How does monetary policy affect household indebtedness?

by Fagereng, Gulbrandsen, Holm & Natvik

Discussed by Stephanie Johnson

September 2022

Does tighter monetary policy reduce household debt burden?
(e.g. $\frac{\text{debt}}{\text{income}}$, $\frac{\text{debt payments}}{\text{income}}$, ...)

Unclear:

1. Incentivizes debt reduction, but...

2. Reduces income.

3. Raises interest payments.

4. (2) and (3) make it harder to reduce debt.

This paper's main contribution

Expect variation in effect of tightening across households:

- Higher debt $\rightarrow$ interest payments increase by more.
- Different income sensitivity.

Distribution matters: want to reduce vulnerability of high risk households.

Use household-level income & balance sheet data to study how effect of monetary policy on $\frac{\text{debt}}{\text{income}}$ differs across households.

Main results

1. $\frac{\text{Debt}}{\text{Income}}$ falls after monetary policy is tightened.

2. $\frac{\text{Debt}}{\text{Income}}$ falls more for households with high initial debt level.

3. Active reduction of outstanding principal.

#1: Is $\frac{\text{debt}}{\text{income}}$ the best measure of debt burden?

Want to capture vulnerability to shocks:

- Cross-sectional variation in interest rates and contract types can mean big differences in risk at same level of $\frac{\text{debt}}{\text{income}}$.

- Resilience arguably more closely related to liquidity factors (e.g. payment size, liquid assets) than gross outstanding debt.

- Fig 2: Highest $\frac{\text{debt}}{\text{income}}$ consistently cutting debt in most years regardless of policy (and experiences strongest income growth).

#1: Is $\frac{\text{debt}}{\text{income}}$ the best measure of debt burden?

Could try some other measures (both as outcome, and for heterogeneity analysis). For example:

- $\dfrac{\text{debt} - \text{(liquid) assets}}{\text{income}}$

- $\dfrac{\text{debt payments}}{\text{income}}$

#2: How is $\frac{\text{debt}}{\text{income}}$ reduced?

Gross debt reduction may not imply more resilient households:

- Could induce portfolio reallocation:
  - e.g. if policy affects relative returns.
  - Sell stocks or draw down savings account to pay off debt.
  - Liquid assets $\rightarrow$ illiquid?

- If consumption is cut, what type?
  - Failure to keep up with home maintenance and replace durables may increase financial pressure in future.

- What type of debt is being reduced?

#3: How useful is primary deficit/Fisher effect decomposition here?

$$\Delta b_{i,t} \approx d_{i,t} + (r_{i,t} - g_{i,t} - \pi_t)b_{i,t-1}$$

Assume no income growth, inflation.

Take household with adjustable rate debt who just makes interest payments ($\Delta b_{i,t} = 0$):

$$0 = d_{i,t} + r_{i,t}b_{i,t-1} \Rightarrow d_{i,t} = -r_{i,t}b_{i,t-1}$$

i.e. mechanical effect of rate increase on interest payments appears twice: in 'Fisher effect' and with opposite sign in 'primary deficit'.

New version (slides) points this out and does further decomposition to isolate 'behavior' from 'mechanical' component.

#3: How useful is primary deficit/Fisher effect decomposition here?

- Second decomposition helpful, but may be a sign the main decomposition is not the right one for the paper.

- 'Primary deficit' not same as debt reduction

- Directly separate out debt reduction component from the start?

#4: Behavior or mechanical?

Interesting direction, but what is 'mechanical' and 'behavioral'?

- Depends on loan term and type of credit?

- $r_{i,t}b_{i,t-1}$ (likely) mechanical.

- Compulsory principal payment also mechanical (and may vary with interest rate).

Conclusion

- Promising paper – main suggestion is to use microdata more.

- Try to understand whether tighter policy makes households more *resilient* (not just reduces $\frac{\text{debt}}{\text{income}}$):

  - What drives gross debt adjustment?

  - Are top $\frac{\text{debt}}{\text{income}}$ really the most vulnerable?

  - Try cutting by other variables (e.g. $\frac{\text{debt payments}}{\text{income}}$, liquid assets).