

For Better and for Worse?

Effects of Access to High-Cost Consumer Credit

Christine Dobridge
Federal Reserve Board of Governors

December 2016

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Research Question

- How does access to credit affect household well being?
 - Consumption smoothing improves household utility:
 - Canonical models: Friedman (1956), Modigliani and Brumberg (1954), and Hall (1978)
 - May worsen well being for some households:
 - Unusually strong preference for current consumption (Laibson, 1997; O'Donoghue and Rabin, 1999; Heidhues and Koszegi, 2010)
 - Poor financial literacy (Lusardi and Tufano, 2015)
 - When lenders are more informed than borrowers about potential outcomes (Bond, Musto and Yilmaz, 2009)

This Paper

- Studies effect of credit access on household well being in states of the world, not among different types of borrowers
 - Distress states vs normal states
- Study the payday loan market
- Studies household *material* well-being, i.e., consumption

Why Study High-Cost Credit?

- Heavily used market:
 - Used by 20 percent of households with income less than \$40,000 that experience a hardship (FRB, 2016)
 - 12 million households take payday loans a year (Pew, 2014)
- Payday lending is a particularly controversial market
 - Small value, short-term, high-cost loans (~400% APR)
 - Opponents: Market is a debt trap
 - Proponents: Helps families facing emergencies
- Research finds conflicting effects of payday lending
 - Negative effects: Melzer (2011); Melzer (2014); Skiba and Tobacman (2015); Carrell and Zinman (2014)
 - Positive effects: Morse (2011); Zaki (2015); Morgan, Strain and Seblani (2012); Zinman (2010)
 - Little effect on finances: Bhutta (2014); Bhutta, Skiba and Tobacman (2015)

Another Reason: Timely Policy Issue

- CFPB proposed payday and title loan regulations in June
- Regulations establish ability to pay standards: “full-payment” test
 - Alternative loan products:
 - Short-term of \$500 or less
 - Rollovers capped at two (three loans total) and a 30 day cooling-off period
 - Auto titles as collateral would be prohibited
- From press release:
 - “We’ve proposed a rule to protect consumers from payday debt traps”
 - “Payday and similar loans lead to consumers trapped in debt and our proposed rule aims to help those consumers”
- Likely to have substantial effect on high-cost credit markets:
 - CFPB projects loan volume would fall 69 percent to 84 percent
 - CFPB has received about a million public comments

Why Study Consumption?

- From a theoretical basis, households derive utility from consumption
- Spending is a common measure of material well-being
- Spending is a better measure of well-being than income (Meyer and Sullivan, 2004)

Summary of Findings

1) In periods of distress:

- Improves material well-being
- Payday loan access helps households smooth consumption
- Mitigates declines in spending on food, mortgage payments, and home repairs

2) In normal periods:

- Payday loan access reduces household material well-being
- Reduces spending on nondurable goods overall and on housing- and food-related spending particularly

Contributions

- 1) Highlighting the state-dependent nature of the effects of high-cost credit on well-being
- 2) Reconciling conflicting evidence on the effects
- 3) Informing policymakers

Presentation Outline

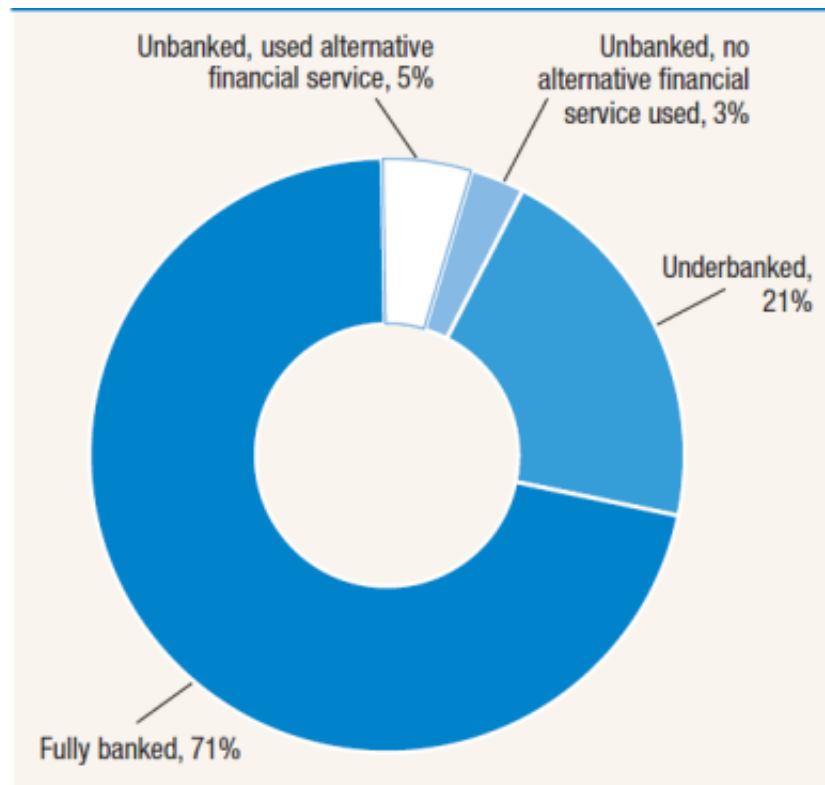
- Facts on household financial preparedness
- Overview of the payday loan market
- Empirical strategy
- Results:
 - Households facing distress
 - Households in normal times
- Conclusion

Facts on Household Financial Preparedness

Many Households Lack Access to Basic Financial Services

FRB Report on the Economic Well-Being of Households

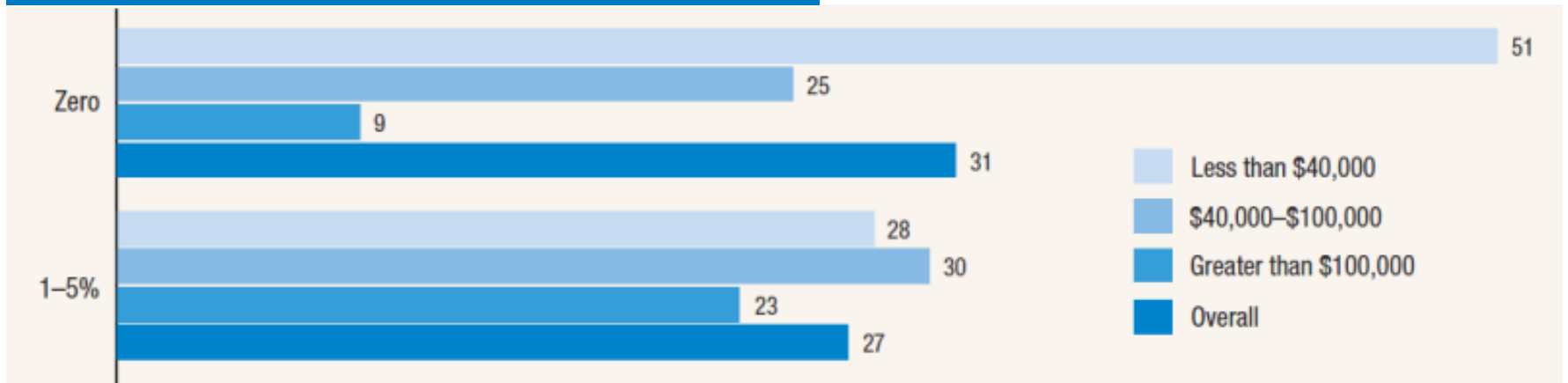
- About 30 percent of households are unbanked or underbanked



Many Households Save Little

- 50 percent of households with income less than \$40,000 report zero savings

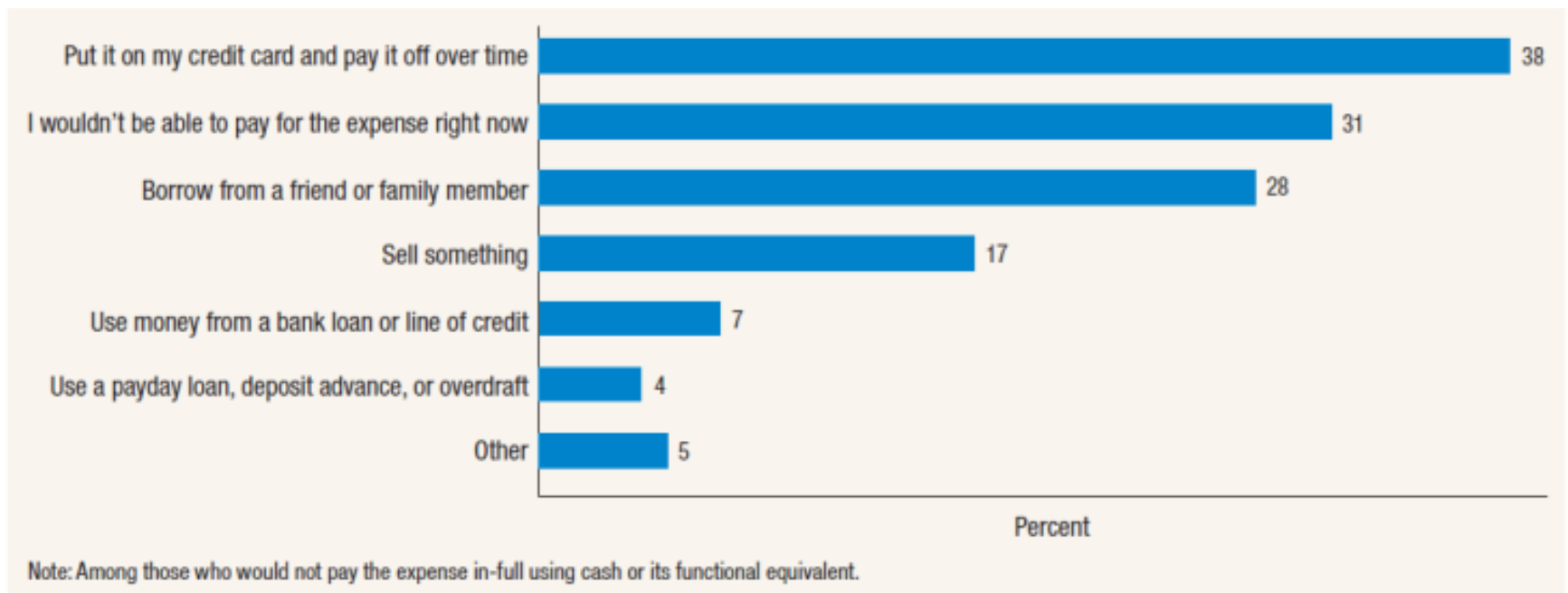
Percent of income saved among non-retirees (by family income)



- Source: FRB (2016)

Many Households Can Not Easily Handle a Small Financial Disruption

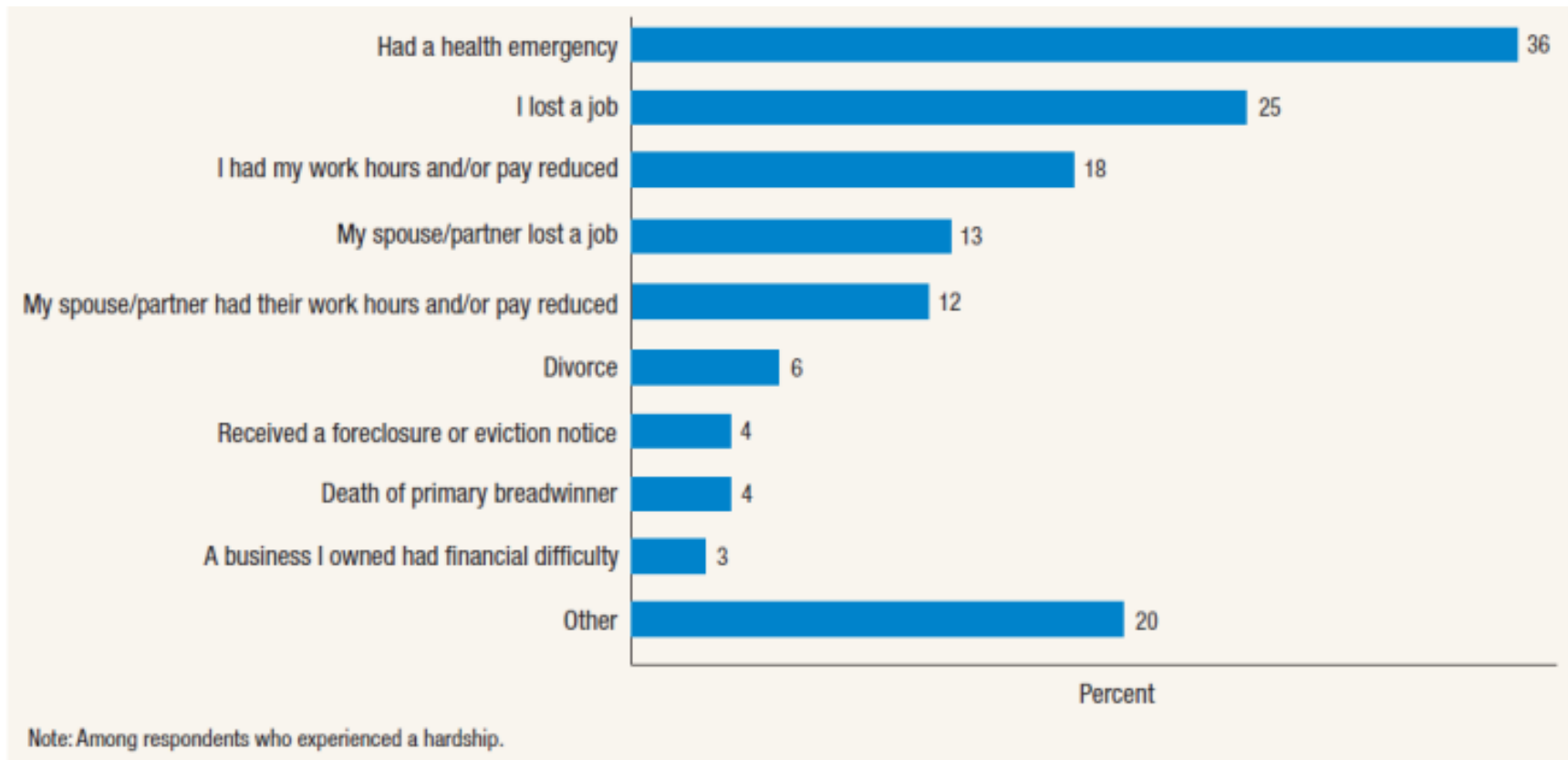
- 46 percent of survey respondents report a \$400 emergency expense would be hard to handle (FRB 2016)



- Source: FRB (2016)

Hardship Events Are Prevalent

- 18 percent of households reported experiencing an economic hardship in the last year



- Source: FRB (2016)

Payday Loan Market Overview

What Are Payday Loans?

- Payday loans:
 - Small value: Often \$500 or less
 - Short-term: Repaid or rolled over on next payday
 - High-cost: Fees from \$10 to \$30 per \$100 borrowed
 - (400% APR for \$15 fee)

How Many People Use Payday or Any High-Cost Loans?

- Use is prevalent:
 - 12 million payday borrowing households a year (Pew, 2012)
 - Used by many households that report hardships

Table 9. Propensity to use a tax refund anticipation loan, pawn shop loan, payday loan, auto title loan, or paycheck advance (by income and whether experienced a hardship)
Percent

Income category	Among respondents who report a hardship	Among respondents who do not report a hardship
Less than \$40,000	20.5	8.1
\$40,000–\$100,000	11.0	3.7
Greater than \$100,000	9.3	1.2
Overall	16.5	4.7

- Source: FRB (2016)

Why Do People Use Payday Loans?

Pew (2012)

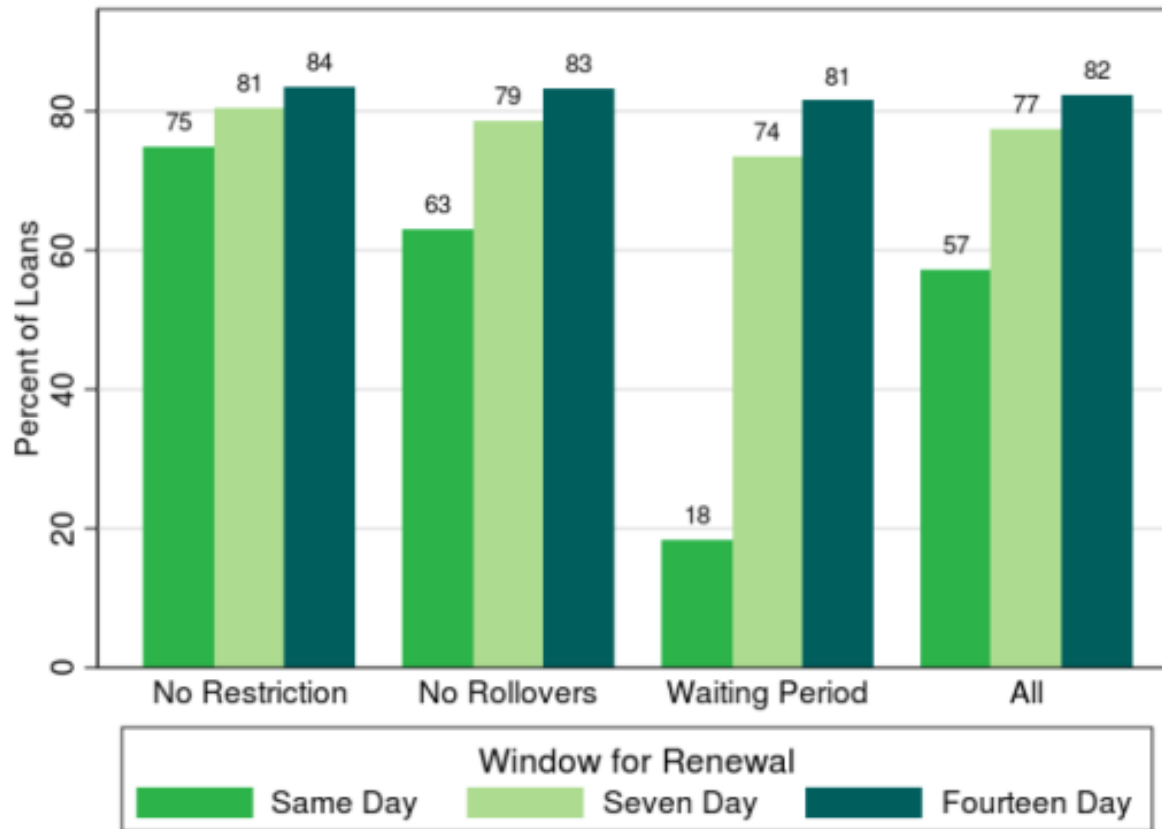
- Recurring expenses: 69 percent
 - 53 percent for utilities, car payments or credit cards
 - 10 percent for rent or mortgage payments
 - 5 percent for food
- Unexpected emergency/expense: 16 percent
- Something special: 8 percent

Characteristics of Borrowers

- Characteristics:
 - More likely to be female, single parents, African American, and less than a college degree (PEW, 2012)
- Income:
 - 25 percent of borrowers with income less than \$15,000
 - 56 percent with income between \$15,000 and \$50,000 (PEW, 2012)
- Financial conditions:
 - 55 percent report no savings (Ellihausen, 2009)
 - 40 percent of applicants without a general purpose credit card (Bhutta, Skiba, and Tobacman, 2015):
 - 80 percent without credit available on credit card (BST, 2015)
 - More likely to have been turned down for credit or have been 60 days delinquent on a payment (Morgan and Pan, 2012)

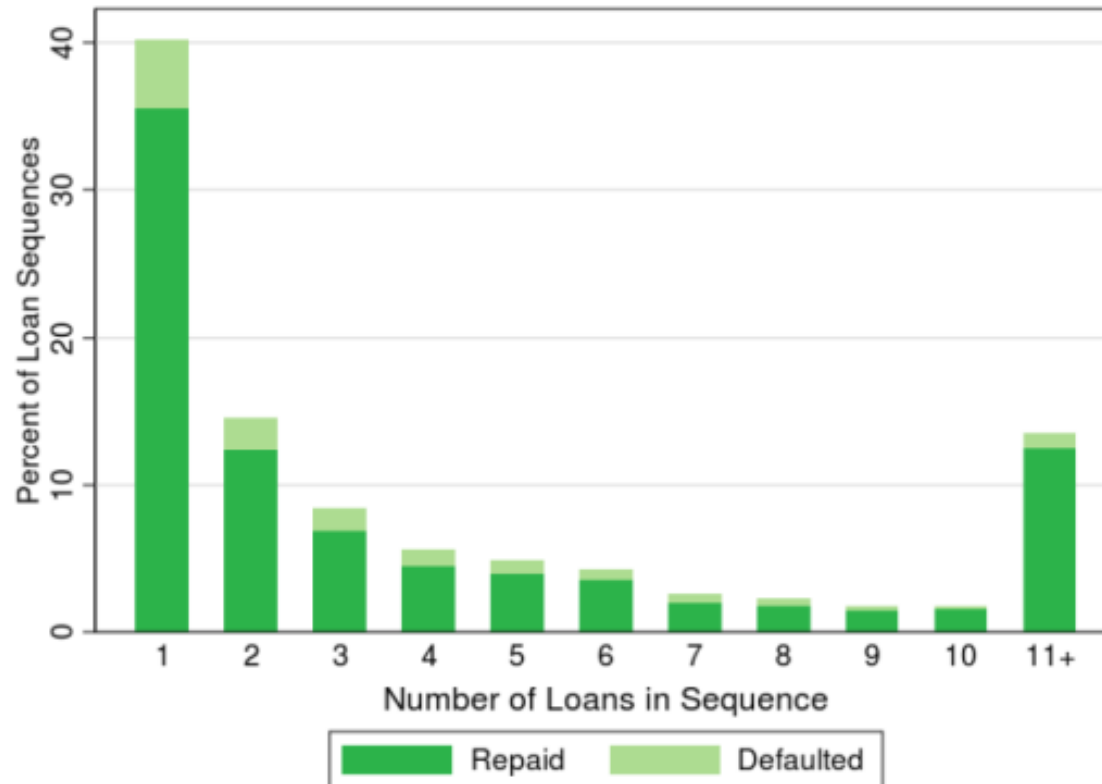
How Often Are Borrowers Renewing Payday Loans?

- 82 percent of payday loans are renewed within the 14 day renewal



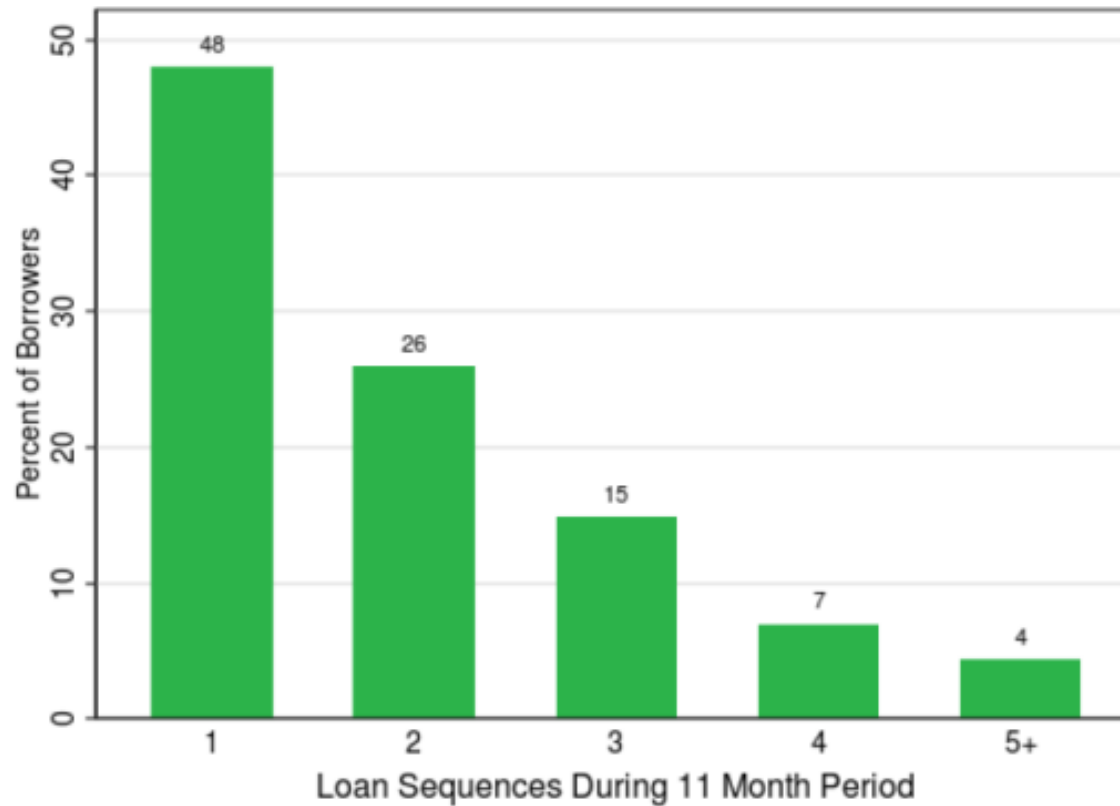
- Source: CFPB (2014)

Number of Loans in a Sequence Is Bimodal



- Source: CFPB (2014)

Most Households Taking 1 or 2 Loan Sequences



- Source: CFPB (2014)

Data and Empirical Methodology

Data Overview

- Consumption data: Consumer Expenditure Survey
 - Confidential data on census tract location
 - Total expenditures, durable expenditures, nondurable expenditures (broad and narrow as in Lusardi (1996))
 - Major breakdown of goods and services (Kearney, 2004)
 - Sample years: 1998-2010
- Weather event data: Sheldus Hazard Database
 - County-level data
 - 18 types of weather events

Empirical Strategy: Temporary Negative Shock

- Identify payday loan access (Melzer, 2011 and 2014)
 - Study households in states do not allow payday lending
 - Treated households: live **close** to the border of states that allow payday lending
 - Control households: live **far** from the border of a state that allows payday lending
- Identify temporary periods of financial distress (Morse, 2011)
 - Weather events that cause monetary damages
- Study the interaction

Advantages of These Measures

- Advantages of payday loan measure
 - Takes advantage of variation in location and over time
 - Not as subject to endogeneity concerns about state law changes
 - Not as subject to endogeneity concerns about lender locations
- Advantage of studying weather events
 - Unanticipated negative shocks
 - Plausible source of temporary financial distress

Empirical Strategy: Temporary Negative Shock

$$\text{Expenditure}_{ict} = \beta_1 \text{PaydayAccess}_{ct} + \beta_2 \text{WeatherEvent}_{nt} + \beta_3 \text{PaydayAccessXWeatherEvent}_{cnt} + \beta_4 \text{Border}_c + \gamma W_{it} + \delta X_{st} + \delta Z_{nt} + \alpha_s + \alpha_t + \varepsilon_{icnst}$$

- i is household; t is month of spending; c is census tract; n is county; s is state
- Expenditure is measured in levels and in logs, adjusted for inflation
- *PaydayAccess* is a dummy = 1 dummy variable that equals 1 if a household is in a state that bans payday lending and also lives in a census tract within 25 miles of a state that allows payday lending
- *WeatherEvent* is a dummy = 1 if any weather event that caused monetary damages occurred in the month, in the county of the census tract
- *Border* is a dummy = 1 if a household is within 25 miles of any border
- Controls: race, age, income class, family size, cubic in income, county unemployment rate, county employment growth, state personal income growth, log of state personal income, log of state house prices
- Cluster standard errors at the county level

Empirical Strategy: Overall Effect of Payday Loan Access

$$\text{Expenditure}_{ict} = \beta_1 \text{PaydayAccess}_{ct} + \beta_2 \text{Border}_c + \gamma W_{it} + \delta X_{st} + \delta Z_{nt} + \alpha_s + \alpha_t + \varepsilon_{icnst}$$

- i is household; t is quarter of spending; c is census tract; n is county and s is state
- Expenditure is measured in levels and in logs, adjusted for inflation
- *PaydayAccess* is a dummy = 1 dummy variable that equals 1 if a household is in a state that bans payday lending and also lives in a census tract within 25 miles of a state that allows payday lending
- *Border* is a dummy = 1 if a household is within 25 miles of any border
- Controls: race, age, income class, family size, cubic in income, county unemployment rate, county employment growth, state personal income growth, log of state personal income, log of state house prices
- Cluster standard errors at the county level

Payday Loan Law Changes

Always Banned	Always Legal		Banned	Legalized	
CT	CA	KY	OH	AR (Dec. 07)	AL (Jun. 03)
ME	DE	LA	SC	AZ (Jun. 10)	AK (Jun. 04)
MA	FL	MN	SD	CO (Jan. 10)	AZ (Apr. 00)
NJ	ID	MS	TN	DC (Nov. 07)	AR (Apr. 99)
NY	IL	MO	TX	GA (May 04)	HI (Jul. 99)
VT	IN	MT	UT	MD (Jun. 00)	MI (Nov. 05)
	IA	NE	WA	NC (Dec. 05)	NH (Jan. 00)
	KS	NV	WI	NH (Jan. 09)	ND (Apr. 01)
		NM	WY	OR (Jul. 07)	OK (Sep. 03)
				PA (Nov. 07)	RI (Jul. 01)
				WV (Jun.06)	VA (Apr. 02)

Source: Morgan, Strain, and Seblani (2012); Bhutta (2014)

Weather Events Are Prevalent in the Sample

Obs. in data sample:	192,329
Obs. with a weather event in the county:	
Any	66,748
Flooding	8,518
All Storm Events	25,782
Wind	23,094
Wind/Winter weather	9,460
Obs. with payday loan access and any weather event in the county:	22,178
Mean county property damage in a month with a weather event:	\$1,366,424

Expenditures Similar Between Treatment & Control

	Payday Access = 0		Payday Access = 1		(P-value difference)
	Mean	SD	Mean	SD	
Total Expenditures	11,069	10,527	10,959	9,738	0.20
Nondurables: Narrow	2,758	3,262	2,733	2,320	0.27
Nondurables: Broad	3,750	3,854	3,739	3,076	0.73
Durable Goods	7,320	7,820	7,220	7,794	0.14
Food at home	1,149	759	1,132	742	0.01
Food away from home	471	900	454	933	0.03
Rent Payments	723	1,290	543	1,105	0.00
Mortgage Payments	1,062	2,085	1,187	2,146	0.00
Utilities	844	607	869	541	0.00
Household Operations	529	1,667	517	1,519	0.37
Health Care	596	934	653	918	0.00
Education	254	1,718	255	1,752	0.96
Alcohol and tobacco	172	325	176	326	0.15
Apparel	360	666	318	972	0.00
Entertainment	526	1,151	551	1,814	0.07
Sample size:	44,332		19,276		

Some Demographic Differences Between Treatment & Control

	<u>Payday Access = 0</u>		<u>Payday Access = 1</u>		<u>(P-Value of Difference)</u>
	Mean	Std. Dev.	Mean	Std. Dev	
Income	51.10	61.91	51.09	59.44	0.99
Married	0.54	0.50	0.54	0.50	0.31
Homeowner	0.65	0.48	0.71	0.46	0.00
Family Size	2.56	1.47	2.51	1.41	0.00
Age	50.39	15.84	50.25	15.63	0.32
Race					
White	0.79	0.41	0.79	0.40	0.83
Black	0.16	0.36	0.16	0.37	0.11
Asian	0.04	0.19	0.03	0.16	0.00
Hispanic	0.10	0.30	0.05	0.22	0.00
Other	0.01	0.10	0.02	0.13	0.00
Education					
Below High School	0.15	0.36	0.15	0.36	0.20
High School	0.28	0.45	0.29	0.45	0.27
Some College	0.26	0.44	0.26	0.44	0.81
Bachelors or higher	0.31	0.46	0.30	0.46	0.77
Sample size:	44,332		19,276		

Results:
Effects of Payday Loan Access in Distress Periods

Payday Access Mitigates Declines on Nondurables

- Expenditure regressions in logs

	Dependent Variable:			
	Total Expenditures	Nondurables: Narrow	Nondurables: Broad	Durables
WeatherEvent	-0.00992 [0.00727]	-0.0140** [0.00709]	-0.0145** [0.00729]	-0.00449 [0.00789]
WeatherEventXPaydayAccess	0.0151 [0.0130]	0.0281** [0.0122]	0.0255* [0.0132]	0.000426 [0.0153]
PaydayAccess	-0.03 [0.0219]	-0.0376 [0.0249]	-0.0415* [0.0230]	-0.019 [0.0244]
Obs.	192,148	191,955	192,012	192,100
R-squared	0.466	0.426	0.41	0.411

Payday Access Mitigates Declines on Nondurables

- Expenditure regressions in levels

	Dependent Variable:			
	Total Expenditures	Nondurables: Narrow	Nondurables: Broad	Durables
WeatherEvent	-51.25 [31.62]	-15.37* [7.931]	-22.04* [11.68]	-29.21 [23.48]
WeatherEventXPaydayAccess	84.96 [53.15]	30.15** [14.34]	34.90* [20.26]	50.06 [39.56]
PaydayAccess	-88.39 [100.5]	-46.64 [28.68]	-67.02* [35.75]	-21.37 [71.08]
Obs.	192,148	191,955	192,012	192,100
R-squared	0.466	0.426	0.41	0.411

Mitigates Declines on Food and Home Repairs

- Expenditure regressions in logs

	Dependent Variable:							
	Food at Home	Food Away from Home	Rent	Mortgage Payments	Utilities	Health Care	Apparel	Home Repairs
WeatherEvent	-0.0145** [0.00659]	-0.0230** [0.0113]	0.00282 [0.0106]	-0.0154 [0.0114]	0.0144* [0.00816]	0.000673 [0.0127]	-0.00184 [0.0143]	-0.0449 [0.0328]
WeatherEventXPaydayAccess	0.0286** [0.0115]	0.0419** [0.0203]	0.0201 [0.0210]	0.0301 [0.0213]	-0.0202 [0.0128]	-0.00161 [0.0200]	0.0035 [0.0217]	0.105* [0.0548]
PaydayAccess	-0.035 [0.0257]	-0.123*** [0.0384]	-0.0316 [0.0429]	-0.135*** [0.0485]	0.0420** [0.0199]	-0.0486* [0.0265]	-0.0511 [0.0380]	-0.0569 [0.0899]
No. Obs	191,003	147,242	62,771	73,276	187,429	143,062	116,778	30,102
R-squared	0.373	0.244	0.381	0.247	0.323	0.164	0.141	0.084

Mitigates Declines on Food, Mortgages, and Home Repairs

- Expenditure regressions in levels

	Dependent Variable:							
	Food at Home	Food Away from Home	Rent	Mortgage Payments	Utilities	Health Care	Apparel	Home Repairs
WeatherEvent	-7.183** [2.805]	-0.626 [3.183]	-6.932** [3.242]	-11.18* [5.712]	3.800* [2.273]	-0.656 [3.919]	-5.793** [2.773]	-18.10* [9.691]
WeatherEventXPaydayAccess	12.11** [5.573]	5.546 [4.860]	5.38 [4.927]	18.72** [8.980]	-3.303 [4.088]	5.821 [6.638]	-1.626 [6.021]	35.69* [18.50]
PaydayAccess	-15.15 [10.74]	-21.15*** [7.312]	-22.07 [14.65]	-59.84** [25.58]	2.681 [5.765]	-10.39 [7.620]	-12.88* [7.533]	3.566 [23.66]
No. Obs	191,003	147,242	62,771	73,276	187,429	143,062	116,778	30,102
R-squared	0.373	0.244	0.381	0.247	0.323	0.164	0.141	0.084

Results:
Effects of Payday Loan Access in Normal Periods

Spending Reductions in Nondurables Overall

	All Income		Income 15-50K	
	Ln	Level	Ln	Level
	(1)	(2)	(3)	(4)
Dependent Variable:				
Total Expenditures	-0.0556** [0.0257]	-599.6 [366.4]	-0.0484* [0.0263]	-575.3* [294.3]
Nondurables: Narrow	-0.0626** [0.0301]	-218.9** [103.1]	-0.0512 [0.0359]	-162.2* [90.50]
Nondurables: Broad	-0.0629** [0.0276]	-313.5** [129.3]	-0.0441 [0.0312]	-260.1** [114.3]
Durable Goods	-0.0530* [0.0273]	-286.1 [252.3]	-0.0531* [0.0278]	-315.2 [204.6]
Obs.	63,605	63,605	21,028	21,028

Spending Reductions Concentrated in Housing and Food

	All Income		Income 15-50K	
	Ln	Level	Ln	Level
	(1)	(2)	(3)	(4)
Dependent Variables:				
Rent Payments	-0.140** [0.0651]	-149.2** [59.98]	-0.164** [0.0758]	-194.5*** [71.39]
Mortgage Payments	-0.202*** [0.0595]	-257.6*** [87.99]	-0.287*** [0.0814]	-156.2** [60.58]
Food At Home	-0.0698** [0.0316]	-86.92** [38.71]	-0.0844** [0.0428]	-115.4** [46.88]
Food Away From Home	-0.161*** [0.0510]	-87.52*** [30.11]	-0.169** [0.0661]	-71.96** [31.23]
Alcohol and Tobacco	-0.036 [0.0395]	15.01 [10.75]	0.0721 [0.0625]	43.96*** [14.64]

Conclusions

- Effect of payday loan access on household well-being depends on whether the household is facing distress
 - If facing distress—improves well-being in the short term
 - If not facing distress—worsens well-being
- Can't tease out overall welfare effect

Issues for policymakers:

- Many households are financially unprepared for distress
- At least some households are likely to lose access to this market
 - Alternatives for households facing distress?