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THE CAPITAL MARKET AND SMALL BUSINESS [v. 8]

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THE CAPITAL MARKET AND SMALL BUSINESS

I. INTRODUCTION

The purpose of this study is to examine the recent trends in the capital market in general and in various segments of the capital market and to assess their impact, if any, on small business financing.

In Section II, an examination of major changes in net lending and borrowing activity and their consequences is presented. Section III analyzes trends in financial intermediation with special attention to changes in the asset holdings of the chartered banks.

In Section IV the results of an investigation of the market for business term loans are presented and the implications of the development of this market for small business and for future regulatory policies are noted. Some more general conclusions are presented in Section IV.

II. TRENDS IN THE CAPITAL MARKET

II.1 Capital Market Participants

There are three groups of participants in the capital market. They are: (a) surplus units (net lenders); (b) deficit units (net borrowers) and; (c) financial intermediaries.

Surplus units have current income in excess of their current consumption and real capital formation. The major surplus unit or net lender in the Canadian capital market is the household or, in the terms employed by the Financial Flow Accounts, "Persons and Unincorporated Business". The reason that persons and unincorporated business are grouped together is that when a business is not incorporated there is no distinction between the income of the business and that of its owner.

The household sector is a net lender because its members are attempting to use income earned during their working years to provide for consumption expenditures during their retirement years. The extent of the net lending provided by households will therefore depend on the expected lifetime income and age distribution of its members. As the proportion of the household sector which is retired increases the desired net lending of the sector as a whole will decline.

Deficit units or net borrowers have expenditures on current consumption and/or real capital formation which exceeds their current income. Both non-financial private corporations and non-financial government enterprises are net borrowers.

The reason is that their net capital formation exceeds their current net income. Net borrowing by this sector will be greater the greater is the desired rate of growth of its members.

Deficit units often borrow directly from surplus units. Thus, individuals hold claims on non-financial enterprises in the form of common and preferred stock and bonds. It is often the case, however, that the liabilities deficit units wish to issue have different characteristics than the assets surplus units wish to hold and direct lending does not occur.

The purpose of financial intermediaries is to provide an indirect link, to intermediate, between surplus and deficit units. Financial intermediaries issue claims in a form which all or some surplus units wish to hold and, in turn, hold claims on deficit units in forms which the latter find suitable.

In the absence of regulation we would expect financial intermediaries to specialize, that is, to issue liabilities with a given set of characteristics and to hold assets with a given set of characteristics. The relative importance of a given type of intermediary would then depend on the attractiveness of both the liabilities it issued and the assets it was willing to hold. Thus, an intermediary may decline in relative importance either because the types of claims it issues are attractive to a small number of surplus units or because the types of claims it specializes in holding are attractive to a smaller number of deficit units.

The amount of financial intermediation will grow relative to total lending and borrowing if intermediaries, as a group, are successful in developing either claims which specific groups of surplus units prefer to hold as financial assets or claims which specific groups of deficit units prefer to issue as liabilities. Thus, intermediaries as a group grow in relative importance by developing specialized financial instruments and arrangements with features which could not be arranged in a direct transaction between surplus and deficit units.

There are several other groups of individuals and isntitutions which may participate in the capital market either as net lenders or net borrowers. The three levels of government will be net lenders or net borrowers depending on whether or not their tax revenues exceed their expenditures.

Residents of foreign countries may also serve as either net lenders or net borrowers in domestic capital markets. Given relatively mobile capital, foreign lending or borrowing will serve to make up the difference between desired domestic lending and desired domestic borrowing at a given interest rate.

Finally, Social Security Funds will be net lenders or borrowers depending on whether annual CPP and QPP contributions plus income on accumulated contributions are greater or less than CPP and QPP pension benefits paid. Although they are reported separately, Social Security Funds represent part of the savings of households. Whether they represent additional

savings or are substitutes for alternative types of saving in which households would otherwise have engaged is an issue which has been investigated by the Economic Council of Canada (1979) among others.

II.2 Net Lenders and Borrowers: 1970-1980

The net lending and borrowing activity of the major groups of capital market participants between 1970 and 1980 is summarized in Table I.

The households and unincorporated business group has been a net lender while both non-financial corporations and government enterprises have been net borrowers.

The federal government has been a net borrower for eight of the eleven years from 1970 to 1980. Provincial and local governments, as a group, have also been net borrowers during eight years of the same eleven year period.

Foreign residents or "The Rest of the World" in the terms of the Financial Flow Accounts have been net lenders in Canada during eight of the eleven years 1970-80.

The Social Security Funds have been net lenders throughout the past decade. Whether they will continue to be so during the next decade, that is, whether contributions and earnings can continue to exceed benefits paid has been the subject of much discussion.

During the decade 1970-80, then, the net lenders on the Canadian capital market have been households and unincorporated business, foreign residents and the Social Security Funds

TABLE I

NET LENDING OR BORROWING BY SECTOR
($ Millions)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Persons and Unincorporated Businesses	3090	3384	5056	5706	8012	8845	8005	9970	11962	13077	15753
2. Non-Financial Private Corporations	-2281	-2800	-3444	-4369	-8015	-4367	-3803	-3922	-3521	-7072	-5477
3. Non-Financial Government Enterprises	-1184	-1300	-1466	-2325	-3169	-5611	-5477	-5794	-6450	-6629	-6481
4. Federal Government	276	-141	-555	591	998	-4065	-3411	-7728	-11383	-9170	-10736
5. Provincial and Local Governments	-917	-1340	-989	-768	-580	-2649	-2679	-875	109	2038	1241
6. Social Security Funds	1193	1278	1375	1472	1780	1999	2183	2259	2449	2734	2008
7. Rest of the World	-1106	-431	386	-686	1492	4965	3842	4299	5302	5098	1538

SOURCE: Statistics Canada 13-002, Financial Flow Accounts IV, 1980 and Statistics Canada 13-562, Financial Flow Accounts Volume I.

(CPP and QPP). The net borrowers have been non-financial private corporations, non-financial government enterprises, and all three levels of government.

II.3 Responses to Changes in Desired Net Lending and Borrowing

Ex post there must, of course, be a dollar lent for every dollar borrowed. There is no such thing as an increase in borrowing by one capital market participant which has no effect on other capital market participants. If an increase in the desired net borrowing of one party is to be accomodated, there must be either an increase in net lending or a decrease in net borrowing (or both) by other capital market participants.

More specifically, suppose the federal government increases its net borrowing. This could be accomodated by an increase in net lending by households. This would, in turn, require either an increase in net saving by households or a reduction in the real capital formation of the latter. If household net saving is to increase then the consumption expenditures of this sector must fall.

Alternatively the equality of net lending and borrowing could be maintained by a reduction in net borrowing by non-financial private corporations. In this case it is the real capital formation of non-financial corporations which is reduced.

Another possibility is that net lending by foreigners increases. In a small, open economy such as Canada's it is not unreasonable to assume that net lending by foreigners will be equal to the difference between desired domestic borrowing and desired domestic lending at a given interest rate.

The data on Table I indicate that increases in net borrowing by government have, in fact, been accomodated by all three of the responses described above. The response of the capital market to the increase in government net borrowing between 1974 and 1975 provides a clear illustration.

The changes in net borrowing or lending by the major capital market participants between 1974 and 1975 are summarized in Table II. The net borrowing of all levels of government and government enterprises taken as a group was $9.6 billion higher in 1975 than in 1974.

As was predicted above, other market participants responded by decreasing their net borrowing or by increasing their net lending. The net borrowing of non-financial private corporations fell by $3.6 billion. The net lending of households rose by $.8 billion and net lending by the rest of the world rose by $3.5 billion.

An increase in resources at the disposal of government was made possible, in this case, by: (a) a reduction in consumption and/or real capital formation by households and unincorporated business; (b) a reduction in real capital formation by non-financial corporations and; (c) a transfer of real resources from abroad.

A transfer of real resources from abroad can only be effected by reducing Canada's exports and increasing its imports. The additional real resources acquired by the government when it became a larger net borrower are drawn, in effect, from the contracting export and import competing sectors.

TABLE II

CHANGES IN NET LENDING AND BORROWING 1974-5

Sector	Change in Net Borrowing ($ Millions)
Federal and Provincial Governments	$7,132
Non-Financial Government Enterprises	2,442
Total Government	$9,574
Non-Financial Private Corporations	$-3,639
Rest of the World	-3,473
Households and Unincorporated Business	-833
Social Security	-219
Total Non-Government	$-8,164

SOURCE: Table I.

As is illustrated in Table I, the pattern of greater net borrowing by government, smaller net borrowing by non-financial private corporations and greater net lending by foreigners and households and unincorporated business which was established in 1975 continued through 1980.

The emergence of the government of Canada as a very large net borrower and the adjustments which other capital market participants were obliged to make in order to accomodate this must be regarded as the major event affecting the capital market during the last decade.

The relevance of this event to small business financing is, first, that, as is the case with all government programs, small business assistance cannot be justified simply because it is helpful to its recipients (if, in fact, it is helpful to its recipients). It must be judged against the best alternative use of the resources involved. Funds transferred by government to small business do not simply materialize out of thin air. They are drawn from the activities listed above in the manner described above. The question is not whether assistance to small business confers some benefit on its recipients (although this is an unresolved issue), it is whether the benefit conferred is at least equivalent to that which is foregone elsewhere.

Second, the $3.6 billion decline in net borrowing by private non-financial corporations between 1974 and 1975 is almost certain to have included a proportionate decline in the net borrowing of small (incorporated) business. The implication

is that one way for government to stimulate small business investment is to reduce its own net borrowing. It is not beyond the realm of possibility that the increase in net borrowing by the federal government reduced real capital formation by small business by more than all its tax concessions and subsidy programs have increased it.

II.4 Corporate Capital Formation and Its Financing

As was argued in the previous section one would expect a large increase in government net borrowing such as that which began in 1974-1975 to crowd out at least some capital formation in the corporate sector. The data reported in Table III indicate that this may in fact have occurred.

Corporate capital formation fell from an average of 48.4% of aggregate capital formation in the period 1970-74 to an average of 45.8% of aggregate capital formation during the period 1976-1980. The period of heavy federal net borrowing was thus coincident with a relative decline in corporate capital formation.

The proportion of corporate capital formation which was financed internally averaged 77% during the period 1970-1974 and 82.2% during the period 1976-1980. The period of heavy net borrowing by the federal government is thus also coincident with an increase in the reliance by the corporate sector on retentions to finance investment.

These two occurrances are consistent with a situation in which private corporations respond to an increase in government

TABLE III

CORPORATE CAPITAL FORMATION

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Corporate Gross Saving	7169	7615	8480	10731	12119	13207	16837	16972	18680	24196	26770
2. Corporate Gross Fixed Capital Formation	9077	10035	11249	13418	16213	17461	20082	21701	23852	27853	31806
3. Aggregate Gross Fixed Capital Formation	18015	20800	23051	27848	34260	40044	44895	48193	52214	59730	67553
(1)÷ (2)	0.79	0.76	0.75	0.80	0.75	0.76	0.84	0.78	0.78	0.87	0.84
(2)÷ (3)	0.50	0.48	0.49	0.48	0.47	0.44	0.45	0.45	0.46	0.47	0.46

Source: Statistics Canada 13-563, Tables 4-2 and Statistics Canada 13-002, Tables 2-2. Data are annual flows in millions of current dollars.

borrowing by reducing their own external financing, in part by substituting internal for external sources of funds and in part by reducing their planned level of investment.

Table IV indicates that reliance on bonds as a source of external finance declined markedly after 1976. This may have been due to any number of factors. Corporate borrowers may have postponed long-term borrowing (bond issues) on the assumption that interest rates were likely to fall in the future. This is not inconsistent with the pre-emption of the long-term bond market by government issues during this period.

Interestingly enough, the decline in the relative importance of bond finance did not result in an increase in the use of bank or other loans. Substitution appears to be in favour of trade credit and advances from related companies (equity).

II.5 Financial Asset Acquisition of Households and Unincorporated Business

This sector is the largest net lender in the economy. It engages in indirect lending through banks and other deposit taking institutions and through life insurance companies and pension funds. It engages in direct lending to non-financial corporations in the form of short-term paper, stock and bond purchases. It engages in direct lending to government in the form of treasury bill, savings bond and other government bond purchases. It engages in direct lending to itself in the form of mortgage purchases.

TABLE IV

SOURCE OF CORPORATE FINANCE

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Net Increase in Liabilities	4094	6834	5622	9095	16133	10822	10819	12832	23378	28068	30184
2. Trade Credit	288	1232	1660	2315	4857	2523	1177	1960	5701	6420	6561
3. Bank Loans	71	1386	1697	2624	3144	2440	2970	1332	3902	5304	6474
4. Other Loans	201	64	278	711	569	905	720	732	924	2041	1616
5. Short term Paper	60	320	-238	-177	1463	212	353	-409	477	994	11
6. Mortgages	499	530	336	320	500	332	757	493	1257	870	1788
7. Bonds	1369	1698	863	750	1457	2112	2132	1983	1563	474	2141
8. Other Liabilities	78	543	270	1261	2444	476	680	1883	3306	4679	3194
9. Equity	1528	1061	756	1291	1699	1822	1030	4408	6248	7286	8399
3÷1	.017	.203	.302	.289	.195	.225	.275	.108	.167	.189	.214
4÷1	.049	.009	.049	.078	.035	.084	.067	.059	.040	.073	.054
7÷1	.334	.248	.154	.082	.090	.195	.197	.160	.067	.017	.071

Source: Statistics Canada 13-563 and 13-002 4th Quarter, 1980. Data are annual flows in millions of current dollars.

As Table VI indicates, the largest fraction of lending by households and unincorporated business is indirect. Over the six year period 1975-1980, 54 per cent of the financial assets acquired by this sector took the form of deposits while a further 25 per cent were in the form of claims on insurance companies and pension funds.

Direct lending to non-financial corporations was negative during the 1975-80 period. Households and unincorporated business sold more short-term paper, more corporate bonds and more corporate stock than they bought over this period. In total sales of claims on non-financial corporations exceeded purchases by $5,766 million during this period.

Direct lending in the form of mortgages increased by $14,532 million over the 1975-80 period. Most mortgage borrowing is also done by the household and unincorporated business sector. Mortgage transactions are thus largely intrasectoral.

Taking mortgage lending to other housholds and unincorporated businesses and the net purchases of claims on non-financial corporations together, net direct lending to the private sector by households and unincorporated businesses between 1975 and 1980 totalled $8,766 million.

Direct lending to all levels of government increased by $15,312 million during the period 1975-80. Households and unincorporated businesses were net buyers of all the claims, treasury bills, Canada Savings Bonds and other bonds, issued by government. Direct lending to government accounted for between

TABLE V -

FINANCIAL ASSET ACQUISITION BY HOUSEHOLDS AND UNINCORPORATED BUSINESS 1970-79
($ Millions)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Net Saving	2964	3574	4966	7243	9906	12025	12593	13571	16066	18461	20645
Net Lending or Borrowing	3089	2712	3922	5152	7836	9219	7736	9046	11721	13192	15753
Net Increase on Financial Assets	7206	8647	9956	17462	20187	24115	27631	27997	35347	42111	43698
Currency and Bank Deposits	2382	3986	3567	6843	6483	8232	7918	7385	8280	18423	10705
Bank Deposits		3698	3171	6436	6056	7608	7562	6885	7699	18106	10147
Deposits in Other Institutions	1525	2346	2847	4481	4008	5591	6344	8488	8814	9695	11350
Life Insurance and Pensions	1807	2267	2896	3665	4133	5089	6607	7651	9064	11713	12651
Treasury Bills	110	-81	2	-72	80	79	285	519	871	811	1429
Finance and Other Short-term Paper	-950	115	-321	605	872	-378	43	-947	1131	-551	770
Mortgages	926	141	531	1017	1109	1416	2438	-371	3787	3631	3631
Canada Savings Bonds)	449	1980	-385	-374	2445	2604	727	1709	2043	-1573	-728
Other Government Bonds)			1858	-42	384	371	595	582	1254	3428	1735
Other Canadian Bonds	378	490	253	666	920	62	-1052	-595	-1378	-344	-242
Stocks	-636	-1525	-1806	-1269	#1407	37	-465	-667	-549	-728	87

SOURCE: Statistics Canada 13-563, Financial Flow Accounts 1961-79, 13-003 Financial Flow Accounts Fourth Quarter, 1980.

TABLE VI

DISPOSITION OF NEW FINANCIAL ASSETS:
HOUSEHOLDS AND UNINCORPORATED BUSINESS

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	Av. 75-80
Deposits/Net Increase in Financial Assets		.70	.60	.63	.50	.55	.50	.55	.47	.66	.49	.54
Life Insurance and Pensions/Net Increase in Financial Assets	.25	.26	.29	.21	.20	.21	.24	.27	.26	.28	.29	.26
Intermediaries/ Net Increase in Financial Assets		.96	.89	.84	.70	.76	.74	.82	.73	.94	.78	.80
Direct Lending to Government/Net Increase in Financial Assets	.08	.22	.15	0	.14	.13	.06	.10	.12	.06	.06	
Direct Lending to Government/Total Direct Lending	2.02	1.70	11.17	0	0.66	0.73	0.63	12.22	0.58	0.57	0.34	
Direct Lending/ Net Increase in Financial Assets	.04	.13	.01	.03	.21	.18	.10	.01	.21	.11	.15	.13

SOURCE: Table III.

60 and 1200 per cent of all direct lending and 9 per cent of all financial asset acquisition by households and unincorporated business during this period.

The proportions in which households and unincorporated businesses have chosen to acquire the alternative financial assets vary markedly from year to year. This variation is sufficient to obscure any trend in the fraction of new assets held in the form of deposits or in pensions or insurance or as direct claims on deficit units.

This same variability in the relative amounts of each financial instrument acquired might be taken to indicate that these instruments are regarded as close substitutes by the Household and Unincorporated Business sector. Thus Treasury Bills and Finance and Other Short-term Paper appear to be substitutes as do Canada Savings Bonds and deposits. The net sale of Canada Savings Bonds and correspondingly large increase in bank deposits in 1979 illustrates the substitutability of the latter two instruments.

In sum, the evidence of the last decade is that the liabilities of government are readily substituted in the asset portfolio of the household and unincorporated business sector for the liabilities of both the corporate sector and the household and unincorporated business sector itself. The most striking evidence of this type of substitution has been the net sale of direct claims on the corporate sector by the household and unincorporated business sector during the period 1975-80.

III. FINANCIAL INTERMEDIATION

III.1 Intermediary Asset Growth

The annual changes in the financial asset holdings of the major classes of financial intermediaries in Canada for the years 1970-80 are reported in Table VII. The respective shares of each class of intermediaries in the aggregate flow of financial asset acquisitions by all intermediaries are reported in Table VIII.

Deposit taking institutions (banks and near banks) accounted for an average of 70 per cent of the growth in the value of financial assets held by all private financial institutions during the period 1970-80. As Table VIII indicates, this share does not appear to be either increasing or decreasing.

Among deposit-taking institutions, chartered banks accounted for an average of 68 per cent of the increase in financial asset holdings over the period 1970-80. Again, this fraction exhibits no trend.

Credit Unions accounted for between 7 and 17 per cent of the growth in financial asset holdings of deposit-taking intermediaries while trust companies accounted for an average of 13 per cent of this growth. There was no discernible trend in either case.

Insurance companies and pension funds together accounted for an average of 19 per cent of the growth in the financial asset holdings of all private intermediaries. While it varied between 16 and 23 per cent, this proportion displayed no trend.

TABLE VII

INTERMEDIARY ASSET GROWTH

($Millions/Year)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Banks and Near Banks	6010	7796	10249	17083	16659	14421	23408	24095	35376	38153	44196
Chartered Banks	4283	5459	6966	12241	12278	8542	15726	14743	25238	27090	31093
Quebec Savings Banks	31	64	63	102	68	86	153	141	174	220	116
Credit Unions	448	986	1492	1752	1520	2490	2935	4177	4191	3441	3711
Trust Companies	808	906	1071	1884	1849	2099	3032	3435	4517	5279	5473
Mortgage Loan Companies	440	381	657	1104	944	1204	1562	1599	1256	2123	3753
Life Insurance Companies	699	754	1246	1688	1942	2186	2682	3206	2950	3428	3623
Trusteed Pension Plans	1060	1403	1590	1970	2140	2842	3820	4304	5347	7173	7631
Other Private Financial Institutions	680	880	1500	2098	3820	2670	4459	4343	5984	6715	6573
Investment dealers	513	555	631	-297	468	212	1033	-167	990	250	217
Mutual Funds	-74	-128	-252	-139	-115	5	-128	224	374	176	164
Fire & Casualty Insurance Companies	323	271	337	400	482	765	1118	1414	898	697	560
Mortgage Investment Trust Corporations	-	-	119	454	256	220	209	327	182	97	165
Sales Finance and Consumer Loan	-169	90	699	1244	1371	817	707	795	940	1184	185
Other (NEI)	87	92	-34	436	1358	651	1520	1750	2600	4019	4979

SOURCE: Financial Flow Accounts, 13-563 and 13-002 4th Quarter, 1980.

TABLE VIII

INTERMEDIARY ASSET GROWTH

(Annual Shares)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Banks and Near Banks	6010	7796	10249	17083	16659	14421	23408	24095	35376	38153	44146
1/(1+2+3)	.71	.72	.70	.75	.67	.65	.68	.67	.71	.69	.71
1.1 Chartered Banks	4283	5459	6966	12241	12278	8542	15726	14732	25238	27090	31093
1.1/1	.71	.70	.68	.72	.74	.59	.67	.61	.71	.71	.70
2. Insurance and Pension	1759	2157	2836	3658	4082	5028	6502	7510	8297	10601	11254
2/(1+2+3)	.21	.20	.19	.16	.17	.23	.19	.21	.17	.19	.18
2.1 Trusteed Pension Plans	1060	1403	1590	1970	2140	2842	3820	4304	5347	7173	7631
2.1/2	.60	.65	.56	.54	.52	.57	.59	.57	.64	.68	.68
3. Other Private Financial Institutions	680	880	1500	2098	3820	2670	4459	4343	5984	6715	6573
3/(1+2+3)	.08	.08	.10	.09	.16	.12	.13	.12	.12	.12	.11
3.1 Other (Identified) Private Financial Institutions	593	788	1534	1662	2462	2019	2939	2593	3384	2696	1594
3.1/(1+2+3)	.08	.07	.11	.07	.10	.09	.09	.07	.07	.05	.03
4. Public Financial Institutions	1133	1396	1495	1830	2357	2713	2896	2711	3096	3025	3962
4/(1+2+3+4)	.12	.11	.09	.07	.09	.11	.08	.07	.06	.05	.06

SOURCE: Table VII.

Disaggregating, one finds that after 1974, (Life) Insurance Companies accounted for a steadily declining and Trusteed Pension Funds for a steadily increasing share of the financial asset acquisitions of this group. Between 1974 and 1980, the Pension Fund share of group asset growth rose from 52 to 68 per cent while its share of aggregate intermediary asset growth rose from 8.8 to 12.2 per cent.

Other Private Financial Institutions accounted for an average of 11 per cent of the growth in financial assets held by private intermediaries. Of the subclasses of institutions which are identified in the Financial Flow Accounts, one, Mutual Funds, was a net seller of financial assets over the period 1970-80. Two others, Investment Dealers and Sales Finance and Consumer Loan Companies were net sellers of financial assets in one or more years during the decade.

Focusing on the last half of the decade, Fire and Casualty Insurance Companies, Mortgage Investment Trust Corporations and Sales Finance and Consumer Loan Companies have all been net buyers of financial assets every year since 1974. Taken either individually or as a group, however, these classes of intermediaries have accounted for a steadily declining fraction of the private intermediary financial asset acquisitions.

The remainder of the "Other Private Financial Institutions" class consists of intermediaries not identified elsewhere. This subclass includes holding companies (closed end

funds), finance leasing companies, venture capital companies and business finance companies (Canadian affiliates of foreign banks).

Taken together, the groups of intermediaries in this residual category have accounted for a steadily increasing share of the growth in intermediary financial asset holdings moving from 1 per cent in 1970 to 8 per cent in 1980. Much of this increase is said to be due to the expansion of the Canadian affiliates of foreign owned banks during the last half of the decade.

When the financial asset acquisitions of government and private intermediaries are combined, one finds that intermediaries owned by the federal and provincial governments accounted for an average of 8.3 per cent of all intermediary financial asset acquisitions between 1970 and 1980. This share reached a maximum of 12 per cent in 1970 and has declined steadily since 1975.

To summarize, since 1970 the proportion of private intermediary financial asset acquisitions accounted for by deposit-taking intermediaries has remained unchanged. During the last half of the decade the respective proportions accounted for by life insurance companies and investment dealers, mutual funds, fire and casualty insurance companies, mortgage investment trust corporations and sales finance and consumer loan companies have decreased. The respective shares of pension funds and a group including closed end funds, finance leasing companies, venture capital companies and Canadian affiliates of

foreign banks have increased. The acquisition of financial assets by government owned intermediaries has declined relative to that of private intermediaries as a group.

III.2 Implications of Changing Relative Importance of Various Financial Intermediaries

If financial intermediaries were unregulated but nevertheless specialized in offering and holding certain types of financial assets, a decline in the importance of a given class of financial intermediaries would imply either that surplus units have reduced their demand for its liabilities or that deficit units have reduced the supply of the types of claims it holds as assets or both.

The normal response of the affected intermediaries would be to alter the nature of the claims they offer to surplus units or to acquire different types of claims on deficit units or both. Failing this, there would be a decline in the relative importance of this type of intermediation.

Thus, facing a decline in the supply of mortgages, trust companies, mortgage loan companies, and mortgage investment trust companies would be obliged either to hold other assets or to reduce their intermediating activity. Facing a decline in the demand for pensions or life insurance, pension funds or life insurance companies would be obliged to offer other liabilities to surplus units (households) or to reduce their intermediating activity.

Changes in the relative importance of various types of intermediation are of little relevance to public policy unless the affected intermediaries are prevented by regulation from altering the nature of their liabilities or the nature of the assets they hold or, more generally, appropriately matching alternative sets of assets and liabilities. The regulatory question is simply what, if anything, is to be gained from measures which prevent alterations in the nature of intermediating activity in response to changes in the distribution and preferences of surplus and deficit units in the economy.

Changes in the relative importance of alternative types of intermediation are of importance to small business only under a restricted set of circumstances. Suppose, for example, that a certain class of intermediary specializes in lending to small business and raises the required funds by issuing specialized liabilities. If the demand for these liabilities happened to decline and this was not part of a general decline in the demand for financial assets, this class of intermediary would be obliged either to alter the nature of its liabilities so as to make them more attractive to surplus units or to curtail its lending. A government wishing to assist small business would ensure that, to the extent that alternative liabilities can be developed, this process is not impeded by regulation.

The evidence on intermediary asset growth reported in

Section III-1 indicates that there is no threat of this nature to the supply of funds to small business. As will be demonstrated subsequently, the intermediaries upon which small business relies most heavily for financing are the banks, near banks and a subset of the "Other Private Financial Institutions". As a group, banks and near banks are maintaining their share of new financial asset acquisitions. Of the other private financial institutions relevant to small business financing, finance leasing companies, venture capital companies and business finance corporations are part of a group (also including holding companies) which is increasing in relative importance. Only sales finance and consumer loan companies have decreased in relative importance.

A second policy issue involves government not as a regulator but as a capital market participant. Government liabilities such as Canada Savings Bonds are close substitutes for the liabilities of private intermediaries (Economic Council of Canada, 1976, p. 32). To the extent that an increase in the supply of government liabilities bids funds away from a particular set of intermediaries it may curtail certain specialized lending activities. By reducing the demand for bank deposits, for example, the large issues of Canada Savings Bonds of the mid-1970's may have reduced bank lending to small business (in relative terms).

Similarly, to the extent that compulsory CPP and QPP contributions would otherwise have been used by households to

acquire deposits, the introduction of the CPP and QPP may, in the short-run at least, have reduced small business lending by deposit-taking intermediaries.

III.3 The Chartered Banks

III.3.1 Share in Intermediating Activity

The discussion above concluded that during the period 1970-1980 there was no discernible trend in the share of household financial assets supplied by financial intermediaries in general and deposit taking intermediaries in particular.

Table VIII indicates that the chartered banks maintained their position among deposit taking intermediaries. In 1980 the chartered banks accounted for 70 per cent of the asset growth of all deposit-taking intermediaries and approximately 50 per cent of the asset growth of all private intermediaries as compared with averages of 69 per cent and 48 per cent respectively for the 1970-1980 period.

In sum, during the period 1970-1980, the chartered banks maintained their share of both total lending and borrowing activity and intermediating activity.

III.3.2 Trends in the Composition of Chartered Bank Assets

Table IX indicates, first, that during the period 1970-1980, the foreign currency assets of the chartered banks grew at a faster rate than their domestic currency assets. This increase in the relative size of the banks' foreign currency

TABLE IX

CHARTERED BANK ASSETS OUTSTANDING ($Millions) AT YEAR END

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	g (1970 -1980)
1. Total Assets	47307	54428	63222	79754	97015	108378	126403	150477	189100	229151	281244	17.8%
2. Canadian Dollar Assets	33616	39958	46650	56455	68481	77169	88790	102819	122128	147285	171296	16.3
(2)÷(1)	0.71	0.73	0.74	0.71	0.71	0.71	0.70	0.68	0.65	0.64	0.61	
3. General Loans	15726	19327	23435	29396	35002	40437	49151	55332	62413	77904	93291	17.8
(3)÷(2)	0.47	0.48	0.50	0.52	0.51	0.52	0.55	0.54	0.51	0.53	0.54	
4. Corporate Securities	843	1269	1577	1460	2024	2155	2877	4180	7863	7577	6944	21.1
(4)÷(2)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.06	0.05	0.04	
5. Mortgages	1457	2308	3394	4564	6023	7700	9083	11746	15162	18060	18499	25.4
(5)÷(2)	0.04	0.06	0.07	0.08	0.09	0.10	0.10	0.11	0.12	0.12	0.11	
6. Government of Canada Bonds	3909	4630	4161	3809	4358	4297	4444	4652	4358	3445	2471	-4.6
(6)÷(2)	0.12	0.12	0.09	0.07	0.06	0.06	0.05	0.05	0.04	0.02	0.01	
7. Acceptances, Guarantees and Letters of Credit	1484	1763	1945	2527	4288	4646	5076	6019	8544	13073	22273	27.1
(7)÷(2)	0.04	0.04	0.04	0.04	0.06	0.06	0.06	0.06	0.07	0.09	0.13	
8. Business Loans	8900	11068	13461	17135	20568	23228	28218	31323	34441	44866	55385	18.3
(8)÷(3)	0.57	0.57	0.57	0.58	0.59	0.57	0.57	0.57	0.55	0.58	0.59	

SOURCE: Bank of Canada, Tables 7 and 10.

business is the continuation of a trend which, according to Neufeld (1972, pp. 131-132), began in the previous decade.

Second, the composition of the domestic assets of the chartered banks changed markedly during the period 1970-1980. Acceptances, mortgages and corporate securities each accounted for a larger share of domestic assets in 1970 than in 1980. There was also some modest growth in the share of bank assets devoted to business loans. On the other hand there was a large decrease (11 percentage points) in the proportion of domestic assets held in the form of government bonds. As of the end of 1980 slightly more than 1 per cent of the Canadian dollar assets of the chartered banks were held in the form of government bonds. This is the culmination of a movement of bank assets away from government lending toward personal and ultimately business and mortgage lending. The magnitude of the shift involved is illustrated by the fact that in 1950 38 percent of chartered bank assets were held in the form of government bonds (Royal Commission on Banking and Finance, 1964, p. 123).

The increase in mortgage lending by the chartered banks is clearly a response to the elimination of the prohibition of mortgage lending which was phased in beginning in 1968. Note that the increase in mortgage holdings mirrors the decline in government bond holdings.

The increase in the proportion of assets held in the form of acceptances and the like took place largely during 1979 and 1980. Some observers see this recent growth in the use of

acceptances as a response by corporate borrowers to recent differences in the interest rates prevailing on commercial paper and on business loans.

The increase in the proportion of domestic assets held in the form of corporate securities took place in 1977 and 1978. In 1979 and 1980 bank holdings of corporate securities actually fell in nominal terms. Taken together with the increased use of acceptances this implies a move by corporate borrowers toward the short end of the market in 1979 and 1980.

Business lending grew at an annual rate of 18.3 per cent (in nominal terms) during the period 1970-1980. This was 2 percentage points faster than the growth in Canadian dollar assets. As a consequence the share of Canadian dollar assets held in the form of business loans increased from 27 per cent in 1970 to 32 per cent in 1980. As the Economic Council of Canada (1976, pp. 28-29) pointed out, this is a continuation of a trend toward increased business lending which began as early as 1961.

III.3.3 Chartered Bank Business Lending

As Table XI indicates, chartered bank business lending grew slightly faster than general bank lending activity over the period 1970-1980. The proportion of business loans directed to construction and merchandising remained more or less the same over this period while there was a decrease in lending to

manufacturers and a corresponding increase in lending to "other" types of business (see Table X).

The analysis of the change in the size distribution of business loans is complicated by the fact that loan size classes are fixed in nominal terms. Thus, as the price level rises, a loan which would remain under $200,000 in constant (1970) dollars will grow larger in current dollars and, as a consequence, move into a larger loan size class. As a result the real growth of loans in the smallest size class will be understated while the real growth of loans outstanding in the largest size class will be overstated. Intermediate size classes will gain loans which move up from the smaller loan size classes and lose loans to the larger loan size classes. For this reason their real growth may be over or understated by conventional measures.

An attempt has been made to adjust the data reported in the Bank of Canada Review to eliminate the effect of the upward drift of nominal loan sizes on the size distribution of constant dollar business lending activity. The methodology employed is described in the Appendix. The results of the adjustment are reported in Table X.

Three growth rates are reported in Table XI. The first is simply the nominal (compound) rate of growth over the periods 1970-1980 and 1974-1980 respectively. The reason for reporting 1974-1980 growth rates will be explained in the next section of this paper.

The second growth rate is the unadjusted real growth rate.

TABLE X

CHARTERED BANK BUSINESS LOANS OUTSTANDING (Millions of $ At Year End)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Total Business Loans	8900	11068	13461	17135	20568	23228	28218	31323	34441	44866	55385
2. Manufacturing	3812	4402	5264	6523	7707	8533	9791	10240	10812	14485	19560
(2)÷(1)	0.43	0.40	0.39	0.38	0.37	0.37	0.35	0.33	0.31	0.32	0.35
3. Construction	591	720	843	1018	1354	1513	2066	2412	2716	3151	3494
(3)÷(1)	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.07	0.06
4. Merchandising	1542	1679	2041	2730	3364	3608	4694	5236	5822	7707	8597
(4)÷(1)	0.17	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.16
5. Business Loans under authorized limits above $5 million	2710	3858	4752	6523	7826	9096	10642	11125	11561	17665	24854
(5)÷(1)	0.30	0.35	0.35	0.38	0.38	0.39	0.37	0.36	0.33	0.39	0.45
6. Business Loans under authorized limits between $1 million and $5 million	2019	2374	2990	3803	4605	5084	6003	6722	7716	10026	11175
(6)÷(1)	0.23	0.21	0.22	0.22	0.22	0.22	0.21	0.21	0.22	0.22	0.20
7. Business Loans under authorized limits of less than $1 million	4170	4836	5719	6810	8137	9048	11573	13477	15163	17175	19357
(7)÷(1)	0.47	0.44	0.42	0.40	0.40	0.39	0.41	0.43	0.44	0.38	0.35
8. Business Loans under authorized limits between $200 thousand and $1 million	-	-	-	3103	3758	4112	5320	6235	7107	8272	9057
(8)÷(1)				0.18	0.18	0.18	0.19	0.20	0.21	0.18	0.16
9. Business Loans under authorized limits less than $200 thousand	-	-	-	3707	4379	4936	6253	7243	8056	8904	10299
(9)÷(1)				0.22	0.21	0.21	0.22	0.23	0.23	0.20	0.19

Source: Bank of Canada Review, Tables 10 and 11.

TABLE XI

GROWTH RATES IN CHARTERED BANK ASSETS, GENERAL LENDING AND BUSINESS LENDING

Asset Type	Nominal Growth	Real Growth	Adjusted Real Growth
Canadian Dollar Assets			
1970-1980	16.3	8.0	8.0
1974-1980	15.3	6.2	6.2
General Loans			
1970-1980	17.8	9.5	9.5
1974-1980	16.3	7.2	7.2
Total Business Loans			
1970-1980	18.3	10.0	10.0
1974-1980	16.5	7.4	7.4
Business Loans Under Authorized Limits Greater than $5 Million			
1970-1980	22.2	13.9	13.2
1974-1980	19.3	10.2	8.9
Business Loans Under Authorized Limits Between $1 and $5 Million			
1970-1980	17.1	8.8	4.4
1974-1980	14.8	5.7	6.3
Business Loans Under Authorized Limits Less than $1 Million			
1970-1980	15.3	7.0	9.5
1974-1980	14.4	5.3	9.7
Business Loans Under Authorized Limits Between $200 Thousand and $1 Million			
1974-1980	14.7	5.6	5.1
Business Loans Under Authorized Limits Less than $200,000			
1974-1980	14.3	5.2	7.9

Source: Table X.

This is simply the nominal growth rate less the (geometric) average annual rate of change in the GNE deflator.

The third growth rate eliminates the effect of changes in nominal loan sizes on the constant dollar size distribution. The growth rates reported in the third column can be regarded as the growth in the business loans outstanding in any size class that would have been observed had there been no inflation.

An examination of these adjusted real growth rates indicates that, between 1970 and 1980: (a) the geometric average) annual growth in business loans outstanding under authorized limits greater than 5 million 1970 dollars was 13.2%; (b) the annual rate of growth in business loans outstanding under authorized limits between 1 and 5 million 1970 dollars was 4.4%; and (c) the average annual rate of growth in business loans outstanding under authorized limits of less than 1 million 1970 dollars was 9.5%.

During the same period the average annual real growth in the domestic assets of the chartered banks was 8%. Thus business loans outstanding in both the largest and the smallest size class grew significantly faster than Canadian dollar assets as a whole. The implication is that, over the decade, the chartered banks allocated an increasing proportion of their assets both to business loans under authorized limits in excess of 5 million 1970 dollars and to business loans under authorized limits below 1 million 1970 dollars.

Given that business loans outstanding under authorizations between 1 and 5 million 1970 dollars grew at an annual rate of 4.4%, they represented a smaller fraction of chartered bank Canadian dollar assets at the end of the decade than at the beginning.

The Bank of Canada Review also reports business loans outstanding under authorizations of less than $200,000 beginning in 1973. Nominal real and adjusted real growth rates have been calculated for this loan size class in addition to the others for the period 1974-80. These calculations reveal a very strong movement toward business loans under authorizations of less than 200 thousand 1974 dollars during the period 1974-1980. This group grew at an adjusted annual rate of 7.9%, more than 2.5 percentage points faster than the annual growth rate of Canadian dollar assets over the same period.

Table XI also reveals that over the 1974-1980 period the proportion of Canadian dollar assets represented by loans under authorizations in excess of 5 million 1974 dollars rose slightly while the proportion of assets held in the form of business loans under authorizations between $1 million and $5 million 1974 dollars remained constant.

The inescapable conclusion of this analysis is that the chartered banks have altered their asset portfolios in favour of small loans to business (and probably loans to small business) and that this alteration was especially pronounced during the last half of the decade.

IV. BUSINESS TERM LENDING

IV.1 Background Issues

In its analysis of the adequacy of the financial arrangements available to small business the Royal Commission on Banking and Finance concluded that while there was no serious gap in the financial system as it related to small businesses, the latter had not been able to obtain term financing on any significant scale from the chartered banks.

> Medium and long-term lending by the chartered banks has thus fallen short of the needs of smaller businesses, and many other private and public sources of credit have consequently grown up to meet them (1964, p. 223).

The Royal Commission gave several reasons for the limited participation by the chartered banks in business term lending. First, the chartered banks indicated that short-term self-liquidating loans were more appropriate to the demand nature of their liabilities. Second, the 6 per cent ceiling on their loan rates had prevented the chartered banks from charging an interest rate commensurate with the risk they associated with term financing. Third, the prohibition on mortgage lending by chartered banks prevented them from taking "the most appropriate collateral for term loans, particularly loans to smaller borrowers lacking other acceptable security" (1964, p. 124).

The Royal Commission concluded that

> it (is) desirable from the point of view of the banks as well as of the smaller businesses which might benefit that the banks continue to lend more freely on an explicit term basis (1964, p. 125).

In order to facilitate an increase in business term lending the Royal Commission recommended that the 6 per cent interest ceiling and the prohibition of mortgage lending by the banks be eliminated.

The Royal Commission did note that other institutions did exist to provide the term loans the banks might have supplied in the absence of interest rate and mortgage security restrictions. The Royal Commission cited: (i) the sales finance companies which, in its view had "become a very important source of funds for smaller businesses" (p. 224); (ii) Roynat which had been formed in 1962 to provide term financing to small and medium-sized businesses (p. 225); and (iii) the Industrial Development Bank, a federal agency which had been engaged in term lending to manufacturing firms since 1944 and to virtually any business "unable to obtain funds on reasonable terms and conditions elsewhere" since 1961 (pp. 226-7).

The recommendations of the Royal Commission regarding the interest rate ceiling and mortgage lending were incorporated in the 1967 revisions to the Bank Act. As of 1968 the 6 per cent ceiling on chartered bank lending rates was removed as was the general prohibition of mortgage lending. The chartered banks continued to be limited as to the extent of their residential mortgage lending.

The sections which follow examine the extent to which the chartered banks took advantage of the removal of these restrictions to increase their business term lending in general and

small business term lending in particular. After this, the consequences of chartered bank expansion and of the entry of foreign banks for existing term lenders will be examined.

IV.2 Trends in Business Term Lending by the Chartered Banks

The term lending activity of the chartered banks over the period 1974-1980 is summarized in Table XII. These data were obtained from the Bank of Canada and are available only for the period beginning in 1974.

The growth rate in business term lending between 1974 and 1980 averaged 10.1% in real terms per year. This is well in excess of the growth rate in business lending as a whole (7.4%) over the same period. The implication is that some of the growth in term lending was due to the conversion by the banks of operating loans to term loans. It is important to note, however, that even if there has been no change in the proportion of business lending which was term in nature, the proportion of chartered bank Canadian dollar assets devoted to this purpose would have increased over this period.

Proper analysis of the change in the size distribution of business term lending over this period requires that loans be assigned to size classes on the basis of their constant (1974) dollar authorization rather than their current dollar authorization. The method of doing this is the same as was used in the case of business lending as a whole and is described in the Appendix. The resulting adjusted real growth rates in

TABLE XII

CHARTERED BANK BUSINESS TERM LENDING
(Average Outstanding in $Millions)

	1974	1975	1976	1977	1978	1979	1980
Total	5363	6424	7961	9640	11123	14013	17427
Under Authorizations Greater than $5 Million	2565	3070	3736	4278	4447	5815	7947
Under Authorizations Between $1 Million and $5 Million	1160	1345	1627	1855	2074	2415	2798
Under Authorizations Between $200,000 and $1 Million	789	942	1266	1685	2259	2857	3244
Under Authorizations of Less than $200,000	849	1067	1332	1822	2343	2926	3438
Under Authorizations of Less Than $200,000 under SBLA	108	139	186	224	278	383	554
Under Authorizations of Less Than $200,000 not Under SBLA	741	928	1146	1598	2065	2543	2884

Source: Bank of Canada, Special Correspondence

business term lending along with the usual nominal and real growth rates are reported in Table XIII.

Examination of Table XIII reveals that, while all size classes of business term lending grew faster than the Canadian dollar assets of the chartered banks, the difference is greatest in the cases of the two smallest loan size classes. Business term loans outstanding under authorizations of less than 200 thousand 1974 dollars grew at an annual rate of 15.9% nearly three times the growth rate of the banks' Canadian dollar assets. Business term loans outstanding under authorizations between 200 thousand and 1 million 1974 dollars grew at an annual rate of 14.4% more than twice the growth rate of Canadian dollar assets as a whole.

The clear implication of these results is that there was a major movement by the chartered banks into the smaller end of the term loan market during the period 1974-1980.

It might be argued that this growth in small loans outstanding would not have occurred had it not been for the incentive provided by the Small Business Loans Act guarantee program. Under SBLA the government provides default insurance at no cost to either the bank or the borrower. As a consequence the interest rate charged on an SBLA loan will be lower by the amount of the bank's normal default premium than the interest rate on an unguaranteed term loan. In order to be eligible for an SBLA guarantee a loan must be for less than $100,000 ($75,000 until 1979) and the borrower must have annual sales of less than $1.5 million.

TABLE XIII

GROWTH RATES IN CHARTERED BANK
TERM LENDING TO BUSINESS
1974-1980

	Nominal	Real	Adjusted Real
All Term Lending	19.6	10.1	10.1
Term Loans under Authorizations over $5 Million	18.8	9.7	8.8
Term Loans under Authorizations Between $1 Million and $5 Million	14.7	5.6	6.5
Term Loans under Authorizations Between $200,000 and $1 Million	23.6	14.5	14.4
Term Loans under Authorizations Less than $200,000	23.3	14.2	15.9
Term Loans under Authorizations Less than $200,000 under SBLA	27.3	18.2	-
Term Loans under Authorizations Less than $200,000 not under SBLA	22.6	13.5	-

Source: Table XII

Clearly, SBLA lending has grown faster than any other loan size category (see Table XIII). This is true even in the absence of a correction for inflation-induced movements to larger loan size classes. It is not the case, however, that the SBLA guarantee is responsible for all the growth at the lower end of the term loan market. Term lending under authorizations of less than $200,000 (in current dollars) and not covered by an SBLA guarantee grew at a real annual rate of 13.5% more than twice the rate of growth of bank assets as a whole. Term lending in the next segment of the market (authorizations between $200,000 and $1 million) which is also not eligible for SBLA support grew at a similar rate. The SBLA program is clearly not a sufficient explanation of the movement by the banks towards the lower end of the term loan market.

It might still be argued that the SBLA program is responsible for the growth of chartered bank term lending under authorizations of less than $100,000. These data do not allow us to comment on this proposition. Since the Act requires lenders to follow "normal banking practice", however, it appears that the bulk of SBLA loans would have been made in any case.

IV.3 Conclusions: The Chartered Banks and Term Loans to Small Business

The Royal Commission on Banking and Finance concluded in 1964 that if there was a gap in the financial system as it related to small business it was in the absence of the chartered banks as

a significant source of term financing. After the amendments to the Bank Act in 1967 the chartered banks began to increase their business term lending activity at the upper end of the term loan market (Neufeld, 1972, pp. 129-130).

The data presented above indicate that in the latter half of the seventies the chartered banks significantly increased the proportion of their assets held in the form of term loans to smaller business borrowers.

This development provides an important object lesson for those studying "gaps" in financial or other markets. When there are allegations that market participants are unable to obtain a needed good or service, it is wise to look first as did the Royal Commission on Banking and Finance, to legislative restrictions on market participants as a source of the problem and to their elimination as a remedy.

IV.4 Foreign Bank Affiliates

IV.4.1 Introduction

It is estimated by the office of the Inspector General of Banks that there are currently between 75 and 100 companies which are affiliated with foreign banks and which are conducting either an agency or a lending business in Canada. There are 38 companies owned by 35 foreign banks which are serving as financial intermediaries and whose activities are summarized in Table 47 of the Bank of Canada Review.

It is anticipated that 30 of these foreign banks will seek

bank status for their Canadian subsidiaries under the provisions of the 1980 revision of the Bank Act. A further 30 foreign banks currently represented but not now engaging in intermediation in Canada are also expected to form Canadian banking subsidiaries and to seek bank status.

As of February 1982, 47 foreign banks had been granted letters patent (charters) and a further 10 applications were expected to be approved by the end of March 1982.

By the end of 1982, then, there will be some 60 foreign banks either engaged or about to engage in financial intermediation in Canada. Although they have constituted and will continue to constitute only a small part of the banking system (no more than 8% of the domestic assets of the Canadian chartered banks), foreign banks have had and will continue to have a disproportionate impact on business lending in Canada.

IV.4.2 Foreign Bank Affiliates 1974-1980

Foreign bank affiliates have, in the past, been heavily oriented towards business lending. As of December 1980, 6.4% of their assets were in leasing receivables, 6.7% in real estate and construction loans, 59.5% in other business loans and the balance in short-term paper and loans to affiliates (Bank of Canada Review, May 1981, Table 47). This is considerably greater than the 32% of Canadian chartered bank assets devoted to business lending.

The "other business loans" of the foreign bank affiliates

have been more or less equally divided between operating and term loans. As of December 1980, something in excess of 36% of the Canadian dollar assets of foreign bank affiliates were devoted to business term loans as compared with 8% for the chartered banks.

During the period 1974-1980 foreign bank affiliates experienced considerable success in expanding their share of both intermediating activity in general and business lending in particular. The Canadian dollar assets of foreign bank affiliates grew at an annual rate of 25.2% in nominal terms and 16.1% in real terms over the period 1974-1980. This is almost three times the rate of growth of chartered bank Canadian dollar assets.

Foreign bank affiliates business loans outstanding also grew at an annual rate of 25.2% (16.1% real) over the period 1974-1980. This is more than twice the growth rate in chartered bank business loans.

Finally, business term lending by foreign bank affiliates grew at an annual rate of 36.5% (27.4%) real during the period 1974-1980. This is almost three times the growth rate of chartered bank business term lending.

Foreign banks obviously became much more important participants in the business lending field during the latter half of the seventies. It is generally believed that this expansion was largely confined to the larger loan size classes. Given the wholesale (non-branch) nature of their operations, the

foreign bank affiliates were not in a position to deal with small business borrowers.

This should not be taken to imply that the expansion of the foreign bank affiliates had no effect on the small business borrower. On the contrary, the entry of the foreign banks into the market for larger business loans may well have been one of the forces which pushed the chartered banks into the smaller end of the business loan market.

There is little or no published information on the size distribution of the business loans of the foreign bank affiliates. Some observers have suggested that the loan size distribution of the Mercantile Bank of Canada be taken to indicate the size distribution of the loans of foreign bank affiliates. The Mercantile Bank is not a foreign owned bank but it has specialized in business lending and it has conducted a largely wholesale banking operation.

The Mercantile Bank has reported the size distribution of its loans since 1975. The percentages of its loans outstanding under authorizations of less than $5 million was: 53% in 1975, 40% in 1976, 37% in 1977, 36% in 1978, 34% in 1979 and 29% in 1980 (Annual Report 1980, p. 13, 1979, p. 12).

Given the inflation that has occurred between 1975 and 1980, the fraction of loans of less than $5 million will fall even if the distribution of constant dollar loan sizes remains unchanged. A calculation of the type described in the Appendix reveals, however, that after correction for the effect of

inflation on average loan sizes, the growth rate of loans outstanding under authorizations in excess of 5 million 1975 dollars was almost three times the growth rate in loans outstanding under authorizations of less than 5 million 1975 dollars.

To the extent that the lending activity of the Mercantile Bank can be taken to approximate that of the foreign bank affiliates, it can be concluded, first, that as of December 1980, approximately 30% of the value of foreign bank business loans outstanding was under authorizations of less than 5 million 1980 dollars. This compares with 55% for the chartered banks.

Second, although the evidence is painfully limited, when the effect of inflation is removed, the value of business loans outstanding under authorizations in excess of $5 million is increasing relative to the value of loans outstanding under authorizations of less than $5 million. As was reported in Section IV.2, the reverse is true of the chartered banks.

In the simplest terms, then, the foreign bank affiliates have been oriented towards the upper end of the business loan market and, if the record of the Mercantile Bank is any indication, tended to move even further in that direction during the period 1974-1980. The chartered banks, in contrast have been oriented more towards the lower end of the business loan market and further increased their emphasis on smaller loans during the period 1974-1980.

The fact that foreign bank affiliates may have reduced the proportion of smaller loans in their portfolios does not

necessarily imply that the share of this group in all business loans under authorizations of less than $5 million outstanding declined during this period. So rapid was the growth of foreign bank business lending as a whole that this group could shift its portfolio in favour of larger loans while continuing to maintain its share of the market for smaller loans. The roughest of calculations, based on the relative growth rates of the smaller and larger loan size classes at the Mercantile Bank and on the overall growth rate of foreign bank business term loans outstanding, suggests an adjusted real growth rate for loans under authorizations less than $5 million of 15.1% over the period 1975-1980 and an adjusted real growth rate of 44% for loans under authorizations in excess of $5 million. The comparable growth rates for the chartered banks are 16% and 5% respectively. The implication is that foreign bank affiliates held their own in the smaller end of the market and greatly expanded, at least relative to the chartered banks, in the upper end of the market.

We have attempted to draw a great many inferences, perhaps too many, from some very weak evidence. One piece of corroborative evidence is available. Sources familiar with the distribution of loans sizes of the foreign banks receiving charters in the fall of 1981 have indicated that the distribution, as of October 1981, is approximately as follows: (i) under $200,000, 5%; (ii) $200,000-$1 million, 5%; (iii) $1 million-$5 million, 20%; (iv) over $5 million, 70%. This is roughly equivalent to the 1980 size distribution of the business loans of the Mercantile Bank.

It is clear from this evidence that the foreign banks are virtually inactive in the market for business loans under $200,000. If their entry and growth has affected the fundamental environment of the smallest business borrowers it has done so indirectly.

IV.4.3 Foreign Bank Affiliates and Business Lending in the Future

As early as 1976 the Economic Council of Canada was able to conclude that the entry of foreign bank affiliates had increased competition in wholesale banking in Canada and had

> probably lessened the transaction, search and credit rating costs of doing business in this country (1976, p. 92).

Our extension of the analysis up to the end of 1980 has served to strengthen the Council's conclusions. As we will ultimately demonstrate, the foreign bank affiliates have expanded their business lending activity relative to all major business lenders. While the focus of this expansion has been the larger loan sizes, the foreign bank affiliates may well have been responsible for pushing the chartered banks to increase their presence in the market for smaller business loans. The small business borrower cannot help but have benefitted as a consequence.

There is some doubt that the salutary effects of foreign bank expansion will continue much into the future. Under the 1980 revisions to the Bank Act, assets of foreign owned banks as a group are limited to 8 percent of the Canadian dollar assets

of the chartered banks plus foreign currency business with Canadian residents booked in Canada by the chartered banks. As of December, 1980, the assets of foreign bank affiliates amounted to 5.2 per cent of the allowed total {(9.713)/171,296+ 15,923) Bank of Canada Review, Table 47, Table 16, Series B3504 and Table 7 Series B670}

As Table XIV indicates, the five year average growth rate in this ratio is 16.3 per cent. This is, of course, also the amount by which the average growth rate of foreign bank assets has exceeded that of chartered bank assets.

This pattern could continue for another two and one-half years {ln(8/5.2)/.163=2.6}, that is, until the middle of 1983 before the ceiling on foreign bank assets is reached. After this, foreign-owned banks will be constrained to grow at the same rate as the chartered banks as a group.

There is, in fact, reason to believe that foreign banks which were operating in Canada prior to the revision of the Bank Act may lose some of their market share. The assets of each foreign-owned bank are limited to twenty times their authorized capital. Authorized capital is set by the Inspector General of Banks. Authorized capital for foreign banks which have been awarded their letters patent has been set so as to allow subsidiaries which were already in existence to grow by 28 per cent (13 per cent per annum compounded) over the next two years (Globe and Mail, August 19, 1981, p. E2). If the banking system continues to grow at its five year average rate of 17 per cent,

TABLE XIV

FOREIGN BANK AFFILIATES (FBA'S)

Year	(1) Canadian Dollar Assets (FBA's)	(2) Assets (FBA's)	(3) Business Loans Outstanding (FBA's)	(4) "Other "Business" Term Loans Outstanding (FBA's)	(5) Canadian Dollar Assets (Chartered Banks)	(6) Foreign Currency Business Booked in Canada (Chartered Banks)	(7) (5+6)	(8) (2/7)
1974	1777		1552	326				
1975	1820	1869	1440	421	77169	2981	80150	2.3
1976	2223	2402	1781	599	88790	3478	92269	2.6
1977	3050	3349	2364	607	102819	6096	108915	3.1
1978	3965	4435	3177	982	122128	12007	134135	3.3
1979	5217	5111	4289	1451	147285	12951	160236	3.8
1980	8041	9713	7051	2915	171296	15923	187219	5.2
Average Growth Rate (%)								
6 Year	25.2		25.2	36.5				
5 Year	29.7	33.0	31.8	38.7	15.9	33.5	17.0	16.3

Source: Bank of Canada Review, Tables 7, 16 and 47.

these foreign banks will suffer a reduction in their Canadian market share.

It is clear that, under the approach taken by the Inspector General, the growth in the ratio of foreign bank assets to chartered bank assets will not come from further expansion by existing foreign bank subsidiaries. This growth must therefore come from the entry of additional foreign banks which might have been represented in Canada but which have not been engaged in financial intermediation in this country.

The restriction of the growth of foreign banks which have become established in Canada in recent years to the point at which they may be obliged to accept reductions in their market shares cannot help but reduce the competition from which business borrowers and perhaps even small business borrowers have benefitted in recent years.

Although the relative expansion of foreign banks as a group will soon cease if it has not already done so and established foreign banks may even suffer a reduction in their market share, business borrowers in general and small business borrowers in particular may benefit from an increase in the number of specialized banking operations in existence.

A number of foreign banks have indicated that, upon receiving their licenses, they will seek business in the ethnic communities in which they are known and with which they are familiar. The implication of such specialization is that some foreign bank affiliates may become involved in the financing of

local community businesses and thus in loans in amounts of $200,000 or less.

In this regard, the restriction of foreign bank affiliates to one branch (without special permission from the Minister) would seem to limit the extent to which they can serve local ethnic communities and the small businesses in them. Those charged with the protection of the interests of small business might make representations to the effect that a liberal and expeditious policy be followed with respect to foreign bank branching.

IV.5 Roynat

Roynat was formed in 1962 "to provide expanding and new Canadian businesses with financing beyond the normal scope of banking facilities" (Royal Commission, 1964, p. 225). Roynat presently specializes in the provision of term loans and leasing services to small and medium-sized businesses. Its average loan size as of April 1980 was $287 thousand. Its average loan size to some classes of business such as food services and general construction was as low as $180 thousand.

Roynat's assets grew at an annual rate of 20.5% in nominal terms and 11.4% in real terms over the period 1974-1980. Its estimated term loans outstanding grew at the same rate. This is somewhat slower than the (adjusted) real growth rate of 14.4% for chartered bank term loans outstanding over the same period (see Table XIII). It is also slower than the 15% which is the

TABLE XV

ROYNAT

ASSETS AND ESTIMATED TERM LOANS OUTSTANDING
(in $Millions at Year End)

Year	Assets: Financial Year End	Assets: Calendar Year End	Estimated Term Loans Outstanding
1974	202.8	235.3	207.1
1975	298.2	335.7	295.4
1976	407.6	430.6	378.9
1977	472.6	499.4	439.5
1978	548.4	571.1	502.6
1979	611.1	657.5	578.6
1980	744.3	807.2	710.3
1981	925.5		
Average Annual Growth Rate (%)			
6 Year	21.7	20.5	20.5
5 Year	18.3	17.5	17.5

Source: Roynat Annual Report 1979, p. 13 and 1981, p. 7.

rough estimate of the rate of growth of foreign bank term loans outstanding under authorizations of less than $5 million during this period.

The picture which emerges is that of a small business financing specialist which was formed when neither the chartered banks nor the foreign banks were significant factors in business term lending facing significant competition from both sources during the latter part of the seventies.

IV.6 Sales Finance Companies

During the sixties it was anticipated that the sales finance companies would emerge as a significant source of business term financing (Neufeld,(1972, p. 343), Royal Commission on Banking and Finance (1964, p. 209)). In their submission to the Royal Commission the sales finance companies indicated that they viewed the Industrial Development Bank (later to become the Federal Business Development Bank) as their principal competitor (1964, p. 209).

The extent of business term financing by sales finance companies is illustrated in Table XVI. Total loans and industrial and commercial retail sales financing grew at an average annual rate of 11.7% (2.6% in real terms) over the period 1974-1980.

This aggregate growth rate is somewhat misleading. Commercial business loans which was the lending activity the finance companies had hoped to develop grew at a rate of 23.4% over the period 1974-1980.

TABLE XVI

SALES FINANCE COMPANIES

Year	(1) Industrial and Commercial Retail Sales Financing*	(2) Commercial Business Loans*	(3) Capital and Dealer Business Loans*	(4) (1+2+3)
1970	NA	NA	NA	-
1971	NA	NA	NA	-
1972	1228.9	52.6	75.8	1357.3
1973	1487.1	73.8	96.1	1657.0
1974	1832.4	94.1	76.5	2000.3
1975	2066.8	102.0	79.5	2248.3
1976	2250.0	127.6	83.3	2460.9
1977	2370.4	275.3	80.9	2726.6
1978	2624.8	321.5	82.0	3028.3
1979	3037.0	271.3	75.6	3383.9
1980	3511.7	382.4	145.4	4039.5
Average Annual Rate of Growth (%)				
6 Year	10.8	23.4	10.7	11.7
5 Year	10.6	26.4	12.1	11.2

*Year end outstanding in $Millions

Source: Statistics Canada 61-006.

If we take the aggregate business term financing activity of the sales finance companies, its annual growth rate was less than that of any other major supplier of business term finance. It was slightly less than that of the FBDB and much less than that of the chartered banks, the foreign bank affiliates and Roynat.

If we take the commercial business loans of the sales finance companies, this new type of lending has grown at an annual rate which is double that of the FBDB and slightly higher than that of both Roynat and the aggregate term lending of the chartered banks.

It can be concluded that while the traditional business financing activities of the sales finance companies (retail sales financing and capital and dealer loans) have grown much more slowly than business lending activity in general, commercial business loans outstanding, while still small, grew faster than the total term loans outstanding of all major sources save the foreign bank affiliates.

While sales finance companies cannot be regarded as having fared well as intermediaries in recent years, they appear to be more than holding their own in the market for general business loans.

IV.7 Federal Business Development Bank

The Federal Business Development Bank specializes in term lending to smaller business borrowers. Its average loan size

in 1980 was $56,000. Of new loans approved by the FBDB in 1980, 53% (by value) were under authorizations of less than $100,000 and 91% were under authorizations of less than $500,000. The FBDB has also tended in recent years to allocate a considerable fraction (40% in 1980) of its loans to retailers, restaurants and hotels while 26% went to the manufacturing sector as a whole. In outstanding, some 37% of Roynat's outstanding loans and 35% of chartered bank business loans outstanding were to firms in the manufacturing sector.

FBDB loans outstanding are reported in Table XVII. Their rate of growth over the period 1974-1980 was 11.7% in nominal terms and 2.6% in real terms. This is less than one-third the growth rate in Roynat term loans, less than one-fourth the estmated growth rate in foreign bank term loans under $5 million and less than one-fifth the adjusted real growth rate of chartered bank term lending under $200,000. If we compare the growth in FBDB loans outstanding over the period 1974-1980, the latter grew at an adjusted rate which was three times as large as the former.

Similar comparisons can be made using 1970-1980 and 1975-1980 growth rates. The 1970-1980 comparison is somewhat more favourable to the FBDB while the 1975-1980 growth rate comparison is less favourable. The implication is that the FBDB's position as a business lender was deteriorating relative to the chartered banks, the foreign banks and Roynat throughout the decade, and the rate of deterioration was accelerating.

TABLE XVII

THE FEDERAL BUSINESS DEVELOPMENT BANK

Year	Business Term Loans Oustanding*	Average Loan Size ($000)	Real Average Loan Size (1970$)
1970	504.2	40	40.0
1971	558.3	39	37.8
1972	636.9	45	41.6
1973	787.6	45	38.4
1974	1032.8	48	35.9
1975	1223.2	47	31.1
1976	1385.9	48	29.0
1977	1471.4	48	27.1
1978	1576.8	49	26.0
1979	1943.1	53	25.5
1980	2086.1	56	24.4

Average Growth Rate	
1970-1980	14.2
1974-1980	11.7
1975-1980	10.6

Source: Bank of Canada Review, Table 49; Federal Business Development Bank Annual Reports.

*Outstanding at Calendar year end (in millions of dollars).

Recall that the situation in the mid-sixties as it was described by the Royal Commission on Banking and Finance was one in which the chartered banks, largely by reason of legislative restriction, had little interest in business term lending, foreign banks were not a significant factor in the market, Roynat had only just been established and the sales finance companies were just developing an interest in business lending. The FBDB, then the Industrial Development Bank (IDB), can be regarded as having had the market to itself.

Two events changed this situation drastically. First, subsequent to the 1967 ammendments to the Bank Act, the chartered banks expanded their term lending. This expansion was particularly evident in the market for smaller term loans in the latter half of the seventies. Second, again beginning in the mid-seventies, foreign bank affiliates began a rapid expansion of their term lending activity.

With the rapid growth of the chartered banks at the lower end of the market, Roynat in the middle and the foreign bank affiliates at the upper end, the relative position of the FBDB deteriorated rapidly. Indeed, not only was its growth relatively slow, what growth it was able to generate was apparently due to successive reductions in the real size of the loans it granted. This reduction in the FBDB's constant dollar average loan outstanding is illustrated in Table XVII. The average loan outstanding in 1980 had a real value of a little over one-half that of the average loan outstanding in 1970. In the retail sector

which is the largest single borrower of FBDB funds the average loan granted in 1980 was 35,000 1980 dollars. It does no injustice to the FBDB to conclude that by the late seventies the FBDB was no longer a significant factor in the field it has been originally mandated to serve, that of industrial development.

IV.8 Financial Intermediaries and Business Term Lending: Some Conclusions

Those who studied the financial environment of small business during the 1960's concluded that, although they could find no significant gaps in the capital market, if problems existed anywhere they existed in the market for term loans. The principal problem was the relative inactivity of the chartered banks in this field. This was a consequence of the 6% interest rate ceiling and the general prohibition on mortgage lending faced by the chartered banks.

Given this restriction on chartered bank activity small business borrowers relied largely on the Industrial Development Bank and, to a lesser extent, the sales finance companies and the newly-formed Roynat for term financing.

After the 1967 ammendments to the Bank Act, the chartered banks became more active in business term lending although their penetration of the market for smaller loans occurred on a significant scale only after the mid-seventies. At the same time foreign bank affiliates entered the market for larger term loans and

expanded rapidly. Similarly, Roynat maintained its share (at least) at the middle end of the market while the sales finance companies were able to effect a modest expansion of their "commercial" business lending activity.

As a consequence of these events, the position of the Federal Business Development Bank deteriorated in relative terms and this deterioration became more marked toward the end of the seventies.

It can never be stated categorically that there are no "gaps" (whatever a gap may be) in the capital market. Nor is it possible to prove that a given class of borrowers is being "adequately" served (whatever that may mean). What we can say is that there has been a significant expansion of the term lending facilities available to businesses of all sizes over the last decade. This expansion has been such that a subsidized lender, the Federal Business Development Bank, has been unable to maintain its position vis à vis the major private lenders. The inability of a subsidized government lender to maintain its share of the market must imply that the existing private institutions have provided "adequate" service.

This should not be taken to imply that the federal government need not pay attention to the claims by the small business community that it is not adequately served by existing financial institutions. The analysis presented here has a great deal to say about the manner in which the government should respond to such claims. What we have seen in recent years is a

potential gap, as discerned by the Royal Commission on Banking and Finance, filled largely by the removal of restrictions on one set of institutions (the chartered banks) and the entry of another (the foreign bank affiliates). Federally subsidized lending (through the FBDB and under the SBLA) has had only a marginal impact.

The implication is that an effective response to concerns regarding the adequacy of financial services available to any given group is to eliminate any restrictions which reduce the ability of existing intermediaries to provide the requisite services and to allow if not facilitate the entry of additional intermediaries.

In this regard we can argue that the 1980 ammendments to the Bank Act which had the effect of limiting the future expansion of foreign bank affiliates which had been conducting an intermediary business in Canada is unfortunate. It is difficult to see how such a restriction on competition can be beneficial to business borrowers whether small or large. Similarly, the restriction on branching by foreign bank affiliates will preclude the latter from dealing directly with small business borrowers.

Although they have not been analyzed in this study, there are a number of restrictions on existing intermediaries which cannot be regarded as helpful to small business. The exclusion, under the 1980 ammendments to the Bank Act, of the chartered banks from direct participation in factoring and

leasing reduces the accessibility of these services to small business.

Similarly, the restrictions which have historically limited the business lending of trust companies have eliminated a group of lenders which would otherwise be readily accessible to small business from the market.

Reliance on intermediary competition is but one policy option. While it is the option that both the Royal Commission on Banking and Finance (1964) and the Economic Council of Canada (1976) favoured, it has not always been the basis of the legislation governing our financial institutions. Indeed, the discussion of legislation governing intermediaries appears to have been dominated by demands that trust companies and credit unions be protected from chartered bank competition and that chartered banks be protected from foreign bank competition. Legislation has often reflected a desire to protect the status quo among intermediaries rather than to allow for the provision of the financial services the community requires.

In some sense the existence of federally subsidized lending under the SBLA and through the FBDB may be regarded as an attempt to compensate for legislation restricting competition within the financial system. If chartered banks are prevented from offering some financial services from which small business might benefit, public institutions are given a mandate to do so under the guise of "gap filling". If the experience of the last ten years in the business term loan market has taught us anything, however, it is

the awsome power of new entry and free competition to remedy deficiencies in the supply of a financial service. Compared with the effect exerted on the market by the chartered banks and the foreign bank affiliates the impact of the public programs has indeed been marginal.

V. GOVERNMENT, THE CAPITAL MARKET AND SMALL BUSINESS

When small businessmen and government officials discuss the manner in which the government can assist the small business community in dealing with its financial problems, the discussion usually centers on loan subsidies, guarantees and other forms of direct assistance.

The conclusion of this study is that there are other, perhaps more effective, ways in which government can encourage additional activity in the small business sector. In Section II it was noted that the government of Canada is a major user of capital and that the huge increases in net borrowing by the federal government had to have crowded out at least some corporate (including small business) investment.

At the same time as the net borrowing of the federal government increased, both a reduction in the proportion of capital formation carried out in the corporate sector and an increase in corporate reliance on internally generated funds was observed. Although these are not necessarily the results of heavy federal borrowing they could have been caused by it.

If this is the case it could be argued that the large increase in net borrowing by the federal government has caused a pro rata reduction in small business capital formation. Moreover the increased reliance by the corporate sector on internally generated funds could be expected to have a disproportionate effect on new businesses which will not have retained earnings upon which to draw.

To demonstrate the magnitude of the effect which the federal government as a competitor for scarce capital can have on small business investment, the additional flow of federal net borrowing each year since 1975 is, at a minimum, ten times greater than the new lending by the government's Federal Business Development Bank. Even if only 10 per cent of this borrowing is accomodated by crowding out the government will have a negative net impact on business capital formation.

Thus, one of the ways in which government can encourage small business capital formation is to reduce its own demands for capital.

In Section III it was noted that the chartered banks had been moving steadily away from holding government bonds in their asset portfolios. Holdings of treasury bills and cash, the most liquid forms of government debt, are generally regarded as being higher than they would be in the absence of primary and secondary reserve ratios.

The fact that holdings of government obligations have been and probably still are excessive relative to the chartered banks desired portfolios illustrates a second problem in small business finance for which the federal government is largely to blame. The regulations governing the chartered banks have historically responded, first, to the perceived needs for monetary control, second, to the need to finance the government's deficits, third, to the protection of other financial institutions and fourth, if at all, to the needs of business and others for intermeidary services.

The implication is that small business in particular would benefit from a re-ordering of federal regulatory priorities. Intermediaries should be allowed to develop markets and offer services where they perceive a need for them. They cannot do this if they are restricted as to their size and/or the composition of their assets and liabilities. The Economic Council of Canada (1976) recommended just such a regulatory approach. Unhappily, the old regulatory priorities appear to have dictated the nature of the 1980 Bank Act ammendments.

As was suggested above, the experience of the seventies provides incontestable evidence of the power of freedom to enter and compete to provide the intermediary services the community, including small business desires. It is not clear that government authorities have learned from that experience. If they return to a pattern of regulations geared to monetary control, debt management and the status quo among intermediaries, the future financing requirements of business will not be adequately provided for and the government will again be obliged to intervene with the relatively poor substitute of public lending and public subsidization of private lending.

APPENDIX

I. Background to Adjusted Real Growth Rate Calculations

1. GNE Deflator 1970-1980 and 1974-1980

1970	100.0	
1971	103.2	
1972	108.3	
1973	117.3	
1974	133.5	100.0
1975	151.2	113.3
1976	165.5	124.0
1977	177.0	132.6
1978	188.1	140.9
1979	207.7	155.6
1980	229.8	172.1

2. Weighted Average Rate of Inflation:

Loans do not turn over every year. It is estimated that the average term of a loan is 5 years. In this case a given increase in the price level will not be fully reflected in the nominal value of loans oustanding for five years. In any given year one-fifth of the stock of oustanding loans will turn over and thus reflect current prices. A second fifth will have turned over the previous year and reflect its price level and so on.

In this case the weighted average inflation rate to apply to the stock of loans outstanding in 1970 for the period 1970-1980 is:

$$\dot{p}_{10} = .2(229.8) + .2(207.7) + .2(188.1) + .2(177.0) + .2(165.5) = 194.0$$

The weighted average inflation rate to apply to the stock of loans outstanding in 1974 for the period 1974-1980 is:

$$\dot{p}_6 = .2(172.1) + .2(155.6) + .2(140.9) + .2(132.6) + .2(124.0) = 145.0$$

3. Distribution of Loans within Size Classes

The distributions of loan sizes within each size class are heavily skewed in favour of smaller loans. This can be inferred from Table A3 of the Bank of Canada Review (December issues).

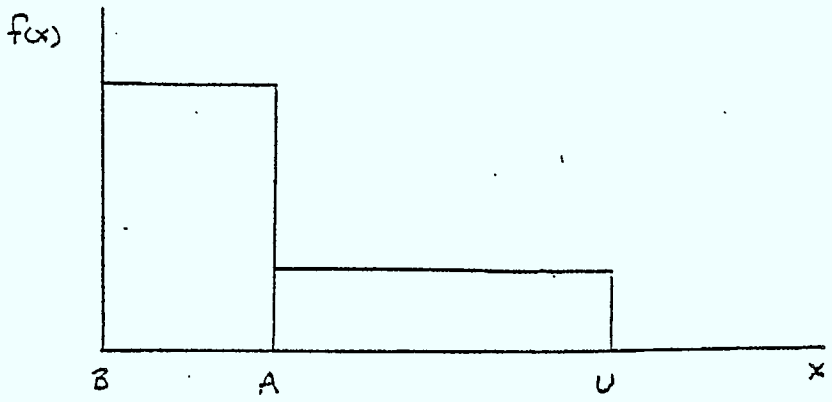
To approximate this type of distribution, density functions of the type illustrated in Figure 1 were assumed. These density functions imply an 80 to 90 per cent probability that a loan will fall within $A of the lower class boundary, B, and a 10 to 20% probability that a loan will fall within the range between A and the upper class boundary U. A is chosen so as to result in an expectation for the distribution which roughly approximates the mean class loan sizes which can be inferred from Tables A3 and 10 in the Bank of Canada Review.

The approximation of observed size class means by the expectations of the assumed distributions is very rough (the expectations are generally higher by a considerable margin) partly because of the limitations of the naive distribution being

employed and partly because a closer approximation of observed means does not change adjusted growth rates appreciably.

FIGURE 1

Assumed Distribution of Loan Sizes Within a Given Size Class



II. Corrections in Real Business Loan Growth Rates

1. Loans under $200,000, 1974-1980

(a) Density function: $f(x) = 3 \quad .02 \leq x \leq .32$

$f(x) = .06 \quad .32 \leq x \leq 2.0$

where x = loan size in hundreds of thousands of 1974 dollars

(b) $E(x) = \int_{.02}^{.32} 3x\,dx + \int_{.32}^{2} .06x\,dx = .265$

(c) Number of loans in this class in 1974:

4,379/.0265 = 165,245

(d) Weighted average inflation rate 1974-1980:

45% or 6.2% per year

(e) Minimum loan size in 1974 dollars no longer in the class in 1980: .2/1.45 = 1.38

(f) Percentage of loans leaving class due to inflation:

$(2-1.38)(.06) = .037$ (3.7%)

(g) Average size of loans leaving the class in 1974 dollars:

$1.38 + (2-1.38)/2 = 1.69$

(h) Value of loans lost: $(.037)(165.245)(1.69) = \$1,033.3$ million

(i) Adjusted real growth rate:

$\ln\{[(\$10,299/1.72) + 1,033.3]/4,379\}/6 = 7.9\%$

2. Loans between \$200,000 and \$1 million 1974-1980

(a) Density function: $f(x) = 1.6 \quad 2 < x < 2.5$

$f(x) = .027 \quad 2.5 < x < 10$

where x = loan size in hundreds of thousands of 1974 dollars.

(b) $E(x) = \int_2^{2.5} 1.6\, x\, dx \quad \int_{2.5}^{10} .027\, x\, dx = 3.07$

(c) The implied number of loans in the class:

$3,758/.307 = 12,241$

(d) The weighted average inflation rate 1974-1980:

45% or 6.2% per year

(e) Minimum loan size in 1974 dollars no longer in the class in 1980: $10/1.45 = 6.9 = \$690,000$

(f) Percentage of loans leaving the class due to inflation:

$(10-6.9)(.027) = .084$ (8.4%)

(g) Value of average loan leaving the class:

$6.9 + (10-6.9)/2 = 8.45$

(h) Total value of loans leaving the class due to inflation:

$(12,241)(.084)(845) = \$868.9$ million.

(i) Adjusted real growth rate 1974-1980:

$\ln\{[(9057/1.72) + 868.9 - 1033.3]/3758\}/6 = 5.1\%$

3. Loans under $1 million 1974-1980

(a) Density function: $f(x) = 3.0 \quad .02 \leq x \leq .32$

$f(x) = .01 \quad .32 \leq x \leq 10$

where x = loan size in hundreds of thousands of 1974 dollars.

(b) $E(x) = \int_{.02}^{.32} 3x\,dx + \int_{.32}^{10} .01x\,dx = .65$

(c) Implied number of loans in this class in 1974:

$8,137/.065 = 125,184$

(d) Weighted average inflation rate 1974-1980:

45% or 6.2% per year

(e) Minimum loan size in 1974 dollars no longer in the class in 1980: $10/1.45 = 6.9 = \$690,000$

(f) Percentage loans leaving the class due to inflation:

$(10-6.9)(.01) = .031$ (3.1%)

(g) Value of average loan leaving the class:

$6.9 + (10-6.9)/2 = 8.45$ ($845,000)

(h) Total value of loans leaving the class due to inflation:

$(125,184)(.031)(845) = \$3,279.1$ million

(i) Adjusted real growth rate 1974-1980:

$\ln\{[(19,357/1.72) + 3279.1]/8,137\}/6 = 9.7\%$

4. Loans under $1 million 1970-1980

(a) Density function: $f(x) = 3.0 \quad .02 \leq x \leq .32$

$f(x) = .01 \quad .32 \leq x \leq 10.0$

where x = loan size in hundreds of thousands of 1970 dollars.

(b) $E(x) = \int_{.02}^{.32} 3x\,dx + \int_{.32}^{10} .01x\,dx = .65$

(c) Implied number of loans in this class:

4,170/.065 = 64,154

(d) Weighted average inflation rate 1970-1980:

94% (or 6.6% per year)

(e) Minimum loan size in 1970 dollars no longer in the class in 1980: 10/1.94 = 5.15 ($515,000).

(f) Percentage of loans leaving the class due to inflation:

(10-5.15)(.01) = .049 (4.9%)

(g) Value of average loan leaving the class:

5.15 + (10-5.15)/2 = 7.58 ($758,000)

(h) Total value of loans leaving the class:

(64,154)(.049)(758) = $2,382.8 million

(i) Adjusted real growth rate 1970-1980

$\ln\{[(19,357/2.30) + 2,382.8]/4,170\}/10 = 9.5$

5. Loans between $1 million and $5 million 1974-1980:

(a) Density function: $f(x) = 4 \quad 1 \leq x \leq 1.2$

$f(x) = .053 \quad 1.2 \leq x \leq 5$

where x = loan size in millions of 1974 dollars.

(b) $E(x) = \int_1^{1.2} 4x\,dx + \int_{1.2}^{5} .053x\,dx = 1.47$

(c) The implied number of loans in the class in 1974:

$4,605/1.47 = 3,133$

(d) The weighted average inflation rate 1974-1980:

45% (or 6.2% per year)

(e) Minimum 1974 loan size no longer in class in 1980:

$5/1.45 = \$3.448$ million

(f) Percentage of loans leaving class due to inflation:

$(5-3.448)(.053) = .082$ (8.2%)

(g) Value of average loan leaving the class:

$3.448 + (5-3.448)/2 = \$4,224$ million

(h) Total value of loans leaving the class due to inflation:

$(3,133)(.082)(4.224) = \$1,085.2$ million

(i) Adjusted Real Growth rate 1974-1980:

$\ln\{[(11,175/1.72) + 1,085.2 - 868.9]/4,605\}/6 = 6.3\%$

6. Loans Between \$1 million and \$5 million 1970-1980

(a) Density function: $f(x) = 4 \qquad 1 \leq x \leq 1.2$

$f(x) = .053 \qquad 1.2 \leq x \leq 5$

(b) $E(x) = \int_1^{1.2} 4x\,dx + \int_{1.2}^{5} .053x\,dx = 1.47$

(c) The implied number of loans in the class in 1970:

$2,019/1.47 = 1,373$

(d) The weighted average inflation rate 1970-1980:

94% (or 6.6% per year)

(e) Minimum 1970 loan size no longer in the class in 1980:

5/1.94 = $2.577 million

(f) Percentage of loans leaving the class due to inflation:

(5-2.577)(.053) = .128 (12.8%)

(g) Value of the average loan leaving the class:

2.577 + (5-2.577)/2 = $3,789 million

(h) Total value of loans leaving the class due to inflation:

(1,373)(.128)(3.789) = $665.9 million

(i) Adjusted real growth rate 1970-1980:

ln{[(11,175/2.30) + 665.9 - 2,382.8]/2,019}/10 = 4.4%

7. Loans over $5 million 1974-1980:

(a) Total value of loans entering class due to inflation:

$1085.2 million (see 5(h))

(b) Adjusted Real Growth Rate 1974-1980

ln{[(24,854/1.72) - 1085.2]/7,826}/6 = 8.9

8. Loans over $5 million 1970-1980:

(a) Total value of loans entering class due to inflation:

(665.9 million (see 6(h))

(b) Adjusted Real Growth Rate 1970-1980

ln{[(24,854/2.30) - 665.9]/2,710}/10 = 13.2%

III. Corrections in Real Term Loan Growth Rates

1. Loans under $200,000

(a) Density function: $f(x) = 3 \quad .02 \leq x \leq .32$

$f(x) = .06 \quad .32 \leq x \leq 2.0$

where x = loan size in hundreds of thousands of dollars

(b) $E(x) = \int_{.02}^{.32} 3x\,dx + \int_{.32}^{2} .06x\,dx = .265$

(c) The implied number of loans in this class in 1974:

$849/.0265 = 32,037$

(d) Weighted average inflation 1974-1980:

45% (6.2% per year)

(e) Minimum loan size in 1974 dollars no longer in the class in 1980: $2/1.45 = 1.38$

(f) Percentage of loans leaving class due to inflation:

$(2-1.38)(.06) = .037$ (3.7%)

(g) Average size of lost loans in 1974 dollars:

$1.38 + (2-1.38)/2 = 1.69$ ($169,000)

(h) Value of loans lost is $(.037)(32,037)(1.69) = \$200.3$ million

(i) Adjusted Real Growth Rate 1974-1980 is

$\ln\{[(3,438/1.72 + 200.3]/849\}/6 = 15.9\%$

2. Loans of $200,000 - $1 million

(a) Density function: $f(x) = 1.6 \quad 2 \leq x \leq 2.5$

$f(x) = .027 \quad 2.5 \leq x \leq 10$

where x = loan size in hundreds of thousands of dollars

(b) $E(x) = \int_2^{2.5} 1.6\,x\,dx + \int_{2.5}^{10} .027\,x\,dx = 3.07$

(c) The implied number of loans in this class in 1973 is
789/.307 = 2,570

(d) The weighted average inflation rate 1974-1980 is 45%

(e) 1974 minimum loan size no longer in this class as of 1980 is 10/1.45 = 6.9 = $690.000

(f) Percentage loans leaving class due to inflation:
(10-6.9)(.027) = .084

(g) Value of average loan leaving the class:
6.9 + (10-6.9)/2 = 8.45

(h) Value of loans leaving the class due to inflation:
(2,570)(.084)(845,000) = $182.4 million

(i) Adjusted Real Growth Rate 1974-1980
$\ln\{[(3244/1.72) + 182.4 - 200.3]/789\}/6 = 14.4\%$

3. Loans of $1 million - $5 million

(a) Density function: $f(x) = 4 \qquad 1 \leq x \leq 1.2$

$f(x) = .053 \qquad 1.2 \leq x \leq 5$

where x = loan size in millions of 1974 dollars.

(b) $E(x) = \int_1^{1.2} 4\,x\,dx + \int_{1.2}^{5} .053\,x\,dx = 1.47$

(c) The implied number of loans in this class in 1974:
1.160/1.47 = 789

(d) The weighted average inflation rate 1974-1980: 45% (6.2% per year).

(e) Minimum 1974 loan size no longer in class in 1980:

5/1.45 = $3,448 million.

(f) Percentage loans leaving class due to inflation:

(5-3.448)(.053) = .082 (8.2%)

(g) Value of average loan leaving the class:

3.448 + (5-3.448)/2 = $4,224 million

(h) Total value of loans leaving the class due to inflation:

(789)(.082)(4.224) = $273.3 million

(i) Adjusted Real Growth Rate 1974-1980

$\ln\{[(2,798/1.72) + 273.3 - 182.4]/1160\}/6 = 6.5\%$

4. Loans over $5 million

(a) Total value of loans entering class due to inflation:

$273.3 million (see 3(h))

(b) Adjusted real growth 1974-1980

$\ln\{[(7947/1.72) - 273.3]/2565\}/6 = 8.8\%$

IV. Correction of Mercantile Real Growth Rates: Loans of under and over $5 million, 1975-1980.

1. Loans Under $5 million, 1975-1980

(a) Density function: $f(x) = .222x \qquad 0 \leq x \leq 1$

$f(x) = .222 \qquad 1 \leq x \leq 5$

(b) $E(x) = \int_0^1 .222\, x^2\, dx + \int_1^5 .222\, x\, dx = \$2{,}738$ million

(c) Implicit number of loans in this class:

460/2.738 = 168

(d) Weighted average inflation rate 1975-1980:

28% (Or 4.9% per year)

(e) Minimum loan size in 1975 dollars no longer in the class in 1980: 5/1.28 = $3.91 million

(f) Percentage of loans leaving the class due to inflation:

(5-3.91)(.222) = .24 (24%)

(g) Average size of loans leaving the class in 1975 dollars

3.91 + (5-3.91)/2 = 4.45

(h) Total value of loans lost:

(168)(.24)(4.45) = $179 million

(i) Adjusted Real Growth Rate 1975-1980

$\ln\{[(596.6/1.52) + 179]/460\}/5 = 4.3\%$

2. Loans Over $5 million 1975-1980

(a) Total value of loans entering class due to inflation:

$179 million.

(b) Adjusted Real Growth Rate 1975-1980

$\ln\{[(1433.7/1.52) - 1.79]/408.2\}/5 = 12.5\%$

3. Application of Mercantile growth rates to foreign bank affiliates.

(a) Foreign bank affiliates: real growth in business term lending 1975-1980: 30.3% per year

(b) Ratio of (a) to annual growth rate in loans of Mercantile Bank: $30.3/8.6 = 3.52$

(c) (b) x growth rate of Mercantile loans under $5 million

$3.52 \times 4.3 = 15.2\%$

(d) (b) x growth rate in Mercantile loans over $5 million

$3.52 \times 12.5 = 44\%$

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