Personal Bankruptcy in the US: Effects of the 2005 Reform[1]

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Introduction

Personal bankruptcy is a form of social insurance offering relief to individuals who are unable to repay previously contracted debt[4]. It provides insolvent individuals with an orderly procedure to settle their liabilities and is intended to minimize the disruption to other aspects of their life. It immediately halts adverse actions by creditors, such as wage garnishment, collections, and foreclosure proceedings, and may offer debt discharge, if approved (see Box 1). Like most forms of insurance, the debt discharge offered under bankruptcy may generate moral hazard, that is, it may induce some individuals to take on debt with little intention of repaying it. In fact, since the very inception of personal bankruptcy, filing rates have been rising, which has led to a heated discussion on the potential for abuse of this institution, and more generally on its optimal design.

To contribute to the discussion on the role and optimal design of personal bankruptcy, we use the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA), enacted in October 2005, as a laboratory to study the response of individuals to significant changes in the provisions of the bankruptcy law. BAPCPA is the most comprehensive reform of personal bankruptcy in the US since it was first introduced, in its current form, in 1978. The reform overhauled filing requirements and substantially increased the monetary cost of filing for bankruptcy (for details, see Box 2). We use it to assess whether increasing the cost of debt discharge via bankruptcy deters delinquency and reduces financial distress. Our analysis can provide valuable insight into the balance between insurance and moral hazard forces associated with personal bankruptcy.

Using administrative credit file data from a nationally representative panel, we quantify the effects of the reform on bankruptcy and insolvency, and explore the consequences of each of these outcomes on access to credit and credit scores. We find that the reform resulted in a 50 percent permanent drop in Chapter 7 filings and a 25 percent permanent rise in insolvency. Exploiting the cross-district variation in filing costs, we show that these responses are driven by liquidity constraints associated with the higher monetary cost of filing for bankruptcy. We find no effect on Chapter 13 filings, or on the propensity to remain current or repay delinquent debt. We further quantify the effects of the reform on households by exploring the difference in the consequences of a bankruptcy filing versus insolvency. We find that insolvency is associated with worse outcomes than bankruptcy, in terms of access to credit and credit scores, suggesting that BAPCPA may have removed an important form of relief from financial distress.

The effects of BAPCPA over time

Our analysis is based on the Federal Reserve Bank of New York's Consumer Credit Panel/Equifax Data (CCP), an anonymous longitudinal panel of individuals who have a credit report with Equifax, one of the three major credit reporting agencies for individuals in the US. The data is quarterly, and our sample starts in 1999 Q1 and ends in 2013 Q3. We use a one percent sample, which includes information on approximately 2.5 million individuals in each quarter. The data is described in detail in Lee and van der Klaauw (2010).

The data contains over 600 variables, allowing us to track all aspects of individuals' financial liabilities, including bankruptcy and foreclosure, mortgage status, detailed delinquencies, various types of debt, with number of accounts and balances. This data allows us

[1] We are grateful to Matt Ploenzke and Harry Wheeler for excellent research assistance.
[2] The Ohio State University and CEPR.
[3] Boston College.
[4] Some of the common circumstances leading to bankruptcy include loss of income due to unemployment or illness, medical bills, divorce, unplanned children. See Livshits, MacGee and Tertilt (2007) and references therein.

Box 1

Personal Bankruptcy in the US

Personal bankruptcy grants delinquent debtors immediate relief from all collection efforts, including direct communication, lawsuits and wage garnishment orders. Most unsecured debt is dischargeable, excluding taxes, alimony and child support obligations, student loans and debt obtained by fraud. Prior to the 2005 reform, a filer could choose between filing for Chapter 7 or 13 (White 2007).

Chapter 7 is the most commonly used bankruptcy procedure – up to 2005 a remarkably stable 70 percent of bankruptcies were Chapter 7 bankruptcies. Under Chapter 7, filers submit a list of all their assets to the courts. The assets that exceed certain exemption levels, which vary by state, are used to satisfy unsecured creditors. The rest of the debts are discharged, and debtors are not obliged to use future income for debt repayment. Before 2005 Chapter 7 bankrupts were not allowed to re-file another Chapter 7 case for the next six years, and have a bankruptcy flag on their credit report for ten years after filing.

Chapter 13 filers keep all of their assets, but must use their future income to repay part of their unsecured debt. Before the 2005 reform, filers would propose their own repayment plans lasting three to five years, with the restriction that the total proposed repayment could not be lower than the value of their non-exempt assets under Chapter 7. A Chapter 13 bankruptcy is considered discharged after the debt repayment plan has been executed, and the Chapter 13 bankruptcy flag stays on the credit record for seven years after discharge. Prior to BAPCA, there were no limits to filing for Chapter 13 bankruptcy.

to observe the drop in bankruptcies and the changing characteristics of those who file for bankruptcy, as well as the behavior of financially distressed individuals who decide not to file post-2005.

We study the behavior of individuals entering a new spell of financial distress, marked by a *new delinquency* or a *new insolvency.* A new delinquency is a missed payment, less than 90 days late, after at least two years of clean record. A new insolvency is a missed payment that is at least 120 days late, after two years with a clean record, except for possible delinquencies. We are interested in whether newly financially distressed individuals subsequently file for Chapter 7 or Chapter 13 bankruptcy, remain insolvent, or whether they pay off their debts and become current.

Figure 1 displays the estimated time effects for one-quarter-ahead transition probabilities from the start of a new spell of financial distress to various outcomes, controlling for a comprehensive set of court district level economic and regulatory variables. In all panels, the baseline year is 2002, which is set to zero, and the estimates are rescaled by their respective pre-reform means. As shown in panel (a), the transition from new insolvency to Chapter 7 bankruptcy filing drops by about 50 log points (about 40 percent) immediately after the reform, and declines further to over 100 log points (over 60 percent) in 2011-2012. By contrast, there is no response to the reform for the transition to Chapter 13 filing, displayed in panel (b). This difference in the response for the two chapters is important in identifying the mechanism behind the changes. All the filing fees for Chapter 7 have to be paid up-front, while they can be included in the repayment plan for Chapter 13. Since the magnitude of the rise of monetary costs is similar for the two chapters (Box 2), these results are consistent with liquidity constraints driving the filing response.

The remaining panels of Figure 1 present the time effects for transitions to other outcomes. The transition from a new delinquency to insolvency – an indicator of deepening of financial distress – rises by 25 percent between 2005 and 2006 and further rises by 35 percent relative to 2005 in 2010-2012, as shown in panel (c). The persistence of insolvency, captured by the transition from a new insolvency to insolvency, shown in panel (d), also rises, by approximately six percent. We find no evidence of an effect of the reform on the transition from a new insolvency to current or the persistence of the current state (panels (e) and (f)).

These findings suggest that the reform, which made it harder and more expensive to discharge debt, had little impact on debtors' willingness or ability to cure insolvencies or to remain current. Instead, the increased burden of filing for Chapter 7 bankruptcy resulted in more individuals becoming and remaining insolvent. Insolvency itself is a form of informal default, in which

Box 2

The Bankruptcy Abuse Prevention and Consumer Protection BAPCPA was signed by President George W. Bush on April 20, 2005 and applied to bankruptcy cases filed on or after October 17, 2005. It introduced several major changes to bankruptcy procedures, which increased the burden, financial and otherwise, of filing for bankruptcy protection.

BAPCPA's main provisions were to introduce an income test requiring Chapter 7 filers to have income below their state's median, effectively removing the possibility of choosing the filing chapter. It also mandated a fixed five year repayment plan for Chapter 13 filers and increased refiling restrictions for both chapters. The new law also raised the cost of filing in a variety of ways. It raised court filing fees and mandated that filers attend compulsory credit counseling classes at their own expense. It also increased reporting requirements in bankruptcy petitions and introduced a new provision holding attorneys personally liable for inaccuracies in information reported to the court during the filing procedure. These changes led to a sizable rise in attorney fees for bankruptcy cases. The median rise in attorney fees was 33 percent for Chapter 7 filers, from a median value of 663 USD pre-reform to 986 USD post-reform. For Chapter 13 filers, the median rise in attorney fees was 25 percent, from a median value of 1847 USD pre-reform to 2515 USD post-reform (Lupica 2012, White 2007).

The sum of these provisions resulted in a significant rise in the cost of filing for bankruptcy. The total out-of-pocket cost of filing for bankruptcy increased from 600 USD and 1600 USD for Chapters 7 and 13 to 2500 USD and 3500 USD, respectively (White 2007, also consistent with findings in Lupica 2012). In our study, we focus on attorney fees and their increase associated with the reform. Attorney fees comprise 75 percent of the total monetary cost of filing for Chapter 7 bankruptcy and 90 percent of the cost of filing for Chapter 13 (Lupica 2012), and rose by an average 35 percent and 29 percent, respectively after the reform.

individuals do not repay their delinquent debt and do not have access to the benefits of bankruptcy protection.

Exploring the mechanism: the role of rising filing costs

To explore the mechanism through which BAPCPA led to a decline in Chapter 7 bankruptcy filings, we exploit the sizable cross-district variation in attorney fees associated with filing for bankruptcy as well as the cross-district variation in the change in these costs following BAPCPA (see Box 2). In Albanesi and Nosal (2015), we estimate district-level mean effects of the reform on the transition from a new insolvency to Chapter 7 and Chapter 13 bankruptcy filings, controlling for district level business cycle effects and state level judicial controls.

Figure 2 presents a scatter plot of the average post-reform change in the transition from a new insolvency to bankruptcy filings against the percentage change in attorney fees for Chapter 7 (top panel) and Chapter 13 (bottom panel). This figure shows clear negative relation between the Chapter 7 attorney fee changes (horizontal axis) and change in transition to bankruptcy Chapter 7 filings (vertical axis). The estimated effect of the attorney fees, represented by a regression line on the figure, implies that from the 25 percentile to the 75 percentile of the cost change distribution (a 24 percentage point increase), increases the drop in Chapter 7 filings by ten percentage points.

Importantly, there is no such relation for Chapter 13 bankruptcy. Given that the rise in Chapter 13 filing fees was similar to the rise of Chapter 7 filing fees, and that only Chapter 7 fees need to be paid up-front, these results provide strong support for our hypothesis that the response to BAPCPA was driven by the rise in filing costs, through liquidity constraints.

Substitution from Chapter 7 bankruptcy

The findings in Figure 1 show that the decline in Chapter 7 filings following BAPCPA is associated with a rise in the incidence and persistence of insolvency. It is then natural to ask if the rise in insolvency was a direct consequence of the reform, through the decline in Chapter 7 filings. Additionally, while there is no change in the average transitions involving the current state or Chapter 13 bankruptcy at the time of the reform, there may still be a relation between the change in Chapter 7 filings and these transitions at the district level.

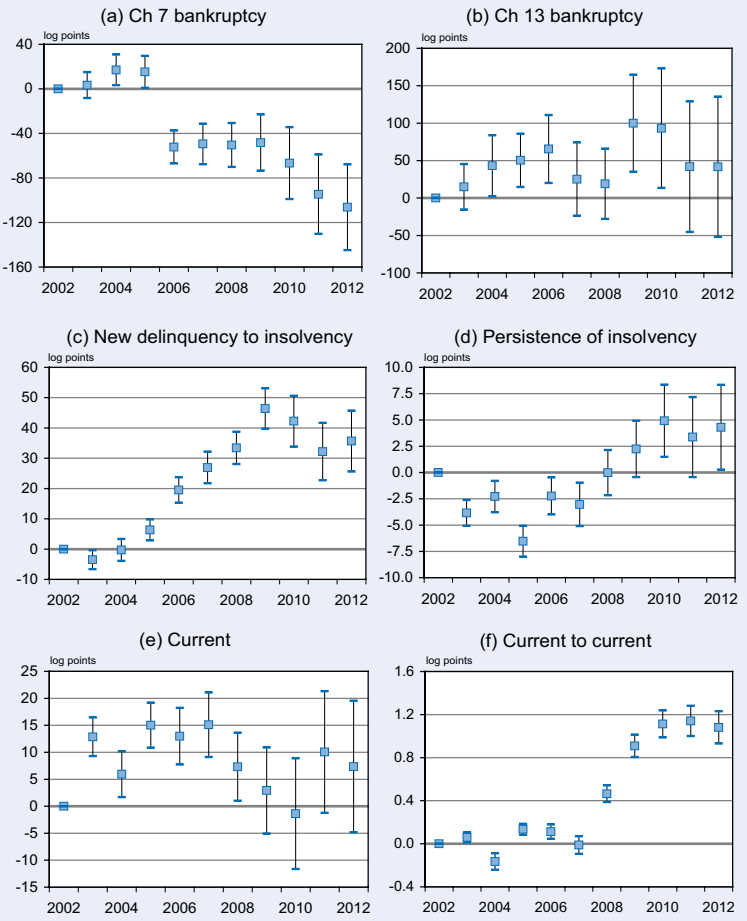
In Albanesi and Nosal (2015), we explore the substitution patterns between the transitions to Chapter 7 and 13 bankruptcy filing and transitions to insolvency and

being current, by estimating the district-level mean effects of the reform. We find a strong substitution pattern from Chapter 7 bankruptcy to insolvency, when starting from a new insolvency, but no impact on the transition to current from a new insolvency. We also find no impact of the change in Chapter 7 filing on Chapter 13 filing, which suggests that the reform did not have the intended effect of channeling individuals from Chapter 7 to 13.

Summarizing these results, Figure 3 displays a scatter plot of the estimated mean change in flows to insolvency (i.e. persistence of insolvency) on the estimated mean change in flows to Chapter 7 filing. There is a clear negative relationship between the two mean flows, implying a substitution from Chapter 7 flows to insolvency flows. The estimated regression, displayed on the graph, implies that a one standard deviation increase in the estimated drop of flows into Chapter 7 bankruptcy can account for 32 percent of the standard deviation of the estimated increase in the persistence of insolvency. This indicates that individuals who are not filing for Chapter 7 bankruptcy protection remain insolvent, and do not repay their delinquent debt. We find no effect of the change in Chapter 13 flows.

Figure 1

Estimated one-quarter-ahead transition frequencies from a new insolvency



Note: Estimated one-quarter-ahead transition frequencies from a new insolvency, except for panel (c), which reports the transition from a new delinquency to a new insolvency, and panel (f), which reports the transition from current to current. Bars denote 90% confidence intervals. States are defined as follows. An individual is "current" if there are no delinquencies of any type in her record for that quarter, and no bankruptcy or foreclosure flags. An individual's state is "delinquent", if she has accounts that are 30, 60 or 90 days delinquent, with no bankruptcy or foreclosure flags. An individual's state is "insolvent" if she has any debt that is 120 days plus delinquent or in charge-off, with no bankruptcy or foreclosure flags. An individual is "bankrupt", if she displays a bankruptcy flag, which is activated by a new bankruptcy filing. The bankruptcy flag for Chapter 7 stays on the record for ten years. The one for Chapter 13 stays on the record for seven years after the payment plan has been completed. The figures plot the time effects $\beta_s(t)$, estimated using the equation: $y_{it} = \sum_{s(t)\neq 0} \beta_{s(t)} I_{s(t)} + \gamma_i + \Phi X_{it} + \varepsilon_t$; where y_{it} is the transition in district i at quarter t, rescaled by its pre-reform mean, $I_{s(t)}$ is an indicator for year s, γ_i denote district effects, and X_{it} denotes a set of economic controls in logs, which include district level personal income, unemployment rate and home price index, as well as the four quarter change in these variables.

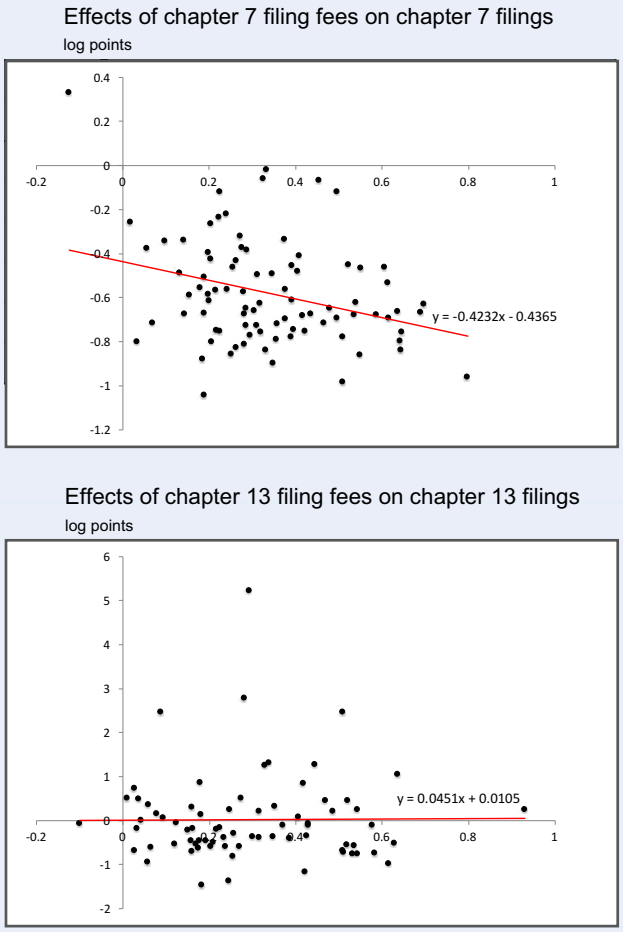
Source: Authors' calculation based on Federal Reserve Bank of New York's Consumer Credit Panel/ Equifax Data.

Bankruptcy versus insolvency

Since our analysis indicates a shift from Chapter 7 bankruptcy to persistent insolvency in response to the reform, it is important to determine whether this change is consequential. To this end, we examine access to credit and credit scores for financially distressed individuals, distinguishing between whether they file for bankruptcy or not. Specifically, we consider cohorts of newly insolvent individuals, and isolate three groups of individuals, depending on their subsequent behavior. Specifically, we consider *Chapter 7 filers* and *Chapter 13 filers*: those who file for Chapter 7 or Chapter 13 bankruptcy within eight quarters after the new insolvency. We also consider *Non-filers*: those who do not file for either chapter in the subsequent eight quarters. We then examine the behavior of several financial indicators for a two year window around the new insolvency for each of the three groups.

Figure 2

Effects of district-specific filing fee change on district-level estimated change of bankruptcy flows



Source: Authors' calculation based on Federal Reserve Bank of New York's Consumer Credit Panel/Equifax Data.

We first examine the differences in access to credit. Figure 4 displays the fraction of individuals with at least one new unsecured line of credit, auto loan or mortgage opened in the prior year, four quarters after the new insolvency for *Non-filers*, or four quarters after filing for bankruptcy for each type of filer[5]. Clearly, Chapter 7 filers are more successful in opening new unsecured lines of credit and obtaining auto loans relative to *Non-filers*. Except at the height of the Great Recession, Chapter 7 filers have an approximately 30 percent higher probability of displaying a new unsecured origination relative to *Non-filers*, and a 60 percent higher probability of obtaining a new auto origination relative to *Non-filers*. In terms of these two items, Chapter 7 filers are also considerably more successful than Chapter 13 filers. Indeed, Chapter 13 filers display a similar fraction of new unsecured and auto originations as *Non-filers*.

For mortgage originations, both Chapter 7 and Chapter 13 filers are more successful in obtaining a new mortgage than *Non-filers*. However, Chapter 13 filers obtain new mortgages at higher rates than Chapter 7 filers, especially after 2005. At the four quarter horizon, prior to 2005, the probability of obtaining a new mortgage for bankruptcy filers of either chapter was approximately 50 percent higher than for individuals who become newly insolvent in the same quarter, but do not file for bankruptcy. After 2005, it is approximately double for Chapter 7 filers, relative to *Non-filers*, and four times as large for Chapter 13 filers relative to *Non-filers*, at the four quarter horizon.

Our findings show major differences in the credit obtained by the three groups of individuals. In order to shed some light on whether this is driven by demand or supply of credit, we use a measure of demand for credit given by the fraction of individuals with inquiries. We interpret inquiries as an indicator of credit demand, as an inquiry is registered in the credit report when an individual initiates a new credit application. The results are reported in panel (d) of Figure 4, where, as before, our measure is taken four quarters after a new insolvency for *Non-filers* or four quarters after filing for those who do file. There is very little difference in the fraction of individuals with inquiries based on filing status, which suggests that the differences in credit seen across the three groups of individuals are not driven by differences in demand for such credit, but in supply.

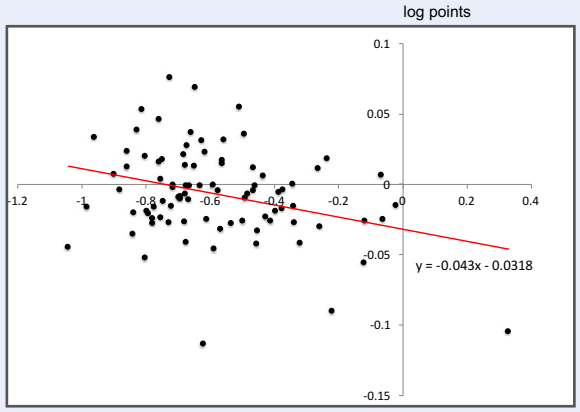
In our last set of results, we examine credit scores, since they are used as a proxy for creditworthiness by most lenders. Figure 5 (left panel) compares credit scores for the three groups of newly insolvent. At insolvency, both Chapter 7 filers and Chapter 13 filers display

[5] The individuals who file for bankruptcy mostly do so two to six quarters after experiencing the new insolvency.

a *lower* credit score than *Non-filers*, which suggests that they are negatively selected. Four quarters after the new insolvency, this ranking still prevails, even if credit scores have increased for all groups. The right panel of Figure 5 compares credit scores after insolvency for *Non-filers* and after filing for each group of filers. The credit score for *Non-filers* recovers with time after insolvency, and is approximately 50 points higher eight quarters after the new insolvency than four quarters after the new insolvency. However, both four quarters and eight quarters after the new insolvency, *Non-filers* display a much *lower* credit score than Chapter 7 filers four quarters after filing, despite the fact that Chapter 7 filers have lower credit scores at the time of the new insolvency. Chapter 13 filers do not enjoy such a benefit, with their score remaining close to that of *Non-filers*. The credit score advantage for Chapter 7 filers over *Non-filers* and Chapter 7 filers rises after BAPCPA, suggesting *positive selection* of bankrupt individuals in the post-reform period compared to bankrupt individuals in the pre-reform period – an effect that is consistent with binding liquidity constraints preventing the newly insolvents from filing for bankruptcy.

Figure 3

Substitution from chapter 7 filings to insolvency



Source: Authors' calculation based on Federal Reserve Bank of New York's Consumer Credit Panel/Equifax Data.

These findings suggest that bankruptcy offers relief from financial distress, not only because it provides debt discharge and automatically stays collections, foreclosures, wage garnishment and other court actions against the filer, but also because it allows filers more access to new lines of credit relative to insolvent *Non-filers*. Additionally, our results show that Chapter 7 offers the most effective relief and is clearly a better outcome than insolvency for most filers. Moreover, the evidence of liquidity constraints restricting access to Chapter 7 bankruptcy for potential filers contradicts the notion in Ausubel and Dawsey (2004) that marginal households would be indifferent between bankruptcy and insolvency.

Conclusion

We show that the main effect of the rise in filing costs associated with the BAPCPA reform was a shift in financially distressed individuals from Chapter 7 bankruptcy to insolvency. We do not find evidence of an increase in the propensity to remain current or to cure debt delinquencies as a result of the reform. We further show that insolvency is associated with a high degree of financial distress in comparison to bankruptcy, suggesting that insolvency would not be the preferred choice for most individuals. This consequence of BAPCPA is potentially welfare-reducing for households. However, since the recovery rates for creditors from insolvent loans should be higher than on bankrupt loans, the reduction in Chapter 7 bankruptcy filings could lead to a potential expansion of supply and to more favorable terms for personal loans. The studies available to date, however, point to increased profits for credit card companies and little evidence that credit conditions for consumers improved (see for example Simkovic (2009)).

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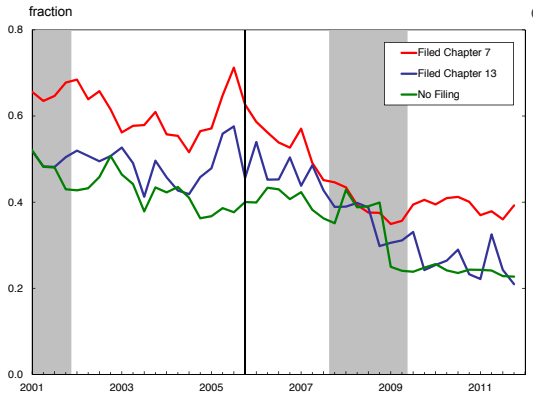
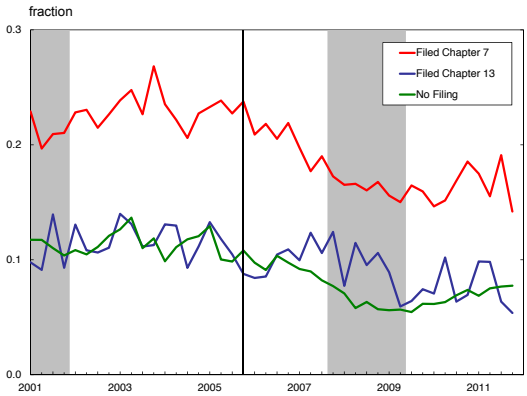
Figure 4: Fraction of individuals who become newly insolvent and

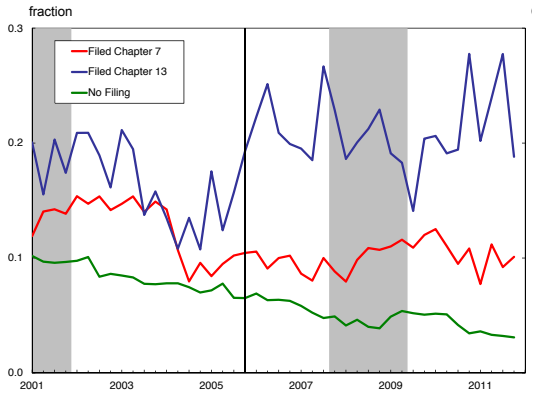
(a) open new unsecured lines of credit



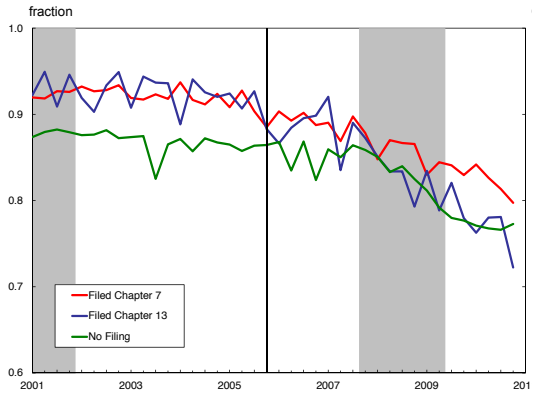
(b) open new auto lines of credit



(c) open a mortgage credit



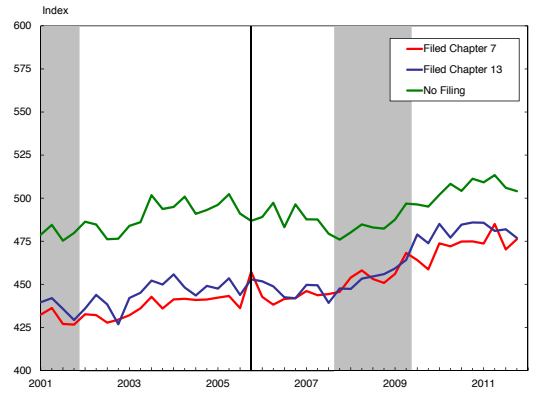
(d) register a new inquiry



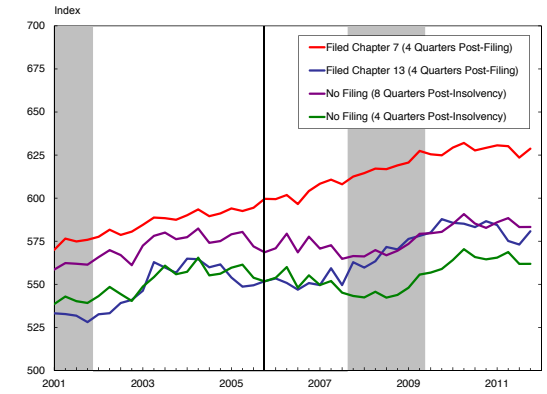
Note: Fraction of individuals who become newly insolvent in each quarter. For *Non-filers*, measured four quarters after the new insolvency. For filers, measured four quarters after filing for bankruptcy. Shaded regions correspond to NBER recessions.
Source: Authors' calculation based on Federal Reserve Bank of New York's Consumer Credit Panel/Equifax Data.

Figure 5: Credit score for individuals who become newly insolvent

(a) at insolvency



(b) four or eight quarters after filing



Note: Credit score for individuals who become newly insolvent in each quarter, if they do not file for bankruptcy in the next eight quarters, and by chapter, if they file.Shaded regions correspond to NBER recessions.
Source: Authors' calculation based on Federal Reserve Bank of New York's Consumer Credit Panel/Equifax Data.