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# Small Business Secretariat Working Paper

WORKING PAPER ON  
BUSINESS BANKRUPTCIES:  
AN INITIAL EXAMINATION OF  
THE DATA FILE FOR 1977-1981



Government  
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BUSINESS BANKRUPTCIES:  
AN INITIAL EXAMINATION OF  
THE DATA FILE FOR 1977-1981

Prepared for the Small Business Secretariat,  
of the Department of Regional Industrial Expansion

By DON R. ALLEN and ASSOCIATES

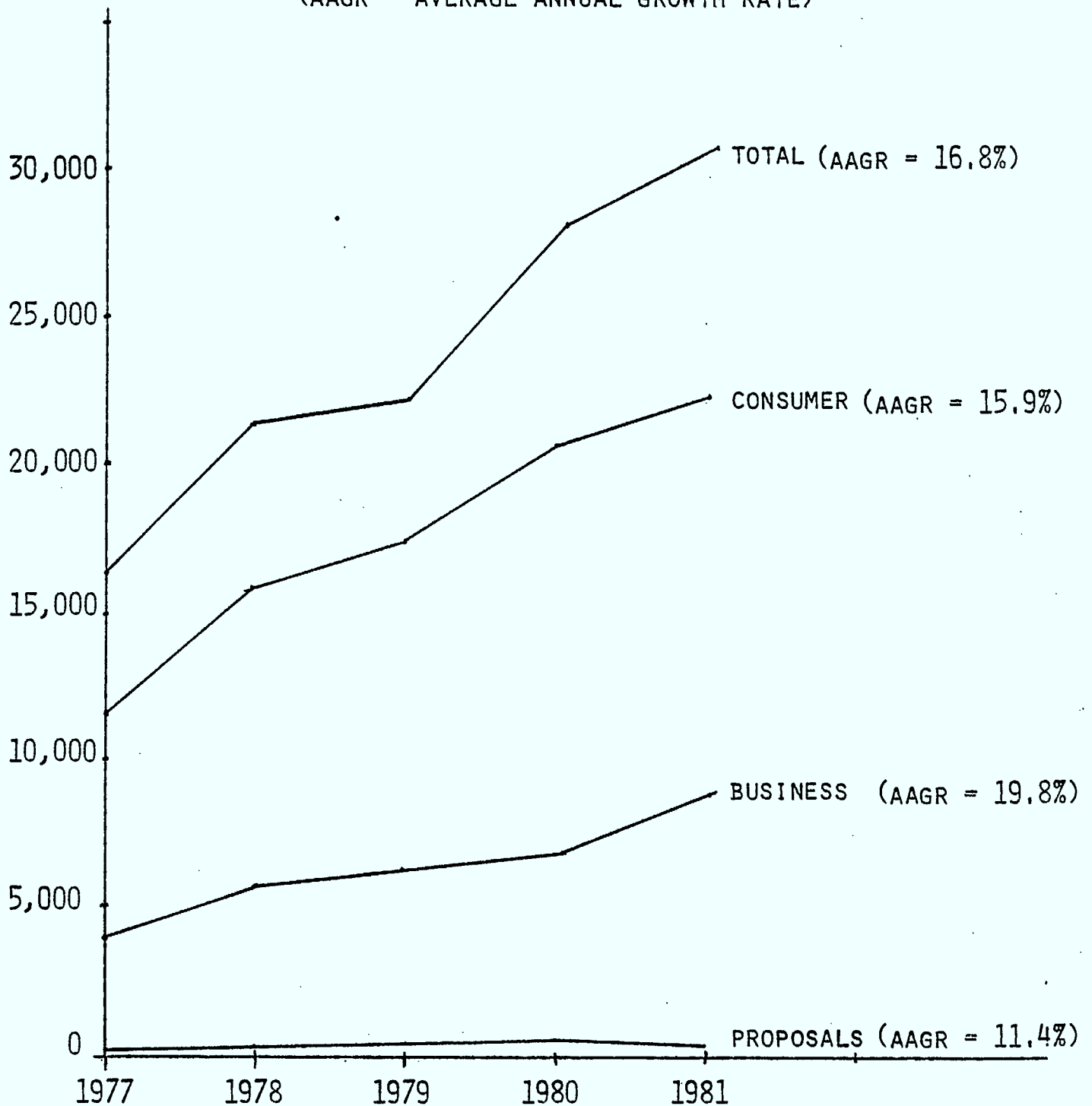
March 1982

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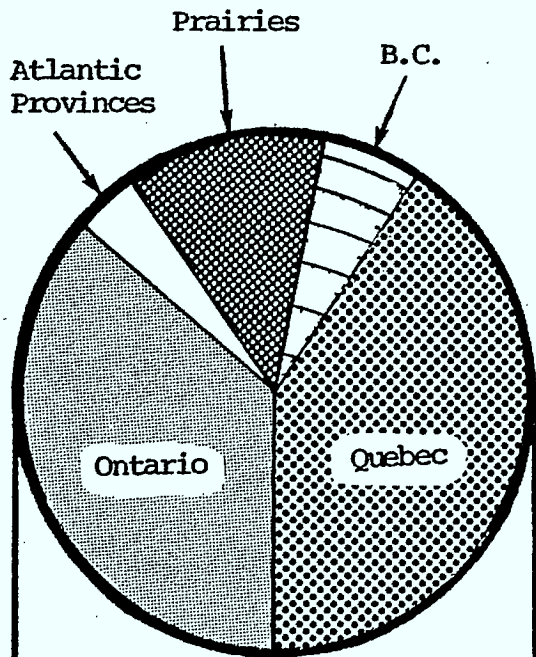
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EXECUTIVE SUMMARY

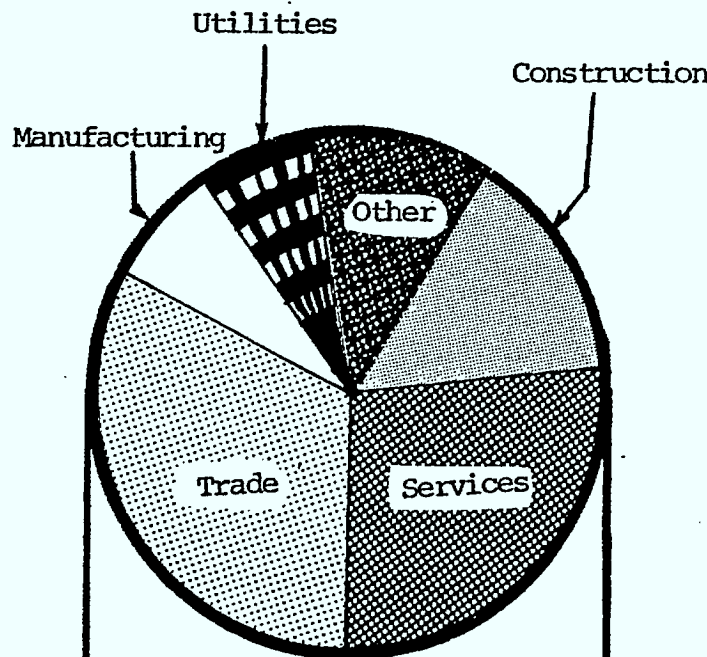
BREAKDOWN OF BANKRUPTCIES & PROPOSALS (1977-81)  
(CANADA TOTALS, ALL SECTORS/SIZES)  
(AAGR = AVERAGE ANNUAL GROWTH RATE)



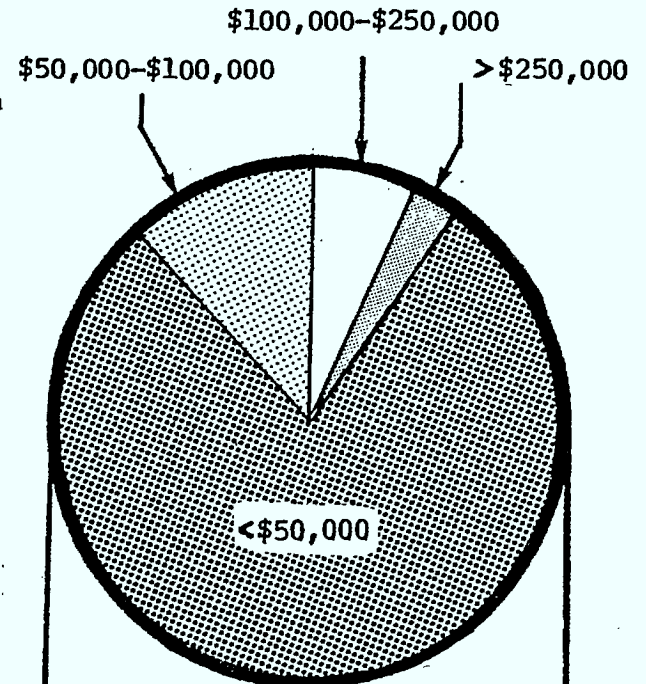
# 1981 COMPOSITION OF BANKRUPTCIES...



BY REGION



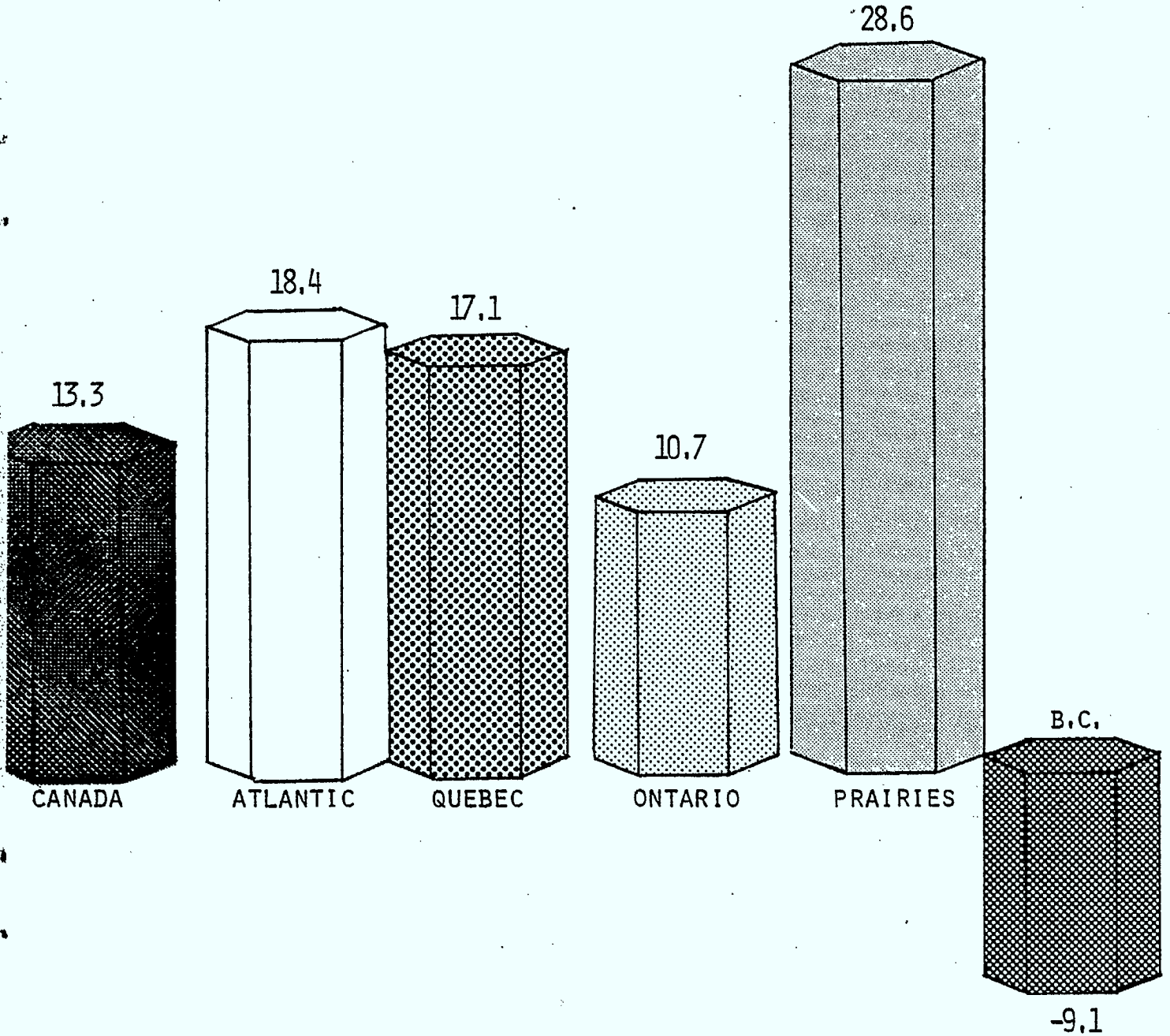
BY SECTOR



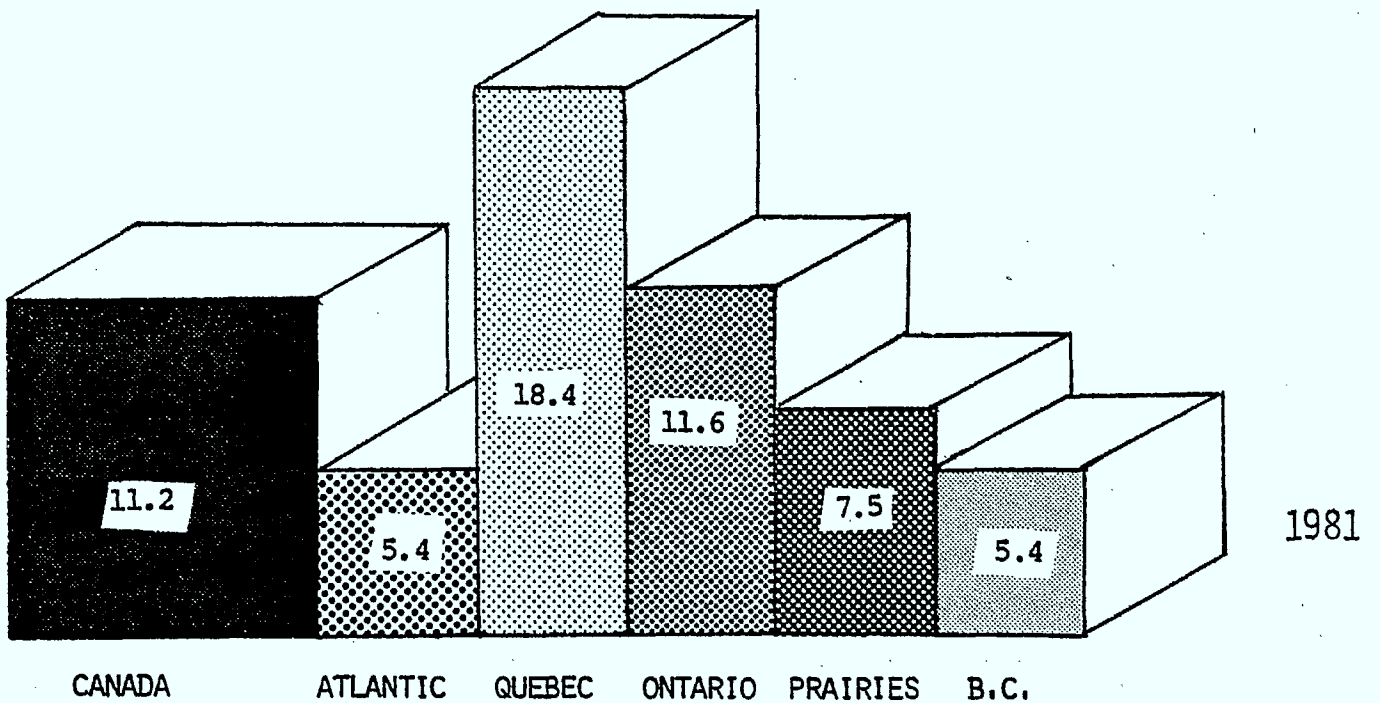
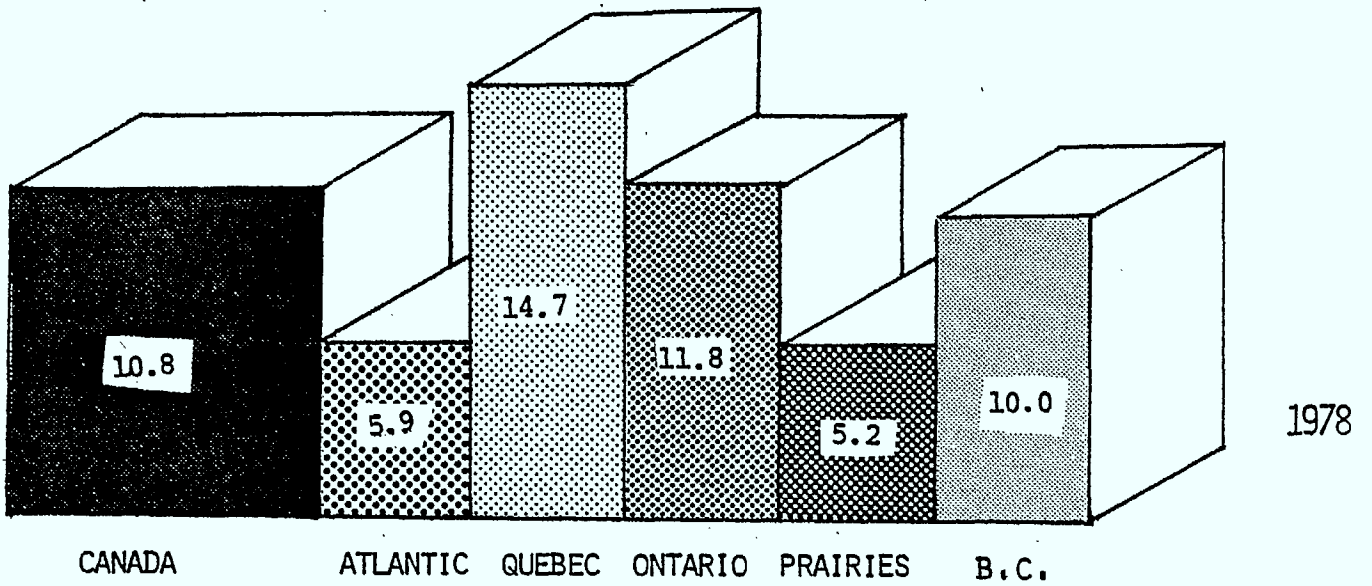
BY ASSET SIZE



# NUMBER OF BUSINESS BANKRUPTCIES - AVERAGE ANNUAL GROWTH RATE BY REGION (1978-81)



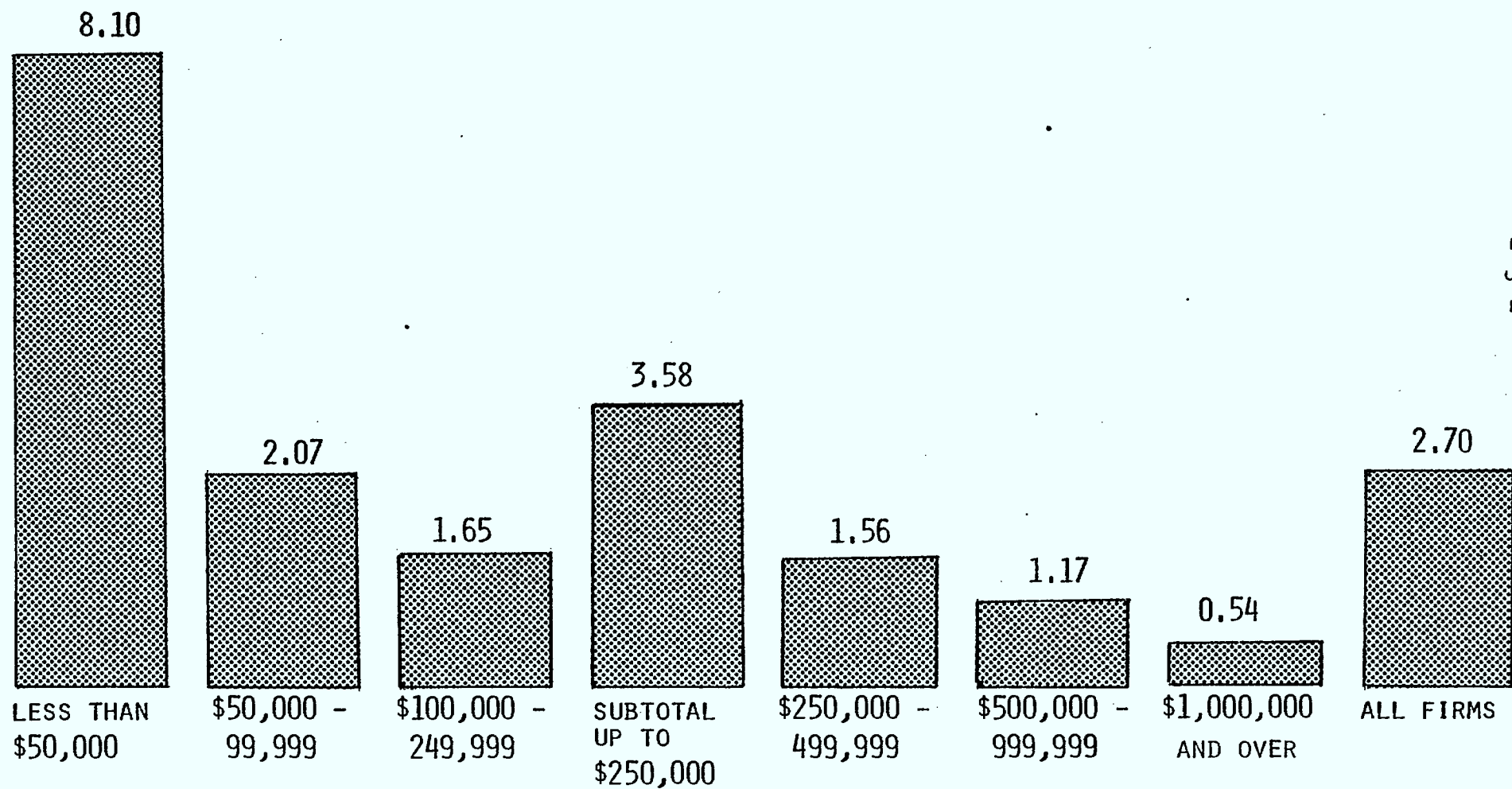
BANKRUPTCY INDEX - NUMBER OF BUSINESS BANKRUPTCIES PER 1000 ACTIVE BUSINESSES \*



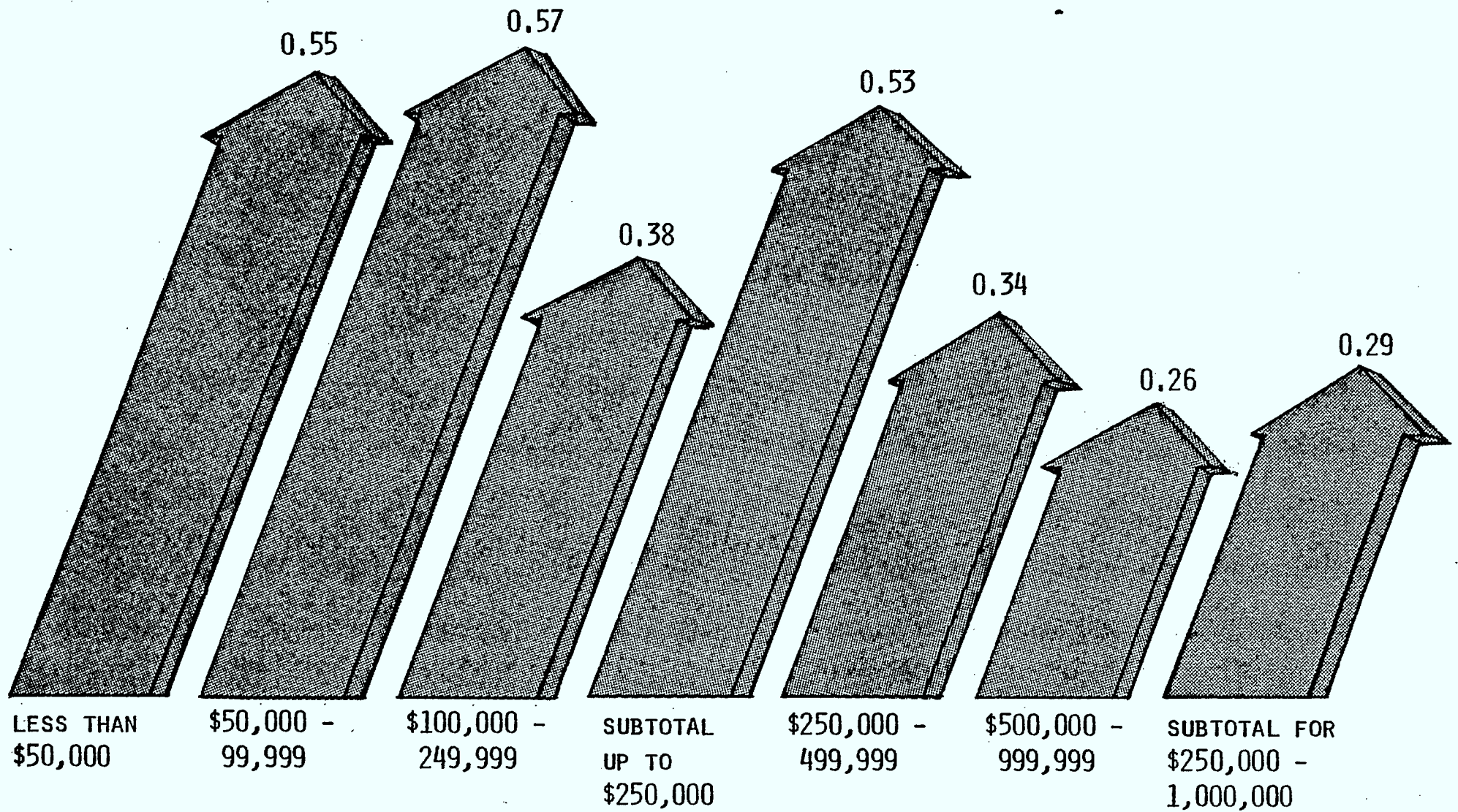
\* Active Businesses by Region provided by Canada Post



# LIABILITY:ASSET RATIO (1981) BY FIRM SIZE



BANKRUPTCY ADMINISTRATIVE EXPENSES AS A PROPORTION OF LIQUIDATION PROCEEDS - 1979 - By Asset Size



Note: Categories \$1-2 million and \$2+ million excluded because of few observations

I. INTRODUCTION

The Office of the Superintendent of Bankruptcy within the Department of Consumer and Corporate Affairs has provided to the Small Business Secretariat of IT & C a micro file on bankruptcies for several years up to and including 1981. These are data compiled as a by-product of administration of the Bankruptcy Act.

This paper contains highlights of initial forays into the data base, using tabulations of the micro file prepared within IT & C for the Secretariat. There have been two objectives to this exercise: (a) to determine the degree of completeness of the file, (b) to draw out some highlights from what is there. These highlights should be of interest in their own right, and should also indicate areas for further examination, using both this administrative data base as well as interview and other survey information relating to bankruptcies or other business failures.

Although some trends reported herein include consumer bankruptcies and proposals, this report deals primarily with business bankruptcies, examining wherever possible the size dimension of firms filing for bankruptcy. Because of data availability limitations, the reference period for the various aspects analysed varies somewhat, but always remains within the 1977-81 time interval.

## II. HIGHLIGHTS OF BANKRUPTCY TRENDS

### A. Composition of Bankruptcies

The following are the definitions for bankruptcies and proposals published by the Office of the Superintendent of Bankruptcy:

Consumer Bankruptcy: Identified as being a bankruptcy where an individual has not incurred liabilities as a result of a business venture or where liabilities attributable to a business venture constitute less than 50% of the total liabilities owed.

Business Bankruptcy: Identified as being a bankruptcy which is chiefly attributable to the liabilities incurred as a result of the carrying on of a commercial venture or business and includes proprietorships, partnerships and Limited Companies.

Proposal: Identified as being a proceeding under the Bankruptcy Act whereby the debtor, with the approval of his creditors and the Court, is granted a composition of his debts, an extension of time to pay his debts or a schema of arrangement to otherwise satisfy his creditors.\*

Although this study deals primarily with business bankruptcies, it is worthwhile to note the composition of total bankruptcies over the years in question. (For this breakdown, the Annual Reports of the Superintendent of Bankruptcy can be used.) Consumer bankruptcies accounted for close to 75% of the total number from 1977 to 1981. Business bankruptcies represented about 24%. Proposals were minimal, representing less than 2% of the total. Business bankruptcies showed the most rapid rate of growth (see Table II.1).

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\*Annual Statistical Summary, 1980, Office of the Superintendent of Bankruptcy, p. 85

TABLE II.1

Distribution of Consumer and Business Bankruptcies and Proposals, 1977-81

	<u>1977</u>		<u>1978</u>		<u>1979</u>		<u>1980</u>		<u>1981</u>		<u>Avg. Ann. Growth Rate (%)</u>
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	
Consumer											
Bankruptcies	12,772	75.4	15,938	73.4	17,876	74.9	21,025	75.0	23,036	73.2	15.9
Business											
Bankruptcies	3,905	23.1	5,546	25.5	5,694	23.8	6,595	23.6	8,055	25.6	19.8
Proposals	254	1.5	234	1.1	312	1.3	403	1.4	392	1.2	11.5
TOTAL	16,931	100.0	21,718	100.0	23,881	100.0	28,023	100.0	31,483	100.0	16.8

Sources: Annual Statistical Summary, 1977-80, Superintendent of Bankruptcy  
Insolvency Bulletin, January, 1982, Superintendent of Bankruptcy



B. Business Bankruptcies by Asset Size Group

The special tabulation from the CCA bankruptcy file indicates that the preponderance of business bankruptcies involve firms with a very small asset base. Of course, the act of filing for bankruptcy may have occurred after a long period of erosion of assets, but the incidence of this cannot be ascertained from this data file. The distribution of business bankruptcies by asset size can be tabulated from this file for the years 1977 to 1981 inclusive; the distribution at the start and end of this period is shown in Table II.2.

TABLE II.2

Business Bankruptcies by Asset Size, 1977 vs. 1981

<u>Asset Size Group (\$)</u>	<u>1977</u>		<u>1981</u>		<u>AAGR</u>
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>%</u>
less than 50,000	3,668	85.5	6,292	78.0	14.4
50,000 - 99,999	331	7.7	1,002	12.4	31.9
100,000 - 249,999	193	4.5	542	6.7	29.5
Subtotal for 250,000	4,192	97.7	7,836	97.1	16.9
250,000 - 499,999	62	1.4	148	1.8	24.3
500,000 - 999,999	21	0.5	47	0.6	22.3
Subtotal for 250,000 - 999,999	83	1.9	195	2.4	23.8
1,000,000 - 1,999,999	13	0.3	24	0.3	16.6
2,000,000 and over	4	0.1	11	0.1	28.8
TOTAL	4,292	100.0	8,066	99.9	17.1

Although the less than \$50,000 asset size group consistently contributed the most to the total number of business bankruptcies, this group also showed the slowest growth rate from 1977 to 1981. As a result, this group, which had an 85% share of business bankruptcies in 1977, represented only 78% by 1981. Of course, this may easily be explained by inflation, since asset data (and all other financial measures on the file) are in current dollars.

C. Business Bankruptcies by Region

It is interesting to note the wide variation in the trend in the number of business bankruptcies by region from 1978 to 1981.\* The Canadian growth rate averaged 13.3% per annum. B.C. was the only region to show a decrease over the 1978-81 period. Ontario had the next best record with an average increase of 10.7% in the number of business bankruptcies. The highest growth rate was noted in the Prairie region, where a staggering rate of 28.6% occurred, although this was from a relatively small base. The regional trends are shown in Table II.3 on the page following:

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\*The 1977 data on the micro file were not generally coded by region, so this section concentrates upon 1978-81

TABLE II.3

Business Bankruptcies by Region

	<u>1978</u>		<u>1979</u>		<u>1980</u>		<u>1981</u>		<u>AAGR</u>
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>%</u>
Atlantic	183	3.3	119	2.1	172	2.6	304	3.8	18.4
Quebec	2,058	37.1	2,073	36.3	2,644	39.7	3,308	41.0	17.1
Ontario	2,144	38.6	2,235	39.2	2,631	39.5	2,912	36.1	10.7
Prairies	486	8.8	586	10.3	730	11.0	1,035	12.8	28.6
British Columbia	678	12.2	695	12.2	485	7.3	508	6.3	- 9.2
CANADA TOTAL	5,549	100.0	5,708	100.1	6,662	100.1	8,067	100.0	13.3

D. Bankruptcy Index by Region

Given a register or count of active businesses, one can compute an index of bankruptcies. While all such registers have certain shortcomings, these are less serious as long as one focusses on the relative index of one region vs. another (which is the purpose of this section), rather than concentrating on the absolute percentage of bankruptcies itself.

Since 1978, Canada Post has maintained a count of business postal delivery points, which are used in this section as a denominator or base for a bankruptcy rate or index.\* Table II.4 presents an index of bankruptcies by region for 1978-81. The national total increased slightly from 10.8 bankruptcies per 1,000 active businesses in 1978 to 11.2 in 1981. Quebec and the Prairies had more significant increases. The three remaining regions showed an overall decrease, Ontario and the Atlantic only slight, the most dramatic being in British Columbia which demonstrated a fall from 10.0 to 5.4. (As was indicated earlier, B.C. consistently acted against the national norm.)

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\*These business points of call include (a) business postal boxes, (b) door-to-door delivery points where the predominant type of mail is addressed to a business, and (c) residences where the householder has requested to be included in Canada Post's listing as a business address. These delivery points will not accord with any other business registers such as Statistics Canada, D & B, NBL, etc. However, for cross-regional comparison purposes, they are useful as a base to which to relate business bankruptcies, in the vein noted in the opening paragraph of this section.

TABLE II.4

Bankruptcy Index by Region

	1978			1981		
	<u>Number of Bankruptcies</u>	<u>No. of Active Businesses</u>	<u>Bankruptcies per 1,000</u>	<u>Number of Bankruptcies</u>	<u>No. of Active Businesses</u>	<u>Bankruptcies per 1,000</u>
Atlantic	183	30,898	5.9	304	56,028	5.4
Quebec	2,058	140,470	14.7	3,308	180,236	18.4
Ontario	2,144	181,331	11.8	2,912	252,115	11.6
Prairies	486	93,225	5.2	1,035	137,792	7.5
British Columbia	678	67,524	10.0	508	94,922	5.4
CANADA TOTAL	5,549	513,448	10.8	8,067	721,093	11.2



E. Business Bankruptcies by Sector

In Canada overall, the Service Sector showed a significantly higher growth rate (28.1%) than any other major industry sector, as shown in Table II.5. Agriculture bankruptcies grew faster (51.7% annually), but were less than 4% of the total. Manufacturing had the most restrained growth in bankruptcies (11.2% per year) among major sectors.

TABLE II.5

Bankruptcy Trends by Sector\*

Industry <u>Sector</u>	<u>1979</u>		<u>1980</u>		<u>1981</u>		<u>AAGR</u>
	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>Number</u>	<u>%</u>	<u>%</u>
Agriculture	136	2.4	240	3.6	313	3.9	51.7
Forestry	40	0.7	47	0.7	74	0.9	36.0
Fishing/Trapping	6	0.1	11	0.2	16	0.2	63.3
Mining, Quarry							
Oil Wells	17	0.3	14	0.2	16	0.2	-3.0
Manufacturing	514	9.0	502	7.5	636	7.9	11.2
Construction	1,029	18.0	1,250	18.8	1,333	16.5	13.8
Utilities	344	6.0	428	6.4	550	6.8	26.4
Trade	1,828	32.0	2,083	31.3	2,506	31.1	17.1
F.I.R.E.	199	3.5	256	3.8	262	3.2	14.7
Services	1,292	22.6	1,593	23.9	2,121	26.3	28.1
Other	303	5.3	235	3.5	239	3.0	-11.2
TOTAL	5,708	99.9	6,659	99.9	8,066	100.0	18.9

\*Industry data is not coded to any satisfactory degree prior to 1979, on the tabulations from the CCA micro file; therefore any sectoral analysis herein deals with 1979-81 only. Of course, there can always be revisions to the bankruptcy file, e.g. the inclusion of additional records, minor SIC coding changes. Therefore, for 1979-81 the sector distribution from these tabulations does not agree precisely with published statistics from the Office of the Superintendent of Bankruptcy.

F. Average Elapsed Time of Bankruptcy Proceedings

It would appear from the tabulations that the length of time to process a business bankruptcy has fallen dramatically in recent years. Processing time was defined as the number of weeks from the opening date of the estate up to the trustee discharge date. The following are the results tabulated for 1977 to 1980 business bankruptcies (1981 is omitted because the files may not have been closed on many of the 1981 records on the micro file):

TABLE II.6

Average Elapsed Time of Bankruptcy Proceedings  
(in weeks)

<u>Asset Size Group (\$)</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
less than 50,000	84	69	47	12
50,000 - 99,999	88	67	46	12
100,000 - 249,999	83	62	40	7
Subtotal for 250,000	84	68	47	11
250,000 - 499,999	75	55	22	4
500,000 - 999,999	67	42	17	5
Subtotal for 250,000 - 999,999	73	52	21	4
1,000,000 - 1,999,999	36	26	12	0
2,000,000 and over	0	52	13	5

III. SELECTED FINANCIAL ASPECTS OF BUSINESS BANKRUPTCIES

A. Ratio of Liabilities to Assets, by Size of Firm

The ratio of liabilities to assets as submitted in notifications for business bankruptcy has hovered just below 3:1, for all sizes of businesses combined. For the smallest businesses, the ratio is dramatically higher, and generally increasing, as shown in Table III.1:

TABLE III.1

Liability:Asset Ratios of Business Bankruptcies

<u>Asset Size Group \$</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
less than 50,000	5.96	6.57	7.72	7.10	8.10
50,000 - 99,999	1.90	2.12	1.98	1.92	2.07
100,000 - 249,999	1.64	1.81	1.74	1.60	1.65
Subtotal for 250,000	3.20	3.54	3.84	3.43	3.58
250,000 - 499,999	1.50	1.43	1.57	1.49	1.56
500,000 - 999,999	1.28	1.38	1.28	1.31	1.17
Subtotal for 250,000 - 999,999	1.41	1.41	1.45	1.41	1.40
1,000,000 - 1,999,999	0.69	0.56	0.43	0.67	0.54
2,000,000 and over	N/A	N/A	N/A	N/A	N/A
All Firms	2.36	2.68	2.99	2.73	2.70

B. Ratio of Liabilities to Assets, by Industry Sector

Among sectors with significant numbers of bankruptcies, the ratio of liabilities to assets is:

- (a) above-average in services, utilities and construction,
- (b) slightly below average in trade,
- (c) close to the average in manufacturing, and
- (d) below average in primary industries.

As shown in Table III.2, these ratios do fluctuate considerably, even during the three years with industry codes on the file:

TABLE III.2

Liabilities:Assets by Industry Sector

<u>Industry Sector</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Agriculture	2.70	2.10	1.82
Forestry	3.82	1.90	1.62
Fishing, Trapping	1.67	2.70	3.67
Mine, Quarry, Oil	33.66	1.78	4.12
Manufacturing	2.96	2.82	2.38
Construction	2.99	3.35	3.05
Utilities	2.80	2.43	3.02
Trade	2.81	2.51	2.57
F.I.R.E.	3.07	2.65	2.65
Services	3.20	2.96	3.11
Other	2.96	2.47	2.96
All Industries	2.99	2.73	2.70

C. Administrative Expense Paid out of Proceeds

As seen in Sections A and B, total liabilities are several times total assets, so that before liquidation of assets even begins there is a deficit of some 60-70% of total liabilities. The next source of shortfall in potential payment of creditors is the "erosion" between reported asset values and liquidation value actually realized. The first charge on the latter consists of the administrative expenses, and the residual becomes the dividends paid to creditors. Table III.3 shows that the proportion of liquidation proceeds consumed by administrative expenses in the disposition of assets is more than 50% for smaller bankruptcies and not quite as severe for larger ones.

TABLE III.3

Bankruptcy Administrative Expenses as a Proportion  
of Liquidation Proceeds

<u>Asset Size Group (\$)</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
less than 50,000	0.54	0.60	0.55	0.60	0.55
50,000 - 99,999	0.39	0.51	0.57	0.44	0.78
100,000 - 249,999	0.43	0.56	0.38	0.42	0.19
Subtotal for 250,000	0.50	0.58	0.53	0.54	0.45
250,000 - 499,999	0.43	0.29	0.34	0.58	1.00
500,000 - 999,999	0.36	0.30	0.26	0.04	0.00
Subtotal for 250,000 -					
1,000,000	0.40	0.29	0.29	0.10	1.00
1,000,000 - 1,999,999	0.15	0.34	0.97	0.00	0.00
2,000,000 and over	0.00	1.00	1.00	0.47	0.00

NOTE: In many cases where the ratio is 0.00 or 1.00, the number of observations may be negligible, and the ratio therefore not meaningful. These cells should be investigated further. Similarly, some 1981 cells may be misleading because of many estates not yet being closed.



D. Dividends Paid to Creditors

The bottom line for creditors is, of course, the portion of liabilities owed to them which actually get<sup>s</sup> paid out of the after-expenses proceeds of the liquidation. As shown in Table III.4, the special tabulations appear to indicate that this amounts<sup>to</sup> only 1 cent or 2 cents on the dollar in most sectors. The middle year in the tabulations, 1979, was used, in order to be confident both that the industry sectors were coded and that the estates were closed in virtually all cases.

TABLE III.4

Ratios of Dividends Paid to Liabilities Declared, 1979

<u>Industry Sector</u>	<u>Ratio</u>
Agriculture	0.02
Forestry	0.01
Fishing, Trapping	0.01
Mine, Quarry, Oil	0.17*
Manufacturing	0.02
Construction	0.01
Utilities	0.01
Trade	0.02
F.I.R.E.	0.00
Services	0.01
Other	0.01

As can be seen from the above, the percentage realized by creditors is so miniscule that there is no point in attempting an industry analysis. In fact, ~~this~~<sup>these</sup> data probably merit<sup>d</sup> further checking for accuracy, before any conclusions are drawn.

\*not a significant statistic since very few observations

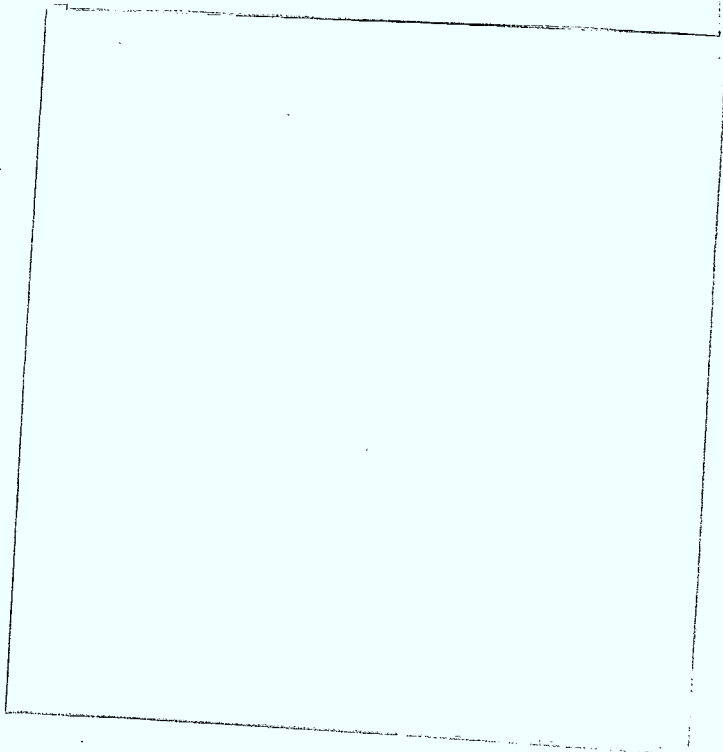
#### IV. AREAS FOR FUTURE INVESTIGATION

As indicated in the introduction, this report represents findings resulting from an initial experimentation with a newly-acquired data file. Some limitations on the data have been noted herein, but clearly there are already interesting findings emerging on the composition of business bankruptcies and certain financial aspects of bankruptcies reported and estates closed in recent years. The potential is there for additional results from this data base, but answers to many related questions will require additional information.

For example, factors often discussed but seldom quantified in connection with business failures and bankruptcies are:

- (1) Age of firm,
- (2) Size of firm, apart from assets at time of filing for bankruptcy (e.g. sales, employees),
- (3) Financial ratios (e.g. debt/equity, interest coverage) in the years prior to failure,
- (4) Growth path (plateau, steady growth, vs. over-expansion) in the years prior to failure, and
- (5) Utilization of government financial or management assistance during lifetime of the business.

To be relevant to how government policy might reduce the incidence of business failure or bankruptcy, the above characteristics should really be analysed in respect of samples of firms which did and did not go bankrupt. Something approximating a control group amongst active or surviving businesses should be fashioned from business registers, and lists of firms previously using one or another government program, in order to provide a basis for such policy-relevant analysis.



INDUSTRY CANADA/INDUSTRIE CANADA



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