

Profiles of Canadian Households Undertaking Insolvency Procedures Pre- and Post-Recession

Final Report

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Introduction

In the years just prior to the 2008-09 recession,¹ the financial condition of Canadian households was characterized by rising incomes, low unemployment, low savings rates, and rising levels of debt. Average real disposable household income increased as the economy expanded from 2004-08, the first period of significant income gains for households since the previous recession of the early 1990s (Sauvé, 2011). Employment rates were the highest they had been, and the unemployment rate, at 6.1% in the months prior to the start of the recession, was near its lowest recorded level (LaRochelle-Côté & Gilmore, 2009; Sauvé, 2010).

Against this backdrop of rising incomes and low unemployment, there was evidence that households were spending as much, if not more, on average, than they were earning. The personal savings rate dropped to 3.0% of disposable income in early 2008 from about 13% in 1990. Also worrisome was the escalation in average debt load, which had reached 127% of disposable income by late 2008, prompting the Vanier Institute of the Family to warn that households had entered a “danger zone” with respect to their ability to manage potential financial difficulties (Sauvé, 2009). Indeed, in the years preceding the recession, there was evidence that households were overextended on debt, as the rates of consumer insolvency continued to rise, albeit at a slower pace than in the 1990s (OSB, 2010b).

During the recession, average household income fell and unemployment increased, but the recession was milder in Canada than in many other developed countries. By 2010 household incomes had recovered to their 2008 average and the unemployment rate had dropped to 8.0% from 8.3% in 2009, still higher than the pre recession rate (Sauvé, 2011; Statistics Canada, 2012b). However, although the average savings rate increased to 6.1% in 2009, before dropping to 4.2% in 2010, the debt-to-income ratio continued to rise, reaching a record 150% of disposable income in 2010 as households continued to take advantage of low interest rates to borrow more (Sauvé, 2011).

Although borrowing when interest rates are low can make financial sense for households, it can also cause serious financial difficulty if the household becomes overextended or experiences a sudden shock to income. Unexpected job loss, illness, or family breakdown can mean the difference between getting by and being unable to repay debt, and if the financial distress becomes serious, between being able to get by and seeking formal relief through insolvency.

There is evidence that consumer insolvency procedures – both bankruptcies and proposals – increased during and after the 2008-09 recession (OSB, 2009, 2010b), but it is not clear whether the profile of insolvent households changed as a result of the recession. Timely information on how the profiles of insolvent households are changing is needed by the insolvency community to provide benchmark data on Canadian households that have undertaken an insolvency

¹ The Canadian economy was in recession from the first quarter of 2008 through the second quarter of 2009 (Bank of Canada, 2010).

procedure, to anticipate changes in demand for insolvency procedures, and to inform preventative and rehabilitative efforts for financially distressed households. Warren (2003) notes that information on who is filing for bankruptcy provides insight into the economic vulnerability and the economic progress of diverse subgroups of the population. Despite the importance of such information, relatively few studies have focused on the profile of insolvent Canadian households.

The overarching objective guiding the research is to determine whether the profiles of households of insolvent debtors have changed post-recession, and if so, in what ways. The research questions are:

1. Have the sociodemographic characteristics of households that have undertaken an insolvency procedure changed in the post-recession period, compared to the pre-recession period?
2. Have the financial characteristics of households that have undertaken an insolvency procedure changed in the post-recession period, compared to the pre-recession period?
3. Have the banking practices, that is, the debt owed, of households that have undertaken an insolvency procedure changed in the post-recession period, compared to the pre-recession period?
4. Have the major reasons for insolvency changed among households that have undertaken an insolvency procedure in the post-recession period, compared to the pre-recession period?
5. For those liabilities where a significant change is observed between 2007 and 2010, what sociodemographic and financial characteristics are associated with the liability?

For each of the five research questions, debtors undertaking a consumer proposal will be examined separately from those undertaking a bankruptcy.

The Insolvency Process

Individuals and families who find themselves in financial difficulty have several options. If credit or debt counselling is available, the debtor may be able to solve his or her financial difficulties by working with a counsellor. In more serious situations, the debtor may need to pursue filing a consumer proposal or filing for bankruptcy. Both procedures are administered under the federal Bankruptcy and Insolvency Act (BIA). In a consumer proposal, an alternative debt repayment schedule is proposed to the creditors; with bankruptcy, relief from unsecured creditors is provided to “honest but unfortunate debtors” (OSB, 2011).

The introduction of changes to the BIA for both consumer and business insolvencies on September 18, 2009 is an extenuating factor that complicates the pre and post recession comparison of the profiles of insolvent debtors. On the consumer side, the debt ceiling for filing consumer proposals under Division II of the BIA was raised to \$250,000 from \$75,000, excluding mortgage debt on the principle residence. The stated intent of the change was to make consumer proposals, which are less costly than commercial proposals, more available to insolvent debtors (Industry Canada, 2011). Prior to this change, an insolvent debtor with more

than \$75,000 in debt who wanted to file a proposal would have had to file under Division I of the Act, which was designed to provide small and medium size businesses a way to avoid bankruptcy by restructuring their debt (Sarra,2008). Although the timing of the legislative changes means observed differences in the profiles of those filing for bankruptcy and those filing consumer proposals cannot be attributed solely to the recession, the data present an important opportunity to examine the profile of insolvent Canadian households pre and post recession.

In the following sections, relevant literature will be reviewed and the sampling frame will be presented. These sections will be followed by the presentation of results of the analyses and discussion of the results.

Review of Literature

Examining the characteristics of insolvent households and tracking changes in these characteristics over time is important because knowledge of who is undertaking an insolvency procedure can provide research-based evidence to anticipate changes in demand for insolvency procedures and can inform both financial literacy efforts and public policy. Among the existing research studies on financially distressed households, most of the work is on the US population; thus it has limited applicability in the Canadian context. Although sparse, the Canadian studies provide some insight into the historical profile of insolvent debtors.

Profiling Insolvent Debtors: Sources of Information

Much of what is known about the characteristics of debtors who have undergone insolvency procedures comes from the pioneering work of researchers on the Consumer Bankruptcy Project in the United States (Lawless, Porter, Pottow, Thorne, Littwin & Warren, 2008; Sullivan, Warren, & Westbrook 1989, 2000, 2006). Data for the Consumer Bankruptcy Project included bankruptcy court records and written questionnaires of debtors in several US states in 1981, 1991, 2001 and 2007. The samples in each year were large, and although the samples in 1981, 1991 and 2001 were not nationally representative, they were drawn systematically within each state to reduce bias. The 2007 sample was nationally representative and collected after passage of the Bankruptcy Abuse Prevention and Consumer Protect Act of 2005 in the US (Lawless, et al., 2008). Research from this project has established that those who seek bankruptcy in the US are overwhelming middle class, not a financially challenged underclass of irresponsible debtors (Sullivan, Warren & Westbrook, 2000; Warren, 2003), that an increase in the severity of the financial distress experienced by debtors, not a reduction in stigma is responsible for the sharp increase in bankruptcy procedures in the US since the early 1980s (Sullivan, Warren & Westbrook, 2006), and that medical problems are an important contributing factor in bankruptcies (Himmelstein, Warren, Thorne & Woolhandler, 2005). Given the differences in health care policy in the US, this latter finding points to the potential difficulty in applying the results of US bankruptcy studies to Canada.

In addition to the Consumer Bankruptcy Project, two smaller studies have profiled the characteristics of insolvent debtors in Utah; the earliest study used data collected in 1997 from

court records (Lown & Rowe, 2003; Evans & Lown, 2008) and the most recent replicated the data collection methods of the Consumer Bankruptcy Project to collect data in 2004-05 (Lown, 2008). These studies focussed on Utah because of the high rates of filings of bankruptcy (Chapter 7) and repayment plans (Chapter 13) in this state (Lown & Rowe, 2003; Lown, 2008). In addition, in recent years the Institute for Financial Literacy has published an annual profile of the sociodemographic characteristics of debtors who used credit counselling services (Linfield, 2010).

In Canada, research that profiles insolvent debtors has been undertaken intermittently, utilizing different data sources and sampling frames. The majority of the studies have drawn samples from data made available by the Office of the Superintendent of Bankruptcy. The earliest work analyzed a systematic, stratified, representative sample of bankruptcy files from 1977² (Brighton & Connidis, 1982). Subsequent profiles were generated by the National Counselling Directive Working Group with data from 1994 (McGregor & Berry, 1998) and by Schwartz and Anderson who used data from March - May 1997 (Schwartz, 1999).³ The National Counselling Directive Working Group study used data from a nationally representative sample of 5,241 bankruptcy files, supplemented with telephone interviews to collect information on the bankrupt debtor's education and occupation (McGregor & Berry, 1998). In contrast, Schwartz and Anderson collected data from 1,094 potential bankrupt debtors through questionnaires distributed by trustees who handled a large volume of bankruptcies. Although the sample was not randomly generated, there is evidence that it was generally representative of the Canadian population at the time of the survey (Schwartz, 1999).

Recent work by Sarra (2008) and colleagues gives some insight into the profile of Canadians who undergo insolvency procedures, updating statistics reported by the Office of the Superintendent of Bankruptcy (OSB) (2007), and providing more detailed information on older insolvent debtors. Using data from the OSB on debtors aged 55 and older who filed for bankruptcy in 2003-05, Redish, Sarra and Schabas (2006) focussed on discovering the reasons behind the increase in the bankruptcy rate of older Canadians and concluded that this segment of the population uses bankruptcy as an "economic adjustment tool," that is, as a means of alleviating financial distress (p. 9). Sarra (2008) compared debtors who filed for bankruptcy with those who filed either Division I or Division II consumer proposals in the 2005-07 time period. Berry and Duncan (2007) examined the role of payday loans in consumer bankruptcies and proposals.

Other studies have focused on bankruptcy at the provincial level. In one of these, Hira (1982) profiled a random sample of 146 debtors in the Manitoba Small Debtors Program between 1973-77. Two large-scale studies profiled debtors in Ontario. Ramsay (1999) collected data from bankruptcy files from a non-representative sample of 1,147 debtors in the Toronto

² The OSB was the Bankruptcy Branch, Consumer and Corporate Affairs Canada at the time.

³ This research is based on a 1998 study by Schwartz and L. Anderson, *An Empirical Study of Canadians Seeking Personal Bankruptcy Protection*.

bankruptcy district in 1994, a district where bankruptcies represented almost 20 percent of Canadian consumer bankruptcies that year. Most recently, Hoyes and Michalos (2011), trustees in bankruptcy in Ontario, generated a profile of 8,000 insolvency cases handled by that firm over the two-year period from January 2009 to December 2010.

Taken together, the Canadian work to date provides important information on how the profile of insolvent debtors in Canada has changed over time. The sociodemographic characteristics, financial characteristics, banking practices – that is, the use of mortgage debt, credit card debt and loans — of insolvent debtors that can be gleaned from these studies are summarized in the next sections.

Sociodemographic Characteristics

Over the past thirty years there has been little change in the general profile of bankrupt debtors. The typical debtor is male, married, and has children, but his age has crept upwards from about 33 in 1977 to 41 in 2010 (Brighton & Connidis, 1982; Hoyes & Michalos, 2011; McGregor & Berry, 1998; Ramsay, 1999; Schwartz, 1999). This general profile, however, masks substantive changes in the sociodemographic characteristics underlying the “typical” profile.

Age

The average age of insolvent debtors has increased since 1977 when Brighton and Connidis (1982) reported that the average age was just under 34 years and that the majority of filers ranged in age from 20-39. By 1994, the average age had risen to 38 (McGregor & Berry, 1998) and the majority of filers fell within the range of 30-49 years of age (McGregor & Berry, 1998; Ramsay, 1999; Schwartz, 1999). By 2006, the OSB (2007) reported that the average age of those filing for bankruptcy was just over 43 years and that of those filing consumer proposals was almost 43 years, compared to the average age of just under 40 years for the Canadian population. In contrast, clients of a major trustee firm in Ontario averaged 41 years at the time of contact with the firm (Hoyes & Michalos, 2011).

Gender

One of the most noticeable trends in insolvency is the rise in the proportion of insolvent debtors who are women. Although men have consistently filed the majority of both consumer proposals and bankruptcies, since the 1970’s the proportion of filers who are women has been rising. In 1977, just 27 percent of filers were women (Brighton & Connidis, 1982) but by 1984, the proportion had risen to 39 percent (McGregor & Berry, 1998). Schwartz (1999) reported that about 40% of filers in 1997 were women and in the past decade the estimates ranged from 42 to 45 percent depending on whether the sample was of Ontario filers, bankruptcy versus proposal filers, or filers aged 55 or older (Hoyes & Michalos, 2011; OSB, 2007; Ramsay 1999; Redish et al., 2006).

Researchers note that the proportion of women declaring bankruptcy may be underreported in both the 1977 and 1994 data; in 1977 because it was possible to declare joint bankruptcy in Quebec, so gender was not part of the information in the file, and in 1994 because of the tendency to report the male as head of the household on joint files (McGregor & Berry, 1998).

What this shift in the gender make up means for the economic status of women has been a question since the shift was first noted (see Ramsay, 1999; Schwartz, 1999), particularly as the shift had also been found in the US (Sullivan & Warren, 1999).

Marital Status

In 1977, 64 percent of bankruptcy filers were married, 13 percent were separated, 6 percent were divorced, 10 percent were single and “common-law” was non-existent as a potential category (Brighton & Connidis, 1982). In contrast, by 2006 the statistics on the marital status of insolvent debtors reflected socio-demographic changes in Canada as the divorce law changed and cohabitation became more common across the country.

Being in a marital or a common-law relationship was more common among those filing proposals (52%) than those filing for bankruptcy (39%), and in both cases the proportion was lower than the proportion of those who were married or living common-law in the general population (60%) (OSB, 2007). Among those filing consumer proposals, over 19 percent were divorced or separated and 26 percent were single; whereas among those filing for bankruptcy, over 27 percent were divorced or separated, and just over 30 percent were single (OSB, 2007). Both the OSB (2007) and Hoyes and Michalos (2011) note that compared to the Canadian population, divorced and separated individuals are over-represented and married or common-law and single filers are under-represented among filers. Among those aged 55 or older, the most common marital statuses were married (40%), divorced (20%) and widowed (15%) (Reddish et al., 2006).

Number of Dependents

The most recent data on number of dependents shows that among the potential Ontario debtors sampled, 45 percent had one or more dependents and of those with dependents, 14 percent were lone parents (Hoyes & Michalos, 2011) – a proportion comparable to that of lone parents found by Schwartz and Anderson in their 1997 study (Schwartz, 1999). No recent reports on the number of dependents of insolvent debtors from research using OSB data were located.

Education

Because information on level of educational attainment is not collected by trustees from debtors as part of the information they are required to collect, researchers using OSB data alone have not been able to examine the education level of insolvent debtors. Rather, we assume lower levels of educational attainment than for Canadians as a whole because education is strongly associated with income and, as shown in the following section on financial characteristics, insolvent debtors tend to have lower incomes than Canadians on average. In telephone surveys conducted as part of the 1994 National Counselling Directive Working Group Study, information on the educational attainment of insolvent debtors revealed that 58 percent had high school or less education, 23 percent had some non-university education and 19 percent had university education (McGregor & Berry, 1998).

In the US, debtors who filed for bankruptcy had about the same level of education as their counterparts in the general population in 2001 and slightly higher levels of educational attainment in 1991, and that as education levels rose for the population, they did so as well among those declaring bankruptcy (Warren, 2003). The main difference between the two groups in 2001 was that those in the general population were less likely than those who filed for bankruptcy to go to college but were more likely to finish their degrees.

Employment Status

Not surprisingly, high levels of unemployment have been found to consistently characterize insolvent debtors. In 1977, 39 percent of bankrupt debtors were unemployed compared to over 25 percent in 1997 (Brighton & Connidis, 1982; Schwartz, 1999). In Ontario 31 percent of bankrupt debtors were unemployed in 1994 (Ramsay, 1999), compared to 13 percent in 2010 (Hoyes & Michalos, 2011). Although there is evidence that rates of unemployment have declined among these debtors, the rates are still higher than the rates nationally and provincially (Hoyes & Michalos, 2011).

Occupation

In Canadian studies, it appears that information on the occupations of insolvent debtors has not been reported since the 1990s. Consistently, insolvent debtors were highly represented in the unskilled and semi-skilled occupational classifications, accounting for between 52 and 67 percent of insolvencies, but between 12 and 18 percent of insolvent debtors had middle management, technical or semi-professional occupations, and between 3 and 5 percent were professionals or upper managers (Brighton & Connidis, 1982; McGregor & Berry, 1998; Ramsay, 1999; Schwartz, 1999). In American studies, comparisons between those who filed for bankruptcy and the general population have shown there is very little difference in the occupational prestige of the two groups (Warren, 2003).

Financial Characteristics

Research has consistently shown that at the time of an insolvency filing, debtors have low to modest incomes (Lawless et al., 2008; OSB, 2007; Sullivan et al., 2006; Warren, 2003). The OSB (2007) reports that in 2006, the average net annual income of those filing proposals was very close to the national average of \$27,900 and that of those filing for bankruptcy was almost 31% lower than the national average net annual income. In the US, in both 2007 and 2001 the median household income of debtors who filed for bankruptcy was 45% below the median US household income (Lawless et al., 2008). However, income shocks are often the precipitating factor in bankruptcy and over two-thirds of the debtors in 2001 had experienced an employment-related problem such as a job loss, a layoff or a cutback in hours in the two years prior to filing for bankruptcy.

Not surprisingly, the debt loads and debt-to-income ratios of debtors filing for bankruptcy are higher than those for households in the general population, and levels of debt have increased over time. In Canada, the average value of total debts was higher for those filing proposals compared to those filing for bankruptcy: \$86,800 versus \$67,100, respectively, in 2006 (OSB, 2007). In the US, total debt loads increased by 55.5% between 1991 and 2001 among

households filing for bankruptcy, with the increase attributable to increases in both secured and unsecured debt (Sullivan et al., 2006). By 2001 credit card debt constituted roughly half of total nonmortgage debt, and the median debt-to-income ratio was 3.04 for US debtors in bankruptcy (Sullivan et al., 2006).

Liabilities

Most debtors filing insolvency procedures have credit card debt and bank loans among their total liabilities. Among those filing a consumer insolvency procedure, credit card debt was the most common form of debt (present in 92% of proposals and 88% of bankruptcies) followed by bank and finance company loans (present in 84% of proposals and 78% of bankruptcies) (OSB, 2007). By comparison, the next most common types of liabilities, mortgage debt in consumer proposals and taxes in bankruptcies, were present in less than 35% of these files.

Sarra (2008) found total credit card debt was 14% of total liabilities for those filing a Division I proposal compared to 18% for those filing a Division II proposal, and 17% for those filing for bankruptcy. For bank loans, the comparable proportions were 14% of total liabilities for those filing a Division I proposal, 13% for those filing a Division II proposal, and 15% for those filing for bankruptcy (Sarra, 2008). Although finance company loans were shown to account for low proportions of total liabilities, large numbers of debtors held these loans, which are frequently consolidating loans and thus, may include credit card debt (Sarra, 2008).

Debtors who filed for bankruptcy are likely to be homeowners in the US, less so in Canada. Sarra (2008) found that 40% of debtors filing Division I proposals held mortgage debt compared to 32% of those filing Division II consumer proposals, and 17% of those filing for bankruptcy. She observed that when there was home equity to preserve, debtors chose to file proposals rather than bankruptcy. In the US, almost 44% of debtors were homeowners at the time of their filing in 1991, compared to a rate of just over 64% in the general population and by 2001 the rate of homeownership rose to over 52% of filers compared to almost 70% of the general population (Warren, 2003). When a home is owned at the time an insolvency procedure is filed, it tends to be the largest asset held, and mortgage debt accounts for a high proportion of total liabilities (OSB, 2007; Sarra, 2008).

Reasons for Insolvency

Two of the perennial insolvency research questions are who is going bankrupt and why. In Canadian studies the leading “whys” over the past 30 years have fallen into the areas of consumer debt, low income, loss of employment, health problems, marital or relationship problems, and involvement in a failed business. Insolvent debtors are asked to state the reasons for their financial difficulties, which are then recorded on the Statement of Affairs, one of the forms that must be filed with the OSB for both bankruptcies and consumer proposals. Canadian insolvency research that uses OSB data reports data on the reason or cause of insolvency from this form.

Sarra (2008) found that among those filing for bankruptcy, the leading causes were overextension of credit (22.0%) and money mismanagement (9.2%), seasonal employment or

insufficient income (15.0%), loss of employment income (12.8%), health reasons (11.3%), relationship breakdown (10.3%), and involvement in a failed business (9.1%). Among those filing consumer proposals, overextension of credit was important (20.0%), but the leading cause was money mismanagement (25.0%). Seasonal employment or insufficient income (14.0%), loss of income (12.0%), relationship breakdown (8.9%), health reasons (8.6%), and involvement in a failed business (3.5%) were also identified as causes. By way of comparison, Hoyes and Michalos (2011) did not distinguish between bankruptcies and consumer proposals in their examination of their filings and reported that a combination of overextension of credit, financial mismanagement and unexpected expenses (55%), job-related reasons including unemployment, layoffs and reductions in pay (39%), marital or relationship problems (14%), and health-related problems (12%) were the leading causes of insolvency among their clients in 2009-10.

Sampling Frame

When an insolvent debtor files either a consumer proposal or for bankruptcy, as part of the process the trustee in bankruptcy must complete and file two forms with the OSB: the Monthly Income and Expense Statement (Form 65) and the Statement of Affairs (Form 79). These forms are filed electronically with the OSB.

For this research, a random sample of 8,000 consumer insolvency files was drawn by the OSB; 4,000 from the calendar year 2007 and 4,000 from the calendar year 2010, thus the sample is drawn from a full year of data prior to, and a full year subsequent to, the technical start and end dates of the recession. Variables were selected from both forms, and these were linked by estate number in the data file. All dollar values in the 2007 sample have been adjusted for inflation, such that all dollar values reported in this study are in 2010 dollars.

The sociodemographic variables available in the data were age (in years), gender, marital status, household size, number of dependents under the age of 18, province, occupation, whether the debtor had operated a business within the past five years, and whether there was a prior consumer proposal or a prior bankruptcy. Province was recoded to region of Canada, and data on occupation was coded as main activity at the time of filing. For the multivariate analysis, three dummy variables were created; one for marital status where 1 = married or common-law and 0 = all others, one for presence of household members aged 17 or younger where 1 = yes and 0 = no, one for prior insolvency where 1 = either a prior bankruptcy or a prior proposal and 0 = no prior insolvency.

Financial characteristics were monthly income from employment, self-employment, pension annuities, child support, spousal support, employment insurance benefits, social assistance, and other sources of income, and such derived variables as personal annual income, and household annual income. Liabilities owed were mortgage debt, bank loans, finance company loans, credit card debt (bank and trust company issuers), credit card debt (other issuers), taxes owed, student loans, loans from individuals, other loans, and payday loans.

Reason for insolvency included all reasons reported by the insolvent debtor; this variable was coded by the OSB. Based on the distribution of the reasons cited for insolvency, some of the reasons were grouped for the multivariate analysis. The reasons for insolvency were grouped as overuse of credit, unemployment, insufficient income, relationship change (marital breakdown, supporting relatives, and moving), liabilities (tax liabilities, business failure, cosigning loans, student loans, gambling and poor investments), and health problems (health concerns, accidents, and substance abuse).

Bivariate analyses were used to address the first four research questions. To compare the sociodemographic characteristics of insolvent debtors between 2007 and 2010, Chi-square tests of significance were performed. To compare the different sources of income and the levels of liabilities, mean values were calculated and t-tests for differences in means were run. To compare the major reasons for insolvency, Chi-square tests and Fisher's exact tests were used, as appropriate. For all comparisons, bankruptcies and consumer proposals were analyzed separately.

To address the final research question, those liabilities that showed significant differences pre and post recession were selected for further analysis. These debts were recoded into dummy variables where 1 = the insolvent debtor reported having the debt and 0 = otherwise. Thus, we were able to use logistic regression to examine which sociodemographic and financial characteristics are associated with the likelihood of having the particular type of debt. In the next section, the results of these analyses are presented.

Results

The proportions of insolvencies that were consumer proposals shifted between 2007 and 2010: Where consumer proposals constituted 17.4% of insolvencies in 2007, they made up 28.6% of insolvencies in 2010. In the first part of this section, we present the changes in the characteristics of insolvent debtors between 2007 and 2010 and, where possible, compare these changes to national statistics on these characteristics.

Change in Sociodemographic Characteristics

The sociodemographic characteristics of insolvent debtors are reported in Table 1. Between 2007 and 2010, debtors filing for bankruptcy differed significantly on the characteristics of gender, age, region, main activity, and whether they had operated a business in the previous five years. Men constituted the majority of bankruptcy filers in both years, but the proportion of women filing for bankruptcy increased significantly to 46.6% in 2010 from 43.4% in 2007. In both years, men were disproportionately represented among filers, as men constituted 49.6% of the Canadian population in 2011 and 49.0% in 2006 (Statistics Canada, 2011a, 2011c).

In 2010, the age distribution of those filing for bankruptcy shifted with 24.0% aged 55 or older in 2010 compared to 19.1% in 2007 (Table 1). In both years, the majority of bankrupt debtors were aged 35-44, constituting 27.0% of filers in 2010 and 30.2% in 2007. At the 2011 Census, 27.2% of the Canadian population was aged 55 or older and just 13.6% was aged 35-44

compared to 25.3% and 15.3%, respectively, at the 2006 Census; thus filers in the latter age range were disproportionately represented among filers (Statistics Canada, 2011a, 2011c).

Ontario filers made up the majority of those filing for bankruptcy, constituting 35.2% of filers in 2010 and 39.2% in 2007 (Table 1). These figures were comparable to the proportion of the population residing in Ontario, which was 38% in both the 2011 and 2006 censuses (Statistics Canada, 2012a). Filers from Quebec were disproportionately represented, constituting 29.8% of filers in 2010 and 30.8% in 2007. Quebec's share of the population was 23.9% and 23.6% in the 2011 and 2006 Censuses, respectively (Statistics Canada, 2012a). Similarly, filers from Atlantic Canada were also overrepresented: 11.8% of filers in 2010 and 10.3% of filers in 2007 were from the Atlantic provinces, where that region's share of the population was 6.9% in 2011 and 7.2% in 2006 (Statistics Canada, 2012a).

The majority of debtors who filed for bankruptcy were employed full-time, but a lower proportion were employed full-time in 2010 (55.1%) compared to 2007 (65.7%); whereas a higher proportion were employed part-time in 2010 compared to 2007 (3.0% and 1.4%, respectively) (Table 1). In comparison, the national employment rate (which includes both full- and part-time employment) was 61.6% in 2010 and 67.4% in 2007 (Statistics Canada, 2012b), and the proportion that were unemployed increased to 18.5% in 2010 from 14.4% in 2007. These rates were much higher than the national unemployment rates of 8.0% in 2010 and 6.0% in 2007 (Statistics Canada, 2012b). The proportion of filers that was self-employed increased to 5.1% in 2010 from 3.1% in 2007.

Finally, the proportion of filers who had operated a business in the previous five years increased to 20.9% in 2010 from 18.8% in 2007 (Table 1). We have not been able to locate comparable national data on business ownership.

Those filing for bankruptcy did not differ significantly on the characteristics of marital status, number of household members, number of dependents under the age of 18, or whether there was a prior consumer proposal or bankruptcy (Table 1). In 2010, 37.2% of those filing for bankruptcy were married or living common law compared to 35.3% in 2007. In both years just over 30% of filers were single, just under 15% were separated, about 13% were divorced, and about 4% were widowed. By way of comparison, 2006 Census data show 58.4% of the population aged 15 or older was married or living in a common-law relationship, 2.5% were separated, 27.6% were single, 5.6% were divorced and 5.9% were widowed, so individuals who were married or in common-law relationships or widowed were underrepresented and individuals who were separated, divorced or single were overrepresented among filers compared to national data (Vanier Institute of the Family, 2010).

In 2010, 47.4% of bankruptcy filers were single-person households and a further 23.6% were two-person households, compared to 50.7% single-person and 21.6% two-person households in 2007 (Table 1). These numbers are in marked contrast to comparable national data. In 2006, 26.8% of Canadian households were single-person households, 33.6% were two-person households, and 39.7% had three or more members (Statistics Canada, 2011b), so filers were

disproportionately single-person households. Most of those filing for bankruptcy in 2007 or 2010 had no dependents aged 17 or younger in the household (about 67%). In contrast, 2006 Census data show 38.5% of Census families do not have children at home; whereas, 27.6% have one child, 24.0% have two children, and 10.3% have three or more children at home (Statistics Canada, 2007). Few filers had either a prior consumer proposal (4.8% in 2010 and 4.3% in 2007) or a prior bankruptcy (just over 14% in both years).

Insolvent debtors who filed consumer proposals differed significantly on just three characteristics between 2007 and 2010: gender, number of household members, and main activity. As was the case with bankruptcy filers, among proposal filers, men were the majority, but the proportion of women rose to 41.2% in 2010 from 35.3% in 2007 (Table 1). Nationally, women constituted 50.4% of the population in 2011 and 51% in 2006 (Statistics Canada, 2011a, 2011c). The proportion of proposal filers that were single-person households declined to 36.7% in 2010 from 44.0% in 2007 compared to 26.8% nationally (Statistics Canada, 2011b). In both years, the majority of filers lived in households with two or more people. Most filers were employed at the time of filing, but the proportion that was employed full-time dropped to 74.1% in 2010 from 82.5% in 2007. In both years these proportions were higher than the national employment rate (61.6% in 2010 and 67.4% in 2007, including full- and part-time employment) (Statistics Canada, 2012b). The proportions of those filing consumer proposals that were retired (9.2% in 2010 and 4.4% in 2007) and that were self-employed (6.2% in 2010 and 3.7% in 2007) increased between 2007 and 2010.

These insolvent debtors did not differ significantly on the characteristics of age, marital status, number of dependents, region, operation of a business in the past five years, or a prior insolvency (Table 1). In both years, the majority of those filing proposals were between 35-49 years old (45.5% in 2010 and 46.1% in 2007), living married or common-law (43.3% in 2010 and 46.3% in 2007) or single (25.0% in 2010 and 29.3% in 2007), and over 60% had no dependents under 18 years of age. The majority of filers in both years lived in Ontario (56.4% in 2010 and 57.1% in 2007), and in both 2007 and 2010 about one in five had operated a business within the past five years. In both years few reported a prior proposal (3.1% in 2010 and 2.9% in 2007) but a higher proportion reported a previous bankruptcy (17.5% in 2010 and 20.9% in 2007).

Change in Financial Characteristics

In Table 2, the mean incomes from various sources for insolvent debtors who had that source of income are reported. Among bankrupt debtors, employment income, income from employment insurance benefits, and household income were significantly higher in 2010 compared to 2007. Income from employment averaged \$1,984 per month in 2010 compared to \$1,904 in 2007, employment insurance benefits averaged \$1,310 per month in 2010 compared to \$1,223 in 2007, and household annual income averaged \$27,376 in 2010, up from \$26,460 in 2007. A decline from in monthly income from self-employment, from \$1,607 in 2007 to \$1,392 in 2010 approached the .05 level of significance. In contrast, among debtors who filed a consumer proposal, just income from self-employment and annual household income were significantly higher in 2010 compared to 2007. Monthly income from self-

employment averaged \$2,179 in 2010 compared to \$1,674 in 2007 and annual household income was \$40,358 in 2010 compared to \$37,085 in 2007.

Income from employment was lower than the national average. Average annual income from employment was \$23,807 for bankrupt debtors and \$30,182 for debtors who filed a consumer proposal in 2010 (compared to \$22,855 and \$29,354.64, respectively, in 2007); the average annual earnings in Canada were \$38,500 in 2009 and \$38,200 in 2007, in 2009 constant dollars (Statistics Canada, 2011d).

Regardless of year, debtors who filed a consumer proposal reported higher monthly amounts of income from employment, self-employment, pensions, employment insurance, social assistance, and other sources than did their counterparts who filed for bankruptcy. Both personal and household annual incomes were also higher among proposal files than bankruptcy filers. Given that consumer proposals involve the repayment of at least part of the debt owed, the higher amounts of income among proposal filers compared to bankruptcy filers is not unexpected.

Change in Liabilities

Four types of debt increased significantly between 2007 and 2010 for insolvent debtors: bank loans, credit cards issued by banks or trust companies, credit cards from other issuers, and mortgage debt (Table 3). Interestingly, while mortgage debt made up a much larger proportion of the average debt of bankrupt debtors in 2010 compared to 2007, 15.1% and 9.7% respectively, bank loans were a smaller proportion of the debt in 2010 at 16.5%, compared to 18.4% in 2007 (Figures 1 and 2). Debt owed on credit cards issued by banks or trust companies increased to 24.0% of all debt in 2010 from 22.0% in 2007 and debt owed on credit cards from other issuers remained constant at just under 11.0% of debt in both years (Figures 1 & 2). Among insolvent debtors who filed consumer proposals, similar relationships were observed for mortgage debt and bank loans. Mortgage debt constituted 29.5 % of debt in 2010, up from 22.8% in 2007 and bank loans constituted 14.5 % of debt in 2010, down from 17.9% in 2007 (Figures 3 & 4). The proportion of debt on credit cards remained constant: In both 2007 and 2010, about 21.0% of debt was owed on credit cards issued by banks and trust companies and about 10.0% was owed on credit cards from other issuers (Figures 3 & 4).

These average levels of debt, both overall and for various types of debt, are much higher than both the average and median debt held by individuals and families. Using data from the 2009 Canadian Financial Capability Survey, Chawla and Uppal (2012) found about two-thirds of respondents to the debt questions on the survey held at least one type of debt and, on average, they held \$114,400 of debt. Statistics Canada (2006) reports median levels of credit card and instalment debt of \$2,400, lines of credit of \$9,000, vehicle loans of 9,000, mortgages on principle residences of \$90,000, student loans of \$9,000, and other debt of \$6,000 in 2005 for economic families and unattached individuals.

Finally, both average secured debt and average total debt were higher in 2010 for insolvent debtors, regardless of whether they filed for bankruptcy or a consumer proposal. Further,

those who filed for bankruptcy reported less secured debt and less total debt, on average, in both years than those who filed a consumer proposal (Table 4). Among those filing for bankruptcy, average secured debt was \$105,919 in 2010 compared to \$62,162 in 2007 and total average debt reached \$113,104 in 2010 compared to \$84,136 in 2007. Among those filing consumer proposals, average secured debt was \$151,068 in 2010 and \$96,783 in 2007. On average, total debt for these debtors was \$147,748 in 2010 compared to \$106,880 in 2007.

Change in Reason for Insolvency

The most commonly cited reason for filing for bankruptcy in both 2007 and 2010 was overuse of credit followed by insufficient income, unemployment, health concerns, and marital breakdown (Table 4). Of these top five reasons, only the proportion reporting unemployment as a cause of bankruptcy changed significantly, rising to 29.3% of filers in 2010 from 25.5% in 2007. The proportions reporting business failure, gambling, or substance abuse as causes of bankruptcy also change significantly between 2007 and 2010. The proportion citing business failure rose to 11.1% in 2010 from 8.1% in 2007. Both gambling and substance abuse were cited less frequently as causes of bankruptcy in 2010, 1.6 and 0.9% respectively, compared to 2007 when each of these causes was cited by about 2.5% of filers. Of note, the majority of bankruptcy filers in both years gave more than one reason for their bankruptcy.

Among those filing consumer proposals, the top five reasons cited for the insolvency matched those of bankruptcy filers: overuse of credit, insufficient income, unemployment, health concerns, and marital breakdown (Table 4). Several significant changes in the reporting of reasons for the filing were observed. Between 2007 and 2010, the proportion citing overuse of credit as a reason for filing a consumer proposal declined to 65.1% from 70.6%, and the proportion citing health concerns declined to 11.4% from 16.4%. In contrast, the proportion of those reporting unemployment as a cause of insolvency rose to 39.4% in 2010 from 28.3% in 2007. As was the case for bankruptcy filers, over half of those filing consumer proposals reported more than one reason for their insolvency.

Influence of Sociodemographic and Financial Characteristics, Liabilities and Reason for Insolvency on Debt

The bivariate analysis of liabilities showed significant change in four types of debt between 2007 and 2010 for both bankruptcies and consumer proposals: bank loans, credit card debt on bank issued cards, credit card debt on cards from other issuers, and mortgage debt. Student loan debt also showed significant change, but for bankruptcy filers only. For these debts, logistic regression analysis was used to explore which factors were associated with these debts pre and post recession. For each type of liability that was significantly different for both bankruptcy and consumer proposal filers, six equations were run using the same set of independent: all bankruptcies (with year as an independent variable), 2007 bankruptcies, 2010 bankruptcies, all proposals (with year as an independent variable), 2007 proposals, and 2010 proposals. For student debt, the three equations for bankruptcies were run.

Bank Loans

Age, region of residence and prior insolvency were negatively related to the likelihood of having debt in the form of bank loans for those filing for bankruptcy (Table 5). Overall and in 2007, older filers were somewhat less likely to hold bank loans. Regardless of year, filers from Quebec were about half as likely as filers from Ontario to hold bank loan debt. Filers from British Columbia were 33% less likely in 2007 than filers from Ontario to hold bank loan debt. Bank loan debt was also less likely for filers from Atlantic Canada compared to those from Ontario: 19% overall and 30% less likely in 2010. Debtors who reported a prior insolvency were 22% less likely overall and 29% less likely in 2007 to have bank loan debt.

Being a male debtor, operating a business in the past five years, reason for insolvency, and household income were positively associated with the likelihood of having bank loan debt (Table 5). Men who filed for bankruptcy were 15% more likely overall and 19% more likely in 2010 than women to have bank loans. Those who filed for bankruptcy were 17% more likely overall and 26% more likely in 2010 to have bank loan debt if they had reported operating a business in the past five years. Unemployment as a cause of bankruptcy increased the odds of holding bank loan debt by 27% overall and by 45% in 2007, while relationship difficulties increased the odds by 29% overall and by 53% in 2010. Increases in household income were associated with an increased likelihood of bank loan debt in all three equations.

Among those filing consumer proposals, filers from Quebec were 37-38% less likely than Ontario filers to hold bank loan debt, and filers who reported a prior insolvency were 32-41% less likely to hold bank loans, depending on year (Table 5). Marital status, reason for insolvency and household income were positively associated with having bank loan debt. In 2007, filers who were married or living common-law were two-thirds more likely to have bank loans compared to single filers. Filers who gave overuse of credit as a reason for insolvency were 44% more likely overall and 46% more likely in 2010 to have bank loan debt, and those who reported relationship difficulties as a reason for insolvency were a third more likely to have bank loan debt overall. Increases in household income increased the odds of bank loan debt overall and in 2010.

Bank Credit Card Debt

Marital status, operation of a business, and overuse of credit increased the odds that a debtor filing for bankruptcy would have bank credit card debt; being a male debtor, the presence of household members under the age of 18, region, a prior insolvency, and liabilities as a reason for insolvency decreased the odds (Table 6). Filers who were married or living common-law were 23% more likely overall and 45% more likely in 2010 to have bank credit card debt compared to single filers. Operation of a business within the past five years increased the likelihood that a filer would have bank credit card debt by about a third, regardless of year. Filers who reported overuse of credit as a reason for insolvency were 34% more likely overall and 51% more likely in 2007 to have bank credit card debt; whereas those who reported liabilities as a reason for insolvency were 23% less likely overall and 30% less likely in 2010 to have bank credit card debt. Men were 27% less likely overall and 36% less likely in 2007 to have bank credit card debt compared to women, and the presence of household members under 18

years was associated with lower odds of bank credit card debt of 27-29%, depending on year. Compared to Ontario filers, filers from Atlantic Canada were 26-27% less likely, depending on year, and filers from the Prairie provinces were 27% less likely overall and 31% less likely in 2007 to have bank credit card debt. A prior insolvency was associated with lowered odds of bank credit card debt of 41-56%, depending on year.

Few variables were associated with bank credit card debt for consumer proposal filers (Table 6). Filers who lived in the Prairie provinces were 36% less likely overall than those who lived in Ontario to have bank credit card debt. Those who operated a business in the past 5 years were 56% more likely overall and 84% more likely in 2010 to have bank credit card debt; those who reported a prior insolvency were between 42-52% less likely to have bank credit card debt, depending on the year. Among the reasons for insolvency, filers who reported overuse of credit were 55% more likely overall and 76% more likely in 2010 to have debt on bank credit card debt; filers who reported liabilities were 32% less likely overall to have such debt.

Other Credit Card Debt

For those filing for bankruptcy, age, marital status, presence of household members under 18, operation of a business, and overuse of credit were positively associated with other credit card debt (Table 7). Older filers were somewhat more likely to have other credit card debt, regardless of year, and filers who were married or living common-law were 31% more likely overall and 50% more likely in 2007 to have other credit card debt compared to single filers. Presence of household members under 18 was associated with a 21% increase in the odds of having other credit card debt in 2007. In 2010, operation of a business within the past five years increased the likelihood of other credit card debt by about a third. Filers who reported overuse of credit as a reason for bankruptcy were 28% more likely overall and 39% more likely in 2007 to have other credit card debt.

Being male, region of residence, a prior insolvency, and liabilities as a reason for insolvency were negatively associated with debt on credit cards from other issuers (Table 7). Men were between 24-29% less likely than women to have other credit card debt, depending on the year. Filers in British Columbia were 26-36% less likely than Ontario filers to have other credit card debt. Compared to Ontario filers, Prairie filers were 22% less likely overall and 26% less likely in 2007 and Quebec filers were 48% less likely overall and 37% less likely in 2007 to report other credit card debt. A prior insolvency decreased the odds of other credit card debt by 18% in 2007, and reporting liabilities as a reason for insolvency decreased the likelihood of holding other credit card debt by about 29%, regardless of year.

Among those filing consumer proposals, age, marital status, living in Atlantic Canada, and reason for insolvency increased the probability of holding other credit card debt; whereas, living in British Columbia or Quebec decreased the likelihood of holding other credit card debt (Table 7). Age was associated with small but increased odds of other credit card debt, regardless of year. Being married or living in a common-law union was associated with an increase the likelihood of having other credit card debt by 47% overall and 78% in 2007 compared to being single. Those who lived in Atlantic Canada were twice as likely as Ontario

filers to have other credit card debt overall and more than two and a half times as likely in 2010. In contrast, compared to Ontario filers, British Columbia filers were 50% less likely overall and 55% less likely in 2010 to hold other credit card debt, and Quebec filers were 48-55% less likely to have credit card debt, depending on year. Among reasons for insolvency, overuse of credit increased the likelihood of having other credit card debt by 45% overall and 67% in 2007; relationship difficulties increased the likelihood by 37% overall and 45% in 2010.

Mortgage Debt

For bankruptcy filers, marital status, household members under 18, living in Atlantic Canada, operating a business, reasons for insolvency, and household income were positively associated with the probability of having mortgage debt (Table 8). Filers who were married or living common-law were two to two and a half time more likely, and those who were separated or divorced were 63-67% more likely than single filers to have mortgage debt, regardless of year. The presence of household members under 18 years of age increased the likelihood that the filer had mortgage debt by 30% overall and by 14% in 2007. Compared to Ontario filers, filers from Atlantic Canada were almost twice as likely to hold mortgage debt regardless of year, and operating a business within the past five years increased the likelihood of having mortgage debt by 42-52%. Among reasons for insolvency, relationship difficulties increased the likelihood of mortgage debt by 51% overall and 80% in 2010; health problems increased the likelihood by 23% overall and 33% in 2007. Regardless of year, increases in household income increased the likelihood that the filer had mortgage debt.

Living in British Columbia or Quebec and unemployment as a reason for insolvency were negatively related to the probability of a bankruptcy filer having mortgage debt (Table 8). Regardless of year, filers from British Columbia were 39-83% less likely and those from Quebec were 35-56% less likely than Ontario filers to have mortgage debt. If unemployment was cited as a reason for insolvency, the filer was 18% less likely overall and 26% less likely in 2007 to have mortgage debt.

For debtors filing consumer proposals, age, marital status, household members under 18, and income were positively associated with the likelihood of having mortgage debt, while region was negatively associated with this type of debt (Table 8). Regardless of year, older filers were somewhat more likely to have mortgage debt and those who were married or living common law were 2 to 2.7 times more likely than single filers to have mortgage debt. Having household members under the age of 18 increased the likelihood of holding mortgage debt from 59-69%, depending on year, and regardless of year, increases in household income raised the likelihood of holding mortgage debt. Compared to Ontario filers, those who lived in British Columbia were 51% less likely overall and 87% less likely in 2007 to have mortgage debt, and those who lived in the Prairie provinces were 44-59% less likely to have mortgage debt, depending on year.

Student Loans

For bankruptcy filers, the presence of household members under 18, living in Atlantic Canada, unemployment, and insufficient income were positively related to having student loan debt (Table 9). Depending on the year, the presence of household members under 18 years of age

was associated with an increase in the likelihood of student loan debt of between 47-72%. Living in Atlantic Canada increased the likelihood of student loans dramatically compared to living in Ontario: the increase ranged from 50-226%. Among reasons for insolvency, filers who reported unemployment were 39% more likely to have student loan debt in 2010, and those who reported insufficient income were 48-52% more likely to have student loan debt, depending on year.

Being male, age, marital status and having relationship difficulties were negatively related to having student loan debt (Table 9). Depending on the year, men were between 44-56% less likely than women to have student loan debt, and older filers were somewhat less likely to have student loan debt. Across all three equations, married or common-law filers were about 50% less likely and separated, divorced or widowed filers were 38-51% less likely than single filers to have student loan debt. Filers who reported relationship difficulties as a reason for insolvency were 26% less likely overall and in 2007 to have student loan debt.

Discussion and Conclusions

Summary: Variables Associated with Types of Debt

More of the respondents have than do not have bank loans, bank credit card debt and other credit card debt, while more of the respondents do not have than have mortgage debt and student loan debt. Given that they have filed for bankruptcy or a consumer proposal, one might expect that more would have than not have each type of debt. Reasons why fewer insolvent debtors have than do not have mortgage debt are not known. Some potential explanations include: inability to qualify for a mortgage due to insufficient income and/or high levels of consumer debt, inability to save for a down payment, having sold their home due to their financial situation such that they no longer have a mortgage or having paid off their mortgage.

Overall, the Cox and Snell R^2 s, a measure of the percent of the variance accounted for by the selected set of variables, is not high (< 8%). Exceptions are the models for mortgage debt: Cox and Snell R^2 is 11% for the bankruptcy 2007 and 2010 data; and 20% and 16% for the consumer proposal 2007 and 2010 data. These data suggest that our set of variables is better at accounting for the likelihood of having mortgage debt than it is for the other types of debt: bank loans, bank credit cards, other credit cards, and student loans. The list of variables is quite comprehensive, incorporating key demographic variables (age, gender, marital status, parental status, household income, and region of residence), operating a business in the last five years, past experience with insolvency, and a variety of potential reasons for the bankruptcy or consumer proposal.

In the bivariate analysis, age, gender, region, main activity, operating a business within the past five years, and household income differed significantly between 2007 and 2010 for bankrupt debtors, whereas gender, number of household members, main activity, and household annual income differed significantly for insolvent debtors who filed consumer proposals. Insolvent debtors were older, more likely to be female, less likely to be from Ontario and more likely to

be from Quebec, less likely to be employed, more likely to be self-employed or unemployed, and more likely to have operated a business within the past five years in 2010 than in 2007. Proposal filers were more likely to be female, less likely to be from one-person households, less likely to be employed, and more likely to be self-employed or unemployed in 2010 than 2007.

The trend toward older age mirrors the trend of an aging population, although insolvent bankrupt debtors tend to be older on average than the population. The shift toward higher proportions of female insolvent debtors, the continuation of a trend identified by Ramsay (1999) and Schwartz (1999), brings this proportion closer to the proportion of women in the general population.

In the multivariate analyses, the debts that differed significantly between 2007 and 2010 – bank loans, bank credit card debt, other credit card debt, mortgage debt, and student loans – were analyzed. The results painted a more nuanced picture of the role of the variables that were significant in the bivariate analyses. For bankrupt debtors, being older was associated with the probability of holding other credit card debt in both 2007 and 2010, and being younger was associated with the probability of holding bank loan debt in 2007 and student loan debt in both years. Men were more likely to have bank loan debt in 2010, and women were more likely to have bank credit card debt in 2007, other credit card debt in both years, and student loan debt in both years. There were no age or gender effects for mortgage debt. For insolvent debtors who filed proposals, gender mattered only in the equations for student loan debt. Women were more likely to hold this type of debt than men in both 2007 and 2010.

Operating a business with the past five years was associated with a higher probability of holding bank loan debt and other credit card debt in 2010 and bank credit card debt and mortgage debt in both years for insolvent debtors who filed for bankruptcy. Although the effect of region varied depending on the type of debt, in both 2007 and 2010 bankruptcy filers from Quebec were less likely to hold bank loan debt, other credit card debt, and mortgage debt, bankruptcy filers from Atlantic Canada were less likely to hold bank credit card debt and more likely to hold mortgage and student loan debt, and filers from British Columbia were less likely to hold other credit card and student loan debt than filers from Ontario.

Identifying other potential variables associated with types of debt for those declaring insolvency is necessary. The debt levels are all measured at the time of filing for bankruptcy or consumer proposal. Retrospective data of how and when these debt levels were accumulated might provide insight on the current debt levels. Also, identifying how debt, savings, and assets have interacted in the five years prior to insolvency might provide further insight on current debt levels. The employment history of insolvent debtors, its stability and the adequacy of income provided, is also relevant.

Bankruptcy by Type of Debt: Common and Unique Variables for 2007 and 2010

Among those who had filed for bankruptcy, the variables associated with five types of debt (bank loans, bank credit cards, other credit cards, mortgages, and student loans) were identified (see Tables 5-9). As will be shown in this section, the variables associated with each type of debt showed some consistency from 2007 to 2010, that is, before and after the

recession. This information is followed by identifying unique variables – those that appeared in either the 2007 equation or the 2010 equation, but not in both equations – associated with the debts.

Bank Loan Debt

Two variables, living in Quebec compared to in Ontario and household income were the only variables that were significant in both 2007 and 2010 for those who had a bank loan and had filed for bankruptcy. Those living in Quebec were less likely than those in Ontario, and those with higher household income were more likely to have bank loan debt.

In 2007, unemployment as a reason for declaring bankruptcy was significantly associated with the likelihood of having bank loan debt; whereas, in 2010, a change in relationship as a reason for declaring bankruptcy was significant. In 2007, those living in BC were less likely than those in Ontario to have a bank loan. In contrast, in 2010, those living in the Atlantic regions were less likely than those in Ontario to have a bank loan. Three additional unique variables in 2007 were age, children, and prior insolvency; those who were older, had children, and experienced a prior insolvency were less likely to have a bank loan in 2007, but these factors were not associated with the likelihood of having a bank loan in 2010. Two additional unique variables were significant only in 2010: Gender (male) and having a prior business were associated with having bank loan debt.

Bank Credit Card Debt

Four variables, having children under 18 in the household, living in the Atlantic region compared to Ontario, having had a business in the last five years and having experienced a prior insolvency, either a consumer proposal or a bankruptcy, were the only variables that were significantly associated with bank credit card debt for those who had declared bankruptcy in either 2007 or 2010. Those with children under 18, those living in the Atlantic region compared to Ontario, and those who had experienced a prior insolvency were less likely, and those who had a business in the last five years were more likely, to have bank credit card debt.

Different reasons for insolvency were associated with having bank credit card debt in the two years. In 2007, unemployment and overuse of credit were the reasons associated with having bank credit card debt. In contrast, in 2010, those who indicated that a cause of their insolvency was liabilities (business failure, cosigned loans, student loans, gambling, or poor investments) were less likely to have bank credit card debt. In 2007 gender, and in 2010 marital status, were associated with holding bank credit card debt: Men were less likely than women, and married or equivalent to married were more likely than singles to have bank credit card debt in 2007 and 2010 respectively. Also unique to 2007, those living in the Prairies were less likely than those in Ontario to have bank card debt.

Other Credit Card Debt

Gender, age, living in BC or Quebec in comparison to Ontario, and having liabilities (e.g., tax, cosigning loans, gambling, poor investments, or student loans) as a reason for bankruptcy, were the significant variables that were the same for those who had other credit card debt and had declared bankruptcy in either 2007 or 2010. Men were less likely than women to have other

credit card debt. Those residing in BC or Quebec compared to Ontario and those who had given liabilities as a reason for bankruptcy were less likely to have other credit card debt. Those who were older were more likely to have such debt.

In 2007, the unique variables that were associated with having non-bank credit card debt were marital status (married or common-law compared to single were more likely to have such debt) and having children under 18; living in the Prairies compared to Ontario, and prior insolvency, both of which were associated with lower probability of holding other credit card debt; and over use of credit and insufficient income as reasons for insolvency, which were associated with having this type of debt. The unique variable for 2010 was having operated a business in the past five years, which was associated with having other credit card debt.

Mortgage Debt

Among those who had declared bankruptcy, those who were married or equivalent to married, and separated, divorced or widowed were more likely to have mortgage debt. Where they lived was also significantly associated with mortgage debt: those living in BC and Quebec were less likely and those in the Atlantic region were more likely than those in Ontario to have mortgage debt. Other variables common to both years were having had a prior business and higher household income, both of which were associated with having mortgage debt in 2007 and 2010.

Unique variables in 2007 that were not associated with mortgage debt in 2010 were unemployment and health concerns as reasons for insolvency, having children, and living in the Prairies compared to Ontario. Those who had children and cited health concerns as a reason for bankruptcy were more likely to have mortgage debt. Those who lived in the Prairies compared to Ontario and those who gave unemployment as a cause of bankruptcy were less likely to have such debt. Indicating relationship changes as a reason for bankruptcy (e.g., marital breakdown, supporting relatives or moving) was unique to 2010; those who gave this reason for their bankruptcy were more likely to have mortgage debt.

Student Loan Debt

Many of the same variables were associated with having student loan debt in 2007 and 2010, but there were two notable exceptions: Unemployment as a cause for filing for bankruptcy was significant in 2010 but not in 2007, and relationship change as a cause of filing for bankruptcy was significant for 2007 but not 2010. Those who gave unemployment as a cause of bankruptcy were more likely to have student loan debt in 2010 and those who had a change in relationship as a cause of insolvency were less likely to have student loan debt in 2007. Those who were younger, female, had children, and were single were more likely to have student loan debt. In addition, those living in the Atlantic region compared to Ontario, and those indicating insufficient income as a cause of their bankruptcy, were more likely to have student loan debt.

Consumer Proposals by Type of Debt: Common and Unique Variables for 2007 and 2010

Among those who filed a consumer proposal, the variables associated with holding four types of debt (bank loans, bank credit cards, other credit cards, and mortgages) were identified (see Tables 5-8). In this section, we first identify the significant variables that were the same in 2007

and 2010. The variables associated with each type of debt show some consistency before (2007) and after the recession (2010). We then identify unique variables associated with the debts in 2007 and 2010.

Bank Loan Debt

Two variables, living in Quebec compared to Ontario and prior insolvency were the only significant variables that were the same for those who had a bank loan and filed a consumer proposal in either 2007 or 2010. Those living in Quebec were less likely than those in Ontario to have bank loan debt. As well, those having a prior insolvency were less likely to have such debt.

The only unique variable for 2007 was marital status; in comparison to singles, those who were married were more likely to have bank loan debts. For 2010, unique variables were overuse of credit (a reason for insolvency), household income, and having children under 18. Overuse of credit and higher household income were associated with having bank loan debt. Those who had children were less likely to have such debts.

Bank Credit Card Debt

Having had a prior insolvency, either a bankruptcy or a consumer proposal, was the only common significant variable associated with bank credit card debt for those filing a consumer proposal in either 2007 or 2010. Those who had a prior insolvency were less likely to have such debt. Overuse of credit as a potential cause of insolvency and having a prior business were the only unique variables for 2010. Both of these were associated with a higher likelihood of having bank credit card debt. There were no unique variables in the 2007 equation.

Other Credit Card Debt

Age and region of residence were the significant variables in common for those having other credit card debt and filing consumer proposals in 2007 or 2010. Those who were older were more likely to have non-bank credit card debt, and those living in Quebec were less likely than those in Ontario to have this type of debt.

Marital status and overuse of credit as a reason for insolvency were unique significant variables for 2007; both were associated with a higher probability of having this type of debt. A different reason for insolvency, changes in relationships, was associated with other credit card debt in 2010. Also unique to 2010, respondents filing a consumer proposal were less likely to have other credit card debt if living in British Columbia and more likely to have this type of debt if living in Atlantic Canada, in comparison to those living in Ontario.

Mortgage Debt

Five variables: age, marital status, parental status, household income, and region of residence were significantly associated with having mortgage debt in 2007 and 2010. Among those with a consumer proposal, those who were older, married or equivalent to married compared to singles, those with children, and those with higher income were more likely to have mortgage debt. Those residing in the Prairies were less likely than those in Ontario to have such debt.

The unique variable in 2007 was residing in British Columbia. Those in BC compared to Ontario were less likely to have mortgage debt. The unique variable in 2010 was being separated, divorced or widowed compared to single, which was associated with having mortgage debt.

Discussion

The purpose of this research was to determine whether the profiles of insolvent households – those declaring bankruptcy and those filing proposals – changed as a result of the recession and, if so, in what ways. Because changes to the Bankruptcy and Insolvency Act that promoted proposals over bankruptcies, among other effects, came into force in September 2009, we cannot answer the question cleanly; however, there is evidence that economic conditions affected debtors in financial distress.

In the bivariate analyses, change in economic conditions may underlie the observed increases in the citing of unemployment and business failure as reasons for bankruptcy. Unemployment as a cause of bankruptcy was also associated with the likelihood of bank loans, bank credit card debt, and mortgage debt in the multivariate analysis, and relatively large proportions of these insolvent debtors reported being unemployed or laid off at the time of filing. Business failure was not cited as a reason for their insolvency by large numbers of insolvent debtors, but it should be examined more closely in future research. We don't know whether business failure refers to a business owned by the debtor or the business of the debtor's employer, and it would be useful to make this distinction in order to understand the impact of business failure.

About 20% of the insolvent debtors in this study reported having operated a business within the past five years, and operation of a business was significantly and consistently associated with an increased likelihood of having bank credit card debt among all filers and mortgage debt among those filing for bankruptcy. Operation of a business was also significantly associated with an increase in the likelihood of bank loan debt both overall and in 2007 and other credit card debt in 2010. Further study of the impact of business ownership on insolvency is warranted. Research on family businesses has shown that family and business finances are highly intertwined (Haynes, Walker, Rowe, & Hong, 1999), and it may be that a struggling or failed business is the underlying cause of insolvency in more cases than the data suggest. Further, to the extent that small business owners pay for business expenses with personal credit cards, it would be useful to examine overuse of credit as a reason for insolvency more closely. Overuse of credit was the most commonly cited reason for insolvency among these debtors, but we cannot assume that overuse refers only to personal credit use; overuse may also result from using credit for the past or current operation of a failed business.

A prior insolvency, either a bankruptcy or a consumer proposal, was commonly associated with a lower likelihood of having bank loan or bank credit card debt. These results raise the possibility that a prior insolvency may make it harder for these debtors to qualify for mainstream financial products and push them toward the fringe financial sector.

Finally, although the increasing age of insolvent debtors is in line with an aging population, insolvent debtors appear to be "aging faster" than the general population. Insolvency in later

life has serious implications for the ability of these financially distressed debtors to age well, and in particular, to remain independent in their later years. Research that builds on that done by Redish and colleagues (2006) will be important in addressing insolvency in an older population.

Future Research

In order to have a better understanding of who is at risk of insolvency, we need better data; either through the collection of information as part of the process of filing an insolvency procedure or through independent survey research. Among reasons given for insolvency, it's important to disaggregate overuse of credit into personal and business credit use and to determine if business failure is the debtor's business or the business of the debtor's employer. More detail on such demographic characteristics as ethnicity and immigrant status would allow study of historically disadvantaged segments of the population. Detailed information on the insolvent debtor's history prior to the insolvency filing is important to understand what led to financial distress. For example, is it a case of not having the security of an income stream to make regular payments? How long was a debtor in financial distress before declaring insolvency? What strategies were used to stave off insolvency, for example, using up savings, selling the home or other assets, working extra hours or jobs? What was tried and why wasn't it enough? Is it because of unexpected circumstances? Is it because debt-to-income levels are high, and these strategies just aren't enough?

Research that compares those who filed either for bankruptcy or a consumer proposal with those who were also in financial distress but did not is needed to better understand who is at risk for insolvency. Among those with similar levels of financial distress, what is the difference between those who file an insolvency procedure and those who do not? What factors influence the choice of filing for bankruptcy versus a consumer proposal? Such research may help to identify points of intervention and strategies that could assist those who are in financial distress to avoid insolvency.

In comparing the profile of insolvent debtors before and after the 2008-09 recession, this research has provided important information on this segment of Canadians in financial distress. There is a need for longitudinal analysis of this segment of the population. How long does it take for someone who has filed an insolvency procedure to get back on their feet? Do they achieve financial stability or do they just scrape by, vulnerable to future income shocks? What is the role of the formal and alternative financial sectors in this process? Does it matter if the insolvency was a bankruptcy or a consumer proposal? These are some of the relevant questions that can be addressed with longitudinal research, and such work is important not just to understanding who is at risk of insolvency, but also to supporting Canadian households in financial distress.

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Table 1. Sociodemographic characteristics of insolvent debtors by type of insolvency, 2007 and 2010.

Characteristic	Bankruptcy					Consumer Proposal				
	2007 n = 3,303		2010 n = 2,858		p-value	2007 n = 697		2010 n = 1,142		p-value
	Count	Percent	Count	Percent		Count	Percent	Count	Percent	
Gender										
Female	1,433	43.4	1,333	46.6	.011	246	35.3	470	41.2	.013
Male	1,869	56.6	1,525	53.4		450	64.7	671	58.8	
Age group										
18-24	209	6.3	121	4.2	.000	32	4.6	35	3.1	.077
25- 29	334	10.1	273	9.6		75	10.8	100	8.8	
30- 34	418	12.7	323	11.3		91	13.1	124	10.9	
35-39	508	15.4	406	14.2		110	15.8	176	15.4	
40- 44	490	14.8	367	12.8		97	13.9	177	15.5	
45- 49	403	12.2	386	13.5		114	16.4	167	14.6	
50-54	308	9.3	295	10.3		72	10.3	146	12.8	
55-59	253	7.7	238	8.3		54	7.7	100	8.8	
60- 64	149	4.5	197	6.9		24	3.4	65	5.7	
65 or older	229	6.9	251	8.8	28	4.0	52	4.6		
Marital status										
Married	815	24.7	794	27.8	.072	260	37.3	483	42.3	.223
Common Law	349	10.6	270	9.4		63	9.0	114	10.0	
Separated	478	14.5	422	14.8		84	12.1	132	11.6	
Divorced	435	13.2	372	13.0		63	9.0	98	8.6	
Widowed	121	3.7	108	3.8		23	3.3	30	2.6	
Single	1,105	33.5	892	31.2		204	29.3	285	25.0	
Number of household members										
1	1,675	50.7	1,356	47.4	.059	307	44.0	419	36.7	.036
2	715	21.6	675	23.6		163	23.4	282	24.7	
3	402	12.2	364	12.7		89	12.8	180	15.8	
4	327	9.9	288	10.1		92	13.2	160	14.0	
5	119	3.6	129	4.5		32	4.6	73	6.4	
6 or more	65	2.0	46	1.6		14	2.0	28	2.5	

Note: Chi-square test of significance used for all comparisons with the exception of main activity for consumer proposals, where Cramer's V was used.

Table 1. Sociodemographic characteristics of insolvent debtors by type of insolvency, 2007 and 2010 (continued).

Characteristic	Bankruptcy					Consumer proposals				
	2007 n = 3,303		2010 n = 2,858		p-value	2007 n = 697		2010 n = 1,142		p-value
	Count	Percent	Count	Percent		Count	Percent	Count	Percent	
Number of children under 18 years										
0	2,207	66.8	1,912	66.9	.569	450	64.6	694	60.8	.276
1	493	14.9	425	14.9		117	16.8	200	17.5	
2	395	12.0	336	11.8		98	14.1	170	14.9	
3	144	4.4	142	5.0		23	3.3	59	5.2	
4 or more	64	1.9	43	1.5		9	1.3	19	1.7	
Region										
British Columbia	297	9.0	296	10.4	.001	47	6.7	83	7.3	.895
Prairie Provinces	353	10.7	367	12.9		78	11.2	116	10.2	
Ontario	1,294	39.2	1,006	35.2		398	57.1	643	56.4	
Quebec	1,017	30.8	850	29.8		147	21.1	257	22.5	
Atlantic Canada	341	10.3	337	11.8		27	3.9	42	3.7	
Main activity										
Employed full-time	2,169	65.7	1,575	55.1	.000	575	82.5	846	74.1	.000
Employed part-time	47	1.4	86	3.0		5	0.7	22	1.9	
Self-employed	103	3.1	147	5.1		26	3.7	71	6.2	
Unemployed or lay off	476	14.4	530	18.5		31	4.4	105	9.2	
Retired	253	7.7	278	9.7		40	5.7	52	4.6	
Maternity or parental leave	11	0.3	5	0.2		1	0.1	4	0.4	
Disability or illness	91	2.8	98	3.4		11	1.6	16	1.4	
Student	39	1.2	32	1.1		3	0.4	4	0.4	
Homemaker	45	1.4	30	1.0		3	0.4	4	0.4	
Not known	69	2.1	77	2.7		2	0.3	18	1.6	

Note: Chi-square test of significance used for all comparisons with the exception of main activity for consumer proposals, where Cramer's V was used.

Table 1. Sociodemographic characteristics of insolvent debtors by type of insolvency, 2007 and 2010 (continued).

Characteristic	Bankruptcy					Consumer proposals				
	2007 n = 3,303		2010 n = 2,858		p-value	2007 n = 697		2010 n = 1,142		p-value
	Count	Percent	Count	Percent		Count	Percent	Count	Percent	
Operated a business within past 5 years										
Yes	621	18.8	598	20.9	.037	126	18.1	227	19.9	.342
No	2,682	81.2	2,260	79.1		571	81.9	915	80.1	
Prior consumer proposal										
Yes	141	4.3	136	4.8	.355	20	2.9	35	3.1	.811
No	3,162	95.7	2,722	95.2		677	97.1	1,107	96.9	
Prior bankruptcy										
Yes	470	14.2	414	14.5	.775	146	20.9	200	17.5	.068
No	2,833	85.8	2,444	85.5		551	79.1	942	82.5	

Note: Chi-square test of significance used for all comparisons with the exception of main activity for consumer proposals, where Cramer's V was used.

Table 2: Financial characteristics of insolvent debtors by type of insolvency, 2007 and 2010.

Income Source	Bankruptcies (n = 6,161)					Consumer Proposals (n = 1,839)				
	2007		2010		p-value	2007		2010		p-value
	n	Mean (std. dev)	n	Mean (std. dev)		n	Mean (std. dev)	n	Mean (std. dev)	
Employment income	2019	1,904.58 (790.31)	1555	1,983.95 (875.05)	.005	543	2,446.22 (1049.27)	867	2,515.14 (1049.27)	.266
Self-employment income	189	1,606.73 (1,190.35)	176	1,391.68 (904.84)	.054	58	1,673.75 (1,066.21)	88	2,178.79 (1639.99)	.040
Pension annuities	467	1,121.12 (665.69)	499	1,167.66 (662.59)	.277	81	1,471.91 (1067.38)	123	1,392.24 (1056.62)	.600
Child support	160	474.97 (316.39)	118	408.89 (257.25)	.064	32	429.00 (320.91)	28	499.53 (304.09)	.388
Spousal support	39	753.41 (824.74)	19	663.00 (498.69)	.662	7	523.91 (313.25)	7	445.00 (307.77)	.643
Employment Insurance Benefits	205	1,223.41 (463.52)	228	1,309.60 (442.30)	.048	38	1,318.59 (520.04)	59	1,403.76 (460.75)	.400
Social assistance	209	729.87 (345.75)	207	754.33 (316.64)	.452	13	749.28 (395.09)	20	877.53 (558.92)	.479
Other income	711	699.53 (676.02)	595	701.28 (735.26)	.964	138	851.72 (951.67)	233	787.48 (834.95)	.497
Personal annual income	3,069	22,207.47 (10,346.21)	2,624	22,210.32 (10,977.84)	.992	682	30,604.91 (15,281.30)	1,119	30,539.78 (13,618.86)	.925
Household annual income	3,158	26,460.49 (13,352.11)	2,721	27,376.34 (14,373.35)	.012	688	37,085.34 (17,864.06)	1,132	40,358.49 (18,827.31)	.000

Note. All dollar values are in 2010 constant dollars. T-tests used for all comparisons.

Table 3: Liabilities of insolvent debtors by type of insolvency, 2007 and 2010.

Type of debt	Bankruptcies (n = 6,161)					Consumer Proposals (n = 1,839)				
	2007		2010		p-value	2007		2010		p-value
	n	Mean (std. dev)	n	Mean (std. dev)		n	Mean (std. dev)	n	Mean (std. dev)	
Bank loans	1,903	21,650.17 (36,950.58)	1,642	26,995.24 (63,851.00)	.003	446	18,902.43 (16,858.00)	692	24,146.58 (64,509.54)	.005
Finance company loans	1,440	12,093.18 (16,179.54)	1,038	13,170.79 (22,305.92)	.185	358	11,026.73 (13,178.33)	491	12,070.48 (14,261.25)	.277
Credit cards (bank or trust company)	2,416	15,439.87 (21,325.96)	2,241	17,672.08 (21,170.87)	.000	549	14,162.02 (13,397.28)	953	18,497.67 (18,230.46)	.000
Credit cards (other issuers)	1,964	8217.00 (12,001.73)	1,757	9,265.99 (11,565.98)	.007	462	8,639.60 (11,617.40)	756	11,049.34 (13,713.72)	.001
Mortgage	505	129,850.57 (95,149.92)	646	180,517.59 (152,009.60)	.000	220	167,480.30 (91,278.12)	466	211,849.66 (121,701.49)	.000
Taxes	1,257	28,169.76 (199,257.86)	1,160	26,720.00 (115,326.99)	.829	245	34,659.38 (337,713.55)	421	10,844.58 (27,076.09)	.150
Student loans	385	13,244.54 (13,093.46)	320	16,258.93 (17,212.64)	.010	63	14,483.39 (13,498.44)	103	14,333.34 (13,763.00)	.945
Loans from individuals	107	24,947.38 (81,526.52)	105	25,686.93 (82,342.25)	.948	14	12,998.07 (14,952.69)	28	17,352.29 (31,383.83)	.627
Other loans	2,275	25,095.34 (267,899.63)	1,842	29,240.69 (319,905.21)	.651	408	9,606.49 (36,395.44)	659	20,451.36 (112,321.95)	.059
Payday loans	246	1,437.83 (1,620.48)	157	1,477.90 (1,303.44)	.795	59	1,828.67 (1,432.51)	69	1,882.65 (1,598.00)	.842
Total Debt										
Unsecured	3,303	59,008.93 (26,911.77)	2,858	66,459.14 (312,630.51)	.315	697	50,223.14 (204,491.70)	1,142	54,224.22 (112,452.38)	.589
Secured	1,334	62,162.17 (89,016.33)	1,258	105,919.01 (134,916.01)	.000	408	96,783.25 (106,301.92)	707	151,067.50 (146,140.56)	.000
Total	3,303	84,135.55 (279,894.46)	2,858	113,104.21 (344,063.45)	.000	697	106,880.32 (234,765.00)	1,142	147,748.49 (192,620.44)	.000

Note. All dollar values are in 2010 constant dollars. T-tests used for all comparisons.

Table 4. Reasons for insolvency and number of reasons by type of insolvency, 2007 and 2010.

	Bankruptcy					Consumer Proposal				
	2007 (n = 3,303)		2010 (n = 2,858)		p-value	2007 (n = 697)		2010 (n = 1,142)		p-value
	Count	Percent	Count	Percent		Count	Percent	Count	Percent	
Reason for insolvency ^a										
Overuse of credit	1,914	57.9	1,612	56.4	.222	492	70.6	744	65.1	.016
Unemployment	842	25.5	838	29.3	.001	158	22.7	254	22.2	.831
Insufficient income	1,096	33.2	1,008	35.3	.085	197	28.3	450	39.4	.000
Tax liabilities	165	5.0	115	4.0	.068	24	3.4	33	2.9	.506
Business failure	267	8.1	318	11.1	.000	43	6.2	99	8.7	.051
Cosigning loans	51	1.5	43	1.5	.917	4	.6	9	.8	.777
Health concerns	680	20.6	564	19.7	.405	114	16.4	130	11.4	.002
Accidents	107	3.2	75	2.6	.155	20	2.9	22	1.9	.189
Marital breakdown	592	17.9	492	17.2	.467	93	13.3	164	14.4	.541
Supporting relatives	171	5.2	147	5.1	.953	42	6.0	70	6.1	.928
Student loans	17	.5	25	.9	.090	4	.6	6	.5	1.000
Gambling	83	2.5	46	1.6	.014	21	3.0	20	1.8	.075
Substance abuse	78	2.4	27	.9	.000	16	2.3	11	1.0	.021
Poor investments	38	1.2	49	1.7	.061	10	1.4	21	1.8	.514
Garnishments	53	1.6	36	1.3	.258	15	2.2	12	1.1	.057
Legal action	61	1.8	39	1.4	.135	10	1.4	12	1.1	.463
Moving or relocating	73	2.2	44	1.5	.054	17	2.4	15	1.3	.073
Number of reasons for insolvency										
0	48	1.5	36	1.3	.745	12	1.7	11	1.0	.631
1	1,291	39.1	1,120	39.2		288	41.3	500	43.8	
2	1,166	35.3	1,014	35.5		245	35.2	396	34.7	
3	582	17.6	479	16.8		116	16.6	174	15.2	
4	172	5.2	162	5.7		28	4.0	50	4.4	
5 or more	44	1.3	47	1.6		8	1.1	11	1.0	

Note: Chi-square test of significance used for all comparisons with the exception of cosigning loans and gambling as reasons for a consumer proposal. For these two comparisons, the Fisher’s exact test was used.

^aEach case may involve more than one reason.

Table 5: Logistic regression analysis of factors associated with the probability of bank loans, 2007 and 2010.

	Bankruptcies Odds Ratios			Consumer Proposals Odds Ratios		
	Total	2007	2010	Total	2007	2010
Gender (Male)	1.151*	1.123	1.190*	1.149	1.248	1.112
Age	.992**	.987***	.998	.994	.990	.996
Marital status						
Married or common-law	1.037	1.103	.978	1.219	1.682*	.960
Separated, divorced or widowed	1.081	1.203	.960	1.280	1.254	1.289
Single (omitted category)						
Household members under 18	.922	.823*	1.036	.736*	.938	.630**
Region						
British Columbia	.825	.672**	.989	.865	.844	.924
Prairies	.912	.988	.848	.952	.797	1.036
Quebec	.457***	.453***	.444***	.631***	.631*	.618**
Atlantic	.814*	.931	.698**	1.998*	1.763	2.094
Ontario (omitted category)						
Operated a business within the past 5 years	1.174*	1.118	1.259*	1.016	.803	1.160
Prior insolvency	.781***	.715**	.847	.628***	.680*	.588**
Reason for insolvency						
Overuse of credit	.981	1.075	.884	1.442**	1.338	1.457*
Unemployment	1.267***	1.448***	1.123	1.173	.934	1.350
Insufficient income	1.099	1.042	1.171	1.065	.906	1.195
Relationship change	1.287***	1.128	1.531***	1.354*	1.326	1.355
Liabilities	.922	1.056	.800	1.278	1.390	1.180
Health problems	.945	.972	.927	1.081	.934	1.227
Household annual income (1,000s)	1.018***	1.017***	1.020***	1.013***	1.004	1.019***
Year	1.008	–	–	1.181	–	–
Constant	1.326*	1.624*	1.056	.885	1.561	.703
Cox & Snell R ²	.059	.060	.070	.055	.051	.072
n	6,160	3,302	2,858	1,837	696	1,141

***p < .001, **p < .01, *p < .05.

Table 6: Logistic regression analysis of factors associated with the probability of debt on credit cards from banks and trust companies, 2007 and 2010.

	Bankruptcies Odds Ratios			Consumer Proposals Odds Ratios		
	Total	2007	2010	Total	2007	2010
Gender (Male)	.729***	.645***	.842	.908	.927	.902
Age	1.001	1.002	.999	1.004	1.003	1.004
Marital status						
Married or common-law	1.226*	1.116	1.453**	1.389	1.560	1.270
Separated, divorced or widowed	1.038	1.034	1.061	1.011	1.458	.783
Single (omitted category)						
Household members under 18	.725***	.710**	.731**	.809	.882	.754
Region						
British Columbia	.973	.782	1.251	.771	.811	.712
Prairies	.727**	.688**	.763	.644*	.626	.605
Quebec	1.108	1.172	1.027	1.201	1.275	1.146
Atlantic	.738**	.736*	.729*	.581	.492	.588
Ontario (omitted category)						
Operated a business within the past 5 years	1.362***	1.392**	1.320*	1.564*	1.276	1.835*
Prior insolvency	.506***	.444***	.589***	.505***	.478**	.535**
Reason for insolvency						
Overuse of credit	1.342***	1.507***	1.156	1.553**	1.318	1.764**
Unemployment	1.225**	1.260*	1.176	.884	.795	.946
Insufficient income	1.117	1.065	1.193	.983	1.381	.826
Relationship change	1.125	1.156	1.107	1.090	.920	1.234
Liabilities	.769**	.844	.701**	.682*	.662	.668
Health problems	1.096	1.101	1.092	1.005	.982	.950
Household annual income (1,000s)	1.003	1.000	1.005	1.002	.997	1.006
Year	.741***	–	–	.770*	–	–
Constant	3.500***	2.901*	3.203***	3.514***	3.274*	3.354**
Cox & Snell R ²	.035	.045	.025	.035	.041	.036
n	6,160	3,302	2,858	1,837	696	1,141

***p < .001, **p < .01, *p < .05.

Table 7: Logistic regression analysis of factors associated with debt on credit card loans from other issuers, 2007 and 2010.

	Bankruptcies Odds Ratios			Consumer Proposals Odds Ratios		
	Total	2007	2010	Total	2007	2010
Gender (Male)	.743***	.714***	.765**	.861	.746	.936
Age	1.015***	1.007*	1.025***	1.023***	1.017*	1.026***
Marital status						
Married or common-law	1.309**	1.497***	1.127	1.467**	1.776*	1.275
Separated, divorced or widowed	1.084	1.220	.951	1.041	1.057	1.034
Single (omitted category)						
Household members under 18	1.059*	1.207*	1.100	1.130	1.211	1.073
Region						
British Columbia	.694***	.643**	.744*	.497***	.641	.449**
Prairies	.776**	.743*	.776	.826	.873	.802
Quebec	.524***	.627***	.416***	.479***	.524**	.448***
Atlantic	.955	1.022	.857	2.182*	1.754	2.695*
Ontario (omitted category)						
Operated a business within the past 5 years	1.089	.918	1.322*	.947	.786	1.034
Prior insolvency	.945	.818*	1.136	.970	1.126	.869
Reason for insolvency						
Overuse of credit	1.275***	1.388***	1.136	1.448**	1.669**	1.310
Unemployment	1.114	1.051	1.160	1.180	1.393	1.097
Insufficient income	1.130*	1.221*	1.039	.930	.741	1.042
Relationship change	1.045	1.056	1.030	1.373*	1.227	1.452*
Liabilities	.715***	.703**	.720**	.825	.847	.802
Health problems	.982	1.027	.918	1.000	1.153	.908
Household annual income (1,000s)	1.003	1.002	1.004	1.002	1.000	1.004
Year	.955	–	–	1.043	–	–
Constant	.842	1.006	.652*	.551	.683	.502*
Cox & Snell R ²	.052	.054	.066	.069	.078	.074
n	6,160	3,302	2,858	1,837	696	1,141

***p < .001, **p < .01, *p < .05.

Table 8: Logistic regression analysis of factors associated with the probability of mortgage debt, 2007 and 2010.

	Bankruptcies Odds Ratios			Consumer Proposals Odds Ratios		
	Total	2007	2010	Total	2007	2010
Gender (Male)	1.098	1.097	1.082	1.057	.888	1.154
Age	1.000	1.001	1.000	1.021***	1.020*	1.024***
Marital status						
Married or common-law	2.270***	2.461***	2.154***	2.320***	2.705**	2.093***
Separated, divorced or widowed	1.668***	1.626**	1.655**	1.438*	1.044	1.627*
Single (omitted category)						
Household members under 18	1.297**	1.143**	1.178	1.667***	1.591*	1.686**
Region						
British Columbia	.390***	.175***	.614**	.493**	.133***	.779
Prairies	.844	.500***	1.248	.503***	.406**	.563*
Quebec	.535***	.444***	.647**	.810	.802	.821
Atlantic	1.962***	1.992***	1.997***	1.239	1.049	1.302
Ontario (omitted category)						
Operated a business within the past 5 years	1.466***	1.423*	1.515**	1.172	.975	1.284
Prior insolvency	.905	1.036	.816	.931	.882	.931
Reason for insolvency						
Overuse of credit	.899	.898	.897	1.083	1.101	1.072
Unemployment	.812*	.743*	.868	.771	.678	.829
Insufficient income	1.052	.905	1.188	.968	.943	.993
Relationship change	1.510***	1.273	1.796***	1.041	1.397	.915
Liabilities	1.098	1.047	1.133	.834	1.156	.730
Health problems	1.226*	1.326*	1.159	1.163	1.377	1.092
Household annual income (1,000s)	1.029***	1.030***	1.027***	1.030***	1.033***	1.030***
Year	.602***	–	–	.747*	–	–
Constant	.068***	.045***	.062***	.043***	.035***	.036***
Cox & Snell R ²	.115	.115	.112	.174	.200	.161
n	6,160	3,302	2,858	1,837	696	1,141

***p < .001, **p < .01, *p < .05.

Table 9: Logistic regression analysis of factors associated with the probability of student debt, 2007 and 2010

	Bankruptcies Odds Ratios		
	Total	2007	2010
Gender (Male)	.507***	.560***	.438***
Age	.962***	.972***	.949***
Marital status			
Married or common-law	.505***	.513***	.492***
Separated, divorced or widowed	.544***	.490***	.620*
Single (omitted category)			
Household members under 18	1.569***	1.467**	1.724***
Region			
British Columbia	1.338*	1.291	1.383
Prairies	1.060	1.303	.802
Quebec	.831	.854	.816
Atlantic	1.826***	1.494*	2.256***
Ontario (omitted category)			
Operated a business within the past 5 years	.997	1.006	1.004
Prior insolvency	.911	1.041	.767
Reason for insolvency			
Over use of credit	1.004	1.007	1.036
Unemployment	1.112	.935	1.388*
Insufficient income	1.478***	1.481**	1.517**
Relationship change	.740**	.745*	.723
Liabilities	.978	.953	1.016
Health problems	1.105	1.157	1.037
Household annual income (1,000s)	.997	.994	1.000
Year	1.005	–	–
Constant	.966	.724	1.414
Cox & Snell R ²	.065	.051	.091
n	6,160	3,303	2,858

***p < .001, **p < .01, *p < .05.

Figure 1. Source of Debt as a Proportion of all Bankruptcy Debt, 2007

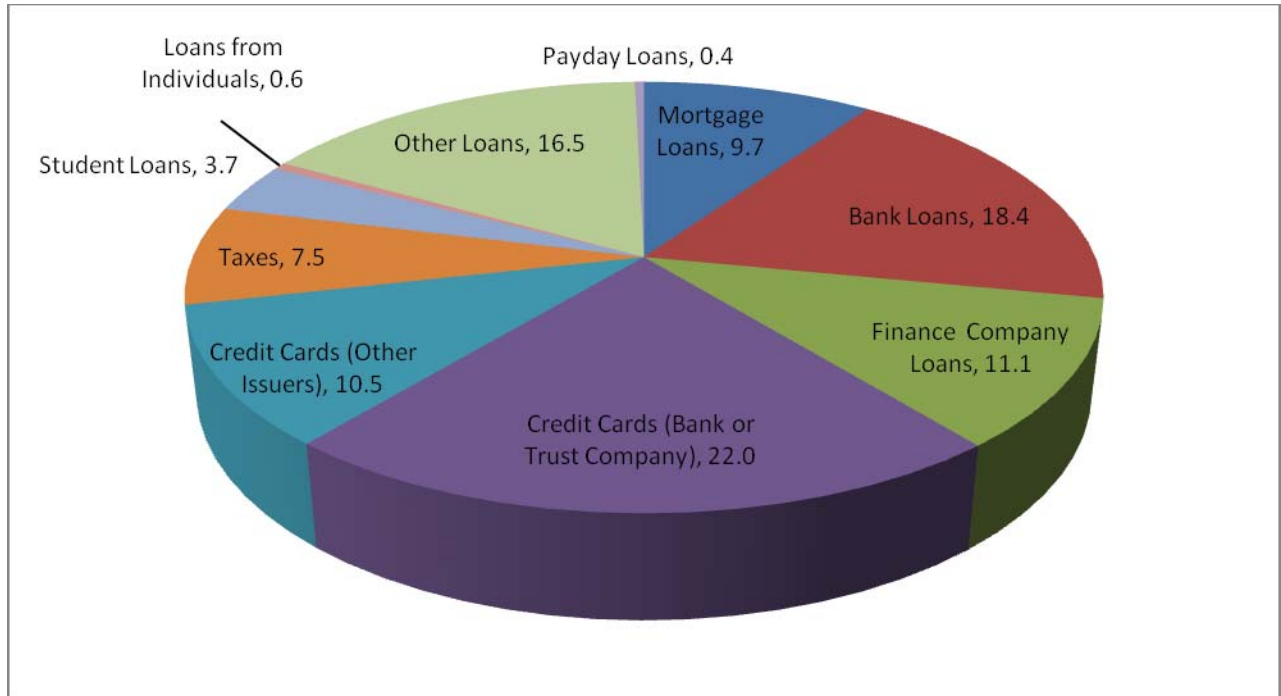


Figure 2. Source of Debt as a Proportion of all Bankruptcy Debt, 2010

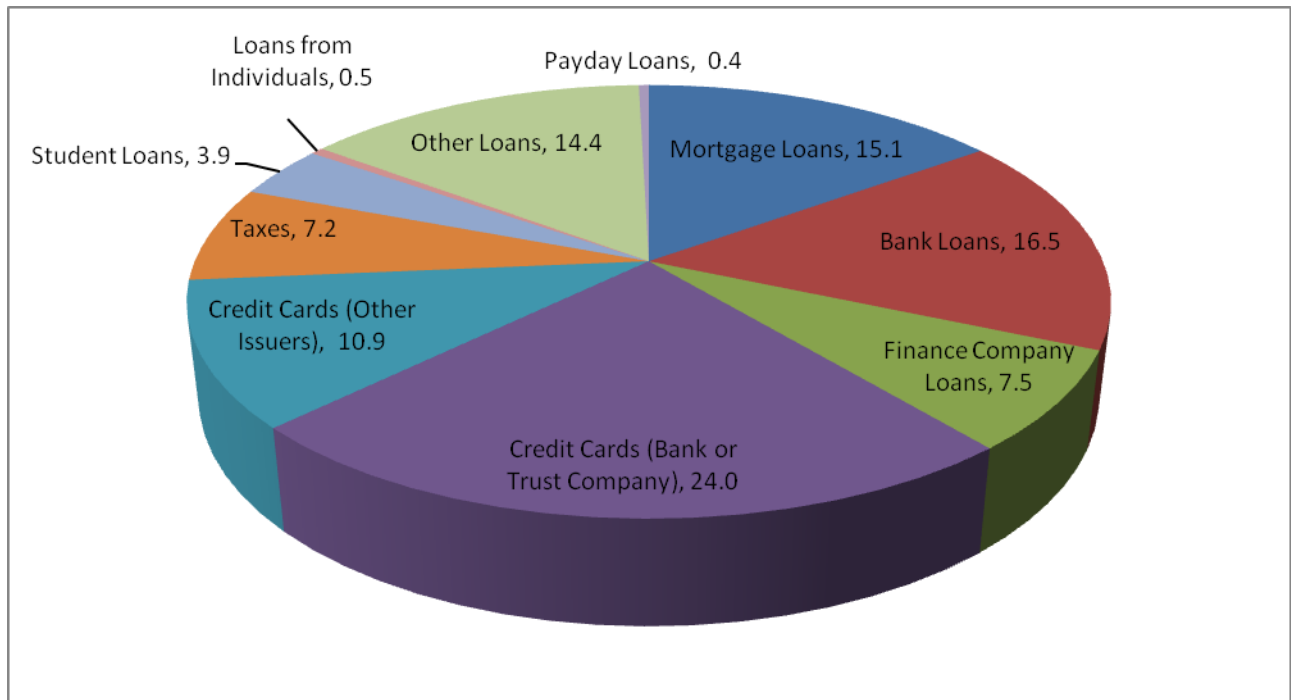


Figure 3. Source of Debt as a Proportion of all Consumer Proposal Debt, 2007

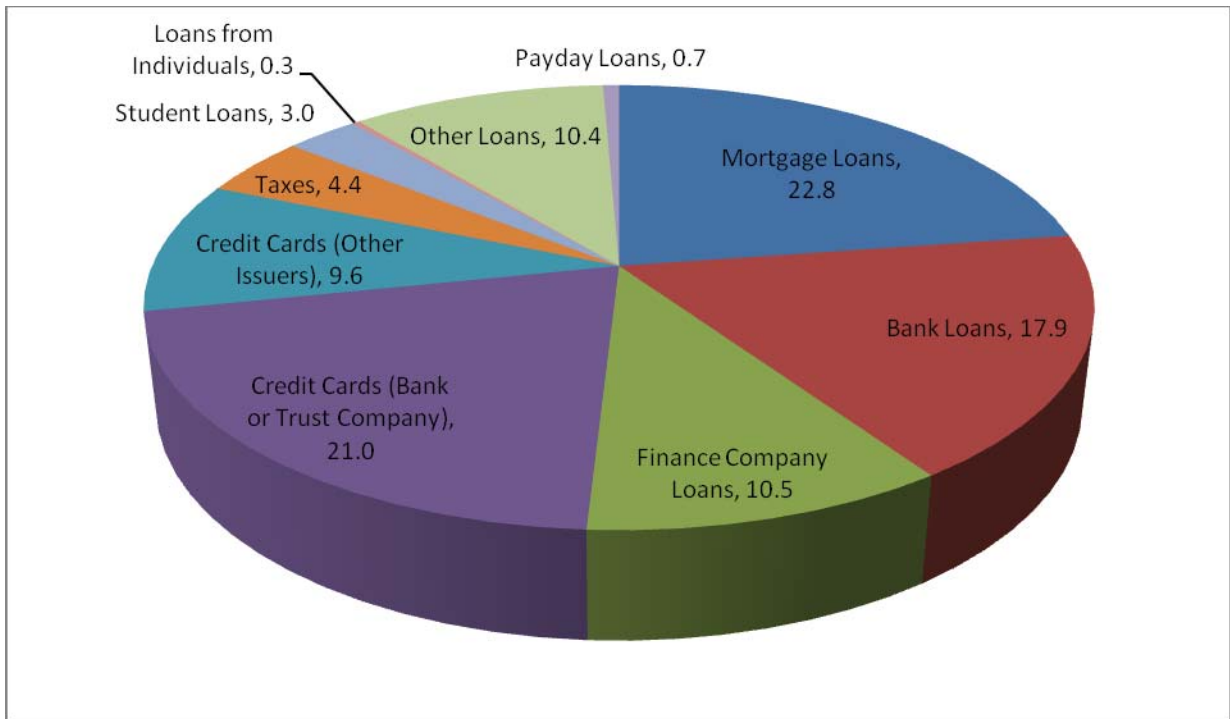
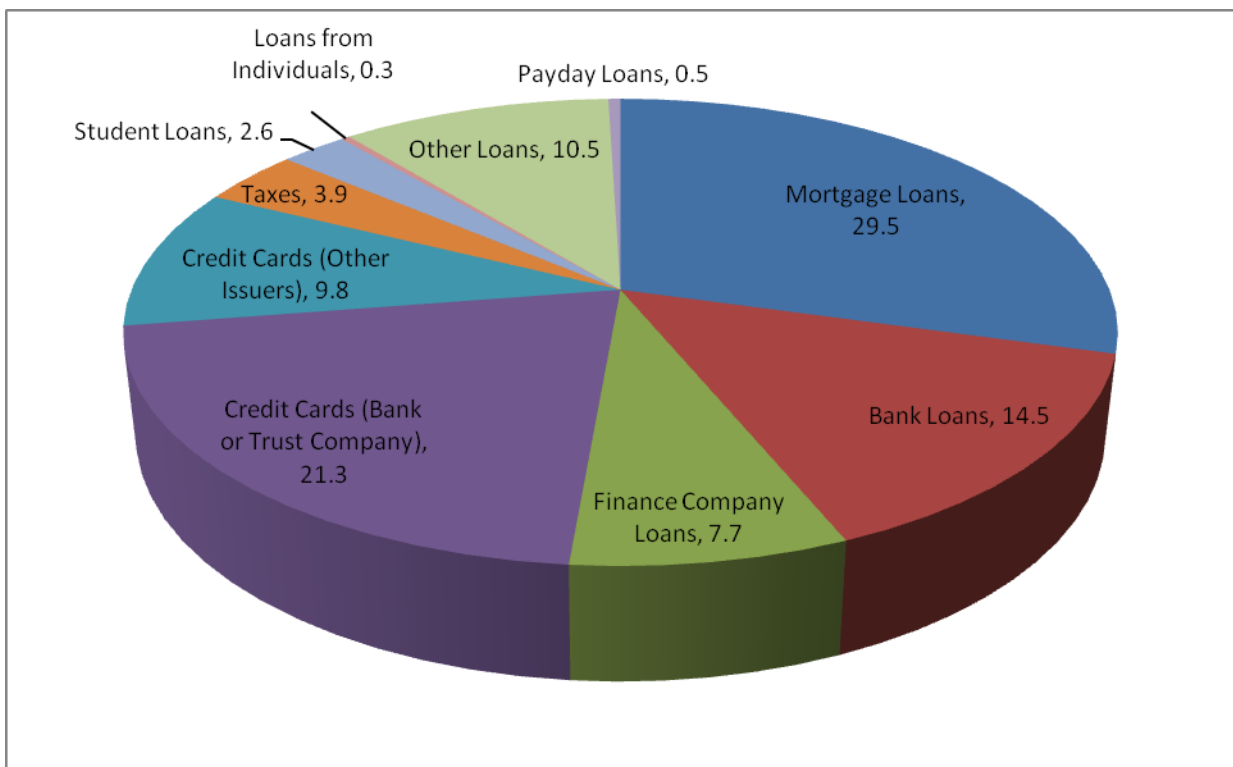


Figure 4. Source of Debt as a Proportion of all Consumer Proposal Debt, 2010



Appendices

Table A1. Financial characteristics of insolvent debtors by type of insolvency, 2007 and 2010.

Characteristic	2007		2010	
	Bankruptcy n = 3,303	Consumer Proposal n = 697	Bankruptcy n = 2,858	Consumer Proposal n = 1,142
	Mean (Std dev.)	Mean (Std dev.)	Mean (Std dev.)	Mean (Std dev.)
Employment income	1,164.20 (1,115.31)	1,905.73 (1,499.78)	1,079.44 (1,180.34)	1,909.48 (1,411.78)
Pension annuities	158.51 (463.86)	171.05 (594.80)	203.87 (522.57)	149.95 (553.01)
Child support	23.01 (123.38)	19.70 (112.52)	16.88 (96.59)	12.25 (90.34)
Spousal support	8.90 (120.22)	5.26 (59.82)	4.41 (66.86)	2.73 (41.30)
Employment Insurance benefits	75.93 (316.91)	71.89 (322.69)	104.47 (376.16)	72.52 (327.75)
Social assistance	46.18 (197.77)	13.98 (113.94)	54.64 (213.24)	15.37 (135.88)
Self-employment income	91.94 (469.02)	139.28 (554.19)	85.70 (402.63)	167.89 (736.88)
Other income	150.58 (425.39)	168.64 (541.88)	146.00 (439.88)	160.67 (492.49)
Personal annual income	20,634.18 (11,486.14)	29,946.27 (15,755.56)	20,391.84 (12,154.73)	29,924.71 (14,147.67)
Household annual income	25,298.89 (14,136.70)	36,606.48 (18,236.03)	26,064.04 (15,195.47)	40,005.09 (19,118.35)
Debt-to-income ratio (all debt)	8.72 (158.51)	2.53 (2.65)	11.61 (353.82)	3.79 (8.27)
Debt-to-income ratio (consumer debt)	8.00 (158.49)	1.27 (0.99)	10.20 (353.81)	1.66 (3.43)

Note. For debt-to-income ratios only, n = 3,157 for bankruptcies and n = 688 for consumer proposals in 2007; n = 2,721 for bankruptcies and n = 1,132 for consumer proposals in 2010. Amounts are monthly, unless otherwise stated. All values are in 2010 constant dollars.

Table A2. Liabilities of insolvent debtors by type of insolvency, 2007 and 2010.

Type of Debt	2007		2010	
	Bankruptcy n = 3, 303 Mean (Std dev.)	Consumer Proposal n = 697 Mean (Std dev.)	Bankruptcy n = 2,858 Mean (Std dev.)	Consumer Proposal n = 1,142 Mean (Std dev.)
Bank loans	12,473.59 (30,015.97)	12,095.38 (16,252.86)	15,509.51 (50,198.74)	15,843.64 (51,803.57)
Finance company loans	5,272.23 (12,249.66)	5,663.66 (10,931.52)	4,783.52 (14,857.02)	5,189.67 (11,094.28)
Credit cards (bank or trust company)	11,293.59 (19,479.92)	11,154.88 (13,225.46)	13,856.94 (20,107.10)	15,436.32 (18,016.53)
Credit cards (other issuers)	4,885.92 (10,095.12)	5,726.68 (10,300.47)	5,696.41 (10,127.25)	7,314.63 (12,320.12)
Mortgage	19,853.02 (59,718.72)	52,863.22 (93,216.65)	40,802.79 (104,495.91)	86,446.53 (129,947.31)
Taxes	10,720.37 (123,650.46)	12,183.00 (200,642.53)	10,845.07 (74,617.47)	3,997.87 (17,241.07)
Student loans	1,543.79 (6,164.91)	1,309.12 (5,788.14)	1,820.45 (7,705.49)	1,292.76 (5,814.33)
Loans from individuals	808.17 (15,260.44)	261.08 (2,739.76)	943.71 (16,436.91)	425.45 (5,524.04)
Other loans	17,284.86 (222,623.65)	5,623.31 (28,231.79)	18,845.82 (257,180.14)	11,801.62 (85,894.02)
Payday loans	107.09 (580.85)	154.79 (656.11)	81.19 (454.09)	113.75 (594.62)
Total debt	59,088.93	50,223.14	66,459.14	54,224.22
Unsecured	(269,111.77)	(204,491.70)	(312,630.51)	(112,452.38)
Secured	25,105.76 (64,260.80)	56,653.61 (94,258.77)	46,622.22 (103,798.06)	93,524.27 (136,386.24)
Total	84,135.55 (279,894.46)	106,880.32 (234,765.00)	113,104.21 (344,063.45)	147,748.49 (193,620.44)

Note. All values are in 2010 constant dollars.