The Limited Power of Monetary Policy in a Pandemic

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Discussion by Sewon Hur

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Introduction

- Very nice paper
  - studies the limitation of monetary policy in an economic-epidemiological model
  - provides intuition for mechanism with analytical expressions
  - demonstrates that mechanism is quantitatively relevant
- Great addition to the literature

Summary of model

- Econ-Epi model (Eichenbaum, Rebel, and Trabandt 2020)

$$\text{new infections} = \pi_c C_{st} C_{it} + \pi_n N_{st} N_{it} + \pi_o S_t I_t$$

- Households choose consumption and labor, facing a no-borrowing constraint
- Bonds are in zero net supply $\Rightarrow$ degenerate wealth distribution
- Monopolistically competitive firms hire labor, facing quadratic price adjustment costs
- Monetary authority sets interest rate according to a Taylor rule with ELB

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Summary of mechanism

- Euler equation of susceptible agent

$$\frac{1}{c_{st}} + \beta\tau_{ct}(V_{i,t+1} - V_{s,t+1}) = \beta\left(1 + rr_{t+1}\right)\left[\tau_t \frac{1}{c_{i,t+1}} + (1-\tau_t)\left(\frac{1}{c_{s,t+1}} + \beta\tau_{c,t+1}(V_{i,t+2} - V_{s,t+2})\right)\right]$$

- Consumption affects the probability of infection
- Precautionary savings due to income loss during infection

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Summary of main findings

- Effects of monetary policy are muted because
  1. agents are less willing to take advantage of intertemporal substitution because of the increased infection risk
  2. stimulative monetary policy may increase the number of infections, leading to further cutbacks in consumption

Comment #1: transmission mechanisms

- The authors consider a very narrow transmission mechanism
  - Savings channel ✓
  - Investment channel $\Rightarrow$ no investment
  - Asset prices and wealth channel $\Rightarrow$ no wealth

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$\Rightarrow$ SIR-HANK model à la Kaplan, Moll, and Violante (2020)

Comment #2: at-home consumption

- Given that the authors emphasize the consumption/savings channel, model could explicitly distinguish
  - outside consumption, which increases infection risk
  - at-home consumption, which does not
- In the data, a tale of two sectors: strong goods expenditures (likely at-home) vs weak services expenditures (likely outside)
- Strong new home sales
- Kaplan et al. 2020 also consider this distinction

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Comment #3: Heterogeneity in age/income/wealth

- Substantial differences in private mitigation
- In Hur (2020), using a quantitative heterogeneous-agent/ overlapping-generations/econ-epi model, I show that reductions in consumption and outside hours are smaller for:
  - young (due to lower infection risk)
  - lower-income (less able to work from home)
  - lower-wealth (lack of precautionary savings)

▸ consumption ▸ outside hours

- Response to government mitigation policies also varies
- Response to monetary policy could also vary

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  - lower-wealth (lack of precautionary savings)
- Response to government mitigation policies also varies
- Response to monetary policy could also vary by age/income/wealth

Comment #4: Deadly monetary policy

- Paper mostly focuses on the effects of monetary policy on output
- What about infections/deaths?
- The delayed lift-off policy increases economic activity initially, leading to higher infections and more deaths
- It would be nice to see the infections plot alongside the output plots

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- The delayed lift-off policy increases economic activity initially, leading to higher infections and more deaths
- It would be nice to see the infections plot alongside the output plots
- Hur (2020) suggests mitigation policies that increase output and decrease deaths
- Can it be that short-term contractionary monetary policy can be welfare improving?

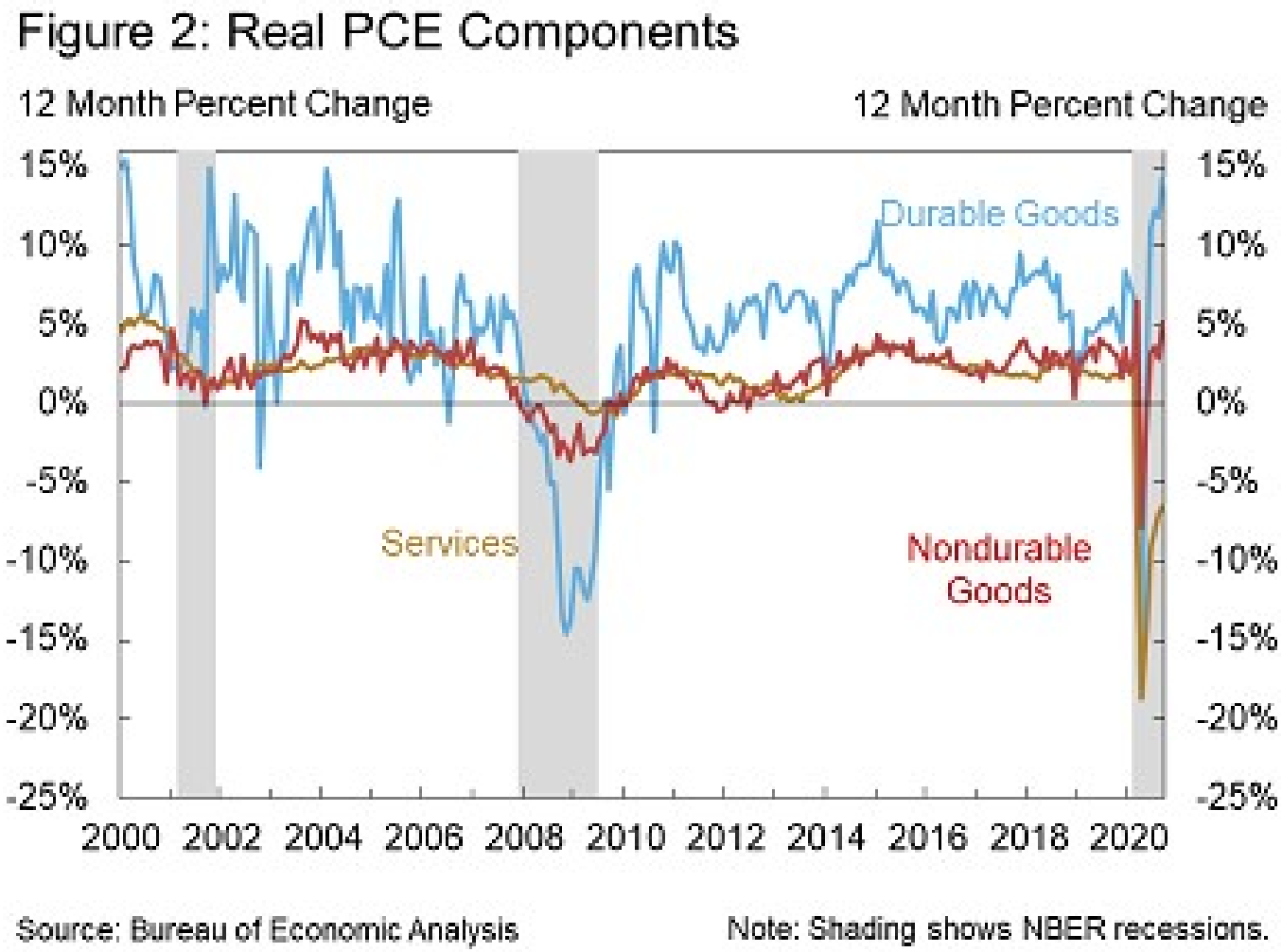
Summary

- Very nice paper on monetary policy during a pandemic
  - especially appreciate simple formulas that intuitively highlight main mechanisms
- Potential for quantitative application to be even more convincing
- Most of my comments (except regarding age) could be addressed by utilizing Kaplan et al. (2020)'s version with sticky prices
  - they do not focus on the limitations of monetary policy

Appendix

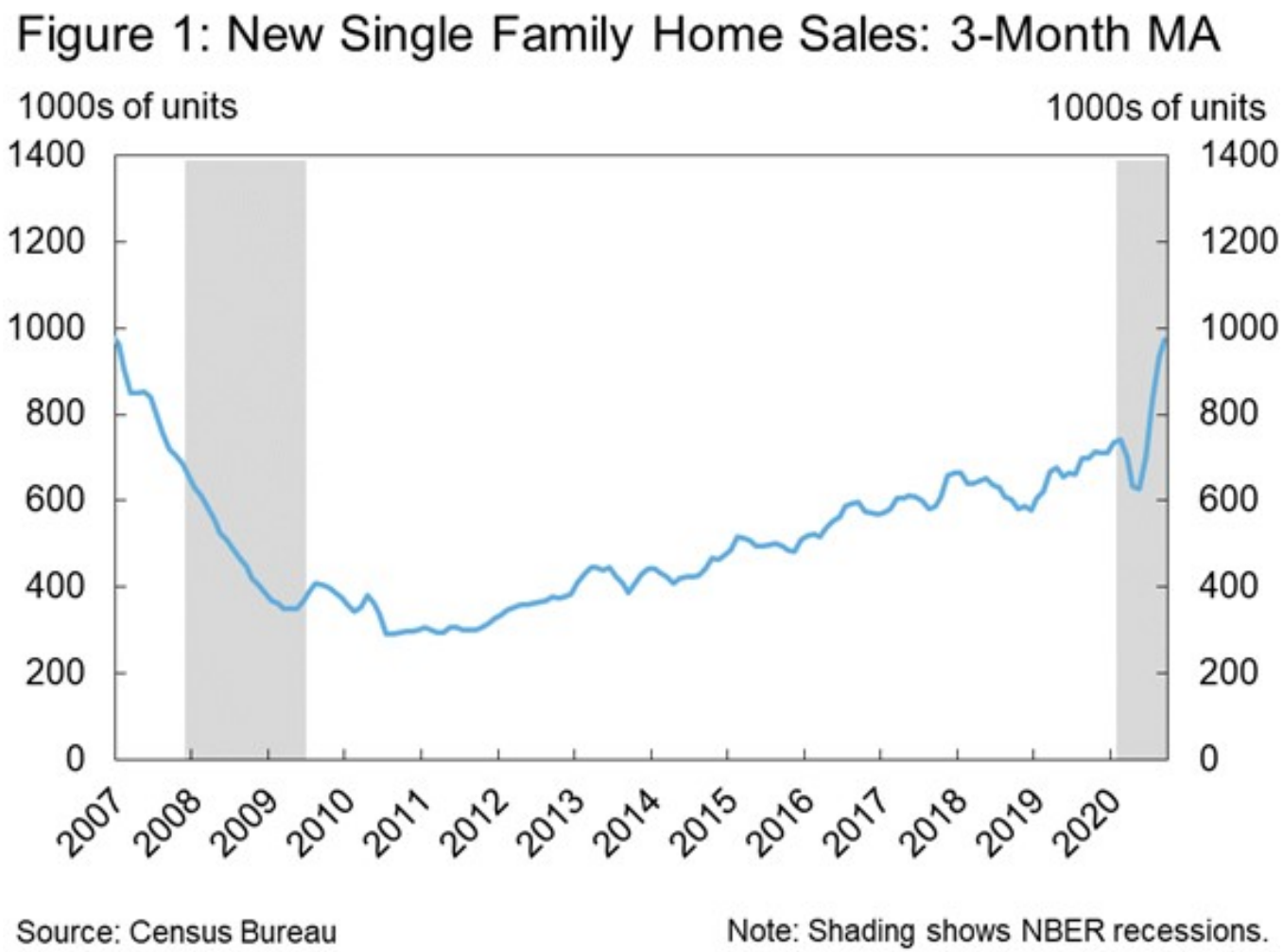
Real PCE

back



New home sales

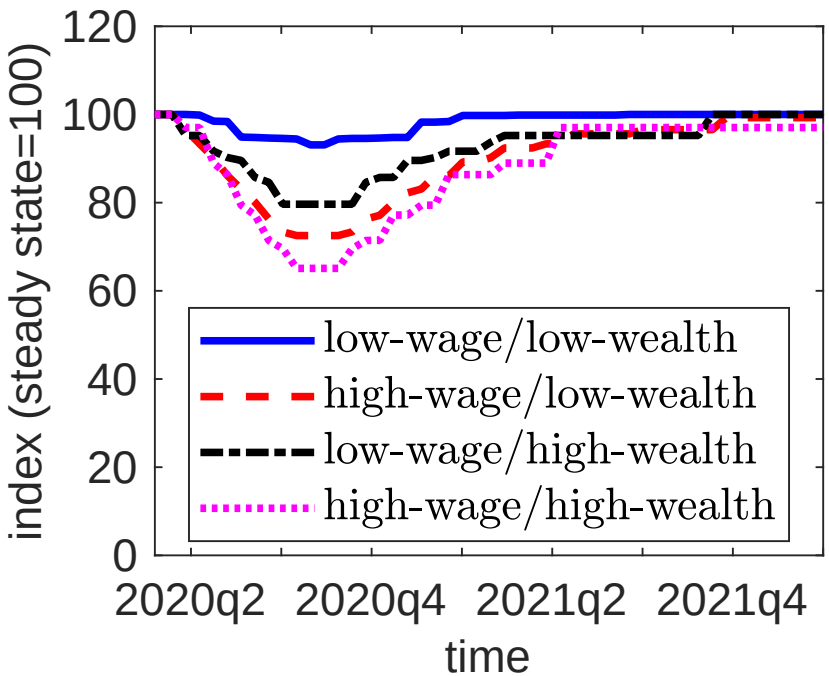
back



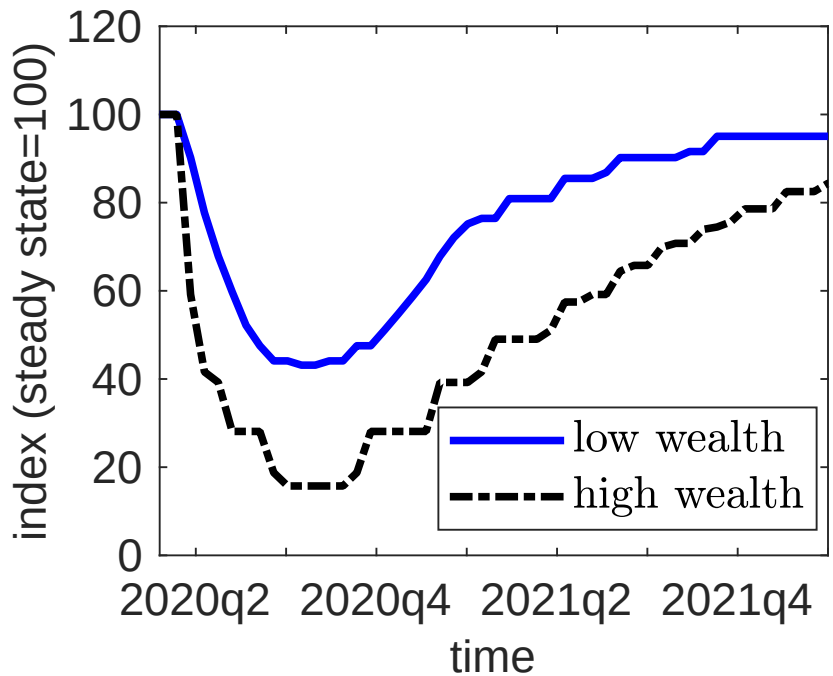
Private mitigation is heterogeneous

back

(a) Consumption
(young, susceptible)



(b) Consumption
(old, susceptible)



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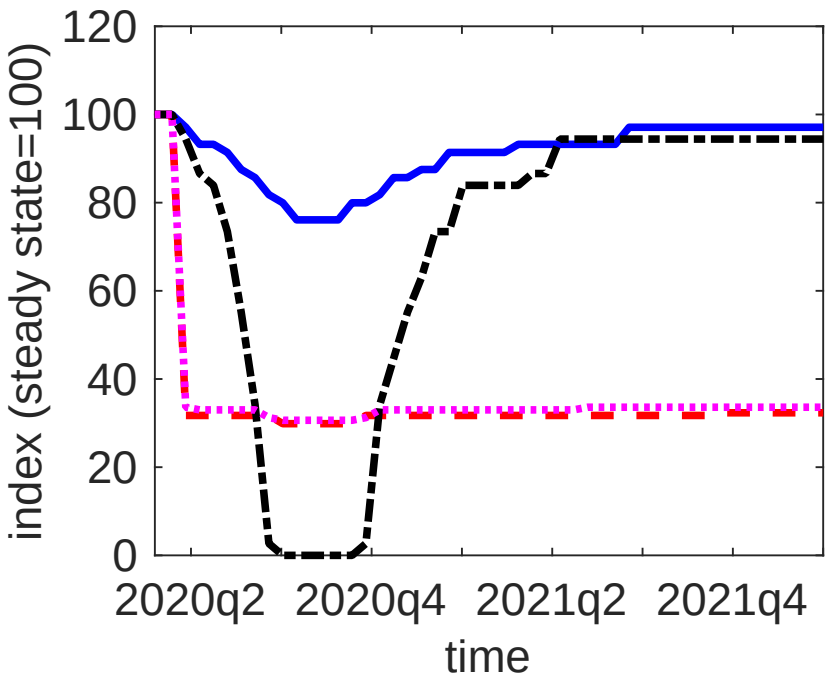
(a) Outside hours
(young, susceptible)



(b) Outside hours
(middle, susceptible)