Credit Access and Retirement Savings

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Motivation

- Most U.S. retirement wealth sits in accounts that are costly to tap early, while the shocks households face are largely uninsured.
- Credit is judged on the *liability* side: does borrowing smooth consumption, or invite overborrowing? This paper asks whether **credit access** changes how much a household commits to illiquid retirement saving.
- **Mechanism.** Credit access substitutes for a liquid buffer. When access expands the household can shift cash from liquid assets into an illiquid retirement account — if it saves the freed cash rather than spending it.

Preview of Results

- **Main result (DiD).** Relaxing a household's credit constraint raises 401(k) contributions \$124/yr (≈7% of the ≈\$1,780 pre-event mean) and the contribution rate 0.28 pp, with flat pre-trends.
- **It matters who receives it.** The response concentrates *above* the income median (\$469*** vs. \$110); below it card balances rise instead (\$904***) — the freed cash is spent, not saved.
- **Portfolio composition shifts too.** Equity +1.2 pp and bonds −1.2 pp for households that pick their own funds; no effect for those invested only in a target-date fund.
- **Complementary IV agrees.** 2SLS with credit-market age as the instrument gives the same signs on a far larger sample.

Data

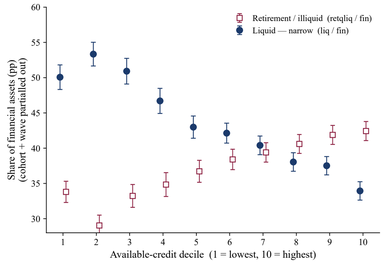
Linked 401(k) recordkeeper × credit bureau

- Contributions (\$ and rate), fund-level holdings, and the credit file (lines, balances, utilization, delinquency, collections).
- Holdings mapped to equity and bond shares and flagged target-date using **Morningstar** fund data.
- DiD estimation sample: 17,386 participant-years. IV: 167,602 households.

Survey of Consumer Finances

- 2001–2022 (8 waves), age 25–64, SCF-weighted: $N = 154{,}144 = 30{,}876$ households × 5 implicates.

SCF: credit access and the liquid → illiquid shift



Liquid = liq/fin, retirement = retqliq/fin, as shares of financial assets; *x*: available-credit decile. The KV-broad definition gives the same pattern.

- More credit access goes with a *smaller* liquid share and *larger* retirement share of financial assets.

Main design: staggered difference-in-differences

Event. A negative flag is removed from a household's credit report, mechanically relaxing its credit constraint. Removal dates are *staggered* — treatment turns on in a different year for each removal cohort g.

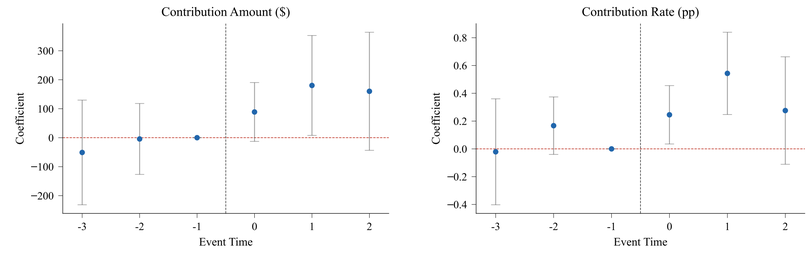
Stacking. Each cohort g is stacked into its own sub-panel with only not-yet-treated controls; cohort×year effects $\lambda_{g,t}$ absorb each cohort's own time path.

Control group. Within a cohort each treated participant is paired 1:1 with an untreated participant in the same plan/employer, of the same age and comparable pre-event credit profile — distress, lines and balances, payment burden, history depth. Pair effects $\mu_{m(i)}$ absorb what is fixed within a pair.

Window. $k = -3, \ldots, +2$, reference $k = -1$. Event study (left) and pooled DiD (right) on the stacked panel:

$$y_{it} = \sum_{k \neq -1} \theta_k \big(D_i \cdot \mathbf{1}\{t - g_i = k\}\big) + \mu_{m(i)} + \lambda_{g,t} + \varepsilon_{it} \qquad y_{it} = \tau \big(D_i \cdot \text{Post}_{it}\big) + \mu_{m(i)} + \lambda_{g,t} + \varepsilon_{it}$$

Main result: credit access → retirement saving



(a) Contribution (\$/yr) (b) Contribution rate (pp)

Pooled DiD	Contribution \$	Rate (pp)
Treated × Post	123.6**	0.280***
	(58.6)	(0.098)
Cohort×year FE	Yes	Yes
Observations	17,386	7,398

- Flat before the event, on at t_0, peaking at $t{+}1$ (+\$180** / +0.54*** pp). Pooled +\$124/yr is ≈7% of the ≈\$1,780 mean.
- Identification rests on parallel trends within a pair; the pre-event coefficients are the test ($p = 0.81$).

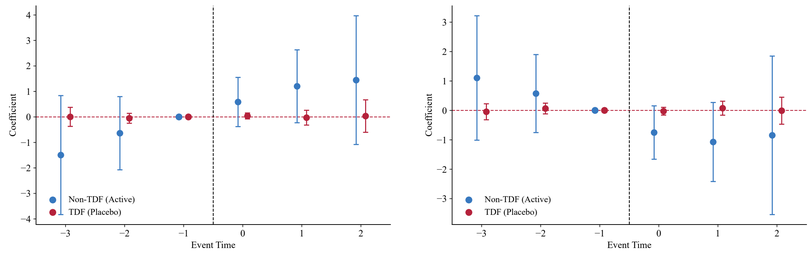
Who saves the freed cash, and who spends it

DiD, income × constraint	High Con.	High Unc.	Low Con.	Low Unc.
Contribution \$	535***	183	174**	−232
	(160)	(276)	(83)	(234)
Bankcard balance \$	575	−1,943	833**	912
	(443)	(1,918)	(362)	(788)
Observations	1,977	544	2,813	973

Con. = constrained (available credit ÷ income < 0.294).

- Saving and consumption are mirror images: at the income median, contributions rise \$469*** above vs. \$110 below, card balances \$904*** below vs. \$150 above.
- The response peaks for **high income × constrained** — most cash freed, and saved at the margin.

DiD: portfolio



(a) Equity share (pp) (b) Bond share (pp)

Pooled DiD	Equity share (pp)	Bond share (pp)
Active investors	+1.20*	−1.15**
	(0.64)	(0.58)
Target-date only	+0.04	−0.02
	(0.09)	(0.08)
Observations (active)	4,567	4,567

- A larger credit buffer makes a forced early withdrawal less likely, so the account is less likely to be sold after a bad market year. The result holds for **active investors** who pick their own funds and is **null** for target-date-only households.

Complementary estimates: IV

On a far larger sample, 2SLS instruments credit access with **credit-market age** — the age of the oldest account — with plan×year, salary-band and age fixed effects:

$$C_{it} = \pi Z_{it} + \phi_{p,t} + \psi_{\text{sal}} + \eta_{\text{age}} + u_{it}, \qquad y_{it} = \beta\, \widehat{C}_{it} + \phi_{p,t} + \psi_{\text{sal}} + \eta_{\text{age}} + \varepsilon_{it}$$

Relevance. Length of credit history enters the bureau scores lenders use to set limits, so credit-market age moves available credit mechanically ($F = 4{,}057$).

Exclusion. Given age, salary band and plan×year, when a household first opened an account should not move saving except through the credit it carries today.

	Saving		Portfolio	
	Contribution \$	Rate (pp)	Equity (pp)	Bond (pp)
IV (2SLS), active	1113.3***	1.883***	+2.63*	−2.30*
	(87.5)	(0.114)	(1.43)	(1.35)
OLS	584.9***	1.130***	—	—
	(26.9)	(0.039)		
Target-date only	—	—	+0.17	−0.21
			(0.21)	(0.19)
IV by income				
Below median	606***	1.38***		
Above median	2,298***	2.70***		
Observations	167,602	167,602	42,121	42,121

Oldest *card* as instrument instead: \$1,431.6*** and 2.241*** on saving ($F = 7{,}530$). Target-date-only $N = 76{,}319$.

- Credit access larger by 10% of income raises contributions ≈\$111/yr, **3.8%** of the \$2,943 mean — the DiD's sign and income gradient. The portfolio split repeats, and both IV estimates exceed OLS, so the raw association understates the effect.

Significance: * $p < .10$; ** $p < .05$; *** $p < .01$. Standard errors in parentheses.