An Empirical Study of Canadians Seeking Personal Bankruptcy Protection

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Introduction

In 1996, 79,631 Canadians went bankrupt. Coming, as it did, on the heels of large increases in 1994 and 1995, this record-breaking number of personal bankruptcies generated understandable concern.

Near the end of 1996, the Office of Consumer Affairs of Industry Canada contracted with Carleton University and COMPAS Inc. to conduct an empirical study of a sample of Canadians seeking personal bankruptcy protection in 1997. This report is the end result of that study.

The last time that a large-scale effort was made to study the empirical characteristics of a group of Canadians debtors was in 1982, when Brighton and Connidis studied a sample that had declared bankruptcy in 1977. In the intervening 20 years, the *Bankruptcy and Insolvency Act* — the major federal legislation regulating bankruptcy — was amended twice, in 1992 and 1997. Our study will allow future reform efforts to be informed by more up-to-date information about the social and economic circumstances of a sample of debtors seeking the protection of bankruptcy.

One feature of our study deserves special mention in this introduction. For pragmatic reasons, we could not survey a random sample of the population of all those seeking bankruptcy protection. Instead, as detailed in the attached COMPAS report, we selected a group of bankruptcy trustees and asked them to survey all those who sought their services (with regard to personal bankruptcy) during March and April of 1997. We cannot, therefore, claim to have a purely random, and thus representative, sample of the population. We have no reason, however, to believe that there would be any significant differences between our sample and one generated by random sampling. For example, we were successful in eliciting the co-operation of trustees in all provinces and in all major cities.

Nonetheless, because we do not have a random sample, we do not perform statistical tests for differences between means and proportions or for hypotheses concerning the coefficients in multivariate models. In Chapter 5, we show the size of differences in means and proportion that *would* be statistically significant if the samples were random.

In writing this report, we have relied heavily on two previous studies of bankrupt debtors. The first is the Brighton and Connidis report that has already been mentioned. The second is a report on American bankrupts published in 1986 by Sullivan *et al.* We owe those authors a debt of gratitude for their path-breaking work. We would also like to thank the staff of the Office of Consumer Affairs and especially our project officer, Konstantinos Georgaras, for their patience with the detailed nature of our work and for their contributions to our understanding of the relevant issues.

In the end, the protection provided by bankruptcy is part of the social safety net that guards Canadians against severe financial hardship. At the same time, bankruptcy laws must balance the rights of debtors and the rights of creditors. We hope that this study will help policy makers as they go about the task of establishing and maintaining the proper balance.

Chapter 1

A Demographic and Economic Profile of A Sample of Those Seeking Personal Bankruptcy Protection in 1997

There is no typical bankruptcy — so many different circumstances, so many different patterns of behaviour are at work that it is impossible to characterize any one as "typical." With that in mind, this Chapter describes our sample of debtors seeking personal bankruptcy protection in 1997 and compares them to their 1977 counterparts studied by Brighton and Connidis in 1984. We begin with some basic demographics — gender, age, marital status and education — and follow with a description of the overall economic situation of the sample, including their employment, household income and receipt of government transfers. Then we examine the structure of their assets and liabilities. Where possible, we compare our sample to that of Brighton and Connidis or to the Canadian population (using data collected by Statistics Canada).

Demographic Characteristics

In the past two decades, broad social trends may have changed the nature of the population that incurs debts and who are therefore at risk of personal bankruptcy. Small businesses are springing up more quickly than before. Women are more likely to work, to hold debt in their own names and to end up as single mothers. A greater proportion of young people attend postsecondary institutions and borrow to do so. Credit cards have become a common means of borrowing for consumer products and services.[1] As a result, the demographic characteristics of debtors seeking bankruptcy protection in 1997 may be quite different from the characteristics of debtors seeking bankruptcy protection in 1977.

Gender

About one quarter of the cases studied by Brighton and Connidis were filed by women; two-thirds were filed by men and the remaining 10 per cent or so were filed jointly by married couples. Brighton and Connidis appear to have believed that bankruptcy was predominantly influenced by the economic status of men. They write (p. 22):

> Most (two-thirds) are male; in fact, many, if not most, cases of female consumer bankruptcy are precipitated by the husband's bankruptcy.

In our sample, 41 per cent of the cases were filed by women. Roberts and Forde (1994), in their "sociodemographic profile" of Canadians declaring bankruptcy also found a 60-40 split in the percentages of men and women.

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[1] These trends are documented in Chapter 2.

Age

Most studies have found that potential bankrupts, as a group, are younger than the general population. Older people are more likely to have paid off their mortgages, accumulated savings and other assets, and built up seniority in their jobs.

Table 1 shows that almost 40 per cent of the Brighton and Connidis sample were under thirty years of age, about 52 percent were between thirty and fifty and the remaining 8 percent were over fifty. By comparison, almost 35 per cent of the Canadian population in 1976 were over fifty, 37 per cent were between 30 and 50 and only 28 per cent were under thirty.

Our sample is older than that of Brighton and Connidis but the Canadian population has gotten older as well. In our 1997 sample, roughly 32 percent were under thirty, 55 percent were between thirty and fifty and almost 13 percent were over fifty. The median person in our sample was 34 years old (not shown). In the Canadian population in 1995, almost 34 per cent were over fifty, 43 per cent were between 30 and 50 and only 23 per cent were under thirty.

Marital Status

Another trend, aside from the movement of the baby boom generation into middle age, has been the rise in number of divorces. In 1970, about 30,000 Canadian couples divorced; by 1980, that number had doubled to close to 60,000 per year. In each year from the mid-1980s until the present, about 80,000 couples divorced.

Many of those who divorce later remarry so that marital status at any one point in time need not reflect the rising number of divorces. Indeed, the percentages of the overall Canadian population in each marital status did not change very much from 1976 to 1995 (Table 2). Among those 15-64 years old in 1976, 30 per cent were single, 64 per cent were married and 6 per cent were widowed or divorced. By 1995, 32 per cent of those 15-64 years old were single, 60 per cent were married and 7 per cent were widowed or divorced. Even for those who divorce and later remarry, however, the initial marital disruption is often accompanied by economic disruption as one household becomes two, as the repayment of existing debts becomes more difficult and as consumption patterns change.

Almost 70 per cent of the Brighton and Connidis sample of bankrupts were married (or living in a common law arrangement), 22 percent were formerly married and only 8 per cent were single (Table 2). Twenty years later, the marital status of our sample of potential bankrupts was quite different. Only about 43 per cent were married (or living in a common law

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arrangement), 29 percent were formerly married and 28 per cent were single.[2]

The observed shift in the marital status of potential bankrupts is far larger than we would have expected based on the aggregate changes in the marital status of Canadians shown in Table 2. Among the 1977 bankrupts, divorced individuals were over-represented, compared to the Canadian population; this pattern continues in 1997. The change has come in the number of single people seeking bankruptcy protection. In 1977, single people were greatly under-represented among bankrupts; in 1997, the proportion of single potential bankrupts was similar to the proportion of single people in the population at large.

The relationship between overall changes in societal patterns of marital arrangements and the marital status of a group of people considering filing for personal bankruptcy is complicated by the fact that the sample of potential bankrupts is not a random sample drawn from the general population. For example, if patterns of debt accumulation have changed, so that single people are more likely to borrow and more likely to go bankrupt, the proportion of single people in a sample of those seeking bankruptcy protection would rise even if marital arrangements had not changed.

Educational Attainment

Since 1977, the average level of educational attainment in Canada has been rising. More Canadians now have high school diplomas, more have some form of post-secondary education and more have university or college degrees. Table 3 shows the highest level of education attained by Canadians 15 years of age and older in 1976 and in 1995 and compares those levels to the educational attainment of those responding to our survey.[3]

Overall, the educational attainment of our sample of debtors seeking bankruptcy protection was slightly higher than that of all Canadians in 1995. More than half of the sample (53 per cent) had some education beyond high school and more than one-quarter had earned some form of postsecondary degree. In the general population in 1995, 46 per cent had some postsecondary education, up from 25 per cent in 1980. One difference between the general population and the group seeking bankruptcy protection is that of the debtors in the sample with some postsecondary education, only 54 per cent had a postsecondary degree or certificate; in the general population, 81 per cent of those with postsecondary education had a certificate or a degree.[4] It is not clear whether this is the result of the difference in the age

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[2] Data on the number of divorces occurring each year in Canada appear in CANSIM series D190. The information on the marital status of Canadians in 1976 comes from the Statistics Canada, *Canada Year Book 1980-81*, p. 134. The 1997 information on marital status comes from Statistics Canada, *Annual Demographic Statistics*, 1995, p. 67. Brighton and Connidis report on the marital status of their sample on p. 20-21 of their report.

[3] Brighton and Connidis did not have information about the educational attainment of their sample.

[4] For the debtors, 52.9 per cent had some postsecondary education and 24.9 per cent did not have a postsecondary certificate or degree (Table 3) so 24.9/52.9 or 46 per cent of those with some post-secondary education lacked a certificate or degree. The corresponding calculation for Canadians, 15 years of age or older yields 8.9/46.2, or 19 per cent.

distributions or if potential bankrupts were more likely to have tried and failed to get a postsecondary degree.

Number of Dependents

The information on age and marital status suggests that those seeking bankruptcy protection are not concentrated in a single "family type" such as "young single individual" or "married with children." Table 4 indicates that almost half of the sample (46 per cent) had no dependents. However, a large number of bankrupts had at least one dependent less than 15 years old (39 per cent) and/or at least one adult dependent (29 per cent).

Another trend of the past few decades that deserves mention here is the rise in the percentage of families that have only one parent, often called "lone-parent" families. In 1976, about 650,000 families (or 10 per cent of Canadian families) had lone parents with the lone parent being the mother in roughly 80 per cent of the families. In 1996, there were over 1 million lone-parent families, comprising over 13 per cent of all families.[5] In our sample, 15 per cent of those seeking bankruptcy protection were unmarried and had at least one dependent under 21 years old.

Immigration

The vast majority of the potential bankrupts that we surveyed — about 85 per cent — had been born in Canada. We asked the other 15 per cent to report the year in which they had arrived in Canada and the part of the world from which they had arrived. Of the immigrants, about three-quarters had been living in Canada for more than 10 years and only about three per cent had arrived within the last five years. The majority (55 per cent) had emigrated from Europe or the United States. About 20 per cent had come from Latin America or the Caribbean with the remainder split evenly between the Middle East and Africa, and various parts of Asia.[6] These percentages are almost identical to those for the Canadian population as a whole. According to the 1991 Census, 16 per cent of Canadians were immigrants and about 72 per cent had been in Canada for more than 10 years. Most of the immigrants were from Europe (54 per cent) and about 25 per cent were from Asia. Thus the only difference between the immigrants in our sample and the immigrants in the general population is the under-representation of Asians among the debtors.[7]

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[5] The numbers for 1996 are from Annual Demographic Statistics 1996. Cat. 91-213; those for 1976 are from Ram, Bali. *Current Demographic Analysis: New Trends in the Family* (Statistics Canada, 1984).

[6] The timing of immigration may affect the probability of bankruptcy. If bankruptcy is the end result of a lengthy process, then recent immigrants may not have been in Canada long enough to be at risk of bankruptcy.

[7] The data on immigration in the Canadian population comes from Statistics Canada, *Immigration and Citizenship*, Catalogue no. 93-316, p. 1.

Economic Situation

Our survey instrument included questions about annual household income (before taxes), employment status, weeks worked and receipt of government transfers. The corresponding Statements of Affairs contain information about monthly income and expenses of the potential bankrupts. By combining those two sources of information, we can characterize the economic situation of our sample fairly completely.

Before starting to use data from the Statement of Affairs, it is worth discussing the nature of the information provided. Each potential bankrupt fills out a Statement of Affairs which represents the debtor's considered assessment of his or her financial position. The values reported on the Statement of Affairs are not immediately verified by the trustee but the trustee typically helps the person estimate the relevant values. Moreover, debtors must certify in writing that the information provided on the Statement of Affairs is accurate, to the best of their knowledge. Purposefully misrepresenting information provided on the Statement of Affairs can prejudice the discharge of one's debts and potential bankrupts are informed of this fact by the trustee.

Brighton and Connidis analyzed the economic situation of their sample by combining information about occupation from the Statement of Affairs with fragmentary data on income and employment that was gathered by the Official Receiver during the bankruptcy process.[8]

Overall, Brighton and Connidis concluded (p. 37) that:

> The data on socio-economic status and employment history presented above show that consumer bankrupts are drawn quite heavily from the lower socio-economic categories (although it must be remembered that a small but significant proportion of all consumer bankrupts are drawn from the professional, managerial and skilled worker groups).

We begin the analysis of our sample by looking at the distribution of annual household income reported by our sample and follow that with a description of the monthly income and expense information appearing on the Statement of Affairs.

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[8] Brighton and Connidis did not survey personal bankrupts, relying instead on official records of the bankruptcies. On the source of their information on income, they write (p. 29):

> Some data was available on incomes, including the responses to a question put to each bankrupt by the Official Receiver as to whether the person was employed at the time and as to his or her income ... the data was not very reliable but did give some idea of general income levels. There were only 879 (of 1,509) valid observations on the income question.

Annual Household Income

Table 5 shows the size distribution of annual pretax household income as reported on the survey; the quintile limits of the distribution are also shown.[9] Median household income in the sample was about $24,000, well below the median income of $37,130 for all Canadian families and unattached individuals.[10]

As is evident, the sample of those seeking bankruptcy protection was much poorer than the general population. Much larger percentages were in the lower parts of the distribution (51.8 per cent of the bankrupt had less than $25,000 in annual incomes versus 33.1 per cent of the general population) and few were in the upper parts (3.7 per cent of the bankrupts had incomes greater than $75,000 versus 15.5 per cent of the general population). In reviewing the income numbers, we should keep in mind that bankrupt debtors are *not* the poorest segment of the Canadian population. Each person seeking bankruptcy protection must have been able to borrow in the past — without debts there would be no need for bankruptcy protection — and must have the wherewithal to pay the bankruptcy trustee about $1,200 for his or her services.

Because of the way in which the Official Receiver asked bankrupts about their income, Brighton and Connidis were forced to report three different average incomes, one for a group who reported before-tax incomes, one for those who reported after-tax incomes and one for those who reported income but did not specify whether the reported income was before or after tax. The three means (adjusted for inflation) were:

Sample of 1977 Bankrupts

Gross Income	$29,687
Net Income	$19,204
Unknown Income	$21,609

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[9] Throughout this report, we use distributions to show the range of variation of particular variables. A *decile* distribution divides the sample into ten equal parts based on the values of the variable in question. A quintile distribution divides the sample into five equal parts and a quartile distribution divides the sample into four parts. For example, in Table 5, $11,000 is the limit of the first quintile of annual household income; this means that the 20 per cent of the sample with the lowest incomes had annual incomes of $11,000 or less. Forty per cent of the sample had annual incomes that were lower than the second quintile limit of $19,500. Therefore, we know that the second quintile is defined by the limits $11,000 and $19,500. The second quintile defines the income range of those between the 20th and 40th percentiles of the income distribution. The top 20 per cent had incomes between $43,000 and the highest reported income of $200,000. The last category should always be viewed cautiously since it may be quite unrepresentative. In our sample, the second-highest annual income was $125,000 and only 10 individuals of the 1,018 respondents reported an annual income above $80,000.

[10] Item non-response was significant on this survey question, either because respondents did not know the overall income of the household in which they were living or because they were reluctant to answer the question. About four-fifths of the sample (856 of 1018) answered this question; Table 5 is based on those who did answer.

The mean pre-tax income in our sample was $28,622, quite close to the mean gross income of $29,687 reported by Brighton and Connidis. Assuming the income information reported by Brighton and Connidis was reasonably accurate, the 1997 group of potential bankrupts is thus similar to the 1977 group, at least in terms of their mean pretax annual income.

Monthly Income and Expenses

On their Statements of Affairs, potential bankrupts report monthly income in three categories — net monthly take-home pay, the monthly contributions from dependents (if any) and "other" monthly contributions. Only those who were currently employed would have had net monthly take-home pay; others depended on the contributions of other family members and on government transfers. Contributions by dependents are captured directly while contributions from other family members and government transfers are combined into "other income." Also reported on the Statement of Affairs are monthly expenses in two categories — fixed expenses such as food and housing and "other" expenses.

The three panels of Table 6 show the distribution of monthly income and expenses and clearly demonstrate the severe economic problems of our sample. Almost one-third reported no monthly take-home pay (although this included the group who reported that they "did not know") (Table 6, Panel A). The median pay for those reporting a positive value was only $1,300 per month. Dependents potentially contribute to the monthly income of the sample but most (about 77 per cent) reported receiving no income from any dependents.[11] Of the one quarter who reported a positive value, the median was a substantial $1,182 per month. About half of the sample had income from "other contributions," presumably from family members or from government transfers. The median amount received for those who had positive values was about $500.

Overall, median net monthly income from all sources was $1,400; that monthly income would translate into an annual income of $16,800, if it continued for 12 months. By way of comparison, the Statistics Canada Low Income Cut-Off (LICO) for a single adult living in a large urban area was $16,874 in 1995. For a family of four, the LICO was $31,753.[12] Monthly expenses followed roughly the same pattern as monthly income, with a median of $1,460.

Of greatest interest, perhaps, is the difference between monthly income and monthly expenses for each person, shown in Panel C of Table 6. This variable gives a sense of whether or not the debtor had any "surplus" income that might be applied to paying off their debts. Not surprisingly, perhaps, more than half of the potential bankrupts had monthly expenses that

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[11]Almost 20 per cent of the sample did not know what their dependents contributed to their monthly income.

[12]The information about Low Income Cut-Offs is from Statistics Canada, *Income Distributions by Size in Canada*, Catalogue no. 13-207-XPB, p. 50.

were equal to or greater than their monthly income. Only about 37 per cent had a monthly income that was greater than their monthly expenses and the positive amounts that occurred were usually quite small. Such small amounts of "surplus" income suggest that the possibility that our sample could repay their debts, given their current income, was remote.

Employment Status

The employment status information collected on our survey describes what respondents were doing at the time they filled out the survey. Our survey questions were not as detailed as those asked by Statistics Canada and thus no exact comparison can be made. A rough comparison to the overall Canadian population, shown in Table 7, reinforces the point made above about the relatively weak economic status of those seeking bankruptcy protection.

Of those aged 25-54 years old in the general population, 83.7 percent were in the labour force in 1996; this rate is roughly the same as the 85 per cent labour force participation rate of those seeking bankruptcy. Unemployment, however, was considerably higher among the potential bankrupts. Of those who were in the labour force, the unemployment rate was 9.5 per cent in the general population but more than 25 per cent among the sample of those seeking bankruptcy protection.

While the current employment status of each respondent is of interest, their labour force participation over a longer time period may also be relevant to their bankruptcy. In Table 8, we see that only 12 per cent of the sample had not worked at all in the 12 months previous to seeking bankruptcy protection. The median number of weeks worked in the previous 12 months was 40 and more than 30 per cent reported working the full year (51 or 52 weeks). Thus the problem for many of these people was their inability to find work that was both steady and remunerative rather than their inability to find work at all.

One possible reason for the high labour force participation of those seeking bankruptcy, and for their apparent attachment to the labour force, is that employment is often a condition for applying for credit in the first place.

Occupation

The Statement of Affairs contains the occupation of those seeking bankruptcy; if the person is not working for pay, that information is reported in the space provided for the occupation. For the majority of our sample — almost 70 per cent — we can therefore collect occupational information and compare it to that reported for Canada as a whole and to similar information collected by Brighton and Connidis. The other 30 per cent of the sample were either unemployed (and did not report an occupation) or were out of the labour force (including homemakers, students and retired persons).

Occupational information is often summarized by scales that attempt to measure "occupational prestige" with "self-employed professionals," "employed professionals" and "high-level managers" at one extreme and with unskilled workers near the other extreme.

When using such scales, one must first convert each response (e.g., "registered nurse") to one of a set of standardized numerical codes. One such set of codes is called the Standard Occupational Classification (SOC) codes. For example, a "registered nurse" is in category 3131. Occupational prestige scales then link each of the SOC codes to new categories arranged along the spectrum from high to low prestige occupations. For example, a registered nurse (SOC code 3131) would be placed with "semi-professionals.".

Both the latest General Social Survey and Brighton and Connidis used an occupational prestige scale called the Pineo-Porter-McRoberts (PPR) scale. This scale has 16 categories, ranging from self-employed professionals to farm labourers. To facilitate comparison with those two sources, we also coded our occupational data according to the PPR scale (Table 8a).

In the article that first described the scale (Pineo, Porter and McRoberts, 1977), PPR suggest that it is sometimes useful to collapse the 16 category scale even further. In their sample of bankrupts, Brighton and Connidis found that 3 per cent were in a category that combined "self-employed professionals", "employed professionals" and "high-level management." By contrast, 10 per cent of the Canadian labour force were in that category in the 1971 census. When we combine our occupational categories in the same way, we find that 4.5 per cent were in this high prestige group of observations. By 1995, however, according to the General Social Survey of that year, 12.5 per cent of Canadians were in this category.

At the other end of the occupational prestige spectrum, Brighton and Connidis found that 38 per cent of their sample were in the three unskilled occupational categories as compared to 24 per cent of the Canadian labour force in 1971. In our sample, 33 per cent were in the unskilled categories as opposed to 21 per cent of the General Social Survey sample.

Brighton and Connidis concluded (p. 24) that:

> These findings clearly show that consumer bankrupts do not constitute a representative sampling of the labour force. Rather, it is obvious that consumer bankrupts are drawn heavily from the lowest skill levels... This is not to say, of course, that such groups are immune from problems of bankruptcy; they represent a small but significant proportion of consumer bankrupts.

Based on the occupational information in our sample, it would seem that those with relatively low skill levels are still disproportionately represented among those seeking bankruptcy protection.

Receipt of Government Transfers

Despite being active in the labour force, a majority of the sample (57 per cent) had received some form of government transfers in the two years previous to seeking bankruptcy protection. About 85 per cent of those receiving government transfers (45 per cent of the whole sample) had received either Unemployment Insurance benefits, Social Assistance or

both. These percentages are far higher than those for the general population. The Canadian Council on Social Development reports that, in Canada as a whole, 9.6 per cent of the population received social assistance in 1996. According to the Human Resources Development Canada, 1.2 million Canadians (or 4.0 per cent of the overall population) received Employment Insurance benefits in January, 1995.[13]

Receipt of unemployment insurance benefits or social assistance payments is an acknowledgment, by an outside institution, of one's economic difficulties.[14] Still another indication of economic difficulty is that about one-third of the sample had applied for additional credit and been turned down. That is, another outside institution — in this case a creditor rather than a social program — had judged the debtor's economic situation to be difficult. Combining the government and private "screening," 655 of the 1,018 debtors in our sample, or 64 per cent, had either received unemployment insurance, received social assistance benefits or applied for and been turned down for credit.

Summary

Overall, Canadians facing bankruptcy were not doing very well in terms of income and employment. While this seems obvious, it is worth mentioning because of the opinion, sometimes expressed, that many bankrupts are *not* in particularly difficult circumstances and are simply taking advantage of bankruptcy laws to avoid repaying their debts.

In terms of their economic situations, our sample is much like the sample studied by Brighton and Connidis 20 years ago. Their incomes are relatively low (although certainly not all would qualify as "poor" by standard definitions) and they have little income beyond that necessary to live quite modestly. If they can find work, they work in jobs that yield relatively low incomes. The proportions that receive either Employment Insurance or Social Assistance suggest that even the employment they have may not be very stable.

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[13]The data on social assistance come from Canadian Council on Social Development and include all members of families receiving social assistance. The data on the numbers receiving unemployment insurance come from Statistics Canada, *Unemployment Insurance Statistics*, January, 1995, Catalogue no. 73-001, p. 10. The federal program formerly known as Unemployment Insurance is now known as Employment Insurance.

[14]Those receiving Employment Insurance (EI) need not be poor; EI claims are based largely on having been employed in an insurable job for the requisite number of weeks. There is no means-testing done before EI claims are approved. Nonetheless, the fact that a person has been unemployed and has not quickly found another job is an indication of potential economic difficulty.

Liabilities

As noted above, our primary source of information about the actual financial situation of the sample is the Statement of Affairs filed on behalf of each potential bankrupt by his or her trustee. Before comparing dollar values reported in our study to those reported in the Brighton and Connidis report, we must first adjust their numbers to take account of the overall changes in price levels that have occurred since 1977. In the twenty years that separate our sample from that studied by Brighton and Connidis, consumer prices rose considerably. Using 1986 as a base (that is, 1986=100), the consumer price index was 58.1 in 1977 and 151.6 in 1996. In the remainder of this section, whenever we want to compare the findings of Brighton and Connidis to our own, we increase the dollar value reported by Brighton and Connidis by the factor of 2.6 (151.6/58.1); these are called "adjusted" figures for 1977. The adjusted figures are reported along with the original numbers as they appear in the Brighton and Connidis report.

In 1977, Brighton and Connidis found that the unadjusted mean level of liabilities was over $25,000; the median was much lower, just under $11,000 (Table 9).[15] With the price adjustment, the mean for the Brighton and Connidis data was $66,281 and the median $28,249.

As Table 9 shows, the liabilities of the "average" debtor seeking bankruptcy protection have not changed much since 1977. The median level of total liabilities fell slightly from $28,249 to $26,016. On the asset side, the median level of assets was still quite low, but had increased somewhat over time. Adjusted for inflation, the median bankrupt in 1977 had assets of about $1,000 while the median 1997 potential bankrupt had assets of $3,000. The median deficiency — the difference between liabilities and assets — in the 1977 Brighton and Connidis sample was $23,362, when adjusted for inflation, as compared to the median deficiency of $16,885 in 1997.

Thus, the picture that emerges is that potential bankrupts in 1997 were in roughly the same asset and liability position as were bankrupts in 1977. One could perhaps argue that the 1997 bankrupts are a bit better off since their assets are somewhat larger and the median gap between assets and liabilities, adjusted for inflation, is about 75 per cent of what it was in 1977 ($16,885/23,362). Given the very large standard deviations for these variables, however, that difference may not be very important.

The median levels of liabilities and assets give a sense of the central tendency of those variables. But when the phenomenon under study is quite heterogeneous — with many

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[15]Data on financial assets and liabilities can be quite skewed, with some very large values at the upper end. In such cases, the arithmetic average will often give a misleading picture of the central tendency of the data, since the high values can raise the mean quite substantially. In such cases, the median — the value of a variable below which half of all values lie — is a better indicator of central tendency. We generally rely on medians in this report although we occasionally report means as well.

different economic situations being labeled "bankruptcy" — it is useful to look at a more complete distribution of values. To that end, Table 10 shows the decile limits for total liabilities and total assets.[16]

One interesting feature of these distributions is the rough equality in the middle of the distributions. The gap is only $17,000 between the third decile limit ($16,072) and the sixth decile limit ($33,458) for liabilities (Column 1) and only $13,000 for the difference between assets and liabilities shown in Column 3 ($26,474 to $13,750). The implication is that the bulk of potential bankrupts have liabilities in the fairly narrow range of $15,000 to $35,000 and a gap between assets and liabilities of between $15,000 and $25,000.

Summarizing their data on total liabilities, Brighton and Connidis wrote:

> A few general impressions emerge from the data. One is that the amount of indebtedness is not extremely high in most cases...it would seem from the typical amount of liabilities that if consumer bankrupts had even $300-$400 per month to apply against their debts they could remain solvent.

Given the data in Tables 9 and 10, that situation seems not to have changed, although inflation makes the $300-$400 range grow to $800-$1,000. Nonetheless, as we saw in the last section, the majority of potential bankrupts do not have anything close to $800 a month in surplus income to devote to debt repayment. They are struggling to buy food, shelter and clothing on the limited incomes available to them.

Table 10 indicates that the majority of bankrupts had very low asset levels. This may be because most assets had already been sold by the time the person filed for bankruptcy or it could be that the debts incurred represented items that could not be resold (including personal services, post-secondary education or tax obligations.) As was true in the Brighton and Connidis sample, however, a minority of bankrupts had substantial assets, although these assets might have been encumbered by mortgages.

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[16]As discussed in a previous footnote, a decile distribution divides the sample into ten equal parts based on one particular variable. For example, looking at column 1 of Table 10, we see that the ten per cent of potential bankrupts who had the lowest liabilities were those with liabilities between 0 and $8,500. Those in the 10-20 per cent range (the second lowest decile) had liabilities between $8,500 and $12,187. Any one individual was likely to be in different deciles for different variables. For example, a potential bankrupt could be in the highest decile of liabilities (above $136,863) and be in the lowest decile of assets (between 0 and $200).

Structure of Liabilities

Although those seeking bankruptcy protection in 1997 were in roughly the same economic position as were bankrupts in 1977, we know that many more people found themselves in the position of having to seek bankruptcy protection. One key to understanding why there are so many more bankruptcy cases may lie in analyzing how the composition of those liabilities has changed.

Each potential bankrupt lists their liabilities in their Statement of Affairs. Each creditor is named, and the amount of the debt specified. Often, the purpose of the debt is either made explicit or can be inferred from the name of the creditor. Using that information, we categorized each liability for each bankrupt into one of 24 mutually exclusive categories defined by either the source of the debt or by the purpose of the debt. For example, two of the 24 categories are "Bank - Mortgage" and "Other Financial Institution - Car Loan." For each of the 24 categories, we coded the preferred, secured and unsecured amounts separately.

In order to summarize the results, we used the 24 categories of debts to create one set of categories differentiated only by the source of the credit (e.g., all bank debts) and another set distinguished its type (e.g., all mortgages). The liabilities are classified as having come from nine different sources:

- banks
- other financial institutions
- various levels of government
- credit card companies
- retailers
- utilities
- private individuals
- medical and dental institutions
- a residual category (called "other debts") whose source was either not identifiable or in a miscellaneous category.

Selected types of debt were also identified:

- mortgages
- car loans
- student loans
- debts to Revenue Canada.

The classifications by source and type represent two different ways of categorizing the same information. For example, a student loan would appear in the "government" category when we discuss sources of debt but would have its own category when we discuss types of debt. Similarly, a bank mortgage would appear under "bank" when we discuss sources and under "mortgage" when we discuss types.

The average number of debts per bankrupt in our sample was 8.6 with a median of 7 (not shown). This is broadly similar to the number of debts in the sample studied by Brighton and Connidis, which had the same median but a higher mean of 14. About one-third of our sample had more than 10 debts as did 30 per cent in the Brighton and Connidis sample.

Table 11 shows the breakdown of the number of debts, both for our sample and for the Brighton and Connidis sample, by the various sources. The proportion of bank loans remained roughly constant at 12 and 14 percent. The proportion of debts owed to "other financial institutions" — trust companies, credit unions and finance/acceptance companies — fell from 23 per cent to 13 per cent. The proportion of debts that were owed to the government and to credit card companies rose considerably while the proportions owed directly to retailers or to private individuals fell considerably.

Table 12 compares the number of liabilities in seven of the nine source categories.[17] Not surprisingly, the structure of liabilities varied widely across the sample. Credit card debt was quite common — almost 69 per cent had at least one credit card debt — but it is perhaps *more* surprising that more than 30 per cent did *not* have any outstanding credit card debt. Still more surprising was the fact that the most common liabilities (at least in terms of the proportion of the sample who had at least one liability in the category) were debts owed to the government, either for student loans, unpaid taxes or for some other purpose. Just under 70 per cent of the sample had a liability to some level of government.

To further illustrate the levels of debts by source, Table 13 shows the decile limits for the amounts owed to each source. Each column of the Table refers to one source of debt — banks, other financial institutions, government agencies and so on. Potential bankrupts need not have debts in each category. For example, a sample respondent might have owed money to a bank and to the government but owed nothing to a credit card company or to a retail store. Conversely, money might be owed to private individuals and the government but not to any financial institution. As in Table 10, any one potential bankrupt might be in the lowest decile in one category but in the highest decile in another category.[18]

Looking at the first column in Table 13, for example, we see that 47.6 per cent of the sample had no debts to banks. The first decile limit is $0 — if we were to arrange the amounts owed to banks in ascending order, the lowest ten per cent of the sample would have had values less than or equal to zero. Similarly, the second decile limit is also $0, as is the third and the

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[17] Debts for the other two categories — utilities and medical and dental services — are excluded from Table 12 because they were both rare and small in size.

[18] Another way to present this data would have been to organize the sample into deciles according to the total amount of liabilities. Then we could have shown the median or mean amount owed in each category of debt. This would have resulted in a profile of the debts held by, say, those with relatively low overall debts. The structure of their liabilities could then have been compared to the structure of liabilities of debtors in the fifth decile or in the highest decile of liabilities. We chose the method used in Table 13 because we thought the distribution of debts for each particular source of debt was more informative.

fourth.[19] The fifth decile — also known as the median — will not be zero since only 47.6 per cent have zero values; the other 2.4 per cent who fall into the fifth decile will have positive values. The median, however, will be quite low in a case like this since only 2.4 per cent of the sample (50 per cent minus 47.6 per cent) have debts to banks that are equal to the median or smaller; the median for the whole sample is $500, as shown in column 1 of Table 13.

Some debtors have zero values in particular columns of Table 13 because they had incurred no debts from the source in question. Others had debts owing to that source but the value of the debt was unknown at the time the Statement of Affairs was filled out. For example, the debtor might know that he or she owed money to Revenue Canada but the precise amount may not have yet been determined. For that reason, the percentage with zero values in Table 13 is different from the percentage with zero debts in Table 12. This distinction is especially important for government debt. Only 30.3 per cent of sample reported no debts to the government in Table 12. However, 39.8 per cent had a zero value in Table 13; this is probably because a fair number of potential bankrupts knew they owed the government money but either did not know how much was owed or knew that the amount of the liability was contingent.

Because a relatively large group of debtors had no debts in any one category, we also report the median value for those who reported positive debts. For example, among the 52.5 per cent of the sample who owed money to banks, the median amount owed was $14,200.

The decile limits in Table 13 illustrate the monetary importance of each source of credit; the larger the decile limits, the greater the amounts owed. Table 13 indicates that debts owed to banks were the largest, presumably because a large part of mortgage debt was concentrated in that category. The next most important creditor (in terms of the size of the median debt for those who had at least one liability in the category) was "other financial institutions" with a median of just over $8,000; mortgages are an important source of liabilities to those institutions as well. The government was the next largest source with a median debt of $6,000 among those had such debts. Debts on credit cards and debts owed to retailers were quite common but were generally smaller. The median credit card debt was just over $3,500 for those who had such debts while the median was $1,600 for retailer debt and $2,000 for "other" debt.

The purpose for which debt was incurred is as important as its source. Table 14 brings together the number and amounts of liabilities in four of our "type of debt" categories — mortgages, car loans, student loans and debts to Revenue Canada. It is important to note that these debts are already included in Table 13 in whatever category best characterized the source of the credit.

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[19] In some distributions — like these — a large subset of the sample (here more than 40 per cent) have the same value. In Table 13, that value is $0. If it was decided that individuals needed to be placed in the first, second, third, fourth or fifth deciles, that placement would have to be made arbitrarily.

As Panel A of Table 14 indicates, the vast majority of bankrupts did not have mortgages. Nor did the majority have either car loans or student loans. In each case, roughly 75 per cent of the sample did not have such liabilities. Almost half of all bankrupts, however, had debts to Revenue Canada. Mortgages were by far the most important category in the sense that, among the bankrupts who had mortgages, the median amount of the liability was quite large, almost $75,000 (Panel B of Table 14). Of course, that debt was probably counterbalanced on the asset side by the value of the house itself. Similarly, the median car loan, for those that had such loans, was $10,000. The median student loan, for those who had them, was $10,100. Debts to Revenue Canada, while more common than mortgages, car loans or student loans, were typically smaller in size, with a median of $2,500 for those who had such liabilities (and who knew their magnitude).[20]

Structure of Assets

On his or her Statement of Affairs, each potential bankrupt reported on the presence and amount of 15 types of assets. Each asset was either then claimed as exempt (and therefore protected against being sold to pay outstanding debts) or non-exempt (and therefore likely to be sold). The assets listed on the Statement of Affairs are called "assets as shown" since they involve an estimate, by the potential bankrupt, of the value of assets. During the course of the months following the filing of the Statement of Affairs, trustees liquidated the bankrupts' non-exempt assets and then created an itemized list of the assets and the value that they actually yielded.

As noted in (Table 9), the overall median level of assets in our sample (including those with no assets at all) was $3,000, somewhat higher than the inflation-adjusted level of assets in the Brighton and Connidis sample ($1,040). Table 15 shows the decile distribution of exempt assets, non-exempt assets and total assets. As before, each column represents a different variable so that a respondent could be in a different decile for each variable. And, as before, we also report the median asset level, for those with positive asset values in each category as well as the percentage reporting no assets.

We see that median asset levels were quite low, even for those who had positive asset values, both in absolute terms and in comparison to levels of liability reported above. The median amount of exempt assets was $2,000 for those who had positive amounts of exempt assets and the median level of non-exempt assets (for those with positive amounts) was $2,090. The overall median for combined exempt and non-exempt assets, for those with positive values, was $3,150.

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[20] For example, Panel 1 of Table 14 indicates that 48.2 per cent of the sample had debts to Revenue Canada. Panel B, however, reports that only 34.5 per cent of the sample reported positive values for debts to Revenue Canada. This discrepancy is the result of a large number of debtors who reported that they owed money to Revenue Canada but that the amount was either unknown or contingent.

In general, large proportions of the sample had no assets in any one of the 15 asset categories. Instead of presenting the decile distributions for each kind of asset, therefore, the two Panels of Table 16 show only the proportion of the sample that had at least one asset in each category and, for those with at least one asset in the category, the median value of assets in that category. Panel A of Table 16 reports on exempt assets while Panel B shows non-exempt assets.

The value of exempt assets available to the bankrupt was quite small in each category. Homes were the most highly valued exempt assets but only 5.8 per cent of the sample had homes that they claimed as exempt assets (Panel A of Table 16). The other exempt assets were either held by a small proportion of the sample (for example, insurance, or stocks and bonds) or were held by sizable proportions but were of little value (for example, furniture, automobiles or personal effects).

According to Panel B of Table 16, the value of non-exempt assets available to the creditors was also quite small although a small proportion of debtors had homes (14.4 per cent) or cars (27.5 per cent) that could be sold.

Summary

Overall, it would seem that individuals seeking personal bankruptcy protection in 1997 were not much different than those who sought bankruptcy in 1977. They were in severe economic straits with low incomes, poor job prospects and a history of social assistance or unemployment insurance receipt. Like the Brighton and Connidis sample, the debtors in our sample do not seem to be exploiting bankruptcy laws in order to relieve themselves of legitimate debts.

The absolute number of personal bankruptcies in Canada has risen dramatically — by a factor of eight — since 1977. So if the average bankrupt is a little different than his or her 1977 counterpart, we must account for the larger number of people who found themselves in a situation where bankruptcy seemed to be the best option. Two of the major possibilities are that:

- the level of debt that each person holds is higher so that a greater proportion of the Canadian public is at risk of bankruptcy; and

- debt levels have not changed much, on a per capita basis, but more people find themselves unable to pay what they owe.

It is likely that both alternatives are relevant to varying degrees. That is, there may be more people at risk of bankruptcy because of rising debt levels and also more people at risk of falling into an economic situation (through the loss of a job or marital disruption, for example) that forces them into bankruptcy.

The next chapter of our report examines these possibilities.

Table 1

The Distribution of Age
**in the Samples of 1977 and 1997 Potential Bankrupts
and for the Canadian Population in 1976 and 1995**

Age Category	1997 Survey of Potential Bankrupts	Canada in 1995
18-29 Years Old	31.9	23.3
30-49 Years Old	55.4	42.9
50 or More Years Old	12.7	33.8

Age Category	1977 Brighton and Connidis Sample of Bankrupts	Canada in 1976
20-29 Years Old	39.8	28.0
30-49 Years Old	52.5	37.1
50 or More Years Old	7.7	34.9

Sources:

Canada in 1995: Statistics Canada, *Annual Demographic Statistics, 1995,* Catalogue no. 91-213-XPB, p. 64

Canada in 1976: Statistics Canada, *Canada Year Book 1980-81*, p.134

Brighton and Connidis: Brighton and Connidis (1984), p.20. The Brighton and Connidis percentage includes 0.6 per cent who were 18-19 years old.

1997 Survey of Potential Bankrupts: Calculations by the authors from the 1997 Survey of Potential Bankrupts.

Table 2

Marital Status
in the Samples of 1977 and 1997 Potential Bankrupts
and for the Canadian Population in 1976 and 1995

Marital Status	*1977 Brighton and Connidis Sample of Bankrupts*	*Canadian Population 15-64, 1976*	*1997 Survey of Potential Bankrupts*	*Canadian Population 15-64, 1995*
Single	8	30	28	32
Married	70	64	43	60
Divorced, Separated, Widowed	22	6	29	7

Sources:

Canada in 1995: Statistics Canada, *Annual Demographic Statistics, 1995,* Catalogue no. 91-213-XPB, p. 67

Canada in 1976: Statistics Canada, *Canada Year Book 1980-81*, p.134

Brighton and Connidis: Brighton and Connidis (1984), p.20-21.

1997 Survey of Potential Bankrupts: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 3

Highest Level of Education Attained
in the Survey of Potential Bankrupts
and for All Canadians, 15 Years of Age or Older, in 1980

Highest Level of Education Attained	All Canadians, Aged Over 15 in 1980	All Canadians, Aged Over 15 in 1995	1997 Survey of Potential Bankrupts
Elementary School	22.9	12.7	3.5
Some High School		20.2	22.3
Graduated High School	52.0*	19.6	21.4
Some Post-Secondary	7.5	8.9	24.9
Graduated from a Technical or Vocational School, community College or CEGEP	9.5	25.4	16.4
Graduated from University or Post-graduate Degree	8.1	13.3	11.6

* This percentage represents both high school graduates and those with some high school; the source did not distinguish between the two.

Sources:

Column (1): Statistics Canada, *Education in Canada*, Cat 81-229 1985
Column (2): Statistics Canada , *Labour Force Annual Averages*, Cat. 71-220, p. B-11.
Column (3): Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 4

Number of Dependents
By Age Category
in the 1997 Survey of Potential Bankrupts

Number of Dependents	*Overall Number*	*Age 15 or less*	*Age 16-21*	*Adults*
0	46.5	60.9	89.0	71.1
1	17.2	16.5	7.5	26.3
2	18.7	16.9	3.3	2.5
3	11.6	4.0	0.2	0.0
4	4.2	1.6	0.0	0.1
5	1.9	0.1	0.0	0.0

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 5

Size Distribution of Income
in the 1997 Survey of Potential Bankrupts and for All Canadian Families and Unattached Individuals

Income Category	1997 Survey of Potential Bankrupts	All Canadian Families and Unattached Individuals
Less than $10,000	14.9	7.1
$10,000 - $14,999	13.5	9.8
$15,000 - $19,999	12.2	7.9
$20,000 - $24,999	11.2	8.3
$25,000 - $29,999	8.2	6.8
$30,000 - $34,999	8.0	7.3
$35,000 - $39,999	6.3	6.5
$40,000 - $44,999	6.4	5.9
$45,000 - $49,999	4.7	5.3
$50,000 - $54,999	3.4	4.8
$55,000 - $59,999	2.2	4.2
$60,000 - $64,999	3.7	4.1
$65,000 - $69,999	0.5	3.4
$70,000 - $74,999	1.1	3.1
$75,000 - $79,999	1.2	2.4
$80,000 - $89,999	1.4	4.1
$90,000 - $99,999	0.2	2.6
More than $100,000	0.9	6.4
Median Income	$24,000	$37,130

Quintile Distribution of Income
in the 1997 Survey of Potential Bankrupts and for All Canadian Families and Unattached Individuals

Quintile	1997 Survey of Potential Bankrupts	All Canadian Families and Unattached Individuals
First	$11,000	$16,694
Second	$19,500	$30,013
Third	$29,800	$45,217
Fourth	$43,000	$67,598
Maximum Value	$200,000	Not Available

Sources: Column (1): Calculations by the authors from the 1997 Survey of Potential Bankrupts
Column (2): Statistics Canada, *Income Distributions by Size in Canada*, Catalogue no. 13-207, p. 113, p. 158

Table 6

Decile Distribution of Monthly Income and Expenses
in the 1997 Survey of Potential Bankrupts

Panel A - Monthly Income

	Net Monthly Take-Home Pay	Contributions of Dependents	Other Contributions	Total Monthly Income
Lowest	$0	$0	$0	$447
2	$0	$0	$0	$800
3	$0	$0	$0	$1,000
4	$600	$0	$0	$1,200
Median	$920	$0	$0	$1,400
6	$1,200	$0	$141	$1,650
7	$1,400	$0	$308	$1,925
8	$1,684	$400	$618	$2,235
9	$2,000	$1,300	$1,037	$2,675
Maximum Value	$13,110	$3,000	$2,522	$13,110
Percentage with No Income or Unknown Income	32.0	77.3	52.1	6.5
Median Income of Those Who Reported Non-Zero Values	$1,300	$1,182	$496	$1,496

Table 6 (continued)

Decile Distribution of Monthly Income and Expenses
in the 1997 Survey of Potential Bankrupts

Panel B - Monthly Expenses

	Cost of Fixed Expenses	Other Expenses	Total Expenses
Lowest	$0	$0	$595
2	$470	$0	$870
3	$639	$0	$1,054
4	$808	$100	$1,227
Median	$980	$210	$1,460
6	$1,180	$395	$1,711
7	$1,440	$595	$1,983
8	$1,742	$890	$2,336
9	$2,196	$1,327	$2,750
Maximum Value	$13,390	$3,933	$13,390
Percentage with No Expenses or Unknown Expenses	11.8	34.6	4.2
Median Expenses of Those Who Reported Non-Zero Values	$1,100	$509	$1,478

Table 6 (continued)

Decile Distribution of Monthly Income and Expenses
in the 1997 Survey of Potential Bankrupts

Panel C - Difference Between Monthly Income and Monthly Expenses

	Difference between Income and Expenses
Minimum Value	Minus $3,945
Lowest	Minus $461
2	Minus $199
3	Minus $86
4	$0
Median	$0
6	$0
7	$49
8	$139
9	$259
Maximum Value	$11,700

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 7

Employment Status
**in the 1997 Survey of Potential Bankrupts
and for All Canadians, Aged 25-54 in 1996**

Labour Force Status	1997 Survey of Potential Bankrupts		All Canadians, 25-54 Years of Age or Older in 1996
In the Labour Force	84.6		83.7
Employed full-time		42.6	
Employed part-time		12.9	
Self-employed		8.0	
Unemployed, Looking for Work		21.1	9.5
Out of the Labour Force	15.4		16.3
Unemployed, Not Looking for Work		2.8	
Homemaker		4.1	
Retired		2.5	
Other (Student, Retired, Not Working for Health Reasons)		8.1	
Total	100.0		100.0

Sources:

Column (1): Calculations by the authors from the 1997 Survey of Potential Bankrupts
Column (2): Statistics Canada, *Historical Labour Force Statistics, 1996*

Table 8

Number of Weeks Worked
in the Twelve Months Previous to Seeking
Bankruptcy Protection for the 1997 Survey of
Potential Bankrupts

Category of Weeks Worked	Percentage in Category
Zero	12.0
1-10	6.5
11-20	11.2
21-30	12.1
31-40	12.6
41-50	17.9
51-52	28.4
Total	100.0

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 8a

Occupational Prestige
Using the Pineo-Porter-McRoberts Scale,
in Samples of 1977 and 1997 Potential Bankrupts
and in the 1995 General Social Survey

Marital Status	1977 Brighton and Connidis Sample of Bankrupts	1997 Survey of Potential Bankrupts	1995 Canadian Population
Self-employed Professional	0	0	1.3
Employed Professional	1.9	3.9	7.9
High-level management	1.0	0.6	3.3
Semi-professional	2.7	7.1	8.8
Technician	0.7	1.2	1.8
Middle management	3.2	4.1	9.8
Supervisor	3.4	3.1	2.2
Foreman	1.1	0.6	2.0
Skilled clerical-sales-service	4.9	7.0	7.9
Skilled crafts and trades	13.3	15.5	9.9
Farmer	0.7	0.1	1.7
Semi-skilled clerical-sales-service	20.7	18.9	14.3
Semi-skilled manual labour	8.1	4.4	8.1
Unskilled clerical-sales-service	6.1	14.2	7.8
Unskilled manual labour	31.4	18.6	11.7
Farm labour	0.8	0.6	1.6
Percent of Sample Reporting			
Occupation and Included in the Above Distribution	64.1	69.4	66.0
Unemployed, Not in the Labour Force or Not Reporting Occupation	35.9	30.6	34.0

Sources:

Canada in 1995: 1995 General Social Survey, Page C10MCME.C161

Brighton and Connidis: Brighton and Connidis (1984), p.20-21.

1997 Survey of Potential Bankrupts: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 9

Total Liabilities, Total Assets and the Difference
Between Total Liabilities and Total Assets
in the 1997 Survey of Potential Bankrupts

	1977 Brighton and Connidis Sample of Bankrupts	1977 Brighton and Connidis Sample of Bankrupts (Adjusted)	1997 Survey of Potential Bankrupts
Total Liabilities			
Median	$10,865	$28,249	$26,016
Mean	$25,493	$66,281	$55,440
Standard Deviation	$51,563	$134,064	$83,632
Total Assets			
Median	$400	$1,040	$3,000
Mean	$6,243	$16,232	$26,111
Standard Deviation	$18,670	$48,542	$52,114
Difference Between Total Liabilities and Total Assets			
Median	$9,370	$23,362	$16,885
Mean	$19,237	$50,016	$29,330
Standard Deviation	$45,294	$117,764	$64,327

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 10

The Decile Distribution of Total Assets and Total Liabilities in the 1997 Survey of Potential Bankrupts

Decile	Total Liabilities	Total Assets	Difference Between Total Liabilities and Total Assets
Lowest	$ 8,500	$200	-$61,295
2	$12,187	$650	-$34,984
3	$16,072	$1,300	-$26,474
4	$20,000	$2,000	-$20,613
Median	$26,016	$3,000	-$16,885
6	$33,458	$4,550	-$13,750
7	$50,438	$10,900	-$10,568
8	$85,400	$43,950	-$7,771
9	$136,863	$93,000	-$4,600
Maximum Value	$1,429,077	$463,900	-$192,358
Minimum Value	$2,325	$0	$1,426,077

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 11

The Distribution of the Number of Debts,
by Source,
for the Samples of 1977 and 1997 Bankrupt Debtors

Source of Liability	1977 Brighton and Connidis Sample of Bankrupts		1997 Survey of Potential Bankrupts	
	Percent of Debts	Number of Debts	Percent of Debts	Number of Debts
Banks	14.0	1,354	12.0	1,046
Other Financial Institutions	22.9	2,226	12.8	1,118
Government	7.5	728	16.8	1,459
Credit Cards (Bank-type, Retailer)	9.3	904	15.7	1,367
Retailer (Not credit card debt)	23.1	2,235	14.5	1,266
Utilities	8.1	785	7.5	652
Private Individual	8.9	866	2.5	216
Medical and Dental	2.2	214	1.5	129
Other	4.0	389	16.7	1,454
Total	100.0	9,701	100.0	8,707

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts
      Brighton and Connidis (1986), p. 50

Table 12

Distribution of the Number of Debts,
by Source, in the 1997 Survey of Potential Bankrupts

Number of Debts	Banks	Other Financial Institutions	Government	Credit Cards	Retailers	Private Individuals	Other Debts
0	46.3	40.7	30.3	31.2	40.6	86.6	46.0
1	25.6	30.6	26.8	32.2	27.5	8.9	24.7
2	15.9	16.4	25.7	20.2	14.1	2.8	12.8
3	7.8	7.4	9.1	10.1	9.4	0.7	7.2
4	1.9	2.7	4.9	3.3	5.1	0.6	2.5
5 or more	2.6	2.3	3.2	2.9	3.5	0.5	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

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Table 13

Decile Distribution of the Amount of Debt,
by Source, in the 1997 Survey of Potential Bankrupts

Decile	Banks	Other Financial Institutions	Government	Credit Cards	Retailers	Other Debts
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	$950	0	0
Median	$500	$1,300	$904	$1,764	$449	$40
6	$4,800	$4,000	$2,711	$2,688	922	$409
7	$10,700	$7,150	$6,069	$4,135	1,500	$1,359
8	$24,000	$14,400	$11,226	$6,300	2,550	$3,000
9	$77,606	$29,000	$21,000	$11,000	$4,236	$8,000
Maximum Value	$385,934	$1,025,196	$300,000	$50,526	$32,500	$377,903
Percent with $0 in Debt or with Debts of Unknown Size	47.5	42.9	39.8	31.5	41.7	49.1
Median Amount Owed for Those With Positive Values	$14,200	$8,065	$6,000	$3,547	$1,600	$2,000

Note: Debts whose size was unknown are coded as having a value of $0. Thus the percent with $0 in the various type of liabilities differs from the proportion with no debts in Table 12 (see text for more complete explanation).

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 14

Distribution of the Number and Amounts of Debts
for Selected Types of Debt in the 1997 Survey of Potential Bankrupts

Panel A - Number of Debts

Number of Debts	Mortgages	Car Loans	Student Loans	Revenue Canada
0	76.8	72.6	74.3	51.8
1	18.0	23.4	11.6	37.7
2	3.2	3.7	12.1	8.9
3	1.7	0.2	1.4	1.2
4	0.0	0.1	0.7	0.3
5 or more	0.3	0.0	0.0	0.1

Table 14 (continued)

Distribution of the Number and Amounts of Debt
for Selected Types of Debt in the 1997 Survey of Potential Bankrupts

Panel B - Amount of Debt

Decile	Mortgages	Car Loans	Student Loans	Revenue Canada
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
Median	0	0	0	0
6	0	0	0	0
7	0	0	0	$400
8	$15,800	$4,908	$4,800	$1,756
9	$80,000	$12,441	$13,000	$7,000
Maximum	$440,419	$156,181	$59,338	$300,000
Percent with $0 in Debt or with Debts of Unknown Size	77.3	74.1	74.7	65.5
Median Amount Owed for Those With Positive Values	$74,314	$10,000	$10,100	$2,500

Note: Debts of unknown size are coded as having a value of $0. Thus the percent with $0 in the various type of liabilities in Panel B differs from the proportion with no debts in Panel A (see text).

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 15

Distribution of Exempt, Non-Exempt and Total Assets in the 1997 Survey of Potential Bankrupts

Decile	Exempt Assets	Non-exempt Assets	Total Assets
Lowest	0	0	$200
2	0	0	$650
3	$500	0	$1,300
4	$1,000	$50	$2,000
Median	$1,400	$200	$3,000
6	$2,000	$500	$4,550
7	$2,800	$2,200	$10,900
8	$3,500	$12,000	$43,400
9	$11,800	$74,206	$92,800
Maximum Value	$199,800	$461,500	$463,900
Percentage Reporting Zero Values	21.1	39.6	5.9
Median of Those Who Reported Non-Zero Values	$2,000	$2,090	$3,150

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 16

Percentage with At Least One Asset
and the Median Value of Assets for Those with At Least One Asset
by Type of Asset, in the 1997 Survey of Potential Bankrupts

Panel A - Exempt Assets	Percentage with At Least One Asset	Median Value of Assets For Those with At Least One Asset
Cash	2.7	$150
Furniture	69.4	$1,200
Personal Effects	46.4	$500
Insurance	1.8	$500
Stocks and Bonds	2.6	$7,000
Home	5.8	$75,000
Automobile	26.0	$1,000
Other assets	8.0	$1,000

Panel B- Non-Exempt Assets	Percentage with At Least One Asset	Median Value of Assets For Those with At Least One Asset
Cash	22.7	$200
Furniture	1.7	$1,400
Stocks and Bonds	6.8	$900
Home	14.4	$83,000
Land	1.5	$7,200
Automobile	27.5	$2,000
Estimated Tax Refund	1.2	$500
Other Assets	10.4	$1,000

Note: Types of assets held by less than one per cent of the sample are not shown in the Table.

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Chapter 2

A Closer Look at Three Group of Debtors Seeking Bankruptcy Protection

One of the possible explanations for the large number of bankruptcies that now occur each year in Canada is that, over time, groups of Canadians that traditionally did not borrow began to carry heavy debt loads and thus became vulnerable to financial insolvency. Another possible explanation is that groups of Canadians that had always carried relatively heavy debts became more numerous. Consider three groups:

the self-employed
* unmarried women
* young people under 30

The *self-employed* have always been heavy borrowers since they must finance the costs of starting up and maintaining a small business.[21] Over the past decades, the number of workers who classify themselves as self-employed has risen considerably (Table 17). In 1977, 1.3 million workers were self-employed; by 1996, that number had increased by almost one million workers. As numerous government reports will attest, small and medium-sized business are a major source of economic growth in Canada and, for that reason, several government programs are aimed at helping Canadians start their own business. Self-employment is a risky business, however, and large numbers of small businesses fail each year.

Unmarried women are more numerous than before and we believe that they are more likely to be carrying heavy debts. Table 17 shows in the trends in number of divorces and in the number of lone-parent families and illustrates that Canadian women are more likely than before to be unmarried heads of families at some point in their lives.

The number of divorces rose by more than 50 per cent between 1975 and 1995. While many divorced men and women later remarry, the economic disruption caused by the divorce may contribute to the need for bankruptcy protection. Moreover, unmarried women — whether divorced, separated or never-married — are now more likely to end up as household heads. Table 17 shows that the number of lone-parent families rose from about 650,000 in 1976 to more than 1 million in 1996; the vast majority of lone-parent families are headed by women.

We have no evidence that unmarried women are more likely to be in debt than before but we suspect that the increased need of some unmarried women to borrow (perhaps because of the

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[21] Some of the self-employed operate large and medium-sized businesses, of course, but those who operate small businesses are the ones who are likely to use personal bankruptcy as a way of gaining relief from their debts.

need to maintain a lone-parent family), combined with the easier availability of credit, may have led each unmarried women to become more likely to borrow.

Unlike the self-employed, *young people* are not more numerous than they once were. Indeed, the mid-1970s were a time when Canada had large numbers of young people as the baby boom cohort passed through their twenties. In the late 1970s, for example, there were about 4.7 million Canadians between the ages of 15 and 24; in the 1990s, that number had fallen to about 4 million. For this group, what has changed is the propensity of young people to borrow. One source of borrowing that was once much less common is borrowing to attend post-secondary schools. Table 17 shows that the volume of federal and provincial student loans almost tripled from $768 million in 1989-90 to $2132 million in 1994-95. The increase came partly from lending authorized by the Canada Student Loans Program and partly from provincial student loan programs that "sprang up" in the 1990s as provincial student grant programs were eliminated. In addition, we believe that young people are now more likely to borrow using credit cards, but we have no statistics to back up that conjecture.

In this Chapter, we look more closely at these three groups in the context of our Survey of Potential Bankrupts. While we might have chosen to look more closely at any number of different groups within the sample, we chose these three because of evidence from previous studies — notably Sullivan *et al.* (1986) — of their potential importance in explaining the rise in the number of bankruptcies and because preliminary data analysis indicated that these groups were numerically important.[22]

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[22]The overall sample size for the Survey of Potential Bankrupts is 1,018. Readers should be aware that each of three groups discussed in this Chapter is therefore comprised of only a few hundred debtors. The definitions for the subgroups are given in the appropriate section below but the following table shows the raw sample sizes. Because the groups are relatively small, we report quartile distributions for the financial variables instead of the decile distributions reported in Chapter 1. Even so, some of the quartiles will typically contain less than 100 respondents.

Full Sample	1,018
Self-employed	251
Not Self-employed	767
Unmarried Women	254
Unmarried Men	321
Married Respondents	443
Debtors under 30 Years of Age	326
Debtors 30 Years of Age or Older	692

The Self-Employed

Roughly one in every four debtors in our sample (251 of 1,018) was either self-employed at the time of our survey or reported on their Statement of Affairs that they had been self-employed within the past five years. Of those 251 debtors, roughly 40 per cent reported being self-employed at the time of the survey. Of the other 60 per cent, two-thirds were currently employed as wage-earners and the remainder were either unemployed or out of the labour force.[23] For some of the self-employed, financial problems with small businesses may have been an important precursor to their seeking bankruptcy protection.[24]

Panel A of Table 18 shows that the self-employed in our sample were more likely to have debts from every source. In some cases — credit card debt or credit obtained from non-bank financial institutions — the differences were relatively small. But in other cases the differences were quite notable. For example, more than 80 per cent of the self-employed owed money to various levels of government as compared to about 66 per cent of those who were not self-employed.

Still more important is the size of these debts. Panel B of Table 18 compares the median, the 25th percentile and the 75th percentile of total liabilities and of five different debt categories for the self-employed and for other debtors.[25] Overall, the median level of total liabilities for the self-employed was just over $51,000; for those who were not self-employed, the median level of total debt was considerably lower, at just over $21,000 (last column, Table 18). Government debt was roughly twice as big for the self-employed as for the other debtors, throughout the distribution. Indeed, the self-employed had roughly doubled the amounts of debt in every category except bank debt (which is dominated by mortgage debt) and credit card debt. Even in those two categories, the self-employed had considerably higher debt levels.

When we look at debts by the type (Table 19), we see that the self-employed have somewhat higher median debts for mortgages and car loans and somewhat lower student loan liabilities. These differences may reflect their greater age rather than their self-employment. The clearest difference is in the amount owed to Revenue Canada. For those who were not self-

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[23] Thus those who were *not* "self-employed" by our definition were those who were not currently self-employed and had not been self-employed within the last five years. Both the "self-employed" and the not self-employed" include individuals who were currently working for someone else or not working at all.

[24] A "personal" bankruptcy is one in which at least 50 per cent of the liabilities are unrelated to the operations of a business.

[25] The 25th percentile of a distribution is the value of the variable such that 25 per cent of the values in the distribution are lower than it. The 75th percentile is defined analogously.

employed, the median debt to Revenue Canada was relatively small (about $1,500) but for those who had been self-employed, the median was $7,000.

The assets of the self-employed were also higher than the assets of the other debtors — the median is $5,200 for the self-employed and $2,500 for those who were not self-employed — but the difference is not large (not shown). Since the self-employed have considerably higher debts than others, their net indebtedness (as measured by the difference between their assets and liabilities) is much higher; the median indebtedness for the self-employed was $28,183 as compared to $14,962 for the other borrowers (not shown).

In terms of monthly income, 11 per cent of the self-employed had none and the median for those who reported positive values was $1,734; median monthly expenses were $1,815. For those who had not been self-employed, 5 per cent reported no monthly income and the median for those who had positive income was $1,400; median monthly expenses for this group was also $1,400.

The ability to pay of the self-employed subgroup, as measured by the difference between monthly income and monthly expenses, was roughly the same as that of the other debtors. In both cases, there was, on average, no surplus monthly income. On the survey, we asked about the pre-tax income of all household members. The median income of the self-employed was $27,500 as compared to $22,500 for those who had not been self-employed but this larger income was counterbalanced by the higher debt levels noted above.

Not surprisingly, ratios of the debt to annual income for the self-employed were much higher than those of the other debtors (Table 20). The median ratio of total debt to annual income was 2.14 for the self-employed and 1.20 for the other debtors; looking at the ratio of total *unsecured* debt to annual income, we see that the ratio for the self-employed was 1.22 and for the others, 0.84. Table 20 shows the quartile distribution of these debt-income ratios.

Even though the self-employed once ran their own businesses, their bankruptcies were not necessarily related to their self-employment. Indeed, only 18 per cent of the self-employed listed "small business failure" as the event that triggered their bankruptcy. Another 14 per cent, however, listed debts to Revenue Canada as the triggering debt. On the other hand, 13 per cent said that "no particular events or debts" triggered their bankruptcy and 5 per cent listed marital disruption. In general, there is no way to be sure that the bankruptcy of someone who had been self-employed was directly related to their self-employment.

Unmarried Women and Unmarried Men

Unmarried women were more numerous among those seeking bankruptcy protection in 1997 than in the 1977 sample studied by Brighton and Connidis. About 70 per cent of the Brighton and Connidis sample were married while only 45 per cent of our sample were either married

or living in common-law arrangements. More than 40 per cent of our sample were women as compared to 25 per cent of the Brighton and Connidis sample.

The well-documented fact that women earn less than men, combined with the increasing proportion of lone-parent families and the larger number of divorces occurring annually, suggests that, over time, more women may have found themselves in an economically vulnerable position. If so, that trend may be a factor contributing to the overall increase in the number of bankruptcies occurring each year.

In this section, we compare the economic position of unmarried men seeking bankruptcy protection to that of unmarried women considering filing for bankruptcy.[26] We will see that both groups are in a very serious economic position but that the women are relatively worse off.

Unmarried men have somewhat higher total liabilities than unmarried women. The first panel of Table 21 shows the distribution of total liabilities (combining secured and unsecured debts) for the two groups. The Table shows the highest and lowest single values as well as the limits that define the first quartile (those in the lowest 25 per cent of the distribution), the median and the third quartile (those with values between the median and the 75th percentile). The median level of total liabilities was $23,643 for unmarried men and $19,052 for unmarried women. Men also had higher value for each of the quartile limits. The difference at the first quartile is modest ($13,900 versus $12,145) but becomes greater at the median and at the third quartile limit.

Once we bring the level of assets into consideration, however, the differences in debt levels between unmarried men and unmarried women becomes much smaller. As the middle panel of Table 21 indicates, men are more likely than women to have large assets — the median level of assets for men and women is about the same ($2,115 versus $1,900) but the 75th percentile for men is $10,500 versus $4,500 for women.

This suggests that some of the large liabilities of the unmarried men were secured by assets such as homes and cars. If so, the net indebtedness — again measured as the difference between assets and liabilities — of men and women should be more similar than their total liabilities alone. The third panel of Table 21 shows the distributions of net indebtedness for unmarried men and unmarried women. The two distributions are much more similar than those in the top two panels. The median level of net indebtedness is $15,972 for unmarried men and $14,826 for unmarried women; moreover, the differences at the other two quartile

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[26] We defined "unmarried" as any marital status other than "married" or "living in a common-law arrangement." Thus, we define, as "unmarried," respondents who had never been married, those who were divorced or separated (without regard to whether the marital disruption was recent or long past) and those who were widowed.

limits are smaller than in the top two panels.

In summary, unmarried men seeking bankruptcy protection had accumulated more debts than unmarried women but the differences were not dramatic. Both groups had substantial debts, especially relative to their limited incomes, a subject to which we now turn.

Having slightly lower net indebtedness made the women a bit better off but that advantage was more than offset by their substantially lower income. The median total monthly income for unmarried men was $1,200 ($14,400 annually) and $1,050 ($12,600 annually) for the unmarried women (not shown).

Our survey asked each person to report their pre-tax annual household income. Table 22 shows the distribution of that variable. We see that the annual household incomes of the unmarried women were quite a bit lower than those of men. The median for unmarried men was $20,000; the median for unmarried women was substantially lower at $14,200. Only one-third of the unmarried women considering filing for bankruptcy had incomes above the median income of the men. By contrast, 70 per cent of the unmarried men had household incomes greater than the $14,200 median for unmarried women.

Combining the respondents' estimates of annual income with the information on liabilities allows us to show, in Table 23, the distribution of debt/income ratios in our sample.[27] These debt/income ratios are a better indicator of relative financial position than total liabilities alone; the higher the ratio, the worse the financial position. With the sum of all debts (secured and unsecured) in the numerator, the median debt/income ratio was 1.36 for men and 1.31 for women. At both of the other quartile limits, however, women had higher debt/income ratios.

When we look at the ratio of total *unsecured* debt to annual income, we see that unmarried women are indeed worse off than unmarried men. The median ratio of total unsecured debt to annual income was 1.16 for women and 0.93 for men. The women also had higher ratios at each quartile limit.

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[27] Table 23 does not show the maximum values for debt/income ratios. Some potential bankrupts had very high debts and very low incomes, leading to debt/income ratios in excess of 500. These values are not shown in order to avoid giving the impression that any large number of individuals had such high ratios.

We can compare the debt/income ratios of our survey respondents to those reported by Sullivan et al. (p. 155): [28]

	Sullivan et al.	1997 Survey of Potential Bankrupts
Total Debt to Annual Income		
Unmarried Men	1.23	1.36
Unmarried Women	1.37	1.31
Total Unsecured Debt to Annual Income		
Unmarried Men	0.77	0.93
Unmarried Women	0.83	1.16

When Sullivan *et al.* compared the median debt/income ratios of unmarried women and unmarried men, they found that the unmarried women had higher median debt/income ratios and were thus unambiguously worse off. In our sample, the same seems true, even though the median of total debt to income was slightly higher for men than for women (1.36 to 1.31). As we saw above, the women had higher ratios at both the 1st and 3rd quartile limits of that distribution.

Not only did the women have less income with which to pay roughly the same debts, but they also had larger families. As Table 24 reveals, only 20 per cent of the unmarried men had any dependents at all whereas 42 per cent of the women had at least one dependent. In fact, there were more women with 2 or more dependents (22 per cent) than men with any at all (19.3 per cent). Overall, the 254 unmarried women in our sample had 177 dependents while the 321 unmarried men had only 113.

Sullivan *et al.* devote a chapter to "Women and Bankruptcy" in their 1980s analysis of American bankrupts. After comparing the financial positions of unmarried women and unmarried men, they write:

> These comparative financial data juxtapose two important economic facts about single women in bankruptcy. They are persistently at the lowest end of

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[28] Sullivan *et al.*, however, used total non-mortgage debt in place of total unsecured debt.

all income measures, and they file bankruptcy in the same state of economic collapse as other bankrupt debtors. Because of their sharply lower wages, single women are more vulnerable to a small disruption — a few unanticipated medical bills, a short layoff, a handful of credit card charges run up too quickly.

Based on our survey results, it is evident that the situation faced by Canadian women in bankruptcy is very similar to that of the American women studied by Sullivan *et al*.

Young People

The economic situation of Canadian young people has drawn considerable attention of late. The gap between youth and adult unemployment rates, which normally falls during periods of economic recovery, has remained between 7 and 8 percentage points since the recession of the early 1990s. Moreover, there is concern about the school-work transitions of young people, concern that even those who find work may be finding only temporary jobs that lack any clearly defined career path.[29]

One might think that the employment troubles of young people would not affect bankruptcy because young people with spotty employment histories and tenuous job prospects ought not be able to amass the large debts that most bankrupt debtors carry. But two factors may have created a link between the economic troubles of young people and bankruptcy.

The first of these factors is the rapid growth in the volume of student loans. Over the past decade, on the order of $20 billion dollars has been lent to hundreds of thousands of Canadian post-secondary students (Finnie and Schwartz, 1996). Some of these borrowers were university students with relatively strong post-schooling job prospects. A large proportion of student loans, however, were issued to students enrolled in short-term courses whose vocational value was much less certain.

Most importantly, however, student loans are issued without any assessment of the borrower's potential to repay; instead, they are based on student financial need. That practice may encourage post-secondary access, but it also leads to situations where some young people have relatively large debts and no means to repay them.

The second factor is the increased availability of bank-type credit card and retailer credit cards. Young people who manage to find a job for even a short time can obtain a credit card since very little screening of applicants is undertaken, beyond a quick check on current employment.

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[29] See Betcherman and Leckie (1997).

Roughly one-third of our sample of potential bankrupts was under 30 years old. Their economic situation was relatively weak, even within the group of those seeking bankruptcy protection. Their median indebtedness was about $16,000 and their median annual household income was $18,000 (not shown). Table 25 compares the financial situation of those under 30 to those over 30.

Of greatest interest in this case is the *composition* of the liabilities held by young people. Not surprisingly, young people are less likely to hold a mortgage and, if they do, to hold smaller ones. Only 10 per cent of those under 30 have outstanding mortgages as opposed to 30 per cent of those over 30. The median mortgage debt for the small numbers who have one is $48,000, compared to almost $80,000 for the older group. Young potential bankrupts were also less likely to owe money on a car; just over 18 per cent had an outstanding car loan whereas almost 30 per cent of older debtors owed money on a vehicle.

Large proportions of both groups had outstanding credit card debts — 65 per cent of young people and 70 percent of the older people. But the credit card balances of the young people were quite modest with a median of only $2,000 among those who had outstanding balances versus $4,300 for those over 30.

Thus far, the liabilities of young people seem less severe than those of the older group - fewer mortgages, fewer outstanding car loans, lower credit card balances. Where the young people face considerably *heavier* debt is in student loans. More than 45 per cent of the younger group had a student loan as compared to only 16 per cent of the older group. For those who had student loans, in both groups, the median amount was close to $10,000.

For young people seeking bankruptcy, student loans were very likely to comprise a large share of overall debt. For 28 per cent of the young people, student loans were 50 per cent or more of the overall debt and, for 10 per cent, student loans were more than 90 per cent of total debt (not shown).

One puzzling aspect in the situation of young people seeking bankruptcy protection is that more than 40 per cent of the 1977 Brighton and Connidis sample were less than 30 years old, at a time when student loans were not an important type of debt and when credit card usage was much more limited.

Student loans are nonetheless playing a role in bankruptcy that was unknown twenty years ago. Brighton and Connidis set out to measure the extent to which student loans figured in the debts of those seeking bankruptcy protection in 1977 and found virtually none in their sample. In our 1997 sample, a very large proportion of young potential bankrupts had student loans and their outstanding balances were quite large. By contrast, despite the availability of credit cards and the large proportions of debtors who had outstanding credit card debt, the amount of these liabilities was fairly small for the younger group of debtors.

Table 17

*Trends in the Number of Self-Employed Workers, Lone-Parent Families,
the Number of Divorces and the Dollar Volume of Federal Student Loans*

Year	Self-Employed Workers (000)	Lone-Parent Families (000)	Divorces	Dollar Volume of Federal and Provincial Student Loans
1975	-	-	50,611	-
1976	-	644.1	54,207	-
1977	1,280.0	-	55,370	-
1978	1,360.2	-	57,155	-
1979	1,423.0	-	59,474	-
1980	1,462.3	-	62,019	-
1981	1,521.5	712.0	67,671	-
1982	1,537.1	740.5	70,436	-
1983	1,594.2	768.1	68,567	-
1984	1,628.8	795.7	65,172	-
1985	1,677.0	823.6	61,976	-
1986	1,681.6	854.9	78,304	-
1987	1,746.1	872.1	96,200	-
1988	1,820.9	890.4	83,507	-
1989	1,809.1	912.7	80,998	-
1990	1,889.3	933.8	78,463	768.55
1991	1,919.9	952.7	77,020	1008.16
1992	1,936.1	936.0	79,034	1059.86
1993	2,056.4	1,011.2	78,221	1145.61
1994	2,111.4	1,025.8	78,880	1843.07
1995	2,133.6	1,042.8	77,636	2131.51
1996	2,266.6	1,059.8	-	-

Source: Self-employed workers: CANSIM Series D984561

Lone-Parent Families: Statistics Canada, Annual Demographic Statistics, Cat. 91-213
Statistics Canada, Revised Intercensal Family Estimates Cat. 91-537
Statistics Canada, Intercensal Estimates of Families, Cat. 91-529

Divorces: CANSIM Series D190

Dollar Value of Federal &
Prov. Student Loans: Finnie and Schwartz (1996).

Table 18

Percentage with At Least One Debt and Distribution of Amounts of Liabilities,
by Source, for the Self-Employed and for Other Debtors
in the 1997 Survey of Potential Bankrupts

	Banks	Other Financial	Governments	"Other" Debt	Credit Cards	Total Liabilities
Panel A						
Percentage With At Least One Debt						
Self-Employed	61.4	62.5	81.7	64.1	72.5	
Not Self-Employed	51.4	58.3	65.8	50.7	67.5	
Panel B						
25th Percentile for Those Reporting Positive Amounts of Debts						
Self-Employed	$6,290	$4,200	$2,867	$1,092	$2,025	$25,128
Not Self-Employed	$4,543	$2,500	$1,300	$ 443	$1,500	$12,392
Median for Those Reporting Positive Amounts of Debts						
Self-Employed	$19,411	$12,000	$9,788	$4,429	$5,081	$51,005
Not Self-Employed	$13,000	$6,900	$5,000	$1,530	$2,947	$21,200
75th Percentile for Those Reporting Positive Amounts of Debts						
Self-Employed	$64,000	$23,283	$22,915	$14,497	$11,400	$115,449
Not Self-Employed	$50,500	$18,094	$12,683	$ 4,195	$ 6,232	$ 44,037
Maximum Value						
Self-Employed	$317,400	$263,277	$300,000	$267,000	$50,526	$546,000
Not Self-Employed	$385,934	$1,025,196	$248,678	$377,903	$45,651	$1,429,077

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 19

Percentage with At Least One Debt and
Distribution of Amounts of Liabilities,
by Type, for the Self-Employed and for Other Debtors
in the 1997 Sample of Bankrupt Debtors

	Mortgage	Car Loan	Student Loan	Revenue Canada	Other Govern.
Panel A					
Percentage With At Least One Debt					
Self-Employed	28.3	29.9	15.1	69.3	35.5
Not Self-Employed	21.5	26.6	29.2	41.3	31.3
Panel B					
25th Percentile for Those Reporting Positive Amounts of Debts					
Self-Employed	$49,000	$6,200	$4,000	$1,500	$ 632
Not Self-Employed	$36,180	$ 5,000	$ 6,000	$ 575	$ 517
Median for Those Reporting Positive Amounts of Debts					
Self-Employed	$87,000	$14,098	$9,000	$7,000	$1,910
Not Self-Employed	$70,000	$8,700	$10,100	$1,487	$1,600
75th Percentile for Those Reporting Positive Amounts of Debts					
Self-Employed	$143,000	$20,000	$18,000	$19,015	$ 7,092
Not Self-Employed	$ 96,835	$15,000	$17,000	$ 3,200	$ 3,500
Maximum Value					
Self-Employed	$322,700	$145,280	$28,702	$300,000	$157,200
Not Self-Employed	$440,419	$156,181	$59,338	$230,452	$111,000

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 20

Debt to Income Ratios
for Those Who Were Self-Employed and
Those Who Were Not Self-Employed
in the 1997 Survey of Potential Bankrupts

Total Debt to Annual Income	Self-Employed	Not Self-Employed
Minimum Value	0.20	0.10
1st Quartile	1.04	0.62
Median	2.14	1.20
3rd Quartile	4.03	2.54

Total Unsecured Debt to Annual Income	Self-Employed	Not Self-Employed
Minimum Value	0.20	0.10
1st Quartile	0.73	0.49
Median	1.22	0.84
3rd Quartile	3.27	1.64
Number in Sample	251	767
Number with Valid Annual Income	184	540
Percent Not Reporting Annual Income	26.7	29.6

Table 21

Total Liabilities, Total Assets and the
Difference Between Liabilities and Assets
for Unmarried Men and Unmarried Women
in the 1997 Survey of Potential Bankrupts

	Unmarried Men	*Unmarried Women*
Total Liabilities		
Minimum Value	$3,635	$2,325
1st Quartile	$13,900	$12,145
Median	$23,643	$19,052
3rd Quartile	$48,586	$33,376
Maximum Value	$465,895	$1,429,077
Total Assets		
Minimum Value	$0	$0
1st Quartile	$700	$600
Median	$2,115	$1,900
3rd Quartile	$10,500	$4,500
Maximum Value	$284,000	$463,900
Difference Between Liabilities and Assets		
Minimum Value	-$238,037	-$1,426,077
1st Quartile	-$27,639	-$24,480
Median	-$15,972	-$14,826
3rd Quartile	-$9,226	-$8,610
Maximum Value	+$106,428	+$52,489

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

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Table 22

Distribution of Income
for Unmarried Men and Unmarried Women
in the Survey of 1997 Potential Bankrupts

	Unmarried Men	*Unmarried Women*
Minimum Value	$0	$0
1st Quartile	$12,000	$10,000
Median	$20,000	$14,200
3rd Quartile	$35,000	$26,000
Maximum Value	$200,000	$108,000
Missing or Didn't Know	72 of 321	64 of 259

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 23

Debt to Income Ratios
for Unmarried Men and Unmarried Women
in the 1997 Survey of Potential Bankrupts

Total Debt to Annual Income

	Unmarried Men	*Unmarried Women*
Minimum Value	0.14	0.19
1st Quartile	0.74	0.76
Median	1.36	1.31
3rd Quartile	2.69	3.01

Total Unsecured Debt to Annual Income

	Unmarried Men	*Unmarried Women*
Minimum Value	0.14	0.11
1st Quartile	0.60	0.64
Median	0.93	1.16
3rd Quartile	1.80	2.47
Number in Sample	321	254
Number with Valid Annual Income	247	187
Percent Not Reporting Annual Income	23.1	26.4

Table 24

Number of Dependents
for Unmarried Men and Unmarried Women
in the 1997 Survey of Potential Bankrupts

	Unmarried Men	*Unmarried Women*
No Dependents	80.7	58.3
1	9.0	19.7
2	6.5	17.3
3	1.9	3.9
4	1.9	0.4
5	0.0	0.4
Total	100.0	100.0

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Table 25

Distribution of the Amounts of Debt for Selected Types of Debt
for Those under 30 and Those over 30
in the 1997 Survey of Potential Bankrupts

Panel A - Those Under 30

Decile	Mortgages	Car Loans	Student Loans	Credit Cards
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	$ 480
Median	0	0	0	$1,034
6	0	0	$2,900	$1,500
7	0	0	$7,197	$2,340
8	0	0	$11,822	$3,600
9	$8,000	$7,315	$18,000	$5,700
Percent with $0 in Debt or with Debts of Unknown Size	89.0	81.6	54.9	35.6
Median Amount Owed for Those With Positive Values	$48,500	$7,659	$10,315	$2,151

Panel B - Those Over 30

Decile	Mortgages	Car Loans	Student Loans	Credit Cards
1	0	0	0	0
2	0	0	0	0
3	0	0	0	$ 116
4	0	0	0	$ 1,396
Median	0	0	0	$ 2,250
6	0	0	0	$ 3,600
7	0	0	0	$ 5,180
8	$47,000	$6,300	0	$ 8,296
9	$93,000	$14,974	$7,800	$12,800
Percent with $0 in Debt or with Debts of Unknown Size	71.8	70.5	84.0	29.6
Median Amount Owed for Those With Positive Values	$78,392	$10,000	$10,000	$4,266

Source: Calculations by the authors from the 1997 Survey of Potential Bankrupts

Chapter 3

Aggregate Level Trends

On an individual level, personal bankruptcy is an economic setback of major proportions. Assets built up over a lifetime can be lost and future access to credit jeopardized. On a national level, the aggregate number of bankruptcies is said to affect the costs of credit as financial institutions pass on loan losses to other borrowers. Moreover, the number of bankruptcies is sometimes taken as an indicator of the financial health of the overall economy. For these personal reasons, as well as for the presumed national ones, we want to explore whether the trend toward rising numbers of bankruptcies represents a permanent change in the way our economy operates.

In this Chapter, we focus on the macroeconomic dimensions of bankruptcy. We begin with an analysis of the alleged "disconnect" between the number of bankruptcies and the levels of GDP and unemployment. We then look at the relationship between bankruptcies and the level of outstanding debt in the economy; in doing so, we must untangle the various measures of debt that complicate efforts to study this question. This Vhapter does not attempt to show cause and effect (for example, that a certain change in GDP or unemployment is predicted to cause a certain change in bankruptcy).[30] Rather, we look for possible relationships among several common macroeconomic measures by examining their thirty-year time trends and simple correlations.[31]

Bankruptcy, GDP and Unemployment

The simplest hypothesis about bankruptcy is that it follows the cycle of the economy. As Pfeilsticker (1980, p. 8) wrote about the American situation:

> Historically, the number of personal bankruptcy filings generally followed the economic health of the nation. That is, bankruptcy filings increased as the unemployment rate increased and the gross national product decreased.

That is, when the economy is strong, many individuals prosper and the number of bankruptcies falls; when the economy falters, some individuals suffer economically and the number of bankruptcies rises.

Based on this simple hypothesis, we would expect the number of bankruptcies and the level of GDP to move in opposite directions — that is, to be negatively correlated. When GDP is rising, we should see the number of bankruptcies falling; when GDP is falling we should see the number of bankruptcies rising. The unemployment rate and the number of bankruptcies

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[30] To do so would require first developing, and then testing, a theory about the underlying causes of bankruptcy.

[31] A simple correlation measures the strength of the linear relationship between two variables without controlling for the influence of other variables.

are expected to be positively correlated. As the unemployment rate rises, we would expect the number of bankruptcies to also rise, and vice versa.[32]

In 1966, 1,903 Canadians filed for personal bankruptcy; in 1995, thirty times that many, or 65,435, filed. From 1966 to 1995, the number of bankruptcies rose steadily, except for two short periods. The number of bankruptcies fell in three consecutive years from 1983 to 1985 and in the two years 1993 and 1994. During the same time period, real (that is, inflation-adjusted) GDP increased from $230 billion to $608 billion, with only three years (1982, 1991 and 1992) of decline.[33] As one might expect, the rate of unemployment was much more volatile, ranging from under 4 per cent in the mid-sixties, up to 11.9 per cent in 1983 and then becoming "stuck" around 10 per cent in the current period.[34]

Figure 1 shows the relationship between the time trend in the number of bankruptcies and the time trend in the level of real GDP. Contrary to the simple hypothesis about bankruptcy falling when real GDP rises, the two series seem to move together; both are rising over much of the period.[35] Except for 1993 and 1994, when bankruptcies were falling and real GDP rising, the two series move largely in the same direction and the simple hypothesis is incorrect. Thus the "disconnect" between real GDP and the number of bankruptcies is more the norm than the exception over the past 30 years.

The number of bankruptcies might also plausibly be related to the rate of unemployment. Domowitz and Eovaldi (1993, p. 813) write that it is a "common perception" that "job loss increases the likelihood of bankruptcy." As we saw in Chapter 1, most of those who are considering filing for bankruptcy were either working or looking for work — 85 per cent of the sample were in the labour force. The unemployment rate among the potential bankrupts was 25 per cent, however, and "loss of employment" was the most commonly cited reason given for considering bankruptcy.

Figure 2 shows the relationship between the trend in the number of bankruptcies and the unemployment rate. Here again, there is no obvious connection that might now be broken. From 1966 to 1982, the number of bankruptcies rose steadily despite some significant variations in the unemployment rate. Then, in each year from 1984 to 1989, the unemployment rate decreased; contrary to expectations, the number of bankruptcies started

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[32] A simple correlation between the number of bankruptcies and the level of GDP does not adjust for the influence of unemployment rates. Likewise a simple correlation between the number of bankruptcies and the unemployment rate does not control for the level of GDP.

[33] In 1996, the number of bankruptcies rose even further to 79,631. GDP continued to rise, reaching $637 billion in the second quarter of 1997.

[34] Data on real GDP (in 1986 prices) is drawn from CANSIM Matrix 6829, Series D20463. Source: SDDS 1901 2501 STC (13-001). Total personal bankruptcies are from CANSIM Series D370477. Source: The Insolvency Bulletin, Consumer and Corporate Affairs. The unemployment rate from 1976-1996 is from CANSIM Matrix 3472, Series D984954. Source: SDDS 3701 STC (71-220, 71-529). The rate for 1965-1975 is from the *Historical Statistics of Canada*, 2nd edition.

[35] There is, in fact, a strong positive correlation between the level of GDP and the number of bankruptcies over the thirty-year period.

rising in 1986 after having fallen in each of the previous three years and continued upward until 1991. In Figure 2, the two series seem to move together from 1989 to 1994 but in light of the other years, this similarity may be more coincidence than causation.[36]

In summary, there has never been a simple relationship between bankruptcy and national income or unemployment rates. While there have been short periods when these variables moved, relative to each other, in the directions that one might anticipate, there have been even more and even longer periods when they did not move in the expected directions.[37]

A slight elaboration of the simple hypothesis suggests that the number of bankruptcies changes with the economy but only after some time has passed. It may take time for those who have lost their jobs to exhaust their savings and other assets and be forced into bankruptcy. The larger number of bankruptcies might even make the recession worse. Murray (1997) presents one version of this relationship:

> ...consumer debt should continue to be regarded as a lagging indicator of business cycle downturns. When incomes and employment decline, the number of households at the margin where debt is excessive increases. The spending cutbacks that result deepen and prolong the downturn.

We calculated simple correlations of the level of real GDP and the aggregate unemployment rate against total personal bankruptcies, lagging the bankruptcy variable by up to three years. The relationship between real GDP and total personal bankruptcies was essentially the same when we assumed no lag at all.[38] For unemployment rates, a one year lag on bankruptcies strengthened the correlation coefficient with the unemployment rate from .75 to .79. This is weak evidence that the rate of unemployment may lead bankruptcy by a year or so, but generally not more.

Faced with findings such as those illustrated in Figures 1 and 2, we can attempt to modify the series to see if some transformation of the data leads to a link between the series that matches the simple hypothesis. For example, we can use a bankruptcy *rate* — the number of bankruptcies divided by the number of adult Canadians — in place of the number of bankruptcies itself. But these kinds of data manipulations are difficult to justify. As Domowitz and Eovaldi (1993, p.816) write:

> No theoretical models of the bankruptcy rate have been proposed at the individual

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[36] Unlike GDP, however, the correlation coefficient between unemployment rates and the number of bankruptcies has the predicted algebraic sign. Little can be concluded from this however, as the positive correlation between the series may simply reflect that they are both growing over time.

[37] We also ran partial correlations for these series, which measure the relationship between bankruptcies and real GDP while adjusting for unemployment rates, and likewise for bankruptcies and unemployment rates while adjusting for GDP. Once again the sign on the correlation coefficient for bankruptcies and real GDP was positive, contrary to the simple hypothesis, and the relationship between bankruptcies and unemployment rates was weak.

[38] The correlation between real GDP and lagged bankruptcies continued to generate a positive correlation coefficient, contrary to the simple hypothesis.

level and none have been proposed for the aggregate rate, either.

Nonetheless, several of these data manipulations were tried, based mostly on "common sense." We calculated two bankruptcy rates. In the first, we used total population in the denominator. For the second, we used the population aged 25 to 44 — those presumed to be in the key borrowing and spending years of their lives — in the denominator. The results suggested a greater increase in the bankruptcy rate for those outside this age range, that is, from 18 to 24, and 45 and older, but shed no light on the simple hypothesis.

We also correlated the rate of change in GDP and the rate of change in bankruptcies, based on a slightly different hypothesis that when the economy grows more slowly, the growth in the number of bankruptcies slows.[39] Again no statistical relationships were found to alter our basic conclusions. As with the relationships that have been previously proposed, "common sense" is sometimes not supported by the data.

Joint Filing and the Number of Bankrupts

A "disconnect" with macroeconomic series could also arise from a change in the way the number of bankruptcies are counted. For example, Domowitz and Eovaldi (1993) found that 1978 changes to the Bankruptcy Code, allowing married couples to file jointly, may have been partly responsible for the subsequent rapid increase in the measured number of bankruptcies in the US.[40]

Similar measurement issues may be important in Canada. Prior to 1992 joint filings only occurred in Québec; after 1992 they were permitted across Canada. For joint filings, only one filing fee is charged by the Bankruptcy Branch. Whenever the cost to a second person of jointly filing bankruptcy falls, we would expect, *ceteris paribus*, to see an increase in the total number of individuals filing.

For example, suppose one person in a married couple is deeply in debt while the other has only moderate debts. The less indebted person might not seek bankruptcy if he or she was charged the full fee. However, the couple might choose to file jointly if only one fee was charged for the two individuals.

Since the Office of the Superintendent of Bankruptcy (OSB) counts the number of bankruptcies by the number of people declaring bankruptcy, regardless of whether they file individually or jointly, we should expect to see an increase in the number of bankrupts after 1992 when two people were allowed to file jointly, all across Canada, for one OSB fee. The

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[39] We found that the rates of change in the number of bankruptcies are far greater and far more volatile than the rates of change in real GDP, but there continued to be no evidence of a "connect".

[40] Domowitz and Eovaldi found that adjusting for changes in joint filings challenged earlier conclusions that other Code changes, such as the increases in the level of exemptions, were responsible for the increase in the overall number of filings.

number of bankruptcies fell in 1993 and 1994 after changes to the joint filing rules, any overstatement based on the effect of joint filing means these numbers would be even lower if not for the legislative amendments. Joint filings accounted for only about 6 per cent of total filings in 1996, but have been increasing since 1992.

Bankruptcy and Consumer Indebtedness

There is no bankruptcy without debt. Therefore the rate of growth of consumer indebtedness is a prime candidate as a factor in explaining the growth in the number of bankruptcies. Increase in consumer debt, however, do not *necessarily* lead to greater numbers of bankruptcies. For example, increases in debt levels may occur because new groups of individuals are entering the credit market for the first time. Moreover, many Canadians may have enough income and assets to carry larger amounts of debt without verging on bankruptcy.

Furthermore, not all debt is the same. Some debts - notably mortgage debts - are secured by a corresponding asset. In some cases, such debts might not lead to bankruptcy since an inability to pay results in the loss of the asset but also in the elimination of the debt. Other debts - credit card balances, student loans - are unsecured and therefore an inability to pay cannot be resolved by the repossession of any linked assets.

The average volume of total outstanding debt (in nominal dollars) in Canada has been rising almost continuously since 1966; only in 1982 and 1991 was the average amount of debt lower than it had been in the previous year. The rapid rise in the amount of outstanding debt has led many to speculate about its role in causing bankruptcy. For example, Jacob Ziegel and his colleagues (1996, p.85) have pointed to "the important role which the easy availability of various forms of consumer credit plays in enabling consumers to become so heavily indebted." Murray (1997, p. 44) writes that "there is a strong suggestion that aggressive marketing by providers of credit, particularly issuers of credit cards, is in large measure responsible" for the rise in American bankruptcies and in the number of cases in which debtors are delinquent in making payments.

None of the available measures of consumer indebtedness is adequate to the task of analyzing the relationship between consumer indebtedness and bankruptcies in Canada. We begin this section by discussing the measures that are available and then look at the relationship between the best of the available measures and the number of bankruptcies.

Available Measures of Consumer Indebtedness

There are three available sources for measuring consumer indebtedness. The first is *liabilities per personal bankrupt,* which is calculated from information provided on Statements of Affairs and is available from the Office of the Superintendent of Bankruptcy. In this series, total liabilities have increased, in nominal dollars, from $283 million in 1977 to $3.6 billion in 1995. On a per bankrupt basis, the increase is from $22,000 to $55,000, numbers which correspond roughly to the means reported in Table 9 in Chapter 1 for the 1977 Brighton and Connidis sample and for our sample of 1997 potential bankrupts.

The second and third sources measure outstanding balances on credit extended to individuals from chartered banks, finance companies, life insurance policy loans, trust and mortgage loan companies, credit unions and caisses populaires.

The second source is the Bank of Canada.[41] The four time series available from this source "do not include residential mortgages, inter-personal credit, and certain service credit" or credit extended by issuers such as retail outlets, public utilities, and motor vehicle dealers.[42] According to this source, consumer credit has increased, in nominal terms by approximately 300 per cent since 1977 and by almost 3000 per cent since 1961.

The third source of information is several time series collected by Statistics Canada from a quarterly census of all chartered banks, and a quarterly survey of all other financial institutions indicated above.[43] These series include one that measures mortgages, as well as one for financial flows of consumer credit. The consumer credit series is an aggregation of outstanding debt on private passenger vehicles, credit cards, and some other non-business loans held by the chartered banks. It does not include other non-business bank loans such as tax shelters or house renovation loans.

The Bank of Canada and Statistics Canada consumer credit series are quite similar, with the Statistics Canada series generally higher by at most 10 per cent. The primary difference between the Bank of Canada and Statistics Canada series seems to be in the types of credit included, (rather than the issuers of credit), and in their estimation techniques.[44]

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[41] CANSIM Series B136, B138, B140, and B142 in Matrix 2569, Consumer Credit: Outstanding balances of selected holders. Source: Bank of Canada. The four series in this matrix differ according to whether they are seasonally adjusted or unadjusted, and month-end or averages. The information in these series is supplemented by some survey input from Statistics Canada.

[42] Matrix 2569, Series B136.

[43] CANSIM Series D160041 and D160048 in Matrix 0751, Financial flows, Table 3-1. Persons and unincorporated business. Source: SDDS 1804 STC (13-214).

[44] An analyst at Statistics Canada also suggested that the Bank of Canada series uses "global numbers", whereas they measure domestic indebtedness only. Global numbers include credit issued to non-Canadians by foreign subsidiaries of Canadian financial institutions.

Using the Statistics Canada source, we define total personal debt as the sum of consumer credit and mortgage debt series. Mortgage debt accounted for about 75 per cent of this total in 1995. According to this series, total personal debt increased by just over 370 per cent since 1977 and over 3000 per cent since 1961. The consumer credit portion increased by 280 per cent from 1977 to 1995 while the mortgage component increased by just over 400 per cent.

None of these series is entirely satisfactory. The OSB data refer only to those seeking personal bankruptcy and not to the Canadian population as a whole. The series from the Bank of Canada and Statistics Canada cover the entire Canadian population but exclude some types of debt and some sources of credit. For example, as the discussion in Chapter 1 illustrates, government debt is quite important, but is excluded from both of these series.

Correlations Between Bankruptcy and Consumer Indebtedness

In this section, we use the Statistics Canada data to analyze the relationship between that measure of consumer indebtedness and the number of bankruptcies.[45]

As Figure 3 reveals, total personal debt — including both mortgage and non-mortgage debt — and the number of bankruptcies are highly correlated, with a simple correlation coefficient of 0.95 for the period 1966 to 1995. Figure 3 also reveals that the correlation is closer in the early years of the series than in the later years. From 1975 to 1995, the correlation is 0.89. Using similar data, Ziegel *et al.* (1996, p. 86) report a correlation of 0.79 over the time period 1976-1994.[46]

The fairly close correlation between the two series, however, should be viewed with great caution. These are two series that are both rising over time, as do many economic time series. For example, despite the high correlation coefficient, consumer credit did not fall when the number of bankruptcies fell during the 1982-84 period.

As noted above, the rise in consumer debt, by itself, does not necessarily imply a rise in bankruptcy. If consumer assets were also rising, the higher debt would not be a problem. To account for the possibility that either consumer assets or income have been rising along with outstanding debt, we might look either at the ratio of debts to assets or at the ratio of debts to income. We cannot look at the ratio of debts to assets, however, because there are no statistical series that capture the aggregate value of assets in Canada over time.

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[45] The two series B136 and D160041 are very highly correlated — the correlation coefficient over the period 1961-1996 is 0.9993 — so that our use of one rather than the other should not dramatically change our results.

[46] Ziegel *et al.* (1986) use average real consumer credit, rather than current dollar consumer credit, which accounts for the difference in results.

We can, however, calculate a measure of the overall ratio of debts to income, using aggregate personal disposable income as the measure of aggregate income.[47] In the numerator of this ratio, we again use the Statistics Canada measure of total debt, one that includes mortgages as well as consumer credit. From 1966 to 1996, total personal debt grew from 51 per cent to 96 per cent of personal disposable income.

Figure 4, which compares the trend in the number of bankruptcies to the time trend in the ratio of total personal debt to personal disposable income, comes closest to showing a macroeconomic relationship between two series. In particular, the ratio of debt to income started falling in 1980 and continued falling until 1984; the number of bankruptcies, as noted above, fell from 1982 to 1983 and continued falling through 1985. This pattern is consistent with the hypothesis that there is a lagged relationship between the ratio of debt to income and the number of bankruptcies. That pattern — if it represented any true relationship at all — seems to have been disrupted in the early 1990s when the number of bankruptcies fell but the debt-to-income ratio continued upward.

If we separate the Statistics Canada total debt series into its two components, mortgage and non-mortgage debt, we see (Figure 5) that the relationship between the trends in the ratio of mortgage debt to income and the number of bankruptcies looks much like the relationship between total personal debt and the number of bankruptcies. This casts doubt on the existence of a "true" relationship between the two series because relatively few bankrupts are homeowners. Just over 20 per cent of those in our survey reported having a mortgage at the time they filed for bankruptcy.[48]

The relationship between the ratio of non-mortgage debt to income and the number of bankruptcies (Figure 6) is quite weak. The correlation coefficient is only 0.20. The low correlation occurs because non-mortgage debt has stayed between 0.15 and 0.25 of personal disposable income over time.[49]

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[47] Current personal disposable income is from CANSIM Matrix 6664, series D11725.

[48] We also looked for relationships using several different consumer credit measures, adjusting for population and income. The results remained inconclusive.

[49] The correlation coefficient between total bankruptcies and the trend in a ratio of the Bank of Canada consumer credit series over personal disposable income was higher, at 0.56, but still much weaker than when the consumer credit series is measured without dividing by income.

Summary and Conclusion

This chapter is a brief exploration of the macroeconomic relationship between the number of bankruptcies and four other macroeconomic aggregates:

- real gross national product
- the rate of unemployment
- the amount of outstanding consumer credit
- the ratio of total personal debt to personal disposable income.

Without any guiding theory, it is difficult to make sense of any claims about "disconnects" or "explanatory models."[50] At best, we can see if various statistical series move in a fashion similar to that of the number of bankruptcies.

When we do this, we find that there have been several periods in which the number of bankruptcies rose when GDP fell but more periods when the number of bankruptcies rose at the same time as GDP rose. Overall, the number of bankruptcies and the level of real GDP are positively correlated. There is no obvious "disconnect" between real GDP and the number of bankruptcies because there was never a "connect" in the first place.[51]

The relationship between the number of bankruptcies and the unemployment rate is perhaps closer. Especially from the late 1980s until 1994, the number of bankruptcies moved along with the unemployment rate. But as we saw in Figure 2, this relationship is not as strong as one might think and does not always seem to work in the same way over the years.

We find the volume of consumer credit is closely associated with the number of bankruptcies, but we suggest that some of this association may be an artifact of the often-found strong positive correlation between two economic time series. Arguing against a causal relationship is the fact that in the two periods when the number of bankruptcies fell, the total amount of credit did not fall with it.

Finally, there is a suggestion that the number of bankruptcies may be related to the ratio of total personal debt to aggregate personal disposable income since those series seemed to move together (perhaps with a lag of a few years) until 1993. Even here, however, the overall pattern seems to be the result of patterns in mortgage debt. Mortgage debt may be relevant only to a small proportion of those seeking bankruptcy because the vast majority of potential bankrupts (about 75 per cent according to Table 14) do not hold mortgages.

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[50] Our search of the primary literature suggests there has not been any aggregate level theory proposed since Domowitz and Eovaldi concluded in 1993 that none existed.

[51] Because we are only looking at simple, bivariate, relationships we can not interpret the lack of a "connect" as indicating that there is no relationship between the overall health of the economy, as measured by real GDP, and the number of personal bankruptcies. Such a relationship may be revealed by a more complex model involving the interaction of several variables.

Chapters 1 and 2 suggest that those seeking bankruptcy protection are neither a homogeneous group nor a representative sample of the population. Our finding that aggregate measures of economic performance are poor indicators of bankruptcies should not, therefore, be surprising.

Several avenues exist for linking our survey results with macro-level trends if time series data exist to support the models. For example, the heterogeneity of bankrupts could be partially addressed by looking at the three groups examined in Chapter 2 — unmarried women, young people, and the self-employed. Among other variables, the "women's model" would perhaps include female labour force participation rates, wage rates, and rates of marital disruption. The "young people's" model could emphasize youth employment, changes in the ratios of lower to higher skilled jobs, tuition fees and student loan policies. The "self-employed" model could look at changes in legislation affecting employment insurance, contracting out, tax benefits and joint filings.

To account for the socio-economic and demographic differences in our sample of bankrupts, finer measures of aggregate time series variables could be used. For example, one could look at time trends of GDP in a particular sector such as the service sector. Other measures of employment, such as changes in part-time and self-employment, could be examined. Because our sample of potential bankrupts had lower income than the population as a whole, trends in wages, government transfers (received by 54 per cent of our sample), and taxes are likely to be important. This analysis, however, still requires a well-constructed, rigorous theory and consistent time series data to support it.

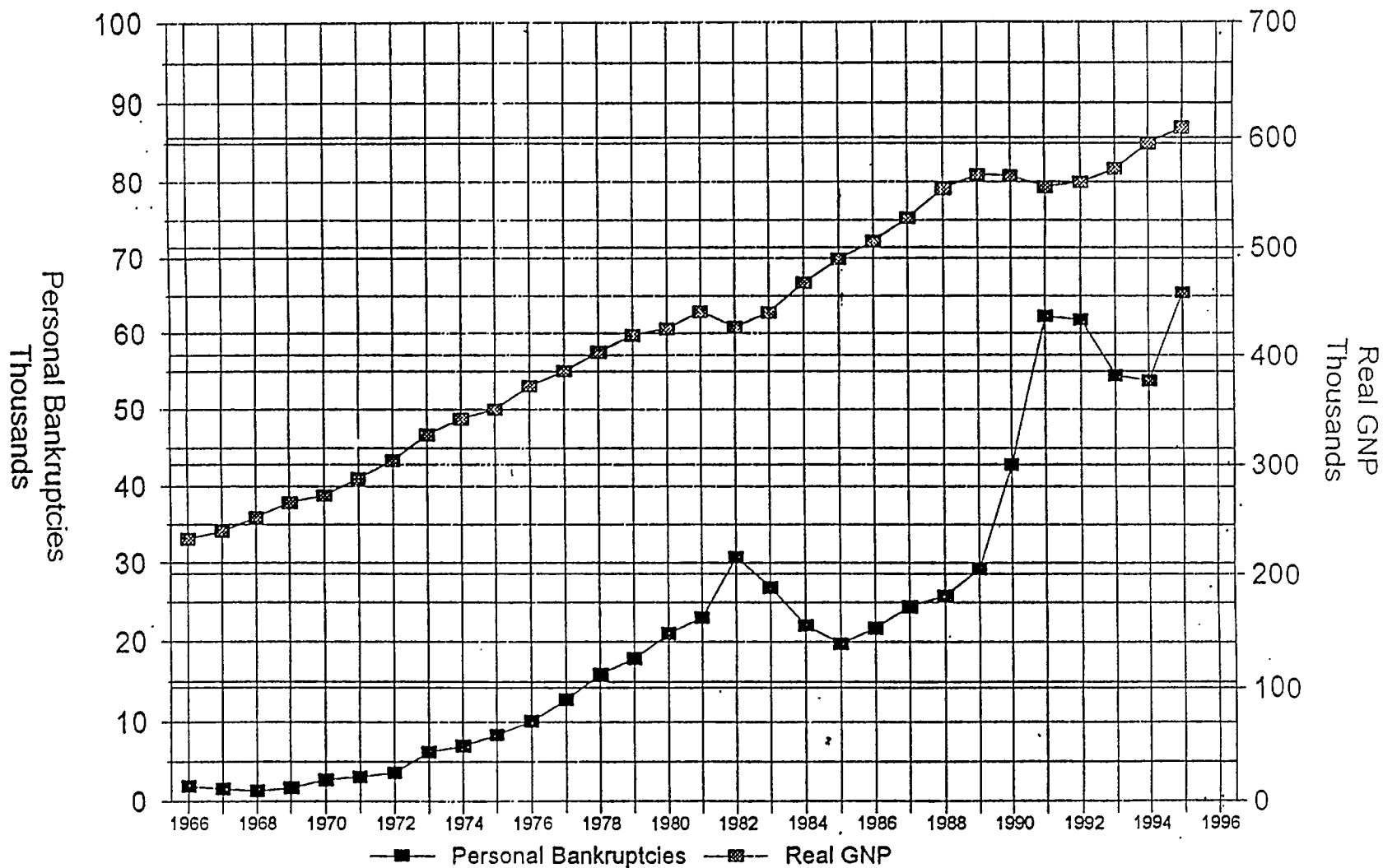# FIGURE 1: Personal Bankruptcies and Real GNP, 1966-1995

Personal Bankruptcies Thousands (left axis): 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Real GNP Thousands (right axis): 0, 100, 200, 300, 400, 500, 600, 700

X-axis: 1966, 1968, 1970, 1972, 1974, 1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996

Legend: —■— Personal Bankruptcies —▧— Real GNP

FIGURE 2: Personal Bankruptcies and
Unemployment Rates, 1966-1995
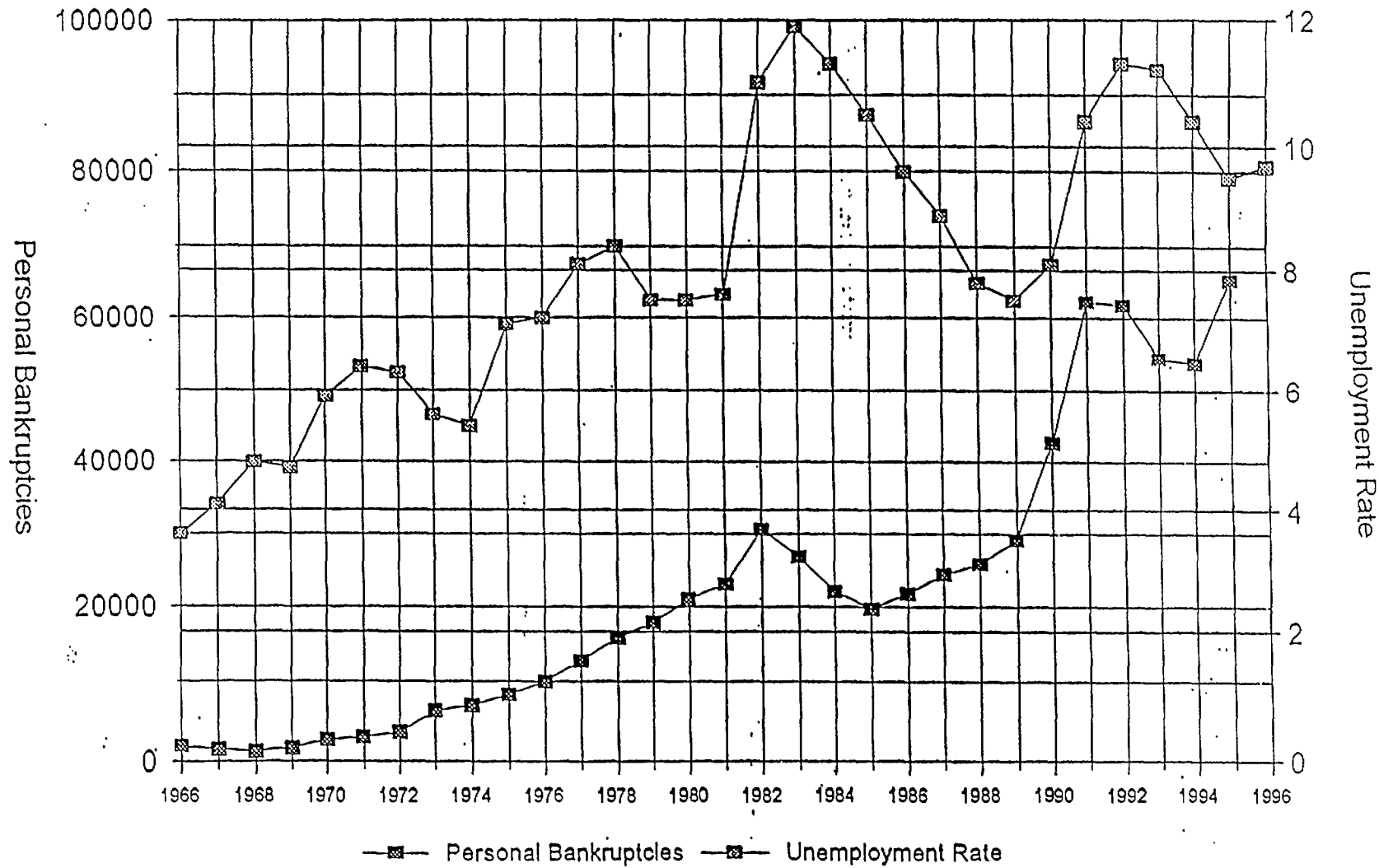
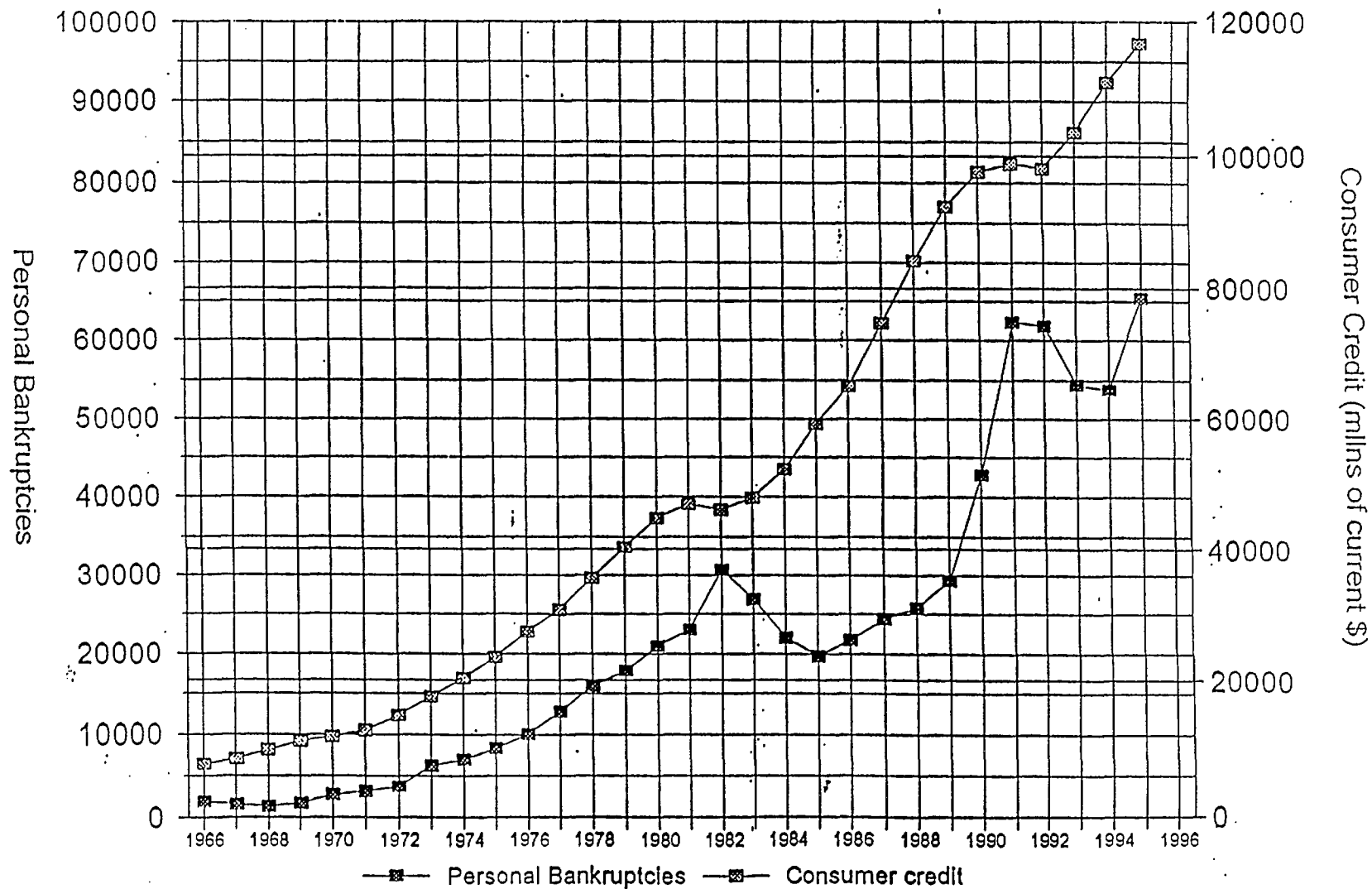FIGURE 3: Personal Bankruptcies and Consumer Credit, 1966-1995

Legend: —■— Personal Bankruptcies —◙— Consumer credit

FIGURE4: Personal Bankruptcies and Total Consumer Debt/PDI, 1966-1995

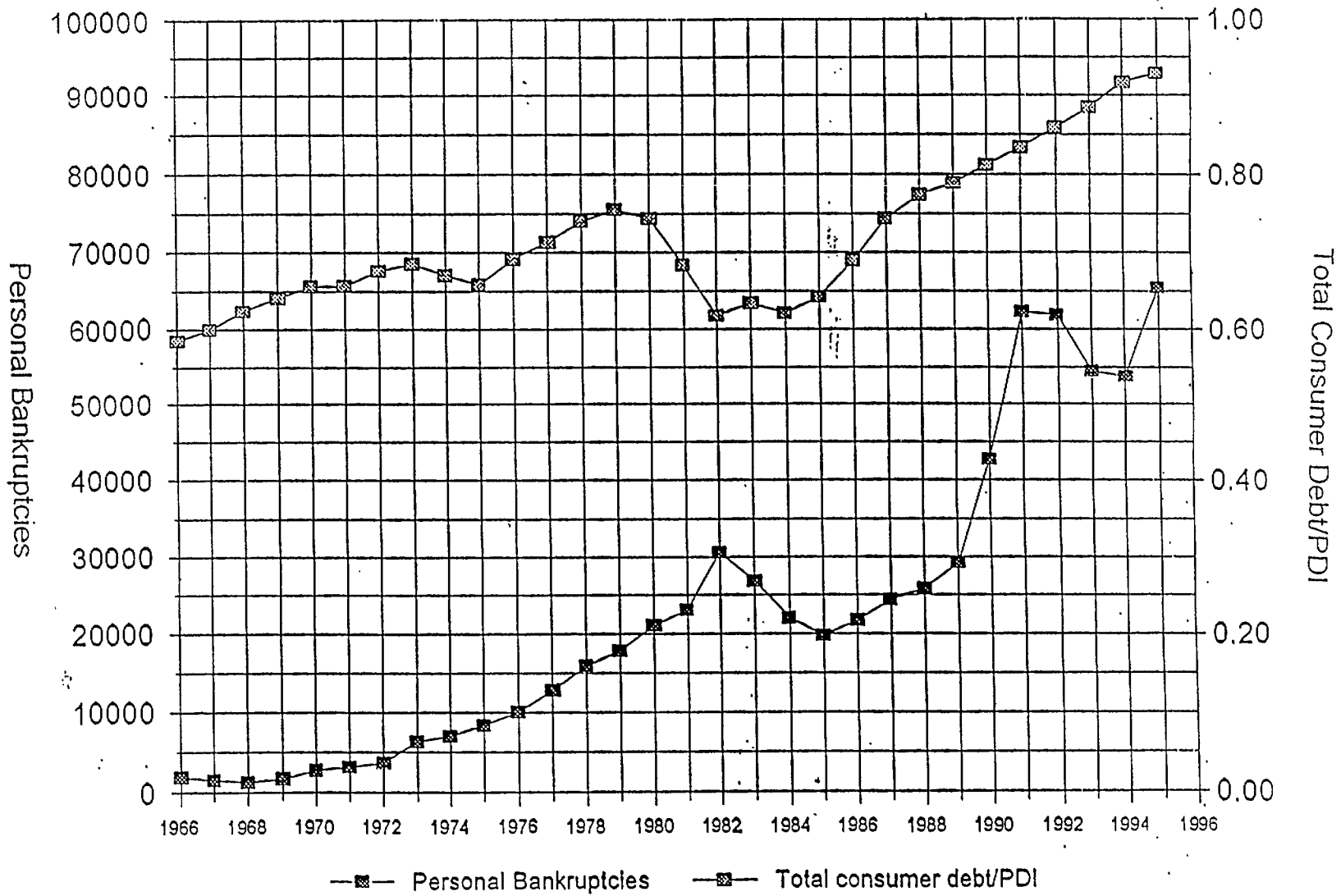Figure legend: Personal Bankruptcies · Total consumer debt/PDI

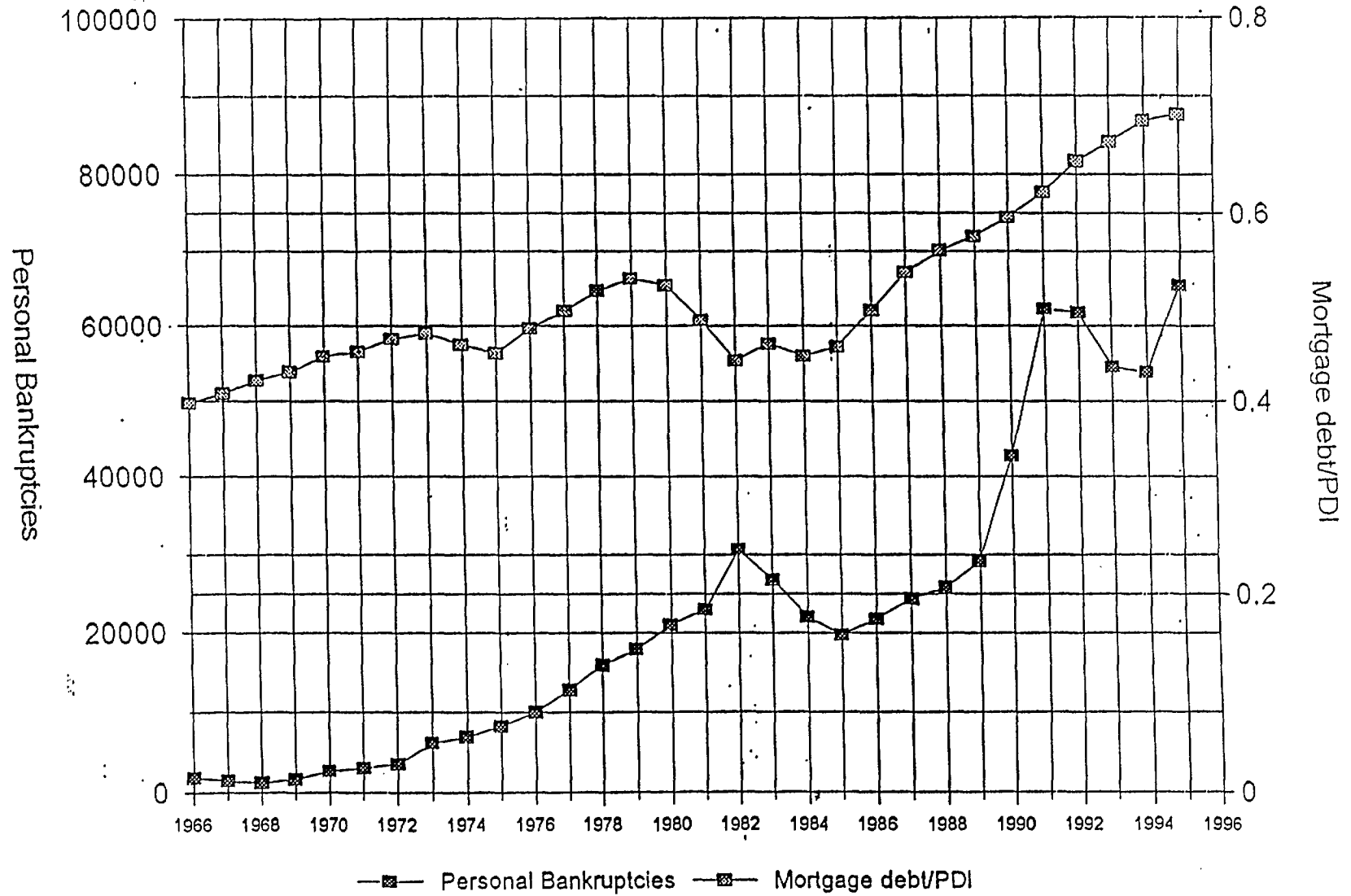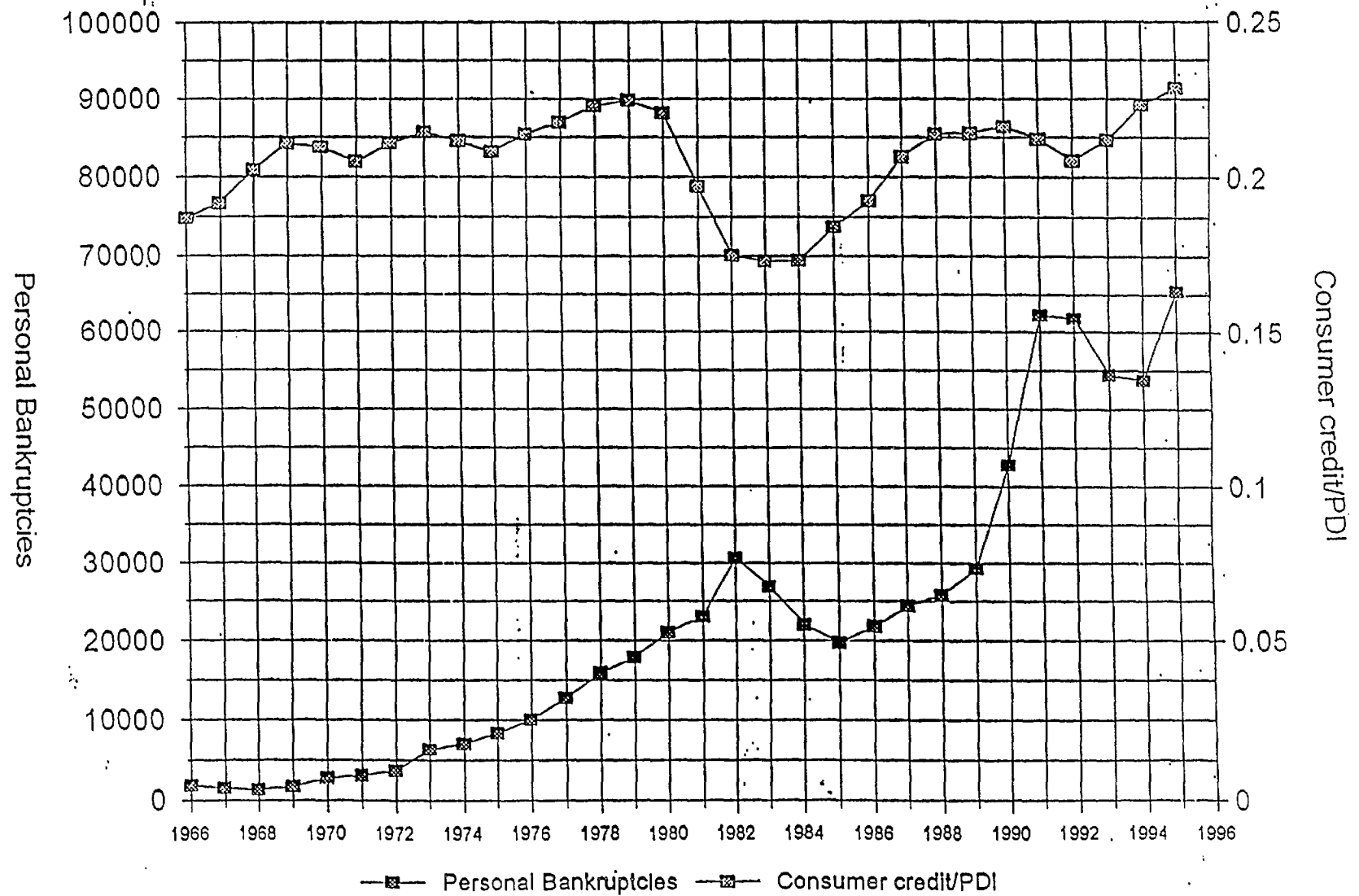**FIGURE 5: Personal Bankruptcies and Mortgage Debt/PDI, 1966-1995**

FIGURE 6: Personal Bankruptcies and Consumer Credit/PDI, 1966-1995

Chapter 4

A Comparison of Those Seeking Credit Counselling to Those Seeking Bankruptcy Protection

Chapters 1 and 2 of this report analyzed the survey responses of debtors who sought bankruptcy protection in the spring of 1997. Those responses provided a good deal of evidence on the characteristics and attitudes of those debtors. There is, however, an important drawback in a survey that looks only at those who were considering filing for bankruptcy. There may be a group of Canadian debtors who faced severe economic conditions but chose *not* to seek bankruptcy protection. Lacking information on these (hypothetical) debtors, we cannot ascertain why some debtors file for bankruptcy and others do not.

While resource limitations prevented us from conducting a survey of debtors drawn from the general population, we were able to conduct a small-scale survey of one group of debtors — those seeking credit counselling — who were in financial difficulty but who were not filing for bankruptcy. Survey responses from those seeking credit counselling allow us to determine if their economic difficulties were as severe as those who chose to file for bankruptcy and to examine any differences among the two groups in attitudes toward bankruptcy.

In the spring of 1997, we identified a number of credit counselling agencies across Canada and sought their cooperation in collecting information about their clients. The majority of the agencies agreed to cooperate. On our behalf, the agencies asked their clients to fill out a survey almost identical to the one administered to the sample of debtors seeking bankruptcy protection. In addition, the agencies attached whatever information forms each of their clients had been asked to complete before starting the counselling process. The survey process yielded information on about 180 debtors seeking credit counselling.[52]

This chapter compares those seeking credit counselling — we will sometimes call them "credit counselees" — to the sample of those seeking bankruptcy protection that was discussed in Chapters 1 and 2. Because 180 is a relatively small sample size, we cannot replicate the detailed analyses that appear in Chapters 1 and 2. For example, a decile distribution would have less than 20 debtors in each decile and would not be statistically reliable.[53]

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[52]At this writing, information concerning 24 of the 180 respondents cannot be analyzed because their surveys arrived too late to be included in the first round of coding.

[53] In general, readers should be aware that some statistical breakdowns reported in this Chapter may involve very small numbers of respondents.

The financial information collected by the credit counselors is not the same as that collected on the Statements of Affairs filed by bankruptcy trustees on behalf of those seeking bankruptcy protection. Furthermore, the information collected varied significantly among the different credit counselling agencies. For that reason, we lack some variables for the credit counselees; for example, we do not know whether or not they had ever been self-employed within the past five years. Moreover, we have incomplete information on other variables; for example, we do not know the age of about one-quarter of the credit counselees.

The chapter proceeds as follows. The first section compares demographic and family characteristics of the counselees to those of the potential bankrupts. The second section addresses the relative economic status of the two groups, including their income, employment, assets and liabilities. The third section looks at the events that triggered either the search for bankruptcy protection or credit counselling and the fourth section looks at relative attitudes toward bankruptcy. Finally, the last section of the chapter presents a multivariate statistical model of the choice between bankruptcy and credit counselling. [54]

Demographic and Family Characteristics

Table 26 compares the demographic and family characteristics of debtors who sought bankruptcy protection to those who sought credit counselling. Statistical tests of the significance of the differences between the two groups cannot be undertaken because random sampling was not used in the survey process. The number of respondents in each category are shown to indicate the small numbers of debtors in some of the categories.

The group of those seeking bankruptcy protection was uniformly younger than those seeking credit counselling. About 32 per cent of the potential bankrupts were under thirty as compared to 20 per cent of the counselees; about 13 per cent of the potential bankrupts were over fifty as compared to 15 per cent of the counselees. The median age of the potential bankrupts was 34 while the median age of those seeking counselling was 40 (not shown).

About 41 per cent of those seeking bankruptcy were women but 56 per cent of those seeking counselling were women. This difference in gender is one of the largest demographic differences across the two samples. The distribution of marital status groups across the two samples was fairly similar. Of those seeking counselling, 37 per cent were married, 27 per cent formerly married and 36 per cent single; among the potential bankrupts, the corresponding percentages were 43, 29 and 28 per cent, respectively. The counselees were less likely than the debtors seeking bankruptcy protection to have any dependents; 70 per cent had no dependents as opposed to 46 per cent of potential bankrupts.

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[54]The second section uses a subsample of 130 counselees for whom complete financial information is available. The third and fourth sections are based on all of the 156 completed survey responses.

More than half of the potential bankrupts had some education beyond high school and 28 per cent had some form of postsecondary degree. Among those seeking counselling, 61 per cent had education beyond high school and 31 per cent had a postsecondary degree. Whereas 47 per cent of the potential bankrupts had a high school education or less, only 39 per cent of the counselees had high school or less. Finally, 26 per cent of counselees were immigrants, as opposed to 15 per cent of those seeking bankruptcy protection.

The major demographic difference between those seeking bankruptcy and those seeking credit counselling was that 56 per cent of the counselees were women as opposed to 41 per cent of the potential bankrupts. The potential bankrupts were somewhat younger and had somewhat less education but the importance of these differences is hard to gauge in light of the small sample sizes available for the credit counselees.

Economic Situation

Table 27 brings together several measures of the economic situations of the two groups. The information about those seeking bankruptcy protection is largely drawn from Chapter 1 of this report.

Income

The median income of the credit counselees who reported annual household income on the survey was $25,000, almost identical to the $24,000 reported by the potential bankrupts (Table 27).[55] Median monthly income for those seeking credit counselling, as reported on the financial forms, was $1,362 per month. That value is again almost identical to the median of $1,400 per month reported by those seeking bankruptcy protection. As documented in Chapter 1, these income levels are quite low.

Despite the similar and low incomes of both groups, those seeking credit counselling were better off economically because they had lower monthly expenses. The median monthly expenses for those seeking credit counselling was $1,083 as opposed to $1,460 for the potential bankrupts. This difference is important because it suggests that, unlike those seeking bankruptcy protection, those seeking credit counselling had some income that might be available to pay off their debts. More than half of the counselees (55 per cent) had "surplus" monthly income of more than $100 per month and 40 per cent had surplus income of more than $200 per month (not shown).

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[55]As with the sample of potential bankrupts, there was considerable non-response to the survey question concerning household income. Roughly 18 per cent of those seeking credit counselling did not answer this question (or did not know their household income) which is comparable to the 22 per cent of the potential bankrupts who did not provide an answer.

The labour force participation rate among those seeking bankruptcy protection was quite high at 85 per cent; among the counselees, the labour force participation rate was somewhat lower at 78 per cent. The unemployment rate among the potential bankrupts, however, was 25 per cent; among the counselees, it was 10 per cent (12 of the 121 respondents who were in the labor force).

About 40 per cent of the counselees (53 of 130) had received either Employment Insurance or social assistance in the past two years, a percentage quite close to the 45 per cent of potential bankrupts. Looking at all forms of government transfers, 54 per cent of the counselees had received such transfers in the past two years as compared to 57 per cent of the potential bankrupts.

In summary, the economic position of those seeking credit counselling seems to have been better than that of those seeking bankruptcy protection. Both groups were relatively poor, however, and both had significant percentages that had received government transfers. Nonetheless, those seeking credit counselling reported monthly expenditures that were less than their monthly incomes and seemed to have some income that might be put toward debt repayment. The unemployment rate among bankrupts was considerably higher although, again, the small sample sizes make it difficult to place a great deal of weight on that finding.

Liabilities

Perhaps the most striking difference between those seeking credit counselling and those seeking bankruptcy protection is in the overall size of their debts. Those seeking bankruptcy had median total debts of $26,016; those seeking credit counselling had median debts of "only" $10,543 (Table 27).

Asset levels for both groups were quite small with a median of $3,000 for the potential bankrupts and $1,500 for the counselees. The counselees had a smaller number of debts as well, with a median of 5 as opposed to the median of 7 for the potential bankrupts (not shown).

Coupled with the above result that the incomes of the two groups were quite similar, we have the strong suggestion that potential bankrupts are simply in deeper financial trouble than those seeking credit counselling. The median debt to income ratio for those seeking credit counselling was 0.54 as compared to 1.36 for those seeking bankruptcy protection (Table 27).

Having debts that amount to 50 per cent of one's annual income is no small matter, especially given the low incomes available to those seeking credit counselling. Nevertheless, we know that many of those seeking counselling had some surplus monthly income so that there was at least a hope of repayment.

The small sample size of the credit counselling survey limits our ability to analyze the structure of liabilities in a meaningful way. For example, looking at specific *types* of debt is difficult — only 16 of the 130 credit counselees had mortgages, 16 had car loans, 22 had student loans, 26 owed money to Revenue Canada and 15 owed money to other government entities. These numbers are too small to make meaningful comparisons to the survey of bankrupt debtors.

Looking at the various *sources* of debts gives sample sizes that are larger and thus more amenable to analysis. Table 28 shows both the numbers of respondents who had received credit from various sources and the median level of debt received from each source. It would seem that not only did those seeking credit counselling have smaller debt loads, but those debt loads were more concentrated in credit card debt and in debt to retailers. Considerably smaller proportions of the counselees had debts to banks, non-bank financial institutions or to the government; and those who had such debts owed smaller amounts of money. But *more* of those seeking credit counselling owed money on their credit cards or to retailers. The size of these debts was comparable to the size of the debts owed by those seeking bankruptcy protection.

Some might believe that those seeking credit counselling are unwilling to take the "easy way" out of economic problems as severe as those faced by debtors who file for bankruptcy. Based on our evidence, however, those seeking credit counselling are in less dire economic straits than those seeking bankruptcy.

Reasons for Seeking Bankruptcy Protection or Seeking Credit Counselling

On our survey instrument, each respondent was asked to tell us whether there was a particular event or a particular debt that "triggered" their need to file for bankruptcy or to seek credit counselling. In addition, another question asked each respondent to rate the importance of a number of different factors in leading to either bankruptcy or credit counselling.

Triggering debts or events

Table 29 shows the responses of those seeking bankruptcy protection or credit counselling to the question: "Were there any particular events or debts which triggered your potential bankruptcy [credit counselling]?" Those seeking credit counselling responded quite differently to this question than did those seeking bankruptcy protection. Major problems such as loss of a job or personal problems (including marital disruption, illness or death) were much more likely to be named by those seeking bankruptcy. Issues related to debt repayment, such as rude or persistent collection efforts, were more likely to be cited by those seeking credit counselling. This suggests that not only were potential bankrupts in a worse economic situation but also that more of them had experienced more severe problems than those seeking credit counselling.

The Importance of Various Factors in Contributing to Financial Problems

Both samples were asked to rate, on a five point scale, the importance of various factors that might have led to their financial difficulties. The factors were:

not enough work
• change in marital status
too much borrowing or credit card use
• lack of budgeting skills
• problems related to a small business
• loss of job

Table 30 compares the responses of those seeking credit counselling to those considering filing for bankruptcy. Large minorities in both groups rated employment problems ("not enough work" or "loss of job") as "very important" in contributing to their financial difficulties. "Not enough work" was rated "very important" by 43 per cent of those seeking bankruptcy protection and by 35 per cent of those seeking credit counselling. "Loss of job" was rated very important by 32 of bankrupts and by 36 per cent of counselees.

The only important difference between the two groups on these questions was that "too much borrowing or credit card use" was classified as very important by 52 per cent of those seeking credit counselling. That factor was important to those considering filing for bankruptcy as well — it was named by 36 per cent — but it would seem that problems related to debt accumulation *per se* were more important to the counselees. Again, however, the small numbers of credit counselees suggest that we be cautious in making too much of such differences.

Attitudes Toward Bankruptcy

As noted above, one commonly held view of bankruptcy is that some debtors simply "give up" more easily than others, even if the objective economic circumstances are the same. While there is no empirical evidence for this view, one possible explanation for why some people might give up more easily than others could lie in differing attitudes concerning bankruptcy. Debtors who feel that bankruptcy is a sign of personal failure or that bankruptcy is something of which other people disapprove might be more likely to seek credit counselling rather than bankruptcy.

Table 31 compares the responses of the two groups to a battery of five survey questions relating to attitudes toward bankruptcy. Each survey respondent was asked to rank, on a scale of 1 to 5, the extent to which they agreed with the following five statements:

bankruptcy is a financial decision like any other
• bankruptcy is a way to overcome past misfortunes and start over
• bankruptcy is a sign of personal failure
• bankruptcy is something that other people look down on

- bankruptcy is more acceptable than it was 10 years ago

Those considering bankruptcy had "softer" attitudes toward bankruptcy, on each question, than did those seeking credit counselling. For example, those considering filing for bankruptcy were more likely than those seeking credit counselling to agree that "bankruptcy is a financial decision like any other" (3.37 versus 3.17), that "bankruptcy is a way to overcome past misfortunes and start over" (3.72 to 3.08) and that "bankruptcy is more acceptable than it was 10 years ago" (3.67 to 3.49). The potential bankrupts were less likely to agree that "bankruptcy is a sign of personal failure" (2.64 to 2.94) and that "bankruptcy is something that other people look down on" (3.41 to 3.67).

This evidence of softer attitudes toward bankruptcy on the part of those seeking bankruptcy is important because those seeking credit counselling ought to be at least somewhat sympathetic with the bankruptcy option (since they have financial troubles of their own). It is not, however, evidence that those seeking bankruptcy protection are taking the "easy way out" *given the same objective circumstances* as other debtors.

In order to address that question, as well as others, we now turn to a multivariate model that attempts to distinguish among those seeking credit counselling and those filing for bankruptcy.

A Multivariate Model of Bankruptcy and Credit Counselling

Through this Chapter, we have relied on bivariate analyses to highlight the similarities and differences between those seeking bankruptcy protection and those seeking credit counselling. While extremely useful, bivariate analyses may be misleading if other variables are not "held constant" when the two variables are being compared.

As a hypothetical example, consider the finding from the last section that those seeking bankruptcy protection had "softer" attitudes toward bankruptcy than those seeking credit counselling. We also know that the sample of those seeking bankruptcy contained a considerably higher percentage of men than the sample of those seeking credit counselling. If men have "softer" attitudes than women, the difference in attitudes between counselees and potential bankrupts may be entirely due to the gender difference rather than to anything about the choice of credit counselling over bankruptcy.

Our model combines responses from the two samples to create a data set that contains 899 debtors seeking bankruptcy protection and 83 debtors seeking credit counselling.[56] Since we are analyzing a choice between two discrete options — bankruptcy and credit counselling — we use a technique known as logit analysis to assess the impact of each variable on the

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[56]These numbers differ from those used in the previous Tables because the multivariate model requires that each record be complete on all variables before being included in the model. Some records were dropped because of missing information either on the attitudinal variables or on dates of birth.

probability of choosing between the two options.

The variables included in the model are those discussed above (for example, gender, age, marital status, total debts and total assets). In addition, we combined the five survey questions that ask about attitudes toward bankruptcy into a single variable. We recoded each question so that the view most favourable toward bankruptcy received 5 points and the view least favourable received 1 point. The result is a 25 point scale in which a score close to 25 indicate attitudes very favourable toward bankruptcy and scores close to 5 indicate attitudes unfavourable to bankruptcy. In the combined sample of potential bankrupts and counselees, the average of this variable was 16.5 with a standard deviation of 3.6.

Column 2 of Table 32 contains the coefficient estimates from the model. These coefficients, however, are not easily interpreted without further manipulation. We therefore provide two other numerical estimates, based on the estimated coefficients, of the impact of each variable on the probability of seeking bankruptcy protection versus credit counselling.

The first, called Δ P ("delta P"), is used when the variable being discussed has only two values, 0 and 1. For example, the variable *male* takes the value 1 for men and 0 for women. The variable *single* takes the value 1 for those who are single and 0 for those who are not single. The value of Δ P indicates the percentage point difference in the probability of seeking bankruptcy between those with the value 1 and those with the value 0. For example, the Δ P for the variable *male* in Table 32 is 5.8. This means that, after adjusting for the other variables, men are 5.8 percentage points more likely than women to seek bankruptcy rather than credit counselling.

The second estimate based on the logit coefficients is called an *elasticity* (and is denoted by the Greek letter ϵ). Elasticities are used when the variable being discussed is continuous; this includes dollar values (such as total liabilities or assets) or the 25 point attitudinal scale.[57] An elasticity indicates the percentage change in the probability of seeking bankruptcy which is predicted to result from a one per cent change in the variable being discussed. For example, a one per cent increase in total liabilities is predicted to lead to a 0.06 per cent increase in the probability of seeking bankruptcy, holding other variables constant. An elasticity of that magnitude (0.06) is quite small.

The most important result in Table 32 is that, in general, the bivariate comparisons presented above remain relevant even when other variables are "held constant." Respondents are more likely to be in the group declaring bankruptcy if they are male, less than thirty years old, or have dependents. The greater the respondents' debts (and the lower their assets) the more likely they are to be declaring bankruptcy. Finally, those with "softer" attitudes toward

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[57]Strictly speaking, neither dollar values or the 25 point scale are continuous in the mathematical sense. Elasticities can be used, however, whenever the variable in question takes on a number of values that are ordered in such a way that higher values indicate numerically larger values. This is true, for example, of a variable measured in dollars but not of a 0-1 gender variable.

bankruptcy are more likely to be seeking it. These results mirror the bivariate results presented above.

This result is especially important in terms of the attitudinal variable. Those with higher scores (indicating softer attitudes toward bankruptcy) are more likely to be in the group actually seeking bankruptcy, even when other variables are held constant. That is, the bivariate difference in attitudes is not the result of differences in gender or in the size of debts or assets.

Summary

Using a small sample of debtors who sought credit counselling, we are able to compare our larger sample of debtors seeking bankruptcy protection to other debtors who, when faced with credit problems, chose not to seek bankruptcy. The two most important findings are that:

- the economic situation of those seeking bankruptcy was far worse than the economic situation of those seeking credit counselling

- debtors seeking bankruptcy had attitudes that were more favourable toward bankruptcy than those of debtors seeking credit counselling

The debts of those seeking credit counselling were far lower than the debts of the potential bankrupts. The median of total liabilities for the counselees was about $10,500 as compared to about $23,000 for bankrupts. Both groups had similarly low incomes. As a result, the debt to income ratios for the potential bankrupts were far higher than those of the counselees. The median debt to income ratio was 0.54 for counselees and 1.36 for bankrupts.

Both surveys contained five attitudinal questions. In general, the attitudes *within* the sample of those seeking bankruptcy protection did not vary by age, gender, and the size of assets and liabilities. However, when the two different samples are compared, those seeking bankruptcy had attitudes which were more favourable toward bankruptcy than the attitudes of those seeking credit counselling. For example, those seeking bankruptcy protection were more likely than those seeking credit counselling to agree that "bankruptcy is a financial decision like any other," that "bankruptcy is a way to overcome past misfortunes and start over, " and that "bankruptcy is more acceptable than it was 10 years ago." The difference in attitudes remained even in a multivariate model that held other factors constant.

Table 26

A Comparison of the *Demographic Characteristics* of Debtors Seeking Bankruptcy Protection and Debtors Seeking Credit Counselling

	Potential Bankrupts		*Credit Counselees*	
	Percentage	Sample Size	Percentage	Sample Size
Age				
30 or less	31.9	325	20.2	19
Between 30 and 50	55.4	564	64.9	61
50 or over	12.7	129	14.9	14
Gender				
Male	57.7	587	41.8	64
Female	40.6	413	56.2	86
Husband/Wife	1.8	18	2.0	3
Marital Status				
Married	42.6	434	36.8	39
Formerly Married	29.4	299	27.4	29
Single	28.0	285	35.8	38
Education				
High School or Less	47.2	474	38.7	60
Some Postsecondary	24.9	250	30.3	47
Postsecondary Degree	28.0	281	31.0	48
Number of Dependents				
None	46.5	473	70.0	91
One	17.2	175	12.3	16
Two	18.7	190	4.6	6
More than Two	17.7	180	13.1	17
Immigration Status				
Immigrant	14.7	148	26.3	41
Born in Canada	85.3	862	73.7	115

Table 27

A Comparison of the *Economic Situation* of Debtors Seeking Bankruptcy Protection and Debtors Seeking Credit Counselling

	Potential Bankrupts		Credit Counselees	
Income Measures	*Median*	*Sample Size*	*Median*	*Sample Size*
Total Annual Household Income	$24,000	793	$25,000	128
Total Monthly Income	$1,400	1018	$1,362	130
Total Monthly Expenditures	$1,460	1018	$1,083	130
Difference between Monthly Income and Expenditure	$0	1018	$117	130
Labour Force Status	*Percentage*		*Percentage*	
Not in Labour Force	15.4	157	22.4	35
In the Labour Forces	84.6	867	77.6	121
Employed	63.5	646	69.9	109
Unemployed	21.1	215	7.7	12
Unemployment Rate	25.0		9.9	
Government Transfers	*Percentage*		*Percentage*	
UI or Social Assistance (Percentage)	45	1018	40.1	130
Any Transfer (Percentage)	57	1018	53.8	130
Measures of Indebtedness	*Median*		*Median*	
Total Liabilities (Median)	$26,016	1018	$10,543	130
Total Assets (Median)	$3,000	1018	$1,500	130
Debt to Income Ratio (Median)	1.36	784	0.54	104

Table 28

A Comparison of the Sources of Credit for Debtors Seeking Bankruptcy Protection and for Debtors Seeking Credit Counselling

	Those Seeking Bankruptcy Protection			*Those Seeking Credit Counselling*		
	Percentage with At Least One Debt	Median of Positive Values	Sample Size	Percentage with At Least One Debt	Median of Positive Values	Sample Size
Banks	53.7	$14,200	553	36.9	$7,000	48
Other Financial Institutions	59.3	$8,065	581	40.8	$7,000	63
Government	69.7	$6,000	613	33.8	$5,200	44
Credit Card Companies	68.8	$3,547	697	72.3	$3,343	94
Retailers	59.4	$1,600	594	63.8	$2,436	83
Other	54.0	$2,000	518	27.7	$ 900	36

Table 29

The Events or Debts that "Triggered" Bankruptcy or Credit Counselling

Triggering Event or Debt	Those Seeking Bankruptcy Protection		Those Seeking Credit Counselling	
	No. of Responses	Percent of Total	No. of Responses	Percent of Total
Loss of Job or Reduced Income	277	18.8	19	9.0
Personal Problems	161	10.9	16	7.5
The Debt Repayment Process	90	6.1	42	19.8
General Inability to Repay Loans	96	6.5	34	16.0
Credit Cards	86	18.8	25	11.8
No specific event/debt or "no response"	164	11.1	18	8.5
Debts to Government	166	11.3	9	4.2
Small Business Failure	60	4.1	2	1.0
All Other Events or Debts	384	25.9	58	27.4
Total Number of Triggering Events or Debts Named	1,484		223	

Table 30

A Comparison of the *Importance of Various Factors in Contributing to the Financial Problems* of Debtors Seeking Bankruptcy Protection and Debtors Seeking Credit Counselling

	Not Important At All		Very Important	
	Those Seeking Bankruptcy Protection	Those Seeking Credit Counselling	Those Seeking Bankruptcy Protection	Those Seeking Credit Counselling
Not enough work	24	37	43	35
Change in Marital Status	58	66	17	21
Too much borrowing or credit card use	18	13	36	52
Lack of budgeting skills	22	13	20	31
Problems related to a small business	62	76	14	12
Loss of job	43	50	32	36

Table 31

A Comparison of the Attitude Toward Bankruptcy of Debtors Seeking Bankruptcy Protection and Debtors Seeking Credit Counselling

	Those Seeking Bankruptcy Protection	*Those Seeking Credit Counselling*
	Average Score on a Scale Where 1="Strongly disagree" and 5="Strongly agree"	
Bankruptcy is a financial decision like any other	3.37	3.17
Bankruptcy is a way to overcome past misfortunes and start over	3.72	3.08
Bankruptcy is a sign of personal failure	2.64	2.94
Bankruptcy is something that other people look down on	3.41	3.67
Bankruptcy is more acceptable than it was 10 years ago	3.67	3.49

Table 32

Multivariate Logit Models of a Combined Sample of Those Seeking Bankruptcy Protection and Those Seeking Credit Counselling

Independent Variable	Logit Coefficient	ΔP or ϵ
Attitudes toward Bankruptcy (25 point scale)	0.096	$\epsilon = 0.13$
Total Debts ($000)	0.038	$\epsilon = 0.18$
Total Assets ($000)	-0.029	$\epsilon = -0.07$
Gender (Male=1)	1.228	$\Delta P = 5.8$
Age Less than Thirty (Yes=1)	1.164	$\Delta P = 5.7$
Age Greater than 50 (Yes=1)	0.390	$\Delta P = 2.6$
Married (Yes=1)	-0.155	$\Delta P = -1.3$
Single (Yes=1)	-0.917	$\Delta P = -10.3$
Number of Dependents	0.457	$\epsilon = 0.04$
Postsecondary Degree (Yes=1)	0.204	$\Delta P = 1.4$
Out of the Labour Force (Yes=1)	0.147	$\Delta P = 1.1$
Unemployed (Yes=1)	0.649	$\Delta P = 3.8$
Received UI or Social Assistance (Yes=1)	0.415	$\Delta P = 2.7$
Monthly Income ($000)	-0.4	$\epsilon = -0.06$
Monthly Expenditures ($000)	-0.36	$\epsilon = -0.05$

Chapter 5

Issues in Interpreting the Survey Results

A report issued separately by COMPAS Inc. discusses the survey procedures used in collecting data from debtors seeking bankruptcy protection and reviews summary statistics drawn from the Survey of Potential Bankrupts. While many of the survey variables are discussed in this report, the COMPAS report presents summary statistics on all questions asked on the survey.

In this Chapter, we briefly discuss two issues related to interpreting the results of our survey efforts:

- the implications for statistical testing of not having drawn a random sample in either the Survey of Potential Bankrupts or in our smaller survey of those seeking credit counselling.

- the question of whether "weighting" is appropriate and whether it would change the results reported here.

Statistical Tests

As noted in the Introduction, we decided early on that it would be inadvisable to attempt to survey a random sample drawn from the population of those seeking bankruptcy protection in early 1997. Contact information was not available for a large proportion of those declaring bankruptcy and, even if it were available, those responding to a survey undertaken long after the initial filing of the Statement of Affairs might have had problems recalling their financial situation at that time or have been unwilling to do so.

One consequence of not having a random sample is that we cannot perform statistical tests that might have seemed appropriate. For example, in Chapter 2, we compare the group of self-employed respondents to those who were not self-employed. One might ask whether the observed differences are reflective of differences in the population of those seeking bankruptcy protection or whether they simply reflect differences in our particular group of 1,018 potential bankrupts.

Usually, we would answer that question by testing the hypothesis that the population mean for the self-employed was equal to the population mean for those not self-employed. The essence of that test is to ask how likely it would be to obtain the difference observed *in a random sample* if there was, in fact, no difference in the underlying populations. Because we do not have a random sample, however, we cannot perform that test.

Nonetheless, we have no reason to believe that our sample is unrepresentative of the underlying population. We therefore provide some guidelines for interpreting the reported difference *as if* the samples had indeed been randomly generated.

Chapter 1 compares the entire sample of potential bankrupts to the sample studied by Brighton and Connidis in 1984. If both samples had been randomly drawn from their underlying populations, the sample sizes would have been large enough to detect true differences that are relatively small. The 1997 survey had 1,018 respondents; the Brighton and Connidis sample had 1,059.

For variables appearing as proportions (including gender, age, marital status and labour force participation), differences that are larger than 4.3 percentage points would lead us to reject the hypothesis that the two populations had the same proportion. For example, in Table 2, there is a difference of 20 percentage points between the proportion of single people in the Brighton and Connidis sample (8 per cent) and the proportion in the 1997 sample (28 per cent). If the samples had been randomly drawn, such a difference would certainly be interpreted as indicating a true difference in the populations of bankrupts in the two years. By contrast, in Table 1, the difference between the proportion of the Brighton and Connidis sample that was between 30 and 49 years of age (52.5 per cent) and the proportion of that age in 1997 sample (55.4 per cent) is only 2.9 percentage points. This difference would generally be judged to be too small to indicate a true difference in the underlying populations.

For continuous variables (such as those measured in dollar values) the size of statistically different differences depends on the extent of variation in the values of the variables. For some variables — such as total debt — that variation is quite large. For others — such as the number of dependents — it is somewhat smaller. For example, Table 9 reports the mean total debt of both the Brighton and Connidis sample and of the 1997 sample of potential bankrupts. The difference in means for total debts, across the two samples, is about $11,000. If we assumed that the two sample were randomly drawn, this difference would not be statistically significant at the 1 per cent level of significance but it would be significant at the 5 per cent level. By contrast, the difference in mean net indebtedness reported in Table 9 is more than $20,000, a difference that would be statistically significant at any standard significance level.

In Chapter 2, we compare several subgroups of debtors within the 1997 sample. We compare respondents who are self-employed to those not self-employed, unmarried men to unmarried women and debtors under 30 years old to those over 30 years old.

Taking the comparison of unmarried men to unmarried women as an example, the difference in a proportion would have to be about 8 percentage points to be statistically significant at the 5 per cent level and 10 percentage points for significance at the 1 percent level. The comparison of unmarried men to unmarried women involves the smallest sample sizes (321 and 254, respectively) so the size of statistically significant differences for the other two comparisons would be slightly smaller.

The statistical significance of differences in continuous variables such as total debts or annual income again depends on the range of variation in each variable. For example, the mean total debt for unmarried men was $45,801 and, for unmarried women, $39,895. However, that difference of $5,906 would not be statistically significant because of the great range of variation in both

quantities.[58]

On the other hand, the mean annual pre-tax income was $26,380 for unmarried men and $19,654 for unmarried women. This difference of $6,729 would have been statistically significant because the range of variation in annual income was much smaller than the range of variation in total debts.

Chapter 4 compares our small sample of credit counselees to the sample of potential bankrupts. Although the sample of credit counselees is small (less than 200), comparisons are being made to the entire group of 1,018 potential bankrupts. For that reason, the sizes of statistically significant differences would be about the same as for comparisons of unmarried men to unmarried women.

In conclusion, we are taking a relatively "hard" line on the issue of statistical significance. Because we know that our sample was not randomly drawn, we report no tests of statistical significance in the text. It should be acknowledged, however, that other analysts might take a "softer" line of this issue and, because there is no reason to suspect significant departures from randomness, they might have performed such statistical tests.

Weighting

As shown on p. 9 of the COMPAS report, the proportions of sample respondents who filed for bankruptcy in various provinces is different from the proportions of the population filing in each province.[59] For example, 30 per cent of all bankruptcies were filed from Québec but only 16 per cent of our sample filed in Québec. About 8 per cent of all bankruptcies were filed in British Columbia but 16 per cent of sample filed in British Columbia. The proportions filing in Ontario were roughly the same in our sample and in the population.

One procedure that is sometimes undertaken in such cases is called "*ex post* weighting." For example, we might treat each Québec respondent as representing two respondents and each British Columbia respondent as representing only 0.50 of a respondent. We do not, however, use any weighting in the results reported here. There are two issues involved in deciding whether or not to weight the data:

The first is whether the *ex post* weighting will allow us to treat our results as if they applied to the underlying population of potential bankrupts. In general, *ex post* weighting does not allow inference to the population. Some surveys over-sample particular subgroups of a population in order to obtain certain sample sizes. In analyzing the results of such surveys, *sampling* weights are used in order to allow inference to the population. Sampling weights — which are based on the probability that a

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[58] Note that we use medians, instead of means, as indicators of central tendency in this report because the data has some very high values that would distort the means. The problem of assessing statistical significance is complicated even further when medians are used in place of means.

[59] We have information from the Office of the Superintendent of Bankruptcy on several characteristics of the population of all those filing for bankruptcy during the same period over which were drawing our sample.

person will be *randomly* chosen for inclusion in the sample — are not the same as weights generated after the fact.

The second question is whether it makes any difference that the sample contains a greater or smaller proportion of individuals from different subgroups, whether those groups are defined by province, age group or gender. Table 33 shows the means of selected variables by province. If there was a systematic pattern of differences across provinces, especially in Québec and British Columbia, we might be concerned that our summary statistics were misleading. Table 33 indicates that there are some differences (as we would expect) but these differences are generally neither striking nor consistent across the selected variables.

As another check on the possible relevance of *ex post* weighting, we use the weights reported on p. 9 of the COMPAS report to compare, in Table 34, the unweighted means to the weighted means for some selected variables. As is clear from Table 34, the use of the weights does not change the overall sample means by very much.

In conclusion, we do not believe that *ex post* weighting should be undertaken for the results reported here. Aside from the theoretical reasons for not doing such weighting, the limited data exploration that has been undertaken here indicate that there is no pressing need to weight by province, despite the differences between our sample and the population in the proportion filing in some provinces.

Table 33

Unweighted Means of Selected Variables, By Province

	Alta.	*B.C.*	*Man.*	*Nfld.*	*N.S.*	*Ont.*	*P.Q.*	*Sask.*
Proportion Receiving Government Transfers	0.60	0.63	0.61	0.68	0.56	0.53	0.59	0.37
Total Monthly Income	$1691	$1592	$1216	$1650	$1383	$1609	$1212	$1886
Attitude Toward Bankruptcy	3.54	3.35	3.32	3.72	3.28	3.42	3.20	3.00
Annual Income ($000)	$26.5	$33.0	$22.8	$37.8	$25.1	$29.4	$27.5	$27.8
Total Debt ($000)	$41.7	$50.7	$28.5	$65.9	$56.8	$71.0	$46.3	$51.7

Table 34

Weighted and Unweighted Means for Selected Variables

	Unweighted Mean	Weighted Mean
Total Debts	$55,048	$55,481
Total Unsecured Debts	$33,754	$33,912
Total Assets	$25,978	$25,935
Bank Debt	$21,080	$20,989
Government Debt	$8,168	$7,904
Credit Card Debt	$3,905	$3,723
Total Monthly Income	$1,535	$1,482
Total Monthly Expense	$1,601	$1,549
Weeks Worked	33.6	33.6
Annual Pre-tax Income	$28,622	$28,305

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