Impact of SBLA Lending: An Evaluation of the Economic Impacts of the SBLA Program

**Prepared on behalf of the CSBFA Administration,
Industry Canada**

By

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January 1997

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I. EXECUTIVE SUMMARY

This study investigated three elements of performance of the SBLA program: lending activity, terms of credit, and economic impact.

This study finds that approximately 54 percent of lending under the terms of the SBLA may be deemed as incremental, but that incrementality takes a variety of forms, including:

- lending to new firms (firm established concurrent with loan);
- lending to young firms (less than 1 year old);
- lending to established firms that are unable to access debt capital;
- lending to firms in distress.

Considerable new employment is attributable to this incremental lending,. Incremental employment estimates include:

- approximately 121 thousand jobs during 1995;
- approximately 350 thousand jobs during lending period 12.
- The SBLA promoted both more timely borrowing for many firms (about 5 percent, or about 10 thousand business since 1990); and,
- furthered the borrowers' relationships with their bankers for three borrowers out of four.

Other findings related to lending activity and terms of lending follow.

- SSBLA borrowers tend to be concentrated among the smaller strata of SMEs.
    - The proportion of SBLA borrower firms that are unincorporated (approximately 20%) is higher than the corresponding estimated proportion of non-SBLA bank borrower clients (approximately 12 %).
    - More than 74 percent of SBLA borrowers are firms with fewer than 5 employees. By comparison, it is estimated that no more than 56 percent of non-SBLA borrower clients of the major banks are firms comprising fewer than 5 employees.
- The size of SBLA borrower firms increased sharply following the April 1993 amendments to the Act. Since the end of 1994 the size of SBLA borrowers has been decreasing (though not yet to period 11 levels).

- SBLA borrower firms are considerably younger than non-SBLA bank borrower clients.
    - Approximately 45% of SBLA borrowers are firms that were less than one year old at the time of the loan. By comparison, less than 5 percent of non-SBLA bank borrowers are start-ups. This difference indicates that the SBLA is providing significant additionality to existing bank lending.
- The anticipated additional hiring that SBLA borrowers expect to undertake has remained relatively constant, at 2 to 3 per borrower, (mean of 2.3) across lending periods 11 and 12.
- Actual job generation that SBLA loan recipients attributed to the loan guarantee program were significantly higher than borrowers' original hiring anticipations.
    - Actual levels of hiring varied across types of borrower, but the average number of new jobs per SBLA loan was 3.9 individuals.
- The sectoral distribution of SBLA lending has shifted between 1990 and 1996. Firms in the retail and services sector appear to be less reliant on SBLA loans in the last few years than they had at the beginning of the decade. Conversely, more use of the SBLA is being made by firms in the transportation and manufacturing sectors.
- The average loan size increased dramatically as of April 1993.
    - In period 11, the average (median) SBLA loan was approximately $40,000 ($27,000). During period 11, 70 percent of loans were for less than $50,000.
    - For period 12, the average loan (median) increased to approximately $50,000 ($40,000). In period 12, fewer than 60 percent of loans were for less than $50,000.
- The primary use of the proceeds of borrowing is for acquisition of equipment, especially by smaller firms.
- The use of proceeds of borrowing to cover SBLA fees has increased throughout period 12. Currently, approximately 45 percent of borrowers pay fees from borrowed funds.
- For the period 12 data for which interest rate data was collected, the average rate is 2.60 percent above prime.
    - Moreover, terms of lending to SBLA borrowers vary by industry, size of the firm, size of the loan, the age of the firm, and whether or not the borrower is a franchise.
- Term to maturity also depends on the industrial sector of the borrower, as well as on the size of the loan, the size of the firm, the age of the firm, and whether or not the firm is a partnership or a franchise operation.
- Significant improvements in sales and profitability are reported by SBLA borrowers.
- Access to debt capital through the SBLA appears to have helped many borrower firms to survive.

Impact of SBLA Lending: An Evaluation of the Economic Impacts of the SBLA Program

II. Objective of the Report

This report presents the findings an empirical study that estimates economic impacts of the SBLA program. Three elements of performance were investigated with reference to the economic impacts of the program since the 1993 and 1995 legislative revisions. The three aspects of this study are:

1. ***Lending Activity.*** The analysis draws on loan registration data to provide breakdowns of lending activity by size of firm, industry sector, size of loan, age of borrower firm, intended use of loan proceeds, and employment growth.[1]
2. ***Price Analysis.*** The terms of SBLA lending to SMEs are evaluated using registration data. The terms of credit (interest rate charged, term of loan) are compared with the terms of lending for non-SBLA borrowers as reported in the Haines-Riding (1994) study of banking practices. Terms of lending were broken out by type of borrower (size, sector, age of firm, and size of loan).[2]
3. ***Economic Impact.*** By means of data obtained from telephone interviews of a large random sample of SBLA loan recipients, the economic impact of the program is estimated according to job creation, effects on borrower performance, and firm survival. Evaluation of the extent of incrementality in the program was estimated and economic impacts interpreted in the context of incrementality. Actual employment increases are compared with the anticipations that borrowers had originally stated in loan registration data.

III. Point of Departure

In recent discussions involving a variety of stakeholders, it has become apparent that there exists disagreement about what the mission of the SBLA is, or ought to be. Before undertaking the analysis of economic benefits, the analysis needs to be placed into the appropriate context. This section, therefore, provides a short discussion of the conceptual issues that surround loan guarantee programs. The debate over the rationale for, and the design of, loan guarantee initiatives is one that is international in

[1] The original project proposal and terms of reference also called for analyses of lending activity by gender of borrower, region, and lender. However, subsequent discussions with the SBLA administration revealed that while data on these variables was included in the registration data, analysis according to these variables was, for a variety of reasons, not to be conducted.

[2] Again, the original terms of reference called for this analysis to be broken down according to gender, region, and type of lender. On the direction of the SBLA administration, this was not pursued

scope. This section draws on discussion held at the International Round Table on Loan Guarantees sponsored by the Inter-American Development Bank and held in Washington DC, June 1996.

First, there are those who believe that an intervention into a market that functions efficiently is unwarranted. According to this school of thought, interventions are justified only by imperfections and that even then, the nature of the intervention should be specific to the particular imperfection. This rationale cites the fact that no imperfections in the credit market have been identified by research.

Recent work by Vogel and Adams (1996) recognizes two conditions under which intervention may be justified. The first is when lenders place "undue" emphasis on the role of collateral in making their lending decisions. The second condition is when the high fixed cost of due diligence (relative to loan size) makes it uneconomical for lenders to extend small loans. In general, both these conditions are arguably true in the Canadian context. Canadian lenders have long been criticized for their reliance on collateral in lending decisions. Moreover, recent initiatives by bank lenders to small firms have taken the form of loan arrangements that minimize costs of evaluation and due diligence.

If we accept that intervention is justified, then it becomes necessary to design the form of the intervention. The intent of many loan guarantee schemes is not always clear, even to those who design and administer them. On the one hand are those who believe that loan guarantee programs should be means of inducing lenders to take additional risks. Others think loan guarantees are intended to assist small firms to raise capital but that such firms need not be riskier. The Canadian SBLA program subscribes to the latter intent. The goal of the program is clearly articulated: "… to increase the availability of loans for the purpose of the establishment, expansion, modernization and improvement of small business enterprises" (SBLA, 1991. P.2). The stated objective is based on the understanding that small businesses, by virtue of size alone, may need intervention to obtain the debt financing required to become established, to expand, and to improve their operations. The SBLA was not designed to encourage lenders to provide additional debt capital for risky firms.

The goal articulated here does not demand or expect that the small firms that use the program need be any riskier than small firms that do not use the program. This distinction is important.

If the issue had been not size of firm, but **risk**, then comparison of economic benefits with the cost of the program would be essential. That is, if the Act had been designed as a means of encouraging lenders to loan to *risky* SMEs, the costs of default and program administration would then be correctly viewed as a subsidy to the private sector (lenders and borrowers) to compensate for the additional risk. To justify program continuance under this objective, the economic benefits must exceed the costs.

According to the SBLA, however, the issue is the **size** of the borrower firm. Because the targets of the program are firms that are small but not risky, no subsidy to lenders and borrowers is justified. Ideally, the default rate ought not be any greater for SBLA borrowers than for non-borrowers. Since, in the ideal situation, no subsidy would exist, there would not be any need to measure benefits. (For a more detailed explanation of this rationale, see Rhyne, 1988).

Riding (1996) demonstrates that in the presence of a loan guarantee, lenders' dependence on collateral is mitigated and that additional credit would result. A natural result of this process, however, is that default risk of the portfolio of guaranteed loans is greater than that of non-guaranteed loans. Thus, even if size alone is the motive for the program, it is natural that a higher rate of default results. Thus even if facilitation of credit to *small* businesses is the program objective, higher-than-normal defaults will result. This implies the need to compare the resulting economic benefits with the default and administration costs of the program. Evaluation of the benefit side of this comparison is the objective of this study.

IV. SCOPE OF THE WORK:

The work reported here comprised the following tasks.

1. The first task was to assemble a machine-readable database of SBLA loan data. For this task, the SBLA administration provided summary data for all SBLA borrowers for periods 11 (1990-April 1993) and 12 (April 1993 - present), more than 189,000 cases.
2. The second task was to analyze these loan registration data and to prepare an initial report, submitted in November 1996. The initial report provided breakdowns of lending activity and terms of lending according to various types of borrower. This final report subsumes the entirety of the earlier interim report so that readers need only resort to this one document.
3. The third task was to administer a questionnaire, using telephone interviews, to a large sampling of borrowers obtained from loan registration files. The goal of the survey was to collect data from SBLA loan recipients on post-borrowing terms of lending, number of employees, hirings, current annual revenues, and borrowers' perceptions of the benefits of the guaranteed loan. Tests for incrementality, or "additionality", were performed.
4. The final task was to analyze interview data, synthesize interview results with loan registration information, and to prepare this final report. In addition to items that comprised the interim report, this document provides an evaluation of the impact of the SBLA program on employment generation, sales revenues, business and profitability. Incrementality is evaluated according to the terms of lending, to borrowers' perceptions, and a from series of questions that seek to identify non-incremental loans.

V. FINDINGS: LENDING ACTIVITY

A. SIZE OF FIRM

Size of borrowers can be measured in several ways. This section reports on the size of SBLA borrowers according to each of three dimensions: the number of employees, the legal status of the firm, and the annual sales volume of the borrower. In all cases, variables are reported on an annual basis so that changes to the SBLA legislation may be investigated.[3]

1. Size: Number of Employees of SBLA Borrowers

The chart that follows shows the average number of employees of SBLA borrowers across the six calendar years that comprise SBLA lending periods 11 and 12. There is a clear increase in firm size, as measured by employment, following the April 1993 amendments to the Act. The average number of employees of SBLA loan recipients during period 11 was 4.6; for period 12, the mean value was 5.4 employees. The increase is to be expected in that among the amendments was one that allowed larger firms to use SBLA guarantees.

Since 1993, the average firm size appears to have been decreasing, but has not yet reached period 11 levels.

Chart 1: Average Size of SBLA Borrowers: Number of Employees

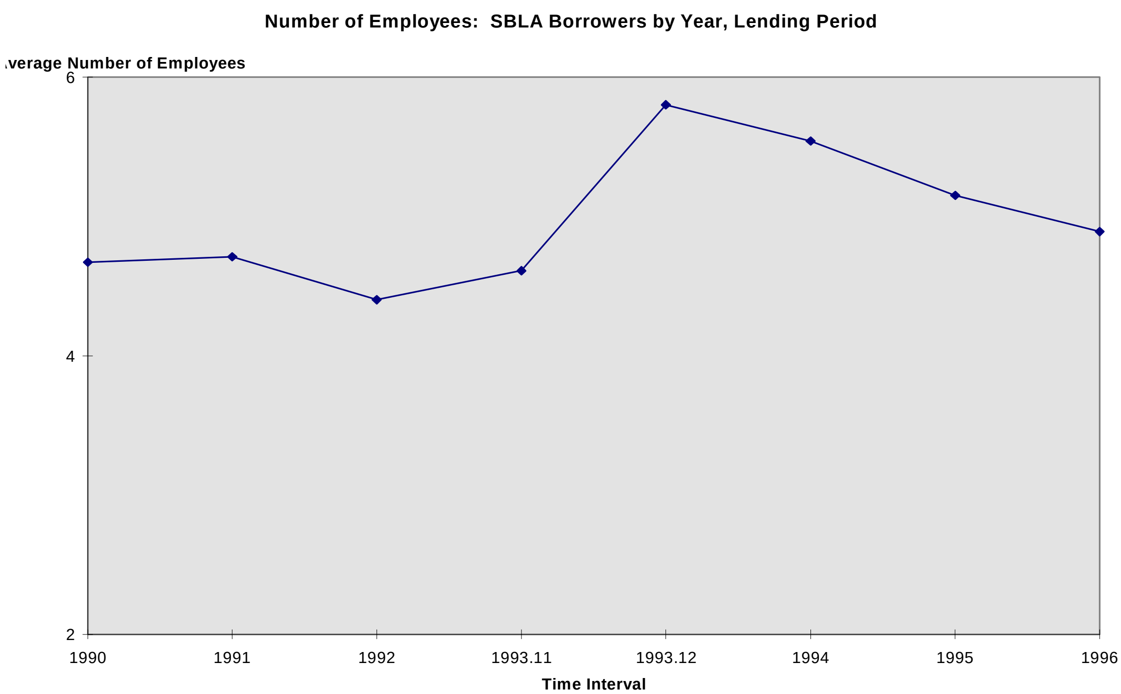
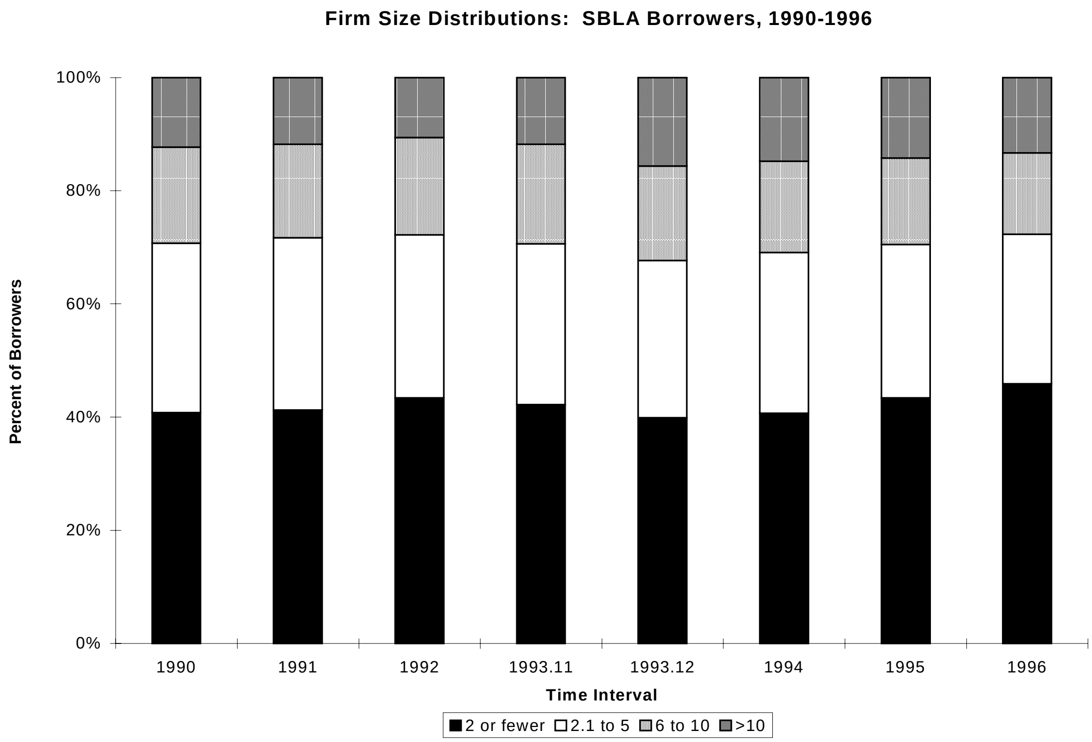


Chart 1 shows the mean values of employment, by year, reported by SBLA borrowers. A second way of examining the size of borrowers is through the *distributions* of employment levels for SBLA borrower firms. Chart 2 shows these distributions, again by year. Again, the shift to larger firms in the post-April 1993 period is evident. Equally evident, however, is the shift back towards smaller firms in 1995 and 1996. During 1995 and 1996, 70.6 and 72.3 percent of borrowers, respectively, were firms with 5 or fewer employees.

[3] In addition, 1993 has been split into two intervals. These are denoted 1993.11 and 1993.12: 1993.11 refers to the January-April span which is in SBLA lending period 11; similarly, 1993.12 refers to May-December of 1993, SBLA lending period 12.

Chart 2: Size Distributions of SBLA Borrowers



2. *Size of SBLA Borrowers: Some External Comparisons*

It is also useful to compare the average firm size with external measures. Several external benchmark measures are available:

- During 1996, the Canadian Bankers Association [CBA, henceforth] commission an arm's length survey of small businesses banking issues. The work was conducted by Thompson-Lightstone Ltd., an independent consulting firm. The study reported a variety of statistics that related to small businesses and small business bank clients.
- During 1994, Haines and Riding obtained considerable information from the files of borrowers maintained by the six large banks, including financial data and other measures of the attributes of bank borrowers. This research was conducted as part of a larger study commissioned by Industry Canada on lending priorities of the large Canadian banks.

Table 1 compares employment as reported by the SBLA administration for periods 11 and 12 with corresponding measures obtained from these two studies.

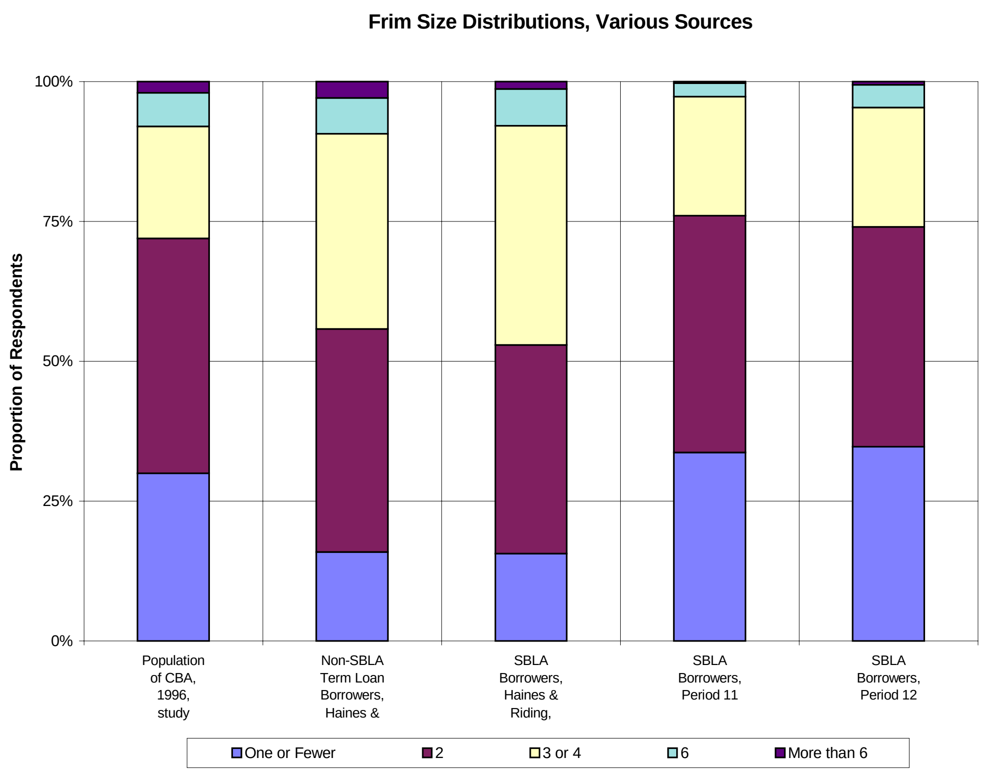
Table 1: Sizes, as Measured by Employment, of Borrower Firms	
Source of Data	**Average Number of Employees** Standard Errors Shown as Available
CBA, 1996	7.7 ± ?
Haines Riding, (Non-SBLA Bank Borrowers, 1994)	9.4 ± 1.24
Haines Riding, (SBLA Bank Borrowers, 1994)	7.5 ± 0.51
SBLA Administration, Period 11	4.6 ± 0.04
SBLA Administration, Period 12	5.4 ± 0.03

Several observations follow from this table. *First, by all measures, the size of the "average" SBLA borrower is significantly less than that of non-SBLA bank clients.* This is a first, strong, indication of incrementality: that the SBLA is meeting its objective of facilitating the objective of making capital available to *small* firms that may otherwise, not be able to qualify for traditional debt financing.

The second observation is that the average level of employment reported by SBLA borrowers on their loan registration forms is materially less than that found among SBLA borrower clients of the "big six" lenders. This suggests that, among SBLA borrowers, banks service the upper end of eligible borrowers and non-bank lenders deal more frequently with smaller clients.

Further to these averages, it is instructive to examine more detailed comparisons of firm size, as measured by the number of employees, against external benchmarks. The chart that follows provides such a breakdown.

Chart 3: Size Distributions: SBLA Borrowers vs. External Benchmarks



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rom this chart, is seems clear that the distribution of bank business borrowers differs significantly from that of the general populations of Canadian SMEs. Of the population of Canadian SMEs, approximately 88 percent were composed of two or fewer employees. Yet, according to the Haines-Riding (1994) study, only 55.8 percent of non-SBLA term loan bank borrowers are firms with two of fewer employees. Among SBLA borrowers, 76 percent (74 percent) of borrowers in 1995 (1996) were firms with two or fewer employees. This difference seems to suggest that the SBLA is providing for significant amounts of incremental lending.

These observations need to be placed into context. First, the employment levels reported by the SBLA administration reflect data from the borrowers loan registration forms. The data from bank files and from the CBA study reflect current, post-borrowing, levels of employment. If we accept all the data reported above, we may conclude that SBLA borrowers have added from 2-3 employees between borrowing and the dates of survey administration. This begs an analysis of SBLA borrowers' stated intentions to add to their employment base.

3. Legal Form of Borrowers

A second measure of firm size is form of ownership. In general, larger firms are incorporated and smaller firms are sole proprietorships.[4] Table 2 and Chart 4 shows annual breakdowns, by legal form, of SBLA borrowers during lending periods 11 and 12. The chart suggests that the proportion of unincorporated business SBLA borrowers is slightly higher in period 12 than for period 11 and that the proportion of incorporated borrowers has decreased.

Again, external benchmarks are available and informative. Table 2 provides summary breakdowns, by legal status of the firms, from various surveys of businesses and SME borrowers.

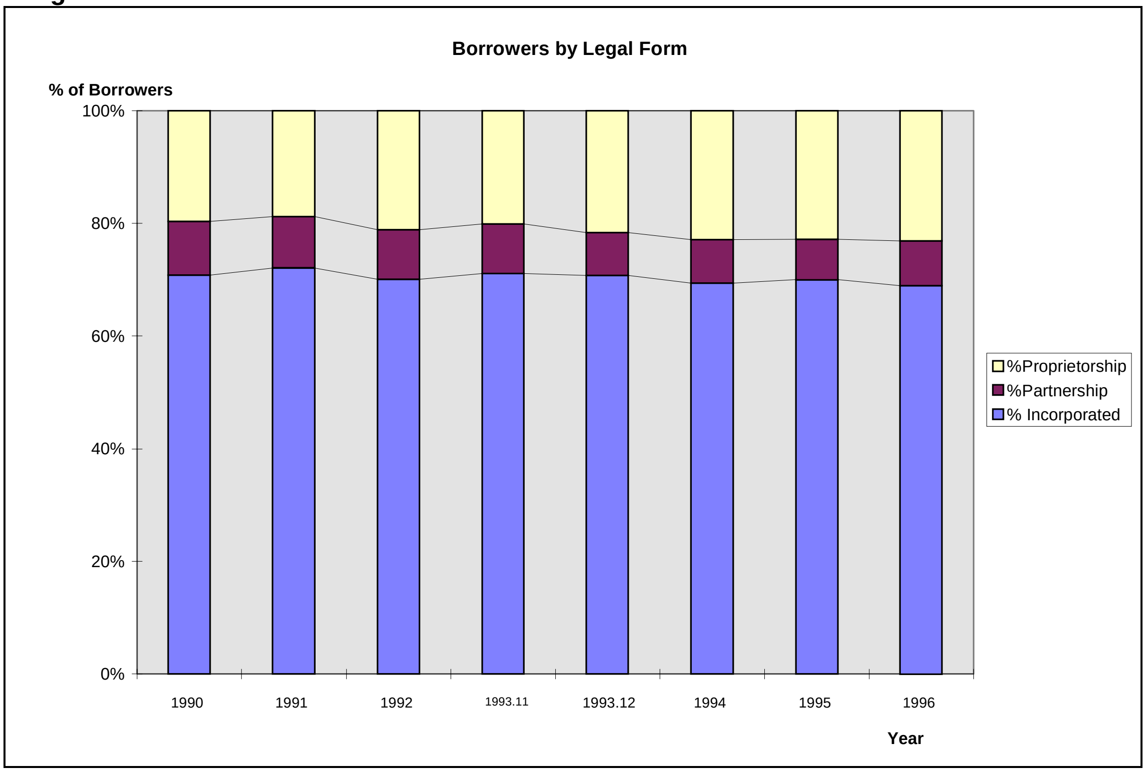
Table 2: Legal Status of Borrower Firms

Source of Data	Proportion that were Sole Proprietorships	Proportion that were Incorporated Businesses
CBA, 1996. Population from which Thompson-Lightstone drew data	40%	48%
Bank Borrowers with non-SBLA Term Loans (Haines & Riding, 1994)	12.1%	78.4%
Bank Borrowers with SBLA Term Loans (Haines & Riding, 1994)	9.2%	86.8%
SBLA Administration, Period 11	19.9%	71.0%
SBLA Administration, Period 12	22.7%	70.0%

[4] In general, partnerships comprise a minority of businesses and tend to be used among certain classes of businesses within the professional services sector (e.g., lawyers, accountants, physicians).

Again, it seems clear that SBLA borrowers are smaller than non-SBLA bank borrowers, but that SBLA borrowers tend to be incorporated more frequently than businesses in the larger population of SMEs. Business bank borrowers, in particular appear to comprise a small proportion of unincorporated firms.

Chart 4: Legal Form of SBLA Borrowers



Salient Findings from this Section:

- *The size of SBLA borrower firms increased significantly following the April 1993 amendments to the Act.*
- *During 1995 and 1996, the size of SBLA borrowers has been decreasing (though not yet to period 11 levels).*
- *The proportion of SBLA borrower firms that are unincorporated (approximately 20%) is higher than the estimated proportion of non-SBLA bank borrower clients that are not incorporated (approximately 12 %).*
- *The stated objective of the SBLA was to facilitate lending by small firms. More than 74 percent of SBLA borrowers are firms with fewer than 5 employees. By comparison, it is estimated that no more than 56 percent of non-SBLA borrower clients of the major banks are firms comprising fewer than 5 employees.*

B. ANTICIPATED AND ACTUAL ADDITIONS TO EMPLOYMENT BASE

Chart 5 outlines how the distribution of anticipated additional employees has varied during SBLA lending periods 11 and 12. From this distributions, it is seen that more than half the firms expect to hire one to two people as a result of the SBLA loan, and that the distributions of these hiring anticipations has been relatively stable during lending periods 11 and 12.

Chart 5: Distributions of Anticipated Additional Employment, SBLA Borrowers

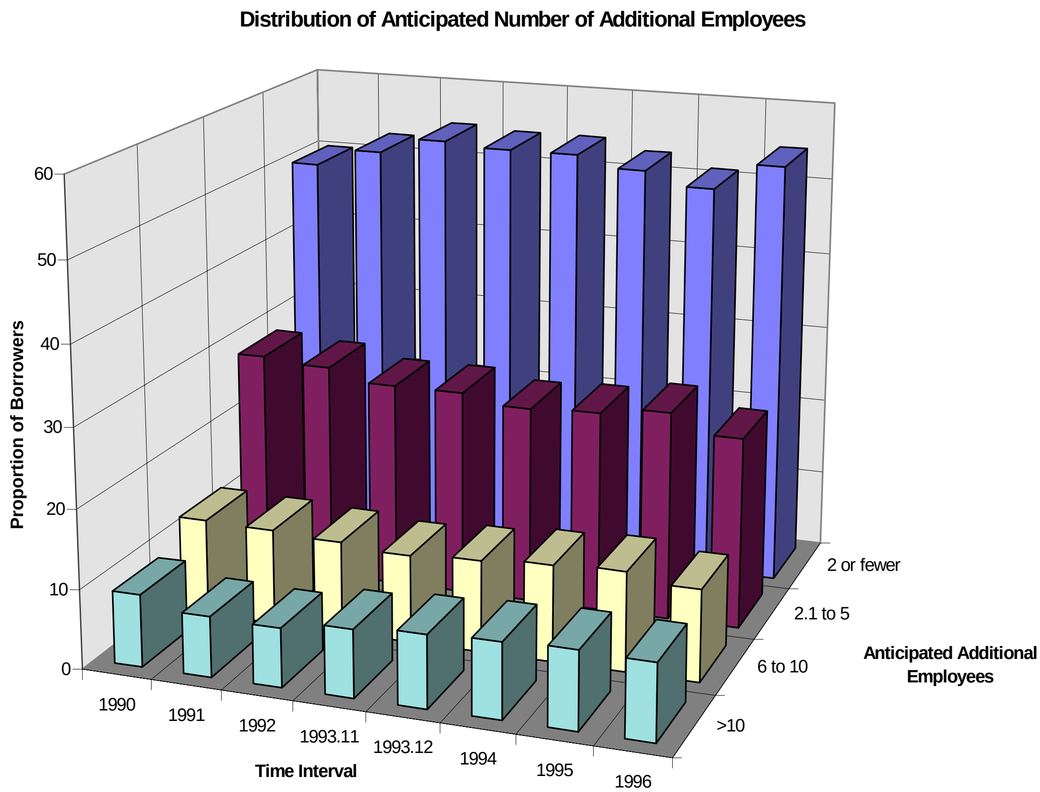
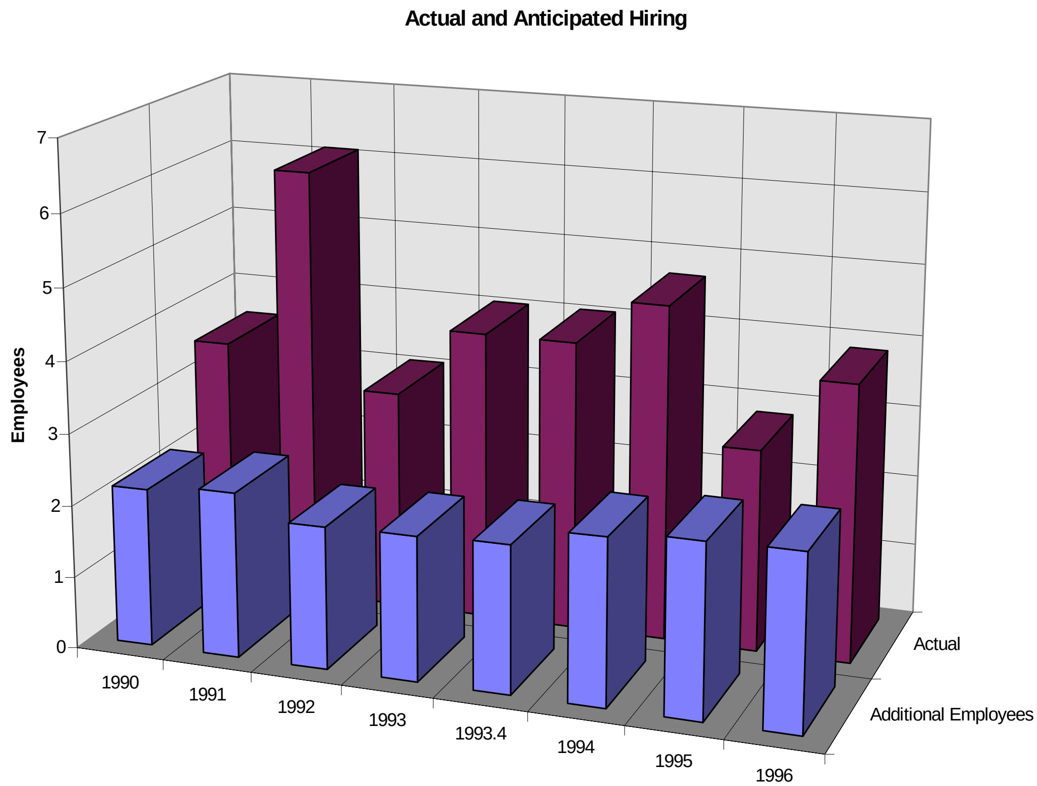


Chart 6 plots the average of SBLA borrowers' reported anticipated additional employment, annually since 1990, as reported on SBLA registration data forms. The was a slight decrease shown in 1992, perhaps attributable to the effects of the recession. Otherwise, the average anticipated additions to employment remains at approximately 2.3 employees. When added to the base level of employment as reported by SBLA borrowers on loan registration, this anticipated increment of 2.3 persons, if realized, makes the registration data consistent with those reported by Haines and Riding and by the CBA study.

Also shown in Chart 6 are the actual numbers of additional employees attributed to the SBLA. These data are obtained from the responses to the telephone survey of 682 SBLA loan recipients. It is clear that actual hiring outstripped anticipated additional employment in every year. Moreover, actual SBLA-related hiring exceeded anticipated hiring for 66 percent of the respondents. Over the 1990-1996 period, actual SBLA-supported hiring averaged 3.9 (± 0.59) employees.[5]

Chart 6: Anticipated Additional Employment SBLA Borrowers

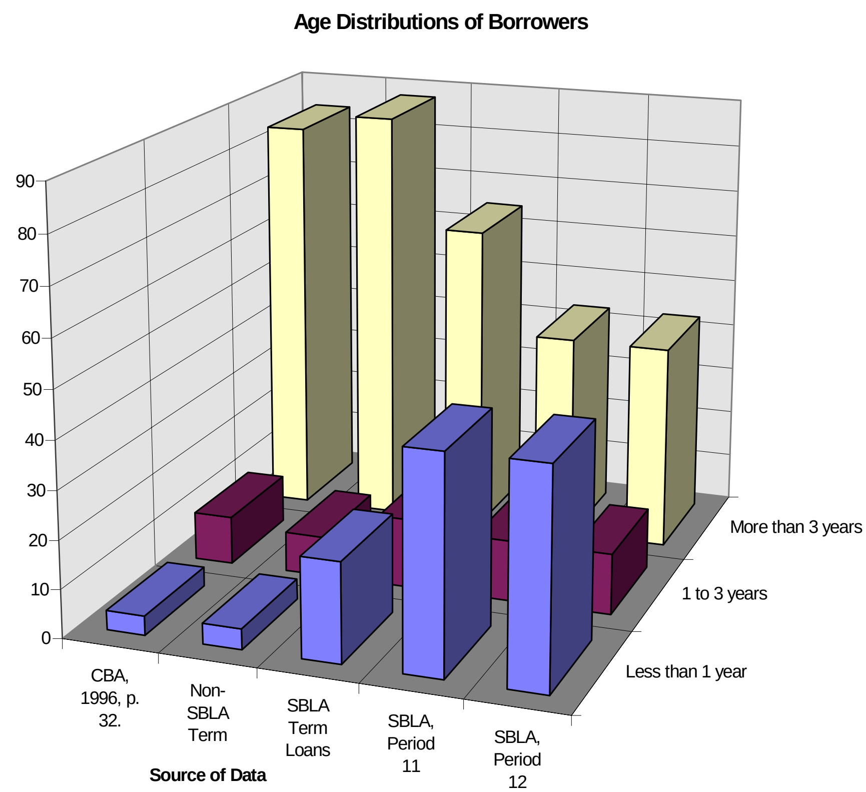


[5] The survey-based data are more volatile than the population-based average of anticipated hiring. This is because the sample sizes from the survey varied by year from 10 (for 1990) to 96 (for 1994) cases.

C. AGE AND STAGE OF FIRM

The following chart illustrates one of the ways by which the SBLA is providing incremental credit to SMEs. The chart breaks down various groups of SME borrowers into age distributions. The first such category are start-up firms, defined here as firms whose reported age was one year or less. As seen in the first two columns (CBA, 1996 and Haines & Riding, 1994, non SBLA Term Loan Borrowers), these represent a minority of bank borrowers. The 1994 Haines & Riding study based on bank loan files found that SBLA *bank* borrowers tended to be somewhat younger, with approximately 20% of SBLA bank borrowers being firms of one year or less in age. The SBLA administration data, however, shows clearly that a *majority* of SBLA borrowers are young firms in both lending periods studied here.

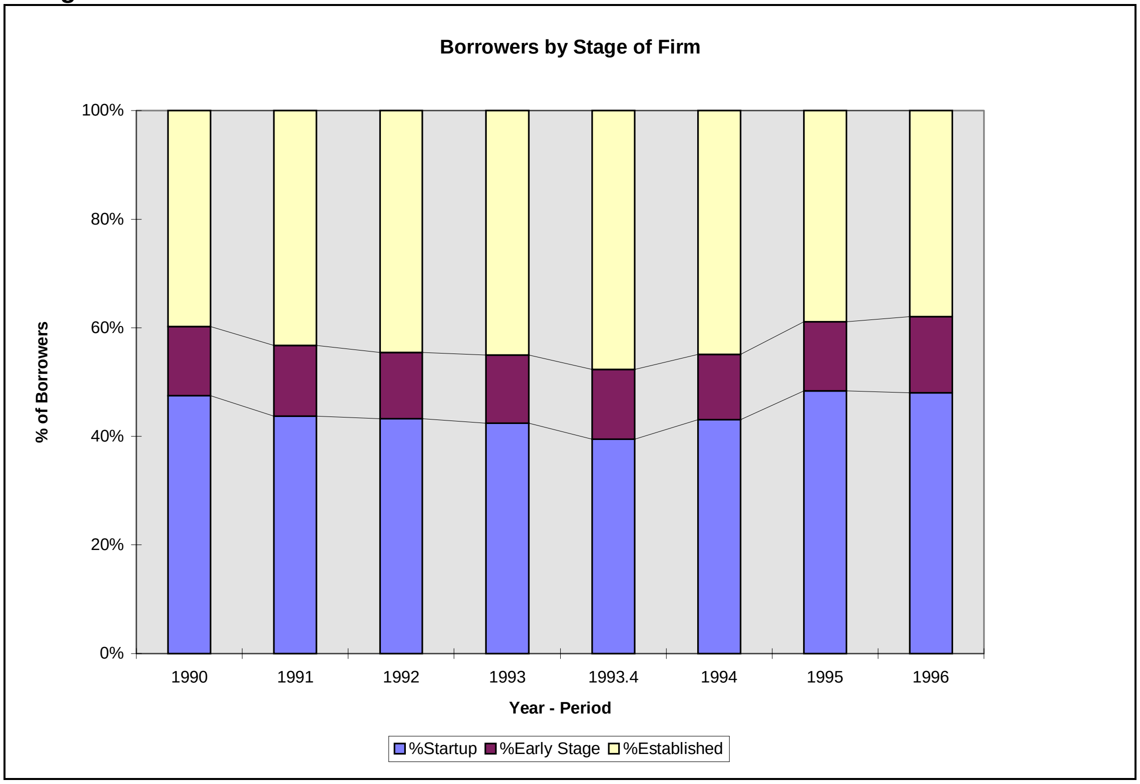
Chart 7: Age Distribution of SBLA Borrowers



From these data, it is seen that traditional bank lenders count no more than five percent of their clients as start-up firms; yet among SBLA borrowers, more than 40 percent of borrowers are less than one year old. This difference represents incremental lending attributable to the SBLA.

Chart 8 continues this analysis by showing the time series of the breakdown among start-up (≤ 1 year), early-stage firms (defined as those firms aged more than one but three of fewer years), and established firms (more than 3 years old). Throughout period 12, the proportion of established firms has been shrinking, with commensurate increases in both start-ups and early-stage borrowers.

Chart 8: Stage of SBLA Borrowers



The preceding charts measured stage of firm according to the number of years for which the firm had been in operation. The revised registration form also sought information about stage of firm according to whether the borrower was a start-up, an expansion or modernization, or an instance of change of ownership. These data are only available for a subset of the cases in lending period 12. For this period:

- start-ups comprised 39.8 percent of borrowers;
- expansion or modernization accounted for 52.4 percent; and,
- change of ownership for the minority, 7.8 percent of borrowers.

These results are consistent with stage of firm as imputed from the age of the business.

Salient Findings from this Section:

- *SBLA borrower firms are considerably younger than non-SBLA bank borrower clients. Almost one-half of SBLA borrowers can be classified as start-up firms or firms that were less than one year old at the time of the loan. By comparison, less than 5 percent of non-SBLA bank borrowers are start-ups. This difference indicates that the SBLA is providing significant additionality to existing bank lending.*
- *The anticipated additional hiring that SBLA borrowers expect to undertake has remained relatively constant, 2 to 3 per borrower, across lending periods 11 and 12.*
- *Actual hiring attributable to the SBLA exceeded the level of anticipated hiring. On average, SBLA recipients hired 3.9 new employees in conjunction with the loan, compared to the average level of anticipated hiring of 2.3 new hires.*

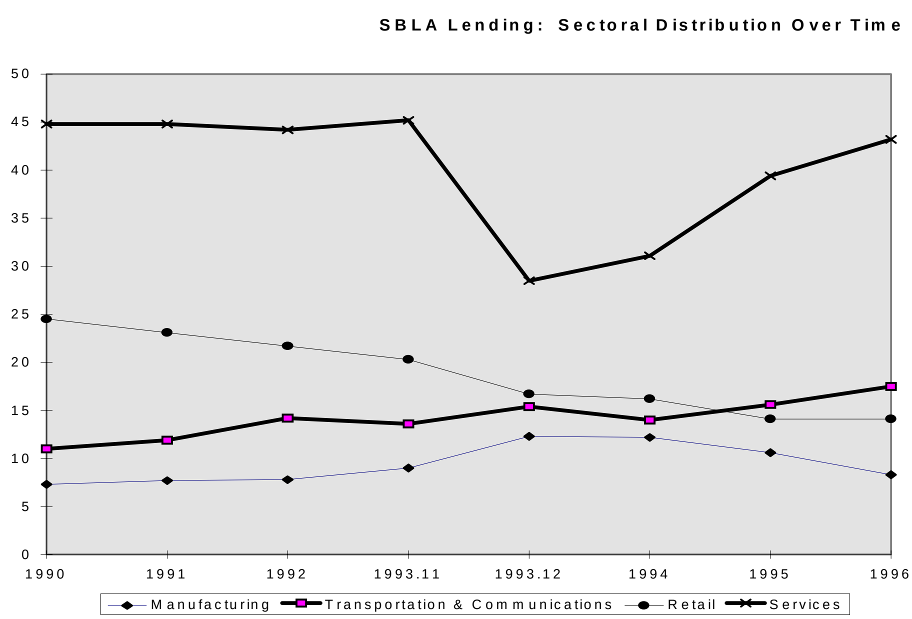
D. SBLA Lending by Industry Sector

Table 3 and Chart 9 report the breakdown of SBLA lending by sector. For period 12, lending to the services sector is further broken down by sub-sector.

Table 3: Sectoral Distribution of SBLA Lending		
Industry Sector	**Period 11 (%)**	**Period 12 (%)**
Construction	7.8	9.0
Manufacturing	7.8	11.3
Transportation & Communications	12.7	15.2
Wholesale	2.7	6.3
Retail	22.6	15.4
Finance, Insurance, Real Estate	-	1.4
Primary Industries	1.7	6.9
Services	44.5	33.7
• *Business services*		*7.2*
• *Accommodation, Food, Beverage*		*10.9*
• *Other Services*		*15.6*

The four main sectors that use SBLA borrowing are manufacturing, transportation and communication, retail, and services. These four sectors account for more than three-quarters of lending under the Act. Use of the SBLA by firms in the other sectors is relatively minor. The data in the table suggests that the reliance of the service sector on the SBLA has diminished. However, as shown in Chart 9, this decrease is transitory. Of note is the decreased use of the program by firms in the retail sector and an increase in use by businesses in the transportation sector.

Chart 9: Distribution of SBLA Lending by Major Sector, 1990-1996.



VI. FINDINGS: TERMS OF LENDING

A. SBLA LENDING BY SIZE OF LOAN

Historically, the amounts borrowed by individual firms under the terms of the SBLA have been small. Chart 10 presents, annually, the average loan size, the median loan size, and the proportion of loans of less than $50,000, annually, across the years that comprise lending periods 11 and 12.

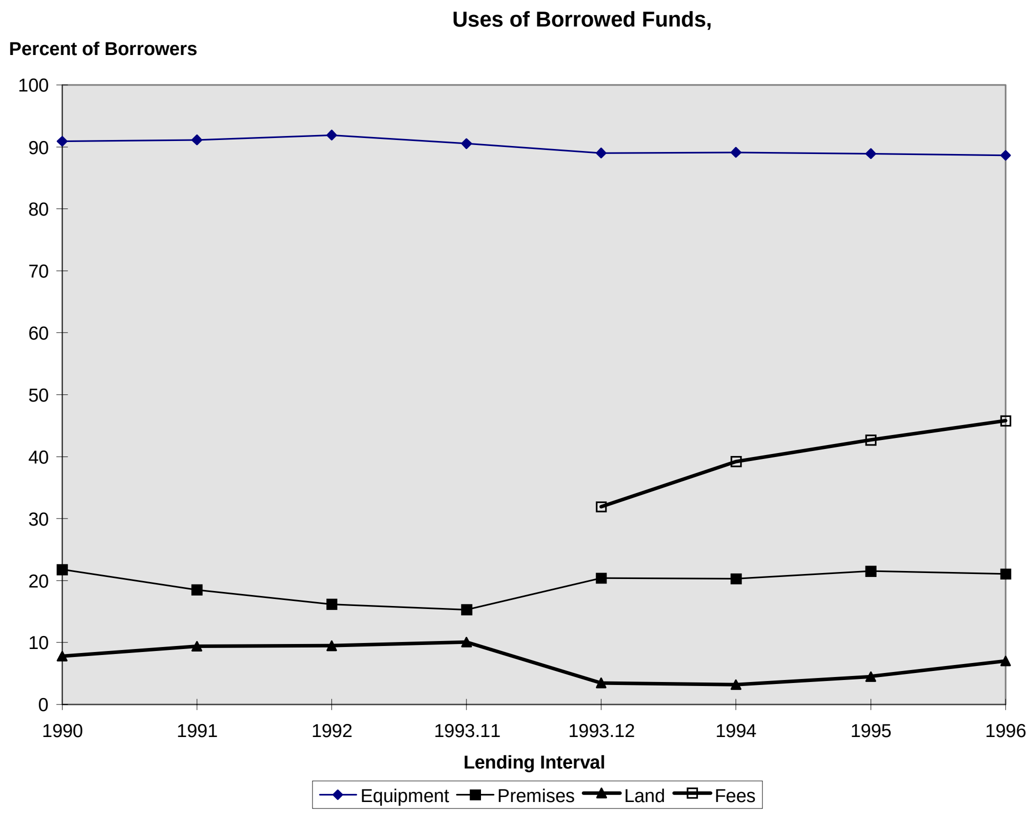
A sharp increase in lending amounts is evident in these time series. Both the mean and median loan sizes increased and the proportion of small loans decreased: more businesses were borrowing more funds under the terms of the Act. Thus, the increased volume of lending as from April of 1993 is due, not only to the increased take-up rate, but also due to increases in the loan size and the frequency of large loans.

Chart 10: Size of SBLA Loans, 1990-1996.

B. USES OF BORROWED FUNDS

Chart 11 shows that the primary use of funds borrowed under the Act is the acquisition of equipment. The pattern of funds use has been constant over time. Since April 1993, firms have increasingly relied on borrowed funds to pay the fees associated with the loan guarantee program; otherwise, few patterns may be discerned from these data.

Chart 11: Uses of SBLA Loans, 1990-1996.



There are, however, other patterns that are revealed by analysis of the data on usage of proceeds. These findings include that:

- loans of less than $25,000 are used almost exclusively for equipment (95% of borrowers) and fees (45 percent of borrowers); only 10 percent of borrowers, where the principal was less than $25,000, used the proceeds for premises;
- early-stage firms were more likely to use the proceeds to pays registration fees (48 percent of cases in 1996) than established firms (43 percent of cases used proceeds to pay fees);
- large loans (those in excess of $100,000) were still used for acquisition of equipment (80-85 percent of cases) but also tended to be used more often for premises (25 to 50 percent of cases); and,

- 90 to 95 percent of start-up borrowers used the funds to acquire equipment and 20 to 30 percent of start-ups used the funds for premises. More established borrowers were less likely (10 to 20 percent of cases) to use the funds for premises.

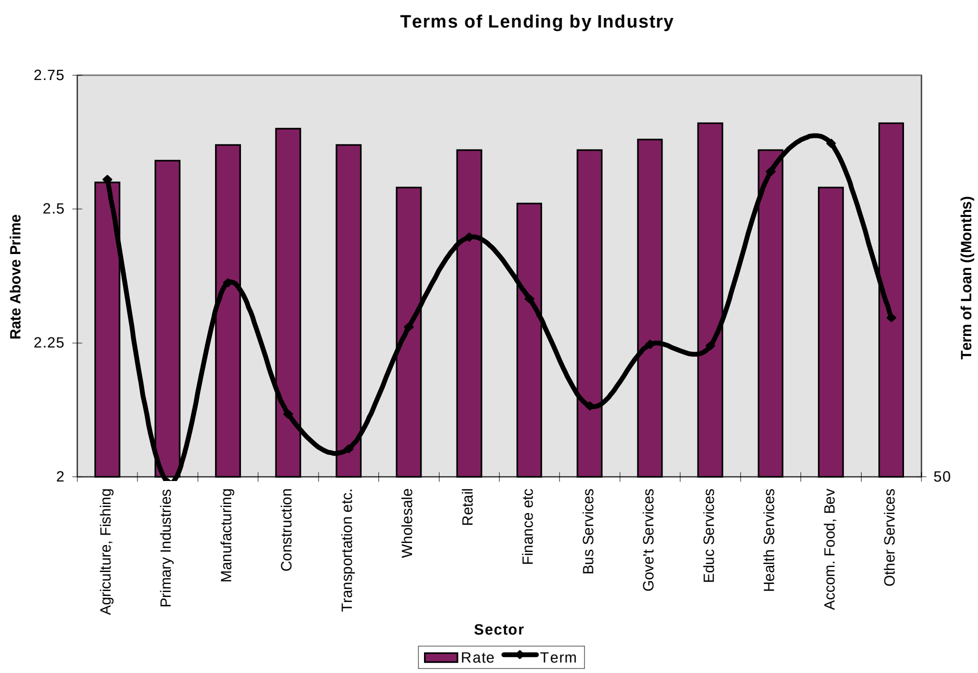
C. TERM TO MATURITY AND INTEREST RATES ON LOANS

Two measures of the terms of lending were available from a subset of the registration data:[6] the interest rate charged on the loan and the term to maturity of the loan. As background, it is noted that prior to April 1993, the maximum rate that lenders could charge was 1.75 percent above prime.[7] Subsequently, amendments permitted lenders to charge as much as 2.75 percent above prime rate. This change in the legislation is apparent from the data. For the period 12 data for which interest rate was collected, the average rate is 2.60 percent above prime.

1. Industry Sector

Both the average interest rate charged and the term to maturity of the loans vary somewhat by industrial sector, as shown in Chart 12.

Chart 12: Terms of Lending on SBLA Loans, by Sector.



From this chart, interest rates were lowest in the Finance & Real Estate, Wholesale, and Accommodation, Food, Beverage sectors and highest in Construction and “Other” Services.

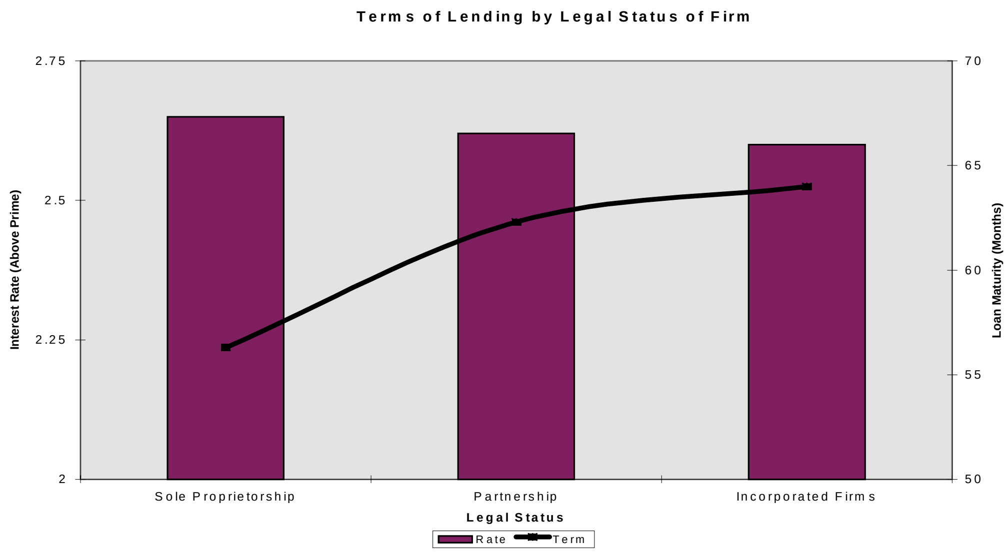
6 Terms of lending have been added to the loan registration form only for the latter portion of lending period 12; these findings are nonetheless based on more than 28,000 cases.

7 Only floating rate loans are considered here.

2. *Legal Status*

The legal status of the business also appeared to be related to terms of lending, as shown below. Interest rates were higher and term to maturity lower for sole proprietorships (Chart 13). Incorporated businesses received more favorable terms of credit: interest rates were lower and terms to maturity longer (Chart 13).

Chart 13: Terms of Lending on SBLA Loans, by Legal Status.



3. *Size of Firm & Size of Loan*

It is not clear that the legal status is the "driver" variable behind terms of lending. In general, sole proprietorships are smaller firms and seek smaller loans, both factors that, as shown in Chart 14, affect terms of lending. From Chart 14, it seems clear that size of loan is related to the level of interest rate charged. In addition, however, within each loan size grouping, firm size also seems to play a significant role: interest rates are, in general, higher for smaller firms and for smaller loans within firm size strata.

To test more rigorously which variables are the primary drivers behind determination of terms to credit, multivariate regression analysis was employed. The results confirmed that higher interest rates were associated with:

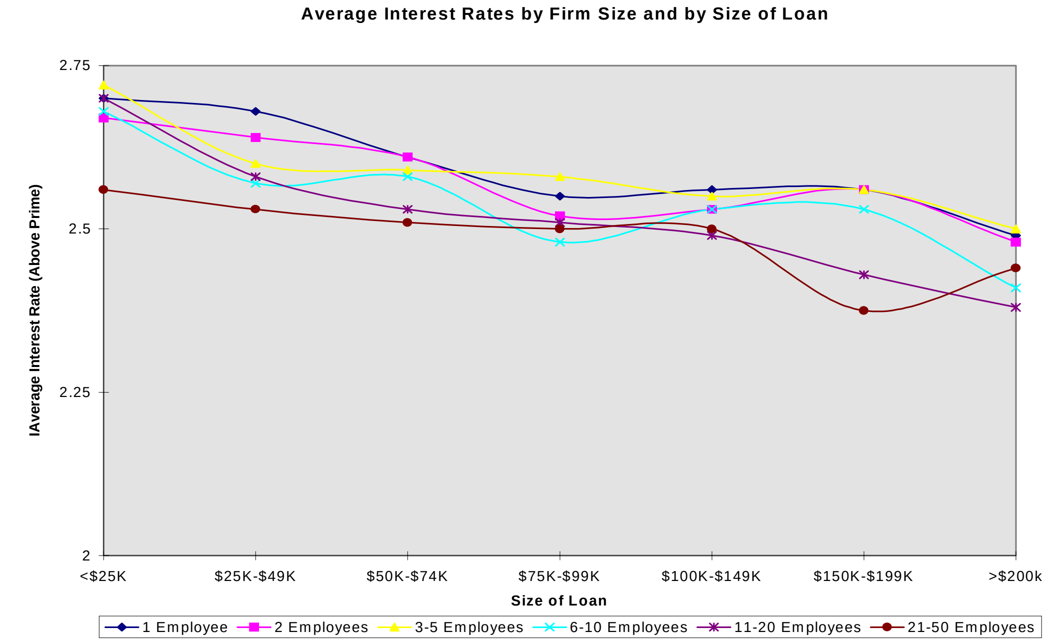
- smaller firms;
- smaller loans;
- younger firms; and,
- franchises.

Term to maturity was also associated with some of these variables. In general, longer terms to maturity were correlated with:

- larger loans;
- smaller firms;

- franchises;
- older firms; and,
- partnerships.

Chart 14: Terms of Lending on SBLA Loans, by Firm Size and Loan Size.



Salient Findings from this Section:

- *The sectoral distribution of SBLA lending has shifted between 1990 and 1996. Firms in the retail and services sector appear to be less reliant on SBLA loans in the last few years than they had at the beginning of the decade. Conversely, more use of the SBLA is being made by firms in the transportation and manufacturing sectors.*
- *The average loan size increased dramatically as of April 1993. In period 11, the average (median) SBLA loan was approximately $40,000 ($27,000). For period 12, the average loan (median) increased to approximately $50,000 ($40,000). During period 11, 70 percent of loans were for less than $50,000; in period 12, fewer than 60 percent of loans were for less than $50,000.*
- *The primary use of the proceeds of borrowing is for acquisition of equipment, especially by smaller firms. The use of proceeds of borrowing to cover SBLA fees has increased throughout period 12. Currently, approximately 45 percent of borrowers also borrow funds to cover the fees.*
- *Terms of lending to SBLA borrowers vary by industry. In addition, interest rates on loans depend on size of the firm, size of the loan, the age of the firm, and whether or not the borrower is a franchise.*
- *Term to maturity also depends on the industrial sector of the borrower, as well as on the size of the loan, the size of the firm, the age of the firm, and whether or not the firm is a partnership or a franchise operation.*

VII. ECONOMIC IMPACT OF THE SBLA FINDINGS FROM SURVEY RESEARCH

A. INTERVIEW PROCESS

Ideally, evaluation of a program such as the SBLA program should employ longitudinal data and a sample of benchmark firms. The loan guarantee recipients would be followed longitudinally and their performance and attributes compared with a those of the benchmark firms. Conditions for this type of analysis are rarely possible. In the absence of this ideal, firms that had received an SBLA during lending periods 11 and 12 were identified and their performance recorded by means of telephone interviews.[8]

For this study, the SBLA administration randomly generated two samples, each of 1,500 randomly-chosen SBLA borrowers. A team of five interviewers conducted telephone interviews, in both official languages, with 682 of these 3,000 businesses. This response rate is lower than that usually obtained with telephone interviews. There are, however, several good reasons for this. First, interviewer time constraints and the unavailability of ready access to borrowers' telephone numbers (not recorded on loan registration forms) allowed for only 2,183 calls. Thus, an actual response rate of 31 percent was obtained, a response rate that is double the usual response rate for mail-based surveys.

The response rate is also low because a material proportion of SBLA borrowers were numbered companies and interviewers were often unable to locate these firms. The actual number of refusals was 110 firms (5 percent).

In other cases where the number was obtained, the appropriate person was not available due to holidays etc. This is important. Mail surveys are often questionable because of non-response bias, a situation where the respondent chooses to answer, or not, because of the subject matter of the survey. For telephone interviews, however, the reasons for non response are not so influenced by the subject matter of the survey so much as by unavailability, lack of time, absence of the key respondent, etc. These are factors that are unlikely to correlate with the subject of the survey and are therefore less likely to lead to non-response bias. Accordingly, the responses to this survey are arguably much more reliable than mail surveys.

The Appendix to this report provides a copy of the survey instrument and summarizes the breakdown of the set of survey respondents. Within reasonable sampling error, the survey respondents are representative of the larger set of SBLA borrowers.

[8] Telephone interviews are rapidly becoming the method of choice for survey administration. This is because telephone methods typically boast high response rates and are relatively more free of non-response, survival, and selection biases.

B. On Definitions of Incrementality

1. On Incrementality and Performance

Central to the estimation of performance of programs such as the SBLA is the notion of **incrementality**, or its opposite, **deadweight**. At one extreme, if the loans advanced under the program would all have been advanced in the absence of the program, then the program would provide no incremental benefit and would not justify any costs of default or administration. However, even this notion is yet more complex because incrementality can take a variety of forms. As pointed out by Meyer,[9] incrementality can take one or more of several forms. A loan might be incremental if it:

- provides credit where, otherwise credit might not be granted;
- provides for a loan on more favorable terms (maturity, interest rate, governance) than would otherwise have been granted;
- provided for credit on a more timely basis than otherwise;
- facilitated or initiated the working relationship between a business borrower and a lending institution; or,
- if the guarantee provided for a broader financing package than would otherwise have been available.

Each of these definitions is consistent with the terms of the SBLA because each form of incrementality is arguably one that facilitates the establishment and expansion of small firms. However, incrementality is difficult to measure with precision. It calls for the measurer to be able to identify events that may or may not have happened if the existing program did not exist.[10] Moreover specifications of incrementality are not necessarily mutually exclusive. For example, the guarantee may have facilitated more timely access to credit and may also have helped establish the borrower-lender relationship. This overlap must be considered when results are reported. Before considering some of the more nebulous of these alternative definitions, there remain clear situations where lending is arguably incremental. These are:

1. where the firm did not exist prior to the SBLA loan guarantee;
2. where the firm was a startup, recognizing that occasionally banks do lend to startup businesses;

[9] Richard Meyer, "Comments", International Round Table on Loan Guarantee Programs, Inter-American Development Bank, June, 1996, Washington, DC

[10] The survey sought a variety of indications and measures of performance. Question 5 sought respondents' estimation of how their performance would have been different if they had not been able to obtain the term loan. Respondents were asked whether sales, profit, and employment would have been higher or lower. Each respondent was then prompted to provide estimates of the extent to which sales, profits, and employment would have differed had the term loan not been available. Obviously, this question requires respondents' judgments about events that had not really occurred. Therefore, the findings may be used only as rough indications of how performance would have differed absent the SBLA.

Because of its importance, respondents were asked about employment a second time, towards the end of the survey. In this second context, they were asked to specify how many additional employees resulted from the SBLA term loan and to identify how many of these employees had been unemployed at the time of the hiring.

3. where the owner(s) of the firm believe, with reason, that the firm could not have obtained sufficient capital otherwise.

These instances of incrementality will be evaluated presently.

C. Economic Impact: "New" Firms and "Young" Firms

Perhaps the most obvious form of incrementality lies in institutional loans to early-stage firms. Banks seldom lend to newly-established businesses. As noted in both Haines and Riding (1994) and the CBA (1996, p. 32), less than five percent of non-SBLA bank term loans are to firms that are less than one year old. Yet, approximately 44% of SBLA loans are to firms that are less than one year old (see Charts 7 & 8). For the purposes of analysis of economic impacts, this set of firms, those less than one year old at the time of borrowing will be split into:

- "New Firms", those that did not exist prior to the SBLA loan;
- "Young Firms", those that did exist at the time the SBLA loan was advanced but which were less than one year old.

From the findings of this study, 138 of the 682 respondents to the survey (20.5 percent) were firms that had not been established prior to the approval of the SBLA loan in question. For the purposes of this study, these are designated as "new firms". An additional 24 percent of SBLA borrowers had been established but were less than one year old at the time of borrowing.. For this study, these firms are defined as "young firms".

In reporting results, sales, profit, and employment effects of the SBLA are reported separately for "new" firms and for "young" firms. This is because the extent of incrementality is arguably different between these two groups.

1. New Firms (138 responses out of 682)

Since these firms did not exist prior to the granting of the term loan, it is reasonable to believe that very few of these "new" firms would qualify for bank lending. Hence, this group will be treated as 100 percent incremental. For these firms:

- 57 percent reported that employment would have been lower if not for the SBLA term loan;
- 67 percent reported that profits would have been reduced had the SBLA term loan not been available;
- 63 reported that sales would have been reduced but for the SBLA term loan; and,
- 57 percent responded that the SBLA term loan was necessary to survival

In terms of the extent of impact, these new firms reported an average increase in employment of 4.14 (standard error = 0.61) employees as a result of obtaining the term loan. On average, 2.98 (standard error = 0.39) of these hirings were people who were unemployed at the time of the loan. Based on the 95 percent confidence limits for this result, table 4 presents estimates of the incremental economic impact of the SBLA on new firms, in terms of new total hiring (and, in parentheses, for unemployed individuals), for:

- the 48,524 SBLA loans extended during calendar 1995; and,
- the 140,011 SBLA loans extended during lending period 12 to December 1995.

New firms, comprising approximately 20.5 percent of these loans are, under the definition used here, all treated as incremental.

Table 4: Economic Impact: New Firms

	95% Confidence Lower Bound	Estimate of Mean	95% Confidence Upper Bound
During 1995	29,046	41,182	53,318
	(21,884)	(29,643)	(37,402)
Lending Period 12 through December 1995	83,810	118,827	153,844
	(63,114)	(85,532)	(107,920)

2. Young Firms (98 responses among 682)

Defined here as firms that had been established at the time of the SBLA loan, but which were one year old or, these firms comprise approximately 24.5 percent of all SBLA loans made between 1990 and mid-1996. Unlike *new* firms, as defined above, not all loans to *young* firms are incremental lending. Recall that approximately 3 to 5 percent of bank term loans are made to businesses less than one year old. Hence, incremental lending to young (but not new) firms comprises, to a good first approximation, about 20 percent of SBLA lending. For these firms, survey findings are as follows:

- 53.3 percent reported that employment would have been lower if not for the SBLA term loan (37 percent stated that employment would not have changed);
- 67.7 percent reported that profits would have been reduced (22.9 percent stated that profits would have remained unchanged) had the SBLA term loan not been available;
- 60.4 reported that sales would have been reduced (30.2 percent stated that sales would have remained unchanged) but for the SBLA term loan; and,
- 26.5 percent responded that the SBLA term loan was necessary to survival

In terms of the extent of impact, these young firms reported an average increase in employment of 2.78 employees (standard error = 0.29) as a result of obtaining the term loan. On average, 2.00 of these hirings (standard error = 0.25) were people who were unemployed at the time of the loan.

Based on the 95 percent confidence limits for these results, the following table presents estimates of the incremental economic impact of the SBLA on employment in young firms, in terms of new total hiring (and, in parentheses, for unemployed individuals), for:

- the 48,524 SBLA loans extended during calendar 1995; and,
- the 140,011 SBLA loans extended during lending period 12 to December 1995.

According to the definition of incrementality used here, approximately 20 percent of these loans would be incremental loans to young firms.

Table 5: Economic Impact: Young Firms

	95% Confidence Lower Bound	Estimate of Mean	95% Confidence Upper Bound
During 1995	21,348	26,976	32,604
	(14,556)	(19410)	(24,260)
Lending Period 12 through December 1995	61,604	77,844	94,086
	(42,004)	(56,004,)	(70,005)

D. Economic Impact: Established Firms (446 responses out of 682)

Young firms and new firms account together for approximately 45 percent of SBLA loans made between 1990 and mid-1996. As argued above, `most loans to new and young firms are probably incremental. The remaining 55 percent of lending is comprised of more established firms. Among these, two sets of incremental firms may be distinguished:

- those whose owner(s) believe, with reason, could not have obtained all of the capital they required save for the SBLA guarantee; and,
- those firms for which the SBLA loan survival enabled survival.

1. Established Firms

From the survey, 41 established businesses were identified as incremental lending because two conditions held: the respondent believed that the firm would not have obtained the debt capital but for the SBLA; and, the firm did not hold assets that could be pledged for the loan other than the asset being financed. This represents 9 percent of established firms in the sample and 6 percent of all respondents. For these firms:[11]

[11] When the small business's perception of their ability to raise capital without the SBLA was compared with their statement of assets available to pledge for a loan, other than the investment being directly financed, ($\chi 2$ (5) = 86.17, $p < .0005$) not surprisingly a majority of businesses able to raise financing from the same source (74%, n=79/107) or an alternative source (95%, n=87/91) without the SBLA **did** have other assets to pledge. Among businesses able to raise the finance from an alternate source with a delay, a slight majority 51% (n=31/51) had additional assets to pledge. Among businesses *not* able to raise the capital 68% (n=47/69) did *not* have additional assets to pledge for a loan. Interestingly, 75% (n=64/85) of businesses indicating that they can't tell or don't know about their ability to raise financing without the SBLA did have additional assets to pledge.

- 61.5 percent reported that employment would have been lower if not for the SBLA term loan (an additional 33.3 percent stated that employment would not have changed);
- 77.5 percent reported that profits would have been reduced (an additional 20.0 percent stated that profits would have remained unchanged) had the SBLA term loan not been available;
- 79.5 percent reported that sales would have been reduced (an additional 15.4 percent stated that sales would have remained unchanged) but for the SBLA term loan; and,
- 37.5 percent responded that the SBLA term loan was necessary to survival

As before, economic impact of the incremental loans to these firms is measured in terms of the employment generated. Established firms for which SBLA lending was incremental generated, on average, 7.31 additional jobs of which 5.27 were to unemployed persons (standard errors of 1.60 and 1.49, respectively). Based on the 95 percent confidence limits for these results, the following table presents estimates of the incremental economic impact of the SBLA on employment in established firms, in terms of new total hiring (and, in parentheses, for unemployed individuals), for:

- the 48,524 SBLA loans extended during calendar 1995; and,
- the 140,011 SBLA loans extended during lending period 12 to December 1995.

According to the definition of incrementality used here, approximately 6 percent of these loans would be incremental loans to established firms. Table 6 presents the results of extrapolation hiring by these established firms.

Table 6: Economic Impact: Established Firms

	95% Confidence Lower Bound	Estimate of Mean	95% Confidence Upper Bound
During 1995	11,966 (6,667)	21,283 (15,343)	30,599 (24,019)
Lending Period 12 through December 1995	34,526 (19,238)	61,409 (44,271)	88,375 (69,305)

2. Firms in Distress

In the sample of 682 responses, 172 respondents (25 percent) stated that, but for the SBLA, their firm would not be in business at all. However, among these 172 respondents, 80 were new firms, 26 were young firms, and 15 were among the incremental established firms as defined in the preceding section. Hence, 51 of the 682 responding businesses (8 percent) were firms that (a) were not otherwise defined as recipients of incremental lending and, (b) firms that respondents believed would fail,

The perception of a business's ability to raise finance without the SBLA did not differ by a firm's degree of technology basis.

save for the SBLA. Arguably, most of these would represent incremental lending because financial institutions do not have the reputation of advancing traditional loans to firms in distress.

For firms in distress, the economic benefit of forestalling failure are the jobs retained. On average, established businesses report 8.25 employees (standard error = 0.65). Assuming 8 percent of loans are to established firms facing survival issues, then job retentions attributable to the SBLA are estimated as:

- 32,025 (± 5,047) jobs for calendar 1995; and,
- 92,400 (± 14,560) for lending period 12 through December 1995.

These firms, by dint of their newness may be considered incremental lending.

E. OTHER FORMS OF INCREMENTALITY

1. Timeliness

In addition to the direct economic benefits noted, approximately 5 percent of respondents reported that the SBLA provided their firm with access to financing in a more timely manner than would otherwise have been available. This timeliness is important because it can allow businesses to capitalize on transient opportunities or benefit from taking advantage of cash discounts.

2. Banker Relations

Perhaps one of the most widespread benefits of the loan guarantee program is its impact on the relationship between business borrower and lender. As noted previously, for a material proportion of loans, the SBLA provided a means of initiating a lender-borrower relationship. In addition, 75 percent of respondents agreed that the SBLA "assisted in the development of [their] banking arrangement with the lender". For 63.6 percent of the sample firms, the SBLA loan was the first borrowing the business had conducted with their lender.

From the 682 respondents, only 129 (14 percent) were deadweight in the sense that none of the types of incrementality identified here could be applied. It is quite possible that, among these businesses would be those that received credit on better terms than they might have had the guarantee not been available.

VIII. SUMMARY

This study investigated three elements of performance of the SBLA program: lending activity, terms of credit, and economic impact

A. LENDING ACTIVITY.

The analysis drew on loan registration data to provide breakdowns of lending activity by size of firm, industry sector, size of loan, age of borrower firm, intended use of loan proceeds, and employment growth.

1. Size

SxBLA borrowers tend to be concentrated among the smaller strata of SMEs. The proportion of SBLA borrower firms that are unincorporated (approximately 20%) is higher than the corresponding estimated proportion of non-SBLA bank borrower clients (approximately 12 %). More than 74 percent of SBLA borrowers are firms with fewer than 5 employees. By comparison, it is estimated that no more than 56 percent of non-SBLA borrower clients of the major banks are firms comprising fewer than 5 employees.

The size of SBLA borrower firms increased sharply following the April 1993 amendments to the Act. This should hardly be surprising because the amendments, *inter alia,* allowed for participation of larger firms. However, since the end of 1994 the size of SBLA borrowers has been decreasing (though not yet to period 11 levels).

2. Age of Borrowers

SBLA borrower firms are considerably younger than non-SBLA bank borrower clients. Approximately 45% of SBLA borrowers are firms that were less than one year old at the time of the loan. By comparison, less than 5 percent of non-SBLA bank borrowers are start-ups. This difference indicates that the SBLA is providing significant additionality to existing bank lending.

3. Anticipated and Actual New Jobs

The anticipated additional hiring that SBLA borrowers expect to undertake has remained relatively constant, at 2 to 3 per borrower, (mean of 2.3) across lending periods 11 and 12. Actual job generation that SBLA loan recipients attributed to the loan guarantee program were significantly higher than borrowers' original hiring anticipations. Actual levels of hiring varied across types of borrower, but the average number of new jobs per SBLA loan was 3.9 individuals.

4. Sectoral Distribution of Borrowers

The sectoral distribution of SBLA lending has shifted between 1990 and 1996. Firms in the retail and services sector appear to be less reliant on SBLA loans in the last few years than they had at the beginning of the decade. Conversely, more use of the SBLA is being made by firms in the transportation and manufacturing sectors.

B. Terms of Lending

1. Loan Size and Use of Proceeds

The average loan size increased dramatically as of April 1993. In period 11, the average (median) SBLA loan was approximately $40,000 ($27,000). For period 12, the average loan (median) increased to approximately $50,000 ($40,000). During period 11, 70 percent of loans were for less than $50,000; in period 12, fewer than 60 percent of loans were for less than $50,000.

The primary use of the proceeds of borrowing is for acquisition of equipment, especially by smaller firms. The use of proceeds of borrowing to cover SBLA fees has increased throughout period 12. Currently, approximately 45 percent of borrowers pay fees from borrowed funds.

2. Term to Maturity and Pricing of Loans

For the period 12 data for which interest rate data was collected, the average rate is 2.60 percent above prime. This appears to be considerably higher than for earlier periods, according to comparisons from other data sources. Moreover, terms of lending to SBLA borrowers vary by industry, size of the firm, size of the loan, the age of the firm, and whether or not the borrower is a franchise.

Term to maturity also depends on the industrial sector of the borrower, as well as on the size of the loan, the size of the firm, the age of the firm, and whether or not the firm is a partnership or a franchise operation.

C. Economic Impact.

By means of data obtained from telephone interviews of a large random sample of SBLA loan recipients, the economic impact of the program was estimated according to job creation, effects on borrower performance, and firm survival. Evaluation of the extent of incrementality in the program was estimated and economic impacts interpreted in the context of incrementality. It is argued that incrementality arises from several sources: age of the firm, established firms unable to obtain the debt finance required, and from loans advanced to firms in distress. In each case, economic impact of the loan guarantee was estimated in terms of its effects on job creation (or retention), survival, and financing.

This study finds that approximately 54 percent of lending under the terms of the SBLA may be deemed as incremental, but that incrementality takes a variety of forms. Overall, approximately 121 thousand jobs during 1995 and approximately 350 thousand jobs during lending period 12 could reasonably be attributed to incremental lending under the terms of the SBLA. In addition, the SBLA promoted both more timely borrowing for many firms (about 5 percent, or about 10 thousand business since 1990) and furthered the borrowers' relationships with their bankers for three borrowers out of four.

The results are summarized in the table on the next page. The next step is to compare these benefits with the costs of default and administration.

Summary: Economic Impact of SBLA

Form of Incrementality	Category of Borrowers	Estimated Proportion of SBLA Lending that is Incremental	Job Creation Impact (Hiring of Unemployed in Parentheses) 1995	Period 12 to Dec 1995	Performance Impacts: Proportion of firms with:	
Additional Lending	New Firms	20%	41,182	118,827	Sales increase:	62%
			(29,643)	(85,532)	Profit Increase:	67%
					Survival Enabled:	57%
	Young Firms	20%	26,976	77,844	Sales increase:	60%
			(19,410)	(56,004)	Profit Increase:	68%
					Survival Enabled:	27%
	Established Firms	6%	21,283	61,409	Sales increase:	80%
			(15,343)	(44,270)	Profit Increase:	77%
					Survival Enabled:	37%
	Firms in Distress	8%	32,025	92,400		
Total		**54%**	**121,546**	**350,480**		
			(96,421)	**(278,206)**		
Timeliness	All firms	5%				
Banker Relationship	All Firms	75%				

IX. APPENDIX I: QUESTIONNAIRE (SEE ORIGINAL NON-ELECTRONIC COPY)

X. APPENDIX II: SUMMARY OF ATTRIBUTES OF SAMPLE

	"New" Firms	"Young" Firms	"Established" Firms
Mean Employment at time of Loan (current)	2.36 (5.47)	3.67 (8.08)	6.86 (8.77)
Estimated Additional Employment	3.14	2.33	2.16
Actual Additional Employment	4.14	2.78	3.61
Impact of SBLA on:			
Profits	+$42.3K	+$30.4K	+$37.5K
Sales	+$226.7K	+220.7K	+$210.2K
% Sole Proprietorship	24.6%	15.3%	16.7%
% High Tech	14.1%	13.5%	14.4%
Mean Interest Rate on Loan (above prime/mortgage)	0.40 / 1.10	0.30 / 1.14	0.48 / 1.04

Sectoral Distribution of SBLA Lending			
Industry Sector	Period 11 (%)	Period 12 (%)	Telephone Sample (%)
Construction	7.8	9.0	6.3
Manufacturing	7.8	11.3	12.5
Transportation & Communications	12.7	15.2	13.5
Wholesale	2.7	6.3	9.5
Retail	22.6	15.4	15.0
Finance, Insurance, Real Estate	-	1.4	10.3
Primary Industries	1.7	6.9	5.4
Services	44.5	33.7	26.2

Legal Form:

- 16.1% were sole proprietorships;
- 10.1 % were partnerships;
- 73 percent were limited companies;
- 6.3 percent were franchises;

Technology Basis

- 14.1 percent were "high tech";
- 49.1% were "low tech".