

THE EFFECTS OF INCOME TIMING ON SHORT-TERM BORROWING:

EVIDENCE FROM SOCIAL SECURITY RECIPIENTS

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FDIC CONSUMER RESEARCH SYMPOSIUM

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The views expressed are those of the authors and do not necessarily reflect the opinions of the Consumer Financial Protection Bureau, its director, or its staff.

Outline

Research approach & prior literature

Data

Pay timing

Results

Next Steps

Related Literature

- Existing literature on short-term consumption smoothing focuses on relationship between timing of income and consumption.
 - Food stamps: Wilde and Ranney (2000), Shapiro (2005)
 - Social Security: Stephens (2003, 2006), Mastrobuoni and Weinberg (2009, 2012)
 - General population (UK): Huffman and Barenstein (2005)
 - “Consumption Commitments”: Vellekoop (2012)
- Limited research on the role of credit in very short-term consumption smoothing.
 - Payday lending and the military: Zaki (2013)
 - Theoretical treatment of paycheck timing and payday lending: Parsons and Van Wesep (2012)
- Welfare effects of payday loans
 - E.g., Zinman (2010), Melzer (2011), Morse (2011), Carrell and Zinman (2014)

Our approach

We use the timing of Social Security and SSI benefits payments to estimate the impact of income timing on loan use:

- Income cycle effects versus a monthly expense cycle
- Borrowing between benefits payments – do borrowers appear to be smoothing consumption within a pay cycle?

Data

- Supervisory data collected from a number of large storefront payday lenders.
- All payday loans originated by the lenders during a twelve month period.
 - Loan amount, fee
 - Origination date, due date, actual date repaid
 - Can link loans made to a borrower (within lender)
 - Borrower income
- This analysis is limited to those lenders that provided income source.

Data

- Several hundred thousand borrowers who received Social Security or SSI benefits.
 - 18% of all payday borrowers receive income from benefits of public assistance (CFPB, 2013)
- Summary statistics for this group of borrowers:
 - Loan principal (not including fee): \$305
 - Fee: \$47
 - Duration 21 days
 - Borrower income: \$954/month

The SSA Disbursement Calendar Generates Several Sources of Variation in Pay Timing

JANUARY 2011						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY 2011						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					



MARCH 2011						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL 2011						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY 2011						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

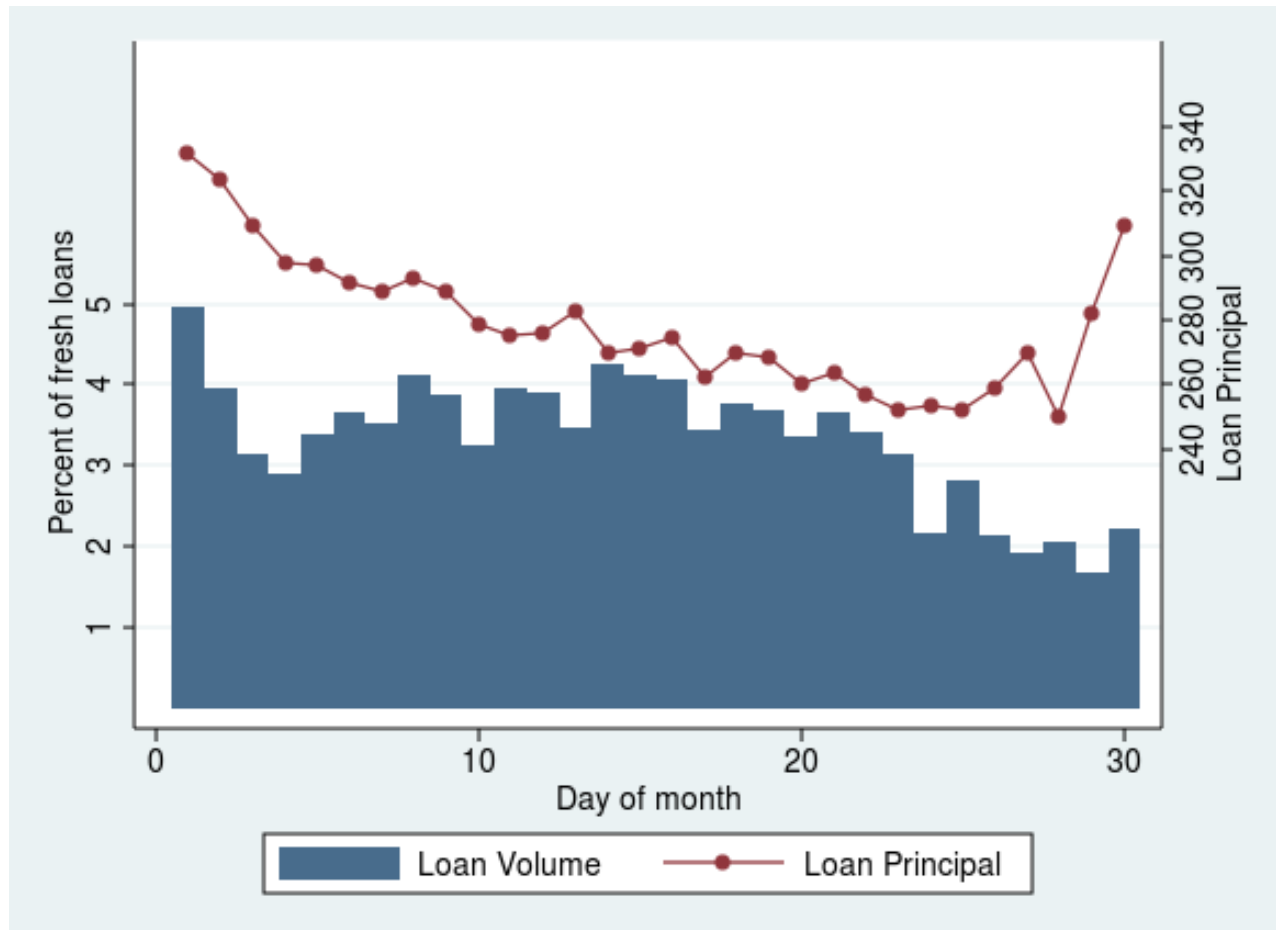
JUNE 2011						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Benefits paid on	Birth date on
Second Wednesday	1 st – 10 th
Third Wednesday	11 th – 20 th
Fourth Wednesday	21 st – 31 st

	Supplemental Security Income (SSI)
	Beneficiaries receiving benefits prior to May 1997 or receiving both Social Security benefits and SSI payments

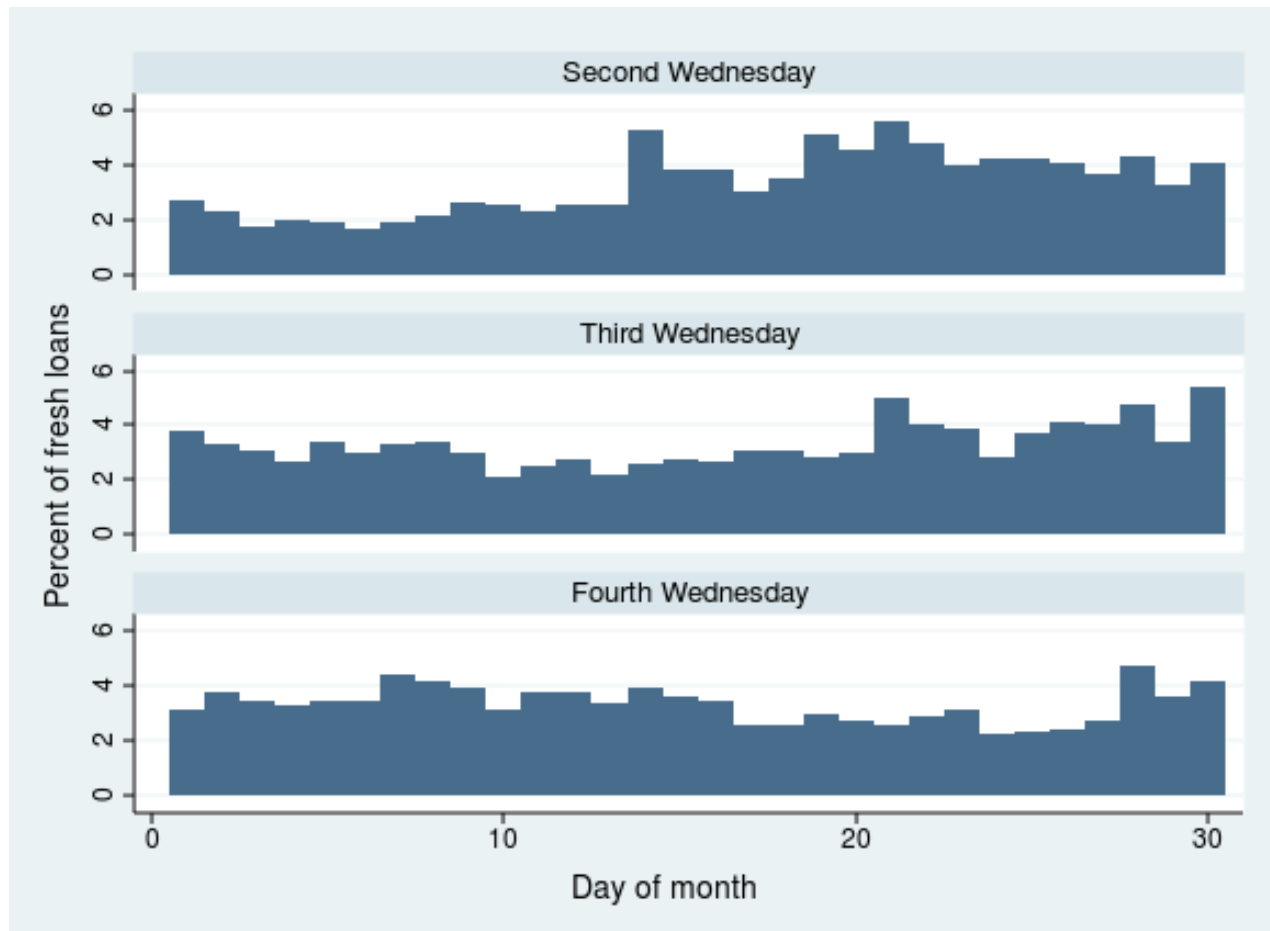
Descriptive results – Loan volume and principal over the calendar month

SSI Recipients



Descriptive results – Loan volume for Wednesday Groups

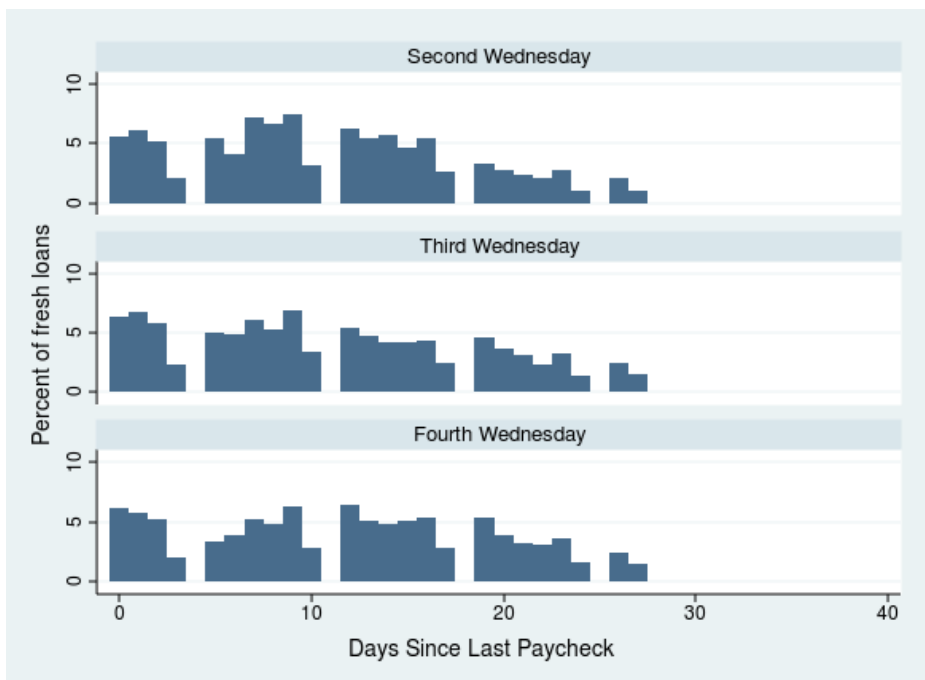
Day of Month



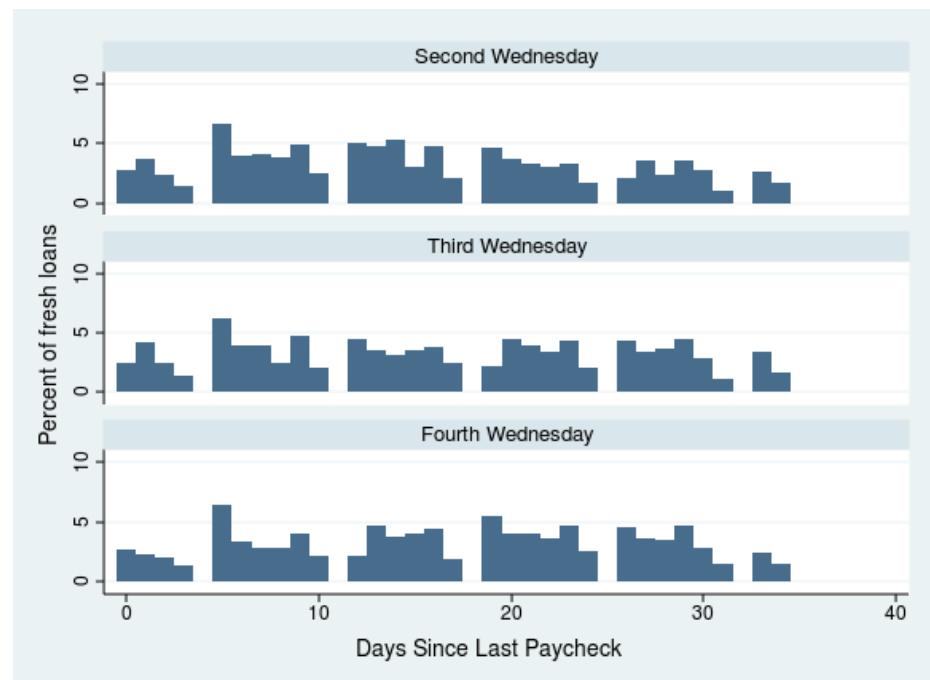
Descriptive results – Loan volume for Wednesday Groups

Days since Last Paycheck

28-day Pay Periods

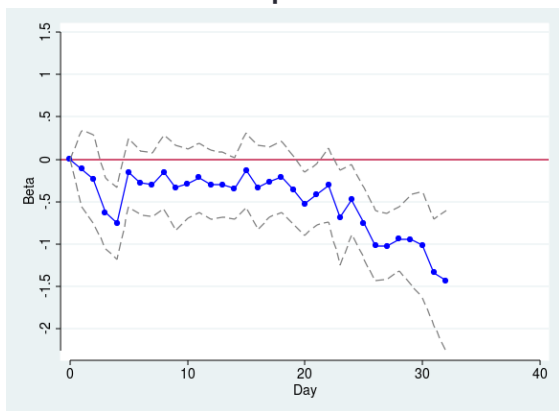


35-day Pay Periods

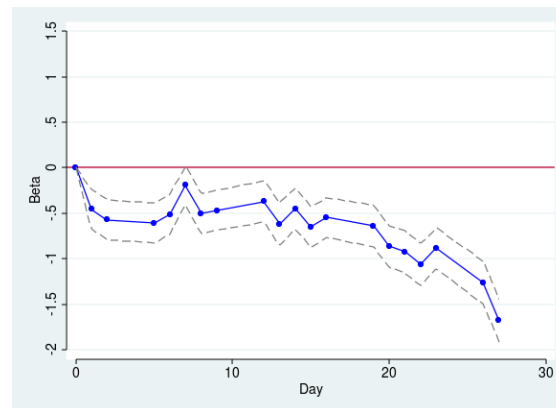


Regression results – loan volume since benefits payment

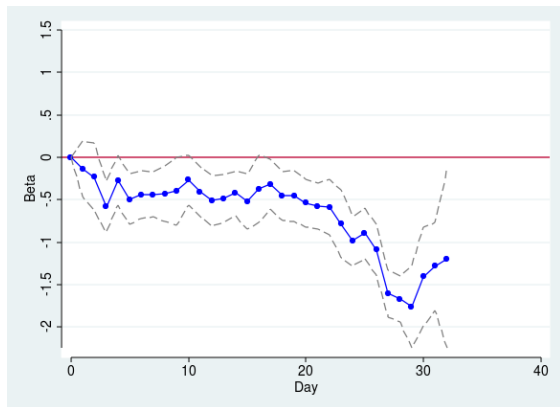
SSI
Recipients



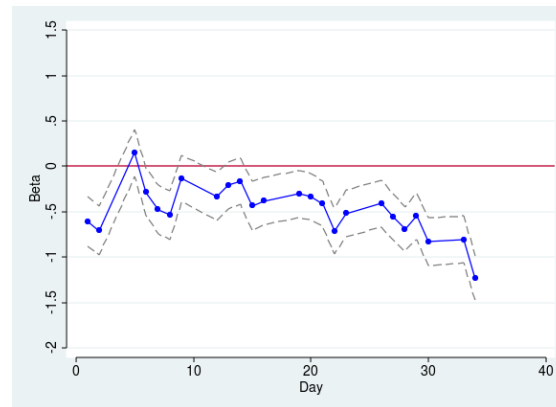
“Wednesday” Groups -
Short Months



“Mixed”
Group

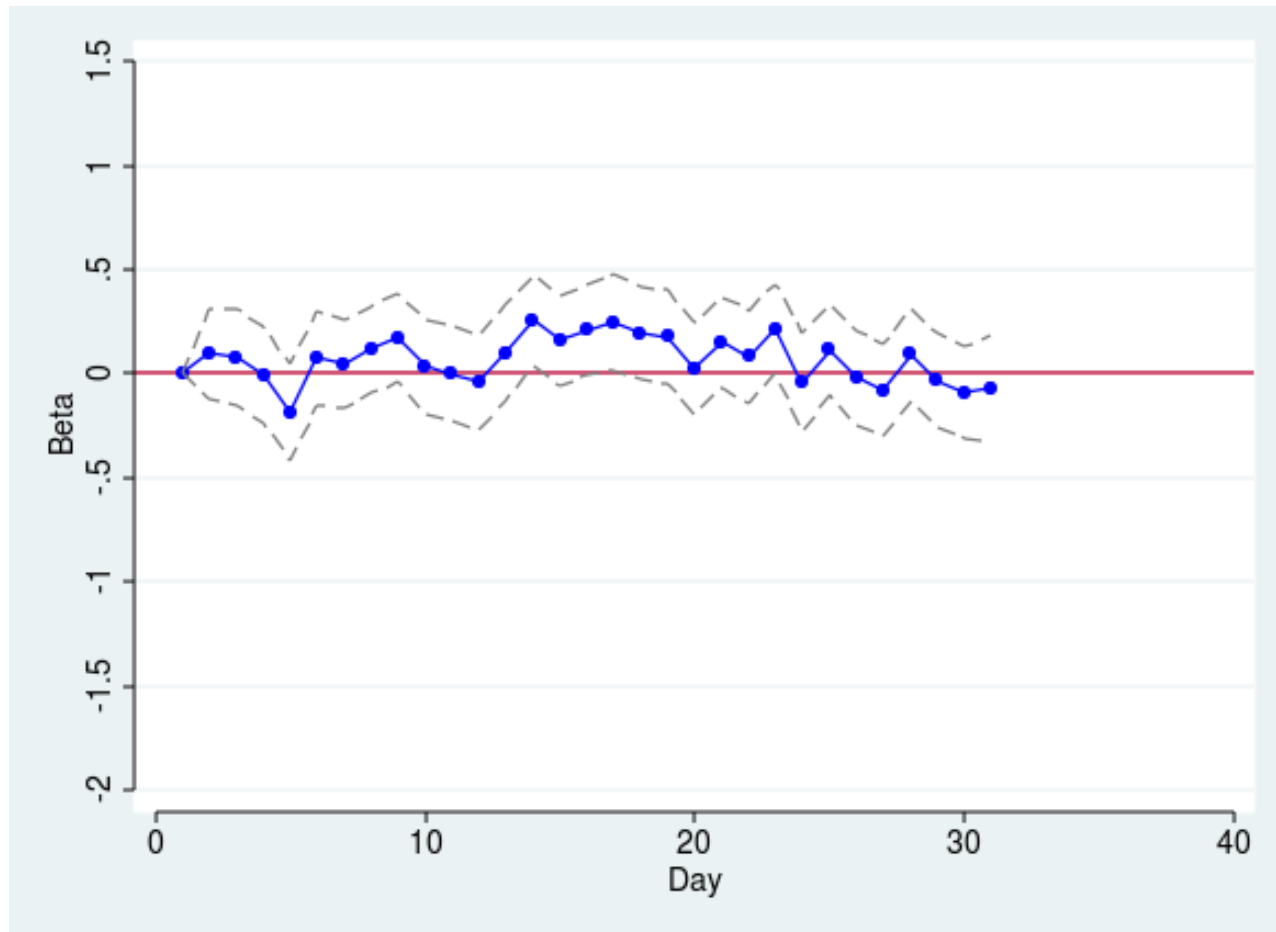


“Wednesday” Groups -
Long Months



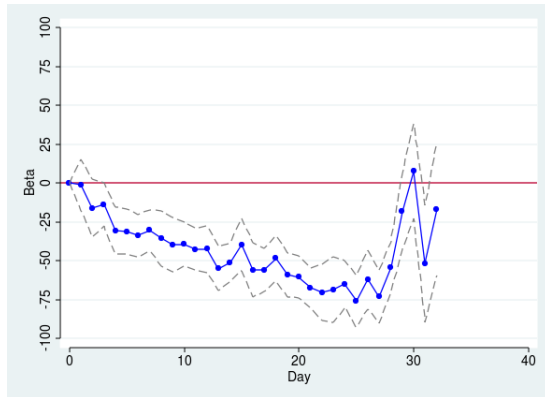
Regression results – loan volume over calendar month

Wednesday Groups

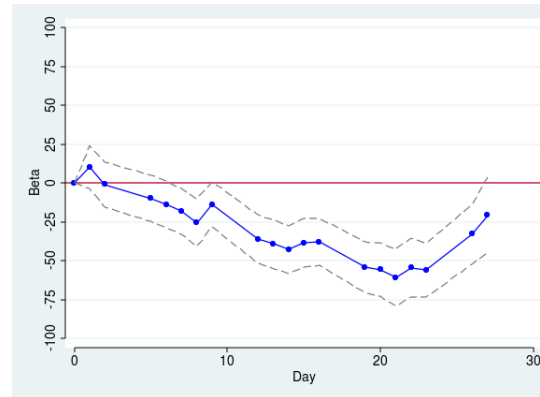


Regression results – loan size since benefits payment

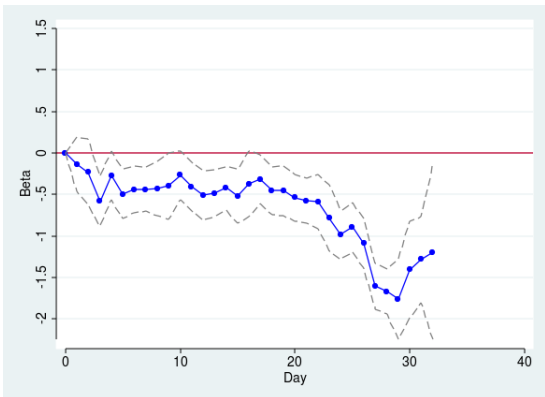
SSI
Recipients



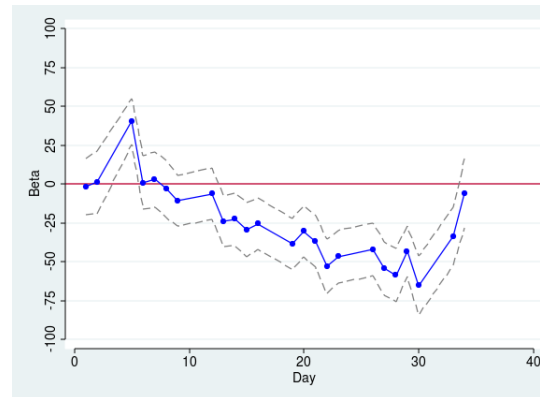
“Wednesday” Groups
Short Months



“Mixed”
Group

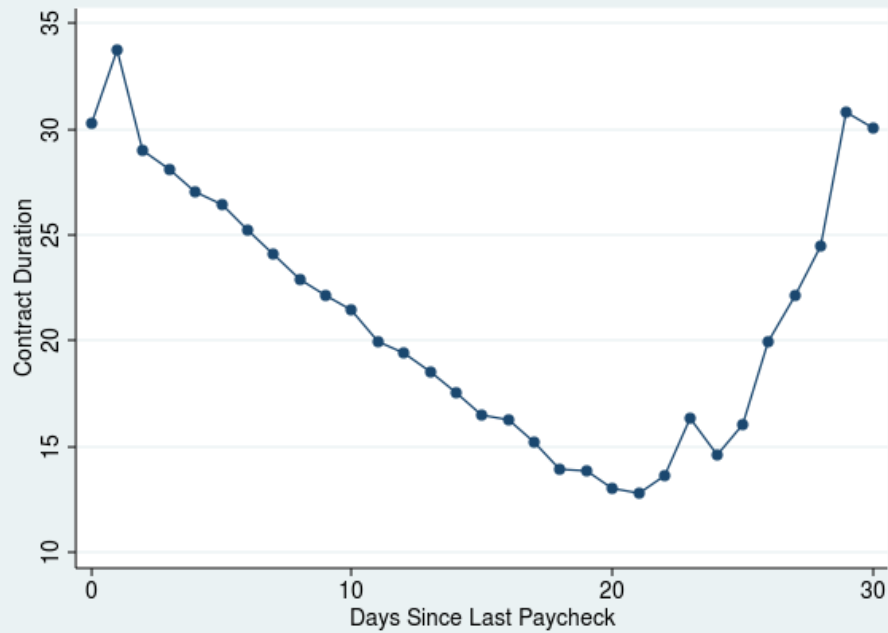


“Wednesday” Groups
Long Months

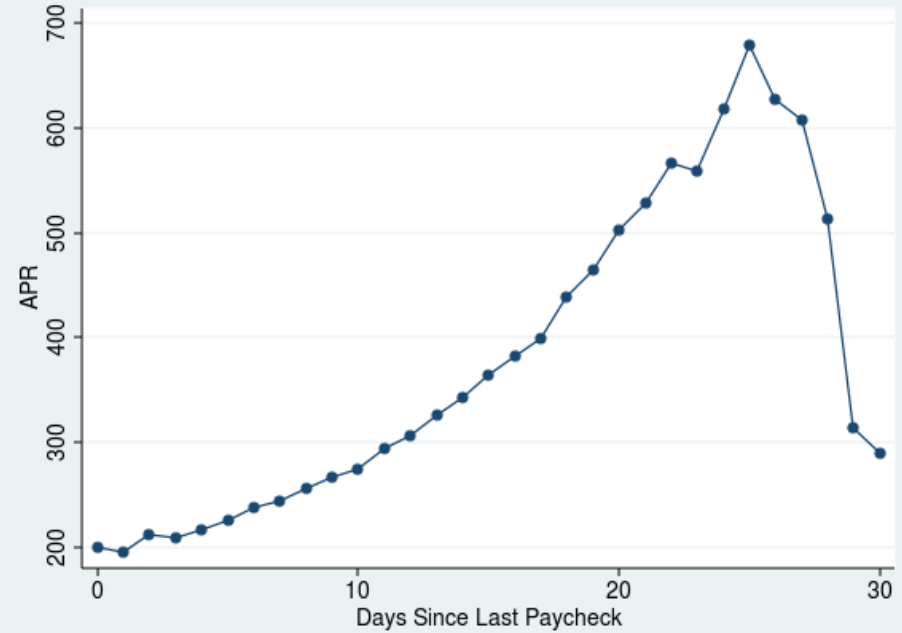


Loan Length and APR Across the Pay Cycle

Contract Duration



APR



Discussion of results

- Borrowing patterns align with income receipt, not a calendar month expense cycle.
- Borrowing declines substantially three weeks after benefits receipt.
- Loan size follows a U-shaped pattern follow benefits receipt.
- Because of minimum loan lengths, loan length increases and effective APR declines late in the pay cycle.
- Results are inconsistent with intra-pay cycle consumption smoothing.

Next steps

- Loan outcomes as a function of when borrowing occurs and when loans are due.
- Heterogeneous effects
 - By income
 - By household structure (using income amounts to draw inferences)
- Exploit heterogeneity in state laws
 - Loan length
 - Loan size
 - Cost
- Further work on theoretical underpinnings.