

Extension of the SBLA to Capital Leases: Analysis of Lessee Attributes and Defaults

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Executive Summary

This report presents findings of contract research that attempts to address two goals:

- to identify attributes of lessee firms in order to compare these businesses with other SBLA borrowers and with the general population of SMEs; and,
- to estimate loss rates on capital leases. The findings of this study can then be used to estimate the potential exposure associated with extension of the loan guarantee program to capital leases.

This study found that the population of firms that typically lease such equipment as computers, office and professional equipment, vehicles (exclusive of passenger cars), tractor trailers, and printing equipment are small firms. More than 90 percent of such lessees report annual sales of less than \$5 million and the typical capital investment in these classes of equipment is usually less than \$250,000. There are, of course, other classes of equipment leasing in which SMEs play little part (aircraft, rolling stock); however the leasing market for the sectors in which SMEs can and do participate is large.

The rate at which lessee firms defaulted on contracts varied by equipment class. The lowest frequency of default on contracts was 1.09%, for tractor trailer. The highest rate was 2.72 percent, for computer-related equipment leases. Loss rates, which also varied across equipment classes, were much smaller: 0.07% for tractor trailers to 0.96% for computer-related equipment. The difference between these rates was attributed to the ability of specialized lessor firms to realize substantial recoveries from repossession and resale of the equipment. The loss rates are less than those that the "big six" bank lenders typically experience on commercial loans to SMEs. Based on estimates of the sizes of the 1995 leasing market for the most frequently-leased categories of equipment, losses due to default are estimated to be approximately \$38 million. This amount would grow proportionately with the market penetration of asset-based financing.

There remain issues that will need to be addressed before extending government loan guarantees to capital leases.

As mentioned, loss rates varied across equipment categories. In addition, many leasing firms specialize in particular types of equipment. To the extent that an "average" fee would be assessed for loan guarantees, the fees paid by lessees of relatively low loss rate equipment categories would partially "subsidize" lessees of equipment for which loss rates are higher. This is not a new problem; yet it is a problem that the design of loan guarantee programs have not yet fully resolved.

A second area of concern relates to the yield on capital leases. This study found that yields on capital leases were usually higher, sometimes considerably higher, than the interest rates, even with fees added, that rates banks typically charge SME borrowers. More specifically, the SBLA requires that bank lenders charge interest at a maximum rate of 3.0 percent above prime. However, yields on leases vary from 1.9 to 6.9 percent above going prime rate.

Third, the low loss rates arise in large part because lessors are willing and able to realize substantial recoveries on repossession and resale of defaulted equipment. In the event that loan guarantees are extended to cover capital leases, provisions might be needed to ensure that lessors resort to loan guarantees as a compliment to repossession and resale and not as a substitute.

Other findings of this study follow.

Attributes of Lessee Firms

- Lessee businesses are concentrated:
 - in the Province of Ontario;
 - beyond the major metropolitan areas;
 - primarily in the transportation sector.
- The most frequently leased categories of leased equipment are:
 - office and professional equipment
 - tractor trailers; and,
 - computer-related equipment.

SMEs comprise a high proportion of the firms that typically lease these types of equipment.

- More than 70 percent of SME leasing firm clients are very small firms. Most are self-employed owner-operators. Typically, lessee firms are so small that financial statement information is unavailable and would be suspect if it were available.
- Lessee firms that do provide financial statements also tend to be small businesses:
 - only 9.4 percent of lessee firms report annual sales in excess of \$5 million.
 - Firms in the manufacturing and retail sectors tended to be the largest.
 - Manufacturing and professional businesses rely less on debt financing relative to firms in other sectors.
- Income statement data are consistent with known industry patterns among SMEs. For example,
 - lessee firms in the retail sector are low-margin; and,

- the profitability of businesses in the professional and manufacturing sectors reflect the more specialized nature of their product lines and their abilities to extract higher markups.
- The amounts of lease financing are consistent with the terms of the SBLA:
 - the average principal amount being lease financed is less than \$250,000;
 - capital amounts are usually for less than \$100,000.
- The average terms to maturity of leases are consistent with the terms of loans made under the SBLA.
- Yields on the leases are high compared with bank terms of lending and the current upper limit of interest rates on SBLA loans.
 - the average yield was 5.6 points above prime rate,¹ considerably more than the rates that banks charge SME clients on either term loans, operating loans, or SBLA loans.
 - The average yield varies considerably according to the type of equipment being leased. For only four types of equipment categories was the average yield less than the prime+3.0% ceiling that the SBLA currently permits lenders to charge on SBLA loans.
 - Lessors, if subject to the prime+3.0% upper limit would lose profitability unless, by virtue of the SBLA guarantee, they could obtain funds at lower costs.
- SBLA borrowers, when surveyed, view the costs associated with leasing equipment as being high relative to the option of borrowing.

Defaults

Default rates on lease and loan contracts ranged from one to three percent. However, actual loss rates averaged 0.312% of original contract value. Loss rates varied across equipment categories, from 0.07% to 0.96%. Most of these rates are somewhat below bank loss rates on conventional loans. This variation raises the possibility that lessor firms would benefit differentially from a common guarantee fee.

¹ The spread between total yield and prime rate was an estimate computed by subtracting the average prime rate for the year in which the lease was signed from the total yields reported on lessors files.

The difference between default rates on contracts and loss rates is probably attributable to the ability of specialized financial institutions to recover substantial values through realization on the assets. The extent to which a guarantee arrangement would substitute or compliment this aspect of asset-based finance will only be known with experience and implies the need to review or monitor arrangements should a guarantee be extended to capital leases.

For some equipment types such as computers and tractor trailers, defaults occur with high frequency early in the life of the contract. This implies that the decision to accept or deny credit may be problematic.

Extension of the SBLA to Capital Leases: Analysis of Lessee Attributes and Defaults

1. OBJECTIVES

This report presents findings of contract research that relates to the possible extension of SBLA loan guarantees to capital leases. The original goals of this study were:

- to identify attributes of lessee firms in order to compare these businesses with other SBLA borrowers and with the general population of SMEs; and,
- to estimate loss rates on capital leases. The findings of this study can then be used to estimate the potential exposure associated with extension of the loan guarantee program to capital leases.

This final report is based on two sets of data. The first set is data regarding defaults on capital lease contracts. The second data set is comprised of information collected from the files of leasing companies on geographic and sectoral distributions of the lease contracts, attributes of lessee firms, and characteristics of leasing contracts. This report uses both data sets to address the research questions posed above. In addition, the report presents the results of a telephone survey of SBLA loan recipients insofar as that survey deals with leasing issues. In particular, perceptions of SBLA loan recipients about capital leasing as an alternative were investigated and the results reported here. The report also addresses questions and issues raised subsequent to an interim report submitted November 20, 1996.

2. BACKGROUND

Kalymon² provided an initial investigation of the possibility of extending SBLA loan guarantees to capital leases in which he viewed term loans and capital leases as direct financial equivalents. Kalymon concluded that, in principle, extension of the SBLA to capital leasing is consistent with the objectives of the SBLA and that such an extension may increase the pool of capital available to SMEs. Kalymon also noted, however, that before doing so, two empirical questions must be resolved, namely:

² Preliminary Study on the Implications of an Extension of the Small Business Loans Act to Capital Leasing, Industry Canada, October 31, 1995.

- data must be assembled so that loss rates on capital leases extended to SMEs can be determined;³ and
- the characteristics of leasing clients need to be assessed and compared with corresponding attributes of both the general population of SMEs and SBLA borrowers.

This final report presents findings on both these questions. The interim report focused only on the second of the above issues. These are both questions that need to be resolved so that government can identify those segments of the SME population that use leasing; to identify potential beneficiaries of the possible extension of guarantees to capital leases; and to design possible extensions of the SBLA so that loan losses are recovered.

3. SCOPE OF THE STUDY

The results presented here reflect data gathered from three of the major asset-based financing firms involved in capital leasing. The three firms are Newcourt Financial Group, Commcorp Ltd., and AT&T Capital. The author wishes to acknowledge at the outset that all three firms provided willing and candid cooperation.⁴ In each case, researchers worked under the terms of confidentiality agreements that specified, *inter alia*, that data would be reported only in aggregated form and not attributed to individual firms. As a result of this cooperation and assistance, the following data were assembled:

- i) *Firm-Specific Data* collected from files of asset-based financing firms on 1,368 lessee businesses. For each case, data was assembled regarding:⁵
 - a) attributes of the lessee firm (financial statement data when available, industrial sector); and,

³ Resolution of this empirical question is necessary so that government exposure to losses may be estimated. This estimation, in turn, guides selection of the level of fees necessary to ensure full cost recovery and provides insights into the appropriate level of the guarantee. The fees implied by the loss rates carry further implications: namely, whether a leasing guarantee scheme ought to be part of the SBLA or be structured as a separate entity. Under some findings, extension of the SBLA to capital leasing may not be indicated even though term loans and capital leases are conceptually similar.

⁴ In particular, the author acknowledges to active assistance of Mr. John Guido and Ms. Anna Day of Newcourt Credit Group; Mr. Rob Murphy and Mr. Gary Hanson of AT&T Capital; and Mr. Ian Wheeler and Mr. Mike Kerdman of Commcorp Ltd. Data gathering was conducted by Ms. Sangita Sondhi and Ms. Maria Alderson. In addition, the President of the Canadian Finance and Leasing Association, Mr. David Powell, was instrumental in enabling researchers access to the personnel within the firms who then facilitated access to the requested data.

⁵ The first task of this study was to design an instrument for collection of the data necessary to resolve the issues at hand. These forms are appended to this report. Industry Canada contracted with a third party to administer the data collection and data entry, both as directed by the author. As a result of this process, more than 1,200 cases of firm-specific information were collected and entered into machine-readable form.

- b) attributes of the lease contract such as yield, term, payment schedules, lease history, types of equipment, cost of equipment, etc.
- ii) *Default information* on loan and lease contracts.⁶ Information on 318 cases of default were analyzed to provide comprehensive overviews of default experiences. The size of this sample permitted breakdowns according to major asset class categories. Data regarding the sample of 318 defaults included, for each case, industrial sector, dates of default and lease origination, type of equipment under contract, original value of leased equipment, projected losses, and SBLA claims if any.
- iii) *Company-wide data on overall leasing activity and default experiences*, broken down by type of equipment under lease.

⁶ Default is defined as those leases due for repossession of the equipment. It is noted in passing that most lessors also maintain lists of client for which restructuring of the financial contract is contemplated as well as “watch” lists of clients in arrears. For the purposes of SBLA exposure the default rate as defined here is most appropriate.

4. RESEARCH FINDINGS: OVERVIEW OF THE LEASING INDUSTRY

A detailed review of the asset-based financing and leasing industry is available and updated on an annual basis.⁷ This section of the report uses the findings of this annual survey to set the stage for the two sets of analysis that comprise the focus of this report.

The Canadian finance and leasing industry spans a diverse group of firms. Three categories of these firms are of particular interest here. The first are those firms best described as asset-based financing companies. The three companies that participated in this study were all asset-based financing firms: AT&T Capital Canada, Comcorp Financial Services, and Newcourt Credit Group. These firms offer a wide range of financing methods that include capital and operating leases, term loans, and conditional sales contracts. The segment of the financing and leasing industry is the fastest growing due both to demand as well as to acquisition activity.

A second category of firms are those that are best termed manufacturer's captive finance companies. Examples of these firms include, among others, Bombardier Finance Inc., Pitney Bowes Leasing, OE Financial Services Inc. Typically, these firms specialize in the products of parent industrial firms, and, therefore they also tend to specialize according to the type of equipment leased.

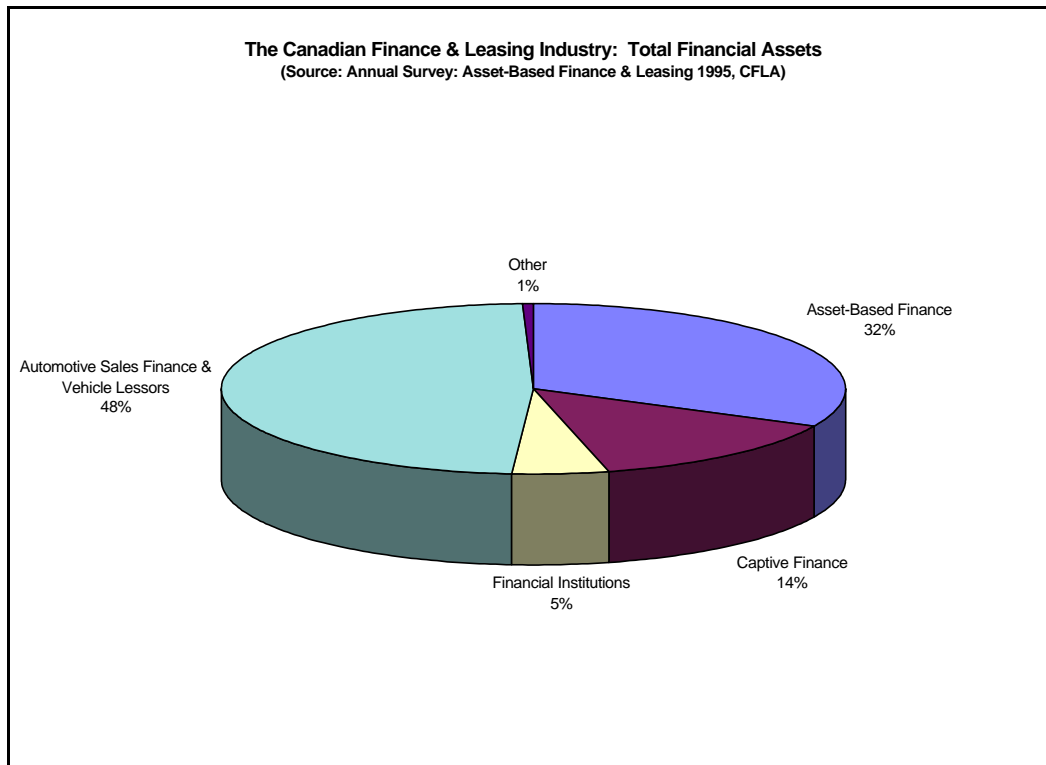
The third major category of interest to this project are finance and leasing arms of financial institutions. These include such firms as Royal Bank Leasing, the leasing activities of the Bank of Nova Scotia, among others. These institutions tend to be more broadly based in leasing activities than are the captive firms.

Other categories of firms that constitute the finance and leasing industry are automotive sales finance companies (e.g., Chrysler Credit Canada Ltd., etc.), vehicle lessors (e.g., Jim Pattison Lease, Sako Auto Leasing, etc.), brokers or agents (e.g., Consolidated Leasing, Lease West Financial Corporation), and distributor dealers such as Telecom Leasing Canada. For various reasons, firms in this final group are of somewhat less interest to this study than are the first three categories.

The charts that follow provide breakdowns of the industry according to the categories of firms listed here. Chart 1 presents the breakdown of the industry according to total financial assets managed by the various categories of firms.

⁷ Annual Survey 1995: Asset-based Financing & Leasing in Canada, Fiscal Year 1995, Mary McDonough Research Associates, published by the Canadian Finance and Leasing Association, Toronto, 1996.

Chart 1:



The growth of the industry is witnessed by the increase in its market penetration. In 1992, asset-based lending and leasing accounted for only 11 percent of asset financing by businesses. For 1995, the CFLA estimated penetration to be 15.9 percent. In part, this is due to increasing demand for products such as computers and communications. However, this growth also represents the increased level of activity from the industry with respect to vendor financing and other point-of-sale arrangements.⁸

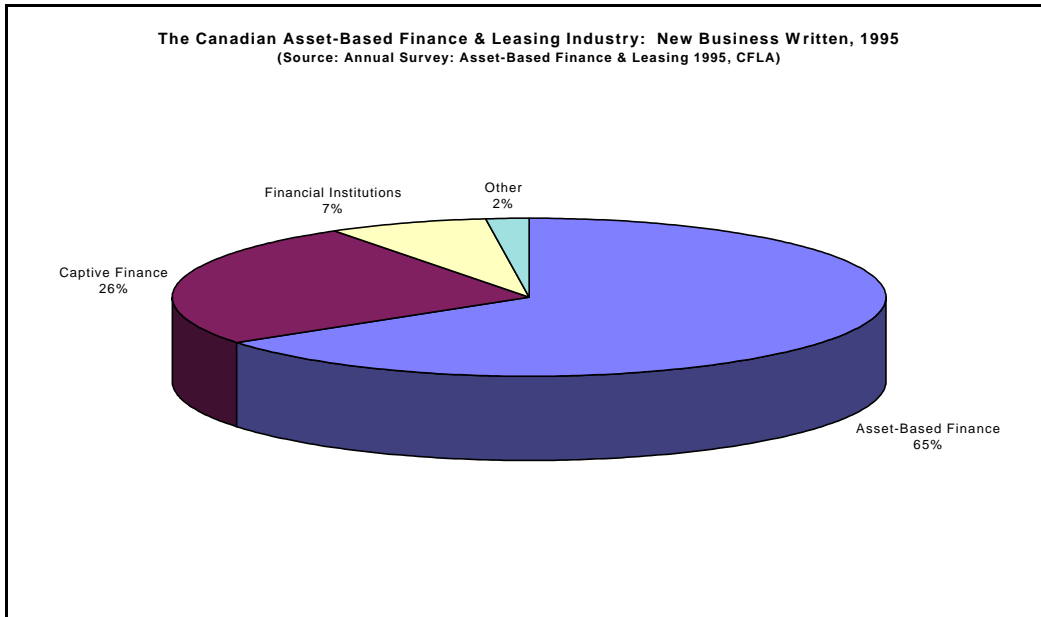
Chart 2 presents a breakdown of the industry according to new business written in 1995. Unlike Chart 1, the second chart provides the industry breakdown only for those categories of firms of direct interest to this study.

Not all asset financing is arranged through capital leases. According to McDonough Research Associates, capital leases accounted for 42 percent of contracts for asset-based lenders, 53 percent for captives, and 81 percent for financial institutions. In addition, McDonough Research Associates estimates that 52 percent of transactions are in the "small to mid-market" category of less than \$100,000 per transaction. For this segment, it is estimated that a total of \$2.16 billion of new business was written by these specialized

⁸ Vendor financing is the arrangement whereby an asset-based finance company acts as a lessor on behalf of an equipment vendor. For example, Newcourt acts as the lessor on behalf of vendors of Heidelberg Printing Presses. According to this arrangement, Heidelberg vendors are able to offer prospective purchasers lease financing. Newcourt purchases the asset on behalf of the purchaser and manages the lease on behalf of Heidelberg. Asset-based finance firms typically provide training, support in various forms, and even customized contracts as part of their vendor financing arrangements.

financial firms with respect to capital leasing in the SME market segment. Chart 3 presents the distribution of this business accounted for the three major categories of financing and leasing companies.

Chart 2:



Clearly, asset-based financing firms dominate the SME segment of the market. However, all three categories of firms appear to focus on particular types of equipment. Chart 4 provides breakdowns of portfolios of the three categories of firms according to the frequency of types of asset under lease.

Chart 3:

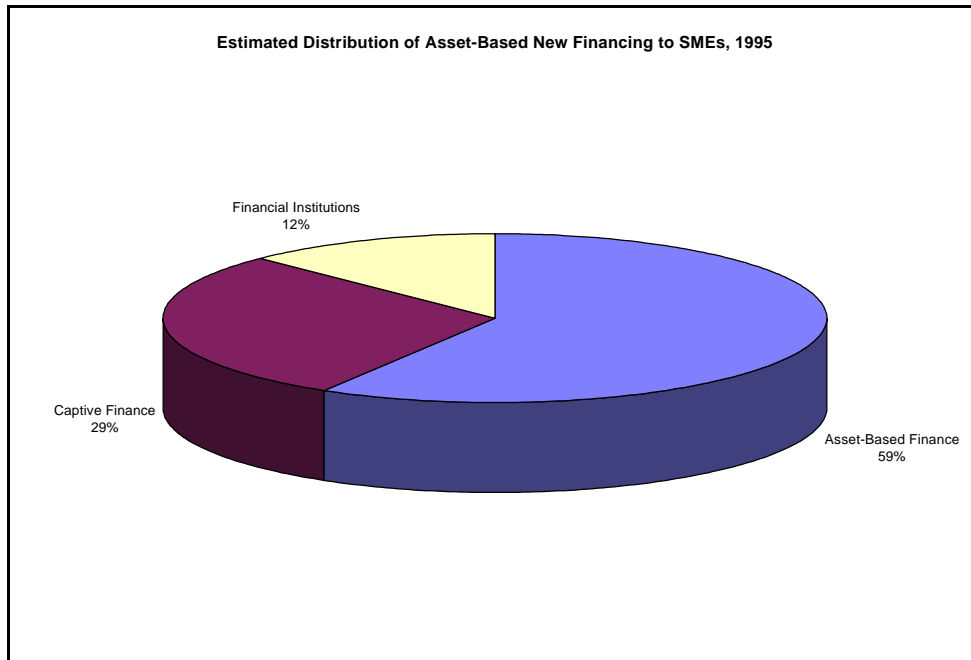
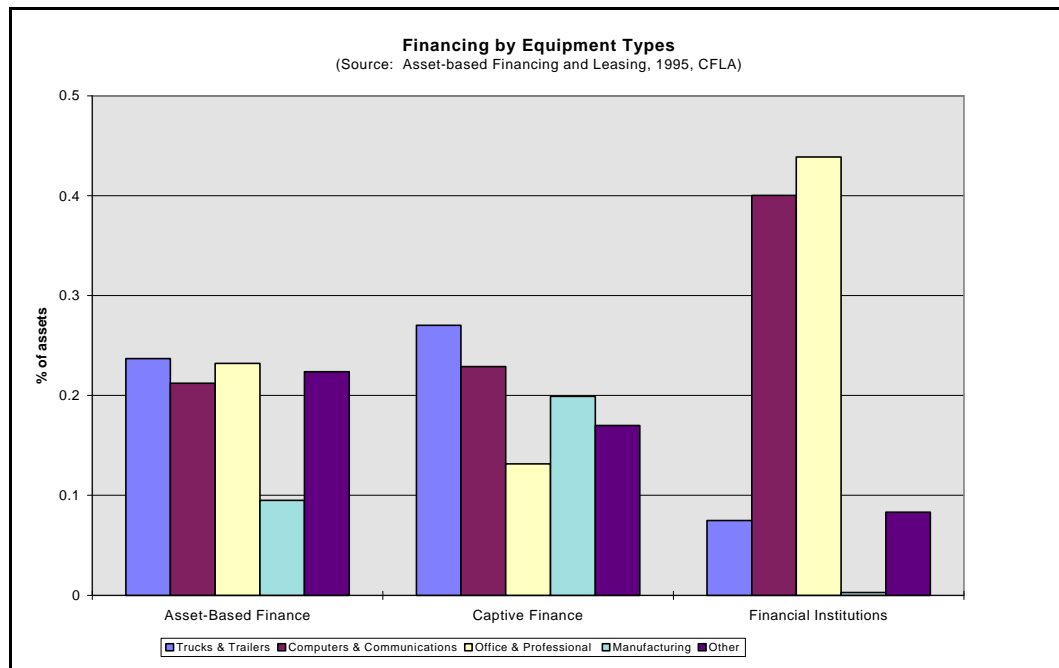


Chart 4:



Clearly, all three categories of firms focus on three classes of equipment for financing:

- office furnishings and professional (doctors dentists) equipment;
- trucks and trailers; and,
- computers and communications equipment.

This is a finding that was substantiated from the sampling of files of asset-based financing firms. These categories of equipment are those for which active after-markets are available and are equipment types amenable to the specialization that characterizes this industry. Table 1 provides estimates of the breakdown of the 1995 new business written by the three main categories of asset-based finance companies for the six categories of equipment leased most frequently by SMEs.

Table 1: Market Estimates: Non-Bank Financing by Equipment Type

(\$million)

Equipment Category	Asset-Based Finance Firms	Financial Institutions	Captive Finance Firms	Totals
Computer-related	1,348	165	1,360	2,873
Construction	297	34	196	527
Office & Professional Equipment	1,948	37	1,514	3,499
Tractor Trailers	1,927	277	255	2,459
Vehicles	496	60	64	620
Printing Equipment	397	30		427
Totals	6,413	603	3,389	10,405

5. RESEARCH FINDINGS: ATTRIBUTES OF LESSEE FIRMS

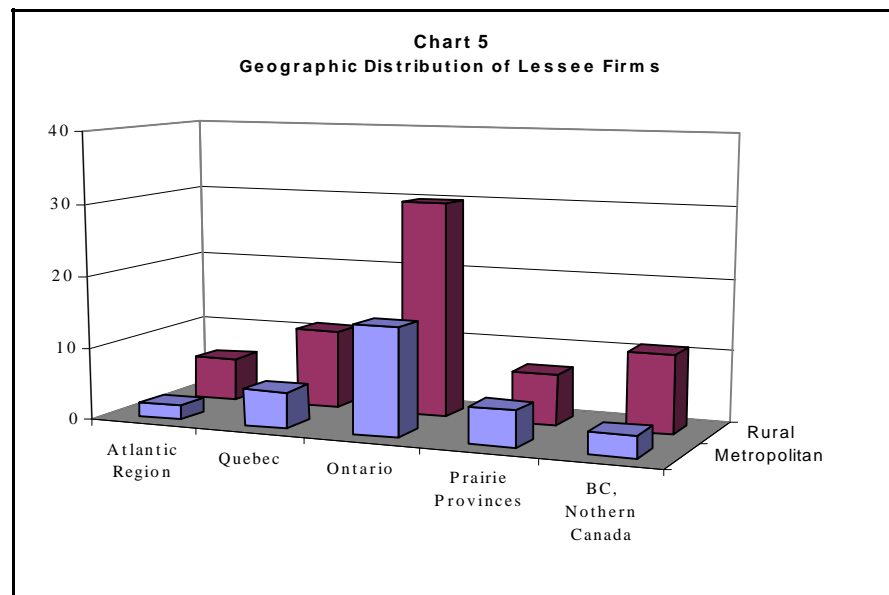
In keeping with the terms of reference for this study, this section of the report provides a summary of findings with respect to:

- geographic and sectoral distributions of the data;
- selected attributes of lessee firms; and,
- important characteristics of the leasing contracts.

5.1 Geographic and Sectoral Distributions of Lessees

5.1.1 Geographic Distributions of Lessee Firms

Chart 5 presents the geographic distributions of the sample of capital leases collected. Here, a lessee is defined as “rural” if the business address was outside the major CMA areas.



Salient findings from this analysis include:

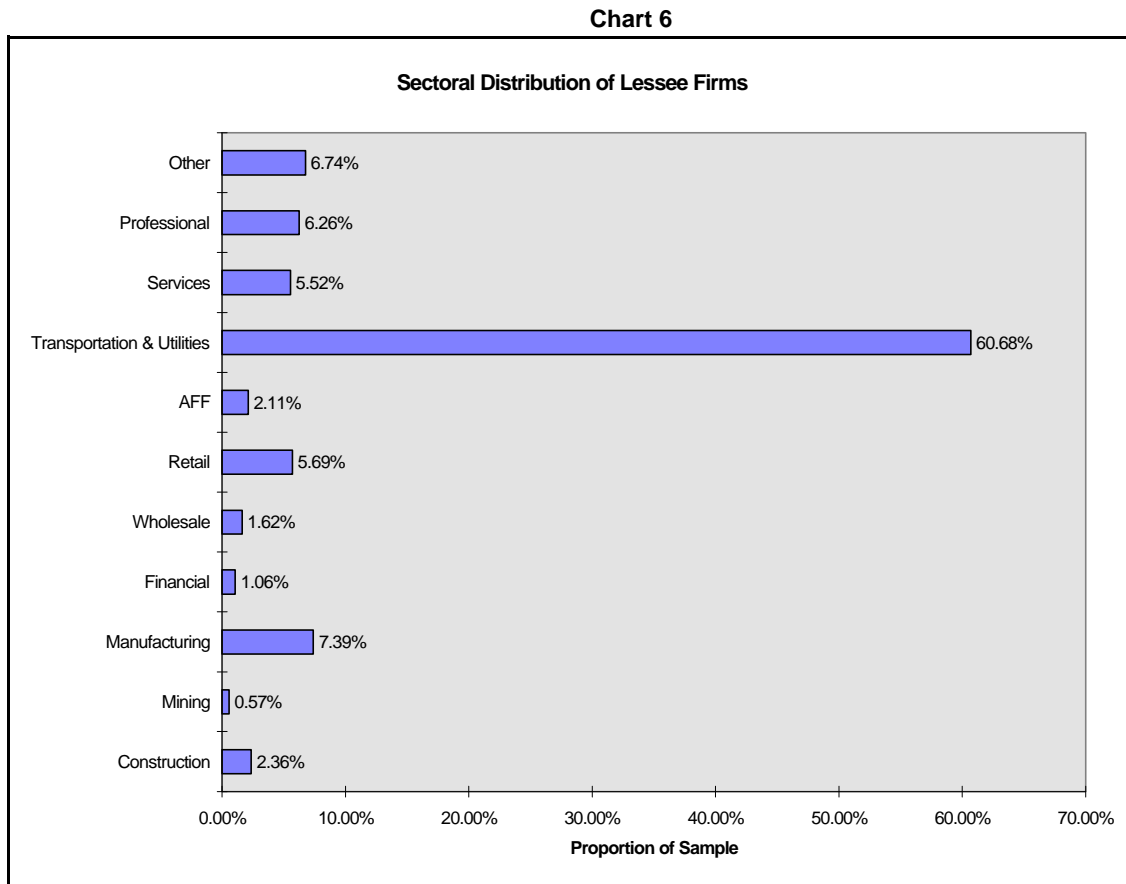
- the Province of Ontario is central to the leasing business, with 47 percent of lessees sampled being located in the province;

- most leasing occurs beyond the major metropolitan areas of Montreal, Vancouver, Toronto, etc.

That a large share of national industrial activity is located in Ontario may account for the centrality of the leasing business Ontario. Alternatively, this centrality might reflect that head offices of most asset-based financing firms are also in Ontario. However, the latter argument is inconsistent with the second finding, that most leasing occurs beyond the boundaries of major metropolitan areas. These findings probably also reflect the frequent use of vendor leasing arrangements. Also implicit in the result is that there may be scope for additional geographic expansion of asset-based financing to large urban areas.

5.1.2 Sectoral Distributions of Lessee Firms

Chart 6 presents the sectoral distribution of firms that are capital lease clients of major asset based lenders.⁹



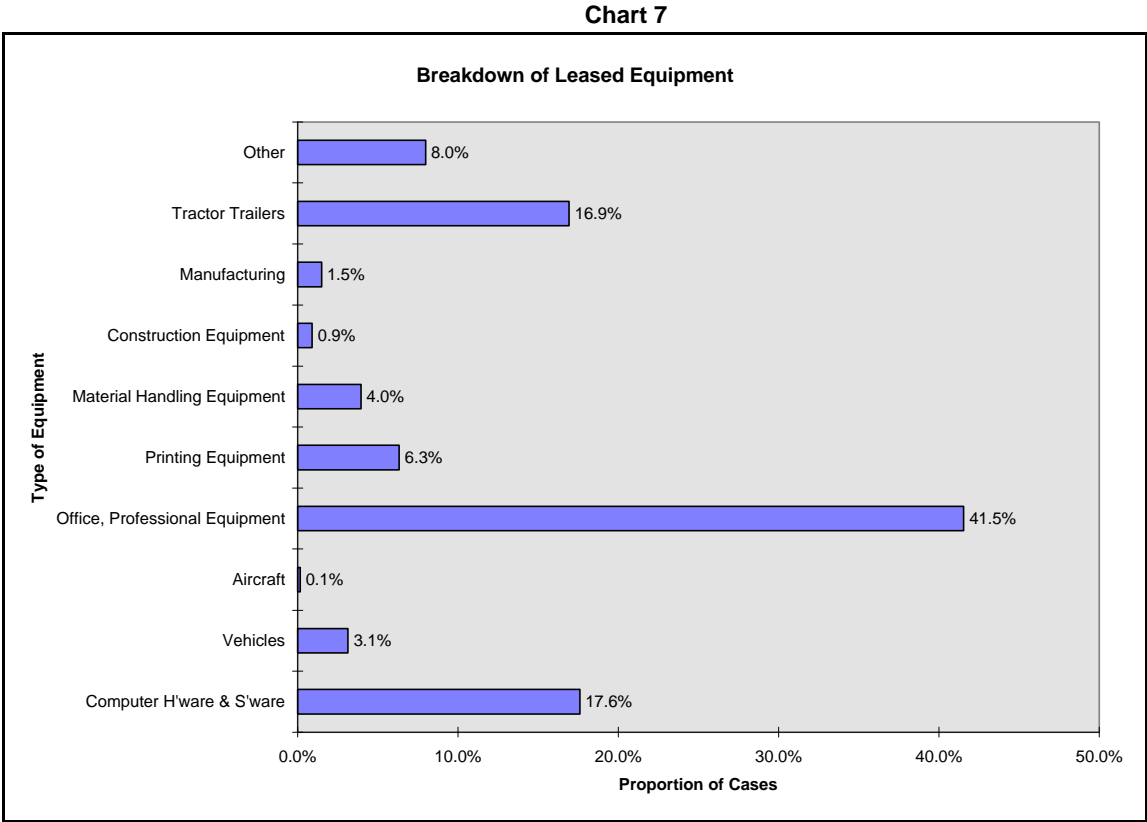
⁹ Note that asset-based lenders are typically organized into several divisions. Often, certain divisions have primary responsibility for “big ticket items” (aircraft, rolling stock, etc.). For the purposes of this study, research focused exclusively on those divisions of asset-based lending firms in which there were reasonable grounds to expect SMEs to be involved.

From this chart, the most striking finding is that there is a concentration of SME lessee businesses in the transportation sector, with a high proportion of capital leases being for tractor trailer equipment.

It will be seen in future pages that SMEs do, indeed, frequently lease tractor trailers and related vehicles. However, it will also be seen that the type of equipment most frequently leased by SMEs is office equipment, professional (e.g., medical and dental) equipment and furniture. It follows, then, that businesses in the transportation sector, firms that have historically leased tractor trailers, may be more familiar with leasing as a means of acquiring necessary equipment and extend their leasing practices to include equipment additional to the vehicles themselves. The details follow presently.

5.1.3 Commonly-Leased Equipment Categories

Chart 7 presents the breakdown of the various types of equipment involved in capital leasing.



- The most frequently leased categories of equipment are:
 - office and professional equipment¹⁰;
 - tractor trailers; and,

¹⁰ Office and professional equipment includes a diversity of assets such as dental equipment, office furniture, medical equipment, pharmacy equipment, photocopiers, etc.

- computer-related equipment.
- These three categories account for approximately three-quarters of equipment leases in the sample data.

This is a useful breakdown, for several reasons:

- the types of equipment that are leased are items that are commonly important to SMEs.
- Many asset-based financing companies specialize in one or a few particular types of equipment.

5.2 Financial Attributes of Lessee Firms

In this section, selected financial attributes of lessee firms are reported for the most frequently-leased categories of equipment: computer hardware and software, office equipment, and tractor trailers.¹¹

- It was immediately apparent that the majority of lessee firms in the sample are indeed very small. Most would be classified as either micro-businesses or very small firms because, in more cases than not, the businesses comprised self-employed owner operators (for example, tractor-trailer and equipment operators, computer lessees). Thus, a measure of size is simply that these businesses do not maintain balance sheet data and income statement data.
- For owner-operated small businesses, “firm” financial performance is confounded with personal finances. As such, financial statement data are not reliable and business income and personal income are interchangeable. The essential implication is important is that these lessees are of a size that is consistent with the stated objectives of the SBLA.

Table 2 breaks down the proportions of firms for which financial statement data were available: first by those industries for which there are more than 10 cases; and then by type of equipment leased (again, for equipment classes for which more than 10 cases are currently available).

¹¹ In the final report, it is anticipated that the larger sample size will allow for additional breakdowns because there will be more cases within some of the equipment categories for which there are insufficient data among the first 569 cases.

Table 2: Availability of Financial Statement Data, Lessee Firms

Industry	Number of Cases	Cases with Financial Statement Data	Proportion with Financial Statement Data
By Industry Sector			
Wholesale	20	17	85%
Manufacturing	91	52	57.1%
Agriculture, etc.	26	13	50.0%
Services	68	32	47.1%
Retail	70	28	40.0%
Professional	77	29	37.7%
Other	83	31	37.3
Construction	29	7	24.1%
Transportation, Utilities	747	48	6.5%
Total	1211	257	21.2%
By Equipment Type			
Manufacturing	20	2	10.0%
Other	107	53	49.5%
Vehicles	42	21	50.0%
Material Handling	53	29	54.7%
Computer Hardware	236	54	22.9%
Tractor Trailers	227	52	22.9%
Printing Equipment	85	24	28.2%
Office Equipment etc.	557	27	4.8%
Total	1327	262	19.7%

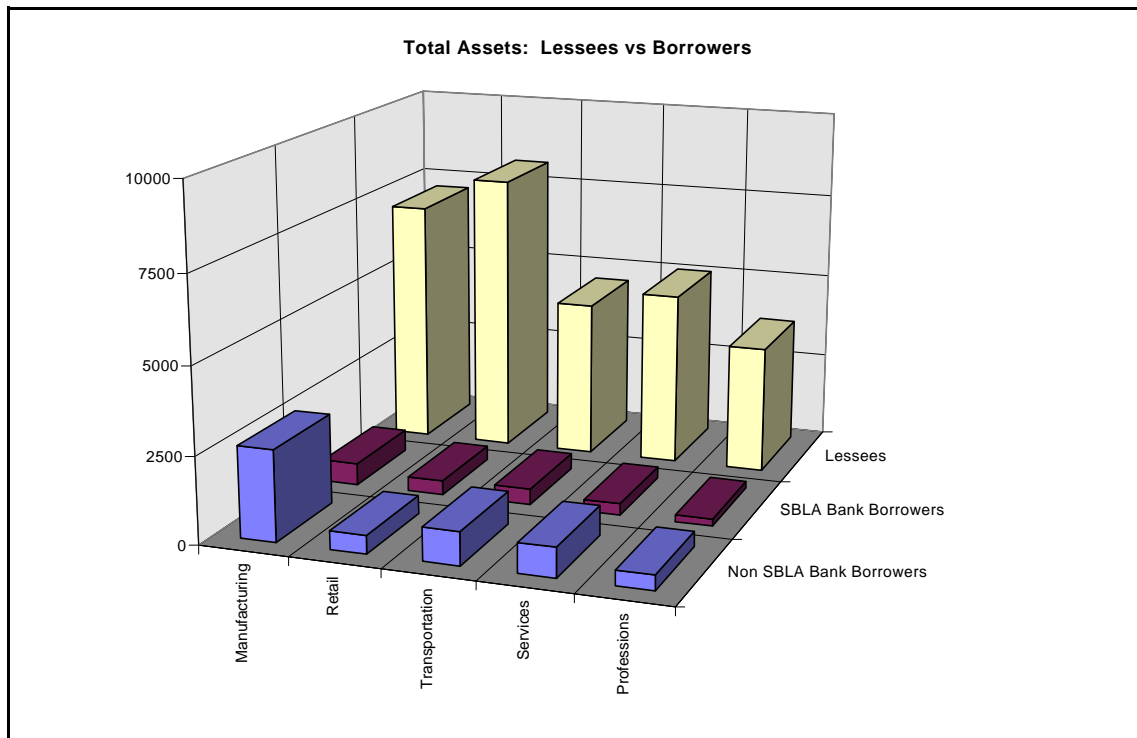
- This table shows that approximately 80 percent of SME leasing firm clients are very small firms: most were self-employed owner-operators.
- In particular industries, such as the transportation sector, the proportion of very small firms is especially high.
- In a few cases, it is possible that lessees might have been large firms for which data may not have been retained by the lessor. However, this is unlikely because lessors' files were, in general, carefully maintained.

The charts that follow present financial attributes of lessees based on the *minority* of lessee firms for which financial statement data are maintained. These charts are based on the financial statements for the most recent fiscal period on file with the lessor firms.

5.2.1 Balance Sheet Data

Chart 8 presents average values of total assets for the minority of firms for which lessors maintained financial statement data.¹² Results are broken down according to industry sector. Only those sectors with more than 10 cases are displayed here. Charts 8 and 9 present, respectively, total assets and owners' equity for the lessee firms for which financial statements were available and, as a basis of comparison, for bank borrowers. Chart 9, which presents owners' equity, is scaled the same way as Chart 8 so that readers may assess the financial leverage of the various sets of firms. Firms in the manufacturing and professional sectors employed relatively less financial leverage than firms in the other sectors.

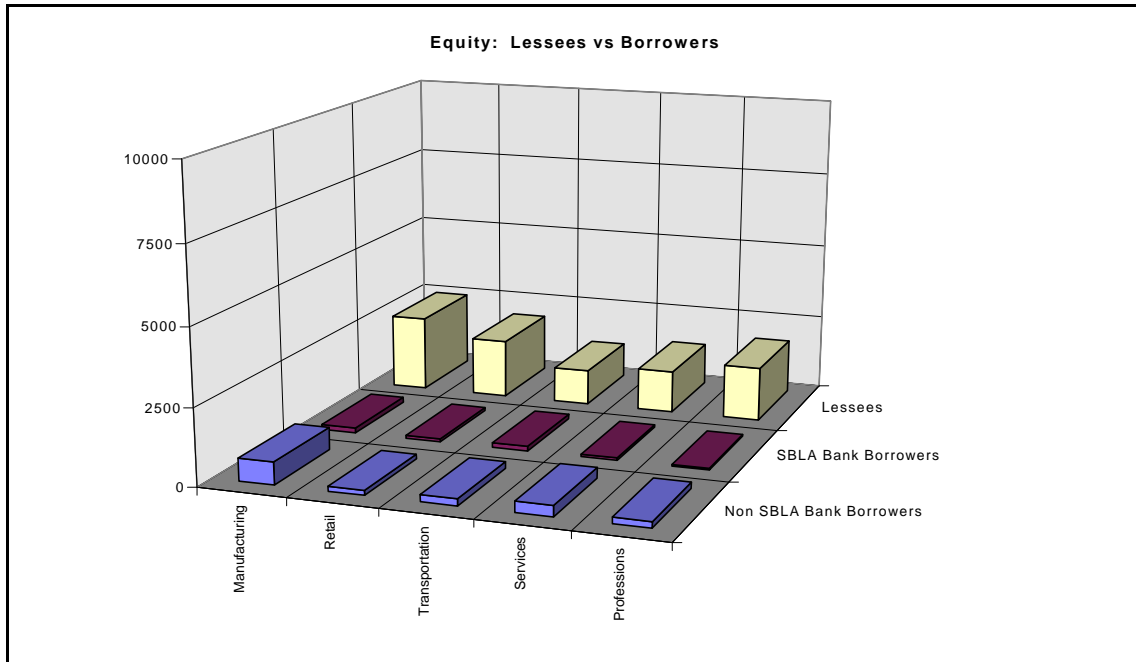
Chart 8



- Aside from the majority of lessee firms that are small owner-operators, those lessee firms for which lessors maintain financial statement data are generally larger than bank borrowers.
- Firms in the manufacturing and retail sectors tended to be the largest lessee businesses, as measured by total assets.

¹² For comparison purposes, lessee information is provided alongside the corresponding financial statement items of SBLA and non-SBLA term loan bank borrowers (Source, Haines & Riding, 1994).

Chart 9



5.2.2 Income Statement Data

In Chart 10, average value of revenues are presented for the major industrial sectors that use capital leases, as well as for term loan bank borrowers and SBLA bank borrowers. Chart 11, presents net incomes for the major business sectors.

Chart 10

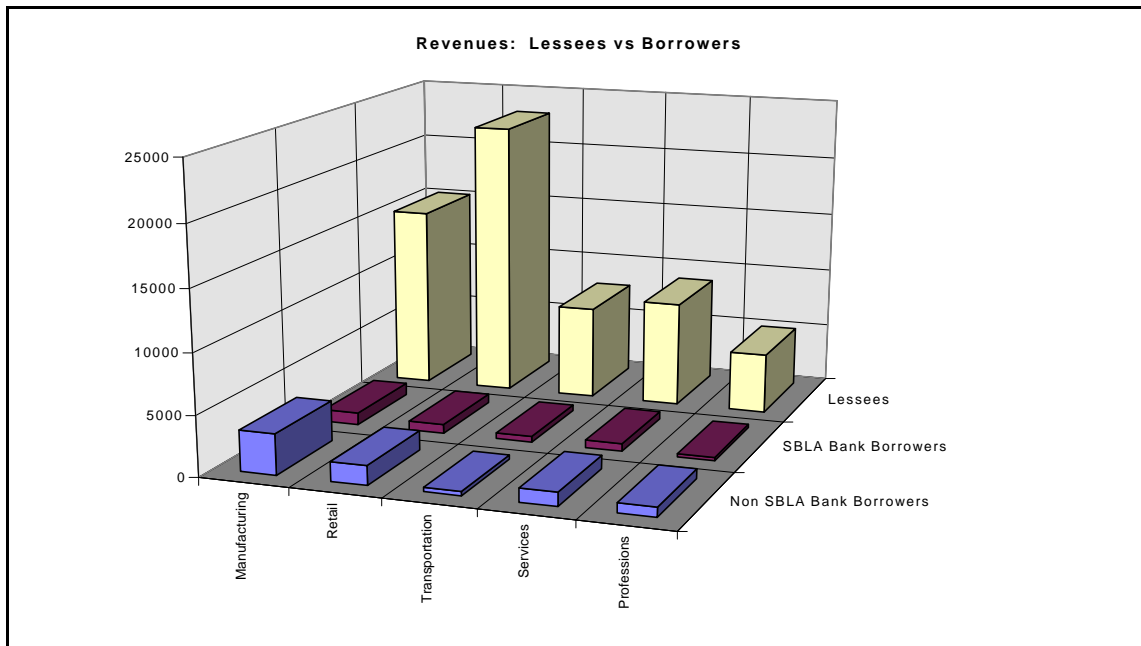
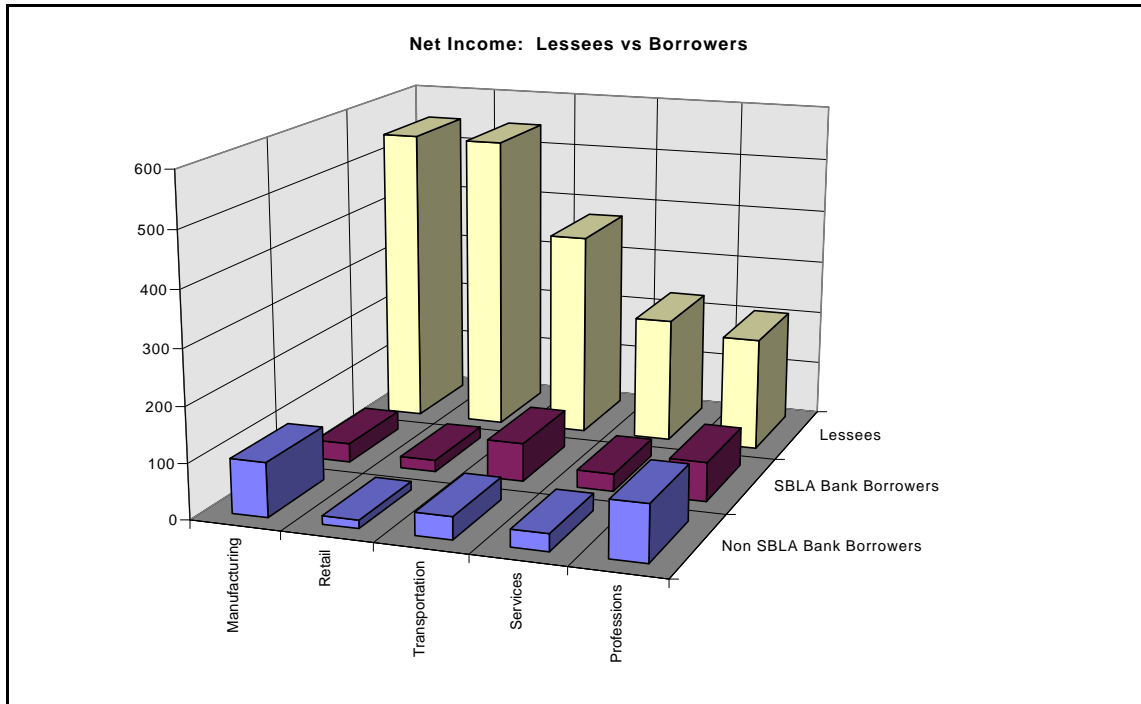


Chart 11



These data are consistent with known industry patterns. The retail sector, for example is a low-margin situation. Profits in the professional and manufacturing sectors reflect the more specialized nature of their product lines and the abilities of these sectors to extract relatively higher markups. Thus, patterns of profitability are consistent with those of other SMEs' in these sectors. Of the firms sampled, only 9.4 percent reported annual sales in excess of \$5 million.

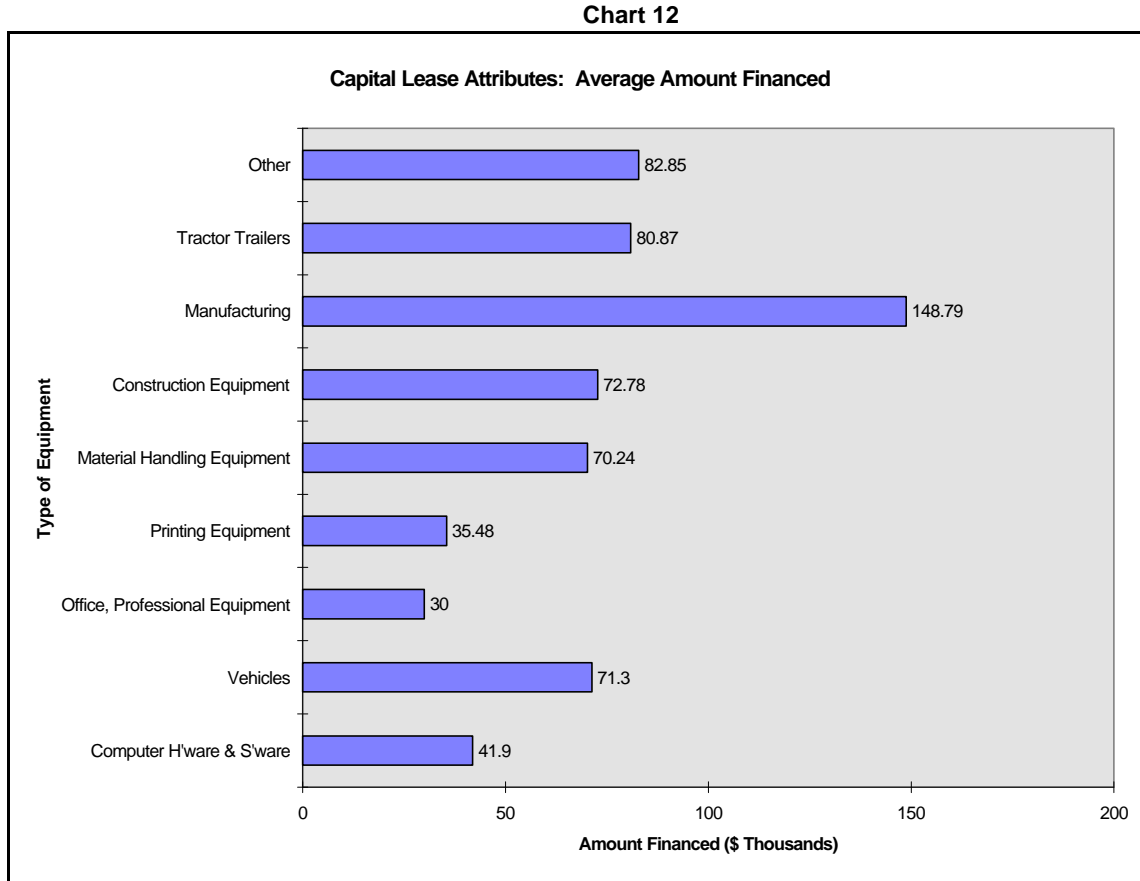
5.3 Attributes of Lease Contracts

This section describes findings regarding the terms under which lease financing is arranged. Three terms of the lease contracts are reported, each according to the type of equipment under lease:

- the average amount financed on lease contracts;
- the average term to maturity of the leases; and,
- the average yields on leases.

5.3.1 Equipment Leasing: Average Amounts Financed

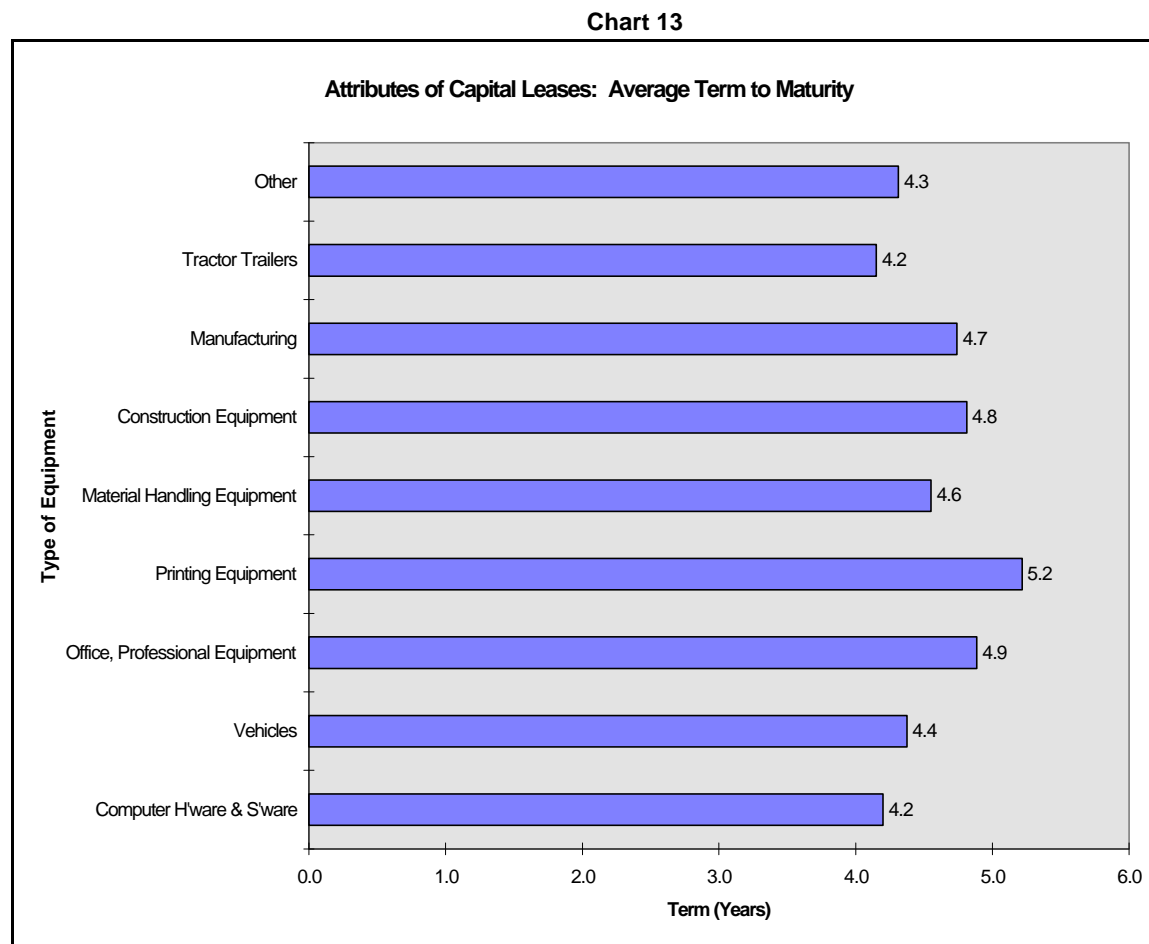
Chart 12 presents the average amount financed by lease contracts according to each of the various categories of equipment categories.



The amounts of financing are, on average, consistent with the terms of the SBLA. On average, the principal amount being financed is less than \$250,000. In most instances, capital amounts are for less than \$100,000. The amounts financed by leases make sense for the various types of equipment being acquired. Leases in the manufacturing sector, for example, are for larger amounts of capital and are typically being made to larger firms than, say, for firms in the transportation sector.

5.3.2 Equipment Leasing: Average Terms to Maturity

Chart 13 shows the average terms to maturity, by equipment category, for the sample of capital leases.



In general, terms to maturity also make sense: short-lived assets such as computers are financed by shorter-term leases and longer-lived assets by longer term leases (e.g., printing equipment, office and professional equipment). The terms of the leases are, on average, again consistent with the terms of loans made under the SBLA.

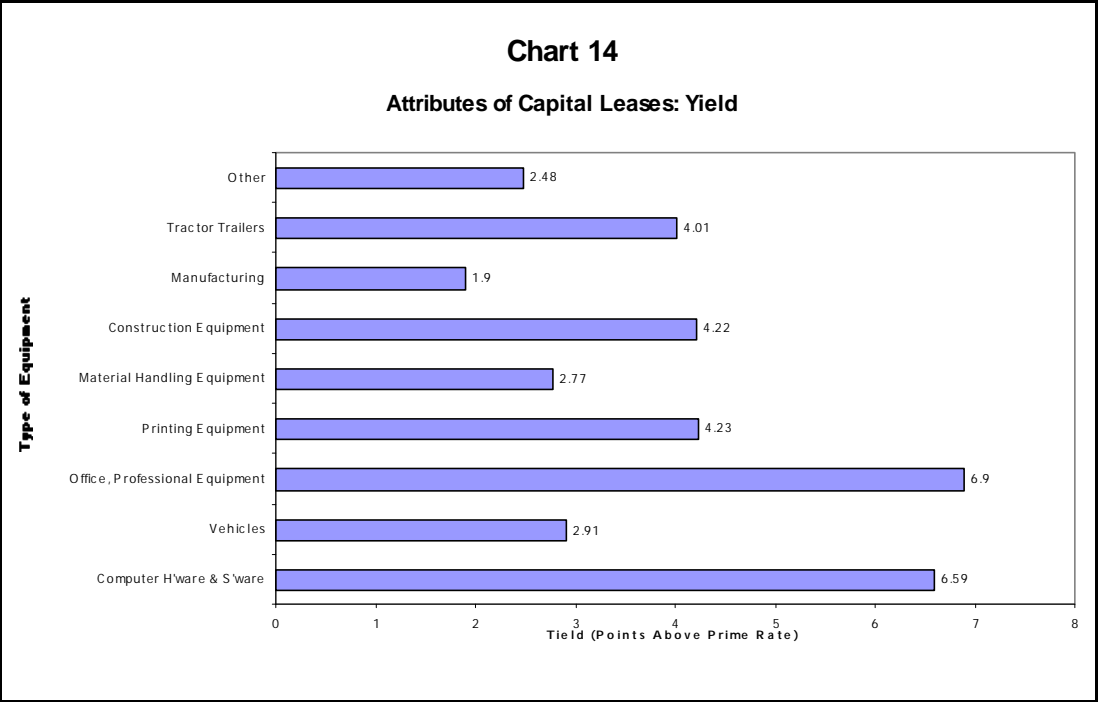
5.3.3 Equipment Leasing: Average Costs of Leases

In Chart 14, the average yields on lease contracts are graphed according to category of equipment. Here, yields are expressed as the number of interest rate points above the average bank prime lending rate for the year in which the lease was signed. Several observations follow from this chart.

- Yields on the leases (that is, rates of return to lessors and costs of lease to lessees) are high compared with bank terms of lending. For the cases in

the sample the average yield was 5.6 points above prime rate. This is considerably more than the rates that banks charge SME clients on either term loans, operating loans, or SBLA loans.

- For only four categories of equipment lease was the *average* yield less than the 3.0% above prime *maximum* that the SBLA currently permits lenders to charge on SBLA loans. If the SBLA were extended to capital leases, lessors might be able to obtain funds, through securitization, at a lower cost in view of the guarantee. However, on average, yields on leases were, on average, 4.8 percent above lessors' costs of funds. Application of the SBLA maximum rate would therefore result in a reduction of lessor profitability, other things being equal.
- The yield varies considerably according to the type of equipment being leased.

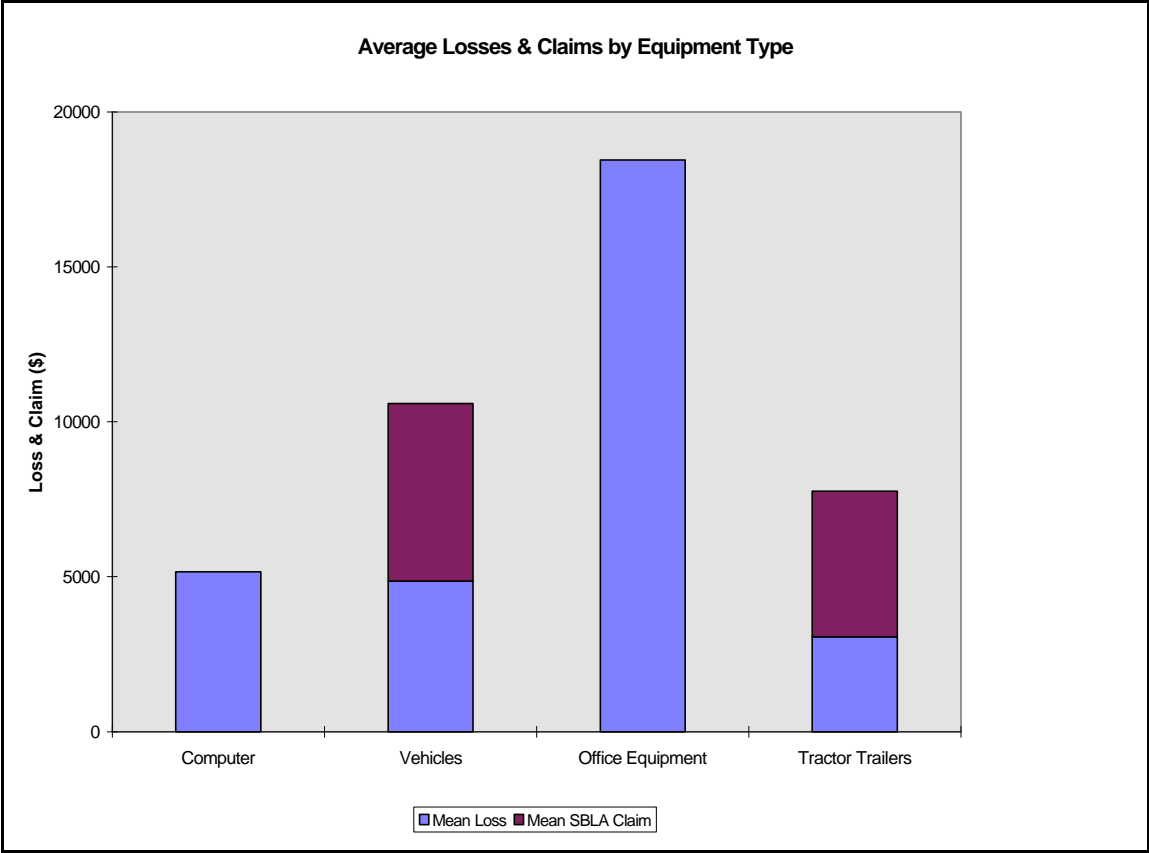


6. Research Findings: Default Rates

6.1 Mean Losses and SBLA Claims

In Chart 15, average losses on defaulted contracts are presented for four equipment categories. These data reflect experiences as of the third quarter of 1996. For the “vehicle” and “tractor trailer” categories, claims under the terms of the SBLA are added to the net-of-claims projected losses. These losses are expressed on a “per contract” basis. To estimate potential losses from defaults, the number of contracts and the proportion of contracts in default are required.

Chart 15



6.2 Default Rates

Table 3 and Chart 16 summarize default and loss experiences for the major categories of equipment. These data are not based on sample data; rather, they reflect the amalgamated complete (census) loss experiences of the three firms participating in this study as at the end of the third quarter of 1996. In this context, it is worth noting that the three asset-based finance firms from which these data were collected dominate the leasing market. Moreover, because the loss and default experiences are broken down by equipment type, they provide insights into the default experiences that could reasonably be anticipated from those other firms in the industry that specialize in particular types of equipment.

Table 3: Default Experience of Asset-Based Finance Companies

Equipment Category	Total Value of Contracts (\$million)	Proportion that are Capital Leases (%)	Proportion of contracts in default (%)	Projected Losses (\$millions) ¹	Loss Rate (% of total value)
Computer-related	503.2	80.8	2.72	2.458	0.488
Construction	110.9	40.8	2.36	0.137	0.124
Office & Professional	212.6	76.9	2.02	2.032	0.956

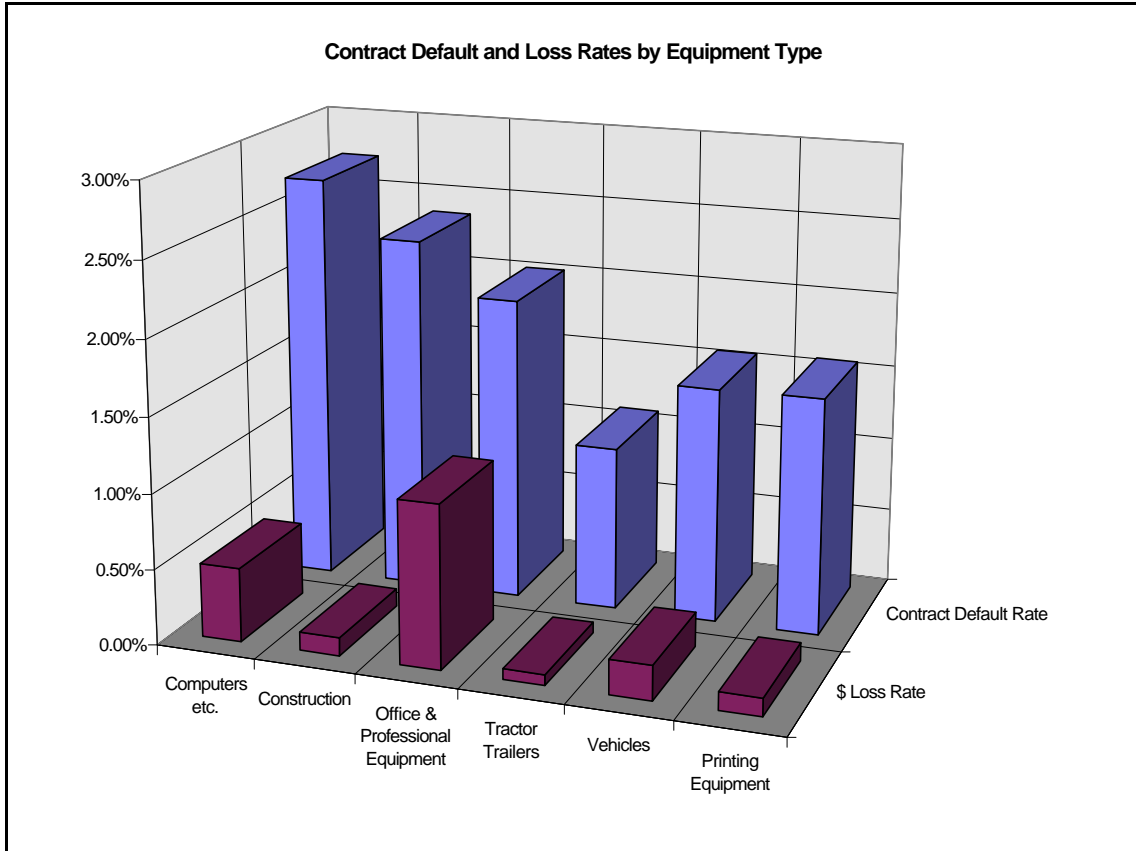
Equipment					
Tractor Trailers	756.3	32.8	1.09	0.533	0.070
Vehicles	88.2	94.5	1.56	0.201	0.228
Printing Equipment	77.5	40.9	1.57	0.089	0.115
Total	1,746.7	70.5		5.450	0.312

Several observations follow from these findings. First, there is a large difference between the rate at which contracts default and the loss rate on those contracts. Contracts in default comprise from one to three percent of the total number of contracts. However, losses expressed as a proportion of contract values are uniformly less than 0.5 percent, a rate that compares favourably with loss rates on bank loans. This difference is attributable to the lessors' ability to realize substantial recovery on the assets.

Lessors are able to keep loss rates low because they have developed specialized knowledge of the aftermarkets for the assets. In a subsequent section, it will be seen that many defaults occur early in the life of the contract. Therefore, maintenance of the above loss rates is contingent on lessors' continued zeal in realizing on repossessions. The question arises, therefore, whether extension of the SBLA to cover capital leases provides a compliment or a substitute for this zeal.

From these results, it is also clear that loss rates differ across types of equipment, and will therefore differ across lessor firms according to their specializations. This observation bears implications for fee setting. If a single fee for SBLA guarantee is established, those firms specializing in relatively low loss assets (for example, tractor trailers) would be subsidizing those firms specializing in relatively high risk assets (for example, office and professional equipment).

Chart 16



6.3 Estimated Claims

In this section, the default loss rates above are combined with the estimates of industry activity derived in Section 4, particularly Table 1. Table 1 presented estimated new business written in 1995 according to type of finance firm and category of equipment. Table 3, above, provided loss rate estimates by equipment category. These results are combined in Table 4 to provide a reasoned estimate of the maximum claim that would be expected were the SBLA extended to cover capital leases. It is emphasized that these estimates are maximums: they assume that all capital leases will be guaranteed and that a 100 percent guarantee is in effect.¹³

Table 4: Overall Default Estimation

¹³ Clearly, a 100 percent guarantee is not likely; however used as a basis this assumption facilitates claims estimation under lesser levels of guarantee. For example, if the guarantee rate is 85 percent, the maximum claims will total 85% of that listed here.

Equipment Category	Total Value of Contracts (\$million, Table 1)	Proportion that are Capital Leases (%)	Value of Capital Leases (\$millions)	Estimated Loss Rates (Table 3, %) ²	Estimated Losses (\$millions)
Computer-related	2,873	80.	2,299	0.488	11.3
Construction	527	40.	211	0.124	0.3
Office & Professional Equipment	3,499	75.	2,625	0.956	25.2
Tractor Trailers	2,459	33.	812	0.070	0.6
Vehicles	620	95.	588	0.228	1.3
Printing Equipment	427	40.	171	0.115	0.2
Total	10,405		6,706		38.9

This section has documented rates at which defaults and losses occur and has estimated the potential maximum industry-wide default losses. To further enrich this aspect of the findings, the next section establishes chronologies of default for categories of equipment for which data is sufficient.

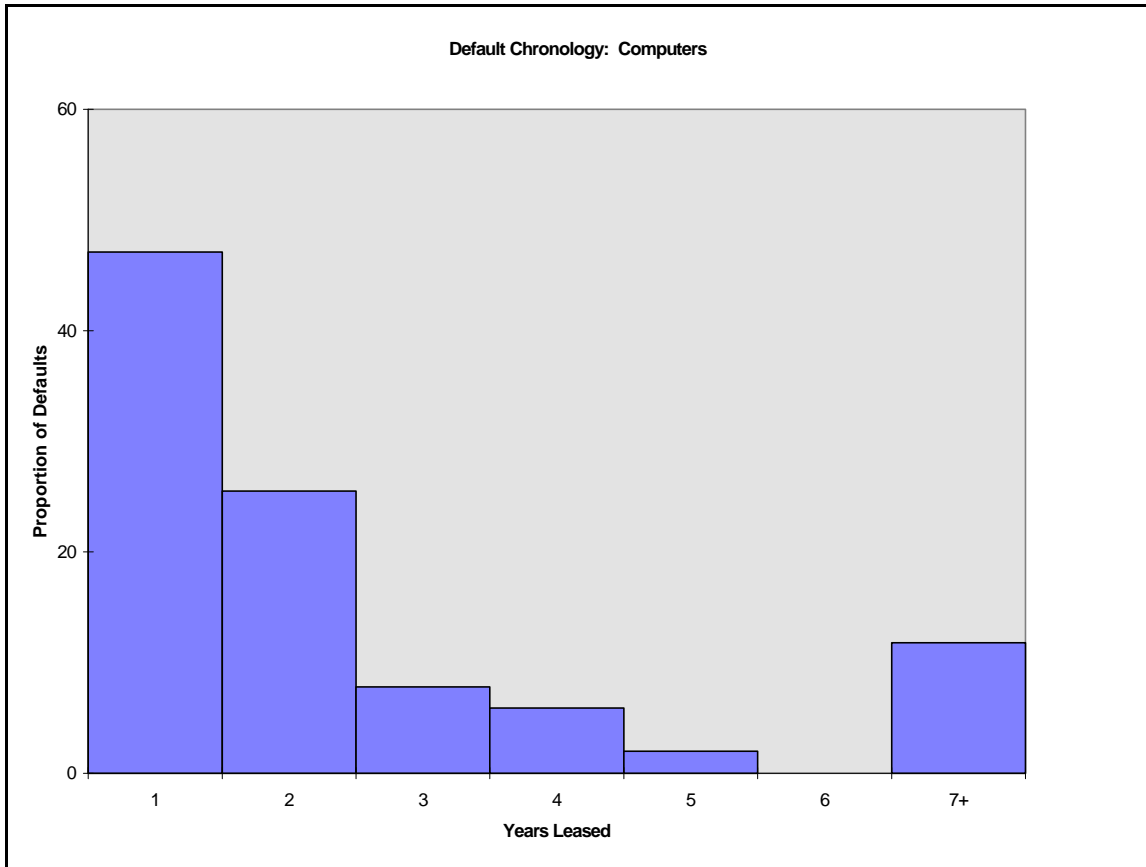
6.4 Default Characteristics

In addition to default rates, specific data elements for 318 lease contracts in default were assembled. Data included industry sector of the lessee, the type of equipment being leased, and the dates on which the lease contracts had been originated and on which they went into default. Accordingly, these data allowed default chronologies to be compiled specific to the major equipment categories. These are presented in this section.

6.4.1 Default Chronology: Computers

Chart 17 presents, for contracts that default, the timing with which leases on computers and related equipment become derelict. Striking is the result that almost half of defaults occur within the first year after the contract is signed and 70 percent of defaults occur within the first 24 months. This result implies a systemic selection problem in the credit granting decision. This problem will be addressed later in this report.

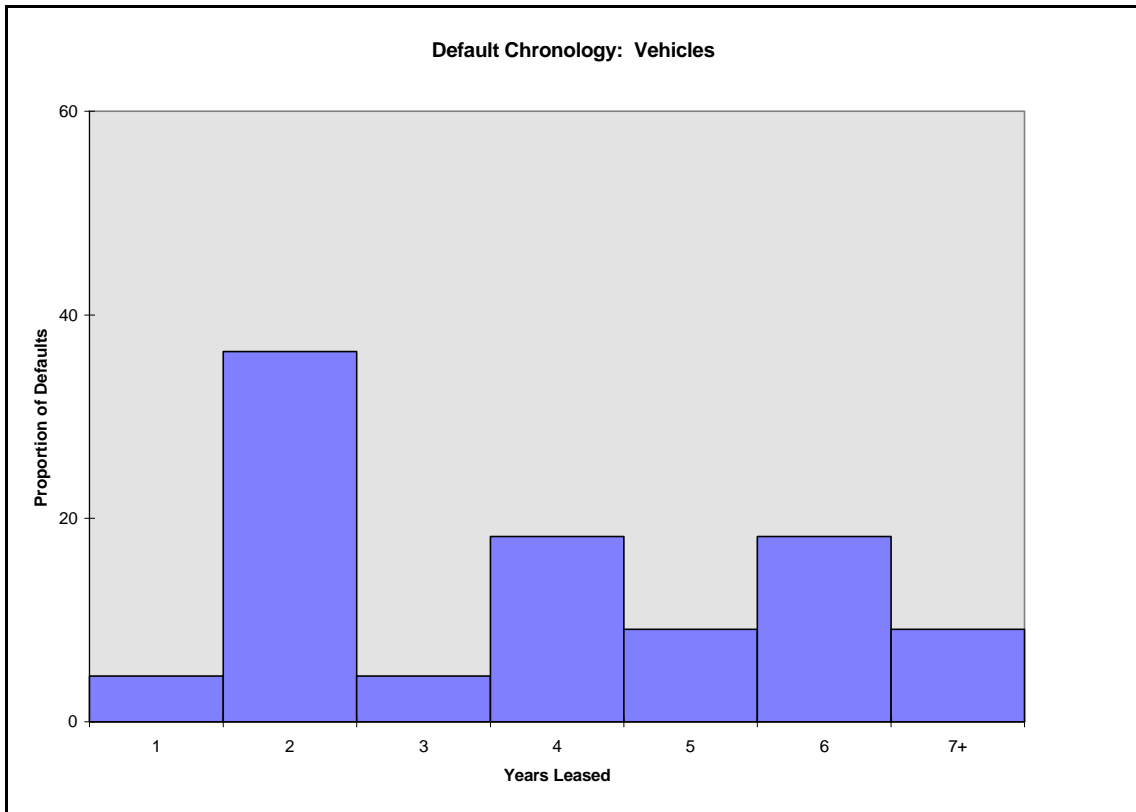
Chart 17



6.4.2 *Default Chronology: Vehicles*

In Chart 18, the default chronology for vehicles is presented. Unlike the situation for computer leases, very few of the defaults on vehicle leases occur within one year of lease signing. However, almost one third of defaults do occur during the second year. This sequence of a low rate of defaults during the first year followed by a high rate during the second year suggests that credit-granting decisions are heavily weighted on forecasts of performance for the immediate term for this asset type and that monitoring of client performance is problematic. It appears that credit is being extended on the strength, perhaps, of contracts in hand between the business (owner) and one or a few clients. Such contracts, however, may not accurately indicate prospects for the subsequent year.

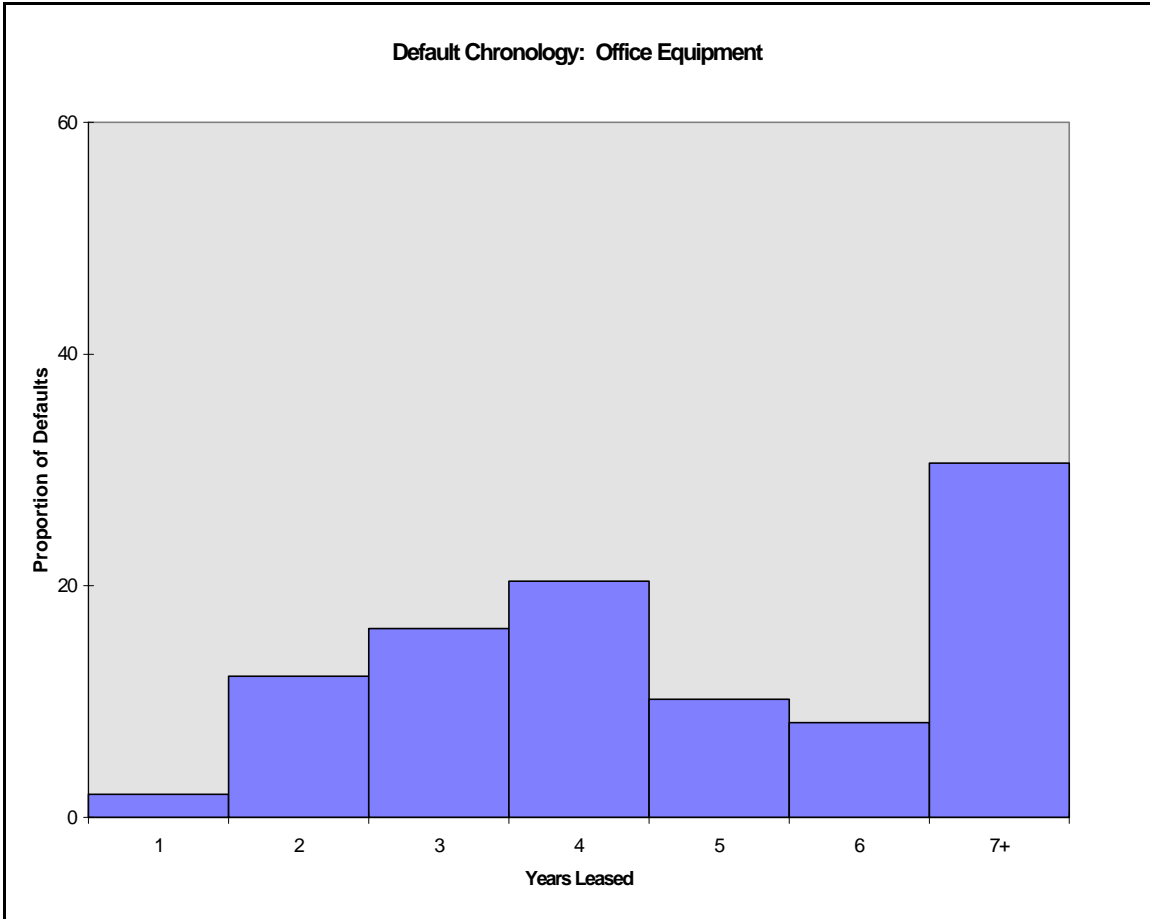
Chart 18



6.4.3 Default Chronology: Office Equipment

Default chronology for office equipment is shown in Chart 19. In form, this chart is that which is most consistent with SBLA experience. Defaults during the first years of the contract are rare, a finding that speaks of credit granting criteria and processes that are appropriate to this classification of equipment type. Most defaults occur during the third and fourth year of the contract (or near the end of the contract lifetime).

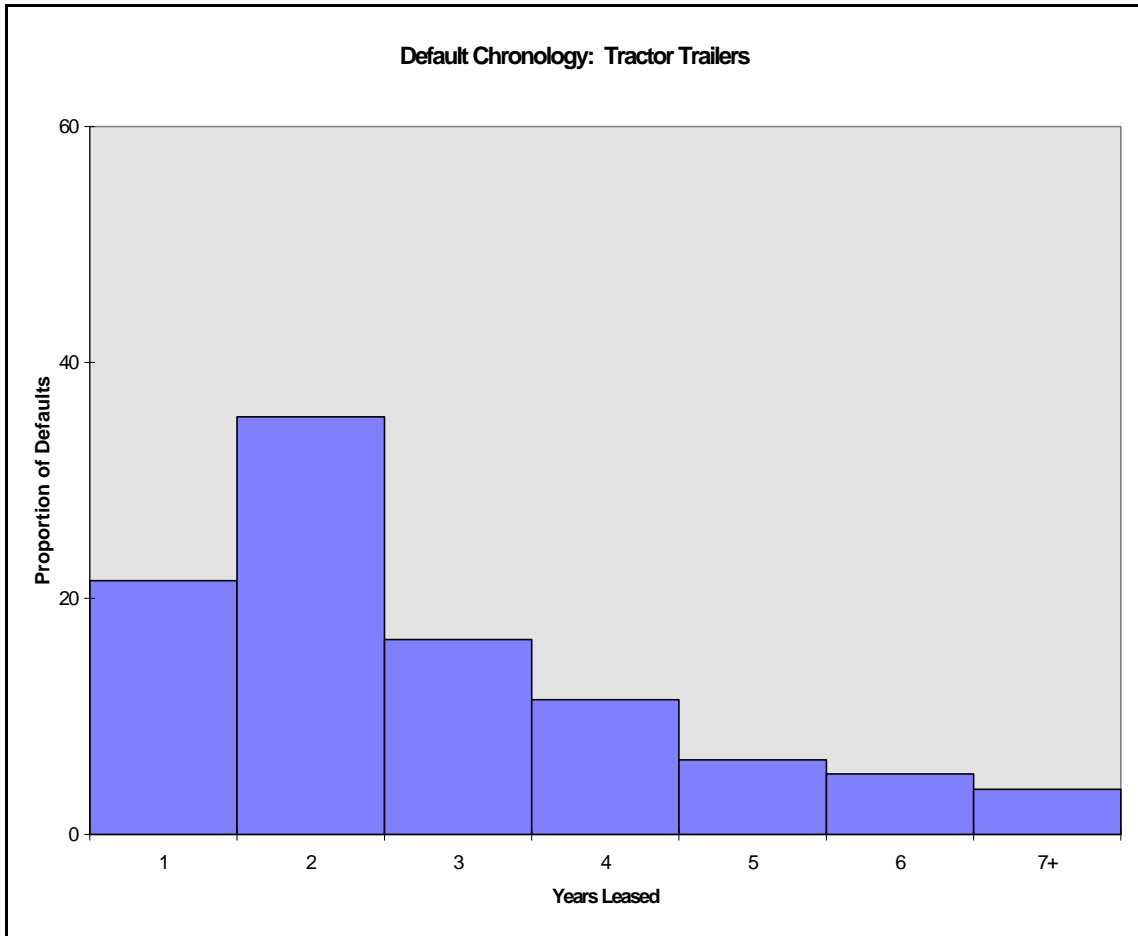
Chart 19



6.4.4 Default Chronology: Tractor Trailers

The default chronology for tractor trailers is depicted in Chart 20. Defaults on this equipment class, like defaults on computers, tend to occur early in the life of the lease - with almost 60 percent of the defaults occurring by the end of the second year. Again, a client selection problem appears to be operative.

Chart 20

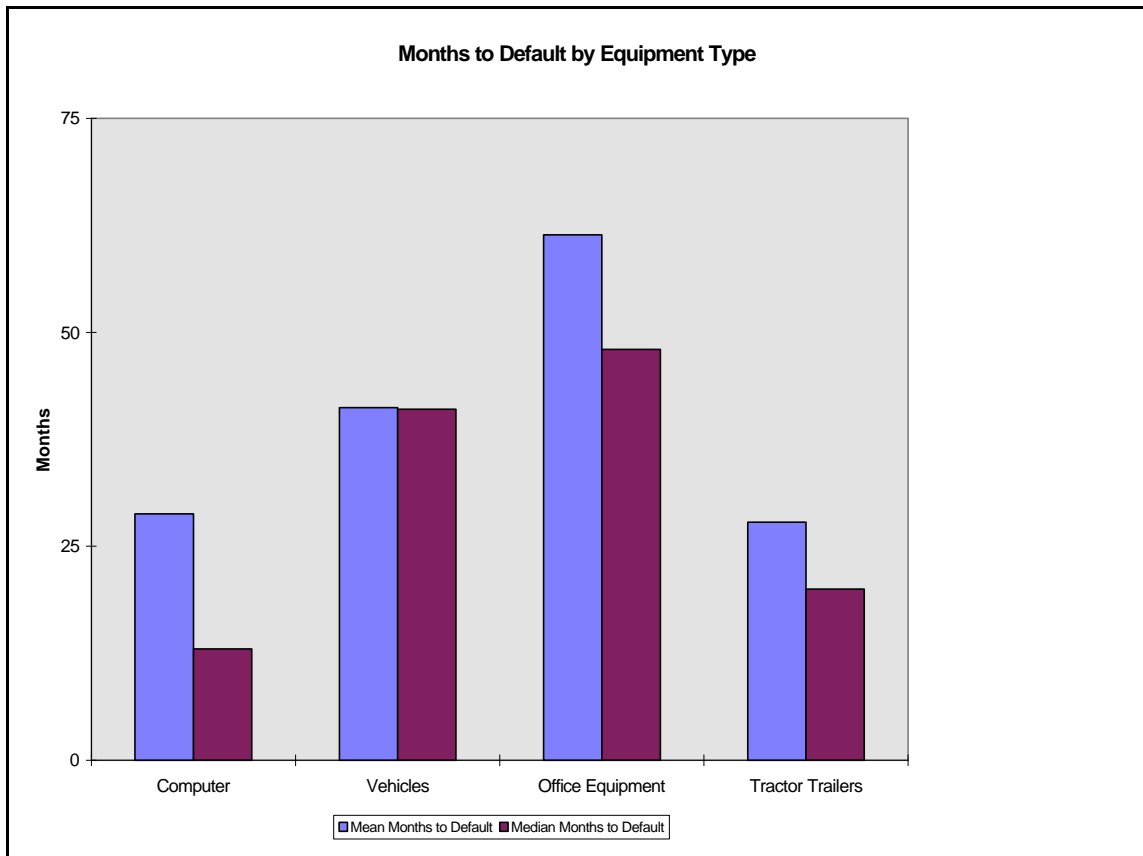


6.4.5 Default Chronologies: Summary

Default rates do not relate the full story with respect to the cost of defaults. The losses are also partially determined by the timing of the default: losses are generally higher early during the credit contract. To some extent, this is partially offset by the asset-based lenders' expert knowledge of the after-markets for the types of equipment they lease. Nonetheless, for some types of equipment, the frequencies with which defaults occur early imply systematic problems with how credit decisions are rendered.

Chart 21 presents the mean and median months to default for the 318 cases of default in the four major equipment types for which data allows establishment of chronologies. Chart 22 sums up Charts 17 through 20 by presenting the *cumulative* default rates for each of the equipment classes.

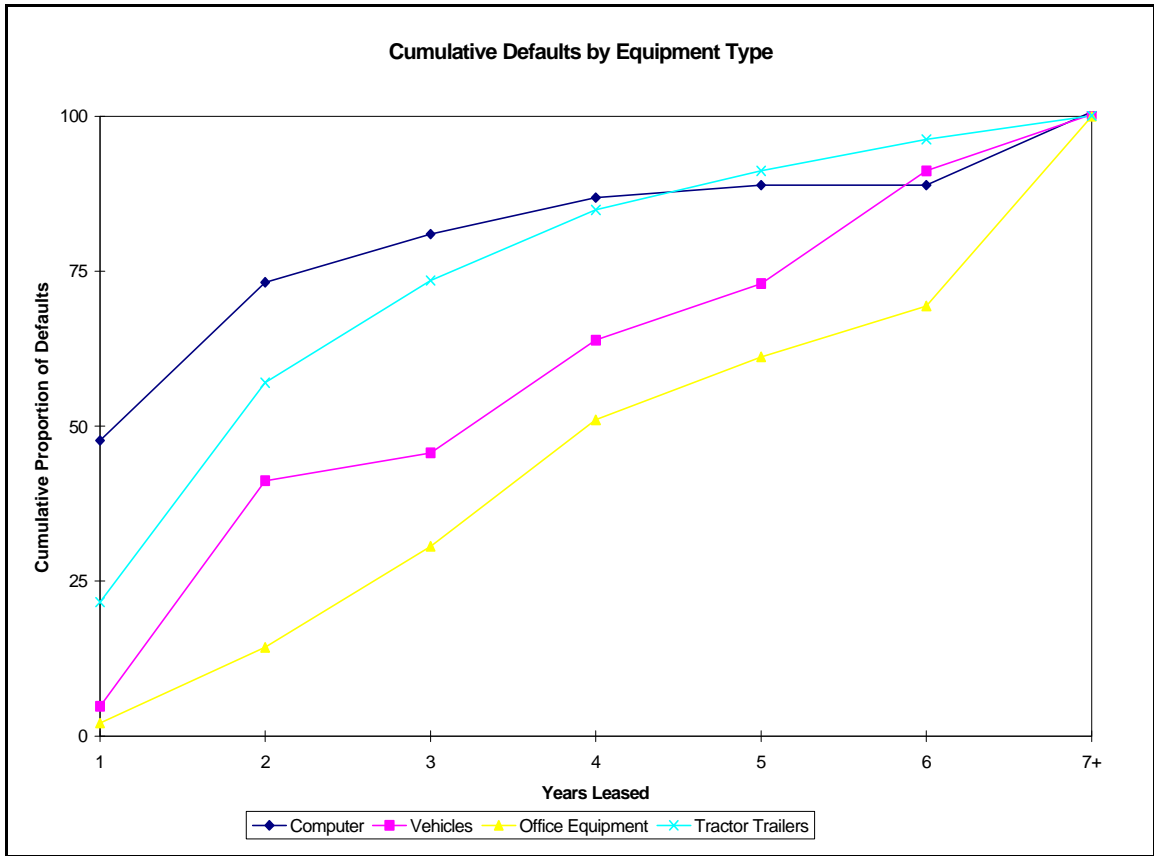
Chart 21



Finding exact reasons for early defaults requires further analysis. However, one potential explanation arises from asset-based finance firms' common use of vendor financing arrangements. According to such arrangements, vendors can interest potential equipment acquirers in a capital lease arrangement. In the event that vendors make the credit decision, they are in potential conflict of interest situations.

On the one hand, vendors are compensated by the sales commission attached to the sale of the equipment. On the other hand, they ought also employ fiduciary responsibility for the lessor's funds. Lessors, for their part, often subject the application for credit to credit scoring. The academic literature, at least, has raised issue with credit scoring approaches. Credit scoring models are often developed subjectively. In those instances where they are developed based on statistical methods, methodological questions regarding the statistical assumptions behind various models that purport to discriminate between good and poor risks have been raised. It is not clear that credit scoring models work well beyond the specific original control groups used to estimate the model parameters.

Chart 22



7. PERCEPTIONS OF LEASING AMONG CURRENT SBLA BORROWERS

In a separate study, SBLA borrowers were interviewed with respect to evaluation of the economic impact of the Act. In the course of these interviews, respondents, all of whom were known to be SBLA borrowers, were asked a sequence of questions about leasing the asset as an alternative to borrowing to purchase. Not all respondents to the telephone survey answered this question; however, of the 431 respondents, 238 (55%) had considered leasing as an alternative - but had rejected leasing in favor of borrowing to purchase. Of these 238 borrowers who had considered leasing:

- 114 (48%) rejected leasing because they perceived leasing to be too costly;
- 44 respondents (18.5%) did not pursue leasing because it was unavailable;
- 41 respondents (17.2%) wanted to own the asset;
- 14 respondents (almost 6%) found the terms of leasing to be too restrictive; and,
- 46 respondents (19.3%) cited other reasons for borrowing. In many of these cases, the respondent was borrowing in order to buy out an existing lease. Others cited acquisition of used equipment as reasons for not leasing.

The 193 respondents who had not considered leasing were asked if, in hindsight, leasing might have been an alternative. Of these, 71 (36.8%) felt that leasing might have been an alternative but had not considered using leasing at the time they had acquired the asset. Others did not view leasing as an alternative. The most frequently-cited reasons why they had rejected leasing were:

- leasing was too costly (90 respondents, 52 percent); and,
- lease arrangements were not available (81 respondents, 46 percent)

Thus, among SBLA borrowers there is a perception that leasing is a relatively expensive means of financing asset acquisition. It is not clear that this perception is related primarily to the interest rate implicit in leasing arrangements or to the tax issues.

8. SUMMARY

This report has presented the findings of contract research that attempts to address two goals:

- to identify attributes of lessee firms so that they may be compared to other SBLA borrowers and to the general population of SMEs;
- to estimate loss rates on capital leases so that potential government exposure associated with extension of the loan guarantee program to capital leases can be evaluated.

8.1 Attributes of Lessee Firms

This study found that the population of firms that typically lease such equipment as computers, office and professional equipment, vehicles (exclusive of passenger cars), tractor trailers, and printing equipment are small firms. More than 90 percent of such lessees report annual sales of less than \$5 million and the typical capital investment in these classes of equipment is usually less than \$250,000. There are, of course, other classes of equipment leasing in which SMEs play little part (aircraft, rolling stock); however the leasing market for the sectors in which SMEs can and do participate is large.

Analysis of the files of asset-based finance companies led to the following findings.

- The leasing business is concentrated:
 - in the Province of Ontario;
 - beyond the major metropolitan areas;
 - in the transportation sector.
- The most frequently leased categories of equipment are:
 - office and professional equipment¹⁴;
 - tractor trailers; and,
 - computer-related equipment.

SMEs comprise a high proportion of the firms that typically lease these types of equipment.

- More than 70 percent of SME leasing firm clients are very small firms. Most are self-employed owner-operators. Typically, these firms are so small that

¹⁴ Office and professional equipment includes a diversity of assets such as dental equipment, office furniture, medical equipment, pharmacy equipment, photocopiers, etc.

financial statement information is unavailable and would be suspect if it were available.

- The lessee firms that do provide financial statements also tend to be small businesses:
 - only 9.4 percent of lessee firms that leased the equipment categories considered in this study report annual sales in excess of \$5 million.
 - Firms in the manufacturing and retail sectors tended to be the largest.
 - Manufacturing and professional businesses employed relatively less financial leverage than firms in other sectors.
- Income statement data are consistent with known industry patterns:
 - lessee firms in the retail sector are low-margin; and,
 - profitability in the professional and manufacturing sectors reflect the more specialized nature of their product lines and the abilities to extract relatively higher markups.
- The amounts of lease financing are consistent with the terms of the SBLA:
 - the average principal amount being lease financed is less than \$250,000;
 - capital amounts are usually for less than \$100,000.
- The average terms to maturity of leases are consistent with the terms of loans made under the SBLA.
- Yields on the leases are high compared with bank terms of lending and the current upper limit of interest rates on SBLA loans.
 - the average yield was considerably more than the rates that banks charge SME clients on either term loans, operating loans, or SBLA loans.
 - The average yield varies considerably according to the type of equipment being leased. For only four types of equipment categories was the average yield less than the prime+3.0% ceiling that the SBLA currently permits lenders to charge on SBLA loans.

- Lessors, if subject to the prime+3.0% upper limit would lose profitability unless, by virtue of the SBLA guarantee, they could obtain funds at lower costs.
- SBLA borrowers, when surveyed, view the costs associated with leasing equipment as being high relative to the option of borrowing.

8.2 Defaults

The rate at which lessee firms defaulted on contracts varied by equipment class. The lowest frequency of default on contracts was 1.09%, for tractor trailers. The highest rate was 2.72 percent, for computer-related equipment leases. Loss rates, which also varied across equipment classes, were much smaller: 0.07% for tractor trailers to 0.96% for office and professional equipment. The difference between these rates was attributed to the ability of specialized lessor firms to realize substantial recoveries from repossession and resale of the equipment. The loss rates are less than those that the “big six” bank lenders typically experience on commercial loans to SMEs. Based on estimates of the sizes of the 1995 leasing market for the most frequently-leased categories of equipment, losses due to default are estimated to be approximately \$38 million. This amount would grow proportionately with the market penetration of asset-based financing.

- Default rates on lease and loan contracts ranged from one to three percent. However, actual loss rates averaged 0.312% of original contract value, an average rate somewhat below bank loss rates on conventional loans. Loss rates varied across equipment categories, from 0.115% to 0.96%. This variation raises the possibility that lessor firms would benefit differentially from a common guarantee fee.
- The difference between default rates on contracts and loss rates is probably attributable to the ability of specialized financial institutions to recover substantial values through realization on the assets. The extent to which a guarantee arrangement would substitute or compliment this aspect of asset-based finance will only be known with experience and implies the need for review or monitoring should a guarantee be extended to capital leases.
- For some equipment types, defaults occur early in the life of the contract with high frequency. This implies that the decision to accept or deny credit may be problematic.

There remain issues that will need to be addressed before extending government loan guarantees to capital leases.

As mentioned, loss rates varied across equipment categories. In addition, many leasing firms specialize in particular types of equipment. To the extent that an “average” fee would be assessed for loan guarantees, the fees paid by lessees of relatively low loss rate equipment categories would partially “subsidize” lessees of equipment for which loss rates

are higher. This is not a new problem; yet it is a problem that the design of loan guarantee programs have not yet fully resolved.

A second area of concern relates to the yield on capital leases. This study found that yields on capital leases were usually higher, sometimes considerably higher, than the interest rates, even with fees added, that rates banks typically charge SME borrowers. More specifically, the SBLA requires that bank lenders charge interest at a maximum rate of 3.0 percent above prime. However, the yield on lease varies from 1.9 to 6.9 percent above going prime rate.

Third, the low loss rates arise in large part because lessors are willing and able to realize substantial recoveries on repossession and resale of defaulted equipment. In the event that loan guarantees are extended to cover capital leases, provisions might be needed to ensure that lessors resort to loan guarantees as a compliment to repossession and resale and not as a substitute.

9. APPENDIX: DATA CODING FORMS

Location Coding Guide	
Maritimes	1
Quebec	2
Ontario	3
Prairies	4
BC / Yukon / NWT	5

Asset Category Coding Guide	
Computer Hardware	1
Computer Software	2
Vehicle	3
Aircraft	4
Office Equipment or Furniture	5
Printing Equipment	6
Material Handling	7
Construction Equipment	8
Manufacturing	9
Tractor Trailers	10
Other	11
Can't tell/ Don't know	99

Payment Coding Guide	
Weekly	1
Bi-Weekly	2
Monthly	3
Bi-Monthly	4
Semi-Annual	5
Annual	6
Other	7
Irregular (see back side of check list)	8
Don't Know / Can't Tell	9

Industry Coding Guide	
Construction	1
Mining	2
Manufacturing	3
Financial	4

Wholesale	5
Retail	6
Agriculture, Fishing, Forestry	7
Transportation, Utilities	8
Services	9
Professional	10
Other	11
Don't Know / Can't Tell	99

**SBLA LEASING PROJECT
DATA FORM**

Information on Lease Terms

Lessee No. <Integer>	
Appl. No. <Integer>	
YEAR of Date Submitted <Integer>	
Type of Equipment (See Coding Sheet) <Integer>	
Province (from Location) (see Coding Sheet) <Integer>	
Setting (Major Metropolitan Area =1; Other=2) <Integer>	
Fixed or Floating Rate (Fixed=1; Floating=2) <Integer>	
If Floating (leave blank if Fixed Rate) <Numeric> Float @	
COF of Fixed or BASE if Floating <Numeric> COF or BASE	
Terms for either fixed or floating <Numeric> Spread	
Yield <Numeric>	
Term (Years) <Numeric>	
Option <Numeric>	
Adjusted <Numeric>	
Payable <Numeric>	
Contract Rate (%)<Numeric>	
Contract Amount (nearest \$000) <Integer>	
Payments Information Commencement Date (Year of) <Integer>	
Frequency (see Coding Guide) <Integer>	
First Payment Date (Year only) <Integer>	
Payment <Numeric>	
Total Payment <Numeric>	

Equipment Costs

Equipment Cost (to nearest \$000)	
Total of Trade in + Down Payment (to nearest \$000)	
Total Invoice	
Amount Financed	
Existing Exposure	
Credit Score	
Credit Rating	

Data on Lessee

Purchase Option	
Most Recent Year Financial Information	Year ®
<i>Total Assets</i>	
<i>Total Liabilities</i>	
<i>Equity</i>	
<i>Revenue</i>	
<i>Net Income</i>	
<i>Non Operational Income</i>	
<i>Operational Cashflow</i>	
<i>CPLTD</i>	
<i>LTD/Equity</i>	
<i>ROA</i>	
<i>Cashflow/LTD</i>	
<i>Interest Coverage Ratio</i>	
<i>Principal Coverage Ratio</i>	
<i>Working Capital</i>	
<i>Debt / Equity</i>	
<i>Debt / TNW</i>	
IF AVAILABLE: Year Lease Undertaken	Year ®
<i>Total Assets</i>	
<i>Total Liabilities</i>	
<i>Equity</i>	
<i>Revenue</i>	
<i>Net Income</i>	

<i>Non Operational Income</i>	
<i>Operational Cashflow</i>	
<i>CPLTD</i>	
<i>LTD/Equity</i>	
<i>ROA</i>	
<i>Cashflow/LTD</i>	
<i>Interest Coverage Ratio</i>	
<i>Principal Coverage Ratio</i>	
<i>Working Capital</i>	
<i>Debt / Equity</i>	
<i>Debt / TNW</i>	

<i>Industry Code</i> (see Coding Guide)	
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Includes claims currently made under the terms of the SBLA (approximately \$405,000).

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