Debt Repayments of Older Adults

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Research Question

- Estimate the effect of an exogenous and temporary income shock on older seniors (age 74+)
- Do older seniors have different incentives than others? Lifecycle-wise, they are very different:
  - Limited horizon for consumption smoothing
  - Earning power greatly reduced
- Little evidence on their financial behavior

Income Shock: One-time Benefit Payment

On May 3, 2021, the Government of Canada announced an unexpected one-time taxable grant payment to provide financial support for older seniors.

Amount: $500 CAD

Payment date: the week of August 16, 2021

Eligibility:

1. Born on or before June 30, 1947, and
2. Eligible for the Old Age Security pension in June 2021

This payment had no effect in their Guaranteed Income Supplement benefit or the Allowance benefit for their spouses. This policy reached 3.3 million older seniors. Most of them (84%) have low and modest income (below $50,000).

Consumer Credit Data

We obtained anonymized consumer credit data from one of the major credit bureaux in Canada. Our sample includes monthly data from November 2020 to February 2022.

Credit data set includes detailed account-level information on:

- Outstanding balances from individual's credit cards
- Required and actual payment made
- Account delinquency status
- Consumer's birth-month (yyyy-mm), credit scores, and the first 3-digit of their postal codes (FSA)

We only consider individuals who were born within 12-months before or after the payment eligibility cutoff date, i.e. birth month between June 1946 and June 1948. We also excluded individuals who did not have any opened credit cards or with zero credit card balances throughout the sample periods. Our cleaned sample contains a total of 405,902 individuals, in which 212,047 (52.2%) of them were eligible for the $500 CAD payment.

For each credit card account, revolving balances are calculated as the difference between last month's outstanding balance and the actual payment made in that month. Data are then aggregated to individual level. Transactors are defined as individuals who did not have any revolving credit card debts; revolvers are individuals on average with >$500 revolving debt between February and April 2021. We further divide revolvers into subsamples by the quartiles of their revolving balances before the benefit announcement.

Stylized Facts

Credit Card Outstanding Balance from Nov 2020 to Feb 2022

	P25	P50	P75	Mean	Obs
Transactors	$ 41	$ 482	$ 1,552	$ 1,262	4,973,628
Revolvers	$ 2,046	$ 5,011	$ 11,651	$ 9,230	1,138,467
Overall	$ 94	$ 772	$ 2,500	$ 2,746	6,112,095

Average revolving balance between Feb and Apr 2021

	P25	P50	P75	Mean	N
Revolvers	$ 1,519	$ 4,273	$ 10,841	$ 8,624	83,498

Empirical Method

Difference-in-differences (DiD) approach with individuals' birth month as exogenous treatment criteria, i.e. individuals born before July 1, 1947 as treated.

Our treatment effect estimation for individual i at time t:

$$y_{is} = \alpha_i + \sum_{s=-6}^{9} \delta_s[T_s \times OTP_i] + \sum_{s=-6}^{9} \sum_{j} \gamma_{js} \text{FSA}_{ij} \times T_s + \epsilon_{is}$$

where

- y_{is}: revolving balance of individual i at time s
- α_i: the individual fixed effects
- δ_s: set of treatment effect estimator relative to April 2021
- T_s: time dummies relative to the month before the announcement. E.g. $T_{-2} = 1$ for March 2021, 0 otherwise
- OTP_i is the treatment indicator for individual i
- $FSA_{ij} \times T_s$: interaction for area-specific time fixed effects

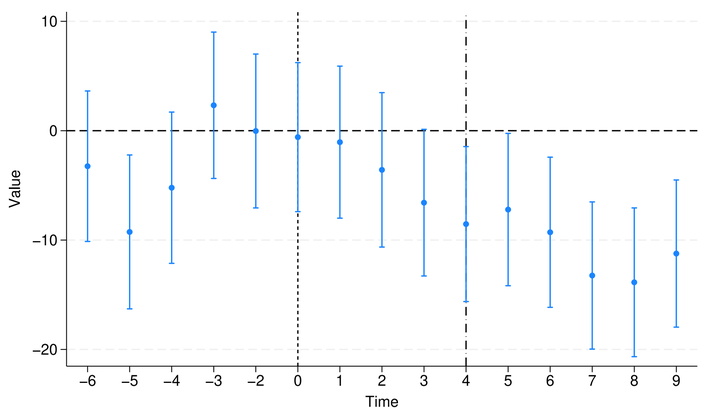
Main Results

- Benefit payment reduces older seniors' propensity to incur revolving credit card debt
- Revolvers' response depends on the level of their revolving balance at the time of benefit announcement

Transactors: Less Likely to Incur Debts

On average, the revolving balance of benefit-eligible transactors decreased by $8.5-$13.8 around the benefit payout month.

Revolving balances of individuals who were transactors



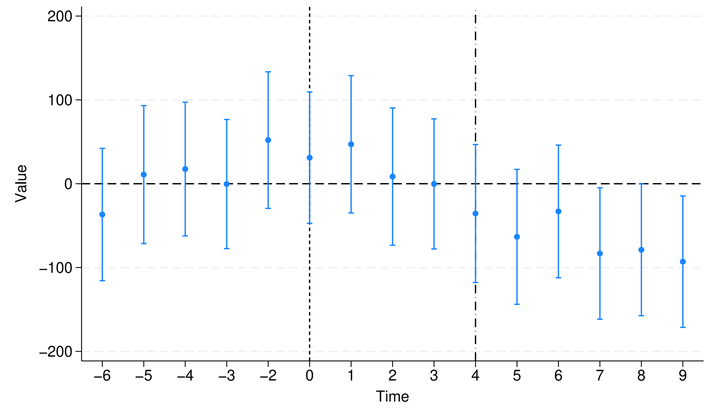
Note: Value refers to revolving balance at current time. Time 0 refers to May 2021, i.e. the month in which the benefit was announce. Time 4 refers to September 2021, i.e. the first month after the benefit was paid out.

Revolvers: Heterogeneous Responses

Revolvers in 2nd Quartile ($1,519 and $4,273 debt)

Benefit-eligible revolvers paid down $79-$92 of revolving debts after the benefit was paid out. It suggest that older seniors with some credit card debts have low-to-moderate marginal propensity to repay debt (MPRD).

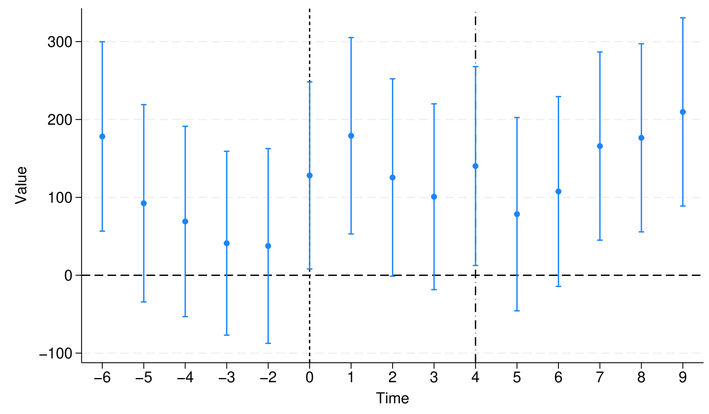
Second quartile of revolving balance



Revolvers in 3rd Quartile ($4,273 to $10,841 debt)

Benefit-eligible revolvers on average had $128-$179 more revolving balances in the months after the announcement. The increase was persistent and did not reduce after the benefit was paid out. Evidence suggests that older seniors with heavy credit card debts respond to *expected* positive income shocks by using credit card more to relax their liquidity constraints.

Third quartile of revolving balance



Conclusion

We examined the effect of an exogenous and temporary shock on credit card use of older seniors. We found that the grant payment provides transactors extra income and liquidity, such that they are less likely to incur credit debts. Revolvers had heterogeneous response conditional on the level of their revolving balances. Our findings provide new evidence on the financial behavior of older individuals who are approaching the end of their lives.