Household Insolvency in Canada

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- Since 1999, the level of indebtedness of Canadian households has increased from 110 per cent to 150 per cent of personal disposable income, making them more vulnerable to shocks that will lead to insolvency. There may be significant implications for the financial system if a systemic shock leads to reduced access to credit.
- There are two types of insolvency: bankruptcy, where all unsecured debt is written off, and debt restructuring. The largest unsecured liabilities are credit card debt and bank loans.
- Drawing on an administrative database of all bankruptcy filings in Canada, this article documents substantial variation in bankruptcy rates over time and across neighbourhoods to better understand the factors that contribute to a rise in household insolvency.
- A potential explanation for the observed patterns in bankruptcy rates across different neighbourhoods is the presence of bank branches and the relationship between creditors and debtors at the local level.

Since 2000, approximately 100,000 Canadians have filed for insolvency each year. This comprises mostly bankruptcies and is triple the annual number of bankruptcies in the 1980s. With increasing levels of household debt in recent years, the number of households that may be vulnerable to a negative economic shock is rising as well. As highlighted in the December 2011 issue of the Bank of Canada's *Financial System Review*, deterioration in the credit quality of household loans and the growing vulnerability of the household sector to adverse economic shocks are the main domestic sources of risk to financial stability.

Recent experiences in the United States and in many European countries have illustrated the importance of assessing the financial situation of households, since fragility in the household sector can have substantial adverse spillovers to the financial system and the entire economy. Meh et al. (2009), for example, using data from a sample of Canadian households between 1999 and 2005, find that as debt-to-income and debt-to-asset ratios increase, households become more sensitive to movements in interest rates, negative income shocks and changes in the housing market. The authors also provide some evidence that less-affluent households have higher debt burdens relative to income and, therefore, that this segment should be monitored and studied more closely.

Insolvency indicates acute stresses in the financial stability of households and also, potentially, of the financial sector. Households that have recently

filed for insolvency have reduced access to unsecured credit and accumulate less wealth than households that have never filed for insolvency, as demonstrated by Han and Li (2011). Insolvent households may also consume less.[1] In addition to these factors on the demand side, there are important supply-side effects of higher insolvency rates. Financial institutions that lend to households may be affected by a higher number of charge-offs and may reduce access to credit for borrowers and tighten lending standards. Financial institutions might also choose to lend at higher rates, which may lead to more instances of insolvency. All of these effects can exacerbate an economic downturn.

This article provides a brief overview of the data on insolvencies, focusing on some stylized facts about insolvent individuals in Canada between 1998 and 2009. This is followed by a review of key research currently being done at the Bank of Canada and elsewhere that is designed to improve our understanding of the role played by financial institutions in insolvency filings in Canada.

Characteristics of Insolvent Households

In Canada, consumer insolvencies are governed by the Bankruptcy and Insolvency Act (BIA). The BIA requires that all insolvency filings be reported to the Office of the Superintendent of Bankruptcy Canada (OSB), which collects and manages data used by many organizations to analyze the overall vulnerability of Canadian households. This data set includes administrative information on individuals, such as income and employment status, from 1998 to 2009.[2] We draw on these data, as well as data from Statistics Canada, to report a number of key stylized facts about insolvency in Canada.

Canadians have two options when they become insolvent. First, they can file for bankruptcy, where they liquidate their assets, their unsecured debt is written off and any wage garnishments in place are stayed (i.e., suspended). Filing for bankruptcy does not protect individuals from secured creditors, however; for example, they must continue to make their mortgage payments (**Box 1** provides more information on the bankruptcy process). A second option is to file a proposal for debt restructuring (referred to as a "Consumer" or "Division II" proposal). If the proposal is approved by a majority of the creditors, debt agreements are restructured to allow repayment on different terms than those in the original contracts. A debt-restructuring proposal may be preferable to bankruptcy for all parties, since the unsecured creditor avoids a total writeoff of the debt, and the individual is able to continue his or her normal activities as before,[3] but with easier repayment terms.

Canadians have two options when they become insolvent. They can file for bankruptcy, [or they can] file a proposal for debt restructuring

The percentage of Canadians who opt for debt restructuring has been rising in recent years (**Chart 1**). Before September 2009, when changes to the BIA took effect, individuals could file for restructuring only if their total debt, excluding debt secured by their primary residence, did not exceed $75,000. After September 2009, that amount increased to $250,000; hence, many

1 Filing for insolvency can have two opposing effects on a household's consumption. Relieving the debt burden allows more of the household's income to be directed toward consumption. At the same time, the household will pay higher interest rates on any unsecured debt (such as credit cards), which can reduce consumption. The overall impact will depend on which of the two effects dominates (Chatterjee et al. 2007).

2 The amount of detail varies by year, but recently there has been more information available on individuals. For earlier years, information is available only on total assets and total liabilities, while for later years, information includes a detailed breakdown of assets and liabilities.

3 An individual filing for debt restructuring may, however, have some difficulty accessing the credit market. A debt restructuring remains on an individual's credit history for three years, while a bankruptcy filing remains on an individual's credit history for six to seven years.

Box 1

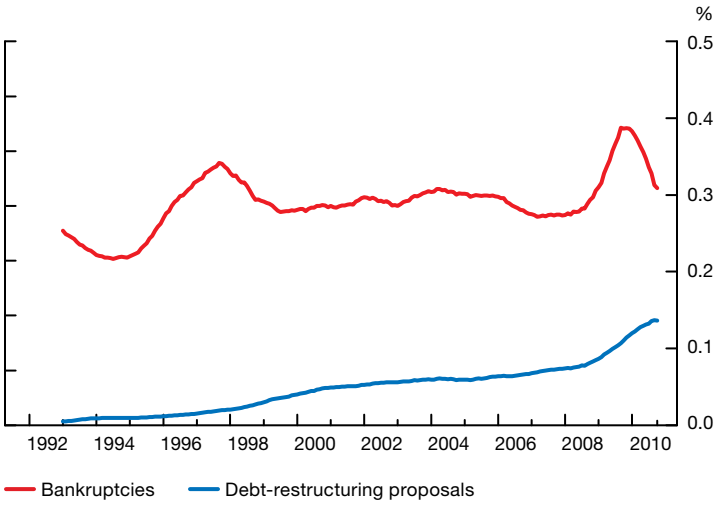
The Bankruptcy Process in Canada

If an individual decides to file for bankruptcy, he or she is required to work with a bankruptcy trustee. In Canada, trustees are private intermediaries who, for a fee, assist individuals in completing the required paperwork and file it with the Office of the Superintendent of Bankruptcy Canada (OSB). Once the individual is declared to be bankrupt by the OSB, the trustee deals directly with the individual's creditors. The trustee is also in charge of selling the individual's assets and determining how many payments he or she has to make to the trustee while in bankruptcy. For more details on both debt-restructuring and bankruptcy procedures, see Sarra (2008).

First-time filers who fulfill all bankruptcy requirements (including financial counselling) are automatically discharged after nine months and can make a "fresh start." Some of a filer's financial obligations, such as child-support or court-ordered payments, remain during bankruptcy and are not discharged after the bankruptcy period is over; the filer must continue to meet those obligations. Student-loan debts are discharged only if the filer has been out of school for a long time period (10 years during our sample period, decreased to 7 years in September 2009). The remaining filers obtain a recommendation from their trustees and attend a discharge hearing, where they may be given full discharge or a "conditional discharge," meaning that they are out of bankruptcy but have to continue making payments to the trustee. When making his or her recommendation to the bankruptcy court, the trustee is required to consider factors such as the total payments the individual has made and the fact that the individual chose bankruptcy over a debt-restructuring proposal. This procedure is equivalent to a Chapter 7 bankruptcy filing in the United States (Livshits, MacGee and Tertilt 2007).

Chart 1: Bankruptcies and debt-restructuring proposals in Canada, 12-month moving average

As a proportion of the population aged 20 and over, per 1,000 persons



Sources: Statistics Canada and the Office of the Superintendent of Bankruptcy Canada

Last observation: October 2010

more households are now eligible to file for restructuring. This suggests that the 2009 changes to the BIA could have played an important role in the subsequent increase in debt restructuring. Research by Li, White and Zhu (2011) supports this hypothesis. They show that changes to U.S. bankruptcy regulations have had a clear impact on (i) the choice to declare insolvency and (ii) whether to file for bankruptcy or debt restructuring, especially for households with mortgage debt. Since the vast majority of the filings in our sample took place before the law was amended, however, determining the impact of regulatory changes on insolvency patterns is beyond the scope of this article.

Average debt

The total debt reported by most individuals who filed for insolvency between 2007 and 2009 is actually below the $250,000 threshold for debt restructuring (**Table 1**). The average owed by an individual filing for bankruptcy was just over $92,000, while the average owed by an individual filing for restructuring was approximately $115,000. Given that the average debt per household in Canada was approximately $56,700 ($79,368 for homeowners and $10,420 for renters)[4] during the same period, it is evident that the amount of debt held by those filing for insolvency is substantial. This high level is surprising, since a large percentage of individuals who file for bankruptcy are renters and, therefore, do not have a mortgage.[5]

Table 1: Total debt of those who filed for insolvency, 2007–09
In Canadian dollars

	Mean	Standard deviation	10th percentile	50th percentile	90th percentile
Bankruptcy	92,528	463,596	12,237	39,446	219,227
Debt restructuring	114,729	246,570	14,419	53,791	280,373

Note: This information is available for 97 per cent of filers between 2007 and 2009.
Source: Office of the Superintendent of Bankruptcy Canada

Household income

Many individuals who file for bankruptcy have little to no income from employment or other sources (**Table 2**). The average annual household income[6] of an individual who filed for bankruptcy during the sample period was $25,250 from 1998 to 2006, and $26,490 from 2007 to 2009. The average annual income of an individual who filed a debt-restructuring proposal ranged from $34,000 (for 1998–2006) to $36,500 (for 2007–09). In both categories, at least 10 per cent of filers reported no household income. Average income was particularly low for individuals who filed for bankruptcy, since many of them—between 16 per cent and 19 per cent—were unemployed, whereas the percentage of unemployed among those filing for debt restructuring was close to

4 Unlike the OSB data, these calculations are at the household level, rather than at the individual level. They are based on household survey data from the *Canadian Financial Monitor* (Ipsos Reid) and are similar to the debt calculations in Meh et al. (2009), which uses the 2005 *Survey of Consumer Finances* (Statistics Canada).

5 Between 2007 and 2009, 79 per cent of individuals filing for bankruptcy were renters. Among those filing for restructuring, 61 per cent were renters.

6 We define annual household income as the bankruptcy filer's monthly income, plus the monthly income of other members of the filer's household, multiplied by 12. We do not, however, have details on the type of income, employment status, etc., of other household members.

the national average of between 7 per cent and 8 per cent. These figures suggest that employment status is a key determinant of bankruptcy for individuals. This is consistent with the findings of Domowitz and Sartain (1999) and Dick and Lehnert (2010). As well, employed individuals who file for bankruptcy tend to have low-wage jobs.

Table 2: Income of insolvent Canadians
In Canadian dollars

Monthly employment income

	Mean	Standard deviation	10th percentile	50th percentile	90th percentile
1998–2006					
Bankruptcy	1,255.81	929.85	0	1,336.39	2,352.89
Debt restructuring	1,817.87	998.06	0	1,862.51	2,978.92
2007–09					
Bankruptcy	1,293.41	998.23	0	1,375.99	2,454.55
Debt restructuring	1,873.75	1,121.50	0	1,909.62	3,155.13

Monthly income from sources other than employment

	Mean	Standard deviation	10th percentile	50th percentile	90th percentile
1998–2006					
Bankruptcy	848.42	965.89	0	580.37	2,165.23
Debt restructuring	1,029.18	1,161.87	0	700.93	2,640.19
2007–09					
Bankruptcy	914.26	2,344.83	0	654.71	2,278.70
Debt restructuring	1,167.52	1,258.80	0	895.98	2,884.62

Note: This information is available for 24.3 per cent of filers between 1998 and 2006 and 97.9 per cent of filers between 2007 and 2009.
Source: Office of the Superintendent of Bankruptcy Canada

Number of creditors

The average number of creditors to whom individuals filing for bankruptcy in 2005 and 2006 owed money was approximately 8; between 2007 and 2009, the number rose to approximately 12 (**Table 3**). This increase can be attributed to easier access to credit and, possibly, to looser lending standards.[7]

Table 3: Average number of creditors, by liability and insolvency type, 2005–09

	Bankruptcy		Debt restructuring	
Liability type	2005–06	2007–09	2005–06	2007–09
Bank loans (except real property mortgages)	0.95	1.48	1.07	1.84
Credit cards				
Bank/trust company issuers	1.56	2.48	1.82	3.14
Other issuers	1.32	2.14	1.44	2.83
Finance company loans	0.82	1.16	0.89	1.49
Other (individuals, lawyers, doctors and government)	2.20	3.16	1.57	2.37
Real property mortgages	0.28	0.49	0.45	0.90
Student loans	0.13	0.22	0.12	0.20
Taxes (federal/provincial/municipal)	0.60	0.83	0.49	0.70
Total creditors	**7.86**	**11.96**	**7.85**	**13.47**

Source: Office of the Superintendent of Bankruptcy Canada

Types of debt

Table 4 shows household liabilities by insolvency type and by home-ownership status for 2007–09. For homeowners, the largest liability is mortgage debt, independent of insolvency type. While mortgage debt is the principal obligation for homeowners who file for restructuring, bank debt and credit card debt are the two most significant liabilities for renters who file restructuring proposals. For bankrupt renters, the "other" category, which includes money owed to individuals, lawyers, doctors and some level of government (such as municipalities), is the largest liability. Those who file for restructuring are more likely to owe money to a bank, since financial institutions may have more incentive and ability to collect on unsecured debt and are thus more willing to consider restructuring plans, and may even encourage individuals to take this route. In bankruptcy cases, however, "other" and "taxes" are more significant liability categories.

7 Several researchers in the United States, most notably Keys et al. (2010), find that looser lending standards played an important role in the subprime-mortgage crisis.

Table 4: Household liabilities, by insolvency type and home-ownership status, 2007–09
As a share of the total dollar amount of defaulted loans

Liability type Bankruptcy/Renter	%	Liability type Debt restructuring/Renter	%
Other (individuals, lawyers, doctors and government)	24.71	Credit cards (bank/trust company issuers)	24.58
Credit cards (bank/trust company issuers)	18.99	Bank loans (except real property mortgages)	21.84
Bank loans (except real property mortgages)	17.26	Other (individuals, lawyers, doctors and government)	15.88
Taxes (federal/provincial/municipal)	16.59	Credit cards (other issuers)	11.21
Credit cards (other issuers)	8.19	Taxes (federal/provincial/municipal)	10.66
Finance company loans	7.92	Finance company loans	10.36
Real property mortgages	3.28	Student loans	2.99
Student loans	2.83	Real property mortgages	2.02
Payday loans	0.23	Payday loans	0.47
Liability type Bankruptcy/Owner	**%**	**Liability type Debt restructuring/Owner**	**%**
Real property mortgages	56.55	Real property mortgages	71.99
Other (individuals, lawyers, doctors and government)	13.52	Bank loans (except real property mortgages)	7.65
Bank loans (except real property mortgages)	11.26	Credit cards (bank/trust company issuers)	6.78
Credit cards (bank/trust company issuers)	6.29	Other (individuals, lawyers, doctors and government)	4.67
Finance company loans	4.52	Credit cards (other issuers)	3.62
Taxes (federal/provincial/municipal)	4.34	Finance company loans	2.93
Credit cards (other issuers)	3.10	Taxes (federal/provincial/municipal)	1.97
Student loans	0.31	Student loans	0.28
Payday loans	0.11	Payday loans	0.11

Note: This information is available for 98 per cent of filers between 2007 and 2009.
Source: Office of the Superintendent of Bankruptcy Canada

Creditors and Bankruptcy

Although it is the debtor who decides to file for bankruptcy, decisions made by both the debtor and the creditor can contribute to bankruptcy.[8] Specifically, a creditor's policy governing those to whom it lends, the terms of its loans and its practices to ensure repayment during the life of the loan can all contribute to whether or not a borrower defaults. If the creditor cannot accurately assess the riskiness of the borrower before making the loan, or if the creditor cannot ensure timely repayment during the life of the loan, then default (and, hence, bankruptcy) can occur.

Allen, Damar and Martinez-Miera (forthcoming) use the data presented in the previous sections to focus on the debtor-creditor relationship and the importance of the type of information creditors collect when they lend to individuals. Financial intermediaries use both "hard" and "soft" information when deciding to lend to clients. Hard information (information that is verifiable, such as an applicant's taxable income) is typically associated with credit scoring.[9] Soft information (defined as unverifiable information processed by a loan officer,

8 The focus of this section, like the majority of the literature on household insolvency, is on bankruptcy, since those who file for bankruptcy are the most vulnerable individuals. The decision to file for bankruptcy versus debt restructuring, however, is an extremely important one, which should not be ignored.

9 A credit score is a numerical expression of a person's creditworthiness. Financial institutions use credit scores to determine whether or not to extend a loan to an individual, how much to extend, and at what terms.

such as the officer's assessment of the applicant's character) is more difficult to measure, since it tends to be more qualitative and is typically associated with the involvement of bank branch managers in building relationships with clients in a neighbourhood. Banks with a strong neighbourhood branch presence are more likely to develop relationships with their borrowers, and thus will gather more soft information about them than banks outside that neighbourhood. Gathering soft information can be costly, however, since it requires time and effort on the part of branch staff, as well as the cost to maintain the branch. If hard information is a perfect substitute for information gathered by loan officers at a branch, then a financial institution should save on the costs of gathering this information by closing branches. However, closing branches when hard and soft information are not substitutes, but complements, can lead to deterioration in a lender's portfolio.

While the credit-scoring process is the same regardless of the bank's location, monitoring of a client's ability to repay the loan varies by neighbourhood

Given the difficulties in collecting soft information, a bank's ability to use it to improve the quality of its loans depends on the total number of loans in the bank's portfolio. A bank with more loans will have fewer resources available to gather and process (or "use") soft information. While the credit-scoring process is the same regardless of the bank's location, monitoring of a client's ability to repay the loan varies by neighbourhood. For example, a bank will rely more on credit scoring in neighbourhoods where it does not have a physical presence. While potentially more cost efficient (since expenditures for collecting soft information at branches are reduced), credit scoring may result in more defaults precisely because of the bank's inability to gather soft information. Some researchers have in fact associated the observed increase in bankruptcies in the United States with the adoption of credit-scoring techniques (Dick and Lehnert 2010; Livshits, MacGee and Tertilt 2011), since this approach led to increased lending to higher-risk borrowers. They also assert, however, that the rise in bankruptcy filings was not as large as the increase in the amount of consumer credit outstanding. They interpret these findings as evidence of the effectiveness of a business model based on credit scoring, since the expanded access to credit (by households previously excluded from credit markets) and the subsequent increase in consumption are achieved at the cost of a relatively small rise in defaults.

We test the hypothesis that, in neighbourhoods where banks make a large number of loans per branch, which we interpret as using soft information less intensively, there are more consumer bankruptcies (Allen, Damar and Martinez-Miera forthcoming).[10] If the involvement of loan officers in the branches did not add any value, one would expect an even distribution of bankruptcy rates across neighbourhoods, controlling for differences in income, employment and other variables. On average, there are approximately three bankruptcies per 1,000 residents in a neighbourhood in Canada (**Table 5**),[11] although the standard deviation within a year differs substantially and the variation across neighbourhoods is large.

10 Implicit here is the assumption that the number of employees is constant across branches. Data on employees are not available at the local level. At the provincial level, the number of loan officers per branch has remained relatively constant, while the dollar amount processed per loan officer has increased. If we had these data at the local level, we could measure the effect of the number of employees, as well as the number of branches, on consumer bankruptcies. Dick and Lehnert (2010), for example, use credit card applications processed per employee as a measure of productivity.

11 A neighbourhood is represented by the first three digits of a Canadian postal code (the forward sortation area).

Table 5: Bankruptcy filings per 1,000 residents across different neighbourhoods, 1998–2007

Year	Number of neighbourhoods	Mean number of bankruptcies	Standard deviation	10th percentile	50th percentile	90th percentile
1998	1,148	3.1	3.2	1.2	2.8	5.2
2001	1,211	3.2	2.8	1.3	2.9	5.2
2004	1,211	3.4	2.9	1.5	3.1	5.4
2007	1,174	3.2	2.1	1.3	2.8	5.3

Note: The slight variation in the number of neighbourhoods from year to year is due to the introduction, elimination and consolidation of forward sortation areas by Canada Post.
Source: Office of the Superintendent of Bankruptcy Canada

To test our hypothesis, we use a number of econometric techniques, the simplest of which is a linear regression of per capita bankruptcy rates in a given neighbourhood on loans per branch in that neighbourhood, across hundreds of neighbourhoods and over time. Several other neighbourhood factors, such as income levels, employment and house prices, are also included. We find that we cannot reject the hypothesis and therefore conclude that soft information is important for banks. Our results suggest, therefore, that the less banks monitor the repayment of the loans they make (or the neighbourhood in which they make them), the higher the default rates will be in that neighbourhood.

Our results suggest that the less banks monitor the repayment of the loans they make, the higher the default rates will be in [a given] neighbourhood

Regional variation in branch presence at the local level could also be a factor in bankruptcy rates. The entry or exit of neighbourhood bank branches is a frequent occurrence in Canada. Approximately 38 per cent of branches closed between 1998 and 2007, while some neighbourhoods experienced an increase in the number of branches. In Allen, Damar and Martinez-Miera (forthcoming), we take advantage of this regional variation in bank branching by considering whether local markets affected by Toronto–Dominion Bank's acquisition of Canada Trust in 2000 resulted in a change in consumer bankruptcy rates.

Following the merger, TD Canada Trust had closed the majority of overlapping branches by 2003. TD Canada Trust's market share of loans post-merger was actually lower than the combined pre-merger shares of each institution when they were separate entities. In other words, following the merger, some consumers moved to other banks for their loans. These other banks, however, did not open many new branches. The result was an increase in the market share for the other banks, but a decrease in their ability to gather and process soft information on all of their borrowers.[12] We find that neighbourhoods affected by the merger (because the neighbourhood branch was closed) saw a greater increase in bankruptcies than those where there were no closures following the merger. We attribute a substantial portion of this rise in bankruptcies to the greater market share for other banks that did not increase the intensity of their monitoring.[13]

12 These banks could have increased the number of employees per branch, which we do not observe since data are not available. There is, however, a constraint on the number of employees a branch can employ, based on size.

13 Another possibility is that TD Canada Trust rationed credit to clients who were then unable to use credit to pay for unexpected expenses and subsequently defaulted. However, we do not see a decrease in bank credit following the merger, suggesting that, since TD Canada Trust granted less credit (hence, the lower market share), these customers were granted loans by the other banks in these neighbourhoods. Furthermore, since bank credit in these markets did not *increase*, the possibility that more households received loans after the merger and that a portion of them defaulted (as in Dick and Lehnert 2010) can be discounted. Instead, the same amount of credit was granted in these neighbourhoods, but the distribution of households across the different banks changed. It is this change in the market shares of different banks that can explain the higher bankruptcy rates.

These results have important implications for financial stability. In Canada, a large number of bank branches were closed at around the same time as credit-scoring methods were adopted. It therefore appears that Canadian banks switched from a branch-based lending model to one in which lending decisions are made centrally, with the help of credit scores. If, as some literature suggests (Dick and Lehnert 2010), centrally coordinated lending is a perfect substitute for branch-based lending, then the presence (or absence) of branches in a neighbourhood should have no impact on default rates. The fact that we observe a link between the scarcity of branches and a rise in bankruptcies suggests that complementing credit-scoring technologies with branch-level information increases the probability that a bank will accurately determine the likelihood of a borrower declaring bankruptcy or prevent bankruptcy before it occurs.

Complementing credit-scoring technologies with branch-level information increases the probability that a bank will accurately determine the likelihood of a borrower declaring bankruptcy or prevent bankruptcy before it occurs

Multiple bankruptcies and access to credit

An important policy debate is whether bankruptcy rules are overly stringent or not stringent enough, since the availability of credit to households that have filed for bankruptcy in the past and the terms of such credit could create vulnerabilities in the household sector. Issues include the effects of bankruptcy laws on access to credit for different types of households: (i) the average borrower, (ii) someone who has recently filed for bankruptcy or (iii) individuals who file for a second bankruptcy a number of years after their initial filing.[14] The types and terms of new credit for individuals who have recently filed for bankruptcy can help to determine whether these individuals will become insolvent again in the near future or whether the bankruptcy filing gave them a "fresh start."

One of the key issues is the length of time it takes for individuals to regain access to credit after they have filed for bankruptcy. In Canada, a judge decides whether an individual can file for bankruptcy a second, third or fourth time, etc. The OSB data show subsequent filings a number of years after an initial bankruptcy. The pattern of multiple filings is interesting, particularly the interaction between creditors and debtors. Han, Keys and Li (2011), for example, find that recently bankrupt individuals in the United States are highly likely to receive a credit card offer in the mail, although with less-favourable terms than those offered to individuals who have never filed for bankruptcy.

In our analysis of the OSB data, we find that the distribution of creditors when an individual files a second time is somewhat different than the distribution at the first filing (**Table 6**). While the government and major banks are the major creditors in both filings, there is a substantial increase in automobile financers in the second filing. This result likely indicates that some debtors' vehicles are seized during the first bankruptcy filing, requiring them to seek automobile financing once they are discharged from bankruptcy. Although most provinces exempt some vehicles from seizure, not all automobiles are covered by these exemptions. Furthermore, individuals recently discharged from bankruptcy who purchase vehicles are likely to pay much higher interest rates.[15] Ongoing research at the Bank of Canada is attempting to disentangle the effects of supply and demand on the debt portfolios of those who file for multiple bankruptcies.

14 Although our focus is on individuals who have filed for bankruptcy at least once, a number of researchers have examined the impact of bankruptcy on access to credit more generally. Using a quantitative macro model, Chatterjee et al. (2007) find, for example, that tightening bankruptcy restrictions would lead to lower interest rates and more credit, with little impact on bankruptcy rates.

15 Einav, Jenkins and Levin (forthcoming) find that, in the United States, the annual interest rate on a car loan for subprime borrowers ranges between 20 per cent and 30 per cent, often in line with the state limit.

Table 6: Principal creditors for individuals filing for a second bankruptcy
Percentage of dollar amount

First bankruptcy filing		Second bankruptcy filing	
Creditor	%	Creditor	%
Government	12.48	Government	22.70
Bank 1	9.47	Automobile financers	10.40
Bank 2	8.01	Bank 2	9.79
Bank 3	7.04	Bank 1	7.37
Credit union 1	5.70	Other financing	6.66
Other financing	5.67	Unknown	4.08
Bank 4	5.57	Bank 4	3.79
Automobile financers	5.43	Credit union 1	3.63

Note: "Other financing" includes all non-bank finance companies other than payday lenders. Second filings are those that take place within three years of the first filing.
Source: Office of the Superintendent of Bankruptcy Canada

Conclusion

Studying the balance sheets of individuals, as well as their income and expense statements at the time of insolvency, can provide information about the financial decisions of both debtors and creditors that could lead to potential vulnerabilities in the household and financial sectors. This article has presented some stylized facts about insolvency in Canada's household sector and has reviewed research on the creditor's role in insolvencies. The average debt of an individual filing for bankruptcy is approximately 1.6 times larger than the debt load of the average Canadian household. Moreover, bankrupt individuals tend to be unemployed, so have little to no income, and are typically renters. Unlike the debt load of the average Canadian household, the debt of a large percentage of bankrupt individuals does not include mortgage debt, but is instead composed of bank loans and credit card debt. We find that individuals who have recently filed for bankruptcy had more creditors than those who filed even a few years earlier, suggesting that there is easier access to credit than in the past. Some researchers have argued that this is due to credit-scoring methods that result in financial institutions lending to riskier borrowers.

Our main empirical finding is that banks that approve more loans per branch—which we interpret as using soft information less intensively—experience more client bankruptcies. This finding has important policy implications, because it indicates that hard information cannot fully replace the type of information gathered at local branches. Therefore, financial institutions that do not use soft information risk further deterioration in their loan portfolios.

This article does not address the growing size of the alternative financial services industry in Canada. For example, payday lenders now account for around 6 per cent of the creditors in our data. More research is needed on their role in consumer finance, since they typically provide credit to the most constrained borrowers (Stegman 2007). In the academic literature published to date, it is still an open discussion whether payday lenders direct individuals onto the path to bankruptcy or, by providing an important source of short-term liquidity, steer them away from it. Future research at the Bank of Canada will focus on this question.

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