



The Sustainability of Household Debt Restructuring Plans

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Methodology

- ❑ Impact of bankruptcy decision on the redefault rate over the 2008-2015 period
- ❑ For a population of French bankrupt households which files were terminated in 2008
- ❑ Taking advantage from the random allocation of the bankruptcy files across managers that we show to have different pro-creditor bias

Results

- ❑ Definition of the Bankruptcy decision : two alternatives : a partial repayment over the two year following the termination of the case OR a two-year grace period
- ❑ The decision to order an immediate partial repayment leads to an increase of 38 percentage points of the probability to refile for bankruptcy over the next seven years (2008-2015)
- ❑ The ex ante expenditure rate and the characteristics of the creditors are the main drivers of the heterogeneity of the impact of the decision
- ❑ Policy recommendations drawn from the exercise

Background

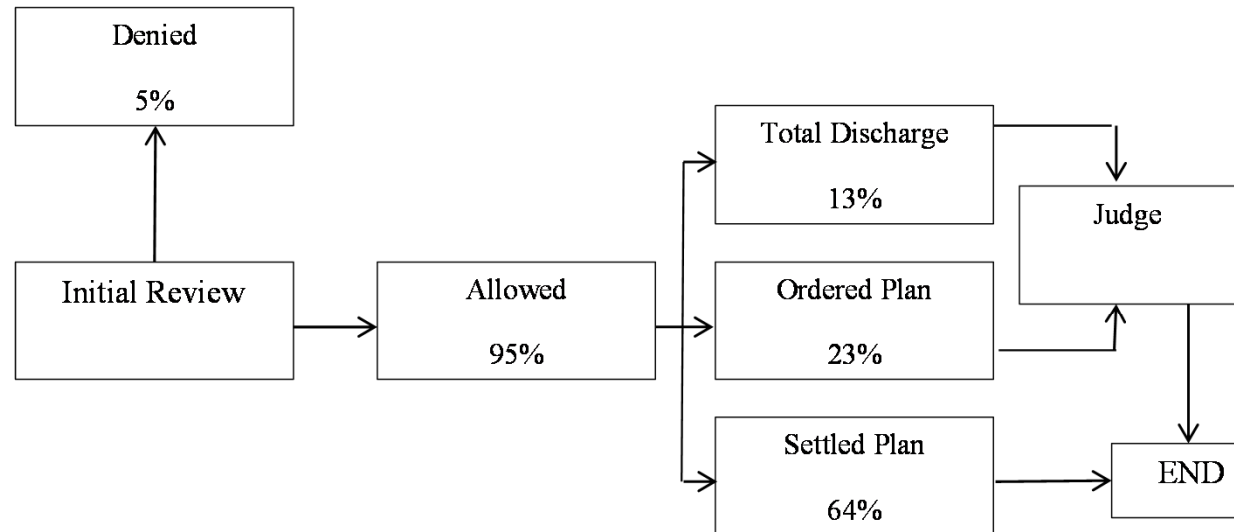
- ❑ *Macro trends* : a strong increase in the household debt ratio in all the OECD countries over the years 2000s, along with a strong increase in the personnel bankruptcy rate
- ❑ *Academics* : a debate now more focused on the restructuring program (2009 HARP program in the US for instance) rather than on the optimal design of the bankruptcy regim (2005 BAPCPA in the US)

Literature

- ❑ Macro economic literature aiming at explaining some stylised facts observed during the crisis with the help of general equilibrium models (for example, Mitman, AER, 2016)
- ❑ Micro econometric literature exploiting the policy evaluation framework (Dobbie et al. (AER, 2015,2016))
- ❑ This study : European context, granular data, policy evaluation microeconometrics.
- ❑ Autopromotion : the drivers of the settlement between the creditors and the household on the restructuring plan (Fraisse et Muller, 2011), the short term effects of the bankruptcy decisions (Fraisse, 2014)

Personal Bankruptcy in France (in 2008)

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 to enter 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 to case managers with fewer than 10 investigations per year are excluded. There are 84,505 observations and 1,296 case managers.

Data Set

- ❑ Source : Banque de France
- ❑ Administrative records of the terminated cases filed in 2008
- ❑ We focus on first-time filers for which either partial payment or no payment at all is demanded over the next two years
- ❑ Redefault rate: Every filer is put on a national registry (FICP) accessible to the banks. We use the identifier of this registry to compute the Re-filing rate until 2015
- ❑ Files are allocated across 1,294 managers working in one of the 118 Household Debt Commission (“HDC”) of the Banque de France. On average per manager : 64 files

Some descriptive statistics : households

TABLE 2- HOUSEHOLD CHARACTERISTICS: SUMMARY STATISTICS

Variables		Mean	Std Dev	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
<i>Tenure</i>	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
<i>Marital status</i>	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
<i>Employment status</i>	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.

Some descriptive statistics : debt characteristics

Table 3 : Characteristics of the initial debt structure and outcomes of the process

VARIABLES	Mean	Standard Deviation	P25	Median	P75	Min	Max
Debt Structure							
# Banking creditors	3.920	2.860	2	3	5	0	23
# Non Banking creditors	3.840	3.480	1	3	6	0	23
Share of non banking debt	0.280	0.320	0.0200	0.140	0.450	0	1
Gini coefficient of creditors distribution	0.630	0.200	0.530	0.650	0.770	0	1
Type of debt							
Housing	0.360	0.480	0	0	1	0	1
Penal	0.140	0.350	0	0	0	0	1
Current expenses	0.400	0.490	0	0	1	0	1
Pay day loans	0.910	0.290	1	1	1	0	1
Alimony obligation	0.0400	0.190	0	0	0	0	1
Causes of over-indebtedness							
Money mismanagement	0.770	0.420	1	1	1	0	1
Adverse events	0.270	0.450	0	0	1	0	1
Outcome of the Bankruptcy Process							
Repayment required	0.610	0.490	0	1	1	0	1
Total Discharge	0.120	0.330	0	0	0	0	1
Rejection	0.0500	0.220	0	0	0	0	1
Redefault Rate	0.380	0.490	0	0	1	0	1
Banks #							
1	0.220	0.410	0	0	0	0	1
2	0.170	0.380	0	0	0	0	1
3	0.100	0.300	0	0	0	0	1
4	0.210	0.400	0	0	0	0	1
5	0.150	0.360	0	0	0	0	1
6	0.120	0.320	0	0	0	0	1
7	0.0900	0.280	0	0	0	0	1
8	0.100	0.300	0	0	0	0	1
9	0.110	0.310	0	0	0	0	1
10	0.0900	0.280	0	0	0	0	1
11	0.0800	0.270	0	0	0	0	1
12	0.0800	0.270	0	0	0	0	1
13	0.0600	0.240	0	0	0	0	1
14	0.0600	0.240	0	0	0	0	1
15	0.0600	0.240	0	0	0	0	1
16	0.0300	0.170	0	0	0	0	1
17	0.0300	0.180	0	0	0	0	1
18	0.0300	0.170	0	0	0	0	1

Endogeneity issues

- ❑ Unobservable characteristics –for example good employment prospect or helps from the family- lead a household to be denied a grace period and has a decreasing impact on the likelihood to redefault
- ❑ Push the HDC to order an immediate repayment
- ❑ Therefore the impact of a severe bankruptcy decision might be underestimated if not treated carefully. The households the more likely to repay might be over represented in the population who must repay

Instrumental approach

- Z_{icj} manager severity : fraction of files the manager orders a repayment minus fraction of files the commission the manager belongs to orders a repayment

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

- This severity measure displays a standard deviation of 14%.

- Instrumental regression

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

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

- IR_i equates one if a repayment is ordered

- Y_i equates one if the household refiles within the next seven years (2008-2015)

- X_i file characteristics

Instrument validity

- ❑ Manager severity must drive the bankruptcy decision (« relevance »)
- ❑ Managers must be randomly allocated across files (« validity »)
- ❑ Severity must impact the refiling rate only through its impact on the decision (« exclusion restriction »)
- ❑ A severe manager must not grant a grace period to a file for which a lenient manager would have deny a grace period (« monotonicity »)
- ❑ Several tests are performed to check the plausibility of these assumptions

Aggregated Impact

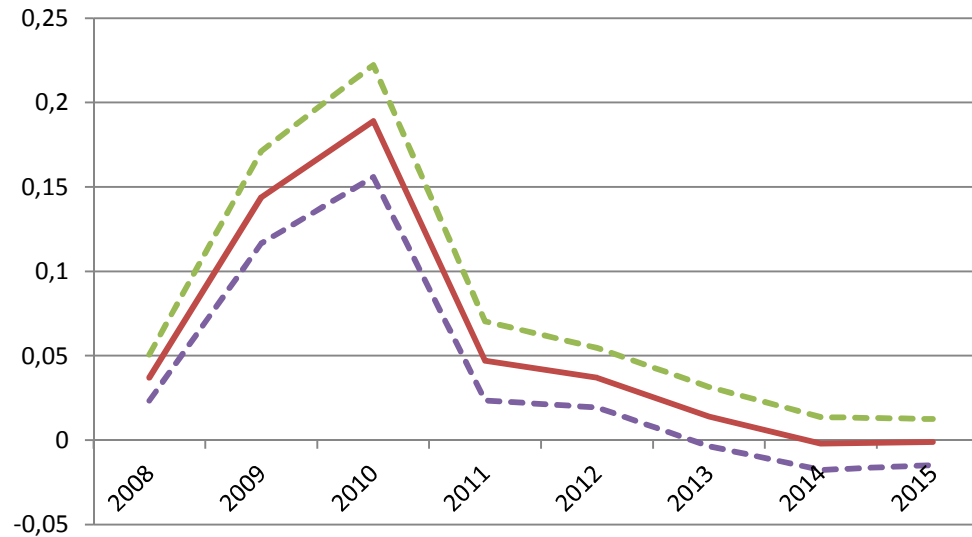
TABLE 6—BANKRUPTCY PROTECTION AND REDEFAULT

	IV		OLS	Reduced Form
	(1)	(2)	(3)	(4)
	First Stage	Second Stage		
Payment Required		0.384*** (0.033)	0.180*** (0.006)	
Case Managers Severity	0.502*** (0.026)			0.193*** (0.023)

- ❑ A causal redefault impact of 38 ppt (only 18 ppt when endogeneity issues are not taken into account)
- ❑ Income, Debt, Expenditure, employment status, marital status, dispersion of the creditors, level of banking debt drive the redefault : call for a scoring function for the bankrupts
- ❑ Shifting from a lenient manager to a severe manager decreases redefault variability by 2,3 percentage points

Impacts over the years

FIGURE 2. RE DEFAULT EFFECT OF AN IR 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 ordering an immediate repayment (“IR”) on the re-default rate over the years following the year 2008 –year of the bankruptcy decision. 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 to 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 bankruptcy decision to order an IR using case managers severity and control for HDC, years of filing, providers of consumer credit dummies, household and debt structure characteristics.

The population that will be impacted by an increase of severity : the marginal population

- ❑ If all the files were terminated by severe managers : 71% would be ordered to repay
- ❑ If all the files were terminated by lenient managers : 44%
- ❑ Therefore, whoever is the manager : 44% would have to repay and 29% would have not to repay. 27% of the households would be impacted by an increase in the severity
- ❑ Statistical inference on this sub-population:
 - ❑ Households around the median income of bankrupts
 - ❑ No difference with the rest of the population in terms of debt ratio and creditors' characteristics
 - ❑ Much more unbalanced budget

Heterogeneity of the impacts

- Main drivers of the heterogeneity of the impact:
 - Expenditure over income ratio
 - Lending financial institutions

TABLE 7—EFFECTS OF BANKRUPTCY PROTECTION AND CASE CHARACTERISTICS

	First-stage	IV	Baseline Mean	Obs.
Expenditure over income				
Bottom quartile	0.106*** (0.016)	0.017 (0.358)	0.409 (0.003)	21,033
Second quartile	0.182*** (0.021)	0.467** (0.198)	0.459 (0.003)	20,911
Third quartile	0.391*** (0.017)	0.528*** (0.053)	0.350 (0.003)	20,707
Fourth quartile	0.264*** (0.015)	0.769*** (0.084)	0.313 (0.003)	21,853

Heterogeneity of the impacts

Banks	IV Regressions		
	First-Stage	Second-Stage	Baseline Mean
A	0.537*** (0.024)	0.344*** (0.056)	0.436 (0.004)
B	0.500*** (0.025)	0.464*** (0.065)	0.438 (0.004)
C	0.472*** (0.034)	0.420*** (0.092)	0.423 (0.005)
D	0.511*** (0.024)	0.364*** (0.059)	0.397 (0.004)
E	0.566*** (0.027)	0.434*** (0.061)	0.456 (0.004)
F	0.497*** (0.031)	0.543*** (0.081)	0.447 (0.005)
G	0.518*** (0.035)	0.459*** (0.086)	0.433 (0.006)
H	0.556*** (0.036)	0.357*** (0.080)	0.452 (0.005)
I	0.524*** (0.032)	0.358*** (0.078)	0.418 (0.005)
J	0.561*** (0.038)	0.349*** (0.084)	0.441 (0.006)
K	0.540*** (0.036)	0.380*** (0.085)	0.415 (0.006)
L	0.518*** (0.039)	0.548*** (0.101)	0.464 (0.006)
M	0.479*** (0.045)	0.435*** (0.109)	0.396 (0.007)
N	0.520*** (0.043)	0.265** (0.103)	0.401 (0.007)
O	0.541*** (0.039)	0.346*** (0.086)	0.392 (0.007)

Conclusion

- ❑ **Score to help to calibrate the decisions of the bankruptcy commissions (might also lead to a more harmonized system)**
- ❑ **Results point out to :**
 - ❑ **Improve financial education and budget management**
 - ❑ **and regulate loan distribution**
 - ❑ **In order to limit the redefault**
- ❑ **Severity function of the objectives**
 - ❑ **Avoid to put ex ante bankrupts under different risks of redefaults :
too much severity**
 - ❑ **Increase the recovery rate : too less severity**
- ❑ **General equilibrium**
 - ❑ **Preliminary analysis : local severity rates –controled with the characteristics of the local population of bankrupts- do not explain past or future change in credit growth**

Since 2008 : policy initiatives

❑ Management of the bankruptcy commissions

- ❑ Harmonisation of the bankruptcy commission internal rules
- ❑ Implementation of a management tool to help the manager to decide
- ❑ Monitoring of the harmonization of internal rules

❑ Stronger regulation on payday loans distribution (loi Lagarde)

❑ Financial education

- ❑ Loi du 26 juillet 2013 de séparation bancaires
- ❑ Loi Lagarde
- ❑ Banque de France initiative for financial education :
<https://www.mesquestionsdargent.fr/>