistance is the conviction that the manoeuvring room thus provided will be used to improve profits and not for the entrepreneur's economic gain. To avoid such situations, the financial institution will want to form an opinion as to the integrity of the management team and

its willingness to turn the business around. On that last point, it may consider the company's capacity to regain profitability (Longhofer and Santos, 2000) as well as the entrepreneur's expectations of gain (Manove et *al.,* (2001). If the probability of a return to profitability is too low or if it appears likely that the creditors will appropriate all of the gains, the entrepreneur will have no desire to improve the financial health of the company. According to the agency theory, in the absence of an expectation of gain, entrepreneurs will tend to maximize the risk with a view to exceptional returns that will enable them to withdraw some value from their ownership shares. Another possibility involves consuming the company's assets for personal use.

Once the financial institution has decided that it can have confidence in the entrepreneur, its motivation for helping will be greater if it has a well established relationship with the business, if the other services provided are profitable and/or if the value of the security is lower than the value of the loan (Riding and Haines, 2001 and Chen, 2006). Where the financial institution holds privileged claims, its motivation to help the debtor will be even greater because the chances of its investment paying off are higher than if it was only an ordinary creditor that would probably only benefit very slightly from an eventual reorganization (Longhofer and Santos, 2000).

The financial institution will generally avoid giving direct advice so as not to be associated with the company management, thereby potentially assuming responsibility towards other creditors (Deschamps, 1990). It will instead suggest that the company in difficulty hire a consultant to help it at the management level. It will be sure not to intervene in defining the mandate, and the consultant will be accountable to the debtor's management for the work. Its help will therefore consist of referring qualified professionals and allowing the business the time to put in place the consultant's recommendations.

Less commonly, the financial institution will want to hire the consultant itself so the latter will be accountable to it. This happens when it wants to be informed of the company's day-to-day management. By acting in this manner, the financial institution could become responsible to the other creditors for transactions that take place once the consultant begins work. This could nevertheless be an attractive strategy if the financial institution wants to maintain operations while ensuring close control.

3.3 Implementing a reorganization by renegotiating the terms of the contract

When a business is economically viable but is experiencing difficulties stemming either from a lack of financing or the inability to deal with the cost of credit, intervention by the accounts manager should be focused on a reorganization, either of the structure of capital, or the conditions of financing.

A borrower that is incapable of honouring a contractual clause or meeting a deadline is in breach of contract. This situation gives negotiating power to the lender, allowing it to bring the terms of the contract up to date to reflect the new reality. There are three possible responses in case of derogation: 1) acceptance without changing the contract terms, 2) renegotiation of the terms (interest rate, deadline, covenants and obtaining of additional security or injection of

additional owner equity) and 3) request for repayment. In making the decision, the financial institution will consider various elements: 1) overall profitability of services provided and length of the relationship, 2) a business analysis, 3) the value of the security and 4) the borrower's bargaining power.

3.3.1 Agreeing to concessions without changing the terms of the contract

A financial institution will more easily overlook contract violations on the part of a borrower if it believes this decision will be profitable in the medium or long term. This profitability may be reflected in the provision of other services and/or the anticipation that the business will become profitable again. The financial institution will then consider the company's potential to weather the financial crisis and to grow (Boot, 2000). Chen and Wei (1993) identify four empirically significant factors to explain why a financial institution will decline to take advantage of the contract violation by imposing new constraints: 1) a low probability of bankruptcy, 2) a low debt ratio, 3) sufficient collateral to cover the loan, and 4) a low loan amount. The financial institution will be more likely to assume such a risk when the market is not very competitive, because if that is not the case, a borrower that has benefited from leniency could change financial institutions once conditions have become more favourable again (Petersen and Rajan, 1994).

A financial institution may also let a contract violation go in order to create an atmosphere of trust that will help solidify its relationship with the business. This strategy of turning a blind eye to a violation is akin to that identified by Ferrary (2003), which involves breaking a rule in order to develop trust. The lender's objective is for the borrower to remember this flexibility when it comes time to renew the loan. The latter will be less inclined to shop around if it considers this flexibility to be a source of protection should its financial situation once again deteriorate. The financial institution could benefit from this good publicity to demand a higher rate of interest (Chemmanur and Fulghieri, 1994).

The existence of sufficient collateral may also contribute to making the lender more cooperative because the uncertainty associated with the company has less impact on the value of its claim. For this to work, the lender must be convinced that the value of the assets held in security will not deteriorate and that the entrepreneur has no interest in usurping the financial institution's rights. According to Chen and Wei (1993), it appears that this conciliatory attitude will predominate where the claim benefits from adequate security. However, it is also possible that security will have the pernicious effect of encouraging the well secured lender to ignore the option of letting the company continue operating in favour of liquidation, even if the company demonstrates a high potential for returning to profitability (Chen, 2006). It is likely that this scenario is more often borne out with SMEs, given the pervasiveness of security and personal guarantees from the entrepreneur.

3.3.2 Renegotiating the conditions of credit

3.3.2.1 Increasing the interest rate

A financial institution that wants to remain profitable in terms of the risks it assumes will advocate increasing the rate applicable to the loan. Beneish and Press (1995) observed that, out of a sampling of 91 commercial accounts in default, financial institutions had reopened the contract in 48 cases. Of those, 65% involved an increase in the interest rate. The financial institution might proceed this way knowing that it is very difficult for the entrepreneur to refinance through the competition. Information asymmetry and the financial difficulties will exacerbate the mistrust of potential lenders. The results of Harjoto's research (2006) indicate that on average, financial institutions will increase the interest rate by 65 basis points before the business becomes bankrupt.

The financial institution will consider the impact of this decision on its relationship with the business and on the entrepreneur's risk aversion. The increased interest rate may be poorly received by the entrepreneur. Depending on the situation, the latter could decide to change financial institutions, even if that doesn't procure more advantageous credit conditions. According to account managers, it would be politically easier to increase the interest rate on the contract due date rather than at the time of violation, particularly when the due date is fairly soon. Another counterproductive consequence for the financial institution of increasing the interest rate is that this makes it more difficult to resolve financial difficulties. To compensate for the increase in fixed interest costs, the business may be encouraged to increase its exposure to commercial risk, which is not necessarily in the interests of the financial institution.

3.3.2.2 Extending the loan period

From the lender's point of view, and all other things being equal, a short-term loan involves less risk than a long-term loan. In fact, the possibility of renegotiating or demanding payment based on a short-term schedule provides for rapidly adjusting conditions to a potentially unfavourable reality (Diamond, 1993). Where the borrower wants to extend the contract end date, this negative signal is decoded by the lender as meaning that the former feels that it will be in a weaker position to renegotiate financing on the date set out in the current contract. When renegotiating pursuant to a contract violation, the financial institution should not extend the contract period unless it is pursuing a strategy aimed at solidifying its relationship with the borrower, and is confident about the business plan's chances of success.

There are other negative impacts for a financial institution extending the period of a loan contract with a debtor experiencing financial difficulties. According to Behrens (1983), the debtor may feel that the pressure from the financial institution has dissipated and as a result, it can allocate its scarce financial resources to paying other, more insistent, suppliers. Another backlash for the financial institution is that its personnel may become less vigilant about monitoring the file (Behrens, 1983). Given that the due date is further off, the account manager may pay less attention to the file, even though it remains problematic given the debtor's financial difficulties. There is also the risk that the extension of the loan period is due to opportunistic behaviour on the part of the account manager or the financial institution in an effort to delay the

reporting of losses (Behrens, 1983). There is some consensus in the literature with regard to the merits of granting extensions. The account managers consulted were fairly open to extensions, as long as the debt covenants are tight enough that the loan can be recalled at the slightest violation.

3.3.2.3 Tightening the debt covenants

Debt covenants are intended to constrain the company's management in order to protect the interests of the lender. Smith (1993) organizes debt covenants into two types: those requiring the maintaining of certain accounting ratios (affirmative), and those prohibiting certain investment or financing activities (negative). Where there has been a contract violation, most often involving an affirmative clause, the lender's response will be to further limit the freedom to manage through more restrictive negative clauses (Beneish and Press, 1995). It would be difficult for the lender to require the borrower to respect more restrictive affirmative clauses if it is unable to respect the existing ones.

Debt covenants limit the entrepreneur's freedom to manage and therefore protect the creditor's interests. They may prevent the entrepreneur from making decisions that could be profitable for the business in the long run. Even in those situations, they are not automatically detrimental to the lender's interests, given that, according to the positive theory, creditors are more risk averse than shareholders. As a result, even if the debt covenants interfere with the freedom of the entrepreneur who wishes to undertake new projects demonstrating good profitability potential, they are necessary for lenders wishing to ensure that the debtor maintains a certain risk profile. In addition, if the project respects the interests of the shareholders and creditors, the company can always request permission to violate the contract terms.

3.3.2.4 Obtaining additional security or a new injection of owner equity

The possibility of receiving additional assets as collateral will serve to encourage the bank to commit to a reorganization. In addition to reducing the risk of losses, security also provides protection against the risk of moral hazard (Chen, 2006). On that last point, the entrepreneur can send an even more reassuring signal to the financial institution by providing personal security or injecting new funds. As already mentioned, the financial institution will interpret that signal as a guarantee that the entrepreneur's privileged information regarding the company's future is positive (Joyce and Woehrle, 2001). The injection of new owner equity also has the advantage of attenuating financial risk by limiting the increase in the debt ratio.

3.4 Seizing and liquidating security

3.4.1 The entrepreneur's cooperation

The financial institution will favour liquidating the security when it deems that it can recuperate more that way than through a reorganization of operations and/or financing. The best way to maximize the product of the disposal is to ensure the entrepreneur's cooperation (Behrens, 1983). To do that, the entrepreneur must also agree that liquidation of the assets is the best solution, and gain some residual advantage, either from the product of liquidation, or through maintaining a good relationship with the financial institution.

3.4.2 The seizure process

Canadian jurisprudence requires that the creditor give the debtor reasonable warning before exercising the right of seizure (Guérette, 1990). The Broadloom decision provides the criteria on which the financial institution should base its decision: 1) the size of the debt, 2) the risks incurred by the lender, 3) the nature and duration of the relationship between the lender and the debtor, 4) the debtor's integrity and reputation, 5) the probability that the debtor can repay within a reasonable time frame and 6) the circumstances for recalling the loan (Guérette, 1990). A debtor company that judges that it has not received reasonable warning prior to seizure may claim that it has been prejudiced, and may take action against the creditor for damages.

3.4.3 The realization value of security

When providing loans to SMEs, financial institutions often require sufficient security to cover the debt in case of default. According to Gouin (1990), financial institutions would lend: 1) up to 75% of the value of accounts receivable under 90 days, 2) between 30% and 50% of the cost of inventory or 3) up to 75% of the estimated value of capital assets. Despite the fact that financial institutions already discount the realization value, the product of liquidation often comes to less than the balance of unpaid debt. Behrens (1983) identifies three reasons for this shortfall compared with initial estimates: 1) the lender initially overestimated the market value of the security, 2) the lender did not correctly re-evaluate the security or did not require new security when the first security became inadequate, and 3) the value of the security decreased more quickly than that of the debt. Financial institutions wanting to maintain the value of their security will ensure periodic monitoring of both the security and the terms of the contract that provide for recalling the loan where it is inadequate.

Unal et *al.*, (2003) looked at the relationship between the risk premium and the collection rate for various sectors of the economy. They found a correlation coefficient of 0.73, significant to 99%, between the collection rate and a measure of the risk premium.

Table 5 Collection rate and risk premium by sector

Sector	Collection rate (%)	Measure of the adjusted risk premium
Public services	70.5	0.614
Petroleum and chemical products	62.7	0.383
Machinery and equipment	46.2	0.292
Construction materials	38.8	0.140
Transportation	38.4	0.251
Media and communications	37.1	0.171
Real estate	35.3	0.261
Retail trade	33.2	0.152
Forestry	29.8	0.142

Sector	Collection rate (%)	Measure of the adjusted risk premium
Hotel industry	26.5	0.132

Source: Unal et *al.*, (2003)

The high correlation rate seems to indicate that financial institutions recognize the risks associated with exercising security for each sector.

Another factor that could explain the collection rate for a financial institution is its level of specialization in liquidating certain types of assets. Petersen and Rajan (1994) suggest that a borrower could benefit from seeking out a lender that specializes in financing the assets that it wants to acquire in order to obtain the best credit conditions.

3.5 The bankruptcy procedure

The procedure provided for in the BIA may be instituted voluntarily by the debtor or be invoked by one or more unpaid creditors with provable claims worth more than $1,000 (Simard, 1990). A declaration of bankruptcy freezes all other claim processes against the company. It then becomes impossible for a creditor to seize assets. Another consequence for the company is that it comes under the guardianship of a trustee, who will temporarily administer it in order to maximize the value of what the creditors can recover. To do that, the trustee may favour a proposal or liquidation, either as a whole or through the individual sale of assets.

3.5.1 The secured creditor and application of the BIA

There are advantages and disadvantages for secured creditors in application of the BIA. In terms of advantages, the court-controlled procedure may provide for protecting the portion of the claim that exceeds the value of the security in two ways: by protecting the company from the claims of other creditors while the trustee prepares a proposal; and by ensuring adequate control in order to maximize the product of liquidation of all the company's assets. Despite these advantages, secured creditors often fear possible application of the BIA. They are concerned in particular with the impact of delays on the value of security (Giammarino, 1989) and the costs of the procedure (Milgrom and Roberts, 2003).

3.5.1.1 Delays associated with application of the BIA

Section 50.4, paragraph 9 of the BIA dealing with proposals provides for a maximum delay of 30 days between filing of the notice of intention to make a proposal to the creditors and the filing of the proposal. The proposal may, however, be extended by renewal periods of 45 days each, without exceeding six months in total. The secured creditor may be frustrated by the expectation that the liquidation value will deteriorate during this period of trustee management. A debtor who is aware of this concern could strategically plant doubts about the intention to seek court protection in order to obtain concessions.

3.5.1.2 The costs of a BIA procedure

The administrative costs and the emergence of priority claims following application of the BIA are elements that are likely to reduce the value of what the creditors can recover. According to Milgrom and Roberts (2003), the expectation of these bankruptcy-related costs serves to encourage the amicable renegotiation of the terms of the debt. Creditors' desire to avoid these costs would explain why they may consent to abandoning some of their rights in favour of the ordinary shareholders in order to avoid the latter opting for voluntary recourse to the BIA.

3.5.2 The chances of success of a reorganization

Campbell (1996) developed a model to predict the chances of success of a reorganization under Chapter 11 of the American insolvency legislation.[13] He found five significant determinants: 1) the size of the company, 2) the earning capacity of the assets, 3) the number of secured creditors, 4) the existence of unencumbered assets, and 5) the number of unsecured creditors. If each factor is taken in turn to explain the logic, the large size of the company would give it an alternative for contemplating a reorganization because the associated costs could be spread out over a larger volume of activity. The earning power of the assets is a good indicator of the creditors' willingness to participate in a reorganization because success of the operation depends on that earning power. The number of secured and unsecured creditors is included among the determinants because of the difficulty of reaching a compromise if interests are too disparate. Finally, the existence of assets that can be given as security provides some manoeuvring room for consolidating the current financing or obtaining new financing. In order to avoid uselessly incurring costs, a lender or trustee would consider these factors before contemplating a reorganization.

4. Suppliers as source of credit

Several factors affect the capacity and willingness of a supplier to provide credit to a client. Section 4.1 outlines the characteristics of the supplier likely to have an overall influence on its provision of credit, while Section 4.2 deals with considerations specific to managing the accounts of debtors in financial difficulty.

4.1 Characteristics of the supplier likely to have an overall influence on its provision of credit

4.1.1 The supplier's business strategy

A business that establishes a credit policy considers simultaneously the risk of bad debts and the impact on its sales figures. These two variables evolve in the opposite direction. A credit

13. Unlike the Companies Creditors' Arrangement Act, Chapter 11 of the American legislation does not contain any criteria with regard to the size of the companies that may use it. This means that Campbell's results may be influenced by the presence of large companies.

policy that is part of an aggressive business strategy to win market share will finance purchasers at more advantageous terms (discount and time allowed for payment). Also, it will be less severe with regard to providing credit to debtors with a less than stellar credit history. The supplier may also use its credit policy for other reasons, including discriminating among clients based on criteria other than strict ability to pay. It may thus favour clients that are more attractive on other fronts, such as: 1) growth potential, 2) higher sales, or 3) fewer returns on sales. Finally, a supplier wanting to spread its volume of activity throughout the year could adopt a credit policy that encourages sales during slow periods.

4.1.2 The supplier's capacity to procure favourable financing

The supplier that offers credit coverage must in turn find financing in order to provide such advances. The cost and terms of its own financing will necessarily influence the terms of credit it will be able to offer its clients (Biais and Gollier, 1997). Given the foregoing, a supplier who is able to obtain credit on favourable terms would be able to use that position to earn market share by enabling clients to benefit from a more flexible credit policy. Inversely, a supplier with more restricted access to credit and operating in a competitive market would risk losing clients that couldn't satisfy more restrictive payment requirements.

Different factors are likely to increase a supplier's propensity to provide credit: 1) financial institutions accepting accounts receivable as security, 2) the possibility of selling accounts receivable to a company specializing in collections, and 3) the possibility of insuring accounts receivable against credit risk. All these opportunities are less expensive for the supplier that has a good reputation for selectivity in granting credit. The financial institution's acceptance of the accounts receivable as security on a loan is likely to increase available credit and reduce its cost. The supplier that has access to these advantages may be able to be more accommodating in its provision of credit. Selling the accounts receivable reduces the constraints associated with financing this asset. The supplier that divests of a portion of its accounts receivable creates some room to manoeuvre in terms of offering credit to new buyers. As for insuring accounts receivable, this practice, through payment of a premium, limits the risk of credit so that it does not upset the creditor's activities.

4.1.3 The supplier's lack of specialization in providing credit

The supplier's main activity is to make its products and services available on the market. Providing credit is incidental, and may be aimed at stimulating sales. Unlike financial institutions, the supplier is not a specialist in evaluating credit files, nor in collecting on overdue accounts. The resources devoted to these activities vary depending on the importance accorded to them by management. According to Mian and Smith (1992), the supplier's size would be an important factor in explaining the existence of a well structured claims department. One of the consequences of suppliers' non-specialization in assessing credit files is revealed by the tendency to operate in a dichotomous fashion when granting or refusing credit, without setting a price structure for credit based on the specific risk posed by the client (Petersen and Rajan, 1997).

Non-specialization, which is particularly critical among small suppliers, would make them less efficient in providing credit, which means that they may refuse sales to solvent clients, or grant credit to insolvent ones. Faced with limited resources for determining the quality of a client's credit, many suppliers agree to advance funds without an exhaustive credit review, and then wait to see if the terms of payment are respected. This strategy is particularly attractive if the requested credit is relatively low and the supplier's profit margin is high. In support of this statement, Petersen and Rajan (1997) demonstrate a correlation between the provision of trade credit and the operating spread.

Another strategy involves using a credit agency to obtain information about the purchaser's credit history. Statistics are provided regarding credit applications and payment regularity. This approach would be particularly appropriate when opening an account, for an abnormally large transaction, or where there is concern about changes in credit quality (Mian and Smith, 1992). Similarly, the use of a collection agency would be contemplated by suppliers who lack expertise in this type of activity.

The supplier may also choose to completely outsource the provision of credit. There are two dangers involved with this. First, the company that receives the contract does not have any direct contact with the client, which implies even greater asymmetry of information. Second, the profit share of the business doing the outsourcing is based on the terms of the outsourcing contract, which may leave room for opportunistic behaviour (Mian and Smith, 1992).

4.2 Managing the account of a client in financial difficulty

4.2.1 Identifying ways to recognize when clients are in financial difficulty

The credit provided by suppliers is a more costly source of financing for the debtor than that granted by financial institutions.[14] As a result, a supplier who observes that a debtor is not taking advantage of its discounts may perceive this as a sign that the debtor is in financial difficulty. (Petersen and Rajan, 1997), which is not always the case. In reality, it takes time to negotiate an additional line of credit or a new loan with a financial institution. The debtor experiencing cash flow problems, due for example to too-rapid expansion, may temporarily finance its operations by extending the time it takes to pay its suppliers, However, if this is a recurring situation, or cannot be explained by temporary cash flow problems, there is room for the supplier to be concerned about its client's financial health.

Another way to recognize clients whose financial situation may have deteriorated is by analyzing the age of accounts receivable. An account that has been due for a long time often indicates a disputed invoice or the existence of financial difficulties for the client. The first assumption is more likely if the client has paid more recent invoices. Whatever the case, the

14. For Wilner (2000), trade credit should normally be more costly because the supplier does not rank as highly in case of liquidation. The higher interest rate would serve in part to compensate for this risk associated with the debtor's insolvency.

existence of overdue accounts often leads the supplier to reassess the appropriateness of providing additional credit to the client.

Client relationships, as well as networking, may also help to identify a client experiencing financial difficulties. On that front, the supplier who deals frequently with the client is in a position to make valuable observations (Petersen and Rajan, 1997). By way of example, a decrease in quantities purchased could signal that sales are deteriorating. This is an indicator, which, together with others, may call into question the client's credit quality. Likewise, the supplier probably serves several clients in the same sector of activity. It may therefore have a good sense of the market and be able to determine whether there is a negative trend for certain clients.

4.2.2 The supplier's reaction upon detecting that a client is in financial difficulty

The supplier that learns of client difficulties has two decisions to make: whether to continue supplying, and how to collect the maximum amount of its credit. One reason the supplier may continue to accord credit to a debtor in difficulty is the desire to maintain the business relationship. By helping the client to weather the financial storm, the supplier wins the client's trust. It will then be better positioned to become a privileged supplier after the reorganization. Inversely, if it is perceived as an instigator of financial problems, it will probably lose the client as soon as a new supplier is identified.

The supplier also assesses its economic dependence before taking the decision to stop sales to a client in difficulty. By way of example, a supplier that has tailored its production to meet the specific needs of a client risks bankruptcy if it halts the supply. The client is therefore in a strong position to obtain concessions from the supplier (Milgrom and Roberts, 2003).

A supplier's predisposition to accord credit to a client in difficulty would be greater when there is a high resale value for recoverable merchandise.[15]. Of all creditors, the supplier is generally considered to be the one able to obtain the best realization value. This advantage is due to its network of clients that already buy such merchandise. It would be even greater if the merchandise were of a generic nature and had not been greatly transformed by the delinquent debtor (Petersen and Rajan, 1997).

15. As per Bill C-55, in case of bankruptcy, a supplier could recover the property sold as per the terms described in the following quote:

> Subject to this section, if a person (in this section referred to as the "supplier") has sold to another person (in this section referred to as the "purchaser") goods for use in relation to the purchaser's business and delivered the goods to the purchaser or to the purchaser's agent or mandatary, and the purchaser has not fully paid for the goods, the supplier may have access to and repossess the goods at the supplier's own expense, and the purchaser, trustee or receiver, or the purchaser's agent or mandatary, as the case may be, shall release the goods, if (*a*) the supplier presents a written demand for repossession to the purchaser, trustee or receiver, in the prescribed form and containing the details of the transaction, within a period of 15 days after the day on which the purchaser became bankrupt or became a person who is subject to a receivership; (*b*) the goods were delivered within 30 days before the day on which the purchaser became bankrupt or became a person who is subject to a receivership (Bill C-55, 2005).

There is another, less ethical, reason presented by Biais and Gollier (1997), for supplying a client in financial difficulty. Knowing that the financial institution bases its decision to grant or maintain credit in part on the signals sent by suppliers, the latter may collude with the client in difficulty to send a false signal in order to facilitate the obtaining of a bank loan. The additional resources provided may then be used to pay the trade accounts payable and make purchases from accomplice suppliers. This strategy is more profitable for suppliers with high profit margins (Biais and Gollier, 1997).

Finally, a more risk-averse supplier could require payment prior to delivery. Even with a cash payment, a supplier may hesitate to maintain the business relationship in order to avoid being subsequently considered an essential supplier. Furthermore, in proceeding this way, it puts pressure on clients to pay their overdue accounts. The essential nature of the products or services it renders is thus a critical element of the negotiating game that could potentially enable the supplier to be paid before the client can place itself under protection of the law. However, the supplier can find itself trapped, because this action may leave the client no option but to use the law to force supply.

5. Conclusion

The financing of SMEs is necessary to ensure a dynamic economy in which entrepreneurial initiatives are sources of growth. For SMEs, the financing provided by banks and suppliers is particularly important in view of the difficulties of access and the prohibitive costs of publicly issuing securities. Our review of the literature revealed that the supply of credit by financial institutions is influenced by the characteristics of the SME, but also by the lender's predisposition to invest in that market segment. Financial institutions have two different ways of managing their lending activities involving SMEs. There is the transactional approach, which favours the use of technology, and is preferred by the large financial institutions. Then there is the relational approach, which leaves more room for the account manager's judgment, and is more often practised by the smallest credit institutions. According to Berger et *al.,* (2007), each of these approaches enables each type of financial institution to maximize profitability by using its strengths. Faced with these approaches, entrepreneurs, meanwhile, could direct credit applications depending on the characteristics of their businesses. A company with solid financial statements and security to offer would therefore find the terms of credit offered by a transactional lender more attractive. Inversely, a loan application featuring more subjective elements might have a better chance being accepted by a lender that favours the relational approach.

As for an SME's access to trade credit, this is influenced both by its financial situation and by the supplier's predisposition to make sales on credit, which in turn is linked to its business strategy, its ability to procure financing on favourable terms, and its lack of specialization in providing credit. Due to suppliers' lack of specialization as financial institutions, the characteristics of the business are accorded less importance in the case of trade credit than with bank credit. It is relatively common for trade credit to be based on trust and experience between the parties.

Bibliography

Altman, E.I. (1968). "Financial Ratios, Discriminant Analysis and the Prediction for Corporate Bankruptcy." *Journal of Finance* 23 (4), 22-39.

Canadian Imperial Bank of Commerce (2006). *2006 Annual Report.*

Canadian Imperial Bank of Commerce (2005). *2005 Annual Report.*

Laurentian Bank (2006). *2006 Annual Report.*

Bank of Montreal (2006). *2006 Annual Report.*

National Bank (2006). *2006 Annual Report.*

Royal Bank (2006). *2006 Annual Report.*

Scotia Bank (2006). *2006 Annual Report.*

Toronto Dominion Bank (2006). *2006 Annual Report.*

Behrens, R.H. (1983). *Commercial problem loans: How to identify, supervise, and collect the problem loan.* Banker s Publishing Company, Boston, p. 224.

Beneish, M.D. and Press E. (1995). "The Resolution of Technical Default." *The Accounting Review* 70 (2), 337-353.

Bertocco, G. (2003). *The role of banks in financing small and medium firms.* p 21: Iniversitit à dell'insubria, Facoltà di économia.

Berger, A.N., Rosen, R.J. and Udell, G.F. (2007). "Does market size structure affect competition? The case of small business lending." *Journal of Banking & Finance* 31, 11-33.

Berger, A.N., Klapper, L.F. and Udell, G.F. (2001). "The ability of banks to lend to informationally opaque small businesses." *Journal of Banking & Finance* 25, 2127-2167.

Berger, A.N. and Udell, G.F. (1998). "The economics of small business finance: the role of private equity and debt markets in the financial growth cycle." *Journal of Banking & Finance* 22, 613-673.

Bester, H. (1994). "The role of Collateral in a Model of Debt Renegotiation." *Journal of Money, Credit and Banking* 26 (1), 72-85.

Biais, B. and Gollier, C. (1997). "Trade Credit and Credit Rationing." *The Review of Financial Studies* 10 (4), 903-937.

Boot, A.W.A. (2000). "Relationship Banking: What do we know?" *Journal of Financial Intermediation* 9, 7-25.

Brody, R.G. and Kimberley, F.E. (1998). "The Sixth C of Credit." *The Journal of Bank Cost & Management Accounting* 11 (3), 46-56.

Campbell, S.V. (1996). "Predicting Bankruptcy Reorganization for Closely Held Firms." *Accounting Horizons* 10 (3), 12-25.

Chemmanur, T.J. and Fulghieri, P. (1994). "Reputation, Renegotiation, and Choice between Bank Loans and Publicly Traded Debt." *The Review of Financial Studies* 7 (3), 475-506.

Chen, Y. (2006). "Collateral, loan guarantees, and the lender's incentives to resolve financial distress." *The Quarterly Review of Economics and Finance* 46, 1-15.

Chen, K.C.W. and Wei, K.C. (1993). "Creditors' Decisions to Waive Violations of Accounting-Based Debt Covenants." *The Accounting Review* 88 (2), 218-232.

Cole, R.A., Goldberg, L.G. and White, L.J. (2004). "Cookie-cutter versus character: The micro structure of small business lending by large and small banks." *Journal of Financial and Quantitative Analysis* 39, 227-251.

Deschamps, J.M. (1990). "La responsabilité du banquier dans un contexte d'entreprise en difficulté." In *Stratégies face aux prêts en souffrance,* edited by Press I. Toronto.

Diamond, D.W. (1993). "Seniority and maturity of debt contracts." *Journal of Financial Economics* 33, 341-368.

Ely, D.P. and Robinson K.J. (2001). "Consolidation, technology, and changing structure of banks' small business lending." *Economic and Financial Review* 2001 (1), 23-32.

Ferrary, M. (2003). "Trust and social capital in the regulation of lending activities." *Journal of Socio-Economics* 31, 673-699.

Giammarino, R.M. (1989). "The Resolution of Financial Distress." *The Review of Financial Studies* 2 (1), 25-47.

Gouin, F.A. (1990). "L'évaluation des biens affectés en garantie dans les situations problématiques." In *Stratégies face aux prêts en souffrance,* edited by Press I. Toronto.

Guérette, S. (1990). "Le recouvrement des biens affectés en garantie." In *Stratégies face aux prêts en souffrance,* edited by Press I. Toronto.

Harjoto, M.A. (2006). "Commercial loan premium for firms prior to bankruptcy." *Commercial Lending Review* 2006 (Nov./Dec.), 17-24.

Jappelli, T. and Pagano, M.J. (2002). "Information sharing, lending and defaults: Cross-country evidence." *Journal of Banking & Finance* 26, 2017-2045.

Joyce, W.B. and Woehrle S.L. (2001). "A Signaling Approach to the Provision for Loan Losses." *The Journal of Bank Cost & Management Accounting* 14 (3), 33-43.

Lane, C. and Quack, S. (2001). *How Banks Construct and Manage Risk: A Sociological Study of small firm lending in Britain and Germany*. ESRC Centre for Business Research, 51 p.

Longhofer, S.D. and Santos J.A.C. (2000). "The importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89.

Manove, M., Padilla A.J. and Pagano M. (2001). "Collateral versus project screening: a model of lazy banks." *The Rand Journal of Economics* 32 (4), 726-744.

Mian, S.L. and Smith, C.W.JR. (1992). "Accounts Receivable Management Policy: Theory and Evidence." *The Journal of Finance* 47 (1), 169-200.

Milgrom, P. and Roberts, J. (2003). *Économie, organisation et management.* Grenoble, Presses Universitaires de Grenoble. Chapter 4, 829 p.

Ohlson, J.A. (1980). "Financial Ratios and the Probabilistic Prediction of Bankruptcy." *Journal of Accounting Research* 18 (1), 109 p.

Petersen, M.A. and Rajan, R. R. (1997). "Trade credit: Theories and Evidence." *The Review of Financial Studies* 10 (3), 661-691.

Petersen, M.A. and Rajan, R.R. (1994). "The Benefits of Lending Relationships: Evidence from Small Business Data." *The Journal of Finance* 49 (1), 3-37.

Pinckney, J.R. (2006). "Rethinking the commercial loan process." *Commercial Lending Review 21* (5), 12-44.

Riding, A.L. and Haines G. JR. (2001). "Loan guarantees: costs of default and benefits to small firms." *Journal of Business Venturing* 16, 595-612.

Schwarz, J.E. (2004). "Creating Value in Corporate Banking." *Commercial Lending Review* 19 (2), 11-20.

Simard, R.P. (1990). "La réalisation des sûretés en cas de faillite." In *Stratégies face aux prêts en souffrance,* edited by Press I. Toronto.

Smith, C.W.JR. (1993). "A Perspective on Accounting-Based Debt Covenant Violations." *The Accounting Review* 88 (2), 289-303.

St-Pierre, J. Beaudoin, R. and Desmarais, M. (2002). *Financing Canadian SMEs: Satisfaction, Access, Knowledge and Needs*. Industry Canada.

Unal, H., Madan, D. and Güntay L. (2003). "Pricing the risk of recovery in default with absolute priority rule violation." *Journal of Banking & Finance* 27, 1001-1025.

Voordeckers, W. and Steijvers, T. (2006). "Business collateral and personal commitments in SME lending." *Journal of Banking & Finance* 30, 3067-3086.

Wilner, B.S. (2000). "The Exploitation of Relationships in Financial Distress: The Case of Trade Credit." *The Journal of Finance* LV (1), 153-178.

References included in citations

Berger, A.N., Hannan, T.H. (1997). "Using measures of firm efficiency to distinguish among alternative explanations of the structure-performance relationship." *Managerial Finance* 23, 6-31.

Berger, A.N. and Udell, G.F., (1995). "Relationship lending and lines of credit in small firm finance." *Journal of Business* 68, 351-382.

Berlin, M. and Mester, L.J. (1999). "Deposits and relationship lending." *Review of Financial Studies* 12, 579-607.

Cole, R.A., Goldberg, L.G. and White, L.J. (2004). "Cookie-cutter versus character: The micro structure of small business lending by large and small banks." *Journal of Financial and Quantitative Analysis* 39, 227-251.

Corvoisier, S. and Gropp, R., (2002). "Bank concentration and retail interest rates." *Journal of Banking and Finance* 26, 2155-2189.

Degryse, H. and Cayseele, P.V. (2000). "Relationship lending within a bank-based system: Evidence from European small business data." *Journal of Financial Intermediation* 9, 90-109.

Ferri, G. and Messori, M. (2000). "Bank-firm relationships and allocative efficiency in northeastern and central Italy and in the south." *Journal of Banking and Finance* 24, 1067-1095.

Hannan, T.H. (1991). "Bank commercial loan markets and the role of market structure: Evidence from surveys of commercial lending." *Journal of Banking and Finance* 15, 133-149.

Harhoff, D. and Körting, T. (1998). "Lending relationships in Germany: Empirical results from surveys data." *Journal of Banking and Finance* 22, 1317-1354.

APPENDIX B

SUMMARY OF INTERVIEWS CONDUCTED WITH BANK AND TRADE CREDIT PRACTITIONERS

The interviews were conducted with individuals working for two different financial institutions and four different companies in order to validate our understanding of bank and trade credit. They informed us about certain practices (called "technologies" in this report) of companies involved in providing credit in order to ensure that this report takes into account important variables for that credit. In addition to the empirical and theoretical research covered in the synopsis of the literature for purposes of this report, these interviews offer further validation, although rather modest given their limited number, of the model used.

Bank credit

The representatives of the two financial institutions with whom we met work for different-sized organizations, one of which is a credit union. We learned from these interviews that neither size nor cooperative nature appear to distinguish the two institutions when it comes to requesting security on the personal property of the owners of client businesses. The individuals with whom we met emphasized that their respective institutions didn't request such guarantees only to limit their losses in case of default, but also to obtain the cooperation and commitment of the owner of the debtor business. The similarities between the two institutions end there.

The organization and operating methods of the two financial institutions appear to vary significantly. The organization of the large bank includes more decision-making levels and allows for greater specialization on the part of employees. For example, there is an account manager and a credit manager, while these two roles are assumed by the same person in the smaller financial institution. Furthermore, when loans begin to look doubtful, a special unit takes over from the credit manager in the large financial institution, while such files remain under the responsibility of the account manager in the smaller financial institution.

One of the people we met indicated that when financing is accorded on an asset, the institution takes into account the value of the asset, minus the value of any other right against it, often including claims for unpaid wages and the rights of unpaid suppliers. The institution thereby ensures the cooperation of the debtor company's employees in case the company experiences financial difficulties. This person concluded that putting super-priorities in place would slow down the growth of companies that, faced with less access to bank credit, would have to turn to internal sources of financing. She also claimed that an increase in interest rates or service charges was not foreseeable. It is impossible for us to know, however, to what extent that opinion is based on the requirements that the financial institution must respect in terms of its capitalization rate. The other banker we met, whose employer is not subject to the same capitalization requirements, did not express a similar opinion. He indicated rather that the institution's profitability would depend on the provision of other banking services to client businesses as well as to the owners of those businesses.

The two interviews with the bankers were in agreement with the literature to the effect that large banks use a transactional approach in supplying credit to SMEs, while

small banks favour a relational approach. The latter would therefore be more apt to adapt to C-47 as explained in Section 4.3 of this report, without rationing their supply of credit to SMEs.

Trade credit

The interviews with individuals responsible for providing trade credit led us to conclude that there is great heterogeneity in practices. The only consensus that emerges is that providing credit is incidental to the supplier's main activity. It may be in pursuit of a variety of objectives: to increase sales, to distinguish the goods and services being sold from those of the competition, to develop client loyalty, or to facilitate transactions with clients. The objective of providing credit is a positive impact on sales, as indicated in the first term of equation (4) of this report.

These interviews provided information that highlighted the relative importance of the variables included in the second term of equation (4). First, three of the four businesses do not generate interest revenue from their accounts receivable, because they do not impose any penalties on overdue accounts. The main reasons invoked are the desire to maintain good relations with clients, upon which these businesses are more or less dependent, and to control the additional management costs that stem from it. With regard to financing costs, two of the four businesses finance a good part of their accounts receivable using a bank line of credit.[1] If their own access to bank credit were to be restricted following implementation of C-47, it could become very difficult for these two companies to continue providing the same credit facilities to their clients. However, the two other businesses finance their accounts receivable out of their current earnings: implementation of C-47 would have little impact on their credit supply.

The interviews suggest that the management costs associated with the provision of credit are quite directly proportional to the number of accounts receivable. The individuals we met from companies with few clients, and therefore a high volume of business generated by each client, did not appear to accord very much importance to these costs. Management is therefore part of maintaining a good relationship with clients, and the costs are more associated with promotional costs than with credit-management costs.

With regard to losses on bad debts, some practitioners indicated that these are very low. Others suggested that losses are difficult to control where there is no risk analysis expertise, which is the case with their companies. The solution is therefore to outsource this task and to provide for the inevitable losses in the annual budget. Based on these interviews, and given the specifics of this sector of activity, section 81 of the *BIA* would have limited usefulness.

Overall, the interviews with the representatives of the four companies suggest that the amendments to section 81 would have practically no impact on their provision of

1. The capacity of the four companies consulted to finance their accounts receivable through a bank line of credit did not appear to be related to their size.

credit. Some of them appeared to be more concerned with the introduction of super-priorities that could restrict their own access to bank credit.

The following table presents the main themes raised during the interviews with the individuals involved in trade credit.

Table B.1
The main themes raised during interviews with individuals involved in trade credit

	A Ltd.	**B Ltd.**	**C Ltd.**	**D Ltd.**
Sector of activity	Fish processing	Printing/Creating CDs and DVDs	Development and distribution of soil, fertilizer, peat and related products	Oligopolistic market for the sale of commercial and industrial maintenance products
Purpose of providing credit	Facilitate transactions, more specifically, quickly move perishable merchandise	Distinguish goods and services sold from those of the competition	Increase sales and build customer loyalty	Facilitate transactions, increase sales and sometimes serve as a promotional tool
Interest revenue from accounts receivable	None	None	1.25% on amount due	None, because largely compensated for by the operating spread on goods sold

	A Ltd.	B Ltd.	C Ltd.	D Ltd.
Cost of financing (and possible impact of proposed amendments in C-47 regarding claims for unpaid wages and pension plans)	The company partially finances its accounts receivable through a low line of credit, and the delay for customer payment is generally short. The impact of these amendments on its provision of trade credit would be low.	The company finances its accounts receivable out of current earnings, and it assumes the cost of credit insurance for large accounts receivable. The impact of the amendments would be practically non-existent because the accounts receivable are not financed through bank credit. In the past, interest rate variations were not reflected in the interest charged to clients.	Accounts receivable are financed through a line of credit and interest revenues on the balance due. In the past, when the cost of bank financing increased, the company reduced its discounts and increased the interest charged to clients on the balance due.	75% of the value of accounts receivable is financed through a line of credit. The individual we met emphasized that the introduction of a super-priority would affect the company's access to bank credit.
Management costs	Low because there are only four major clients	Relatively low because there are only a few clients, each one being large	High, in the opinion of the person we met	Not mentioned
Losses on bad debts	Low because only delays in payment are a problem	Low	Not mentioned	Not mentioned

	A Ltd.	B Ltd.	C Ltd.	D Ltd.
Impact of the amendments proposed in C-47 with regard to section 81 of the *BIA*	Practically non-existent because the goods sold are perishable and the brokers have always paid the amounts due	Practically non-existent because if the company repossessed the CDs or DVDs, it would only recuperate the scrap value (it does not own the distribution rights)	Not mentioned	The company has never made use of section 81. The impact of the amendments would be practically non-existent.

APPENDIX C

BIBLIOGRAPHY ORGANIZED BY THEMES

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INTRODUCTION

Purpose of the research

The project will explore the possible links between the provisions of commercial insolvency legislation in Canada and access to bank and trade credit. It will provide for developing a certain number of research assumptions regarding the impact on SME access to capital of the current provisions of commercial insolvency legislation and of their amendments as envisaged in Bill C-55. The project is also intended to provide a preliminary assessment of these assumptions and of the model proposed by some practitioners in the area of bank and trade credit.

Insolvency legislation may pursue a variety of objectives. Reformers tend to speak of seeking a balance between the parties involved, and more specifically, arbitrating among their interests.[1] Public choice theory reminds us that these parties may organize and become parties to the legislative reform process. This research project falls outside, or ahead of, considerations on this process. A recurring theme in public debates about the legislative reform process deals with the effects of certain provisions of the legislation, or amendments to them, on SMEs' access to capital; this project provides a compilation of some of the opinions and observations on the issue.

For purposes of this research, the term "SME" will be used to designate a business that does not have public access to savings, i.e., a business whose debt or equity units are not traded on organized financial markets. The expression "access to capital" therefore becomes synonymous with "access to credit".

As agreed, this project focuses on the impact of the *BIA*. In the context of the 2005 research project on *the empirical analysis of the effectiveness of reorganization procedures under the BIA and the CCAA,* we observed that businesses that have recourse to the BIA are mainly private companies, while the list of businesses that have taken advantage of the CCAA includes mainly public companies.

Objective of this report

This report constitutes the first of three deliverables set out in the research contract. It presents a first grouping of bibliographic references categorized by themes. The bibliography does not constitute an exhaustive listing of all articles that have been

1. For example, a participant at a conference held in 2003 (in *The Initiative for Policy Dialogue Bankruptcy Task Force Meeting, Columbia University*) refers to the balance between ex-post protection of the debtor and the ex-ante cost of credit: "There are key trade-offs between ex-post debtor protection and ex-ante cost of credit. If the system gives a lot of protection to the debtor ex-post, then the debtor can be worse off ex-ante because the cost of credit will be very high. Striking the right balance between the two is a topic of hot debate at the moment."

published on the subject, but rather a relevant selection from the perspective of the research objectives.

The references presented in this report are grouped into four categories. The first category lists those dealing with financing economic activity. The second encompasses references covering themes associated with bank credit. The third category lists those associated with trade credit. The fourth reference category deals with the relationship between these two types of credit as well as the priority rule, which constitutes a central element for all contractual and legal provisions governing this relationship.

While financial institutions constitute a specific category of businesses, the expression "business" is used here to designate businesses producing non-financial goods or services. In addition, the term "bank" and the qualifier "banking" are used generically, and refer equally to banks, in the legal sense of the word, and credit unions, which also play a role as financial intermediaries.

Access to credit, information and efficiency

The issue of business access to credit, including a possible rationing for certain categories of business, like SMEs, has long been of interest in policy analysis and the literature on business financing. Since the 1980s, this issue has come up regularly in debates about various proposals to reform or amend commercial insolvency legislation, particularly when dealing with commercial insolvency.

The decision to provide credit is taken in a context of uncertainty, as is the case with transactions whose costs and benefits emerge over time. Even before this uncertainty in the possible relationship between a potential debtor and a potential creditor, there is the uncertainty revolving around the possible value that the external credit or financing is intended to enable the debtor to put in place.

The quest for information is one of the principal means of managing a situation of uncertainty. This creates a problem of availability and production of information, as well as the transfer of information between two parties, the debtor and the creditor, in a context of information asymmetry. Moreover, this volume of information is required of even the smallest business in order to better manage uncertainty.

As Romer (1990)[2] indicates, the production or search for information represents a fixed cost; the more users there are, the more there are to share the cost. A large public company has numerous users, including investment funds and individual investors. For small closely held SMEs, on the other hand, there is a much more limited number of users; other than the managing owner, the company's banker will often be the only other user. A situation of credit rationing in such cases may be associated with the prohibitive

2. Romer, P.M.(1990), "Endogeneous Technological Change", *Journal of Political Economy*, 98(5), 71-102, cited in L.Veldkamp (2006), "Media Frenzies in Markets for Financial Information", *American Economic Review* 96(3), 577-601.

cost of information. On the other hand, the company's purchases from suppliers may constitute an independent source of information.

The weight of uncertainty for an investment will be reduced if there is a possibility of liquidation. The shares issued by a large public company will generally be traded on the markets, which enables their holders to dispose of them at will. That is much less the case with investments in a small business. However, some assets, such as stocks of raw materials, can quite easily be liquidated with the cooperation of their supplier.

From the perspective of access to capital, the effectiveness of commercial insolvency legislation should be looked at primarily in informational terms. From the point of view of SME access to capital, for which the two main sources of external financing are banks and suppliers, effective legislation should directly or indirectly promote the production of information, as long as the overall benefits outweigh the cost.

PART I
FINANCING ECONOMIC ACTIVITY

There are two theoretical models that attempt to understand debt financing. The first, which is the pecking order theory, suggests that companies have an order of preference among the various forms of financing. They prefer: 1) internal to external financing, 2) short-term loans rather than long-term loans on which lenders impose more requirements, and 3) loans rather than investments from new shareholders who demand higher returns due to the information asymmetry of which they are victims. The second model, which is the static trade-off effect, balances on the one hand the tax advantages associated with the deductibility of interest charges, and on the other, the costs of bankruptcy and the agency costs resulting from conflicts between shareholders and creditors.

- Cassar G., Holmes S. (2003). "Capital structure and financing of SMEs: Australian evidence." *Accounting and Finance* 43, 123-147.
- Gaud P., Jani E. (2002). *Déterminants et dynamique de la structure du capital des entreprises suisses: une étude empirique*. Genève: Université de Genève.

Types of financing

A business that decides to finance its activities through loans has several options, which may be grouped into two categories: private financing and public financing. Each type of financing is distinguished in particular by the transaction costs and the contractual terms.

- El-Gazzar S., Pastena V. (1990). "Negociated accounting rules in private financial contracts." *Journal of Accounting and Economics* 12, 381-396.

Do SMEs have adequate access to capital?

- Canadian Bankers Association. (2003). *Competition in the Canadian Small and Medium-Sized Business Financing Market.* pp 1-27: Canadian Bankers Association.
- De Meza D., Webb D.C. (1987). "Too much Investment: A Problem of Asymmetric Information." *The Quarterly Journal of Economics* 102, 281-292.
- CFIB (2003). *Banking on Competition.* pp 1-27: Canadian Federation of Independent Business.
- Stiglitz J., Weiss A. (1981) "Credit Rationing in Markets with Imperfect Information". *American Economic Review.*
- Wynant L., Hatch J. (1991). *Banks and small business borrowers: a 1990 research study*. Edited by Western Business School UWO. London (Ont.).

Access to credit varies depending on whether the country's economic system is geared toward banks (Germany) or markets (Anglo-Saxon countries).

- Boot A.W.A. (2000). "Relationship Banking What Do We Know?" *Journal of Financial Intermediation* 9, 7-25.

Financing in a context of information asymmetry

Description

- Akerlof G.A. (1970). "The market for "lemons": quality uncertainty and the market mechanism." *The Quarterly Journal of Economics* 84, 488-500.

SMEs are more opaque than large companies. Information asymmetry constitutes a wall of mistrust that separates creditors and the debtor business.

- Giammarino R.M. (1989). "The Resolution of Financial Distress." *The Review of Financial Studies* 2.

Asymmetry may be reduced by various means (substitute for the assets given as security, as explained further on): providing for contracts incorporating clauses based on accounting information (communicating quality information reduces the cost of credit as long as this information is not biased), amending the legislation dealing with the information to be provided or strengthening the role of certain external players, such as financial analysts. This last solution proves to be practically impossible, however, in the SME context.

- Bertocco G. (2003). *The role of banks in financing small and medium firms.* p 21: Iniversit à dell'insubria, Facoltà di économia.
- Bhattacharya U., Daouk H., Welker M. (2003). "The Word Price of Earnings Opacity." *The Accounting Review* 78, 641-678.
- Day J., Taylor P. (2004). "Institutional Change and Debt-based Corporate Governance: A Comparative Analysis of Four Transition Economies." *Journal of Management and Governance* 8, 73-115.
- El-Gazzar S., Pastena V. (1990). "Negotiated accounting rules in private financial contracts." *Journal of Accounting and Economics* 12, 381-396.
- Elloumi F. (2000). *La gestion des bénéfices dans un contexte de difficulté financière d'entreprise : une perspective de gouvernement d'entreprise.* 218 p. Montréal: UQAM.
- Healy P.M., Palepu K.G. (2001). "Information asymmetry, corporate disclosure, and capital markets: A review of the empirical disclosure literature." *Journal of Accounting and Economics*, 405-440.
- Hoshi T., Kashyap A., Scharfstein D. (1991). "Corporate Structure, Liquidity, and Investment: Evidence from Japanese Industrial Groups." *The Quarterly Journal of Economics* 106, 33-60.
- Jappelli T., Pagano M. (2002). "Information sharing, lending and defaults: Cross-country evidence." *Journal of Banking & Finance* 26, 201.
- Rosner R.L. (2003). "Earning manipulation in failing firm." *Contemporary Accounting Research* 20, 361-408.
- Sengupta P. (1998). "Corporate Disclosure Quality and the Cost of Debt." *The Accounting Review* 73, 459-474.
- Smith, C. W. Jr. (1993). "A Perspective on Accounting-Based Debt Covenant Violations", *The Accounting Review*, 88 (2), 289-303.

- Mazumdar S.C., Sarin A., Sengupta P. (2002). *To Tell Or Not To Tell: The Value of Corporate Disclosure.* Working Paper, Santa Clara University.
- Watanabe W. (2005). *How are Loans by their Main Bank Priced? Bank Effects, Information and Non-price Terms of Contract.* RIETI Discussion Paper Series 05-E-028, 43.

PART II
BANK CREDIT

The roles and operations of financial institutions

Financial institutions provide a variety of services, including estate management, investment services and service to businesses. Of course, they also offer credit to entrepreneurs, and must devote a significant percentage of their resources to assessing the quality of entrepreneurs' projects, while maintaining monitoring costs at an optimal level.

Note:
Banks classify their loans into four portfolios: home mortgages, consumer loans, credit card loans and loans to businesses and government. The latter involve the highest percentage of bad loans. By way of example, problem loans to businesses and governments represent 0.77% of this loan portfolio, compared with 0.39% for all other portfolios for the Royal Bank.

- Bank of Montreal, 2005 Annual Report, Royal Bank, 2005 Annual Report, http://www.rbc.com/investorrelations/ar_05/english/html/home.html
- Longhofer S.D., Santos J.A.C. (2000). "The Importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89.
- Manove M., Padilla A.J., Pagano M. (2001). "Collateral versus project screening: a model of lazy banks." *The RAND Journal of Economics* 32, 726-744.

The overall performance of financial institutions is influenced by several variables, including the economic and business situation of the country in which they operate, the intensity of competition, legislation and regulatory requirements.

- Bank of Montreal, 2005 Annual Report, http://www2.bmo.com/ar2005/share_info.html
- Dewenter K.L., Hess A.C. (1998). "An International Comparison of Banks' Equity Returns." *Journal of Money, Credit and Banking* 30, 472-492.
- Kremps É. (1999). "Modes de financement des entreprises allemandes et françaises." *Bulletin de la Banque de France* 70, 99-121.
- Lane C., Quack S. (2001). "*How Banks Construct and Manage Risk: A Sociological Study of Small Firm Lending in Britain and Germany*". 51 p. University of Cambridge Working Paper: ESRC Centre for Business Research.
- Scott J.A, Smith T.C. (1986). "The effect of the bankruptcy reform act of 1978 on small business loan pricing." *Journal of Financial Economics* 16, 119-140.

This performance stems notably from strategies for managing risks that basically involve externalizing, sharing or internalizing risks.

- Lane C., Quack S. (2001). "*How Banks Construct and Manage Risk: A Sociological Study of Small Firm Lending in Britain and Germany*". 51 p. University of Cambridge Working Paper: ESRC Centre for Business Research.

Risk is managed at two levels. First, some loans are managed on an individual basis, i.e., the financial institution conducts an initial analysis and a detailed follow-up in order to estimate the probability of default and the extent of losses in case of default. It uses a number of risk management practices, for example, expert systems (the 5 "Cs" of credit), credit scoring, establishing relationships or active networking. Second, financial institutions manage a large number of loans with low unit value on a more global level, such as through a portfolio combining all loans of the same type, like credit card loans.

- Allen L., DeLong G., Saunders A. (2004). "Issues in the credit risk modeling of retail markets." *Journal of Banking & Finance* 28, 727-752.
- Ang J.S., Chua J.H., McConnell J.J. (1982). "The Administrative Costs of Corporate Bankruptcy: A note." *The Journal of Finance* 37, 219-226.
- Baxter N.D. (1967). "Leverage, Risk of Ruin and the Cost of Capital." *The Journal of Finance* 22, 395-403.
- Beaulieu L. (1993). *Crédit et recouvrement au Québec*. Montréal: Les éditions Transcontinentales.
- Boot A.W.A. (2000). "Relationship Banking What Do We Know?" *Journal of Financial Intermediation* 9, 7-25.
- Brody R.G., Frank K.E. (1998). "The Sixth C of Credit." *The Journal on Bank Cost & Management Accounting* 11, 46-56.
- Ely D.P., Robinson K.J. (2001). "Consolidation, Technology, and the Changing Structure of Bank's Small Business Lending." *Economic and Financial Review*, 23-32.
- Equinox Management Consultants. (2002). *Gaps in SME Financing: An Analytical Framework*. 87 p.: Industry Canada.
- Ferrary M. (2003). "Trust and social capital in the regulation of lending activities." *The Journal of Socio-Economics* 31, 673-699.
- Frame W.S., Padhi M., Woosley L. (2001). *The Effect of Credit Scoring on Small Business Lending in Low- and Moderate-income Areas*. Working Paper, Federal Reserve Bank of Atlanta, 23.
- Frame W.S., Srinivasan A., Woosley L. (2001). "The effect of credit scoring on small-business lending." *Journal of Money, Credit and Banking* 33, 813-825.
- Gouin F.A. (1992). "L'évaluation des biens affectés en garantie dans les situations problématiques." In *Stratégies face aux prêts en souffrance*, edited by Press I. Toronto.
- Kleinmuntz B. (1990). "Why We Still Use Our Heads Instead of Formulas: Toward an Integrative Approach." *Psychological Bulletin* 107, 296-310.
- Longhofer S.D., Santos JAC. (2000). "The Importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89.
- Petersen M.A., Rajan R.G. (1994). "The Benefits of Lending Relationship: Evidence from Small Business Data." *The Journal of Finance* 49, 3-37.
- Petersen M.A., Rajan R.G. (2002). "Does Distance Still Matter? The Information Revolution in Small Business Lending." *The Journal of Finance* LVII, 2533-2570.
- Warner D. (1977). "Bankruptcy Costs: Some Evidence." *The Journal of Finance* 32, 337-347.

- Welch I. (1997). "Why Is Bank Debt Senior? A Theory of Asymmetry and Claim Priority Based on Influence Costs." *The Review of Financial Studies* 10, 1203-1236.

Several factors influence the approval rate for loan applications, including competition, the size of the institution, the form of holding, the corporate structure and past experience with bad loans.

- Berger A.N., Goldberg L.G., White L.J. (2001). *The Effects of Dynamic Changes in Bank Competition on the Supply of Small Business Credit.* In: Department of Economics in its series Working Papers, number 01-07, 29 p.: New York University, Leonard N. Stern School of Business.
- Feldman R. (1997). *Small Business Loans, Small Banks and a Big Change in Technology Called Credit Scoring.* Edited by. Minneapolis: Federal Reserve Bank of Minneapolis.
- Lane C., Quack S. (2001). *How Banks Construct and Manage Risk: A Sociological Study of Small Firm Lending in Britain and Germany.* 51 p. University of Cambridge Working Paper: ESRC Centre for Business Research.
- St-Pierre J., Bahri M. (2003). *Relations entre la prime de risque bancaire des PME et les composantes de leur risque global.* In: ASAC, Halifax, Nouvelle-Écosse.
- Watanabe W. (2005). *How are Loans by Their Main Bank Priced? Bank Effects, Information and Non-price Terms of Contract.* RIETI Discussion Paper Series 05-E-028, 43.

The characteristics of borrowers sought by financial institutions

The existence and scope of a past relationship between a financial institution and a borrower facilitate access to credit and/or improve lending terms.

- Angelini P., Di Salvo R., Ferri G. (1998). "Availability and cost of credit for small businesses: Customer relationships and credit cooperatives." *Journal of Banking and Finance* 22, 925-954.
- Berger A.N., Udell G.F. (1995), "Relationship Lending and Lines of Credit in Small Firm Finance". *Journal of Business* 68, 351-379.
- Boot A.W.A. (2000). "Relationship Banking What Do We Know?" *Journal of Financial Intermediation* 9, 7-25.
- Boot A.W.A., Thakor A.V. (1994). "Moral Hazard and Secured Lending in an Infinitely Repeated Credit Market Game." *International Economic Review* 35, 899-920.
- Cole R.A. (1998). "The importance of relationships to the availability of credit." *Journal of Banking & Finance* 22, 959-977.
- Degryse H., Van Cayseele P. (2000). "Relationship Lending within a Bank-Based System: Evidence from European Small Business Data." *Journal of Financial Intermediation* 9, 90-109.
- Detragiache E., Garella P., Guiso L. (2000). "Multiple versus Single Banking Relationships: Theory and Evidence." *The Journal of Finance* 55, 1133-1161.

- Equinox Management Consultants. (2002). *Gaps in SME Financing: An Analytical Framework.* 87 p.: Industry Canada.
- Harhoff D., Körting T. (1998). "Lending relationships in Germany - Empirical evidence from survey data." *Journal of Banking & Finance* 22, 1317-1353.
- Hoshi T., Kashyap A, Scharfstein D. (1990). "The role of banks in reducing the costs of financial distress in Japan." *Journal of Financial Economics* 27, 67-88.
- Hoshi T., Kashyap A, Scharfstein D. (1991). "Corporate Structure, Liquidity, and Investment: Evidence from Japanese Industrial Groups." *The Quarterly Journal of Economics* 106, 33-60.
- Longhofer S.D., Santos J.A.C. (2000). "The Importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89.
- Ongena S., Smith D.C. (2000). "What Determines the Number of Bank Relationships? Cross-Country Evidence." *Journal of Intermediation* 9.
- Petersen M.A., Rajan R.G. (1994). "The Benefits of Lending Relationship: Evidence from Small Business Data." *The Journal of Finance* 49, 3-37.
- Rheinbabena J.V., Rucke M. (2004). "The number and the closeness of bank relationships." *Journal of Banking & Finance* 28, 1597-1615.
- Streb J.M., Bolzico J., Druck P., Henke A., Rutman J., Escudero W.S. (2002). *Bank relationships: effect on the availability and marginal cost of credit for firms in Argentina.* CEMA Working Papers 216, Universidad del CEMA. 1-49.

Other characteristics of borrowers determine access to bank credit and the terms of credit, whether it be: 1) financial characteristics (asset structure, availability of collateral, profitability, growth, risk, the size or structure of financing), 2) non-financial characteristics of companies (the sector of activity or corporate structure), or 3) characteristics of the owners/managers.

- Angelini P., Di Salvo R., Ferri G. (1998). "Availability and cost of credit for small businesses: Customer relationships and credit cooperatives." *Journal of Banking and Finance* 22, 925-954.
- Altman, E.I. (1968). "Financial Ratios, Discriminant Analysis and the Prediction for Corporate Bankruptcy." *Journal of Finance* 23(4), 22-39.
- Brody R.G., Frank K.E. (1998). "The Sixth C of Credit." *The Journal on Bank Cost & Management Accounting* 11, 46-56.
- Cassar G., Holmes S. (2003). "Capital structure and financing of SMEs: Australian evidence." *Accounting and Finance* 43, 123-147.
- Ferrary M. (2003). "Trust and social capital in the regulation of lending activities." *The Journal of Socio-Economics* 31, 673-699.
- Gropp R., Scholz J.K., White M.J. (1997). "Personal Bankruptcy and Credit Supply and Demand." *The Quarterly Journal of Economics* 112, 217-251.
- Johnsen P.C., McMahon R.G.P. (2003). *Cross-industry differences in financing behavior of SMEs from Australia's business longitudinal survey.* School of Commerce, Flinders University Research Paper Series, 35 pages.
- Ortiz-Molina H., Penas M.F. (2004). *Lending to small business: the role of loan maturity in addressing information problems.* In: Discussion Paper, p 34: Tilburg University.

- Reid G.C. (1996). "Financial Structure and the Growing Small Firm: Theoretical Underpinning and Current Evidence." *Small Business Economics* 8, 1-7.
- Watanabe W. (2005). *How are Loans by Their Main Bank Priced? Bank Effects, Information and Non-price Terms of Contract.* RIETI Discussion Paper Series 05-E-028, 43.

The literature highlights several advantages associated with secured debts and the order of priority of financial institutions. The latter also benefit from the protection offered by government loan guarantee programs.

- Bester H. (1994). "The Role of Collateral in a Model of Debt Renegotiation." *Journal of Money, Credit and Banking* 26, 72-86.
- Chen K.C.W., Wei K.C.J. (1993). "Creditors' Decisions to Waive Violations of Accounting-Based Debt Covenants." *The Accounting Review* 68, 218-232.
- Longhofer S.D., Santos J.A.C. (2000). "The Importance of Bank Seniority for Relationship Lending." *Journal of Financial Intermediation* 9, 57-89.
- Manove M., Padilla A.J., Pagano M. (2001). "Collateral versus project screening: a model of lazy banks." *The RAND Journal of Economics* 32, 726-744.
- Riding A.L., Haines G.J. (2001). " Loan Guarantees: costs of default and benefits to small firms." *Journal of Business Venturing* 16, 595-612.

PART III
TRADE CREDIT

The business as source of financing and trade credit

In addition to producing goods and services, the business may be a source of financing for downstream businesses that buy its production. While not a financial institution, a manufacturing company or company operating in the primary or services sector that does not require payment for its products upon delivery becomes a source of credit that complements or substitutes for the capital that its client businesses could obtain through borrowing or by accepting new shareholders. An historical analyses of the development of modern economies and the comparative study of economic systems indicate that trade credit would have preceded bank credit as a means of financing production. This suggests that interfirm financing based on the relationships between suppliers and clients could be easier or less costly to practice, at least in some cases, than bank financing. The literature analyzing the provision of trade credit introduces other explanatory factors in addition to those related to questions of financing, among them the information asymmetry associated with the quality of products.

Authors like Bevan & Danbolt (2002) recall the importance of recognizing the role of trade credit in empirical research on the structure of capital and business debt.

Trade credit may also be interpreted as a form of financial intermediation with specific characteristics (Bond, 2004); trade credit could, depending on the circumstances, complement or substitute for bank credit (Burkart & Ellingsen, 2004).

Note:
From the perspective of interfirm relations, trade credit may be associated with various forms of cooperation among the parties involved. At one extreme, there have been documented cases of vertical integration, with a sub-contractor obtaining a raw material or inputs on credit from a supplier and returning transformed products back to that supplier. Historically, the first forms of modern production that preceded the industrial revolution, in the period entitled "proto industrialization", involved merchant entrepreneurs providing credit in the form of fibres and textiles to workers and sole proprietorships in rural settings. In the wholesale sector for non-perishable discriminatory products such as auto parts, trade credit, while reflecting a business strategy of providing financing, is a corollary of practices aimed at minimizing the costs of multiple transactions on items that are sometimes subject to being returned to the suppliers; payments are made at set times for deliveries made on an ongoing basis, sometimes several times a day.

- Bevan A.A., & Danbolt J. (2002). "Capital structure and its determinants in the UK: a decompositional analysis." *Applied Financial Economics 12*(3), 159-170.
- Bitros G.C. (1979). "Neoclassical theory of trade credit: a critique and a

reformulation." *Econometrica 47*(1), 199-202.
- Bond P. (2004). "Bank and Nonbank Financial Intermediation." *Journal of Finance 59*(6), 2489-2529.
- Burkart M., Ellingsen T. (2004). In-Kind Finance: A Theory of Trade Credit. *American Economic Review 94*(3), 569-590.
- Chittenden F., Bragg R. (1997). "Trade credit, cash-flow and SMEs in the UK, Germany and France." *International Small Business Journal 16*(1), 22.
- Coricelli F. (1996). "Finance and growth in economies in transition." *European Economic Review 40*(3-5), 645-653.
- Emery G.W. (1984). "A Pure Financial Explanation for Trade Credit." *Journal of Financial & Quantitative Analysis 19*(3), 271.
- Emery G.W. (1987). "An Optimal Financial Response to Variable Demand." *Journal of Financial & Quantitative Analysis 22*(2), 209.
- Ferris J.S. (1981). "A transactions theory of trade credit use." *Quarterly Journal of Economics 96*(2), 242-270.
- Herbst A.F. (1974). "A factor analysis approach to determining the relative endogeniety of trade credit." *Journal of Finance 29*(4), 1087-1103.
- Herbst A.F. (1974). "Some empirical evidence on the determinants of trade credit at the industry level of aggregation." *Journal of Financial & Quantitative Analysis 9*(3), 377.
- Jain N. (2001). "Monitoring costs and trade credit." *Quarterly Review of Economics & Finance 41*(1), 89.
- Lee Y.W., Stowe J.D. (1993). "Product Risk, Asymmetric Information, and Trade Credit." *Journal of Financial & Quantitative Analysis 28*(2), 285.
- Miwa Y., Ramseyer J.M. (2006). "Japanese industrial finance at the close of the 19th century: Trade credit and financial intermediation." *Explorations in Economic History 43*(1), 94-118.
- Nadiri M.I. (1969). "The determinants of trade credit in the U.S. total manufacturing sector." *Econometrica 37*(3), 408-423.
- Ng C.K., Smith JK., Smith R.L. (1999). "Evidence on the determinants of credit terms used in interfirm trade." *Journal of Finance 54*(3), 1109.
- Petersen MA., Rajan RG. (1997). "Trade credit: theories and evidence." *Review of Financial Studies 10*(3).
- Pike R., Nam Sang C., Cravens K., Lamminmaki D. (2005). "Trade Credit Terms: Asymmetric Information and Price Discrimination Evidence from Three Continents." *Journal of Business Finance & Accounting 32*(5/6), 1197-1236.
- Schnabel JA. (1994). "Production loans." *Journal of Business Finance & Accounting 21*(3), 457-465.
- Tamari M. (1973). "The cost and use of trade credit." *Management International Review (MIR) 13*(1), 93-111.
- Walker DA. (1985). "Trade Credit Supply for Small Businesses." *American Journal of Small Business 9*(3), 30-40.
- Wilson N., Summers B. (2002). "Trade Credit Terms Offered by Small Firms: Survey Evidence and Empirical Analysis." *Journal of Business Finance & Accounting 29*(3/4), 317.

Managing trade credit, the business strategy and the risk of client insolvency

Prior to the previously cited recent literature that empirically verified various theories on trade credit, there were a number of articles and research papers of a more descriptive nature, intended, among other things, to inform managers. More recently, these writings have evolved towards the development of models to demonstrate trade credit management practices from a promotional perspective, for example, decisions involving payment periods and payment discounts, and from a financial perspective, particularly credit risk and the information content of trade credit in terms of the probability of insolvency and bankruptcy of debtor clients.

Other than rate, one dimension or decision variable for trade credit is the maximum amount of credit accorded. Beranek & Scherr (1991) attempt to identify the determinants of that decision or decision variable, i.e., they attempt to model that variable (endogenous, determined by other variables). Is there a possible channel for the impact of law at this level?

One important consideration in managing trade credit is the source of companies' information for deciding whether to provide credit. The Bensman (1995) text recalls the importance of Dun & Bradstreet on that front. Is there a possible channel for the impact of the law at this level, i.e., at the level of the cost and quality of information?

- Abad P.L., Jaggi C.K. (2003). "A joint approach for setting unit price and the length of the credit period for a seller when end demand is price sensitive." *International Journal of Production Economics 83*(2), 115.
- Adams P.D., Wyatt S.B., Kim Y.H. (1992). "A contingent claims analysis of trade credit." *Financial Management (Financial Management Association) 21*(3), 95.
- Arcelus F.J., Srinivasan G. (1995). "On the integration of production, inventory and trade-credit policies." *Production Planning & Control 6*(5), 455.
- Asselbergh G. (1999). "A Strategic Approach on Organizing Accounts Receivable Management: Some Empirical Evidence." *Journal of Management & Governance 3*(1), 1-29.
- Ben-Horim M., Levy H. (1982). "Inflation and the trade credit period." *Management Science 28*(6), 646-651.
- Bensman M. (1995). "Judge & Jury." *Treasury & Risk Management 5*(6), 31.
- Beranek W., Scherr F.C. (1991). "On the Significance of Trade Credit Limits." *Financial Practice & Education 1*(2), 39-44.
- Crook J. (2003). "Guest Editor's Introduction." *Managerial & Decision Economics 24*(6/7) 417-418.
- Deloof M. (2003). "Does Working Capital Management Affect Profitability of Belgian Firms?" *Journal of Business Finance & Accounting 30*(3/4), 573-587.
- Marks N.E., Abouzeid K., Long B. (1992). "Marketing Doesn't Make Credit Decisions." *Industrial Marketing Management 21*(4), 323-330.
- Matsumura T., Ryser M. (1995). "Revelation of private information about unpaid

notes in the trade credit bill system in Japan." *Journal of Legal Studies 24*(1), 165.
- Nam Sang C., Pike R. (2003). "The Trade Credit Decision: Evidence of UK Firms." *Managerial & Decision Economics 24*(6/7), 419-438.
- Pike R., Nam Sang C. (2001). "Credit Management: An Examination of Policy Choices, Practices and Late Payment in UK Companies." *Journal of Business Finance & Accounting 28*(7/8), 1013-1042.
- Policano A.J. (1977). "A choice theoretic model of the optimal use and issuance of trade credit." *Economic Inquiry 15*(2), 166.
- Scherr F.C. (1996). "Optimal Trade Credit Limits." *Financial Management (Financial Management Association) 25*(1), 71-85.
- Scherr F.C., Mays M.E. (2000). "A Model for Multiperiod Trade Credit Granting Decisions." *Financial Practice & Education 10*(2), 62-74.
- Summers B., Wilson N. (2003). "Trade Credit and Customer Relationship." *Managerial & Decision Economics 24*(6/7), 439-455.
- Welshans MT. (1967). "Survey of credit practices in U.S. companies." *Management Review 56*(4), 70.
- Wilner BS. (2000). "The exploitation of relationships in financial distress: The case of trade credit." *Journal of Finance 55*(1), 153-178.
- Wort D.H., Zumwalt J.K. (1985). "The trade discount decision: a markow chain approach." *Decision Sciences 16*(1), 43-56.
- Wilson N., Summers B., Hope R. (2000). "Using Payment Behaviour Data for Credit Risk Modelling." *International Journal of the Economics of Business 7*(3), 333-346.

The demand for trade credit and access to capital

An evaluation of the role of trade credit in the economy and the terms providing for effective or optimal use of this means of financing by economic agents requires integrating the perspective of the debtor business. In terms of transactional rationale, specifically the savings that provide for a separation between deliveries, sometimes quite frequent and in small volumes, and periodic invoicing and payment, the perspectives of the creditor business and the debtor business must be quite similar because trade credit involves a less costly way of doing business, to the advantage of both parties. In terms of the financial role of trade credit, it is more difficult to maintain that there is a convergence between these two perspectives. The demand for trade credit by the debtor business may be, as highlighted by some previously cited authors, a choice the supplier is compelled to make by sectoral or industry standards. On the other hand, the ability to accommodate this choice bears certain witness to minimal financial manoeuvring room for the creditor business, while for the debtor business, the use of trade credit may in fact testify to the absence of such room for manoeuvring. Variables associated with trust, such as some common cultural data, may determine, at least partially, a company's capacity to procure financing with trade credit.

- Aaronson D., Bostic R.W., Huck P., Townsend R. (2004). "Supplier relationships and small business use of trade credit." *Journal of Urban Economics 55*(1), 46.

- Biais B., Gollier C. (1997). "Trade credit and credit rationing." *Review of Financial Studies 10*(4), 903.
- Brasch J.J. (1973). "Trade credit and personalismo in Latin America." *Journal of International Business Studies 4*(1), 31-41.
- Chant E.M., Walker, D.A. (1988). "Small business demand for trade credit." *Applied Economics 20*(7), 861.
- Danielson M.G., Scott J.A. (2004). "Bank Loan Availability and Trade Credit Demand." *Financial Review 39*(4), 579-600.
- Howoth C., Reber B. (2003). "Habitual Late Payment of Trade Credit: An Empirical Examination of UK Small Firms." *Managerial & Decision Economics 24*(6/7), 471-482.
- Huyghebaert N., Gaeremynck A. (2000). "New Firm Survival: The Effects of Start-Up Characteristics." *Journal of Business Finance & Accounting 27*(5/6), 627.
- Marotta G. (2005). "When do trade credit discounts matter? Evidence from Italian firm-level data." *Applied Economics 37*(4), 403-416.
- Niskanen J., Niskanen M. (2006). "The Determinants of Corporate Trade Credit Policies in a Bank-dominated Financial Environment: the Case of Finnish Small Firms." *European Financial Management 12*(1), 81-102.
- Sharkas W. (1974). "The mini information system – an aid to small business survival." *Journal of Small Business Management 12*(3), 39-41.
- Summers B., Wilson N. (2002). "An Empirical Investigation of Trade Credit Demand." *International Journal of the Economics of Business 9*(2), 257-270.
- Uzzi B., Gillespie J.J. (2002). "Knowledge Spillover in Corporate Financing Networks: Embeddedness and the Firm's Debt Performance." *Strategic Management Journal 23*(7), 595.

A broader perspective on trade credit

The decision by "X" Company to provide trade credit in the context of a business strategy and the decision by "Y" Company to use the trade credit available to it as a source of financing may influence and be influenced by the global economic context. The macroeconomic literature contains rather old references on the role and effects of trade credit; that theme is still discussed in current literature.

The circumstances, monetary policy and flexibility of budget constraints

Nearly thirty years ago, the literature (see Myers, 1977) proposed for analytical purposes a breakdown of trade credit into the "transactional" component and the "financial" component. The second component would react to the macroeconomic context, particularly monetary policy; Laffer (1970) went so far as to include an estimate of trade credit potential among the types of currency.

The meaning that should be given to the practice of trade credit may be complex. Some of the following studies demonstrate that in the presence of a restrictive monetary policy, which serves among other things to limit bank credit for businesses, the latter will tend to compensate for that limiting effect by practising more trade credit. This suggests that the amount of trade credit observed at any given time may have a component that can be qualified as structural in the sense that it reflects cost structure, including transaction costs, and a component that can be qualified as circumstantial, in the sense that it reflects the conditions of credit that may fluctuate depending on the circumstances, and depending on the size of the business, its sector, and/or characteristics even more specific to it, like its age and recent evolution. A first step in modelling the possible effects of the law, or categorizing these effects, could be based on that distinction.

- Atanasova C.V., Wilson N. (2003). "Bank Borrowing Constraints and the Demand for Trade Credit: Evidence from Panel Data." *Managerial & Decision Economics 24*(6/7), 503-514.
- Chiplin B., Wright M. (1985). "Inter-industry differences in the response of trade credit to changes in monetary policy." *Journal of Business Finance & Accounting 12*(2), 221-248.
- Christian J.W., Mazek W. F. (1969). "Corporate debt structure and the differential effects of monetary policy." *Southern Economic Journal 35*(4), 359.
- Cumby R.E. (1983). "Trade credit, exchange controls, and monetary independence." *Journal of International Economics 14*(1/2), 53-67.
- De Blasio G. (2005). "Does Trade Credit Substitute Bank Credit? Evidence from Firm-level Data." *Economic Notes 34*(1), 85-112.
- Huyghebaert N., Gaeremynck A. (2000). "New Firm Survival: The Effects of Start-Up Characteristics." *Journal of Business Finance & Accounting 27*(5/6), 627.
- Laffer A.B. (1970). "Trade Credit and the Money Market." *Journal of Political Economy 78*(2), 239.
- Marotta G. (1997). "Does trade credit redistribution thwart monetary policy? Evidence from Italy." *Applied Economics 29*(12), 1619.
- Mateut S. (2005). "Trade Credit and Monetary Policy Transmission." *Journal of Economic Surveys 19*(4), 655-670.
- Meltzer A.H. (1960). "Mercantile Credit, Monetary Policy, and Size of Firms." *Review of Economics and Statistics* 42(4), 429-437.
- Myers C.R. (1977). "Comment: an economic model of trade credit." *Journal of Financial & Quantitative Analysis 12*(3).
- Nilsen JH. (2002). "Trade Credit and the Bank Lending Channel." *Journal of Money, Credit & Banking 34*(1), 226-253.
- Ramey V.A. (1992). "The source of fluctuations in money: Evidence from trade credit." *Journal of Monetary Economics 30*(2), 171-193.
- Schaffer M.E. (1998). "Do firms in transition economies have soft budget constraints? A reconsideration of concepts." *Journal of Comparative Economics 26*(1), 80.
- Wallace R.F. (1965). "The Quality of Trade Credit." *Journal of Finance 20*(1), 142-143.

- Woon Gyu C., Yungsan K. (2005). "Trade Credit and the Effect of Macro-Financial Shocks: Evidence from U.S. Panel Data." *Journal of Financial & Quantitative Analysis 40*(4), 897-925.
- Zahn F., Hosek W.R. (1973). "Impact of trade credit on the velocity of money and the market rate of interest." *Southern Economic Journal 40*(2), 202.

Financing of trade credit, taxes, insurance and factoring

- Asselbergh G. (2002). "Financing firms with restricted access to financial markets: the use of trade credit and factoring in Belgium." *European Journal of Finance 8*(1), 2-20.
- Brick I.E., Fung W.K.H. (1984). "The Effect of Taxes on the Trade Credit Decision." *Financial Management (Financial Management Association) 13*(2), 24-30.
- Edwards D. (2004). "Trade Credit Insurance and Captives." *Risk Management 51*(8), 45-55.
- Hay D., Louri H. (1996). "Demands for short-term assets and liabilities by UK quoted companies." *Applied Financial Economics 6*(5), 413-420.
- Insurance. (2001). *Financial Executive 17*(5), 14-115.
- Shipley D., Neale B. (1995). "The Credit Trap Constraint on Sales through Industrial Distribution Channels." *Journal of General Management 21*(2), 65-83.
- Summers B., Wilson N. (2000). "Trade credit management and the decision to use factoring: An empirical study." *Journal of Business Finance & Accounting 27*(1/2), 37.
- Tavis L.A. (1970). "Finding the best credit policy." *Business Horizons 13*(5), 33.

PART IV
THE PRIORITY RULE
AND THE COEXISTENCE OF BANK AND TRADE CREDIT

Some of the previously cited references mentioned advantages, from the point of view of financial institutions, of secured debts and the priority ranking of their claims compared with other sources of business financing, particularly trade credit. This priority ranking results both from contractual terms and from legal provisions of general application, such as those defining property rights and those dealing with transactional obligations, in addition to more specific legal provisions in the event the debtor becomes insolvent.

Laws and regulations set out a framework within which banks, businesses providing trade credit, and debtor businesses negotiate contracts and conduct business with a view to making the most profit from the capital available to each of them. From this broader perspective, the objective is to ensure the best allocation of credit through the various channels or types of intermediation, without a priori favouring one in particular. If for fundamental reasons associated with the specialization of tasks and the nature of the transactions in question, one category of creditor has access to a flow of information that could reduce the information asymmetry on the credit market and the resulting rationing, an effective legal framework would allow for contractual terms encouraging optimal use of that flow of information.

The problem of information asymmetry and the limitations it imposes on external financing will vary depending on whether a debtor business is a start-up or has been in operation for a number of years, or whether it is large. An effective legal framework does not mean uniformity of contracts for providing credit to businesses and determining the ranking and other terms of coexistence between the various sources.

The possibility that a debtor business will experience insolvency is a key consideration for its external financing partners. In terms of the evolution of contractual relationships between a business and such partners, it is useful to distinguish between relationships ex ante the possible occurrence of such a state, and the ex post relationships, i.e., contractual relationships starting from when a business becomes insolvent.

There is a large volume of literature, almost exclusively American, dealing with the priority rule among creditors established by financing contracts and the legal framework in ex post situations. More specifically, this literature analyzes the effect of the 1978 reform of the commercial insolvency legislation (Chapter 11) on access to credit for insolvent businesses looking to reorganize. The first section lists some references from this literature. Despite its apparently limited scope, some of the principles it calls into question apply to issues of access to capital in general. The second section completes the bibliography with a few reference articles on the coexistence of different types of credit in contractual relationships, both ex ante and ex post.

Violation of the absolute priority rule and access to capital by reorganizing businesses

In a reorganization context, the absolute priority rule (APR) implies that creditors with priority ranking should be compensated in full before other categories of creditor may participate in the reorganization process. A violation of the APR means a contravention of the pre-established ranking among creditors: ordinary creditors versus secured creditors or shareholders versus ordinary creditors. Although these violations will be encoded in the law pursuant to the reforms, recent authors (Douglas and Donald) have indicated that violations of the APR, prior to being associated with legal provisions, should be related to fundamental organizational constraints. The codification of violations of the APR can be interpreted as an attempt to more effectively manage these constraints. A central theme of the literature on the subject is the new value of a reorganizing business or a plan (new value exception); a sub-theme is the recognition of violations of the APR by the financial bond market.

- "The proposed Bankruptcy Act: changes in the absolute priority rule for corporate reorganizations." (1974). *Harvard Law Review 87*(8), 1786.
- Adler B.E., Ayres I. (2001). "A Dilution Mechanism for Valuing Corporations in Bankruptcy." *Yale Law Journal 111*(1), 83.
- Allan C.E., Lawrence A.W. (1998). "The importance of deviations from the absolute priority rule in Chapter 11 bankruptcy proceedings." *Financial Management 27*(4), 106.
- Brian AB. (1996). "The new value exception to absolute priority in bankruptcy." *Commercial Law Journal 101*(3), 290.
- Brinkman DR. (1989). "The New Value Exception to the Absolute Priority Rule after Ahlers." *The Banking Law Journal 106*(4), 351.
- Brown D.T. (1989). "Claimholder incentive conflicts in reorganization: the role of bankruptcy law." *Review of Financial Studies 2*(1).
- Craig M. (1994). "The new value exception: a plea for modification or elimination." *Bankruptcy Developments Journal 11*(3), 781.
- Douglas G.B., Donald S.B. (2006). "Absolute Priority, Valuation Uncertainty, and the Reorganization Bargain." *The Yale Law Journal 115*(8), 1930.
- Franklin C.B. Jr. (1966). "The treatment of security holders under the absolute priority rule in Chapter X Reorganizations." *Journal of Finance 21*(4), 745-746.
- Megan H. (2000). "The absolute priority rule and new value: Before and after Bank of America National Trust and Savings Association v. 203 North LaSalle Street Partnership." *Commercial Law Journal 105*(3), 331.
- Miscioscia A.L. Jr. (1993). "The Bankruptcy Code and the new value doctrine: An examination into history, illusions, and the need for competitive bidding." *Virginia Law Review 79*(4), 917.
- Povel P. (1999). "Optimal 'soft' or 'tough' bankruptcy procedures." *Journal of Law Economics & Organization 15*(3), 659.
- Dufrene U.B. (1993). "A note on the Bankruptcy Reform Act of 1978, an agency perspective." *Managerial Finance 19*(6), 45.

- Eberhart A.C., Moore W.T., Roenfeldt R.L. (1990). "Security Pricing and Deviations from the Absolute Priority Rule in Bankruptcy Proceedings." *The Journal of Finance 45*(5), 1457.
- Eberhart A.C., Senbet L.W. (1993). "Absolute priority rule violations and risk incentives for financially distressed firms." *Financial Management 22*(3), 101.
- Eberhart A.C., Sweeney R.J. (1996). "A note on noise in the market for bankrupt firms' securities." *Journal of Banking & Finance 20*(2), 401-415.
- Eberhart A.C., Weiss L.A. (1998). "The importance of deviations from the absolute priority rule in chapter 11 bankruptcy proceedings." *Financial Management (Financial Management Association) 27*(4), 106.
- Eric B., Francois de, V. (1997). "Valuing risky fixed rate debt: An extension." *Journal of Financial and Quantitative Analysis 32*(2), 239.
- Fabozzi F.J., Howe J.T., Makabe T., Sudo T. (1993). "Recent evidence on the distribution patterns in Chapter 11 reorganization." *The Journal of Fixed Income 2*(4), 6.
- Georgakopulous N.L. (2003). "New value, after Lasalle." *Emory Bankruptcy Developments Journal 20*(1), 1-24.
- Hamilton M. (2000). "The absolute priority rule and new value: before and after Bank of America National Trust and Savings Association v. 203 North Lasalle Street Partnership." *Commercial Law Journal 105*(3), 331.
- Harris C.S. (1991). "A Rule Unvanquished: The New Value Exception to the Absolute Priority Rule." *Michigan Law Review 89*(8), 2301.
- Thomerson M.J. (1992). "The status of the new value exception to the absolute priority rule after Norwest Bank Worthington v. Ahlers." *Commercial Law Journal 97*(4), 457.
- Unal H., Madan D., Gäntay, L. (2003). "Pricing the risk of recovery in default with absolute priority rule violation." *Journal of Banking & Finance 27*(6), 1001.
- Wagner H.S. III. (1996). "The pricing of bonds in bankruptcy and financial restructuring." *The Journal of Fixed Income 6*(1), 40.

The coexistence of various categories of creditors and the grounds for priorities

Some authors have attempted to justify in theory that certain categories of creditors have precedence over other categories by virtue of contractual clauses or legal provisions; in other words, to establish the merits of these clauses or provisions.

- De Blasio G. (2005). "Does Trade Credit Substitute Bank Credit? Evidence from Firm-level Data." *Economic Notes 34*(1), 85-112.
- Farinha L.S.A., Santos, J.O.A.C. (2002). "Switching from Single to Multiple Bank Lending Relationships: Determinants and Implications." *Journal of Financial Intermediation 11*(2), 124.
- Hashi I. (1997). "The economics of bankruptcy, reorganization, and liquidation." *Russian & East European Finance & Trade 33*(4), 6.

- Ivo W. (1997). "Why is bank debt senior? A theory of asymmetry and claim priority based on influence costs." *The Review of Financial Studies (1986-1998) 10*(4), 1203.
- Longhofer S.D., Carlstrom CT. (1995). "Absolute priority rule violations in bankruptcy." *Economic Review - Federal Reserve Bank of Cleveland 31*(4), 21.
- Longhofer S.D., Santos JO.A.C. (2003). "The Paradox of Priority." *Financial Management (Financial Management Association) 32*(1), 69.
- Mella-Barral P. (1999). "The dynamics of default and debt reorganization." *The Review of Financial Studies 12*(3), 535.
- Nam Sang C., Pike R. (2003). "The Trade Credit Decision: Evidence of UK Firms." *Managerial & Decision Economics 24*(6/7), 419-438.
- Nilsen J.H. (2002). "Trade Credit and the Bank Lending Channel." *Journal of Money, Credit & Banking 34*(1), 226-253.
- Niskanen J., Niskanen M. (2006). "The Determinants of Corporate Trade Credit Policies in a Bank-dominated Financial Environment: the Case of Finnish Small Firms." *European Financial Management 12*(1), 81-102.
- Povel P. (1999). "Optimal 'soft' or 'tough' bankruptcy procedures." *Journal of Law Economics & Organization 15*(3), 659.
- Schnabel J.A. (1994). "Production Loans." *Journal of Business Finance & Accounting 21*(3), 457-465.
- Scott J.H. Jr. (1977). "Bankruptcy, secured debt, and optimal capital structure." *Journal of Finance 32*(1), 1.
- Uzzi B., Gillespie J.J. (2002). "Knowledge Spillover in Corporate Financing Networks: Embeddedness and the Firm's Debt Performance." *Strategic Management Journal 23*(7), 595.
- Walker D.A. (1985). "Trade Credit Supply for Small Businesses." *American Journal of Small Business 9*(3), 30-40.
- Wallace R.F. (1965). "The Quality of Trade Credit." *Journal of Finance 20*(1), 142-143.
- White M.J. (1980). "Public Policy toward Bankruptcy: Me-First and Other Priority Rules." *Bell Journal of Economics 11*(2), 550.

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