

Discussion of: Debt and Liquid Wealth: Evidence from Pension Fund Withdrawals

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What the Paper Does

- Use Chile's COVID-era pension withdrawals as a quasi-natural experiment to study changes on the liquidity of wealth on household propensity to borrow.
- Policy design had “kinks” in withdrawal rules $\Rightarrow$ Fuzzy Regression Kink Design (RKD).
- Withdrawals are endogenous to unobserved income shocks/job loss, health problems, or changes in expectations are related to withdrawals.
- Main question: How does liquid wealth affect household borrowing behavior?
- Findings:
 - At first kink -low balances (young, low-income, women): liquidity reduces borrowing (elasticity ≈ -0.39).
 - At second or third kinks or higher balances: effects are small, indistinguishable from zero.

Why is this Study Innovative?

- This paper studies a different unexpected shock to household liquidity on household financial decisions:
 - **Cash transfers / windfalls:** lottery winners (Imbens, Rubin, and Sacerdote 2001), dividend from Alaska Permanent Fund (Hsieh 2003).
 - **Public health insurance eligibility:** Medicaid expansions (Gallagher, Gopalan, Grinstein-Weiss & Sabat, 2020).
 - **Minimum wage increases:** borrowing for durable consumption (Aaronson, Agarwal, and French 2012) and student debt repayment (Gopalan, Hamilton, Sabat & Sovich, 2024).
 - **Exogenous credit limit shocks:** RCT on credit card limits (Aydin, 2022).
- This paper instead leverages **pension wealth liquidity**: 100% illiquid (e.g. long-term savings).
- Provides new evidence on how relaxing illiquidity in retirement accounts affects household balance sheets.

Borrowing in the life-cycle

Horizon $t = 0, \dots, T$; state: liquid wealth W_t , pension wealth W_t^P , debt b_t .

$$\max_{\{d_t, \phi_t\}} E \sum_{i=0}^T \beta^i \left[u(c_{t+i}) - \lambda b_{t+i} \right], \quad u(c) = \frac{c^{1-\gamma}}{1-\gamma}$$

λ proxy of shadow cost of holding debt and γ controls risk aversion and IES;

Budget constraint:

$$c_t = y_t + T_t(\phi_t) - r_D b_t + d_t, \quad b_{t+1} = (b_t - d_t)(1 + r_D) \geq 0$$

$$W_{t+1}^P = (W_t^P - T_t(\phi_t) + \tau_t)(1 + r^*), \quad T_t(\phi_t) = \phi_t W_t^P$$

Income process: $y_t = y_t^{lc} \cdot \delta(\omega_t)$, life-cycle growth y_t^{lc} , AR(1) shocks $\delta(\omega_t)$ with persistence (ρ).

Bellman equation:

$$V_t(W_t, W_t^P, b_t) = \max \{ u(c_t) - \lambda b_t + \beta E[V_{t+1}] \}$$

Terminal Payoff with Pension Subsidies

At T , annuitize wealth at price $a(r^*)$. First pillar provides PBS/PMAS floors:

$$F(W_T^P, W_T, r^*) = \begin{cases} \left(p_l + \frac{p_l}{p_m} \frac{W_T^P}{a(r^*)} + \frac{W_T}{a(r^*)} \right)^\nu, & 0 < \frac{W_T^P}{a(r^*)} \leq p_m, \\ \left(\frac{W_T^P}{a(r^*)} + \frac{W_T}{a(r^*)} \right)^\nu, & \frac{W_T^P}{a(r^*)} > p_m. \end{cases}$$

Terminal value:

$$V_T = u(c_T) + \theta F(W_T^P, W_T, r^*), \quad c_T = y_T - b_T \geq 0.$$

Implication: Higher pension subsidies $\Rightarrow$ more insurance $\Rightarrow$ less repayment.

Liquidity Experiment: Transferring Pension Wealth

Policy: allow fraction ϕ_t of pension wealth to become liquid:

$$T_t(\phi_t) = \phi_t W_t^P.$$

Target object: Marginal Propensity to Borrow (MPB):

$$\text{MPB}_t = \frac{\partial d_t}{\partial T_t(\phi_t)}.$$

Prediction: With costly debt ($r_D > r$) and/or debt aversion ($\lambda > 0$),

$$\text{MPB}_t \leq 0 \quad \Rightarrow \quad \text{Liquidity used to repay debt.}$$

Heterogeneity:

- Highly indebted $\Rightarrow$ sharp deleveraging (more negative MPB).
- Low debt / high $W^P \Rightarrow$ MPB closer to zero.

- **Permanent Income Hypothesis:** Liquidity $\downarrow$ borrowing for smoothing shocks (e.g. transitory versus persistent).¹
- **Buffer stock model:** Households do value having unused borrowing capacity / savings.
- **Self-control models:** Ex ante higher indebtedness and low pension savings; but why repay then?
- **Wealth effect:** At lowest kink, withdrawals are offset by future pension subsidies. Wouldn't this bias towards borrowing?
- **Mental accounting:** Withdrawals were mentally labeled as saving money, making debt repayment more desirable?;
- **Option to default:** Debt overhang? Costly personal bankruptcy (?);

¹Guvenen et al. (2014) $\uparrow$ uncertainty in recessions $\downarrow$ chance of $\uparrow$ income; 

Concluding Comments

- Important contribution to the literature on pension design and household finance.
- Sample Selection: Sample with debt > 0 three months before withdrawals.
 - Does this create a self-selected sample of debt-active households?
 - Identification via RKD is valid if selection is smooth around thresholds;
 - How sensitive are estimates to including those without prior debt?
- Smooth probability of receiving Emergency Income recipients or expected pension subsidies around the kink?
- Probability of getting the COVID soft-loans?
- Policy implications: One-size-fits-all illiquidity rules may not be optimal: Beshears et al. (2024)