

**CONSUMER PROPOSALS IN CANADA AFTER THE 2009 LEGISLATIVE
AMENDMENTS TO THE *BANKRUPTCY AND INSOLVENCY ACT***

Vyacheslav Mikhed

Payment Cards Center, Federal Reserve Bank of Philadelphia

&

Barry Scholnick

School of Business, University of Alberta

March 2015

EXECUTIVE SUMMARY

- This paper examines the impact of the 2009 legislative reforms to the Canadian Bankruptcy and Insolvency Act (BIA), as they relate to Consumer (Division II) Proposals.
- Consumer Proposals are an Insolvency process in Canada, under which creditors agree that debtors can renegotiate debt contracts (e.g. reduce amounts owing and/or delay payment schedules).
- The main 2009 change to the BIA as it relates to Consumer (Division II) Proposals, was the increase in the Net Debt (total debt minus mortgage debt on principal residence) ceiling from \$75,000 to \$250,000. In practice, this allowed debtors with higher net debts to access the relatively inexpensive and uncomplicated Division II proposal system, rather than having to access other forms of insolvency (e.g. the Division I system, which imposes higher administrative costs to filing) or stay outside of the insolvency system.
- In relation to the number of filings, we find that there was a significant increase in the quantity of Division II proposals after the 2009 reforms, by individuals who would previously have been ineligible to file a consumer proposal. Most of these new proposal filers after the 2009 reforms had net debts (total debt minus mortgage debt on principal residence) that were in the \$75,000 to \$150,000 range, rather than in the \$150,000 to \$250,000 range.
- In relation to the terms of Division II proposals, we find that those filers after 2009, who previously would have been ineligible to file a Division II proposal, had a lower relative payment agreed to by their creditors (“cents on the dollar”), but a higher absolute payment agreed to by their creditors (“total dollar amounts”).
- In relation to the outcomes of proposals over the life of the proposal agreement (i.e. whether the debtor complied with the proposal agreement over time), we find that the 2009 changes did not have any economically significant impact on the various outcomes.

1. INTRODUCTION

While consumer proposals are a large and growing part of the Canadian consumer insolvency system, rigorous statistical analysis of consumer proposals is relatively limited. The aim of this paper is to provide a statistical analysis of consumer proposals in Canada, using detailed individual proposal filing level data provided to us by the Office of the Superintendent of Bankruptcy (OSB), Canada's Insolvency regulator. Our data include the universe of all consumer proposals filed in Canada from 2006 to 2014. Our particular focus is on the impact of the 2009 regulatory changes to the consumer proposals process.

The central element of a consumer proposal in Canada is that it involves a proposal from a distressed debtor to creditor(s) to adjust the terms of the original credit agreement. Typically the debtor proposes to the creditor(s) that there be a reduction in the amount of the outstanding debt, or a lengthening of the payback period for the debt, or both. The creditors are able to accept or reject the debtor's proposal, thus for a proposal to become operational it requires both debtors and creditors to agree to the terms of the debt restructuring.

The main focus of this study is to evaluate the impact of the changes to the Consumer Proposals in Canada following the legislative changes to the Bankruptcy and Insolvency Act (*Bankruptcy and Insolvency Act (BIA)*, R.S.C. 1985, c. B-3) which were made effective on September 18, 2009. In particular, we focus on the impact of the change in the ceiling of net debt (total debt minus mortgage debt on principal residence) under which consumer proposals could be filed. The net debt ceiling changed from \$75,000 to \$250,000 after the reforms.

This legislative change in 2009 was potentially very important because it reduced the administrative barriers to consumers with larger amounts (>\$75,000) of outstanding net debts to filing a consumer proposal. Before the 2009 legislative reforms, debtors with larger amounts of net debts (>\$75,000) were precluded from filing what are defined as Division II proposals (abbreviated as Div II proposals, also known as Consumer Proposals), but they were allowed to file Division I (abbreviated as Div I) proposals.

The key distinction between Division I and Division II proposals for the debtor is the additional transaction cost in undertaking a Division I proposal compared to a Division II. Division I proposals are essentially designed for larger and more complicated estates, or for small business estates, whereas Division II proposals are designed to be a low transaction cost alternative for small and relatively uncomplicated consumer estates. The administrative and legal

costs in filing a Division I proposal are thus significantly higher than the legal and administrative costs of filing a Division II proposal. In other words, the key impact of the 2009 reforms was to allow debtors with larger net debts ($> \$75,000$ but $< \$250,000$) to access the lower cost alternative of filing a Division II proposal, rather than forcing such debtors to file a more expensive Division I proposal or file for bankruptcy, or not enter the insolvency system.

The central aim of our paper therefore is to statistically assess how this reduction in the administrative costs barriers to filing proposals impacted the Div. II proposals. In particular we examine how these 2009 changes impacted: (1) the characteristics of individual debtors who filed proposals before and after the 2009 changes; (2) the terms of individual consumer proposals before and after the reforms, and (3) the outcomes of consumer proposals before and after the 2009 changes.

We use both graphical techniques, as well as formal statistical modelling to evaluate the impact of the 2009 legislative reforms. In particular, we examine the impact of the 2009 reforms on three groups of proposal filers: (1) all Division II proposals before the 2009 reforms (which by definition had net debts of $< \$75,000$), (2) Division II proposals after the 2009 reforms with net debt $< \$75,000$, (3) Division II proposals after the reforms with net debt $> \$75,000$ and $< \$250,000$.

We are particularly interested in comparing this third group of Division II filers with larger net debts, who would not have previously been eligible to file a Division II proposal, with the first two groups of debtors with smaller net debts, who would have been able to file a Division II both before and after the 2009 reforms. In this way we will be able to examine the impact of the 2009 reforms on various outcomes of interest, including the characteristics of filers, the terms of proposals and the outcomes of proposals. We restrict our evidence to only Division II filers, rather than comparing across filers who make other insolvency related choices, (such as Division I proposals, consumer bankruptcy, or no form of insolvency), in order to ensure we are comparing like with like (i.e. Division II filers before and after the 2009 changes).

We use a variety of different data sources in our statistical analysis. Our main source of data is the universe of individual proposal files provided to us by the OSB. These data include data taken from the Estate Information Summary (EIS), as well as data in OSB Forms 14, 65 and 79 (Full details in Table A2). These data provided a very detailed description of the characteristics of debtors, the terms of proposals as well as the outcomes of proposals. We match

these individual level data to neighborhood level data from the Canadian Census. Because we can observe the Canadian six digit postal code for every proposal filer, we can observe a large variety of neighborhood level characteristics of each filer (e.g. urban/rural, income, education, unemployment, etc.)

Our main conclusions are that the 2009 reforms had significant impacts on the number of consumer proposals filed as well as the terms of the proposals filed. In particular, we show that the 2009 reforms resulted in an increase in Division II proposal filings by those debtors who would have previously been precluded from filing this particular type of proposal before the 2009 reforms. Furthermore, we find that those debtors who would have previously been precluded from filing, were able to receive acceptance from their creditors to repay a lower relative amount (i.e. cents on the dollar) but a higher absolute amount (total dollars repaid) compared to filers with lower amounts of net debt who could access the Division II system before the 2009 reforms.

On the other hand, we also find that the 2009 reforms did not have a significant impact on the outcomes of proposals. In other words, while the 2009 reforms had a significant impact on events during the initial proposal filing process (i.e. number of filings and terms of proposals agreed to by creditors), the 2009 reforms did not seem to affect the behaviour of debtors in repaying their obligations to creditors during the subsequent years of the proposal process.

The outline of our paper is as follows. Section 3 examines the characteristics of debtors who filed consumer proposals before and after the 2009 reforms, in particular those who would have previously been precluded from filing Div II proposals before the reforms. Section 4 analyzes the terms of consumer proposals before and after the 2009 changes, and in particular the relative amounts of repayments (cents on the dollar) agreed to by the creditors. Section 5 explores the absolute amount (total dollar magnitudes) of consumer proposals before and after the reforms, agreed to by creditors. Section 6 examines the various outcomes of these proposals, i.e. the extent to which the debtor complies with the agreed on terms of the proposal over the succeeding years. Section 7 concludes.

2. DATA

Our raw data includes the universe of all Division II proposal filers from 2006 to 2014. We include a detailed Table of Summary Statistics in Table A1, as well as a detailed Table

providing the source of all data in Table A2. In our main statistical analysis, there are more than 234,000 individual proposal files in our sample (after the various adjustments described below).

In the matching of the OSB proposal data and Dissemination Area (DA) census data, 4,525 proposals (around 1.5 % of the total sample) were deleted because their filers' postal codes were not matched to Canada Post postal codes (as provided in the Postal Code Conversion File by Statistics Canada). Some of the unmatched postal codes were US ZIP codes (five digit numbers) or they contained typos or other errors preventing the identification of the correct postal code. Also, 570 proposals (0.2 %) were excluded because they were not matched to the Census DA data.

All primary and related joint proposal filings are recorded in our data. So, if two people file a joint proposal, it is recorded twice in the initial data set with the same values of all the variables. We deleted non-primary joint proposal filings from our data to eliminate these duplicates. In total, this operation eliminated 39,644 files.

We also removed files with key variables of interest outside of allowable ranges or missing. In particular, we deleted files with 0 or missing proposed payments as well as proposed payments larger than or equal to 100 % of net debt. We also omitted 716 cases with net debt outstanding below zero or above \$75,000 or \$250,000 for single filers and double these amounts for joint filers in the appropriate periods (before and after the reforms).

Our individual-level OSB filing data provide us with a variety of demographic variables including individual-level data on filer's age, marital status, household size, self-employment status, and prior insolvency. A unique element of our filer-level OSB data is our ability to capture the reasons given by filers for their financial distress. OSB Form 79 includes responses to the following open-ended question: "Give reasons for your financial difficulties." Our data include the full textual responses to this question from every filer in our database, and textual analysis software was used to code these responses into 17 separate categories (listed in Table A2). Each category is represented by a dummy variable, with multiple responses allowed per filer.

As is typical in our statistical methodology, when using categorical variables such as regions in regression analysis, we are required to exclude one category out of the regression model. The excluded category is called the reference (or baseline) group and coefficients on all other categories should be interpreted as average changes in the outcome of interest for included

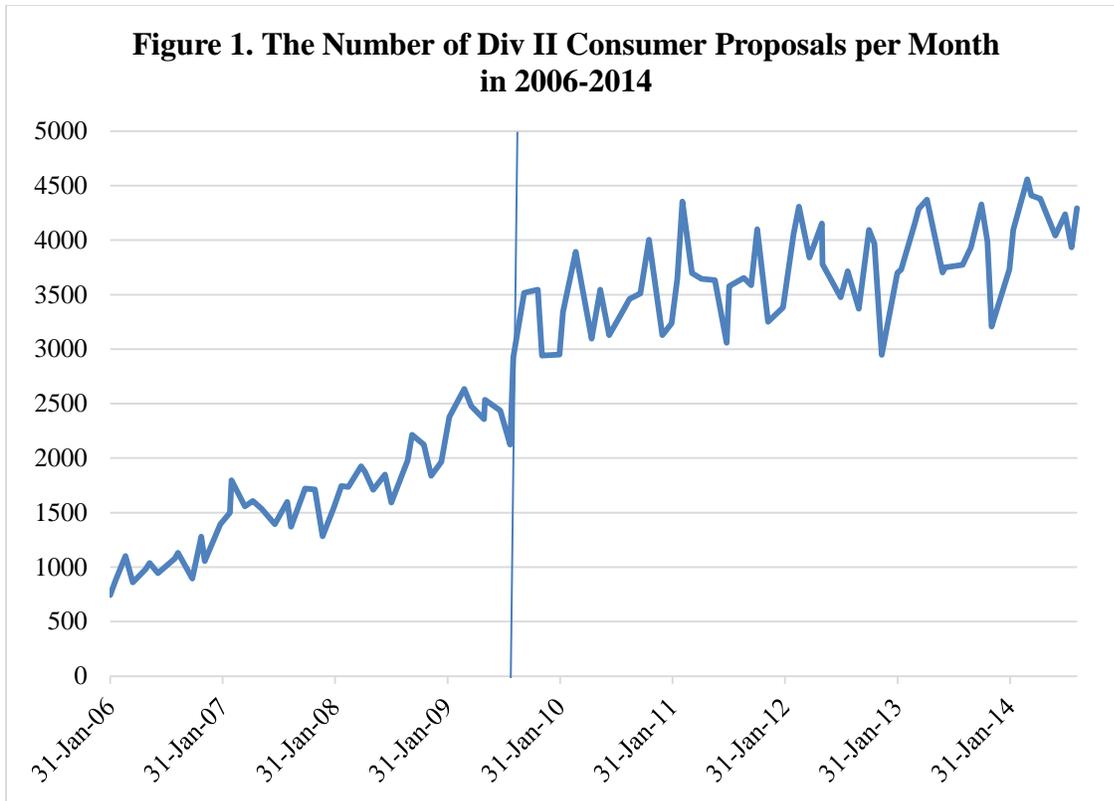
categories relative to the reference group. For example, in case of regions, the baseline is Atlantic region. Hence, the coefficient on the indicator variable “Ontario” in Table 1 implies that the proposed rate of return in Ontario on average is 4.959 % higher than the proposed rate of return in Atlantic region (PE, NB, NS and NL).

3. CHARACTERISTICS OF DEBTORS

Part 3 of this paper will provide data on the characteristics of debtors who submit Division II Proposals. In particular, we will provide monthly time series data on the counts of debtors with various characteristics filing Consumer Proposals over time. All of data will be presented in figures, where the time period extends from 2006 to 2014. In all of these time series figures, we will mark the introduction of the legislative change in September 2009 with a vertical line, thus making it possible to observe trends over time both before and after the 2009 legislative change.

3.1. Total Number of Consumer Proposals

Figure 1 reports monthly data on the raw counts of total consumer proposals over time from 2006 to 2014. The main conclusion from this Figure is the sharp increase in the number of consumer proposals that occurred in the period immediately after the legislative reforms of 2009.

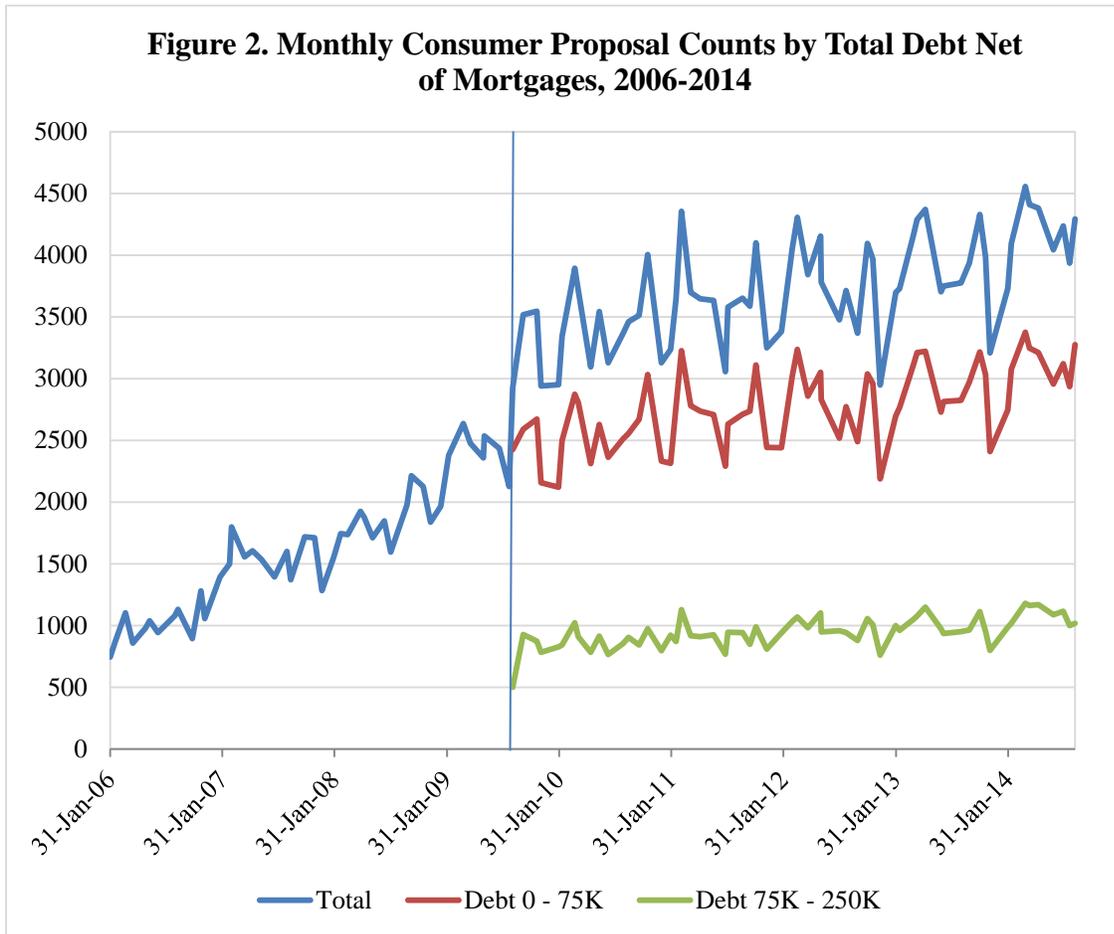


3.2. Total Counts of Consumer Proposals by Size of Net Debt

The central element of the 2009 reforms for Division II proposals was the change in the maximum amount of net debt an individual could have to be eligible to file a consumer proposal (where net debt is defined as total debt minus debt on principal residence). In the period before the 2009 reforms, only individuals with net debts of \$75,000 or less were eligible to file consumer proposals. After the reforms, this ceiling was increased to \$250,000.

In Figure 2, we show how these changes affected monthly counts of proposal filers over time. The blue line indicates the total proposal filings both before and after the 2009 change. For the period after the change, we include filers with net debts up to \$75,000 (in red), and net debts between \$75,000 and \$250,000 (in green). The main conclusion of this Figure is that a large fraction of the increase in proposals after the 2009 reforms appears to be due to debtors with net debts larger than \$75,000 (i.e. the green line), who were previously ineligible to file consumer proposals. In the period after 2009, approximately 3,500 to 4,000 proposals were filed every month (blue line), of which approximately 1,000 were filed every month by individuals who

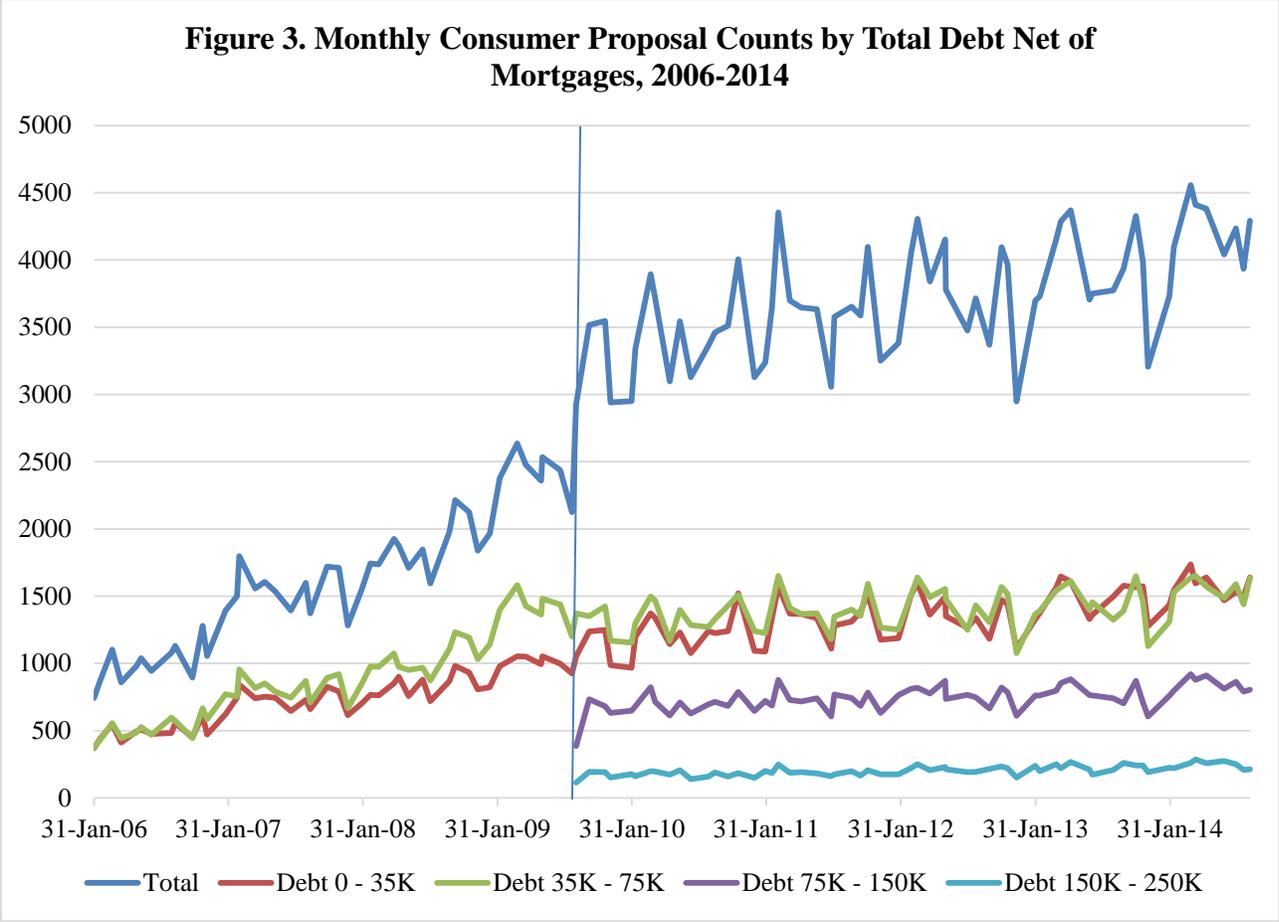
would previously have been excluded from filing consumer (or Division II) proposals due to the net debt ceiling. Another conclusion from this Figure, therefore, is that the changes in 2009, increasing the net debt ceiling for which individuals could file consumer proposals, had a very important impact on the total number of proposal filers over time.



In Figure 3, we replicate Figure 2 except that we create more categories of net debts (specifically: \$0 – \$35,000; \$35,000 – \$75,000; \$75,000 – \$150,000; \$150,000 – \$250,000). The first two categories could exist both before and after the 2009 reforms, while the latter two categories could only exist after the 2009 reforms.

The most important conclusion from Figure 3 is that there were significantly more debtors with net debts between \$75,000 and \$150,000 (approximately 750 per month) compared to debtors with net debts between \$150,000 and \$250,000 (approximately 250 per month). In other words, even though the 2009 reforms increased the net debt ceiling for proposals from

\$75,000 to \$250,000, most of the increase in proposal filings came from debtors with relatively smaller amounts of net debt (between \$75,000 and \$150,000).



3.3. Total Counts of Consumer Proposals by Canadian Regions

Figures 4, 5 and 6 report total counts of consumer proposals over time, by various Canadian regions and geographies. Figures 4 and 5 report counts for Urban and Rural areas respectively, while Figure 6 reports counts for the different provinces / regions.

Figures 4 and 5 report Urban and Rural counts for each of the various net debt categories described above (\$0 – \$35,000; \$35,000 – \$75,000; \$75,000 – \$150,000; \$150,000 – \$250,000). Our definition of rural and urban filers is based on Statistics Canada’s data on Metropolitan Influence Zones (MIZ), which uses data on the extent to which residents of a neighborhood work within urban cores. These data are available at the geographic level called Census Subdivision (CSD). We match each consumer proposal filer’s six digit postal code to Census Subdivision

using Postal Code Conversion File (PCCF) provided by Statistics Canada. All regions in Canada are categorized into 8 MIZ categories, which reflect the extent to which the neighborhood is more or less urban or rural (e.g. a region in category 1 indicates that it is within a Metropolitan Statistical Area (MSA), while an area in 8th MIZ category indicates that it is within one of the Canadian Territories). We are thus able to categorize every proposal filer in Canada as being either urban (MIZ=1) or rural (MIZ>1), based on the Statistics Canada categorization of his or her Census Subdivision.

The main conclusion from our data on urban and rural filers is that the urban/rural distinction does not seem to affect our main results described above regarding the number of filers with net debt relative to the \$75,000 or \$250,000 ceilings. For both urban as well as rural filers, there appears to be a significant increase in total proposal filings immediately after the 2009 reforms, and in both cases this increase in filings was driven by filers relatively close to the previous ceiling (i.e. whose net debt was between \$75,000 and \$150,000).

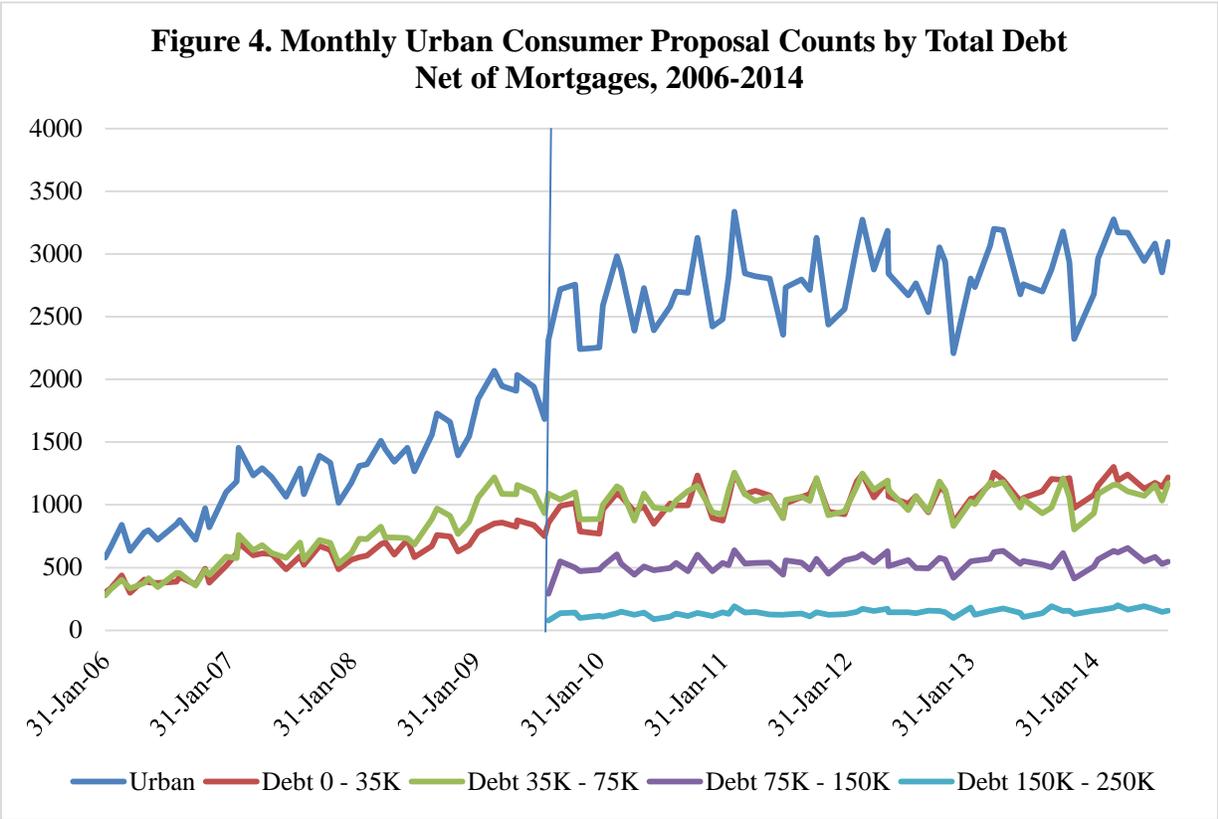
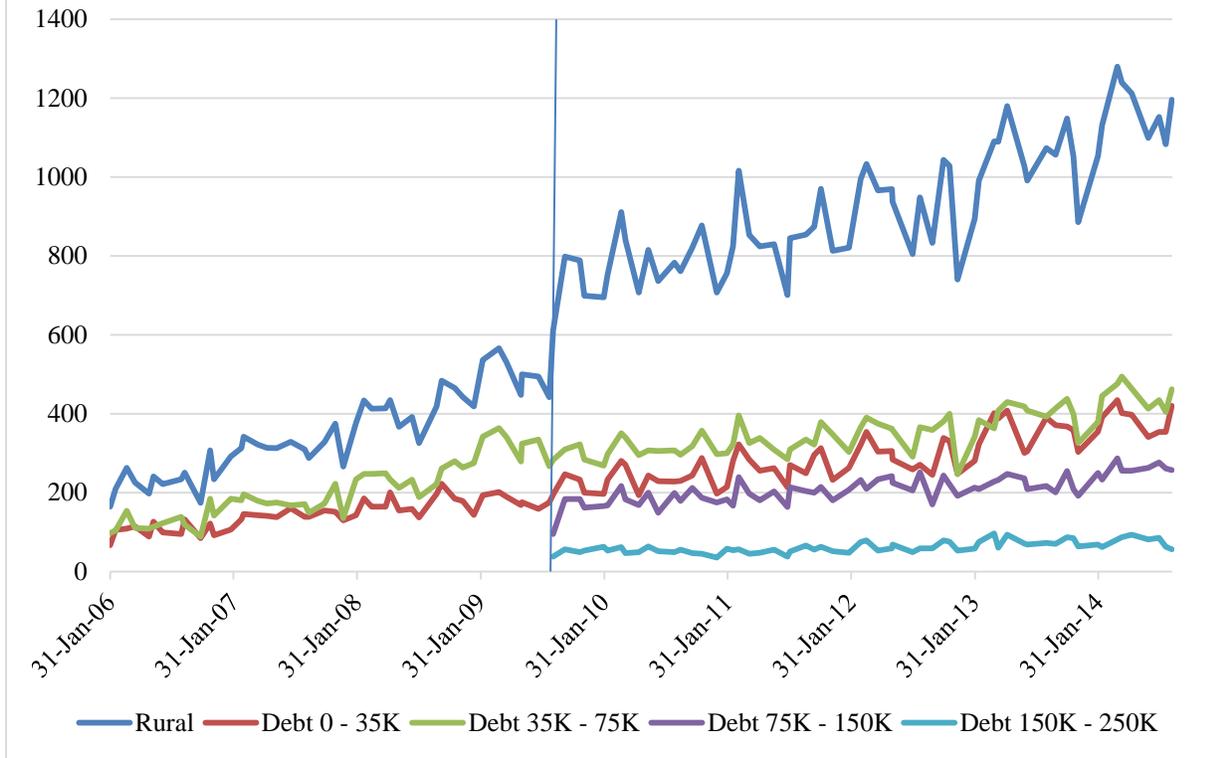
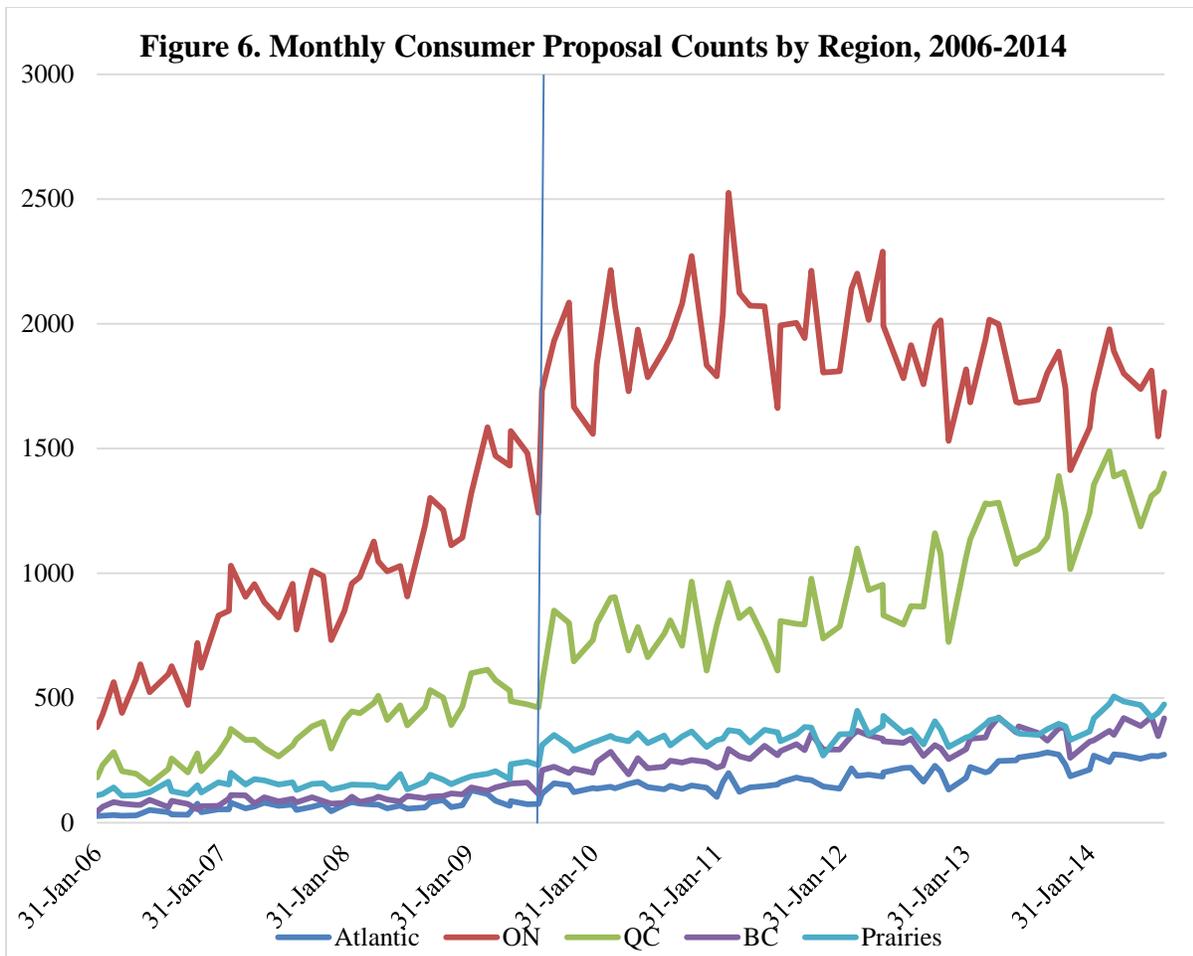


Figure 5. Monthly Rural Consumer Proposal Counts by Total Debt Net of Mortgages, 2006-2014



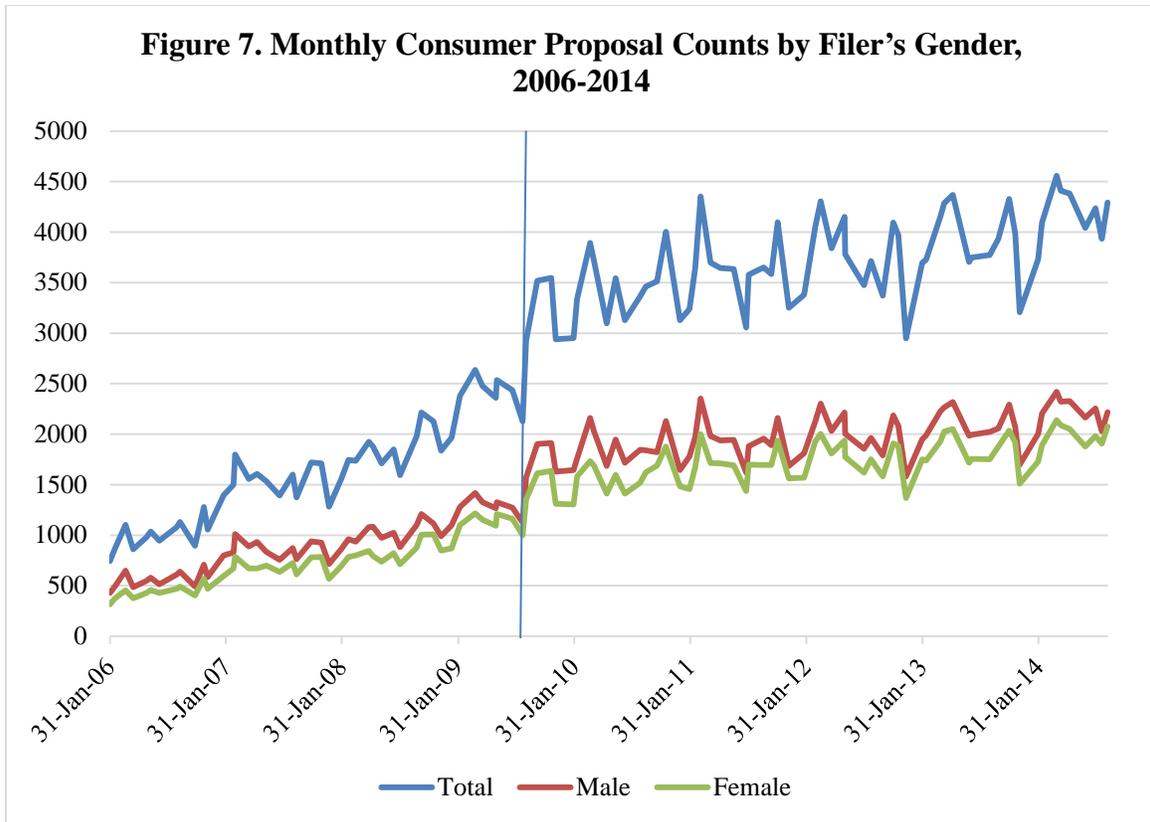
In Figure 6 we report raw counts of consumer proposals over time for various provinces or groups of provinces (Atlantic, Quebec, Ontario, Prairies and British Columbia). Across all of these various provincial groupings there is a very clear increase in the number of proposal filings immediately after the 2009 changes. This is to be expected, given that the 2009 reforms applied equally across all provinces in Canada.

What are noticeable from Figure 6 are the different trajectories over time for Ontario and Quebec after the 2009 reforms. Proposal filings in Ontario increased sharply in 2010 and 2011, and then began to decline, while proposal filings in Quebec remained relatively flat in 2010 and 2011, but then sharply increased in 2013 and 2014. Nevertheless, for all provinces, we can see a significant increase in proposals over time in the period since the 2009 reforms.



3.4. Total Counts of Consumer Proposals by Gender

We are able to observe data on the gender of each proposal filer from the documentation provided by each filer to the Office of the Superintendent of Bankruptcy (OSB). Figure 7 reports total consumer proposal filers over time, as well as filings by gender. The two groups are very similar in that they both show a significant increase in 2009 following the legislative changes. What is of interest from this figure, however, is that even though male and female filers track each other very closely over time, there seems to be consistently more male than female filers, although by a relatively small amount.



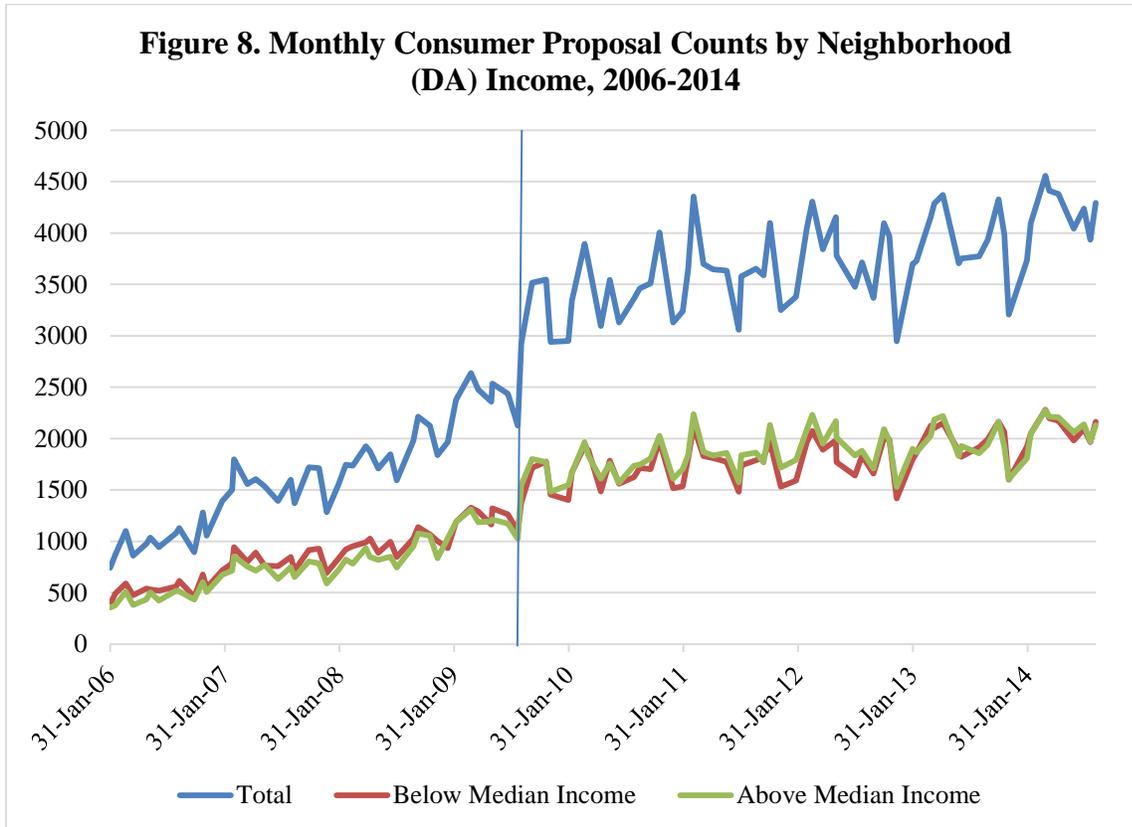
3.5. Total Counts of Consumer Proposals by Neighborhood Measure of Income

It is of interest to examine whether proposal filings come from poorer or richer neighborhoods across Canada. In this regard we use Statistics Canada census data, which provides data on the average income for neighborhoods across Canada. We use data from the 2006 Census.

In particular, Statistics Canada makes all Canadian Census data available at a very small geographic area called a Dissemination Area (or DA). These DAs contain, on average, approximately 200 households (i.e. the size a few city blocks). Using the Postal Code Conversion File (PCCF) we can very accurately match Statistics Canada DA level geographies to the much smaller Canada Post six digit postal code geographies. In other words, for every six digit post code in our study (as reported by each individual proposal filer) we can directly match to the relevant Statistics Canada DA level data reporting DA level income.

We use the Statistics Canada data to split all proposal filers into DA neighborhoods that are above and below median income across Canada (i.e. relatively richer and relatively poorer neighborhoods).

The most striking finding from our data in Figure 8 is that the numbers of proposal filings from richer and poorer neighborhoods match each other very closely over time – including the increase following the 2009 changes.



4. THE TERMS OF CONSUMER PROPOSALS

This section will examine the terms of consumer proposals, using both graphical figures as well as more formal regression models. The terms of the consumer proposal are those terms accepted by the debtors and the creditors at the outset of the proposal process. In the following section we will provide data on the outcomes of consumer proposals.

In this section, we will examine two important terms of consumer proposals: (1) proposed rate of return on proposals, and (2) and proposed payments on proposals. We define proposed rate of return on proposals as total payments under proposal (taken from the Estate Information Summary, EIS) divided by total debt net of mortgages on the principal residence (as reported on

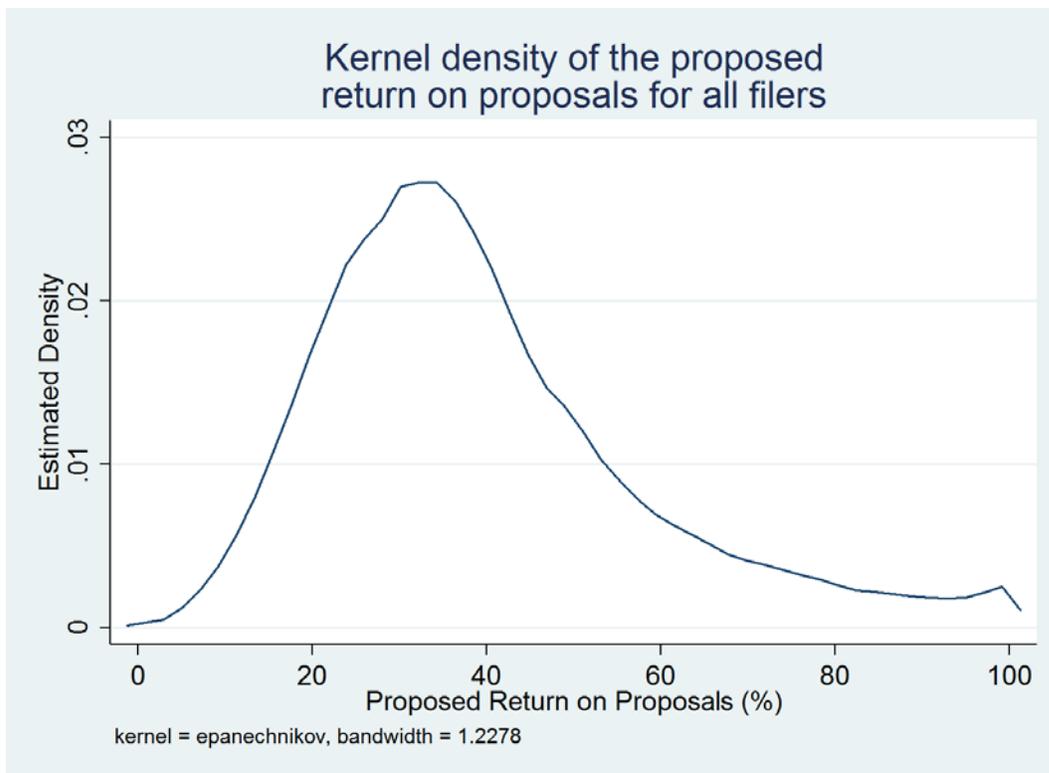
Form 79).¹ This fraction is transformed into percentage terms after multiplying by 100. In other words, the proposed rate of return on proposals can be considered as the “cents on the dollar” that the debtor proposes to pay back to the creditors over the lifetime of the proposal.

Proposed payments on proposals are simply total dollar payments under proposal as reported to the OSB on the EIS.

4.1. The Determinants of Proposed Returns (“Cents on the Dollar to be Repaid”)

Figure 10 simply plots the distribution of the Proposed Return for all proposals in our database. As can be seen the median is around 37 %, with a relatively long right tail. (A kernel density, as displayed in the figures below, can be thought of as simply a “smoothed” histogram, describing the distribution of a data series.)

Figure 10



¹ These proposed payments may include trustee, counselling, administrative and other fees. Total amounts of debts outstanding are as reported by the debtor to the trustee at the time of making the proposal.

4.2. Distribution of Proposed Return on Proposals (Before and After Reforms; Above and Below \$75,000)

Figure 11

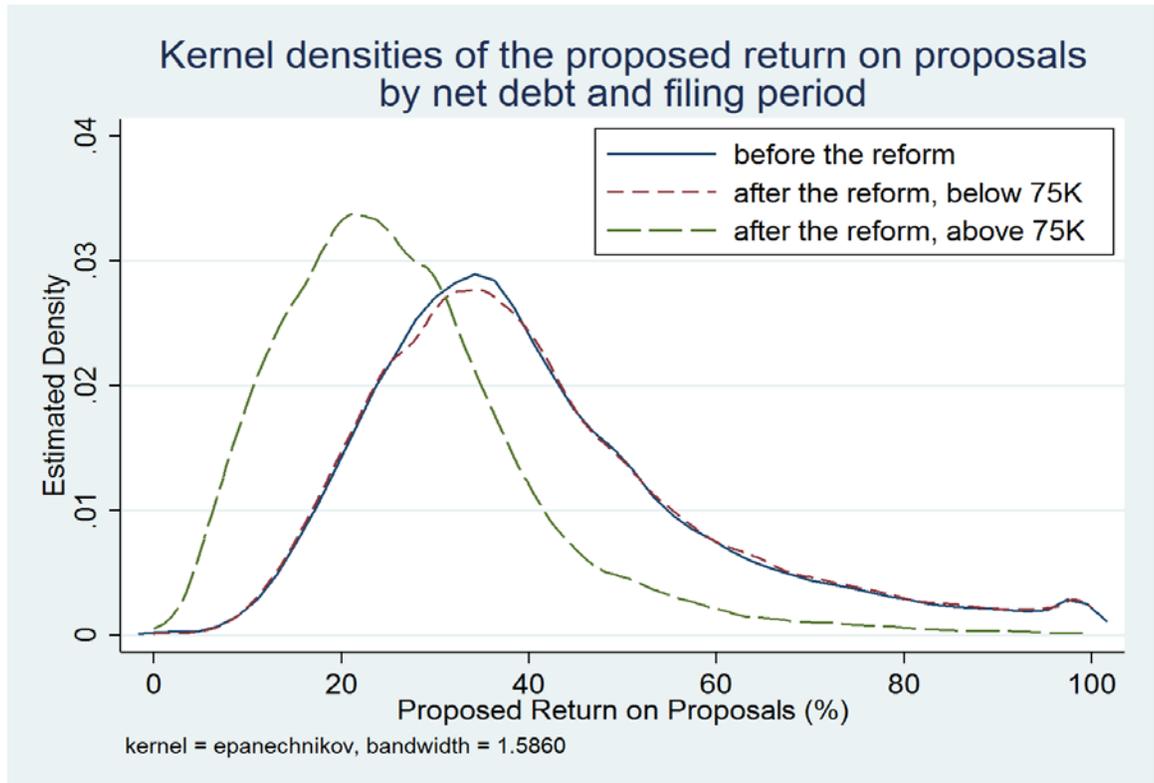


Figure 11 plots the distribution of Proposed Rate of Return on Proposals (Cents on the Dollar) for three different categories of proposal: (1) all proposals before the 2009 reforms (which we label in subsequent text “*small – before*”), (2) proposals after the reforms with net debt < \$75,000 (which we label in subsequent text “*small -after*”), (3) proposals after the reforms with net debt > \$75,000 and < \$ 250,000 (which we label in subsequent text “*large-after*”). Note: there is no large debt – pre reform series, because large filings were not allowed under Division II proposal before the reforms.

The main conclusions from Figure 11 are that: (1) the distributions of small-before and small-after are essentially identical; and (2) the large-after series is significantly to the left of both of the small debt series. In other words, the data in Figure 11 indicate that the size of the net debt outstanding is one of the key drivers of proposed returns. The 2009 reforms did not result in any significant difference in the proposed returns of small filers. However, for filers with large

net debt, their proposed returns were on average less than smaller filers (we provide more formal regression based evidence for this below).

4.3. Proposed return on proposals (as percentage of net debt) by available family income

Figure 12

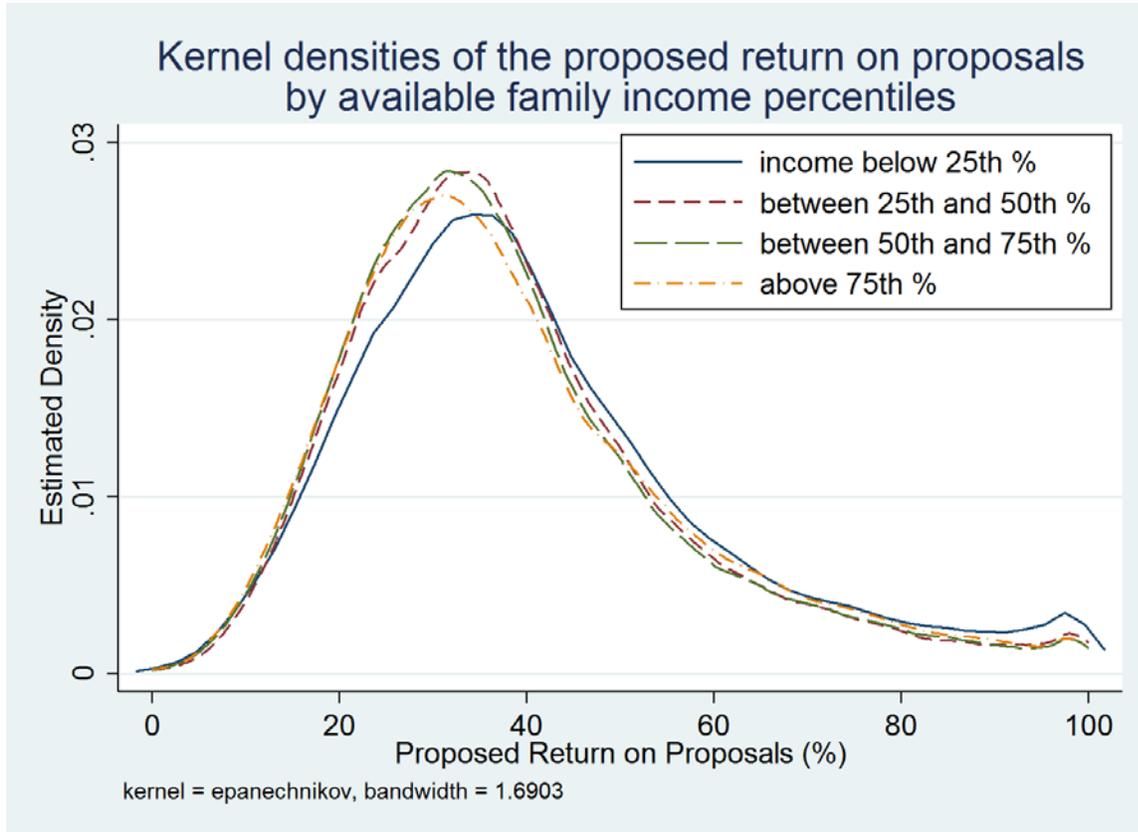


Figure 12 displays the distributions of the proposed rates of return by “Available Family Income”. Available Family Income is a measure of disposable income as defined by OSB. We take available monthly family income directly from Form 65 where it is defined to be equal to total family income minus non-discretionary family expenses as defined by the OSB.² This Figure thus attempts to provide evidence on the importance of available family income on the proposed rate of return agreed to by the creditors.

² These non-discretionary expenses include child support payments, spousal support payments, child care, health condition expenses, fines / penalties imposed by the Court, expenses as a condition of employment, debts where stay has been lifted, and other expenses.

In Figure 12, we split up all Proposal filers into four separate quartiles based on their “available family income” (splits at 25%, 50%, 75% percentiles), and plot the proposed rates of return for each of these quartiles. This Figure indicates that all four distributions are relatively close to each other. This suggests that differences across available family income have a much smaller impact on the proposed rate of return, compared to differences across the actual size of the debt outstanding as described above.

In Figures 13 and 14 we examine the importance of available family income (i.e. “ability to pay”) as a determinant of proposed rate of return in the context of the 2009 legislative changes. We plot each of the three main categories described above (small – before; small – after and large – after) in two separate Figures (13 and 14), one of which is for proposal filers with below median available family income and the other is for proposal filers with above median family income. A comparison of these two figures shows that the distributions of proposed rates of return between proposal filers with above and below median family income look similar, but not identical.

Figure 13

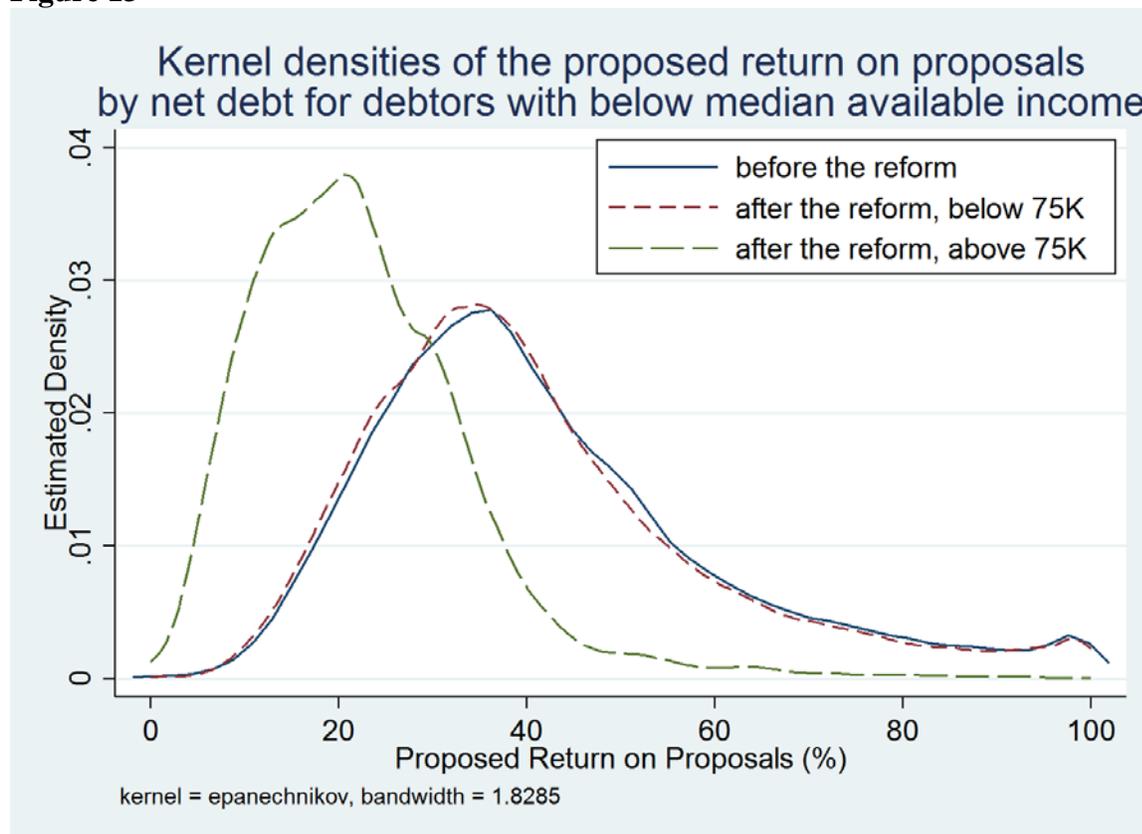
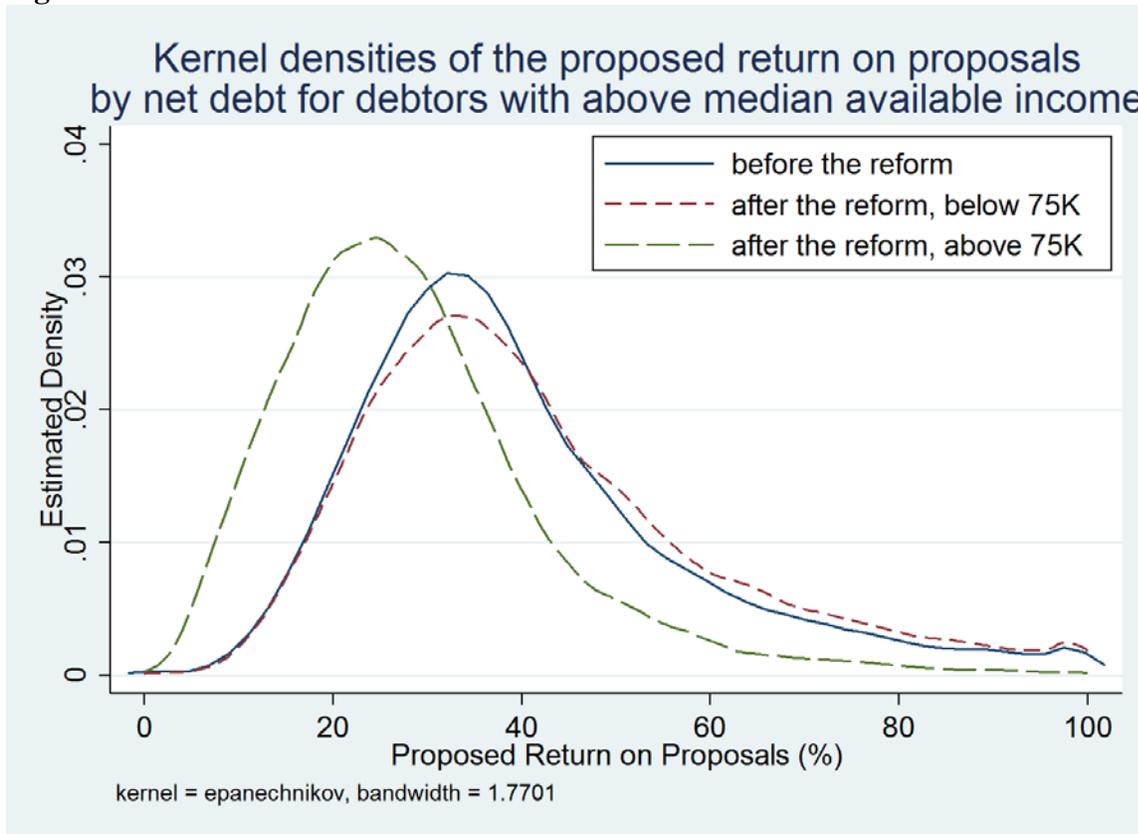


Figure 14

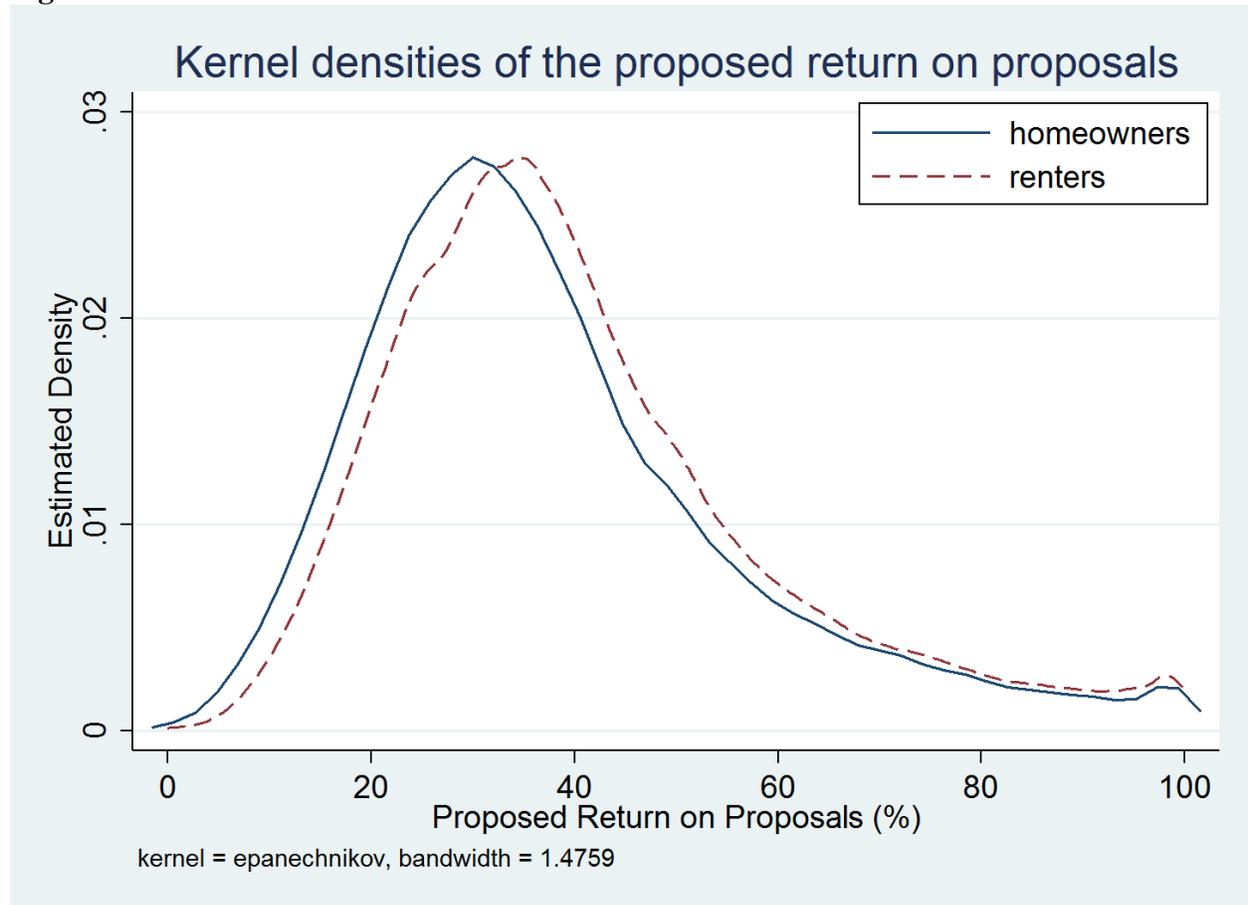


4.4. Proposed return on proposals (as percentage of net debt) by homeownership

Figure 15 plots the proposed rate of return on proposals for individuals who own a house, compared to those who are renting. It is important to note that this figure considers proposed rate of return on debt *net of mortgage debt* on principal residence. In other words the proposed rate of return in this Figure compares the non-mortgage debt of renters and owners, thus comparing like with like.

The main finding from Figure 15 is the similarity between renters and homeowners. The rate of return of homeowners is slightly to the left indicating that they propose a slightly lower rate of return compared to renters.

Figure 15



4.5. Proposed return on proposals (as percentage of net debt) by joint / single status

Figure 16

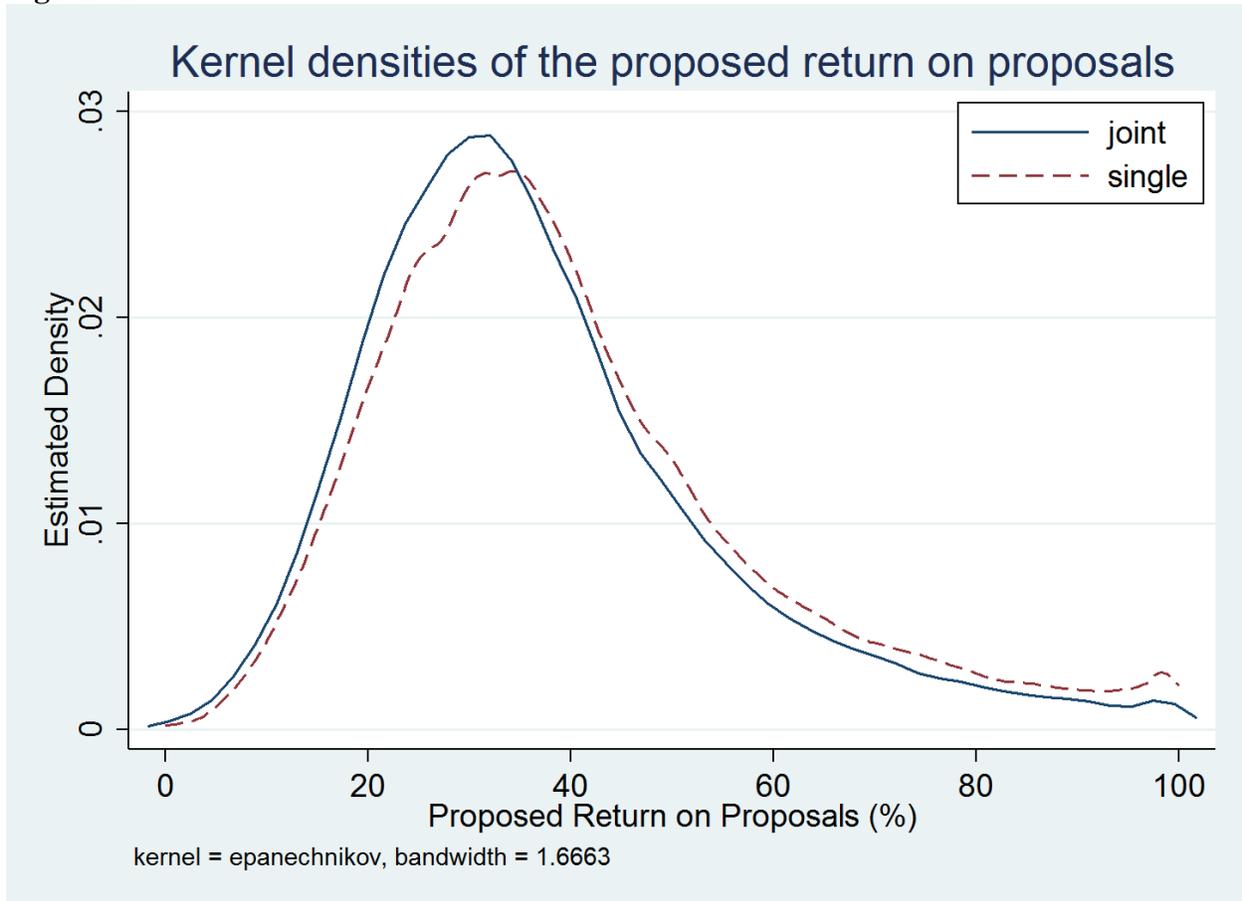


Figure 16 plots the proposed rate of return for joint and single filers. Joint filings occur when two individuals within a family (typically spouses) make a filing together. The total net debt ceilings for joint proposals are double that of single proposals (i.e. joint proposals could have net debt up to \$150,000 before 2009, and up to \$500,000 after 2009).

Once again this Figure shows that these distributions are very similar, although joint filers tend to have creditors agree to slightly lower rates of return.

4.6. Proposed return on proposals (as percentage of net debt) by geographic region

Figure 17

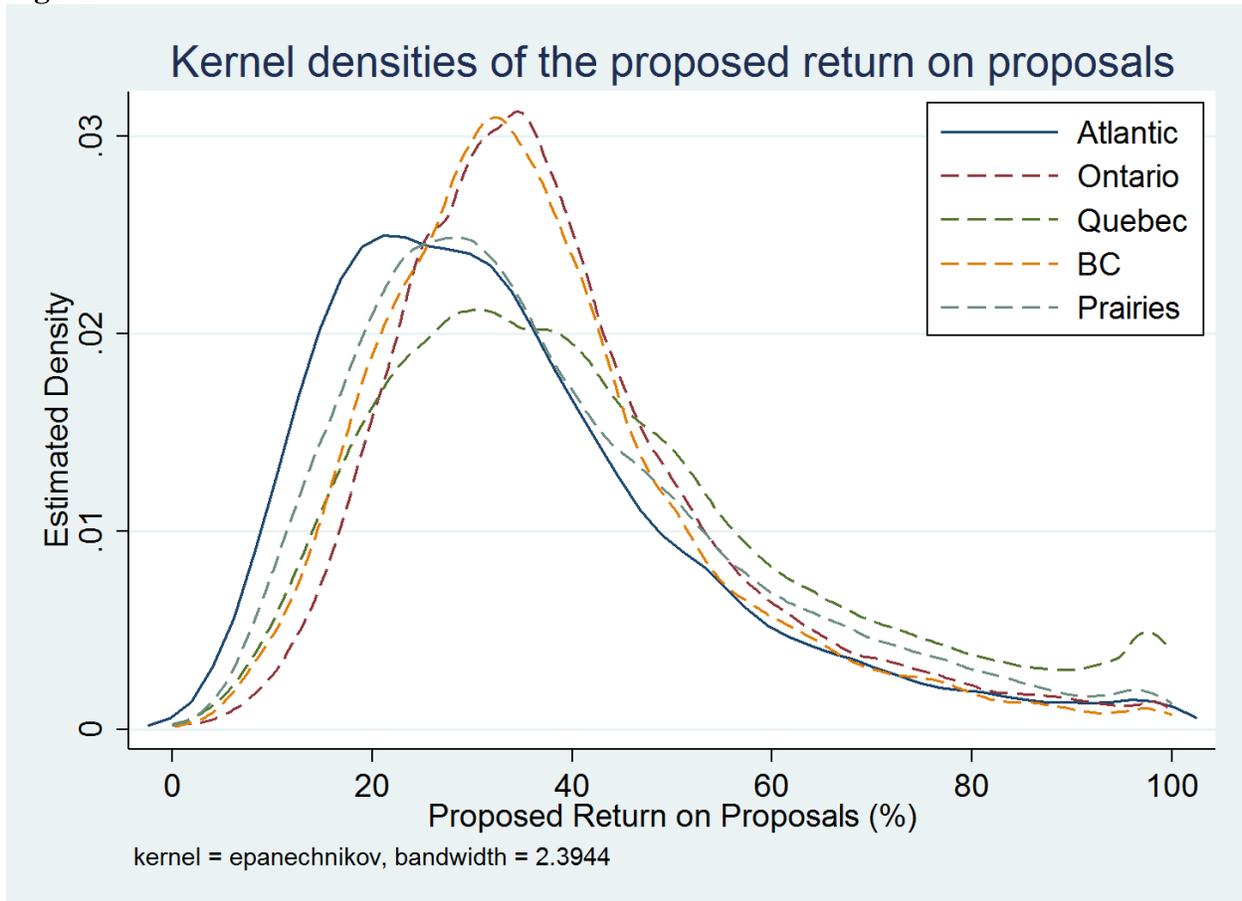


Figure 17 plots proposed rates of return for the different regions of Canada. The main finding is that while there are some differences in these distributions, there does not seem to be a clear systematic pattern in proposed rates of return between the provinces. The figure indicates, for example, that filers in Ontario and British Columbia tend to have higher proposed returns compared to filers in Quebec and the Atlantic provinces.

4.7. Regression Results for Proposed Rate of Return

In all of the above Figures, we report the distribution of Proposed Rates of Return for a wide variety of characteristics. In this section we conduct a single regression analysis with the dependent variable being the proposed rate of return (in percentage terms). Table 1 reports results from this regression. By including a large number of independent variables we can examine the impact of these various variables, while holding the other variables constant. In the Appendix below on data sources we provide detailed explanations on the definitions and sources of all of these various independent variables. Here we focus our discussion on the estimated coefficients and significance levels of a few of the most important explanations for the proposed rate of return.

In this regression, the estimated constant term is 38%, which indicates after controlling for all of the various independent variables we include, the average proposed rate of return (or negotiated “cents on the dollar” is 38 cents per dollar owed by debtors to creditors.)

Our most important independent variable in the context of this study is the variable defined as “Filed after 09/17/2009 with net debt > 75K (0 or 1)”. This variable is a dummy variable indicating whether a particular proposal filing was made in the period after the legislative change in 2009 and that the net debt of the proposal was higher than the previous net debt ceiling of \$75,000. The estimated coefficient on this variable is very large and negative and highly statistically significant (-15.18***).

The omitted variable category in this case is filings made after the 2009 reforms, but where net debt was < \$75,000.³ In other words, we can interpret the constant term of 38% as indicating that the proposal filers in the omitted category (small – after) will have an average return of 38%. These results indicate that large filers after the reforms had a net debt of approximately 15% less than the 38% rate of return for (the omitted category) small filers after the reforms (i.e. approximately 23%). This result is consistent with the data displayed graphically in Figure 11 above, which showed that large debtors after the 2009 reforms had a rate of return very significantly lower than proposal filers with net debts below \$75,000 (both before and after the reforms). The importance of our formal regression result is that we can confirm that this graphical finding still remains even after controlling for a large number of independent variables.

³ The baseline category is actually made up of all the omitted variables from all of the various categories included in the regression, but for simplicity we only refer to the omitted category of small net debt after the 2009 changes.

Joint filers are found to have a proposed rate of return of approximately 4 % less than single filers, which is consistent with our observation that creditors will accept a lower proposed rate of return for larger outstanding debts. In this case it can be argued that the *household* net debt of joint filers will be larger than the *household* debt of single filers. This result is consistent with the graphical display of joint and single filer's proposed rates of return described above.

Another important result from the regression below is that the coefficient on Available Monthly Family Income (\$000) is 2.359***. We take available monthly family income directly from Form 65 and it is equal to total family income minus non-discretionary family expenses as defined by the OSB. This coefficient implies that for each additional \$1,000 in available monthly family income of the debtor, the creditors agree to the 2.3% higher proposed return. It is worth noting that \$1,000 in *monthly* income is a large change for a typical proposal filer, who has on average \$3,132 in available monthly family income with a standard deviation of \$1,407. In other words, in the context of this data, an additional \$1,000 of available *monthly* family income is large. We can thus conclude that there will be a statistically significant, but relatively small impact of available family income on proposed rate of return.

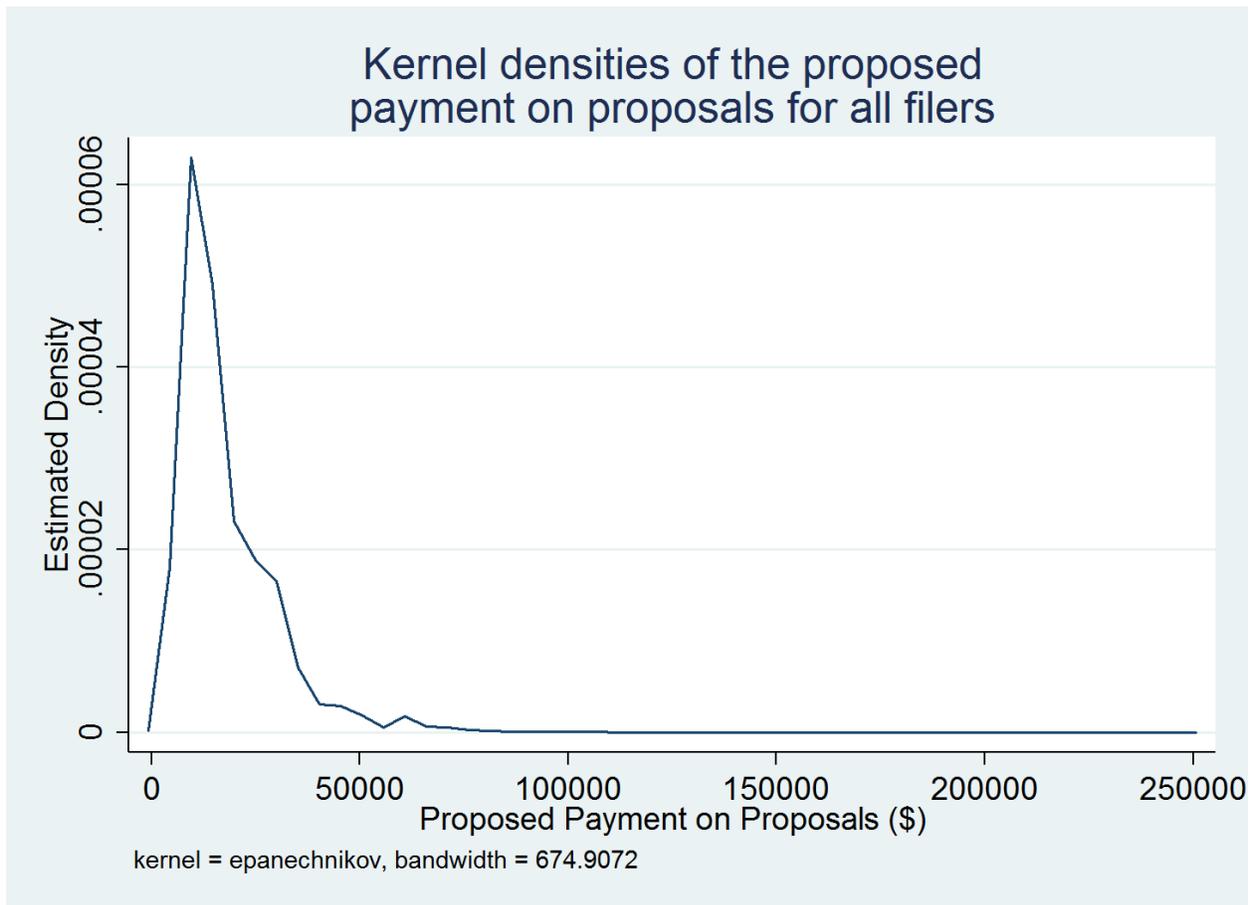
5. DETERMINANTS OF TOTAL PROPOSED PAYMENT TO CREDITORS

The section above described determinants of the proposed return agreed to by the creditors as a fraction of the net debt outstanding (total debt net of debt secured by principal residence). In this section, we examine the determinants of the actual total dollar magnitude of the proposed payment to the creditors. The issue we are examining in this section is how the 2009 regulatory change actually affected the total proposed payments to creditors. It can be argued that creditors are very interested in this total proposed payment figure, because this is the actual amount of the debt that they will recover, as opposed to the percentage on the dollar of debt. In other words, this section will examine how the 2009 regulatory change affected total dollar payments that are proposed to creditors. As in the section above, we display both graphical figures as well as regression analysis.

5.1. Proposed total dollar payments on proposals (\$).

Figure 18 below simply plots the distribution of the total proposed payments to creditors. As can be seen, there is a spike in this distribution at approximately \$10,000 proposed repayments, but there is also a very long right tail to this distribution, indicating that many proposal filers are proposing to make significantly larger payments to creditors.

Figure 18



Figures 19 and 20, below, plot the total proposed payments distributions, but as above, separate proposal filers into three distinct categories: (1) proposal filers before the September 2009 changes; (2) proposal filers after the 2009 regulatory changes with net debts > \$75,000; and (3) proposal filers after the 2009 reforms with net debts < \$75,000. Figures 19 and 20 display the same data, except that Figure 19 only reports payments up to \$60,000.

The central finding of Figures 19 and 20 is the very clear difference for proposal filers with net debt >\$75,000 after 2009, and the close similarity of all individuals with net debt <\$75,000, whether or not they filed before or after 2009. The distributions for all filers with net debt <\$75,000 seem to peak at approximately \$10,000 in proposed payments to creditors (irrespective of whether the filing occurred before or after the 2009 reforms). On the other hand the distribution of proposed payments of larger filers with net debts >\$75,000 is clearly to the right, and seems to peak at between \$20,000 to \$30,000.

These Figures suggest that even though the relative percentage of net debt proposed is lower for larger (>\$75,000 in net debt) borrowers after the 2009 reforms, the actual dollar amount of the proposed repayments of these larger borrowers is significantly higher.

Figure 19

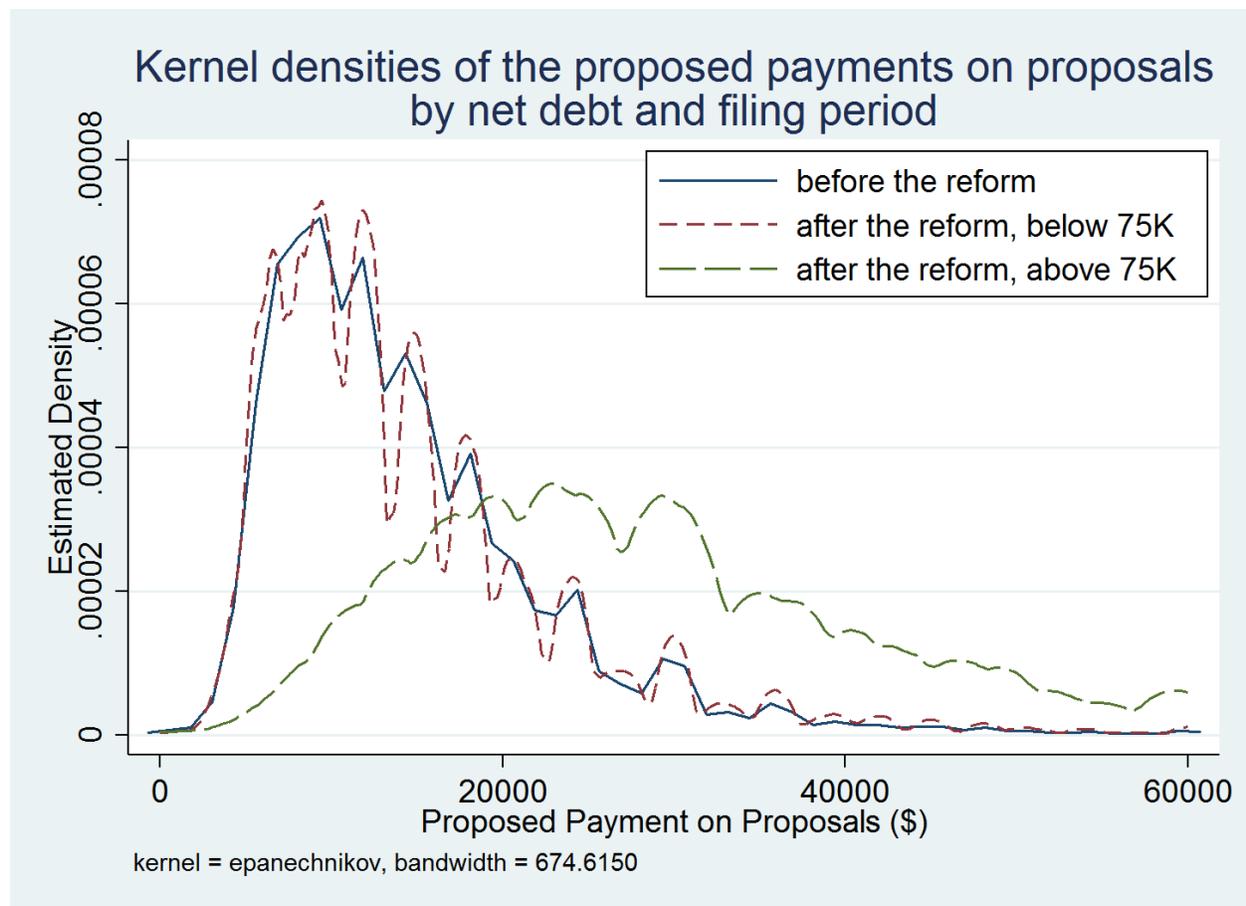
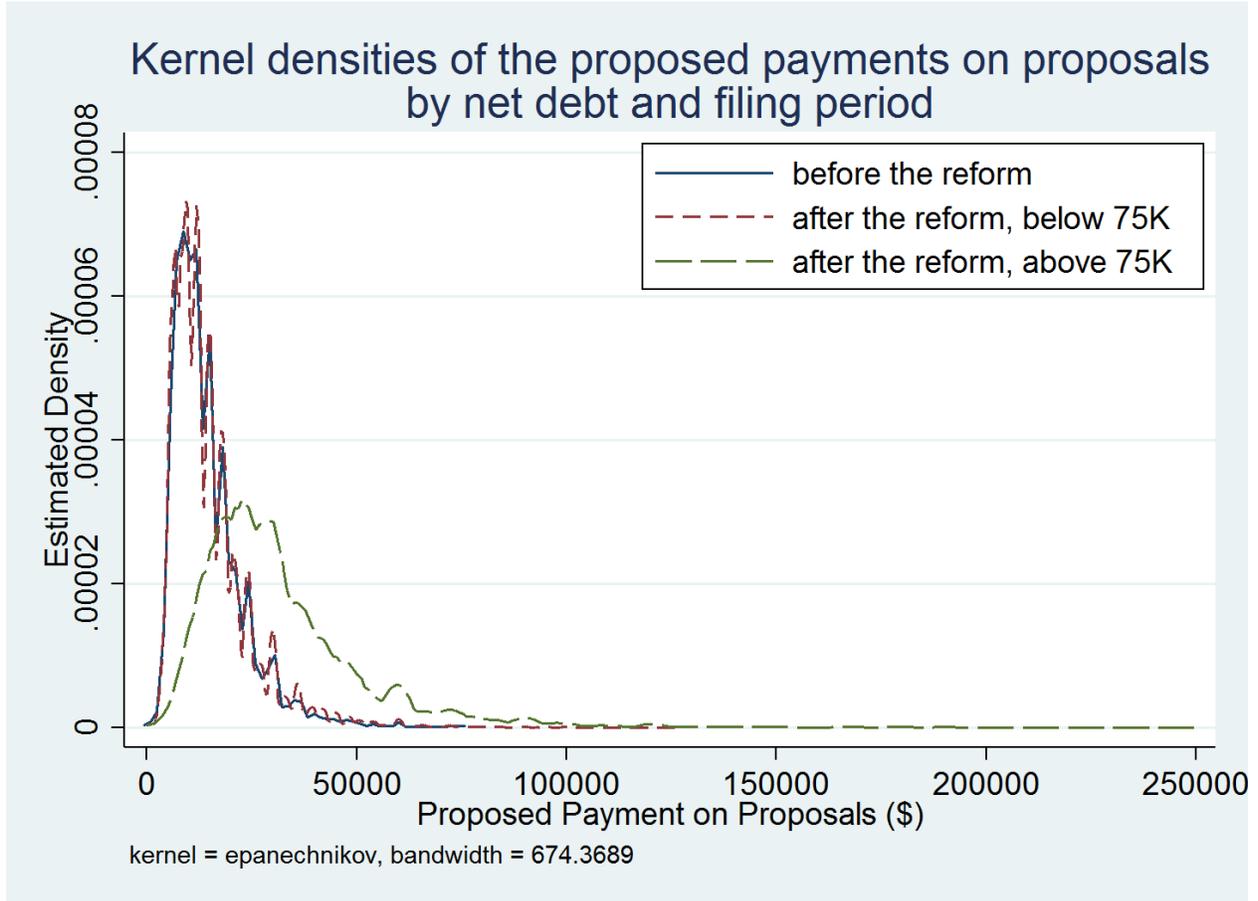


Figure 20



5.2. Regression Results

Full regression results are reported in Table 2. The structure of this regression is exactly the same as in Table 1 above, with the exception that the Dependent variable is the dollar value of total proposed payments (rather than the percentage rate of return, - i.e. proposed payments relative to total net debt outstanding). The regression results are broadly in line with the graphical description of the data reported in the Figures above.

The most important result in this regression is that the dummy variable indicator for filers with net debt >75,000 after 2009 is highly significant, with a coefficient of more than \$11,700 (this is relative to the omitted variable which is filers with net debt <75,000 after 2009). In other words, as predicted above, creditors will receive on average \$11,700 more from proposal filers, who were previously excluded from the Division II consumer proposal filing system.

Another important coefficient in this regression is the estimate for joint filers (relative to single filers). This shows that joint filers propose to pay \$6,706 more than single filers to their creditors. This is to be expected, because joint filers will tend to have more net debt outstanding, thus they will propose more payments.

6. OUTCOMES OF PROPOSALS

This section examines the outcomes of proposals using a variety of measures including whether the proposal was accepted/amended/withdrawn and also the default rate for proposals for each of the first five years of the proposal.

As above, our focus in this section is to examine the impacts of the 2009 reforms on the proposal system. In all cases, therefore, we examine our three main categories described above: (1) all proposals before the reforms (small-before), (2) proposals after the 2009 reforms < \$75,000 (small – after), (3) proposals after the 2009 reforms > \$75,000 (large – after). As above we report our results from a regression analysis where the small – after group is our base group, and thus estimate how much the other groups (small – before and large – after) differ from the base group.

We use the same regression specifications as above, except that we change the dependent variables. Full regression results for all of these specifications are reported in Appendix 2. For ease of comparison, our main results are reported in Table 3. This table simply reports the regression estimate of the constant term (which reflects the baseline category, in our case small – after), as well as the estimated coefficients of the two dummy variables for the other two categories, which captures the extent to which each category differs from the baseline category. The main conclusion across all of the various outcome measures we examine here is that these outcomes did *not* change to any large extent after the 2009 reforms.

6.1. Proposals Accepted/Amended/Withdrawn

Our first result in Table 3 examines the proportion of proposals that are eventually accepted by creditors. We find that the baseline amount (for the small-after group) is approximately 97 %. For both of the other groups however, the estimated dummy indicates that the groups differ from the baseline by only 1 percentage point. While these estimates are statistically significant, they are very small in terms of economic magnitudes. We can thus

conclude that the reforms of 2009 did not have economically significant impacts on the proportion of proposals that are eventually accepted by creditors.

Our next outcome measure is the proportion of proposals that are amended during the proposal process. We find that in the baseline case (small – after) approximately 9 % of proposals are amended during the proposal process. Once again, we find that the two other categories do have statistically significant differences from the baseline case, but these differences are economically small in magnitude (only approximately 3 %). Furthermore, both the category before the 2009 change (small – before) as well as the large-after category have the same positive sign relative to the baseline small – after category. In other words these differences do not appear to be related to the effect of the actual 2009 reforms on large filers (above \$75,000 in net debt).

Our final category in this section examines the proportion of proposals that are withdrawn before the final acceptance by creditors. We find that approximately 2 % of proposals are withdrawn in the baseline (small-after) category. Once again there are statistically significant differences to the other two categories, but in both cases the economic magnitudes are very small (1 % or less). Furthermore, in both cases the estimated signs on the coefficients are both positive, indicating that the regulatory change in 2009 was not the main reason for these differences.

6.2. Proposal Failures by Years after Proposal Agreement

We use the same methodology to examine the impacts of the 2009 reforms on proposal failure by year. Our main conclusion again is that proposals filed after the 2009 reforms on average have failure rates similar to proposals filed before the reforms.

Our baseline results show that the pattern of failures in each year in the life of the proposal is 7 % in year 1, 7 % in year 2, 5 % in year 3, and 3 % in year 4. In other words, the most failures occur in years 1 and 2 in the life of proposals, with the proportion of failures then declining over the lifetime of the proposal.

What is of most importance in the context of discussing the impact of the 2009 reforms on these failure rates is the magnitudes and significance of the dummy variables reflecting the other two categories (small-before and large-after) relative to the small-after baseline category. As above, the differences in failure rates between these two groups of proposals and the baseline (small – after) are very small, with none of the estimates being larger than 1 %. Furthermore,

most of the estimates for the large – after category are not even statistically significant, indicating that there is no difference between small after and large after categories. In other words, these results provide some suggestive evidence that new proposal filers that were allowed to use the Division II filing system after the reforms on average have similar patterns of failures as their peers.

7. CONCLUSION

The main focus of this paper has been to examine the impact of the increase in the net debt ceiling (total liabilities minus debt from main residence) from \$75,000 to \$250,000 in September 2009. This increase in the net debt ceiling allowed a large number of individuals who were previously precluded from filing consumer proposals, to begin to file such proposals.

Our main findings are that the 2009 reforms to the net debt ceiling had a significant impact on both the number of consumer proposal filers, as well as the terms of those new proposals. The data show a significant increase in consumer proposal filers with net debts larger than \$75,000 after 2009, although the majority of such filers had a net debt lower than \$150,000, rather than falling in the \$150,000 to \$250,000 range.

The data on the terms of consumer proposals show that filers who became newly eligible to file a consumer proposal after 2009, were able to negotiate relatively lower rates of proposed returns (i.e. cents repaid on the dollar) from their creditors. On the other hand, however, we find that debtors who were newly eligible to file consumer proposals after 2009, agreed to pay their creditors larger absolute dollar amounts. This is largely because such newly eligible debtors had large amounts of net debts outstanding.

While the data shows that the 2009 reforms had a significant impact on the terms of consumer proposals (specifically the proposed rate of return, i.e. cents on the dollar, and proposed absolute dollar amount of the proposed payments), we find that the 2009 reforms had small or insignificant impacts on proposal outcomes. The data allow us to examine a large number of proposal outcomes (including failure rates in each of the first five years of the life of a proposal, proposal acceptances, proposal amendments and proposal withdrawals), but in all cases we find that the 2009 reforms did not have a large impact. In summary, therefore, the data show that the 2009 reforms had significant impacts on both the number of consumer proposals as well as the terms of consumer proposals negotiated between debtors and creditors.

This research has generated a variety of different questions as to why individual debtors and creditors make the choices that they do under the Consumer Proposal system. The current authors plan on continuing their research into consumer proposals in Canada, with a particular interest in the motivations of debtors and creditors in making the various choices described here.

Table 1. The effect of the 2009 reforms on proposed rate of return

Independent variables	Dependent variable:	
	proposed return	se
<i>Filed after 09/17/2009 with net debt > 75K (0 or 1)</i>	-15.18***	(0.119)
<i>Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)</i>	-1.283***	(0.233)
Has house (0 or 1)	0.112	(0.123)
Available family income (\$000)	2.359***	(0.0342)
Is divorced, separated, widowed (0 or 1)	-0.152	(0.103)
Joint filing (0 or 1)	-4.136***	(0.116)
Year of filing indicators (0 or 1):		
2007	0.0764	(0.235)
2008	-0.423*	(0.228)
2009	-1.160***	(0.230)
2010	-1.115***	(0.311)
2011	-1.372***	(0.311)
2012	-1.473***	(0.310)
2013	-1.811***	(0.309)
2014	-2.646***	(0.314)
Ontario	4.959***	(0.196)
Quebec	8.098***	(0.203)
British Columbia	3.252***	(0.242)
Prairies	3.784***	(0.229)
Tracted census agglomeration	-0.807***	(0.210)
Non-tracted census agglomeration	0.239	(0.151)
Strongly influenced zone	-0.675***	(0.192)
Moderately influenced zone	-0.403**	(0.185)
Weakly influenced zone	0.403*	(0.233)
No influenced zone	-1.091	(0.704)
Territories	6.172**	(3.140)
Total assets (\$000)	-0.00350***	(0.000406)
Numerical literacy score (between 100 and 500)	0.0370***	(0.00548)
Unemployment rate (%)	0.0638***	(0.00811)
Debtor's age (years)	-0.324***	(0.0196)
Debtor's age (years) squared	0.00351***	(0.000208)
Male (0 or 1)	-0.148*	(0.0775)
Self-employed (0 or 1)	-1.707***	(0.134)
Household size (count)	-1.893***	(0.0328)

Table 1. The effect of the 2009 reforms on proposed rate of return (continued)

Independent variables	Dependent variable:	
	proposed return	se
Overuse of credit (0 or 1)	-0.438***	(0.0841)
Marital Breakdown (0 or 1)	-1.614***	(0.121)
Unemployment (0 or 1)	-0.642***	(0.0908)
Insufficient Income (0 or 1)	-1.081***	(0.0770)
Business Failure (0 or 1)	-3.044***	(0.140)
Health Concerns (0 or 1)	-0.417***	(0.103)
Accidents / Emergencies (0 or 1)	-0.319	(0.254)
Student Loans (0 or 1)	-2.730***	(0.498)
Gambling (0 or 1)	1.831***	(0.326)
Tax Liabilities (0 or 1)	1.924***	(0.207)
Loans cosigning (0 or 1)	-2.324***	(0.359)
Bad / Poor Investments (0 or 1)	-1.234***	(0.299)
Garnishee (0 or 1)	2.845***	(0.358)
Legal Action (0 or 1)	-0.412	(0.328)
Moving / Relocation (0 or 1)	-0.411	(0.290)
Substance Abuse (0 or 1)	1.062***	(0.389)
Supporting Relatives (0 or 1)	-0.226	(0.151)
Graduate (DA) (proportion of DA population)	-3.266***	(0.919)
University (DA) (proportion of DA population)	-6.279***	(0.686)
College (DA) (proportion of DA population)	-5.293***	(0.741)
Apprenticeship (proportion of DA population)	-1.992**	(0.815)
High school (proportion of DA population)	-5.519***	(0.671)
Share of recent (5 years) immigrants	-2.665***	(0.820)
Share of 1 year immigrants	2.331	(2.329)
Median DA income (\$000)	-0.0559***	(0.00698)
Standard error of DA income (\$000)	0.00725	(0.0102)
Constant	38.11***	(1.329)
Observations	231,325	
R-squared	0.121	

Table 2. The effect of the 2009 reforms on proposed payments

Independent variables	Dependent variable: proposed payments se	
<i>Filed after 09/17/2009 with net debt > 75K (0 or 1)</i>	<i>11,727***</i>	<i>(62.78)</i>
<i>Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)</i>	<i>-501.2***</i>	<i>(123.2)</i>
Has house (0 or 1)	169.9***	(65.17)
Available family income (\$000)	3,737***	(18.09)
Is divorced, separated, widowed (0 or 1)	666.3***	(54.64)
Joint filing (0 or 1)	6,706***	(61.50)
Year of filing indicators (0 or 1):		
2007	140.3	(124.6)
2008	63.02	(120.5)
2009	89.38	(121.7)
2010	-0.367	(164.8)
2011	-311.0*	(164.4)
2012	-294.6*	(164.2)
2013	-644.4***	(163.8)
2014	-838.2***	(166.3)
Ontario	1,628***	(103.9)
Quebec	642.2***	(107.6)
British Columbia	1,365***	(128.0)
Prairies	1,145***	(121.1)
Tracted census agglomeration	-314.5***	(111.4)
Non-tracted census agglomeration	286.2***	(80.10)
Strongly influenced zone	137.5	(101.5)
Moderately influenced zone	753.4***	(98.03)
Weakly influenced zone	1,557***	(123.2)
No influenced zone	1,723***	(372.7)
Territories	3,004*	(1,663)
Total assets (\$000)	8.923***	(0.215)
Numerical literacy score (between 100 and 500)	2.503	(2.903)
Unemployment rate (%)	9.873**	(4.295)
Debtor's age (years)	222.6***	(10.38)
Debtor's age (years) squared	-1.632***	(0.110)
Male (0 or 1)	1,040***	(41.04)
Self-employed (0 or 1)	1,830***	(70.78)
Household size (count)	-1,970***	(17.36)

Table 2. The effect of the 2009 reforms on proposed payments (continued)

Independent variables	Dependent variable:	
	proposed payments	se
Overuse of credit (0 or 1)	223.5***	(44.51)
Marital Breakdown (0 or 1)	358.2***	(63.91)
Unemployment (0 or 1)	-192.3***	(48.10)
Insufficient Income (0 or 1)	-536.2***	(40.75)
Business Failure (0 or 1)	2,058***	(74.38)
Health Concerns (0 or 1)	-212.1***	(54.73)
Accidents / Emergencies (0 or 1)	-52.46	(134.7)
Student Loans (0 or 1)	1,432***	(263.6)
Gambling (0 or 1)	2,816***	(172.4)
Tax Liabilities (0 or 1)	3,909***	(109.5)
Loans cosigning (0 or 1)	-456.0**	(190.2)
Bad / Poor Investments (0 or 1)	1,879***	(158.3)
Garnishee (0 or 1)	-542.5***	(189.7)
Legal Action (0 or 1)	366.4**	(173.5)
Moving / Relocation (0 or 1)	-55.46	(153.7)
Substance Abuse (0 or 1)	471.6**	(206.0)
Supporting Relatives (0 or 1)	140.8*	(79.86)
Graduate (DA) (proportion of DA population)	3,910***	(486.5)
University (DA) (proportion of DA population)	2,455***	(363.5)
College (DA) (proportion of DA population)	-758.7*	(392.3)
Apprenticeship (proportion of DA population)	-2,211***	(431.7)
High school (proportion of DA population)	-1,108***	(355.5)
Share of recent (5 years) immigrants	-2,460***	(434.0)
Share of 1 year immigrants	410.1	(1,233)
Median DA income (\$000)	6.997*	(3.694)
Standard error of DA income (\$000)	-0.122	(5.405)
Constant	-2,908***	(715.1)
Observations	231,325	
R-squared	0.468	

**Table 3. Proposal outcomes' probabilities and changes after the reforms
(Full Regression Results reported in Appendix)**

Outcome	After the reforms, below 75K	Before the reforms	After the reforms, above 75K
	baseline	difference from baseline	difference from baseline
	<i>(small-after)</i>	<i>(small-before)</i>	<i>(large-after)</i>
Accept	0.97	-0.0104***	-0.0119***
Amend	0.09	0.0343***	0.0356***
Withdraw	0.02	0.0116***	0.00687***
Failure in year:			
1	0.07	0.00940***	0.00211
2	0.07	0.0158***	-0.000836
3	0.05	0.00958***	0.00811***
4	0.03	0.00650**	-0.00932**
5	0.01	0.00234	-0.00900

APPENDIX 1

Table A1. Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Proposal duration (months)	234808	52.96	12.88	0	94.5
Net debt (\$)	234876	46319.05	35494.97	1702.56	250000
Proposed return on net debt (%)	234876	39.19	18.64	0	100.0
Proposed return on total debt (%)	234876	28.59	21.37	0	100.0
Proposed payments (\$)	234876	17098.70	12659.98	0.01	250000
Amount for distribution / net debt (%)	113088	16.52	14.62	0	93.10
Total receipts / net debt (%)	112890	26.55	20.87	0	100
Proposed - Actual payments / net debt (%)	113088	22.99	18.54	-75.39	100.00
Proposed - Total receipts / net debt (%)	112890	12.87	20.26	-99.57	99.80
Amended proposals (0 or 1)	234876	0.08	0.27	0	1
Accepted proposal (0 or 1)	234876	0.97	0.16	0	1
Failure within 1 year (0 or 1)	194897	0.07	0.25	0	1
Failure in year 1 to 2 (0 or 1)	146983	0.07	0.26	0	1
Failure in year 2 to 3 (0 or 1)	104121	0.05	0.21	0	1
Failure in year 3 to 4 (0 or 1)	70076	0.03	0.16	0	1
Failure in year 4 to 5 (0 or 1)	42007	0.01	0.12	0	1
Withdrawn proposal (0 or 1)	234876	0.02	0.15	0	1
Filed after 09/17/2009 with net debt > 75K (0 or 1)	234876	0.14	0.34	0	1
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	234876	0.24	0.43	0	1
Has house (0 or 1)	234876	0.38	0.48	0	1
Available family income (\$000)	234876	3.13	1.41	0	29.16
Is divorced, separated, widowed (0 or 1)	234876	0.22	0.42	0	1
Joint filing (0 or 1)	234876	0.15	0.36	0	1
Year of filing indicators (0 or 1):					
2007	234876	0.060	0.237	0	1
2008	234876	0.072	0.258	0	1
2009	234876	0.106	0.307	0	1
2010	234876	0.138	0.344	0	1
2011	234876	0.145	0.352	0	1
2012	234876	0.151	0.358	0	1
2013	234876	0.160	0.367	0	1
2014	234876	0.130	0.336	0	1
Region indicators (0 or 1):					
Ontario	234876	0.5429	0.4982	0	1
Quebec	234876	0.2421	0.4283	0	1
British Columbia	234876	0.0766	0.2659	0	1
Prairies	234876	0.0953	0.2936	0	1

Table A1. Summary Statistics (continued)

Variable	Obs	Mean	Std. Dev.	Min	Max
Region type indicators (0 or 1):					
Tracted census agglomeration	234876	0.033	0.178	0	1
Non-tracted census agglomeration	234876	0.070	0.255	0	1
Strongly influenced zone	234876	0.041	0.199	0	1
Moderately influenced zone	234876	0.045	0.208	0	1
Weakly influenced zone	234876	0.028	0.166	0	1
No influenced zone	234876	0.003	0.052	0	1
Territories	234876	0.000	0.011	0	1
Total assets (\$000)	233853	102.5	147.9	0	23481
Numerical literacy score (between 100 and 500)	234876	265.27	12.65	214.71	323.07
Unemployment rate (%)	234876	6.900	5.071	0	70.3
Debtor's age (years)	234876	44.092	11.958	12	104
Debtor's age (years) squared	234876	2087.1	1124.2	144	10816
Male (0 or 1)	234876	0.594	0.491	0	1
Self-employed (0 or 1)	234876	0.086	0.280	0	1
Household size (count)	234876	2.354	1.388	1	30
Overuse of credit (0 or 1)	232341	0.669	0.471	0	1
Marital Breakdown (0 or 1)	232341	0.134	0.341	0	1
Unemployment (0 or 1)	232341	0.220	0.415	0	1
Insufficient Income (0 or 1)	232341	0.369	0.483	0	1
Business Failure (0 or 1)	232341	0.082	0.274	0	1
Health Concerns (0 or 1)	232341	0.157	0.364	0	1
Accidents / Emergencies (0 or 1)	232341	0.021	0.143	0	1
Student Loans (0 or 1)	232341	0.005	0.073	0	1
Gambling (0 or 1)	232341	0.013	0.112	0	1
Tax Liabilities (0 or 1)	232341	0.034	0.181	0	1
Loans cosigning (0 or 1)	232341	0.010	0.101	0	1
Bad / Poor Investments (0 or 1)	232341	0.015	0.122	0	1
Garnishee (0 or 1)	232341	0.011	0.103	0	1
Legal Action (0 or 1)	232341	0.013	0.112	0	1
Moving / Relocation (0 or 1)	232341	0.016	0.126	0	1
Substance Abuse (0 or 1)	232341	0.009	0.094	0	1
Supporting Relatives (0 or 1)	232341	0.064	0.244	0	1
Graduate (DA) (proportion of DA population)	234876	0.067	0.064	0	0.679
University (DA) (proportion of DA population)	234876	0.168	0.098	0	0.786
College (DA) (proportion of DA population)	234876	0.186	0.070	0	0.615
Apprenticeship (proportion of DA population)	234876	0.118	0.066	0	0.513
High school (proportion of DA population)	234876	0.244	0.072	0	0.595

Table A1. Summary Statistics (continued)

Variable	Obs	Mean	Std. Dev.	Min	Max
Share of recent (5 years) immigrants	234876	0.053	0.077	0	0.639
Share of 1 year immigrants	234876	0.012	0.022	0	0.326
Median DA income (\$000)	234876	26.3	7.6	0.0	89.3
Standard error of DA income (\$000)	234876	2.8	3.8	0.0	296.8

Table A2. Data sources

Variable	Aggregation	Data Source
Proposal duration (months)	Individual	OSB form EIS, authors' calculations
Net debt (\$)		OSB form 79
Proposed return on net debt (%)		Forms EIS and 79
Proposed return on total debt (%)		Forms EIS and 79
Proposed payments (\$)		EIS
Amount for distribution / net debt (%)		Forms 14 and 79
Total receipts / net debt (%)		Forms 14 and 79
Proposed - Actual payments / net debt (%)		EIS, 14, 79
Proposed - Total receipts / net debt (%)		EIS, 14, 79
Amended proposals (0 or 1)		Form 14
Accepted proposal (0 or 1)		Form 14
Failure within 1 year (0 or 1)		Form 14
Failure in year 1 to 2 (0 or 1)		Form 14
Failure in year 2 to 3 (0 or 1)		Form 14
Failure in year 3 to 4 (0 or 1)		Form 14
Failure in year 4 to 5 (0 or 1)		Form 14
Withdrawn proposal (0 or 1)		Form 14
Filed after 09/17/2009 with net debt > 75K (0 or 1)		EIS, authors' calculations
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)		EIS, authors' calculations
Has house (0 or 1)		Form 79
Available family income (\$000)		Form 65
Is divorced, separated, widowed (0 or 1)		Form 79, authors' calculations
Joint filing (0 or 1)		EIS, authors' calculations
Year of filing indicators (0 or 1):		
2007		EIS
2008		EIS
2009		EIS
2010		EIS
2011		EIS
2012		EIS
2013		EIS
2014		EIS
Region indicators (0 or 1):		
Ontario		EIS
Quebec		EIS
British Columbia		EIS
Prairies		EIS

Table A2. Data sources (continued)

Variable	Aggregation	Data Source
Total assets (\$000)	Individual	Form 79
Debtor's age (years)		EIS
Debtor's age (years) squared		Authors' calculations
Male (0 or 1)		Form 79
Self-employed (0 or 1)		Form 65, authors' calculations
Household size (count)		Form 79
Reasons for financial difficulties:		Form 79
Overuse of credit (0 or 1)		Form 79
Marital Breakdown (0 or 1)		Form 79
Unemployment (0 or 1)		Form 79
Insufficient Income (0 or 1)		Form 79
Business Failure (0 or 1)		Form 79
Health Concerns (0 or 1)		Form 79
Accidents / Emergencies (0 or 1)		Form 79
Student Loans (0 or 1)		Form 79
Gambling (0 or 1)		Form 79
Tax Liabilities (0 or 1)		Form 79
Loans cosigning (0 or 1)		Form 79
Bad / Poor Investments (0 or 1)		Form 79
Garnishee (0 or 1)		Form 79
Legal Action (0 or 1)		Form 79
Moving / Relocation (0 or 1)		Form 79
Substance Abuse (0 or 1)		Form 79
Supporting Relatives (0 or 1)		Form 79
Region type indicators (0 or 1):	Census Sub	2006 Canada Census
Tracted census agglomeration	Divisions	
Non-tracted census agglomeration	(CSD)	
Strongly influenced zone		
Moderately influenced zone		
Weakly influenced zone		
No influenced zone		
Territories		
Unemployment rate (%)	Dissemination	2006 Canada Census
Graduate (DA) (proportion of DA population)	Areas (DAs)	
University (DA) (proportion of DA population)		
College (DA) (proportion of DA population)		
Apprenticeship (proportion of DA population)		
High school (proportion of DA population)		

Table A2. Data sources (continued)

Variable	Aggregation	Data Source
Numerical literacy score (between 100 and 500)	Dissemination Areas (DAs)	Murray (2011)
Share of recent (5 years) immigrants	Dissemination	2006 Canada Census
Share of 1 year immigrants	Areas (DAs)	
Median DA income (\$000)		
Standard error of DA income (\$000)		

APPENDIX 2: FULL REGRESSION RESULTS FOR TABLE 3 IN TEXT

Table A3. The effect of the 2009 reforms on proposal amendment

Independent variables	Dependent variable:	
	Probability of amendment	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	0.0356***	(0.00207)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.0343***	(0.00412)
Proposed return	3.53e-05	(3.66e-05)
Has house (0 or 1)	0.00113	(0.00235)
Available family income (\$000)	0.0110***	(0.000592)
Is divorced, separated, widowed (0 or 1)	-0.000964	(0.00186)
Joint filing (0 or 1)	0.0113***	(0.00197)
Year of filing indicators (0 or 1):		
2007	0.00770**	(0.00374)
2008	-0.00371	(0.00354)
2009	-0.0170***	(0.00366)
2010	-0.00386	(0.00538)
2011	-0.00728	(0.00532)
2012	0.0115**	(0.00553)
2013	-0.0134**	(0.00522)
2014		
Ontario	-0.0118***	(0.00354)
Quebec	0.0226***	(0.00381)
British Columbia	-0.000967	(0.00437)
Prairies	-0.0108***	(0.00404)
Tracted census agglomeration	0.00328	(0.00379)
Non-tracted census agglomeration	-0.000245	(0.00268)
Strongly influenced zone	0.00261	(0.00342)
Moderately influenced zone	0.00121	(0.00328)
Weakly influenced zone	0.00632	(0.00427)
No influenced zone	-0.00365	(0.0125)
Territories		
Total assets (\$000)	-2.02e-05**	(8.30e-06)
Numerical literacy score (between 100 and 500)	0.000159*	(9.66e-05)
Unemployment rate (%)	-0.000210	(0.000145)
Debtor's age (years)	-0.000278***	(5.95e-05)
Male (0 or 1)	0.00624***	(0.00139)
Self-employed (0 or 1)	0.00796***	(0.00226)
Household size (count)	-0.00566***	(0.000591)

Table A3. The effect of the 2009 reforms on proposal amendment (continued)

Independent variables	Dependent variable:	
	Probability of amendment	se
Overuse of credit (0 or 1)	-0.00339**	(0.00148)
Marital Breakdown (0 or 1)	0.00145	(0.00214)
Unemployment (0 or 1)	-0.00136	(0.00163)
Insufficient Income (0 or 1)	-0.00457***	(0.00138)
Business Failure (0 or 1)	0.00486**	(0.00233)
Health Concerns (0 or 1)	-0.00383**	(0.00186)
Accidents / Emergencies (0 or 1)	0.000115	(0.00441)
Student Loans (0 or 1)	0.00128	(0.00884)
Gambling (0 or 1)	0.0262***	(0.00496)
Tax Liabilities (0 or 1)	0.0424***	(0.00301)
Loans cosigning (0 or 1)	-0.00667	(0.00649)
Bad / Poor Investments (0 or 1)	0.0108**	(0.00477)
Garnishee (0 or 1)	-0.00803	(0.00598)
Legal Action (0 or 1)	-0.000135	(0.00563)
Moving / Relocation (0 or 1)	0.00249	(0.00496)
Substance Abuse (0 or 1)	-0.00175	(0.00648)
Supporting Relatives (0 or 1)	-0.00184	(0.00275)
Graduate (DA) (proportion of DA population)	0.0413***	(0.0159)
University (DA) (proportion of DA population)	0.0412***	(0.0121)
College (DA) (proportion of DA population)	0.00823	(0.0131)
Apprenticeship (proportion of DA population)	-0.0149	(0.0143)
High school (proportion of DA population)	-0.00770	(0.0119)
Share of recent (5 years) immigrants	-0.0547***	(0.0148)
Share of 1 year immigrants	0.0739*	(0.0411)
Median DA income (\$000)	-0.000201*	(0.000121)
Standard error of DA income (\$000)	-0.000166	(0.000180)
Observations	203,453	

Table A4. The effect of the 2009 reforms on proposal acceptance

Independent variables	Dependent variable:	
	Probability of acceptance	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	-0.0119***	(0.000995)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	-0.0104***	(0.00200)
Proposed return	0.000778***	(2.55e-05)
Has house (0 or 1)	0.00627***	(0.00123)
Available family income (\$000)	-0.00146***	(0.000312)
Is divorced, separated, widowed (0 or 1)	-0.00213**	(0.000936)
Joint filing (0 or 1)	0.00808***	(0.00116)
Year of filing indicators (0 or 1):		
2007	-0.00312	(0.00232)
2008	-0.00222	(0.00223)
2009	0.000164	(0.00225)
2010	0.00503	(0.00310)
2011	0.0119***	(0.00296)
2012	0.00917***	(0.00300)
2013	0.00949***	(0.00298)
2014	0.0146***	(0.00291)
Ontario	0.0264***	(0.00224)
Quebec	0.00317	(0.00240)
British Columbia	0.0145***	(0.00268)
Prairies	0.0186***	(0.00248)
Tracted census agglomeration	0.00283	(0.00174)
Non-tracted census agglomeration	-0.000707	(0.00137)
Strongly influenced zone	-0.00147	(0.00176)
Moderately influenced zone	-0.00111	(0.00164)
Weakly influenced zone	0.000125	(0.00199)
No influenced zone	-0.00519	(0.00659)
Territories	-0.0156	(0.0291)
Total assets (\$000)	9.59e-06**	(4.46e-06)
Numerical literacy score (between 100 and 500)	3.54e-05	(5.07e-05)
Unemployment rate (%)	8.08e-05	(7.33e-05)
Debtor's age (years)	0.000116***	(3.14e-05)
Male (0 or 1)	-0.00511***	(0.000737)
Self-employed (0 or 1)	-0.00537***	(0.00105)
Household size (count)	0.000802***	(0.000303)

**Table A4. The effect of the 2009 reforms on proposal acceptance
(continued)**

Independent variables	Dependent variable:	
	Probability of acceptance	se
Overuse of credit (0 or 1)	0.00624***	(0.000742)
Marital Breakdown (0 or 1)	0.00595***	(0.00112)
Unemployment (0 or 1)	0.00258***	(0.000869)
Insufficient Income (0 or 1)	0.00346***	(0.000737)
Business Failure (0 or 1)	-0.00685***	(0.00103)
Health Concerns (0 or 1)	0.00210**	(0.000984)
Accidents / Emergencies (0 or 1)	0.00384	(0.00238)
Student Loans (0 or 1)	-0.00900**	(0.00380)
Gambling (0 or 1)	-0.00485*	(0.00262)
Tax Liabilities (0 or 1)	-0.0287***	(0.00117)
Loans cosigning (0 or 1)	-0.00731***	(0.00274)
Bad / Poor Investments (0 or 1)	-0.00118	(0.00241)
Garnishee (0 or 1)	-0.00927***	(0.00223)
Legal Action (0 or 1)	-0.0104***	(0.00238)
Moving / Relocation (0 or 1)	0.00459	(0.00283)
Substance Abuse (0 or 1)	-0.00486	(0.00298)
Supporting Relatives (0 or 1)	0.00278*	(0.00156)
Graduate (DA) (proportion of DA population)	-0.00921	(0.00827)
University (DA) (proportion of DA population)	-0.00649	(0.00631)
College (DA) (proportion of DA population)	-0.00941	(0.00679)
Apprenticeship (proportion of DA population)	-0.00117	(0.00726)
High school (proportion of DA population)	-0.00868	(0.00613)
Share of recent (5 years) immigrants	0.00569	(0.00797)
Share of 1 year immigrants	0.0322	(0.0227)
Median DA income (\$000)	-1.78e-05	(6.35e-05)
Standard error of DA income (\$000)	1.34e-05	(9.64e-05)
Observations	231,325	

Table A5. The effect of the 2009 reforms on proposal withdrawal

Independent variables	Dependent variable:	
	Probability of withdrawal	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	0.00687***	(0.00101)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.0116***	(0.00192)
Proposed return	-0.000115***	(1.73e-05)
Has house (0 or 1)	-0.00239**	(0.000973)
Available family income (\$000)	0.000323	(0.000295)
Is divorced, separated, widowed (0 or 1)	0.00193**	(0.000837)
Joint filing (0 or 1)	-0.00249**	(0.00101)
Year of filing indicators (0 or 1):		
2007	-0.00233	(0.00183)
2008	-0.000654	(0.00178)
2009	0.000182	(0.00182)
2010	0.00203	(0.00279)
2011	-0.00206	(0.00267)
2012	-0.000964	(0.00269)
2013	-0.00461*	(0.00258)
2014	-0.0128***	(0.00240)
Ontario	-0.0101***	(0.00165)
Quebec	0.0223***	(0.00197)
British Columbia	-0.00676***	(0.00193)
Prairies	-0.00601***	(0.00185)
Tracted census agglomeration	0.00680***	(0.00190)
Non-tracted census agglomeration	0.00134	(0.00125)
Strongly influenced zone	0.00405**	(0.00159)
Moderately influenced zone	0.00349**	(0.00150)
Weakly influenced zone	0.00193	(0.00191)
No influenced zone	0.00894	(0.00645)
Territories		
Total assets (\$000)	-1.08e-06	(3.30e-06)
Numerical literacy score (between 100 and 500)	0.000190***	(4.72e-05)
Unemployment rate (%)	-0.000108	(6.68e-05)
Debtor's age (years)	1.94e-05	(2.95e-05)
Male (0 or 1)	-0.00121*	(0.000660)
Self-employed (0 or 1)	0.00179	(0.00110)
Household size (count)	-0.000185	(0.000283)

**Table A5. The effect of the 2009 reforms on proposal withdrawal
(continued)**

Independent variables	Dependent variable:	
	Probability of withdrawal	se
Overuse of credit (0 or 1)	-0.00158**	(0.000682)
Marital Breakdown (0 or 1)	0.00202**	(0.000949)
Unemployment (0 or 1)	0.000673	(0.000775)
Insufficient Income (0 or 1)	-0.000807	(0.000667)
Business Failure (0 or 1)	0.00233**	(0.00112)
Health Concerns (0 or 1)	0.00154*	(0.000847)
Accidents / Emergencies (0 or 1)	0.00222	(0.00197)
Student Loans (0 or 1)	-5.80e-05	(0.00460)
Gambling (0 or 1)	0.00208	(0.00250)
Tax Liabilities (0 or 1)	0.00949***	(0.00136)
Loans cosigning (0 or 1)	0.00393	(0.00266)
Bad / Poor Investments (0 or 1)	-0.00134	(0.00253)
Garnishee (0 or 1)	0.00796***	(0.00220)
Legal Action (0 or 1)	0.00745***	(0.00228)
Moving / Relocation (0 or 1)	0.000143	(0.00245)
Substance Abuse (0 or 1)	0.00670***	(0.00250)
Supporting Relatives (0 or 1)	-0.000606	(0.00139)
Graduate (DA) (proportion of DA population)	-0.00704	(0.00779)
University (DA) (proportion of DA population)	-0.0111*	(0.00588)
College (DA) (proportion of DA population)	-0.000986	(0.00623)
Apprenticeship (proportion of DA population)	-0.0152**	(0.00644)
High school (proportion of DA population)	-0.00461	(0.00558)
Share of recent (5 years) immigrants	-0.0251***	(0.00804)
Share of 1 year immigrants	-0.0252	(0.0225)
Median DA income (\$000)	-0.000139**	(5.92e-05)
Standard error of DA income (\$000)	-6.42e-05	(0.000107)
Observations	231,294	

Table A6. The effect of the 2009 reforms on proposal year 1 failure

Independent variables	Dependent variable: Probability of year 1 failure	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	0.00211	(0.00237)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.00940***	(0.00321)
Proposed return	0.000791***	(2.97e-05)
Has house (0 or 1)	-0.0132***	(0.00236)
Available family income (\$000)	-0.00406***	(0.000589)
Is divorced, separated, widowed (0 or 1)	0.0110***	(0.00158)
Joint filing (0 or 1)	-0.0192***	(0.00208)
Year of filing indicators (0 or 1):		
2007	-0.000765	(0.00345)
2008	0.00874**	(0.00342)
2009	-0.00875**	(0.00346)
2010	-0.0207***	(0.00476)
2011	-0.0278***	(0.00465)
2012	-0.0296***	(0.00462)
2013	-0.0267***	(0.00470)
2014		
Ontario	-0.00503	(0.00333)
Quebec	0.00533	(0.00346)
British Columbia	-0.00667*	(0.00399)
Prairies	0.0255***	(0.00403)
Tracted census agglomeration	-0.00346	(0.00324)
Non-tracted census agglomeration	0.00269	(0.00239)
Strongly influenced zone	0.00317	(0.00315)
Moderately influenced zone	0.00784**	(0.00305)
Weakly influenced zone	0.00856**	(0.00376)
No influenced zone	-0.00480	(0.0101)
Territories	0.0225	(0.0599)
Total assets (\$000)	-3.86e-05***	(9.61e-06)
Numerical literacy score (between 100 and 500)	-6.07e-06	(8.61e-05)
Unemployment rate (%)	0.000166	(0.000123)
Debtor's age (years)	-0.00103***	(5.68e-05)
Male (0 or 1)	0.0165***	(0.00124)
Self-employed (0 or 1)	0.00171	(0.00224)
Household size (count)	0.00144***	(0.000526)

Table A6. The effect of the 2009 reforms on proposal year 1 failure (continued)

Independent variables	Dependent variable:	
	Probability of year 1 failure	se
Overuse of credit (0 or 1)	-0.00646***	(0.00131)
Marital Breakdown (0 or 1)	0.00283	(0.00181)
Unemployment (0 or 1)	0.000696	(0.00143)
Insufficient Income (0 or 1)	-0.00676***	(0.00124)
Business Failure (0 or 1)	-0.00425*	(0.00244)
Health Concerns (0 or 1)	0.00885***	(0.00163)
Accidents / Emergencies (0 or 1)	-0.00546	(0.00410)
Student Loans (0 or 1)	-0.00218	(0.00773)
Gambling (0 or 1)	0.00839*	(0.00451)
Tax Liabilities (0 or 1)	-0.00656*	(0.00348)
Loans cosigning (0 or 1)	-0.0249***	(0.00686)
Bad / Poor Investments (0 or 1)	-0.0110**	(0.00557)
Garnishee (0 or 1)	0.0487***	(0.00417)
Legal Action (0 or 1)	0.0103**	(0.00479)
Moving / Relocation (0 or 1)	-0.0120**	(0.00478)
Substance Abuse (0 or 1)	0.0224***	(0.00492)
Supporting Relatives (0 or 1)	-0.00668***	(0.00257)
Graduate (DA) (proportion of DA population)	-0.0444***	(0.0148)
University (DA) (proportion of DA population)	-0.0394***	(0.0108)
College (DA) (proportion of DA population)	0.00432	(0.0116)
Apprenticeship (proportion of DA population)	-0.00140	(0.0125)
High school (proportion of DA population)	-0.0165	(0.0104)
Share of recent (5 years) immigrants	-0.0364***	(0.0131)
Share of 1 year immigrants	0.0496	(0.0363)
Median DA income (\$000)	3.85e-05	(0.000111)
Standard error of DA income (\$000)	-0.000387*	(0.000206)
Observations	188,603	

Table A7. The effect of the 2009 reforms on proposal year 2 failure

Independent variables	Dependent variable: Probability of year 2 failure	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	-0.000836	(0.00296)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.0158***	(0.00367)
Proposed return	0.000800***	(3.70e-05)
Has house (0 or 1)	-0.0124***	(0.00278)
Available family income (\$000)	-0.00506***	(0.000713)
Is divorced, separated, widowed (0 or 1)	0.0145***	(0.00192)
Joint filing (0 or 1)	-0.0206***	(0.00239)
Year of filing indicators (0 or 1):		
2007	0.0121***	(0.00373)
2008	0.0122***	(0.00362)
2009	-0.00624*	(0.00358)
2010	-0.0116**	(0.00501)
2011	-0.0189***	(0.00488)
2012	-0.0235***	(0.00485)
2013		
2014		
Ontario	-0.0126***	(0.00447)
Quebec	-0.00144	(0.00463)
British Columbia	-0.0134**	(0.00524)
Prairies	-0.00678	(0.00504)
Tracted census agglomeration	0.00337	(0.00429)
Non-tracted census agglomeration	-0.00119	(0.00292)
Strongly influenced zone	-0.00727**	(0.00367)
Moderately influenced zone	0.00149	(0.00370)
Weakly influenced zone	-0.00675	(0.00437)
No influenced zone	-0.0246**	(0.0110)
Territories	0.101	(0.0925)
Total assets (\$000)	-1.21e-05	(1.10e-05)
Numerical literacy score (between 100 and 500)	4.26e-05	(0.000105)
Unemployment rate (%)	0.000241	(0.000150)
Debtor's age (years)	-0.000734***	(6.86e-05)
Male (0 or 1)	0.0135***	(0.00149)
Self-employed (0 or 1)	0.00463*	(0.00264)
Household size (count)	0.00471***	(0.000623)

Table A7. The effect of the 2009 reforms on proposal year 2 failure (continued)

Independent variables	Dependent variable:	
	Probability of year 2 failure	se
Overuse of credit (0 or 1)	-0.00501***	(0.00160)
Marital Breakdown (0 or 1)	-0.000521	(0.00228)
Unemployment (0 or 1)	0.00265	(0.00173)
Insufficient Income (0 or 1)	-0.00377**	(0.00148)
Business Failure (0 or 1)	-0.00573**	(0.00292)
Health Concerns (0 or 1)	0.00826***	(0.00199)
Accidents / Emergencies (0 or 1)	0.00319	(0.00477)
Student Loans (0 or 1)	0.00268	(0.00918)
Gambling (0 or 1)	0.0113**	(0.00547)
Tax Liabilities (0 or 1)	0.00848**	(0.00405)
Loans cosigning (0 or 1)	-0.00738	(0.00721)
Bad / Poor Investments (0 or 1)	-0.00292	(0.00622)
Garnishee (0 or 1)	0.0417***	(0.00573)
Legal Action (0 or 1)	0.00623	(0.00624)
Moving / Relocation (0 or 1)	-0.00695	(0.00575)
Substance Abuse (0 or 1)	0.00991	(0.00684)
Supporting Relatives (0 or 1)	-0.00719**	(0.00302)
Graduate (DA) (proportion of DA population)	-0.0331*	(0.0176)
University (DA) (proportion of DA population)	-0.0385***	(0.0130)
College (DA) (proportion of DA population)	-0.0160	(0.0141)
Apprenticeship (proportion of DA population)	-0.00154	(0.0154)
High school (proportion of DA population)	0.00969	(0.0126)
Share of recent (5 years) immigrants	-0.0110	(0.0152)
Share of 1 year immigrants	0.0754*	(0.0419)
Median DA income (\$000)	3.89e-05	(0.000134)
Standard error of DA income (\$000)	2.99e-05	(0.000193)
Observations	141,968	

Table A8. The effect of the 2009 reforms on proposal year 3 failure

Independent variables	Dependent variable:	
	Probability of year 3 failure	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	0.00811***	(0.00292)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.00958***	(0.00319)
Proposed return	0.000518***	(3.61e-05)
Has house (0 or 1)	-0.00818***	(0.00265)
Available family income (\$000)	-0.00276***	(0.000692)
Is divorced, separated, widowed (0 or 1)	0.00787***	(0.00185)
Joint filing (0 or 1)	-0.00949***	(0.00224)
Year of filing indicators (0 or 1):		
2007	0.00108	(0.00341)
2008	-0.00937***	(0.00323)
2009	-0.0142***	(0.00336)
2010	-0.0191***	(0.00451)
2011	-0.0220***	(0.00448)
2012		
2013		
2014		
Ontario	-0.00280	(0.00425)
Quebec	0.00323	(0.00442)
British Columbia	-0.00145	(0.00511)
Prairies	-0.00926**	(0.00467)
Tracted census agglomeration	-0.00107	(0.00411)
Non-tracted census agglomeration	-0.000751	(0.00287)
Strongly influenced zone	0.00532	(0.00399)
Moderately influenced zone	-0.000925	(0.00359)
Weakly influenced zone	0.00115	(0.00464)
No influenced zone	-0.0179*	(0.0108)
Territories	0.0623	(0.101)
Total assets (\$000)	-3.17e-06	(1.06e-05)
Numerical literacy score (between 100 and 500)	-0.000151	(0.000100)
Unemployment rate (%)	-0.000326**	(0.000147)
Debtor's age (years)	-0.000151**	(6.37e-05)
Male (0 or 1)	0.00503***	(0.00142)
Self-employed (0 or 1)	0.00891***	(0.00245)
Household size (count)	0.00250***	(0.000606)

Table A8. The effect of the 2009 reforms on proposal year 3 failure (continued)

Independent variables	Dependent variable:	
	Probability of year 3 failure	se
Overuse of credit (0 or 1)	-0.00503***	(0.00155)
Marital Breakdown (0 or 1)	-0.00390*	(0.00227)
Unemployment (0 or 1)	0.000102	(0.00168)
Insufficient Income (0 or 1)	-0.00254*	(0.00142)
Business Failure (0 or 1)	-0.0179***	(0.00311)
Health Concerns (0 or 1)	0.00554***	(0.00190)
Accidents / Emergencies (0 or 1)	0.00638	(0.00441)
Student Loans (0 or 1)	0.00383	(0.00867)
Gambling (0 or 1)	0.000680	(0.00540)
Tax Liabilities (0 or 1)	0.00394	(0.00395)
Loans cosigning (0 or 1)	-0.000522	(0.00666)
Bad / Poor Investments (0 or 1)	-0.00598	(0.00609)
Garnishee (0 or 1)	0.0334***	(0.00545)
Legal Action (0 or 1)	-0.00754	(0.00677)
Moving / Relocation (0 or 1)	-0.000967	(0.00546)
Substance Abuse (0 or 1)	-0.00120	(0.00710)
Supporting Relatives (0 or 1)	-0.00660**	(0.00293)
Graduate (DA) (proportion of DA population)	-0.0114	(0.0168)
University (DA) (proportion of DA population)	-0.0130	(0.0124)
College (DA) (proportion of DA population)	0.000358	(0.0136)
Apprenticeship (proportion of DA population)	-0.00434	(0.0150)
High school (proportion of DA population)	0.0164	(0.0121)
Share of recent (5 years) immigrants	0.0152	(0.0141)
Share of 1 year immigrants	0.0372	(0.0395)
Median DA income (\$000)	-0.000179	(0.000129)
Standard error of DA income (\$000)	0.000327**	(0.000145)
Observations	100,103	

Table A9. The effect of the 2009 reforms on proposal year 4 failure

Independent variables	Dependent variable:	
	Probability of year 4 failure	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	-0.00932**	(0.00393)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.00650**	(0.00279)
Proposed return	0.000348***	(3.52e-05)
Has house (0 or 1)	-0.00295	(0.00258)
Available family income (\$000)	-0.00246***	(0.000692)
Is divorced, separated, widowed (0 or 1)	0.00439**	(0.00179)
Joint filing (0 or 1)	-0.0110***	(0.00224)
Year of filing indicators (0 or 1):		
2007	8.49e-05	(0.00266)
2008	-0.00157	(0.00255)
2009	-0.00633**	(0.00256)
2010	-0.00670*	(0.00362)
2011		
2012		
2013		
2014		
Ontario	-0.00299	(0.00449)
Quebec	-0.00338	(0.00456)
British Columbia	-0.0123**	(0.00499)
Prairies	-0.00997**	(0.00481)
Tracted census agglomeration	-0.00796**	(0.00369)
Non-tracted census agglomeration	-0.00450*	(0.00269)
Strongly influenced zone	-0.00428	(0.00352)
Moderately influenced zone	-0.00159	(0.00348)
Weakly influenced zone	-0.00674*	(0.00394)
No influenced zone	-0.00815	(0.0107)
Territories		
Total assets (\$000)	4.13e-06	(1.06e-05)
Numerical literacy score (between 100 and 500)	-2.89e-05	(9.80e-05)
Unemployment rate (%)	0.000141	(0.000138)
Debtor's age (years)	8.08e-05	(5.90e-05)
Male (0 or 1)	0.00456***	(0.00139)
Self-employed (0 or 1)	0.0110***	(0.00224)
Household size (count)	0.00177***	(0.000583)

Table A9. The effect of the 2009 reforms on proposal year 4 failure (continued)

Independent variables	Dependent variable:	
	Probability of year 4 failure	se
Overuse of credit (0 or 1)	-0.000904	(0.00152)
Marital Breakdown (0 or 1)	-0.00382*	(0.00228)
Unemployment (0 or 1)	0.000720	(0.00165)
Insufficient Income (0 or 1)	0.000888	(0.00137)
Business Failure (0 or 1)	-0.00478*	(0.00279)
Health Concerns (0 or 1)	-0.000271	(0.00195)
Accidents / Emergencies (0 or 1)	-0.000679	(0.00470)
Student Loans (0 or 1)	-0.0344**	(0.0161)
Gambling (0 or 1)	0.000285	(0.00517)
Tax Liabilities (0 or 1)	0.00596	(0.00372)
Loans cosigning (0 or 1)	-0.000534	(0.00668)
Bad / Poor Investments (0 or 1)	-0.00225	(0.00592)
Garnishee (0 or 1)	0.0155***	(0.00557)
Legal Action (0 or 1)	0.0136***	(0.00517)
Moving / Relocation (0 or 1)	-0.00390	(0.00581)
Substance Abuse (0 or 1)	-0.0111	(0.00817)
Supporting Relatives (0 or 1)	-0.00366	(0.00285)
Graduate (DA) (proportion of DA population)	-0.0391**	(0.0164)
University (DA) (proportion of DA population)	-0.00227	(0.0120)
College (DA) (proportion of DA population)	-0.0271**	(0.0133)
Apprenticeship (proportion of DA population)	0.00289	(0.0146)
High school (proportion of DA population)	-0.00627	(0.0118)
Share of recent (5 years) immigrants	0.0182	(0.0133)
Share of 1 year immigrants	0.00940	(0.0375)
Median DA income (\$000)	-3.53e-05	(0.000126)
Standard error of DA income (\$000)	0.000168	(0.000147)
Observations	66,868	

Table A10. The effect of the 2009 reforms on proposal year 5 failure

Independent variables	Dependent variable:	
	Probability of year 5 failure	se
Filed after 09/17/2009 with net debt > 75K (0 or 1)	-0.00900	(0.0157)
Filed before 09/17/2009 with net debt ≤ 75K (0 or 1)	0.00234	(0.00651)
Proposed return	0.000150***	(3.31e-05)
Has house (0 or 1)	-0.00148	(0.00238)
Available family income (\$000)	-0.00175***	(0.000667)
Is divorced, separated, widowed (0 or 1)	0.00305*	(0.00169)
Joint filing (0 or 1)	-0.00604***	(0.00207)
Year of filing indicators (0 or 1):		
2007	-0.00198	(0.00192)
2008	-0.00123	(0.00189)
2009	0.00113	(0.00195)
2010		
2011		
2012		
2013		
2014		
Ontario	-0.00236	(0.00435)
Quebec	0.00122	(0.00449)
British Columbia	-0.00793*	(0.00478)
Prairies	-0.00625	(0.00466)
Tracted census agglomeration	-0.00835***	(0.00290)
Non-tracted census agglomeration	-0.00178	(0.00271)
Strongly influenced zone	-0.00589**	(0.00296)
Moderately influenced zone	-0.00343	(0.00307)
Weakly influenced zone	-0.00489	(0.00368)
No influenced zone		
Territories		
Total assets (\$000)	1.59e-05*	(9.53e-06)
Numerical literacy score (between 100 and 500)	-0.000230**	(9.43e-05)
Unemployment rate (%)	0.000148	(0.000127)
Debtor's age (years)	-9.54e-06	(5.33e-05)
Male (0 or 1)	0.00466***	(0.00132)
Self-employed (0 or 1)	0.00457**	(0.00211)
Household size (count)	0.00119**	(0.000533)

Table A10. The effect of the 2009 reforms on proposal year 5 failure (continued)

Independent variables	Dependent variable:	
	Probability of year 5 failure	se
Overuse of credit (0 or 1)	-0.00196	(0.00141)
Marital Breakdown (0 or 1)	-0.00386*	(0.00220)
Unemployment (0 or 1)	-0.00273*	(0.00162)
Insufficient Income (0 or 1)	-5.02e-05	(0.00129)
Business Failure (0 or 1)	-0.00602**	(0.00281)
Health Concerns (0 or 1)	0.00233	(0.00174)
Accidents / Emergencies (0 or 1)	0.00439	(0.00369)
Student Loans (0 or 1)	-0.00628	(0.0102)
Gambling (0 or 1)	0.000200	(0.00465)
Tax Liabilities (0 or 1)	0.00218	(0.00353)
Loans cosigning (0 or 1)	0.0126***	(0.00430)
Bad / Poor Investments (0 or 1)	0.00269	(0.00486)
Garnishee (0 or 1)	0.0141***	(0.00430)
Legal Action (0 or 1)	-0.00343	(0.00651)
Moving / Relocation (0 or 1)	-0.00346	(0.00592)
Substance Abuse (0 or 1)	-0.00534	(0.00723)
Supporting Relatives (0 or 1)	0.000853	(0.00246)
Graduate (DA) (proportion of DA population)	0.0137	(0.0150)
University (DA) (proportion of DA population)	0.0177	(0.0111)
College (DA) (proportion of DA population)	0.00864	(0.0127)
Apprenticeship (proportion of DA population)	0.00278	(0.0140)
High school (proportion of DA population)	0.00771	(0.0111)
Share of recent (5 years) immigrants	-0.00431	(0.0121)
Share of 1 year immigrants	0.0201	(0.0337)
Median DA income (\$000)	-1.70e-05	(0.000119)
Standard error of DA income (\$000)	-0.000180	(0.000239)
Observations	39,635	