Mortgage Structure, Saving Rates and the Wealth Distribution

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Mortgage *debt* contracts are a large *saving* plan

- Housing is the largest item in household budgets; main asset in wealth portfolios
- Less noticed: ∼25% of aggregate household saving *flows* in the Euro area are mortgage repayments (similar in US)
- For homeowners, mortgage repayment is a large share of saving flows (∼60%)
- In most countries (Euro area, US), the dominant/only structure is a fully amortizing annuity loan
- Repayment schedules are fixed at origination; deviating is costly (tax rules, refinancing, fees/penalties)

Reduced-form evidence: Mandatory amortization ⇒ ↑ saving, ↓ consumption
Bernstein & Koudijs (2024 QJE); Backman & Khorunzhina (2024); Backman et al. (2024); Larsen et al. (2024)

This Paper

- Standard life-cycle model with income risk, illiquid home equity, and a **repayment rigidity**:
  - Underpaying scheduled principal is costly: $\tau_t = \tau \cdot \max\{0, d_t^* - d_t\}$
- Core mechanism: for constrained new homeowners, mandatory amortization **forces saving into home equity**
  - ↓ consumption early in the life cycle
  - ↓ **liquid wealth buffers** ⇒ higher exposure to shocks (higher MPC; C volatility)

Mandatory amortization for all borrowers in Netherlands would increase Hand-to-Mouth % from ∼4% to ∼19%, with high welfare costs.

Data and identification: HFCS and the 2013 Dutch reform

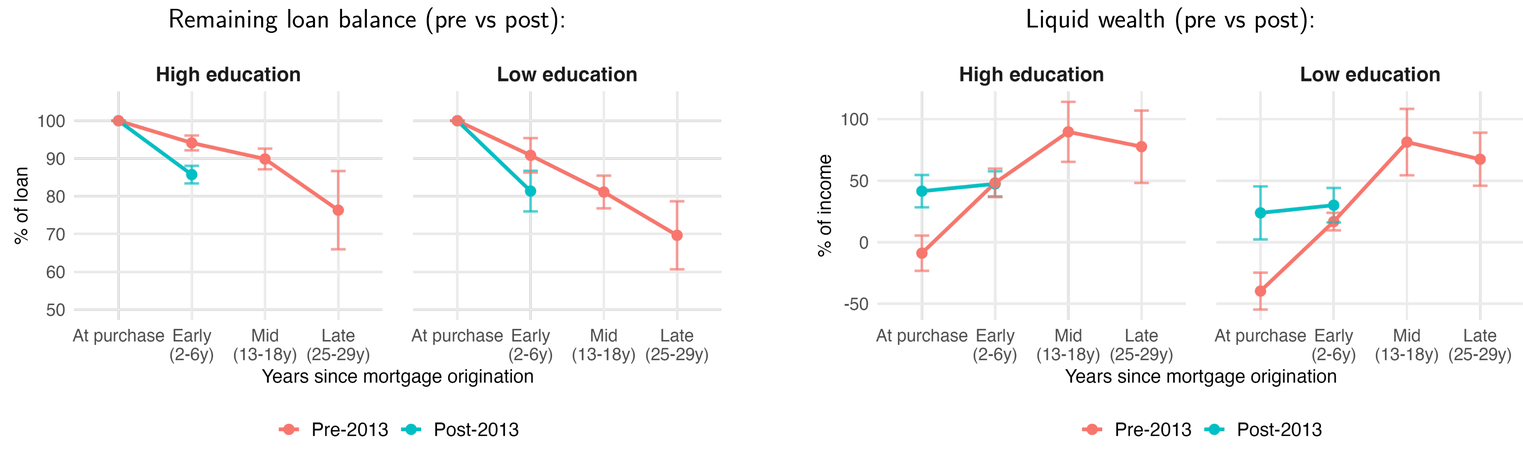
HFCS. Household Finance and Consumption Survey (Euro area), waves 2013–14, 2016–17, 2020–21.

- Focus on the Netherlands: pre-2013 more flexibility (incl. interest-only); post-2013 MID tied to fully amortizing loans
- Use pre/post cohorts of first-time buyers to identify the cost of delaying repayment
- **Key pre/post moments (see below):**
  - Post-2013 buyers repay faster (about **0** → ∼**8%** of the loan after 5 years) + accumulate **less liquid wealth** over the same horizon (flat vs. strong growth pre-policy)

Calibration / estimation (NL)

- Match NL HFCS moments on mortgage debt and liquid wealth over time-since-purchase
  - By education group as perm. income proxy
- Identify the post-2013 repayment rigidity from the discrete shift in repayment/liquidity dynamics
- Estimated post-reform friction implies a large penalty for delaying repayment
  - $\tau^{post} \approx 0.665$, est. effect of policy

Empirical evidence (NL): repayment accelerates, liquidity accumulation slows

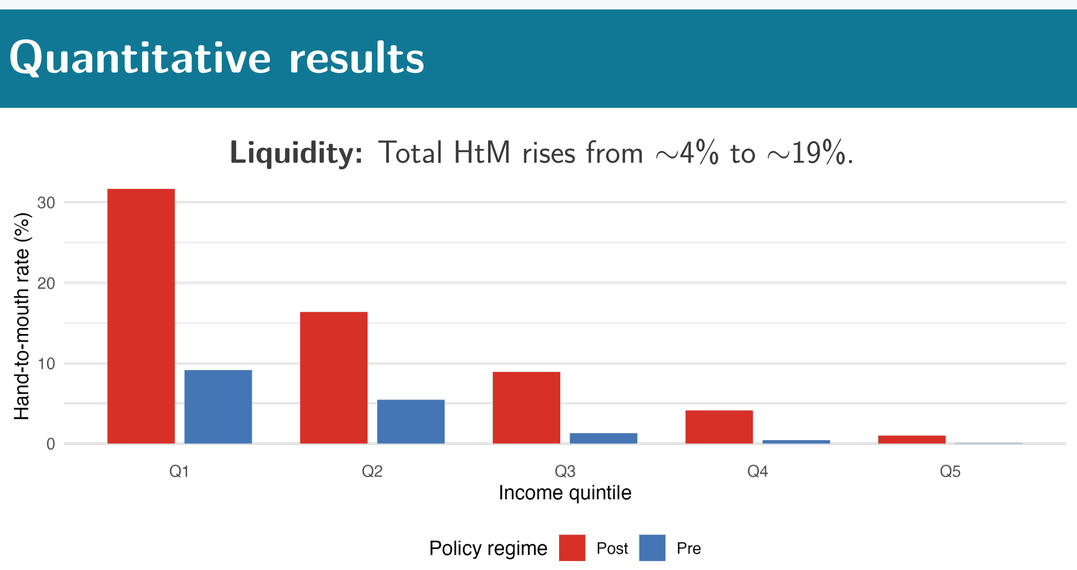


Model framework (life-cycle + mortgage rigidity)

First-time buyers face uninsurable income risk; housing is fixed at purchase; two assets: liquid safe asset and mortgage debt (illiquid equity).

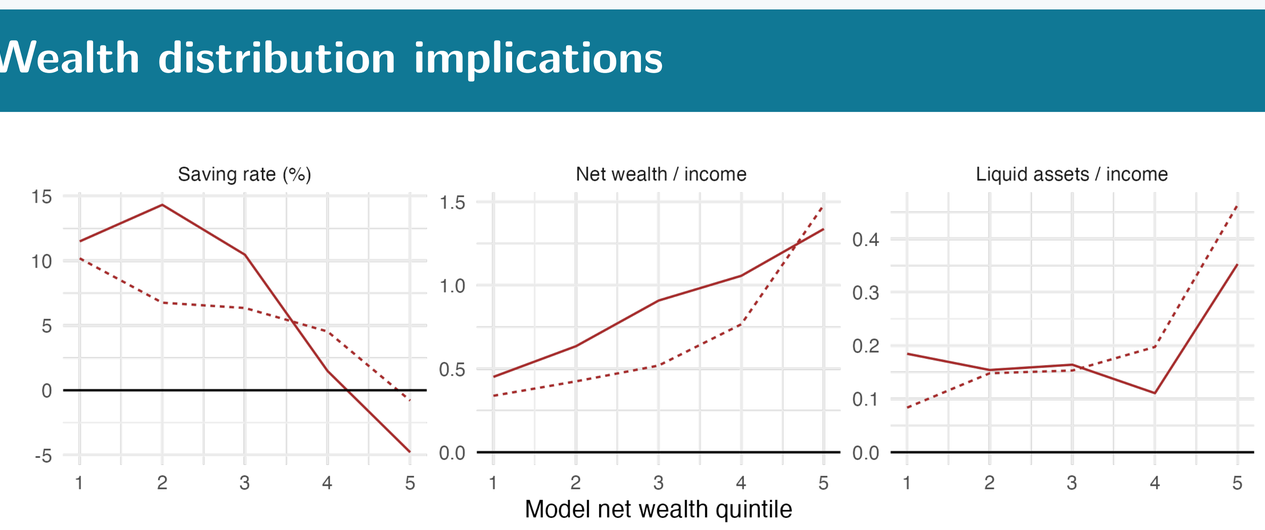
- **Friction.** Scheduled principal repayment d_t^* from annuity formula; underpaying is costly: $\tau_t = \tau \cdot \max\{0, d_t^* - d_t\}$.
- **Household choice.** Each period choose consumption c_t, liquid saving, and mortgage repayment d_t.

Quantitative results



- **Welfare loss (median CEV):** -**2.82%** (low educ.) and -**2.13%** (high educ.)

Wealth distribution implications



- Mandatory amortization increases saving at the bottom, reducing total wealth inequality
- But reduces liquid wealth accumulation, increasing *financial* wealth inequality

Takeaways

- Mandatory amortization channels saving into mortgage repayment (home equity), restricting consumption smoothing
- This reduces liquid wealth buffers, increasing exposure to income shocks (higher MPC; C volatility)

Policy implication.

- Financial-stability benefits of amortization should be weighed against household liquidity and welfare costs
- Contract/regulatory designs that preserve amortization while allowing *temporary flexibility* can reduce exposure to shocks where constraints bind most

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