

Credit Supply to Bankrupt Consumers

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The views presented herein are those of the authors and are not necessarily those of the Federal Reserve Board or its staff.

Research Questions

- Do banks offer any credit to bankrupt consumers?
- If yes, how do banks structure the terms of these offers?

Why Important?

- Shed light on some key issues in the consumer credit market
 - A five-fold increase in the outstanding of consumer revolving credit since early 1980s (about \$900 billion in 2009)
 - A five-fold increase in personal bankruptcy filings during the same period (1.5 million in 2010)
 - 1 in 10 households has filed for bankruptcy at some point
 - Common view: Due to dramatic expansion of credit supply to risky borrowers
 - But we know little on how *credit supply* is related to credit risk
 - Largely because supply per se is often not observable (Musto (2004), Cohen-Cole, Duygan-Bump, and Montoriol-Garriga (2009), Han and Li (2010))
 - Good IVs are hard to come by
 - But it is important to identify credit supply changes separately from credit demand changes

Key Contributions of Our Paper

- We provide direct evidence on credit supply to bankrupt consumers, borrowers with the most conspicuous credit risk
 - Using the Mintel credit card mailing data—a unique data set combining credit supply information and consumer credit history
- Consumer bankruptcy decision
 - In theory, access to credit after bankruptcy is an important factor in bankruptcy filing decision
 - Absent in existing studies on determinants of personal bankruptcy filing decisions

Conceptual Framework

How bankruptcy influences future supply of credit can be ambiguous

- Bankruptcy flags reveal consumer-specific risk factors that are otherwise unobservable to lenders \Rightarrow Reduce credit supply
- Bankruptcy discharges most unsecured debt and improves the filer's balance sheet \Rightarrow Increase credit supply
- The law does not allow for repeated discharges within eight years \Rightarrow Supply may depend on time since filing
- Bankruptcy may change credit demand, to which credit supply may react

Conceptual Framework—continued

- To mitigate the cost of default risk \Rightarrow Offering low credit limits
- To raise profitability when credit limit offered is low \Rightarrow Fees
- Will bankrupt consumers accept such offers? \Rightarrow Likely yes.
 - demand for credit to smooth consumption
 - transaction convenience
 - build credit record
- In response, lenders have little incentive to sweeten offers with
 - teaser rates
 - rewards program

The Smoking Gun

You deserve some credit for getting through bankruptcy



Pre-selected offer for:

You've earned this offer:

0% APR until May 2011

Dear

You've successfully moved beyond bankruptcy and deserve a new beginning.

So I'm pleased to tell you about this Capital One® Platinum MasterCard® offer. It comes with our best introductory rate and can help you rebuild credit.

You get a **0% APR until May 2011** on all purchases - so you could save money on interest.

You'll start with a manageable credit line - some extra cushion for when unexpected expenses hit. Then you'll be eligible for **credit line increases** based on credit and payment history. And you'll never pay for charges you didn't make - you're covered by **\$0 Fraud Liability** if your card is ever lost or stolen.

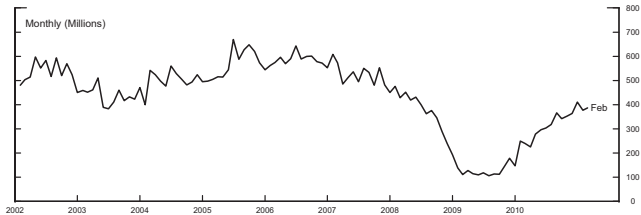
Anecdotal Previews Some of Our Key Results

- Yes, banks offer credit to bankrupt consumers
- The offer is not a result of blanket campaign: banks seek out bankruptcy filers
- It suggests that bankrupt consumers, especially those fresh filers, may be a profitable demographic to target

Data Description

- Proprietary Mintel/Comperemedia data, a monthly cross-sectional survey on credit market mailings,
- Our sample covers offers received between August 2009 and July 2010
- About 3,000 participating consumers keep mail offers they receive in a month and forward them to the data vendor at the end of the month.
- Demographic and economic characteristics of participants are also collected
- Merged with credit history for each participant, including bankruptcy information (but not chapter of filing)

Credit Card Solicitation Mail Volume



Source: Mintel.

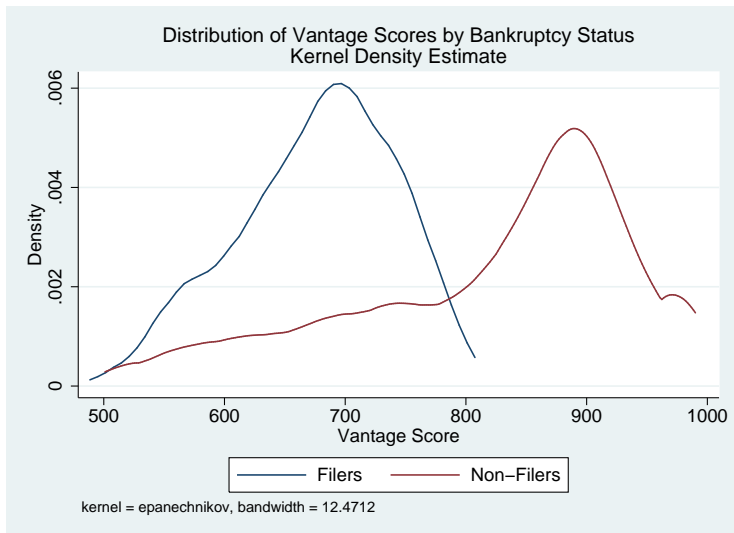
Summary Statistics—Demographics

Table 1: Demographics by Bankruptcy Filing Status

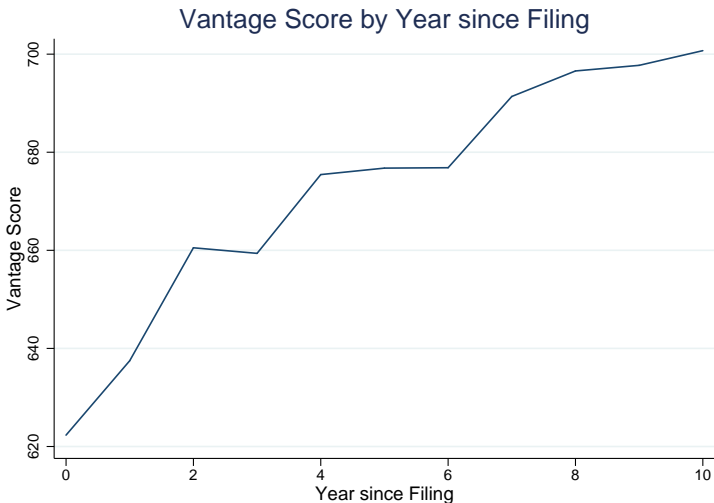
	Mintel					SCF	
	Nonfilers	Filers	Years since last filing			Nonfilers	Filers
			0-2 yrs	3-5 yrs	6-10 yrs		
Mean age	52.5	50.4	48.0	49.9	51.6	50.1	49.2
Mean household size	2.6	2.7	3.0	2.7	2.6	2.5	2.7
Married (%)	60.6	52.8	63.8	52.0	48.0	59.5	54.1
Black (%)	5.7	8.1	6.9	10.0	7.6	12.2	15.3
High School (%)	32.3	39.6	37.5	43.8	38.2	32.0	39.1
Some College (%)	21.7	24.4	22.3	25.4	24.5	17.7	23.4
College (%)	37.3	22.0	25.0	19.1	22.5	36.9	23.4
Homeowner (%)	76.0	55.7	57.5	52.0	57.7	62.5	51.4
Number of consumers	42,675	2,377	487	657	1,233	3,982	436

Our sample has fewer than 10% bankrupt consumers because we use credit bureau data to identify bankruptcy

Credit Score Distributions of Filers and Nonfilers Overlap



Filers' Credit Scores Improve Somewhat over Time



Summary Statistics—Liabilities

Table 2: Liabilities Statistics by Bankruptcy Filing Status

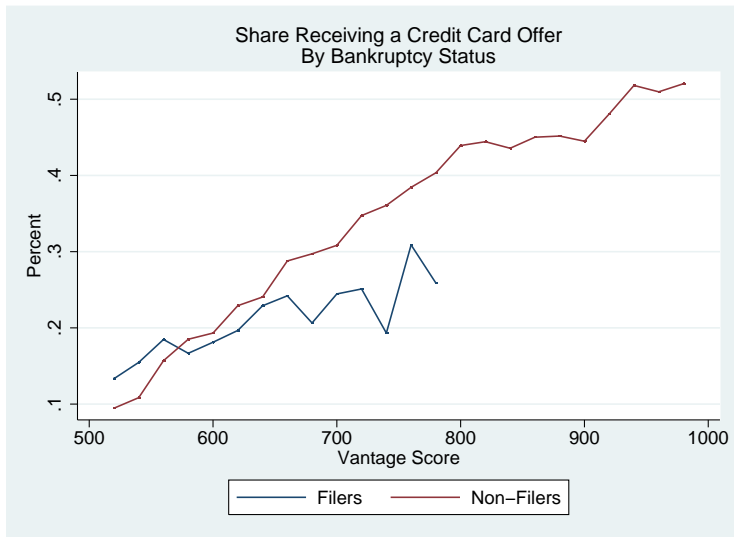
	Nonfilers	Filers	Filed		
			0-2 years	3-5 years	6-10 years
Total debt (\$)	87,659	49,812	54,490	35,846	56,801
Nonmortgage debt (\$)	21,033	14,255	11,122	12,744	16,342
Revolving debt (\$)	9,951	3,586	2,096	2,933	4,541
Revolving credit limit (\$)	40,545	7,873	5,510	6,363	9,652
Number of revolving accounts	5.9	3.6	2.2	3.6	4.3
Installment debt (\$)	10,523	10,523	8,935	9,747	11,587
Income (\$)	77,616	54,053	58,385	48,293	55,473
N. of del. accounts	0.38	0.77	1.03	0.58	0.78

Summary Statistics—New Accounts and Inquiries

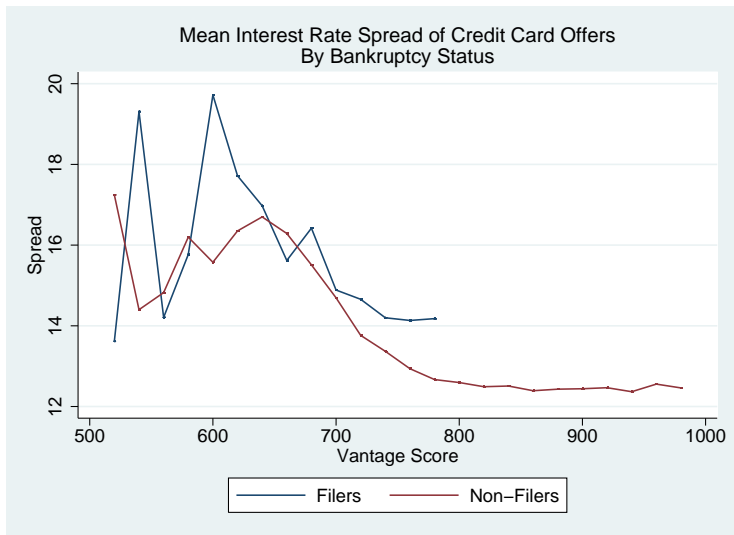
Table 3: New Accounts Opened and Inquiries on Credit History

		All trades		Bank cards	
Timing		Nonfilers	Filers	Nonfilers	Filers
% of consumers opened trades	previous 3 months	15.8	14.5	5.4	4.7
Avg. num. of trades opened	previous 3 months	1.2	1.3	1.1	1.1
% of consumers opened trades	previous 6 months	28.5	24.7	10.2	8.0
Avg. num. of trades opened	previous 6 months	1.4	1.5	1.1	1.1
% of consumers opened trades	previous 12 months	47.4	43.4	20.3	17.3
Avg. num. of trades opened	previous 12 months	1.8	1.9	1.3	1.3
% of consumers opened trades	previous 24 months	70.7	70.6	40.2	42.8
Avg. num. of trades opened	previous 24 months	2.8	3.0	1.7	1.7
		Nonfilers		Filers	
% of consumers w. credit inquiry	previous 6 months	28.9		38.0	
Avg. num. of credit inquiry	previous 6 months	1.8		2.1	

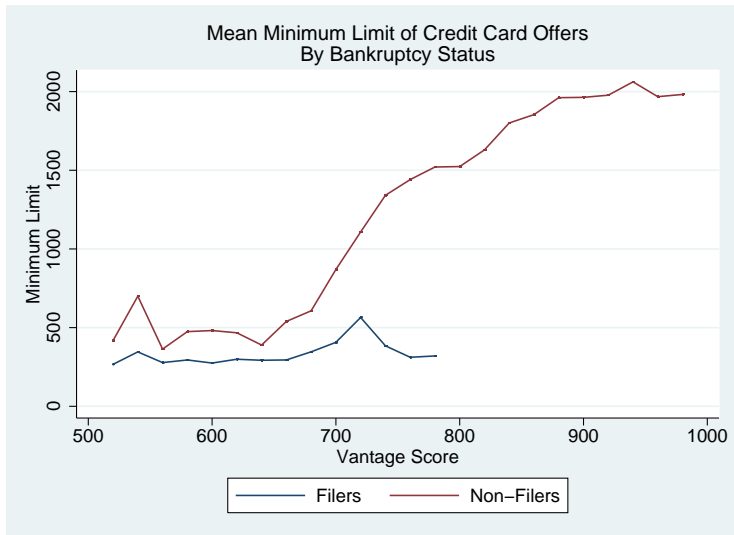
Likelihood of getting credit card offers differs across credit score distribution



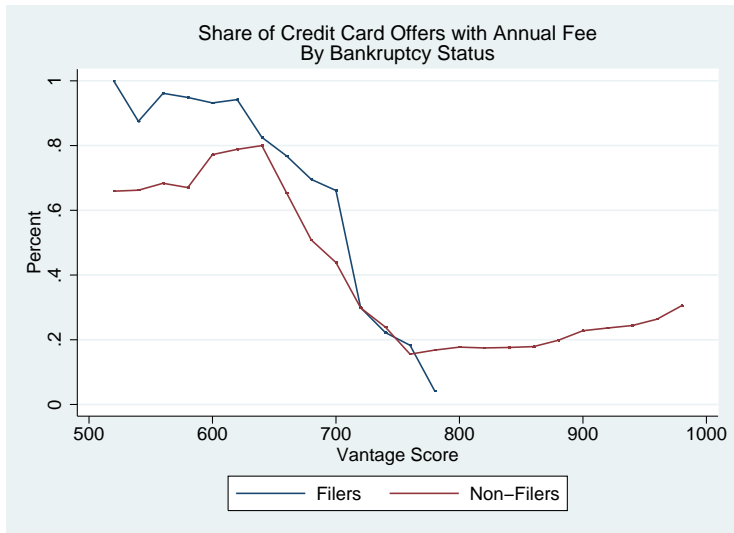
Spread is greater for filers but not dramatically so



Minimum credit limit is low for filers and does not vary across credit score distribution

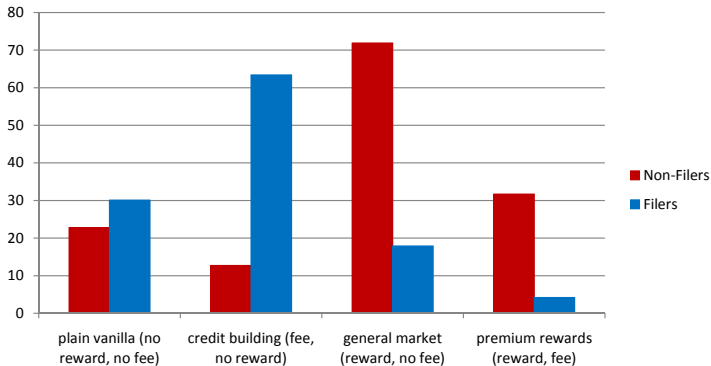


Annual fees are very common features of filers' offers

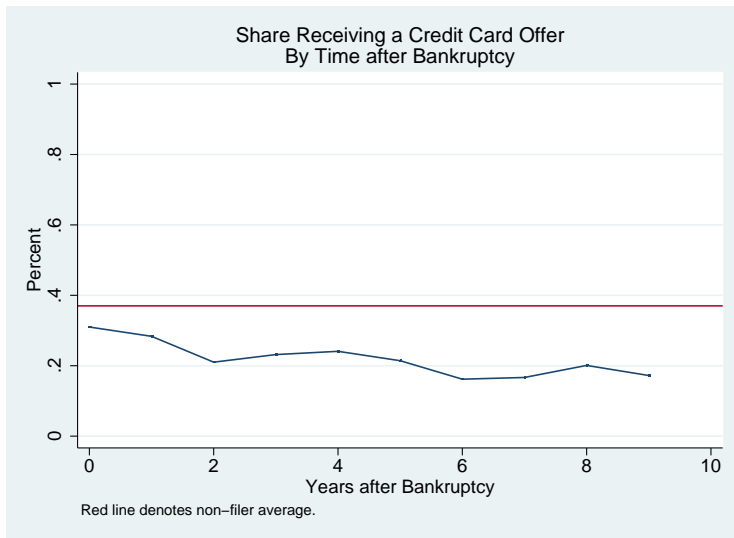


Filers' offers tend to be 'credit building'

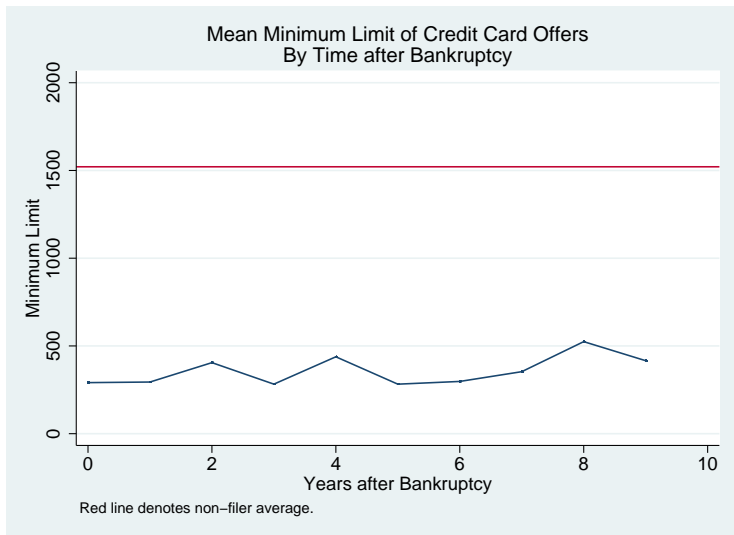
Types of Card Offers, by Filing Status



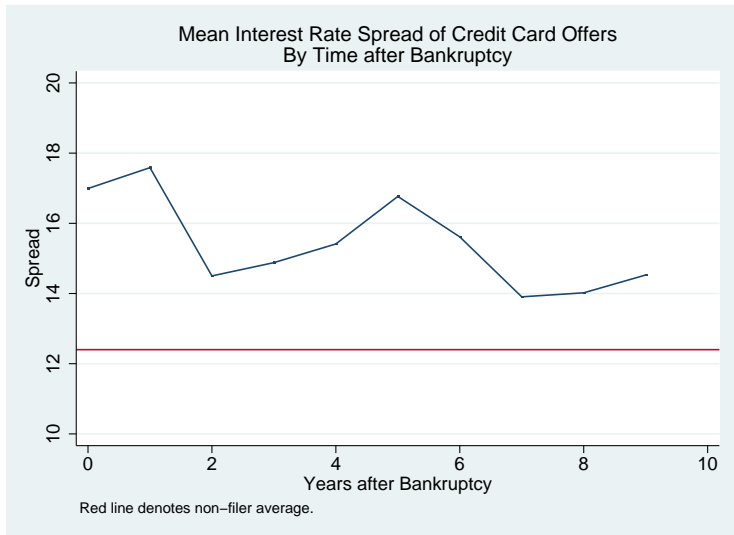
Likelihood of getting an offer does not improve over time after filing



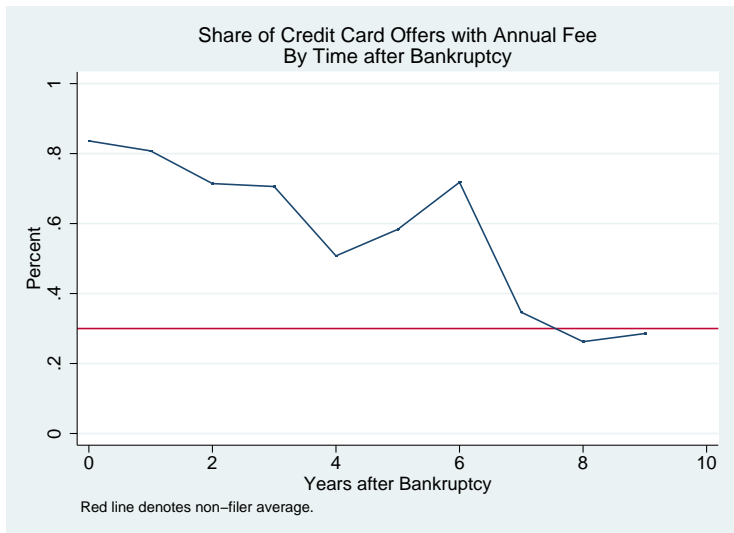
Recent bankruptcy filers have slightly lower minimum limits



Recent bankruptcy filers have slightly higher spreads



Recent bankruptcy filers are much more likely to have an annual fee



Econometric Analysis—Model Specification

- Variables of interest \in { Received offer; Interest rate spread; Credit limit; Have teaser rate offer; Have annual fee; Have rewards program }
- Var. of interest
 $= F(\text{filer, credit score, demographics, balance sheet})$
- Var. of interest
 $= F(\text{time since filing, credit score, demographics, balance sheet})$

Econometric Analysis—Regression Results I

Table 5—Filers vs. Non-filers

Independent var.	Dependent variables:						
	Having offer (1)Probit	Pre-approved (%) (2) Probit	Interest spreads (3) OLS	Min. limit (4) OLS	Having intro (5) Probit	Having annual fee (6) Probit	Having rewards (7) Probit
filer	-0.068*** (0.011)	-0.134*** (0.024)	0.773*** (0.097)	-472*** (68.7)	-0.129*** (0.018)	0.129*** (0.018)	-0.429*** (0.021)
controlled for							
credit scores?	yes	yes	yes	yes	yes	yes	yes
demographics?	yes	yes	yes	yes	yes	yes	yes
balance sheets?	yes	yes	yes	yes	yes	yes	yes
mean of dep. var.	0.40	0.47	13.8	1,636	0.70	0.26	0.78
N	45,052	35,825	22,518	17,591	35,838	35,838	35,838

Econometric Analysis—Regression Results II

Table 6—By Time since Filing

Independent var.	Dependent variables:						
	Having offer (1) Probit	Pre-approved (%) (2) Probit	Interest spreads (3) OLS	Min. limit (4) OLS	Having intro (5) Probit	Having annual fee (6) Probit	Having rewards (7) Probit
filed 0-2 years	0.037 (0.024)	-0.138*** (0.047)	1.335*** (0.171)	-367*** (117)	-0.031 (0.030)	0.283*** (0.037)	-0.630*** (0.045)
filed 3-5 years	-0.048** (0.020)	-0.187*** (0.042)	0.467*** (0.170)	-456*** (113)	-0.148*** (0.032)	0.166*** (0.032)	-0.602*** (0.033)
filed 6-9 years	-0.121*** (0.014)	-0.099*** (0.035)	0.595*** (0.145)	-565*** (103)	-0.184*** (0.027)	0.019 (0.023)	-0.276*** (0.029)
mean of dep. var.	0.40	0.47	13.8	1,636	0.70	0.26	0.78
N	45,052	35,825	22,518	17,591	35,838	35,838	35,838

Extension: Hidden Costs and Shrouding

- We explore “shrouding” of the true costs of borrowing by looking at less conspicuous terms of credit card contracts
- Gabaix and Laibson (2006): Even in a competitive market, sellers may shroud terms to consumers if they are either myopic or imperfectly informed
- Mintel collects more than 90 potential attributes of any offered contract

Hidden Costs Results

- Filers' offers tend to contain higher “hidden” costs than comparable nonfilers'
- Balance Transfers
 - Less likely to receive a promotional balance transfer period
 - Shorter teaser period conditional on receiving one
 - Higher balance transfer interest rate
 - More likely to pay a balance transfer fee
- Filers more likely to pay additional fees
 - Minimum finance charge
 - Monthly “maintenance” fee
 - “Other” fees

Summary

- Lenders extend credit to bankrupt consumers, especially to those who filed most recently
- Lenders are more cautious in extending credit to more seasoned filers
- Credit offers to bankrupt consumers tend to have lower credit limits, higher interest rates and fees, and fewer incentives
- Filers benefit less from improving their credit scores than do nonfilers
- Offers to filers contain more “hidden” costs and fees

Future Research

- Cross-section: Is there state-level variation in offers based on bankruptcy exemptions, garnishment, house price declines, or unemployment?
- Time-series: What was the impact of the CARD Act on offers to especially risky borrowers?
- Dynamics: Competition in the market for unsecured credit