I Z A Institute
of Labor Economics
Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 11032

Households Debt Restructuring: The Re-default Effect of a Debt Suspension

Henri Fraisse

SEPTEMBER 2017

I Z A Institute
of Labor Economics

Initiated by Deutsche Post Foundation

DISCUSSION PAPER SERIES

IZA DP No. 11032

Households Debt Restructuring: The Re-default Effect of a Debt Suspension

Henri Fraisse
Banque de France and IZA

SEPTEMBER 2017

IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

Households Debt Restructuring: The Re-default Effect of a Debt Suspension

When facing financial distress, French households can file a case to a "households' over-indebtedness commission" (HDC). The HDC can order an immediate repayment or grant a debt suspension. Exploiting the random assignment of bankruptcy filings to managers, we show that a debt suspension has a very significant and negative effect on the likelihood to re-default but that this impact is only short-lived. The effect depends not only on the characteristics of the households but also on the nature of their indebtedness. Our results imply that rather than focusing on a specific debt profile, above all a deeper restructuring of the expenditure side is necessary to make the plan sustainable. They also single out specific banks lending to particular fragile households. They indicate the importance of policy actions on budget counseling, as well as the importance of regulation of credit distribution to avoid both entering into bankruptcy and re-filing for bankruptcy.

JEL Classification: D, G2, K35
Keywords: bankruptcy, household finance, default, debt restructuring

Corresponding author:
Henri Fraisse
Banque de France
ACPR-DE-CR
53 Rue de Chateaudun
Paris 75009
France
E-mail: henri.fraisse@banque-france.fr

During the last financial crisis, the indebtedness of households reached levels that had not yet been experienced on a worldwide scale. The household debt-to-income ratio exceeded 200% in Ireland, the Netherlands and Denmark in 2010, and was approximately two times higher in the United States compared with ten years before (115% versus 62%).[1] A similar trend has been observed for nations with lower household debt levels. Although it remained below 100%, the debt ratio increased by more than 20 percentage points over the last decade in countries such as Belgium, Italy and France. Increases and high levels of indebtedness are typically interpreted as signs of higher financial vulnerability, often resulting in an increasing number of personal bankruptcies. Indeed, the US experienced a record high of 1.53 million bankruptcies in 2010, and 220,000 French households filed for consumer bankruptcy in the same year, in contrast to 150,000 households ten years earlier.

A large strand of the literature on bankruptcy has investigated the optimality of certain features of such legal procedures. A legislator must strike the right balance between the protection of debtors in financial distress and the protection of creditors to ensure the proper functioning of the credit market. Beyond the debate on the establishment of an *Ex ante* "optimal" bankruptcy regim, a large number of policy initiatives were launched to ease the restructuring of household debt following the financial crisis. [2,3] *Ex post*, one prominent question is what the optimal level of debt relief—which lowers the risk of re-default and ultimately leads to an increase in the expected value of the repayment —should be.[4]

In this paper, we investigate how does debt relief —one of the main tools that is used in modern bankruptcy—affect the long term probability of re-filing for bankruptcy. For each case that is under review, a French Household Debt Commission (HDC hereafter) may pursue several courses of action: 1) to order a

restructuring plan with immediate repayment, 2) to order a restructuring plan with a two-year grace period, 3) to grant a full debt discharge or 4) to simply reject the case. [5] To simplify the analysis, we associate bankruptcy files with two potential treatments: an immediate repayment, or a two year suspension of debt repayment of at least two years. This paper uses a new data set of approximately 100,000 French first-time filers whose cases were terminated in 2008. Our data enable us to determine whether or not these filers "re-filed" for bankruptcy by the end of 2015. Furthermore, our empirical strategy exploits the fact that files are randomly allocated among file managers within a local HDC, and that some file managers consistently decide more favorably towards either households or creditors. Using file manager "leniency" as an instrumental variable for bankruptcy decisions, we are thereby able to estimate the impact of a two year suspension of debt repayment on the propensity to re-default for the borderline cases or "marginal" filers, whose bankruptcy treatment appears to be a close call (and thus rests heavily at the whim of the respective case manager).

The instrumental variable approach allows for the estimation of a causal effect by controlling for unobserved characteristics such as financial literacy, job prospects or family background that could explain both the bankruptcy decision and, consequently, the propensity to re-default. Identification strategies that are similar to ours, such as those based on a random allocation of files among case managers with different tendencies, have been used to answer various related empirical research questions.[6] As noted by White and Li (2009), the French bankruptcy regime is much more severe and has much stricter repayment requirements than the US regime. The legal environment provides little incentive for strategic default in response to house price drops. The restructuring process primarily addresses unsecured debt which the civil code obliges the household to repay. [7] The HDC should be preliminarily considered as a policy tool that is designed to fight poverty traps by mostly restructuring items such

as unsecured debt utilities, payday loans and unpaid rent. [8] Dating back to 1990, the French institutional setting has been rather unique in this respect and thus provides an interesting program to study in comparison with other European countries without such a scheme (Italy, Spain, Greece).

Our analysis yields several important results. First, we find that a grace period has a very significant and negative effect on the likelihood to redefault but that this impact is only short-lived. Within the population of bankrupts who did not re-default after four years, the grace period did not further disincentivize repayment nor give sufficient relief to relatively decrease the risk of re-default. Further, the cross sectional heterogeneity conveys two interesting results. First, we find the likelihood of re-default to be mainly driven by the share of income that goes to living expenses, implying that a balanced budget should be the primary objective of the restructuring plan, regardless of the level of indebtedness. Second, lenders specialized in payday loans, or loans distributed in supermarkets, are associated with a deeper negative impact of the grace period on the re-default rate.[9]

Previous economic studies have mainly focused on the credit-debtor protection trade-off present in personal bankruptcy systems. Internationally, different legal systems that govern personal bankruptcy laws strike different balances between the objectives of creditor protection and debtor protection. The American system, for instance, even after adopting the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) in 2005 which imposes pro-lender restrictions on bankruptcy filings, remains relatively debtor-friendly compared with French and German jurisdictions. A related strand of the literature has sought to describe the main features of efficient bankruptcy law systems. These studies have explored both microeconomic theory (Wang and White, 2000) and macroeconomic dimensions

(Arthreya, 2002; Livshits et al., 2006) to illustrate the *ex ante* trade-offs between creditor and debtor protection.

As underscored by Han and Li (2011), who focused on *ex post* bankruptcy borrowing, little is known about households' behavior after bankruptcy. In recent years, a few empirical papers have begun investigating the issue, although most have focused on mortgage repayment in the United States (Agarwal et al.,2011; Adelino et al., 2013; Mayer et al., 2014, Agarwal et al.,2017). In the bankruptcy literature, Dobbie and Song (2015) and Dobbie et al. (2015) use an identification strategy similar to ours to measure the impact of the US Chapter 13 bankruptcy protection on subsequent outcomes such as employment, home foreclosure or mortality. The impact is assessed with respect to the absence of bankruptcy decisions as well as the granting of a filing under Chapter 7. Our paper instead assesses the impact of bankruptcy decisions within the population of bankrupts, focusing on households' subsequent financial sustainability. Distinct from the body of work analyzing the effects of bankruptcy protection, this work contributes to the parallel question of how restructuring affects the likelihood to re-default—addressed until now only within the American jurisprudential framework of mortgage restructuring (Haughwout et al., 2016). We examine a historically pro-lender jurisdiction and solely consider unsecured debt, contrasting a non-American case with previous results in the literature.

The remainder of the paper is organized as follows: Section I presents the institutional background of the French legal system, with a particular emphasis on the case allocation mechanisms among case managers. Section II describes the data and provides descriptive statistics. Section III presents our identification strategy, and Section IV contains estimates of the re-default effect of a two year suspension of debt

repayment. Section V discusses the main results and presents some policy implications. Section VI provides concluding remarks.

I. Institutional background

A. An overview of the French bankruptcy system

In France, households that face financial difficulties in meeting their debt obligation can file for bankruptcy with a Household Debt Commission. The bankruptcy process begins with the household filing a bankruptcy petition and providing the HDC with a detailed statement of earnings, expenditures, assets and liabilities (see Figure 1). The HDC is then in charge of establishing a debt resolution scheme, which is subject to a formal approval by a judge. Before accepting the request, the HDC verifies that three conditions are met: 1) the indebted household must be unable to clear its debts, 2) the debt must not be due to the homeowners' professional activities and 3) the household must file in good faith. [10] In case of rejection, the household may re-file for bankruptcy later on without any restrictions.

Once a case has been accepted. The HDC then decides between several procedures depending on the level of indebtedness. For relatively low levels of indebtedness, the HDC encourages creditors and debtors to agree on a settlement plan. If no agreement is reached, the HDC recommends a plan to the judge which, once approved, is imposed upon the creditors and the debtors. For relatively moderate levels of indebtedness, the HDC may also propose that a judge order a two-year suspension of debt repayment.[11] Finally, for the highest levels of indebtedness and upon the approval of the household, the HDC may ask that the judge proceed to a liquidation of the household assets, and that the household benefit from a total debt discharge.

Insert Figure 1 about here

The households or the creditors may notify the judge who is in charge of validating the HDC decision and ultimately appeal if they disagree with the final decision. However, this is rare; in 2014, 230,935 households filed or re-filed for bankruptcywhile only 7,537 households and individual entrepreneurs combined appealed the bankruptcy decisions.

There are strong incentives to comply with the modification plans that are established between the parties or imposed by the judge. If a household does not respect the terms of the plan, it loses the benefit of the collective procedure, and each creditor can then individually sue the household. To control the borrowing behavior of households during the plan's implementation period, each new loan is subject to the approval of the HDC. In addition, the household is red-flagged on a national credit register during the implementation period, potentially even remaining there for eight years after having been granted a total discharge. In practice, a household on this register does not have access to new loans.

B. Case managers

The HDCs are organized under the supervision of the Banque de France. At least one commission is present in each of the French "*départements*".[12] They are chaired by the local state representative ("préfet" or "sous-préfet") or a representative of the French Treasury. The HDCs are composed of representatives of the creditors (bankers, utility providers or tax collectors), representatives of the debtors and a representative of a consumer organization. There are 118 HDCs throughout the French territory. [13] HDCs are the only entry point into the judicial process; no "forum shopping" is possible.

The HDC only focuses on the most difficult cases. Given the case load of each HDC and the age of the program (approximately 25 years old), the vast majority of cases are processed at the case manager level, and the only role played by the HDC or the judge is to formally validate the case manager's work.

The case manager first studies the legal admissibility of the case. Once the case has been declared admissible (in 95% of cases), the case enters the resolution stage. All of the individual judicial pursuits set forth by creditors are then extinguished and merged into one single collective pursuit. The task of the case manager is to then establish a plan that will be proposed to the HDC after collecting information from the bankrupt household and its creditors. The initial debt structure of the household is sent to each creditor in contact with case manager, who negotiates to restructure the creditor's line. Thereafter, the case manager attempts to reach an agreement before the case is formally brought before the commission. The case manager may consider the financial situation of the household as being "compromised," in which case he or she proposes that the HDC grant either a two-year moratorium on its debt or a liquidation of its assets together with a total discharge. [14]

The French government entrusts the Banque de France with the management of the 118 HDCs. This mission is formalized by a contract with the French Treasury, to whom the Banque de France must justify their annual budget for HDC oversight. In this respect, the productivity of each case manager is closely monitored; in recent years, performance-based pay has been introduced at the individual level.[15] This remuneration scheme is tied to the number of cases that a case manager is able to process without taking into account the *ex post* outcomes of the cases, as noted in the report of the HDC system compiled by the French Court of Auditors (2010). [16] To avoid conflicts of interest, Banque de France's branch managers are therefore asked to

implement a random allocation of the cases. In practice, this is achieved by assigning the files to case managers on a rotational basis. On-site inspections by the Banque de France auditors take place to ensure the randomization of files at the local level. It is also important to note that a case manager does not meet with the households; he or she therefore has a limited influence on a household's behavior beyond the bankruptcy decision.

In our sample, there are 1,296 case managers who have handled, on average and in comparison with the empirical literature using this identification strategy, a relative high number of cases each (see table 1). In addition, there are important within-HDC variations in the propensity of the case managers to grant a debt suspension. A quarter of the case managers grant a suspension of debt repayment at a rate 7.2 lower than their peers in the same HDC (see Table 1). This allows for a meaningful statistical analysis in exploiting the cross variation in the leniency of the managers and the random allocations of the files across managers within a single HDC.

Insert Table 1 about here

II. Data

A. Data Sources and Sample Construction

The Banque de France's staff uses a computer-assisted management tool to keep track of the changes in bankruptcy files during the negotiation process. This tool stores information on the latest debt modification projects together with household and creditor characteristics. Our analysis is conducted on these individual administrative files, which were collected by the Banque de France from mid-2007 to 2010. Both pending and closed files are therefore present in the dataset, for a

total of 570,173 files. Each file contains information on the household's resources, wealth and debt. The characteristics of the pending repayment plan are available, as well as the stage at which the file currently stands in the legal procedure.

Starting from our dataset of 570,173 files, we obtained the identifiers of the managers that closed the files in 2008 and we restrict our analysis to the cases that were closed in 2008 for households that filed for the first time between 2007 and 2008 (94,899 files). Second, we exclude the households for which cases were rejected on the grounds that they were under the scope of corporate bankruptcy (1,250 files). Third, we discard some obvious outliers (7,401 files) with respect to the last centile for some variables (age of the filer, number of creditors and total debt, number of files handled per manager). Fourth, since our identification strategy is based on the propensity of case managers to recommend a repayment, we drop case managers with fewer than ten cases (1,414 files). Similarly, since our identification strategy relies on the random allocation of cases among case managers,we drop the HDCs for which cases were systematically assigned to a single case manager (88 files) as well as those with missing values in our set of controls (241 files). In the end, our final dataset contains 84,505 files.

B. Measure of re-default

Once the case has been examined by the HDC, a unique identifier is created for each household. This identifier is matched in a confidential database with key information such as first name, last name, date of birth and place of birth taken from national identification. When a household files for bankruptcy, thanks to this information the manager checks whether this is a refiling or not and stores the date of refiling. We had access to all the identifiers of households who refiled between 2008

and December 2015. We matched these identifiers with the identifiers of the cases that were terminated in 2008. We consider a household as "re-defaulting" if its case was terminated in 2008 and its identifier appears in the dataset of the identifiers of the refiling cases from 2008 to December 2015.

Our measure of re-default therefore captures the long term "sustainability" of the bankruptcy plan that were made in 2008.[17] Whatever is the outcome of the bankruptcy process, a re-default rate can be computed as the HDC keeps track of the household that files once and an household is always allowed to refile. Re-default is much more prevalent when a repayment has been ordered but might happen even in case of a total liquidation or a rejection (see table 3). For example, a household has been rejected because it was considered that it could sell some assets to expunge its debt. It might refile if its overindebtedness endures. Even when benefiting from a total discharge or a suspension of debt repayment, an household might refile because it is still unable to balance its budget or because it is hitten by another financial adverse shocks. Note that if the file is accepted and therefore leads to a restructuring of some sort (liquidation, grace period) the identity of the household is then placed on a national register ("FICP register") for a duration corresponding to the maturity of the restructuring plan and for 5 years in the case of a total liquidation. This register is made accessible to the banks.

C. Descriptive Statistics

Household Characteristics

In our sample, the typical bankruptcy filer is a 46-year-old person who is part of a couple and is a tenant with a long-term job contract (see Table 2). His or her monthly

net income aggregated at the household level amounts to EUR 1,357, i.e., approximately one monthly minimum wage, while monthly expenditures amount to EUR 1,278 on average. The French National Statistic Institute, in line with its European counterparts, measures the poverty threshold as 60 % of the median standard of living. This measure is adjusted depending on the number of dependents and their age within the household, although we do not know the age of the dependents in our dataset. For illustration, in 2008, the poverty line was EUR 1,017 for a single person. [18] In our data, 53% of the single person households are below this line.

Note that the manager can also advise restructuring the expenditure side, and that data regarding expenditure level is gathered before this restructuring.[19] Lastly, we note that job loss is a frequent initial cause of financial distress; 33% of filers are unemployed as compared to 4% in the general population (above 16 years of age).

Insert Table 2 about here

Debt Characteristics

The debt of bankrupt households is on average 1.7 times their yearly total net income, which is almost four times that of the national average. On average, this debt is spread over eight creditors, which illustrates the prevelance of over-indebtedness beyond just mortgage debt. Indeed, in comparison with other countries such as the United States, a noticeable feature of over-indebtedness in France is the very small share of bankrupt households that are homeowners (5% versus 60% of homeowners in the whole population). The regulation of the mortgage market thus is not as pertinent as in Spain or in the United Kingdom (in terms of Europe) for debt relief concerns. [20] Only 3% of over-indebted households have a housing loan, compared to approximately 25% for the population as a whole. [21] Among the bankrupt households, 80% are tenants.

As noted by Brunner and Krahnen (2008), in the corporate context, the success of a restructuring plan can stem from the differences among creditor types and their dispersion. In our sample, non-bank debt represents 28% of total debt. Table 3 shows on average an equal number of banking and non-banking creditors. In our analysis, we will use a Gini index to capture the dispersion in the amount of debt across the pool of creditors.

By using a calibrated model for the United States, Livshits et al. (2006) show that in recent decades, the large increase in revolving debt in the United States has been a key determinant of the increase in bankruptcy filings. Skiba and Tobacman (2008) reinforce these findings with a causal study based on American individual-level administrative records of payday borrowing. Our data move in the same direction: consumer credit is indeed involved in 90% of the files, amounting to approximately two-thirds of the total amount of debt. To give an order of magnitude, according to the European Community Household Panel, which provides an assessment of the indebtedness of a sample of representative households of the French population, approximately 35% of French households had a non-housing outstanding loan in 2007. Given the importance of consumer credit in the bankruptcy files, our analysis considers bank dummies that correspond to banks that have granted consumer credit to households. We select the 18 largest providers of consumer credit (called “banks” hereafter) in terms of occurrence in our sample. The least and most frequent provider are present in 3 percent and in 22 percent of the files, respectively.

Insert Table 3 about here

Causes of personal bankruptcy

The causes of personal bankruptcy reported by case managers provide a more direct assessment than the debt structure alone. In our data set, these causes are divided into

12 sub-categories grouped into two main categories : poor money management (excessive number of credits, fiscal arrears, rent arrears,…) and adverse event (lay off, long term disease, divorce,…). While a previous consensus held adverse events to be the main cause of bankruptcy filings, this view has been challenged in the literature (White, 2007). In France, however, adverse events are indeed the most common causes of bankruptcy (see Table 3).Poor money management also plays a non-negligible role, occuring in 27% of the cases. These findings are consistent with US data from surveys of bankruptcy filers (see Sullivan et al., 1999).

Bankruptcy outcomes

We summarize the various bankruptcy decisions into a single variable: a dummy that equals one if the household benefits from a two year suspension of debt repayment following the termination of its case, and zero otherwise. This variable thus would equal zero for households whose file is rejected and one for households that benefit from a total discharge. A total of 44% of households in the sample benefit from a two year suspension of debt repayment. The long-term re-filing rate is 38% on average, reaching 48% among households that have been ordered to repay and 25% among households that have benefited from a two-year grace period (see Table 3).

II. Identification Strategy

We want to assess the causal impact of a two year suspension of debt repayment on their likelihood to re-default in the long term. However, a judge's order of suspension is likely to be endogenous; for instance, a household's unobserved characteristics such as financial literacy, job prospects or family background can jointly determine whether it benefits from a suspension of payment, as well as its likelihood to re-

default. To remedy this issue, we use variations in the orders of two year of suspension of debt repayment that are generated from the random assignment of case managers as an instrument to estimate a causal impact. Our baseline instrumental variables (IV) model can be described by the following two-equation system:

$$SP_i = \theta Z_{icj} + X_i\alpha + \gamma_c + \varepsilon_i \quad (1)$$

$$Y_i = \beta SP_i + X_i\delta + \gamma_c + \eta_i \quad (2)$$

SP_i is a dummy variable equal to one if the household benefits from a two year suspension of debt repayment and zero otherwise. The instrument Z_{icj} denotes the leniency measure of the case manager *j* of the HDC *c* to whom household *i* was assigned. Y_i is a dummy variable that is equal to one if the household re-files during the seven years following the decision. γ_c is an HDC fixed effect, and X_i includes a wide range of household and debt characteristics. We cluster standard errors at the HDC level.

Following Doyle (2008), the instrument Z_{icj} is defined as the leave-one-out fraction of two year suspension of debt repayment that is ordered by the case manager *j* minus the leave-one-out fraction of two year suspension of debt repayment ordered by his HDC *c*.

$$Z_{icj} = \frac{1}{n_{cj}-1}\left(\sum_{k=1}^{n_{cj}} IR_k - IR_i\right) - \frac{1}{n_c-1}\left(\sum_{k=1}^{n_c} IR_k - IR_i\right) \quad (3)$$

n_{cj} is the number of the cases that are treated by the case manager *j*, while n_c is the number of the cases that are treated in the HDC *c* to which the case manager *j* is not assigned. Our instrument is therefore a measure of "leniency" of the case manager relative to his peers within the HDC.

Our instrument displays large variations within a given HDC: the standard deviation of Z_{icj} is 0.14 (see Table 1). Such variations illustrate the significant discretionary power that is granted to case managers, given their random initial allocation. This

discretionary power may stem from the blurred legal definition of over-indebtedness in the civil French code.

Our instrument must meet several conditions for a valid causal interpretation of the IV estimates. First, the case manager leniency must be associated with the decision to grant a suspension (“relevance”). Second, the case manager leniency must impact the probability of re-default only through the probability of receiving a debt suspension (“exclusion restriction”). Third, it must be uncorrelated with case characteristics (“random assignment”). Finally, it must satisfy the monotonicity assumption: any household that is ordered to repay by a lenient case manager would also be ordered to repay by a strict one, and any household that is not ordered to repay by a severe case manager would not be ordered to repay by a lenient case manager (“monotonicity”).

Table 6 displays the results of the first stage of our instrumental regression. The case manager leniency is shown to be highly predictive of the probability that a household will benefit from a debt suspension. A one standard deviation increase in the case manager leniency (14 percentage points) increases the probability to be ordered a debt suspension by 7.5 percentage points. This impact is strong; all else equal, it is comparable to the effect of a 65 percentage point decrease in earnings.

While we interpret our instrument as a leniency measure, one might claim that a more lenient case manager might also simply be better at collecting and processing soft information about the households. Under this hypothesis, better soft information would systemically coincide with a decision biased toward the debtor. For increased robustness, we additionally propose an indirect test of this interpretation: assuming that a longer processing time corresponds to more intensive effort to collect information and to reach a settlement between creditors and debtors, we check whether processing time has an impact on the bankruptcy decision. Given the starting and ending dates of the procedure for each file, the time that is spent on given a case

is known: on average, it takes 244 days to close a case, with a standard deviation of 87 days. Following Autor et al. (2015), we compute each case manager's average resolving time and test its statistical significance in the first stage regression. We find that the inclusion of a case manager's resolving time does not change the first stage estimates.[22] In addition, when including both manager leniency and processing time in the reduced form regression, the parameter associated with manager leniency does not change significantly. The absence of any personal interaction between case managers and filers should guarantee the validity of the exclusion restriction.

A final criterion necessary for the validity of our instrumental variable is the lack of correlation between case assignment and case characteristics, although in theory our institutional features and performance-linked policy should result in the random assignment of cases to managers. Since the seminal paper using this type of identification strategy by Kling (2006), a wide range of tests have been proposed in the literature to check whether files are randomly allocated across managers. Such tests can be classified in three types. Tests of the first type check whether the inclusion of case characteristics in the first stage regression substantially modifies the parameter associated with manager leniency. [23] Tests of the second type check whether files' caracteristics are evenly distributed across managers, which translates to mean testing case characteristics between low and high leniency managers, or across case managers' fixed effects. [24] Tests of the third type check whether case characteristics predict manager leniency. We perform all three types of tests. [25]

The first stage estimate associated with the instrument are significantly lower when including controls. Certain case characteristics are correlated with the instrument, and some local areas with statistically distinctive levels of bankrupts present a higher variability in case manager decisions, which may weigh more on the regression outcomes. Nevertheless, the IV estimates without any controls are not statistically

different from the ones where all the controls are included (see Table 4A and Table 6 for a comparison with our baseline regression described in the next section). Lastly, the reduced form estimates are very similar with or without controls.

We perform mean tests for case characteristics across case managers' fixed effects. When regressing each file characteristic on an exhaustive set of managers' fixed effects, these fixed effects appear to be statistically different according to p-values computed from a joint F-test. It should be noted that we have a single year of data regarding managers' decisions, while most of the papers previously mentioned (except Maestas et al. (2013)) have several years of observations. Further, the characteristics of the filers are different from a local area to another, and we are not able to control for local area fixed effects. [26] Therefore, at the aggregate level, a randomization test will be plagued by the non-randomization of files across areas (even though they are randomly allocated within an area). Still, when we perform the same test at the commission level, for every characteristic, our results confirm the proper randomization of the cases across managers in, on average, more than 90% of the Commission (see column 3 of Table 4B).[27]

Next, we regress manager severity on file characteristics.[28] Most of our variables are not significantly related to manager severity (see column 1 of Table 4B), but a few are. In order to check whether our analysis is robust to potential endogeneity problems, we proceed to the following test: we run a regression predicting manager severity by file characteristics for each HDC. If the F-test for a joint nullity of the parameters associated with the case characteristics is below 10%, we classify the HDC as "non-randomized"; otherwise, it is placed in the group of "randomized" HDCs. We find that about half of the commissions can be considered as randomized by this measure. We then reproduce our baseline regression—detailed in the next section—adding a "randomized commission" dummy which is interacted with the

bankruptcy decision and the file characteristics. We find that bankruptcy decisions do not differently impact re-default across the “randomized” and “non-randomized” commissions, and that file characteristics do not differ across “randomized” and “non randomized” HDCs (see column 3).

All in all, we conclude that the allocation of the files is plausibly random in each HDC: the IV and the reduced form estimates of the bankruptcy decisions are the same whether we include the file characteristics or not. Furthermore, the characteristics of the files do not substantially differ from one manager to another, and tend to have poor predictive power on manager leniency.

Insert Table 4A and Table 4B about here

Finally, one testable implication of monotonicity is whether case managers who are lenient toward one group of households are also lenient toward other households outside of that group. Conditioning the sample on filer-level observables (e.g., age, gender) and running the first stage on each subsample, we observe that the sign and the magnitude of the first stage parameter associated with the manager leniency do not substantially change across sub samble (see Table 5).

Insert Table 5 about here

III. Results

We first detail the causal impact of debt repayment on the long-term probability of re-default. We then look at the size and characteristics of the filers who are on the margin of being ordered an debt suspension. This group is of particular interest because these filers would be disproportionately affected by policy changes that address the leniency level of the bankruptcy decision. We further measure how the impacts differ over the years following the bankruptcy decision and how they depend

on the characteristics of the filers. Finally, we test for heterogeneous marginal treatment effects.

A. Main Estimates

In Table 6, we report the two-stage least squares estimates for the probability of re-default, which provides the causal effects for the filers who are on the margin of being ordered a debt suspension. They are juxtaposed to the OLS and the reduced form estimates. In each of the models, we control for geography (HDC indicators), a large set of household demographics, housing tenure, household income, current expenditures and debt characteristics. The causes of bankruptcy are excluded from the set of controls as we suspect this information to be contaminated by the case manager's subjective judgment.

Insert Table 6 about here

We find that granting a household a two year suspension of debt repayment significantly and strongly decreases the likelihood of a re-default. A suspension of debt repayment leads to a 36.9% decrease in the probability of a re-default over the seven years following the bankruptcy decision of the marginal household. The OLS estimate, although still large, is significantly lower in absolute terms (21.8 percentage points); unobservable characteristics that lead to a household benefiting from a debt suspension have a positive impact on the probability of re-default. The case manager therefore has at his disposal a set of characteristics that are unobservable to econometricians which jointly make the case manager less strict and the households more likely to re-default. Our instrumental approach allows us to correct for this visible endogenous selection of repayment.

Figure 2 reports the magnitude of the impact of the suspsension over the years that follow. The suspension appears to have a significant impact in first four years on the probability of re-default, reaching its peak in the second year following the decision. Five years after the decision—conditionally on not having previously re-defaulted—the probability of re-default is the same whether or not the household benefits from the grace period. For these households, the grace period therefore does not further disincentivize repayment, nor give sufficient relief to further decrease the risk of re-default.

Insert Figure 2 about here

When marginal cases are assigned the most lenient case manager within their HDC, we see that the predicted probability of benefiting from a two year suspension of debt repayment, from the estimates of the first-stage regression, is 61.5%. A total of 38.5% of filers would be denied a suspension regardless of the case manager ("never takers" in the terminology of the policy evaluation literature). When the filers are assigned the stricter case manager within the HDC, this predicted probability falls to 33%. In other words, 33% of filers would benefit from a suspension regardless of the case manager to whom they are assigned (i.e., "always taker"). Therefore, 28.5% of filers are the most likely to be affected by a change in the severity of the HDC.

Table 7 shows the first-stage and second-stage estimates when the re-default variable is interacted with dummies corresponding to the categories of a given characteristic. This allows us to assess the statistical significance of these different coefficients. For example, the "marginal entrant" is more likely to be in the middle range of the income distribution. Consider now a policy change that uniformly increases the leniency with which managers handle cases. The first stage estimates do

not vary as much among banks (from 0.47 to 0.56), which suggests that this increased leniency would broadly harm all banks equally. The customers of bank A will not get more grace periods than the customers of bank B following an increase in managers' leniency. This would have a relatively smaller impact on households with a level of total debt or banking debt in the top quartile of the distribution. By contrast, this would strongly impact the households in the upper range of the expenditure rate.

These types of compositional changes could have important policy implications: if higher severity will less often place in suspension of debt repayment those households more subject to money management issues (and not necessarily households that are more indebted or poorer), then budget counseling policy should be more implemented in order to avoid perpetuating a debt trap.

Insert Table 7 about here

B. Heterogeneity in the Effect of IR on re-default

Our main estimates imply that the re-default rate of filers who benefit from an debt suspension would have been 36.9 percentage points higher in the absence of the debt suspension, although we might expect this effect not to be the same for all such filers. The differences in re-default rate among households, as well as difference in the composition of their debts, could be due to differences in both observable and unobservable.

Table 7 presents the two-stage least squares estimates for a wide range of household and debt characteristics. We now interact the outcome variable with dummies for each quartile or sub-categories and run the 2SLS on the whole sample, observing higher re-default effects for the population of filers who are in more dire financial straits. Unemployed filers with very low incomes and higher levels of indebtedness are

substantially less likely to re-default following a suspension of debt repayment. Neither the number of creditors, however, nor the dispersion of the debt—in sum, the overall debt structure—seem to lead to significantly different re-default effects, disconfirming the debt juggling phenomenon observed in the U.S. jurisdiction. The collective restructuring that is offered by the bankruptcy process seems to compensate for the relative higher financial fragility of households with atypical debt structures.

One key driver of heterogeneous effects is the expenditure rate. Low levels of expenditure rates are related to a non-significant effect, whereas the likelihood to re-default is 67% lower following an suspension for the population in the top quartile of the expenditure rate distribution in comparison with the bottom quartile (see Table 7). This again underscores the necessity of a strong "expenditure restructuring" to make a debt restructuring successful. We further observe noticeable heterogeneous effects among banks. Following a suspension, a customer of the bank K has a 3 percentage point lower probability to re-default than a customer of the bank M (see figure 3).These resuts suggest that some banks target more financially fragile households. We do not have enough banks (18) to run a meaningful statistical analysis relating this behaviour to banks characterisitcs. However, it is worthnoting that those banks -that are specialized in on-line banking or in distributing credits in supermarkets- have specific business models with laxer screening of credits.

Insert Figure 3 about here

The differences in re-default effects among filers could be due to differences in unobservable characteristics such as financial vulnerability. Thanks to our research design, we are able to compute marginal treatment effects (MTE) to assess how the two year suspension of debt repayment effect would vary in correlation with

unobserved characteristics (see Heckman et al., 2006). The MTE in our case is the marginal benefit of a grace period conditional on the characteristics of the file and the propensity to be ordered immediate repayment. We interpret the propensity to be ordered immediate repayment as a measure of unobserved financial fragility. [29]

Figure 4 shows the MTE as a function of this unobserved financial fragility. For marginal filers with low levels of financial fragility (and therefore high propensities to be ordered immediate repayment), the re-default effect of a grace period is negative and significantly different from zero but much less pronounced than for marginal filers with high levels of financial fragility. While they appear to decrease as unobserved financial fragility increases, the MTEs are not estimated precisely enough to conclude that the MTEs for the filers in the upper range of financial fragility are significantly different from the those of the filers in the middle range who form the population of marginal entrants.

Insert Figure4 about here

IV. Discussions

A. *Case manager leniency as a policy variable*

Our instrument—case manager leniency—displays large variations within a single HDC. Guided by the principle of equal treatment under the law, one policy action should be to decrease these variations by limiting the discretionary power that is given to case managers. From the first-stage estimates, we can observe that shifting from a strict manager (i.e., in the bottom quartile of the two year suspension of debt repayment rate distribution) to a lenient manager (i.e., in the top quartile of the distribution) leads to an increase of 7 percentage points in the probability of

benefiting from a suspension.[30] Using the reduced form estimates, the same increase will translate to a 2.6 percentage point lower probability to re-default in the long term. In 2008, the discretion that was given to case managers thus lead to a substantial variation into bankruptcy decisions and outcomes.

B. Efficiency of the bankruptcy regime

In the American case, the literature that is based on non-experimental settings has not identified a substantial impact of bankruptcy protection on financial health. Our results contrast with this literature, instead proving more consistent with the recent findings of Dobbie et al. (2015) that bankruptcy protection matters. In the French case, by granting a two year suspension of debt repayment, the HDC substantially decreases the financial vulnerability of the households at least in the medium term.

Another conclusion can also be drawn from our results. By law, the HDC has the obligation *ex ante* to filter out promising cases from lower quality cases with respect to their ability to repay. [31] Within the marginal population of filers, we observe that increased leniency from the case managers decreases the short term probability to re-default but does not further disincentivize repayment. Therefore, it would be more efficient to align leniency levels with those of the more lenient managers. At the same time, this should ensure equality before the law, decrease re-default in the short term while leaving the ability to service the debt in the long term unchanged. These results would hold under some assumptions. First, creditors should prefer a grace period combined with a higher repayment in the long term rather than an immediate but more risky repayment. Second, more lenient decisions should not change the quality of the cases brought to the bankruptcy courts. A decrease in severity could indeed play an

important role in a general equilibrium framework, since it must be balanced with moral hazards effects in the distribution of credit.

Given that case managers filter out so-called “strategic cases” because of the obligation to file in good faith, credit rationing resulting from excessively lenient bankruptcy decisions should be limited. In regards to creditors, some evidence suggests that spillover effects to credit markets to be small, at least for key players of payday loans. For example, in the case of one of the market leaders for this type of loan, non-performing loans account for only 2% of its outstanding loans. As a preliminary analysis, running equations (1) and (2) separately at the *département* level and to recover the *département* fixed effects, we find no significant correlation between these fixed effects and the growth of consumer credit, housing credit, housing prices or the unemployment rate averaged over different time periods. This result holds for the period preceding the bankruptcy decision (2001-2008), the period that followed the bankruptcy decision (2009-2015) and the entire period. The interactions between local market characteristics and HDC decisions could benefit from further investigation. In particular, the effects on the more financially constrained households that might not have been visible at the aggregate level need merit additional analysis.

V. Conclusion

This paper looks at the *ex post* re-default effects of the debt restructuring scheme on French households using a unique dataset that provides the entire debt composition for each over-indebted household. The empirical strategy is based on the effective randomization of cases to their respective case managers, who then vary in

accordance with the leniency of their decisions. This enables us to estimate the effects of a two year suspension of debt repayment on re-default over a long-term period following the initial decision.

We first confirm the proper randomization of cases among case managers. Next, we find strong differences among case managers in the propensity to grant or deny a deferral. The assignment to a lenient manager has a similar impact on the probability to benefit from a deferal as having 65% lower household earnings.

We then find that a debt suspension leads to a causal 36 percentage points decrease in the probability of a re-default over the seven years following the bankruptcy decision of "marginal" cases. The debt suspension, however, seems to offer only temporary relief: five years after the initial decision, conditionally on having not defaulted before, households that benefited from a grace period present the same likelihood to re-default as others. Filers on the margin to receive a debt suspension (i.e., those who are more subject to a uniform increase of the severity of the bankruptcy decision) are in the middle range of income and undebtedness but on the top of the expenditure rate distribution. The stronger negative re-default effects of a debt suspension occur among the unemployed, low-income earners and the more indebted. The *ex ante* expenditure rate is a key variable to explain heterogeneous effects. Together, these facts would suggest that rather than focusing on a specific debt profile, above all a deeper restructuring of the expenditure side would be necessary to make the plan sustainable. Our results also single out specific banks lending to particular fragile households. In sum, these results indicate the importance of policy actions on budget counseling, as well as the importance of regulation of credit distribution to avoid both entering into bankruptcy and re-filing for bankruptcy.

Our paper calls for the use of a score in the bankruptcy procedure to increase the standardization of case managers' decisions. Indeed, households with otherwise

comparable characteristics often receive significantly heterogenous treatment from one case manager to another. Beyond the use of a score, assuming that a primary goal of HDCs is to filter cases based on their respective “quality”, our paper concludes that under some assumptions the commission should be less severe in granting grace period or setting repayment rates.

Within the marginal population of filers, we observe that increased leniency from the case managers decreases the short term probability to re-default but does not further disincentivize repayment. Therefore, it would be more efficient to align severity levels with those of the more lenient managers. At the same time, this should ensure equality before the law, decrease re-default in the short term while leaving the ability to service the debt in the long term unchanged. The general equilibrium implications of such a shift are left for further investigation.

FOOTNOTES

*Corresponding author: Fraisse, Banque de France, 31, rue Croix-des-Petits-Champs 75001 Paris, France (e-mail: henri.fraisse@banque-france.fr). The opinions expressed here are the authors' own and do not necessarily reflect the views of the Banque de France. I thank Anne Muller and Rémy Prom for outstanding research assistance. I am grateful to Georges Overton for his careful reading and numerous comments. Assistance in data productions and explanation on the bankruptcy process were generously provided by Mark Beguery and Marie-Claude Meyling. We benefit grandly from the advice of two anonymous referees as well as Régis Blazy, Frédéric Boissay, Gilbert Cette, Mark Harris, Hervé Le Bihan , Corinne Prost, Patrick Sevestre, David Thesmar, and participants at the EALE conference, the ECB workshop on debt sustainability, the Banque de France research seminar, the 18th International Panel Data conference, the Money, Macroeconomic and Finance conference in Dublin and the 29th GdER Annual International Symposium on Money, Banking and Finance in Nantes.

1. See OECD (2014)

2. See for example "Lingering Bad Debts Stifle Europe Recovery" in the Wall Street Journal of 31 January 2013.

3. To mention a few, the United States launched a federal program – the Home Affordable Modification Program – in 2009 to facilitate the modification of loans that were granted to homeowners who were at risk of foreclosure. In Italy, a moratorium on mortgages was implemented in February 2010. The moratorium expired in March 2013 and has enabled around 100,000 homeowners to suspend repayments. In Spain, the legal framework for housing foreclosure was softened to facilitate the restructuring of the debt of the most financially vulnerable households in 2012. By contrast, France has a long and unique experience of public intervention in household debt restructuring. In 1989, the Neiertz law introduced collective action for creditors by creating Household Debt Commissions (HDCs) to promote ordered out-of-court settlement.

4. A parallel can be drawn between this empirical research question and that of international economists who have been studying the turning point of the so-called "debt Laffer curve" (see Sachs, 1989).

5. France was the second European country (after Denmark in 1984) to design a government intervention in household debt restructuring. For an international overview, see Laeven and Laryea (2009).

6. Kling (2006) assesses the impact of the length of incarceration on employment, Chang and Schoar (2006) study the effect of pro-debtor friendliness on firms' post-bankruptcy outcomes, Doyle (2007) reports the impact of foster care placement on future earnings, French and Song (2011) and Autor et al. (2015) investigate the effect of disability insurance on labor supply, consumption and income, and Aizer and Doyle (2015) identify the effect of juvenile incarceration on high school completion and adult incarceration.

7. White and Zhu (2010) collect data for Delaware and document that 71 percent of filers from a sample of Delaware cases include mortgage arrears in their repayment plans. By contrast, only 6% of the cases in our study include mortgage arrears in their repayment plans.

8. The French home loan market focuses on the most solvent households. Only 30% of households have an outstanding home loan, against a home ownership ratio of 60%, which means that half of home owners are not indebted at all. About one in four French households lives in social housing.

9. These results have been considered by French legislators who previously have passed laws both regulating the provision of payday loans and setting up a national program for financial education ("Loi Lagarde" in 2010, "Loi Hamon" in 2014).

10. Business debt activities fall under the scope of corporate bankruptcy laws.

11. Note that a settlement plan might include a 2-year suspension of payment as well.

12. A "Département" is an French administrative area. There are 102 départements in France. On average, their population is about 650,000 people.

13. There may be several HDCs within a single département.

14. When the HDC grants a suspension, it also suspends interest payments. At the end of the suspension, the amount due is capitalized over the period of suspension at a reference interest rate equal to the yearly average of the 3 month French Treasury bill rate.

15. More productive case managers quickly climb the Banque de France wage scale.

16. Note that we built the data set using administrative records taken from a management tool only designed to store information for the use of case managers and for the computation of productivity indicators. No quantitative analysis is run by the HDC to improve the process (no "credit score" is implemented, for example).

17. When filing for bankruptcy, each household goes through a formal process which lasts on average 244 days. The household can dismiss his file if he is not satisfied with the restructuring plan. In that case, it will no longer benefit from the collective procedure and will be again subject to the individual judicial pursuits of its creditors. In addition, as a national identifier is given to the household

when entering the process, the HDC will reject any further immediate refilings, although we have not observed any such pathological case in our data set.

18. See "Les seuils de pauvreté en France" , Observatoire des Inégalités, 2016.

19. To give an example, HDCs often encourage households to limit the number of cellphones in use.

20. The 2011 European Commission staff paper "National measures and practices to avoid foreclosure procedures for residential mortgage loans" documents a default rate of 2.44 and 2.88 % for the United Kingdom and Spain respectively in 2009, compared to 0.44% in France. See Bahchieva et al. (2005), among others, for an illustration of the US case.

21. Source: European Community Household Panel, 2008. See Ampudia et al. (2016) for an overview of the financial fragility of households in Europe.

22. The *p*-value associated with the log of the resolving time is 0.17 percentage points.

23. See Doyle (2007), Maestas et al. (2013), Autor et al. (2017) and Dobbie et al. (2016).

24. See Doyle (2008) and Dobbie et al. (2015).

25. See French and Song (2014) , Dobbie and Song (2015) and Dobbie et al. (2016).

26. The local HDC FE is the linear combination of all the managers FE of the local HDC.

27. Note that one distinguishing feature of our dataset with respect to previous works is our unusually large number of file characteristics (around 50 versus usually less than 10 in previous papers). Some characteristics are rare. Building on the existing literature, we consider in our analysis managers dealing with at least 10 cases. Nevertheless, 10 cases might not been enough to test for randomization when some characteristics are not frequent.

28. Such a test is performed in French and Song (2014) , Dobbie and Song (2015) and Dobbie et al. (2016).

29. We compute the MTE using a multivariate normal assumption. Results are consistent with the IV estimates.

30. =0.549*(0.072-(-0.056)=0.549*0.93 SD of the manager severity.

31. See the Article L330-1 of the French consumer code.

REFERENCES

Adelino, M., Gerardi, K., Willen, P., 2013. “Why don’t lenders renegotiate more home mortgages? Redefaults, self-cures and securitization,” 60 (7) *Journal of Monetary Economics* 835-853.

Agarwal S., Amromin G., Ben-David I., Chomsisengphet S. and D. Evanoff. 2011. “The Role of Securitization in Mortgage Renegotiation,”102(3) *Journal of Financial Economics* 559-578.

Agarwal S., Amromin G., Ben-David I., Chomsisengphet S., Piskorski T. and A. Seru. 2017. “Policy intervention in debt renegotiation: evidence from the home affordable modification program,” 125(3) *Journal of Political Economy* 654-712.

Aizer A. and J., Jr. Doyle. 2015. “ Juvenile Incarceration, Human Capital and Future Crime: Evidence from Randomly Assigned Judges,” 1 30(2) *Quarterly Journal of Economics* 759-803

Ampudia M., H. van Vlokhoven, D. Żochowski. 2016. ” Financial Fragility of Euro Area Households,” 27 *Journal of Financial Stability* 250-262.

Arthreya Kartik B. 2002. “Welfare Implications of the Bankruptcy Reform Act of 1999,” 49(8) *Journal of Monetary Economics* 1567-1595.

Autor David, Mogstad Magne and Andreas Kostøl. 2015. “Disability Benefits, Consumption Insurance, and Household Labor Supply,” MIT, Working Paper, July.

Bahchieva Raisa, Susan Wachter & Elizabeth Warren, 2005. “Mortgage Debt, Bankruptcy, and the Sustainability of Homeownership,” in *CREDIT MARKETS FOR THE POOR* 73, 104 (PatrickBolton & Howard Rosenthal eds., 2005).

Been, V., Weselcouch, M., Voicu, I. And S. Murff. 2013. “Determinants of the incidence of U.S. Mortgage Loan Modifications,” 37(10) *Journal of Banking & Finance* (October)

Brunner Antje and Jan Pieter Krahnen., 2008. “Multiple Lenders and Corporate Distress: Evidence on Debt Restructuring,” 75(2) *Review of Economic Studies* 415-442

Chang Tom and Antoinette Schoar 2008 “Judge Specific Differences in Chapter 11 and Firm Outcomes,” MIT Working Paper.

Cour des comptes, Rapport public annuel 2010, « La lutte contre le surendettement des particuliers,» pp.461-494.

Dobbie, Will and Jae Song. 2015. "Debt Relief and Debtor Outcomes: Measuring the Effects of Consumer Bankruptcy Protection," 105(3) *American Economic Review* 1272-1311.

Dobbie, W., P. Goldsmith-Pinkham and C. Yang.2015. "Consumer Bankruptcy and Financial Health," NBER. Working Paper #21032.

Doyle, Joseph J., Jr.. 2007. “Child Protection and Child Outcomes: Measuring the Effects of Foster Care,” 97(5) *American Economic Review* 1583–1610.

European Commission, 2011 “National measures and practices to avoid foreclosure procedures for residential mortgage loans,” Commission Staff Working Paper SEC #357.

French, Eric and Jae Song. 2014. "The Effect of Disability Insurance Receipt on Labor Supply," 6(2) American Economic Journal: Economic Policy 291-337.

Han Song and Geng Li. 2011. “Household borrowing after personal bankruptcy,” 43 *Journal of Money Credit and Banking* 491-517.

Haugwhout A., Okah E. and J.Tracy 2016. “Second Chances : Subprime Mortgage Modification and Redefault,” 48 *Journal of Money Credit and Banking* 771-793.

Kling, Jeffrey R. 2006. "Incarceration Length, Employment, and Earnings," 96(3) *American Economic Review* 863–876.

Laeven Luc and Thomas Laryea, 2009. “Principles of Household Debt Restructuring,” IMF, Staff Position Note.

Livshits Igor D., James MacGee and Michele Tertilt. 2006. “Accounting for the Rise in Consumer Bankruptcies,” 2(2) *American Economic Journal: Macroeconomics* 165-193.

Maestas, Nicole, Kathleen J. Mullen and Alexander Strand, 2013. "Does Disability Insurance Receipt Discourage Work? Using Examiner Assignment to Estimate Causal Effects of SSDI Receipt," 103(5) *American Economic Review* 1797-1829.

Mayer, Christopher, Edward Morrison, Tomasz Piskorski and Arpit Gupta. 2014. "Mortgage Modification and Strategic Behavior: Evidence from a Legal Settlement with Countrywide," 104(9) *American Economic Review* 2830-57.

Schoar, A. and D. Paravisini, 2013. “The Incentive Effects of IT: Randomized Evidence from Credit Committees,” NBER. Working Paper # 19303.

Skiba Paige M. and Jeremy Tobacman. 2008. “Payday Loans, Uncertainty, and Discounting: Explaining Patterns of Borrowing, Repayment and Default,” University of Pennsylvania, mimeo.

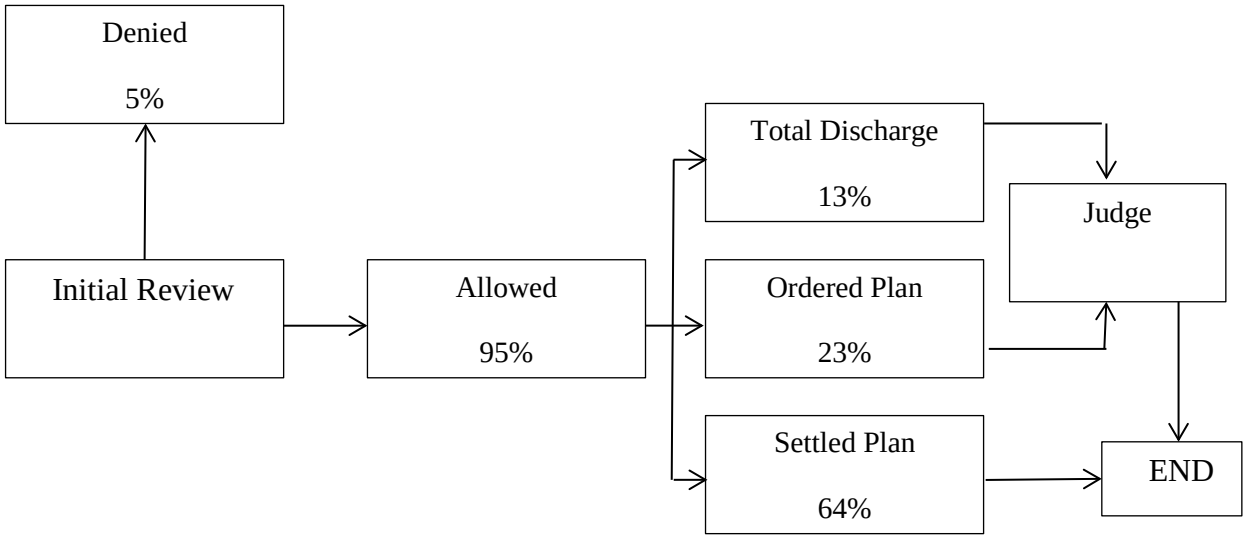
Sullivan Teresa A., Elizabeth Warren, and Jay L. Westbrook. 2000. *The Fragile Middle Class*. Yale University Press, New Haven and London.

White, Michelle J., and Ning Zhu. 2010. "Saving your home in Chapter 13 bankruptcy," 39(1) *The Journal of Legal Studies* 33-61.

Wang Hung-Jen and Michelle J. White. 2000. “An Optimal Personal Bankruptcy System and Proposed Reforms,” 29(1) *The Journal of Legal Studies* 255-286.

FIGURES AND TABLES

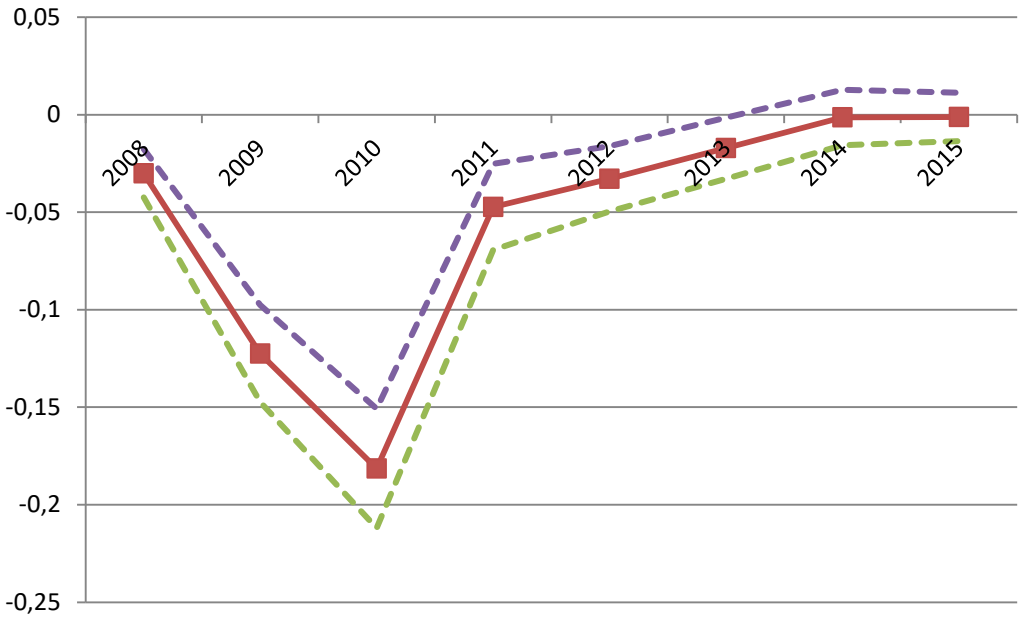
FIGURE 1. BANKRUPTCY PROCESS



Source: Banque de France.

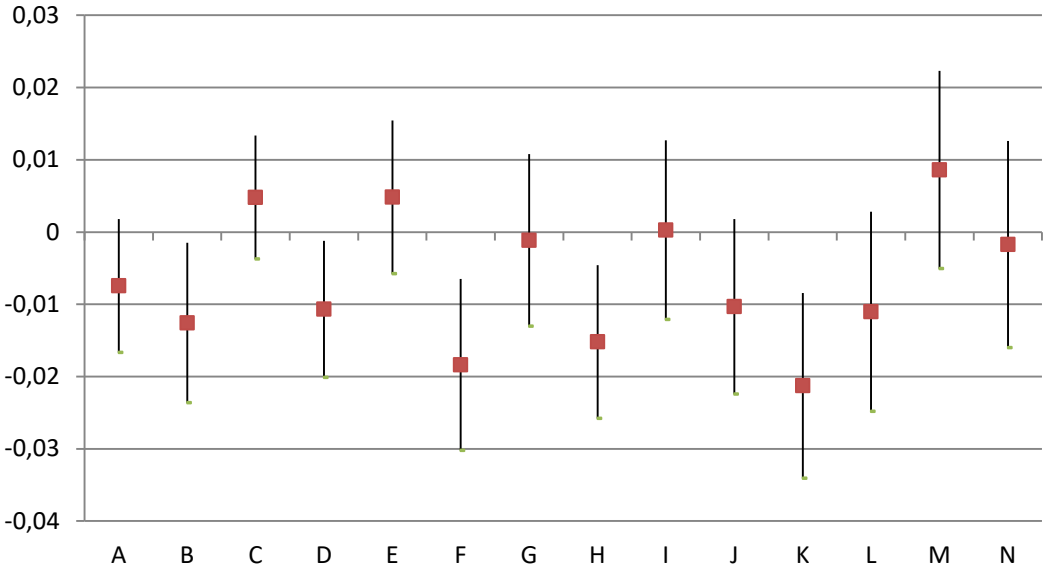
Notes: This figure summarizes the description of the bankruptcy process in France. For illustration, 5% of the first-time bankruptcy filers whose cases were decided in 2008 were denied entry into the bankruptcy process. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers.

FIGURE 2. RE DEFAULT EFFECT OF AN TWO YEAR SUSPENSION OF DEBT REPAYMENT OVER THE YEARS RELATIVE TO THE YEAR OF THE BANKRUPTCY DECISION (2008)



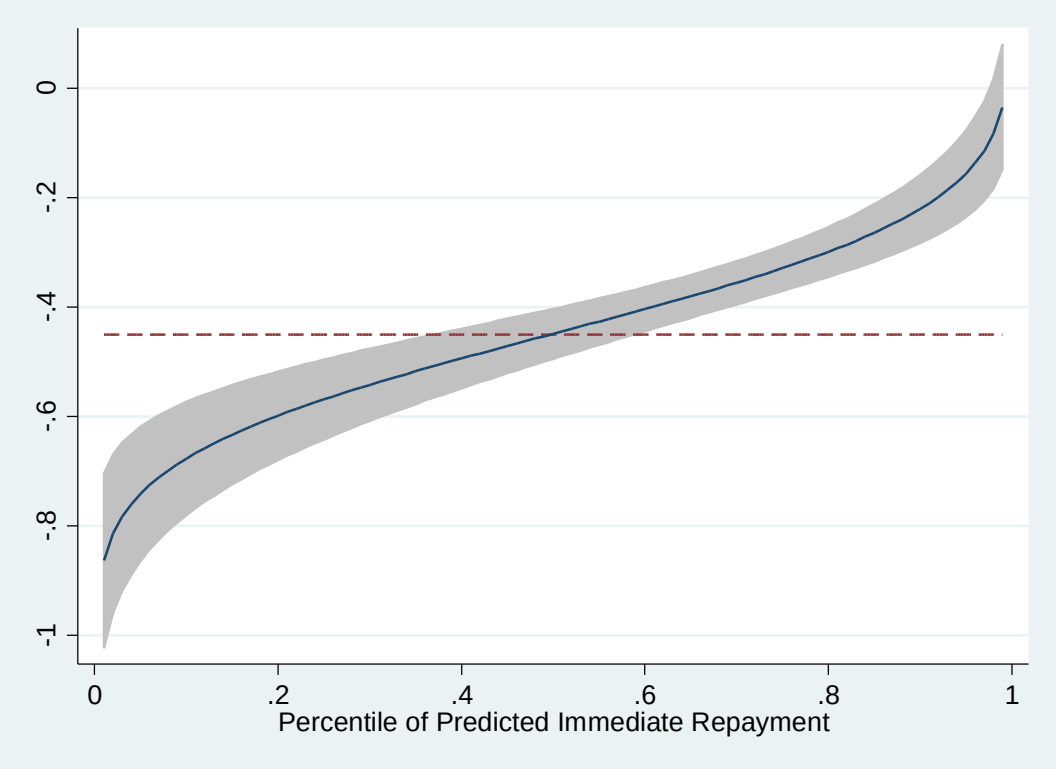
Notes: This figure plots two-stage least squares results of the impact of benefitting from a two year suspension of debt repayment on the re-default rate over the years following the year of the bankruptcy decision (2008). The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. The dashed lines are 95 percent confidence intervals from standard errors clustered at the HDC level. We instrument the two year suspension of debt repayment using case managers' leniency, controlling for the HDCs, years of filing, providers of consumer credit dummies, the households and debt structure characteristics.

FIGURE 3. RE DEFAULT EFFECT OF AN TWO YEAR SUSPENSION OF DEBT REPAYMENT ACROSS BANKS



Notes: This figure plots two-stage least squares results of the impact of benefitting of a two year suspension of debt repayment on the re-default rate across banks. The reference is bank O. For illustration, following a two year suspension of debt repayment, the customers of banks F has a 2% lower probability to re-default than the customer of bank I. The bar represents the 99% confidence interval. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. The dashed lines are 95 percent confidence intervals from standard errors clustered at the HDC level. We instrument the two year suspension of debt repayment using case managers' leniency, controlling for the HDCs, years of filing, providers of consumer credit dummies, the households and debt structure characteristics.

FIGURE 4. MARGINAL TREATMENT EFFECT ON RE DEFAULT



Source: Banque de France.

Notes: This figure reports the estimated marginal treatment effects of benefiting of a two year suspension of debt repayment on re-default rate. MTEs are computed using a multivariate normal assumption. For low levels of propensity to be ordered immediate repayment—corresponding to higher levels of unobserved financial fragility—the impact of benefiting from a suspension ordered a repayment on re-default is higher. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. There are 84,505 observations and 1,296 case managers. Files associated with case managers with fewer than 10 investigations per year are excluded.

TABLE 1- CASE MANAGER STATISTICS

Variables	Mean	SD	P25	Median	P75	Min	Max
Number of cases per manager	64	34.7	39	60	83	11	223
Case Manager Leniency	0.00	0.137	-0.072	0.00	0.056	-0.50	0.68
Number of cases per HDC	758	536	372	631	969	67	3076

Source: Banque de France.

Notes: There are 118 HDCs (Households Debt Commissions) spread over the French territory for a total number of 1,296 case managers. "Case manager leniency" is the case manager rate of ordering a two year suspension of debt repayment less the same rate computed at the level of the HDC he/she works for.

TABLE 2- HOUSEHOLD CHARACTERISTICS: SUMMARY STATISTICS

Variables		Mean	SD	P25	Median	P75	Min	Max
Income and Charges (Euros)	Monthly income	1357	687.4	900	1,240	1,701	0	10,800
	Initial outstanding	27878	30922	8,984	17,661	33,872	30	207,000
	Expenditure	1278	453.4	957.8	1,220	1,552	0	9,899
Household	Age	46.21	13.2	36	45	55	20	81
	#Dependents	0.87	1.2	0	0	2	0	15
	Co-debtor	0.28	0.45	0	0	1	0	1
	Unemployed co-	0.040	0.21	0	0	0	0	1
Tenure								
	Tenant	0.80	0.40	1	1	1	0	1
	Homeowner	0.03	0.17	0	0	0	0	1
	Homeowner	0.04	0.20	0	0	0	0	1
	Other household	0.13	0.34	0	0	0	0	1
Marital status								
	Married	0.24	0.43	0	0	0	0	1
	Divorced	0.08	0.27	0	0	0	0	1
	Cohabiting	0.33	0.47	0	0	1	0	1
	Single	0.27	0.45	0	0	1	0	1
Employment status								
	Long-term	0.37	0.48	0	0	1	0	1
	Short-term	0.07	0.25	0	0	0	0	1
	Unemployed	0.34	0.47	0	0	1	0	1
	Retired	0.13	0.34	0	0	0	0	1

Source: Banque de France.

Notes: This table reports summary statistics. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. “Monthly income” includes social transfers, and“Expenditure” corresponds to monthly expenditures reported by the household to the HDC. “Age” is the age of the person filing for bankruptcy. Co-debtor is a dummy equal to 1 if there is a co-filer. As regards marital and employment status, the sum of the shares is not equal to 1. Widows, civil unions and domestic partnerships (in the case of marital status), as well as part-time work (in the case of employment status), have not been taken into account as their share in the total sample is too small to be of statistical interest.

TABLE 3- CHARACTERISTICS OF THE INITIAL DEBT STRUCTURE AND OUTCOMES OF THE PROCEDURE

Variables		Mean	STD	P25	Median	P75	Min	Max
Debt structure	# Bank creditors	3.92	2.86	2	3	5	0	23
	# Non-bank creditors	3.84	3.48	1	3	6	0	23
	Share of bank debt	0.71	0.32	0.54	0.86	0.97	0	1
	Gini coefficient of creditor	0.63	0.20	0.53	0.65	0.77	0	1
	Presence of a Consumer Credit	0.90	0.29	1	1	1	0	1
Causes of over-indebtedness	Money mismanagement	0.27	0.42	1	1	1	0	1
	Adverse events	0.77	0.45	0	0	1	0	1
Outcomes of the bankruptcy process	Two year of suspension of debt	0.44	0.49	0	0	1	0	1
	Total Discharge	0.12	0.33	0	0	0	0	1
	Rejection	0.05	0.22	0	0	0	0	1
Re-default		0.38	0.49	0	0	1	0	1
Re-default by outcome of the procedure	Two year of suspension of debt	0.25	0.43	0	0	1		
	Repayment in the two year	0.48	0.49	0	0	1	0	1
	Total Discharge	0.09	0.28	0	0	0	0	1
	Rejection	0.16	0.37	0	0	0	0	1
Banks :	A	0.22	0.41	0	0	0	0	1
	B	0.17	0.38	0	0	0	0	1
	C	0.10	0.30	0	0	0	0	1
	D	0.21	0.40	0	0	0	0	1
	E	0.15	0.36	0	0	0	0	1
	F	0.12	0.32	0	0	0	0	1
	G	0.09	0.28	0	0	0	0	1
	H	0.10	0.30	0	0	0	0	1
	I	0.11	0.31	0	0	0	0	1
	J	0.09	0.28	0	0	0	0	1
	K	0.08	0.27	0	0	0	0	1
	L	0.08	0.27	0	0	0	0	1
	M	0.06	0.24	0	0	0	0	1
	N	0.06	0.24	0	0	0	0	1
	O	0.06	0.24	0	0	0	0	1
	P	0.03	0.17	0	0	0	0	1
	Q	0.03	0.18	0	0	0	0	1
	R	0.03	0.17	0	0	0	0	1

Source: Banque de France

Notes: This table reports summary statistics on the debt structure of filers. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations. “Share of non-bank debt” is the share of non-bank debt in the total initial debt. The case manager may indicate several causes of over-indebtedness for the same case. Causes of over-indebtedness are reported by the case manager using a multiple choice grid. Among the outcomes of the bankruptcy process: “Two year of suspension of debt repayment” is defined as a dummy equal to 1 if the household benefited from a two year suspension of debt repayment following the decision of the HDC, and “Re-default rate” is a dummy equal to 1 if the household files again within the seven years following this decision. Based on a market share larger than 3%, we select the 18 largest providers of consumer credit in terms of occurrence in our sample. For illustration, Bank A provides consumer credit to 22% of the filers.

TABLE 4A—REDUCED FORMS AND IV REGRESSIONS WITH NO FILE LEVEL CONTROLS

	IV			
	First Stage	Second Stage	OLS	Reduced Form
Two Year Suspension of Debt Repayment		-0.369***	-0.217***	-0.257***
		(0.024)	(0.006)	(0.026)
Case Managers Leniency	0.696***			
	(0.035)			
Observations	84,258	84,258	84,258	84,258
Adjusted R-squared	0.084	0.047	0.070	0.027

Source: Banque de France.

Notes: This table displays the test of whether the HDC complied with the random allocation of the cases among managers. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. We run IV and reduced form regressions without any file characteritics included. These estimates are to be compared with the estimates of the IV and reduced form regressions including all file characteristics displayed in Table 6. Standard errors (in parentheses) are clustered at the HDC level. *** = significant at the 1% level. ** = significant at the 5% level. * = significant at the 10% level.

TABLE 4B— TESTS OF RANDOMIZATION

	(1)	(2)		(3)
	Manager Severity	Baseline Regression		F-test p-value
		Random	Non Random	
Payment required		-0.406***	0,092	
		(0.029)	(0.058)	
Income and charge (in euros)				
Monthly Income	0.004***	-0.031***	0,0006	0,924
	(0.001)	(0.005)	(0.007)	
Initial Outstanding Debt	-0.004**	0.040***	0.001	0,847
	(0.002)	(0.004)	(0.007)	
Charges	-0.000	0.028***	-0,024	0,915
	(0.005)	(0.009)	(0.014)	
Household characteristics				
Age	0.020**	-0.033**	-0.005	0,839
	(0.008)	(0.013)	(0.019)	
# Dependents	0.001	0.012***	0.009**	0,966
	(0.001)	(0.003)	(0.004)	
Codebtor	0.005**	0.021**	-0.002	0,924
	(0.002)	(0.010)	(0.015)	
Unemployed Codebtor	0.001	0.058***	-0.006	0,992
	(0.002)	(0.010)	(0.015)	
Tenure (Ref: Tenant)				
Homeowner	-0.006*	-0.097***	-0.049**	0,941
	(0.004)	(0.014)	(0.019)	
Homeowner (outstanding mortage)	-0.005	-0.063***	-0.027	0,983
	(0.004)	(0.013)	(0.021)	
Marital Status (Ref: Married)				
Cohabitating	-0.002	0.013	-0.004	0,975
	(0.002)	(0.010)	(0.013)	
Divorced	0.002	0.030***	0.005	0,915
	(0.001)	(0.009)	(0.013)	
Single	0.000	0.023**	0.003	0,924
	(0.002)	(0.010)	(0.014)	
Employment Status (Ref: Long Term Contract)		*Employment Status (Ref: Long Term Contract)*		
Short term contract	0.004**	0.071***	0.011	0,890
	(0.002)	(0.010)	(0.015)	
Unemployed	0.001	0.124***	-0.025	0,983
	(0.002)	(0.010)	(0.017)	
Retired	0.005*	-0.089***	-0.018	0,941
	(0.003)	(0.008)	(0.018)	

TABLE 4B— TESTS OF RANDOMIZATION (CONTINUED)

	(1)	(2)		(3)
	Manager Severity	Baseline Regression		*F*-test *p*-value
Debt Structure		Random	Non Random	
# Banking creditors	-0.000	0.006***	0.003	0,746
	(0.000)	(0.002)	(0.002)	
# Non Banking creditors	0.000	0.007***	0.001	0,797
	(0.000)	(0.001)	(0.001)	
Share of non banking debt	0.007**	-0.034***	-0.024	0,831
	(0.003)	(0.010)	(0.015)	
Gini coefficient of creditors	0.001	0.010	-0.034*	0,941
	(0.003)	(0.012)	(0.018)	

Notes: This table displays tests of whether the HDC complied with the random allocation of the cases among managers. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. In column (1), we regress manager severity on file characteristics. While most of our variables are not significantly related to manager leniency, a few are. In order to see whether this is an issue, we proceed to the following test: we run a regression predicting manager leniency by file characteristics for each HDC. If the *F*-test *p*-value for a joint nullity of the parameters associated with the case characteristics is below 10%, we classify the commission in the group of "non-randomized HDCs"; otherwise it is placed in the group of "randomized HDCs". We find that about half of the HDCs should be considered as randomized through this measure. We then reproduce our baseline regression in columns (2), adding a dummy for "randomized commission" interacted with the bankruptcy decision and file characteristics. Within each HDC, we run regressions of each of the observable characteristics on case manager fixed effects, discarding the cases associated with a manager whose individual fixed effect is statistically significant at the 10% level. This is equivalent to testing mean differences among case managers within a single HDC for every observable characteristic. The share of cases remaining in the sample for one observable characteristic is displayed in column (3).

TABLE 5 : MONOTONICITY : FIRST STAGE ESTIMATES BY SUB-SAMPLE

Age			**Household characteristics**	
	25-39	0.377***	Tenant vs. others	0.398***
		(0.038)		(0.032)
	40-59	0.389***	Married	0.408***
		(0.035)		(0.048)
	60 and up	0.341***	Divorced	0.392***
		(0.035)		(0.027)
Income			Long Term Contract	0.390***
	Bottom quartile	0.321***		(0.049)
		(0.031)	Unemployed	0.364***
	Second quartile	0.413***		(0.031)
		(0.038)	Retired	0.335***
	Third quartile	0.425***		(0.037)
		(0.039)		
	Fourth quartile	0.366***		
		(0.061)		
Expenditure over income			**Debt over Income**	
	Bottom quartile	0.327***	Bottom quartile	0.411***
		(0.085)		(0.034)
	Second quartile	0.279***	Second quartile	0.389***
		(0.050)		(0.029)
	Third quartile	0.487***	Third quartile	0.365***
		(0.038)		(0.041)
	Fourth quartile	0.317***	Fourth quartile	0.341***
		(0.034)		(0.046)
Banking Debt over Total Debt			**Number of creditors**	
	Bottom quartile	0.381***	Bottom quartile	0.353***
		(0.038)		(0.024)
	Second quartile	0.416***	Second quartile	0.369***
		(0.031)		(0.039)
	Third quartile	0.372***	Third quartile	0.374***
		(0.036)		(0.036)
	Fourth quartile	0.341***	Fourth quartile	0.427***
		(0.049)		(0.050)
Gini Index				
	Bottom quartile	0.352***		
		(0.028)		
	Second quartile	0.388***		
		(0.042)		
	Third quartile	0.403***		
		(0.039)		
	Fourth quartile	0.385***		
		(0.036)		

Source: Banque de France, first-time bankruptcy filers whose cases were decided in 2008 (84,505 files).

Notes: This table tests the monotonicity of case managers' leniency levels: i.e., whether managers who are lenient towards one group of filers are also relatively lenient towards other filers outside of this group. We condition the sample on filer-level observables (e.g., age, gender) and run the first stage on each subsample. We display the first-stage estimate associated with case manager leniency for each sub-sample. Manager leniency is defined as the leave-one-out mean rate of ordering a repayment for the assigned case manager minus the leave-one-out mean rate of ordering a repayment for the HDC. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. Standard errors (in parentheses) are clustered at the HDC level. *** = significant at the 1% level. ** = significant at the 5% level. * = significant at the 10% level.

TABLE 6—BANKRUPTCY PROTECTION AND RE-DEFAULT

	IV		OLS	Reduced Form
	(1)	(2)	(3)	(4)
	First Stage	Second Stage		
Two Year Suspension of Debt Repayment		-0.369***	-0.218***	
		(0.029)	(0.006)	
Case Managers Leniency	0.549***			-0.203***
	(0.035)			(0.026)
Income and charge (in euros)				
Monthly Income	-0.110***	-0.027***	-0.010***	0.014***
	(0.003)	(0.004)	(0.002)	(0.002)
Initial Outstanding Debt	-0.051***	0.039***	0.047***	0.058***
	(0.004)	(0.003)	(0.003)	(0.003)
Charges	0.126***	0.013	-0.006	-0.034***
	(0.022)	(0.008)	(0.007)	(0.009)
Household characteristics				
Age	0.048***	-0.033***	-0.042***	-0.051***
	(0.010)	(0.010)	(0.009)	(0.010)
# Dependents	0.014***	0.018***	0.015***	0.013***
	(0.003)	(0.002)	(0.002)	(0.003)
Co-debtor	-0.023**	0.020**	0.023***	0.028***
	(0.009)	(0.008)	(0.007)	(0.007)
Unemployed Co-debtor	0.039***	0.056***	0.051***	0.042***
	(0.008)	(0.008)	(0.008)	(0.008)
Tenure (Ref: Tenant)				
Homeowner	0.127***	-0.104***	-0.123***	-0.151***
	(0.021)	(0.010)	(0.011)	(0.012)
Homeowner (outstanding mortgage)	0.058***	-0.083***	-0.091***	-0.104***
	(0.021)	(0.010)	(0.011)	(0.013)
Marital Status (Ref: Married)				
Cohabitating	-0.010	0.010	0.012*	0.014**
	(0.008)	(0.007)	(0.006)	(0.006)
Divorced	0.042***	0.034***	0.027***	0.018***
	(0.006)	(0.007)	(0.006)	(0.006)
Single	0.017***	0.025***	0.022***	0.019***
	(0.006)	(0.007)	(0.007)	(0.007)
Employment Status (Ref: Long Term Contract)				
Short term contract	0.087***	0.079***	0.065***	0.047***
	(0.007)	(0.008)	(0.007)	(0.007)
Unemployed	0.265***	0.121***	0.081***	0.024***
	(0.007)	(0.009)	(0.005)	(0.006)
Retired	0.185***	0.103***	0.075***	0.035***
	(0.010)	(0.010)	(0.009)	(0.010)

TABLE 6—BANKRUPTCY PROTECTION AND RE-DEFAULT (CONT.)

	IV		OLS	Reduced Form
	First Stage	Second Stage		
Debt Structure				
# Banking creditors	-0.007***	0.007***	0.008***	0.010***
	(0.001)	(0.001)	(0.001)	(0.001)
# Non-Banking creditors	-0.000	0.007***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Share of non-banking debt	0.074***	-0.049***	-0.061***	-0.077***
	(0.009)	(0.008)	(0.007)	(0.007)
Gini coefficient of creditors distribution	0.032***	-0.006	-0.011	-0.018*
	(0.010)	(0.010)	(0.010)	(0.010)
Adjusted R-squared	0.282	0.090	0.073	0.108

Source: Banque de France.

Notes: This table reports in column (1) and (2) the first-stage and second-stage estimates of the instrumental regressions (equation 1 and 2 in the text). The reduced form regression estimates and the OLS estimates are displayed in column (3) and (4). The dependent variable in columns (1), (3) and (4) is the re-default rate over the seven years following the bankruptcy decision taken in 2008, while in column (2) it is the immediate repayment decision taken by the case manager. All regressions include HDC, years of filing and providers of consumer credit dummies. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers. Standard errors (in parentheses) are clustered at the HDC level. *** = significant at the 1% level. ** = significant at the 5% level. * = significant at the 10% level.

TABLE 7—EFFECTS OF BANKRUPTCY PROTECTION AND CASE CHARACTERISTICS

	(1)		(2)
	IV Regressions		
Age (Ref 25-39 yrs)	First-Stage	Second-Stage	Baseline Mean
40-59	-0.002	-0.060	0.397
	(0.022)	(0.038)	(0.002)
60 and up	-0.009	0.002	0.275
	(0.031)	(0.042)	(0.004)
Income (Ref : Bottom quartile)			
Second quartile	0.116***	0.145***	0.365
	(0.028)	(0.051)	(0.003)
Third quartile	0.132***	0.136*	0.411
	(0.030)	(0.074)	(0.003)
Fourth quartile	0.079	0.304***	0.456
	(0.054)	(0.087)	(0.003)
Expenditure over income (Ref. Bottom quartile)			
Second quartile	0.277***	-0.269*	0.459
	(0.041)	(0.162)	(0.003)
Third quartile	0.474***	-0.465***	0.350
	(0.035)	(0.116)	(0.003)
Fourth quartile	0.282***	-0.671***	0.313
	(0.032)	(0.127)	(0.003)
Household characteristics			
Marital status (Ref : Married)			
Cohabiting	-0.012	0.240**	0.453
	(0.044)	(0.104)	(0.006)
Divorced	-0.023	-0.031	0.363
	(0.036)	(0.046)	(0.003)
Single	-0.058*	0.065	0.367
	(0.030)	(0.052)	(0.003)
Employment status (Ref : Long Term Contract)			
Short Term Contract	0.013	-0.016	0.440
	(0.046)	(0.083)	(0.003)
Unemployed	-0.026	-0.200***	0.367
	(0.036)	(0.052)	(0.003)
Retired	-0.000	0.015	0.253
	(0.036)	(0.046)	(0.004)

TABLE 7—EFFECTS OF BANKRUPTCY PROTECTION AND CASE CHARACTERISTICS

(CONTINUED)

	(1)		(2)
	IV Regressions		
Debt Structure	First-Stage	Second-Stage	Baseline Mean
Debt over Income (Ref : Bottom Quartile)			
Second quartile	0.005	-0.054	0.374
	(0.024)	(0.041)	(0.003)
Third quartile	-0.011	-0.170***	0.430
	(0.027)	(0.044)	(0.003)
Fourth quartile	-0.062*	-0.233***	0.422
	(0.036)	(0.050)	(0.003)
Banking Debt over Total Debt (Ref : Bottom Quartile)			
Second quartile	0.066***	-0.152***	0.398
	(0.024)	(0.045)	(0.003)
Third quartile	0.017	-0.108**	0.429
	(0.028)	(0.050)	(0.003)
Fourth quartile	-0.003	-0.108**	0.390
	(0.036)	(0.049)	(0.003)
Number of creditors (Ref : Bottom Quartile)			
Second quartile	0.034	-0.017	0.381
	(0.027)	(0.046)	(0.003)
Third quartile	0.028	0.035	0.427
	(0.031)	(0.051)	(0.004)
Fourth quartile	0.105***	0.009	0.472
	(0.038)	(0.048)	(0.004)
Ginix Index (Ref : Bottom Quartile)			
Second quartile	0.024	-0.047	0.399
	(0.032)	(0.045)	(0.003)
Third quartile	0.038	-0.029	0.401
	(0.028)	(0.043)	(0.003)
Fourth quartile	0.003	-0.069	0.369
	(0.030)	(0.044)	(0.003)

Source: Banque de France.

Notes: This table reports in columns (1) and (2) the first-stage and second-stage estimates of the instrumental regressions (equations 1 and 2 in the text) among file characteristics. The outcome variable is interacted with dummies for each quartile or sub-categories, and we run the 2SLS on the whole sample. All regressions include HDC, years of filing, providers of consumer credit dummies, households and debt structure characteristics. The sample consists of first-time filers between 2006 and 2008 whose cases were decided in one of the 118 Household Debt Commissions in 2008. Files associated with case managers with fewer than 10 investigations per year are excluded. Standard errors (in parentheses) are clustered at the HDC level. *** = significant at the 1% level. ** = significant at the 5% level. * = significant at the 10% level.