Moral Hazard Misconceptions: The Case of the Greenspan Put

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Conventional wisdom

- FED lowers rate when asset prices fall

- This provides a form of insurance

- Insurance creates moral hazard

- Banks borrow more ex ante

- Increased need for financial regulation (macropru)

Questions

- When central banks lowers rates in face of financial shock, its primary concern is the real fallout

- Suppose the central bank aims to stabilize output/inflation

- Does the moral hazard concern means that it should be less aggressive in fighting the recession?

- Does it mean that macropru more needed when monetary policy is more responsive?

- Are ex ante macropru and ex post monetary policy complements or substitutes?

Model

- Two agents A and B(ank)
- Three periods

D chosen by Banks

State of the world realized
Central bank sets **r**

Dividend

1   2   3
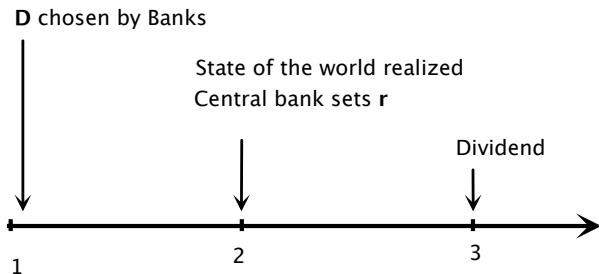
Model (continued)

- B's balance sheet (at $t = 2$)

$$\frac{\delta}{1+r} - D$$

- Asset value depends on shock to δ and on CB response
- Shocks to asset values have larger effect on balance sheet when bank is levered (high D)
- B's balance sheet matters for aggregate output

$$Y = C_A(r, Y + D) + C_B\left(r, \frac{\delta}{1+r} - D\right)$$

Positive implications

- A more responsive policy insures payoff of B
- When δ goes down r goes down, propping asset values
- Choosing high D less costly if a bad δ shock hits
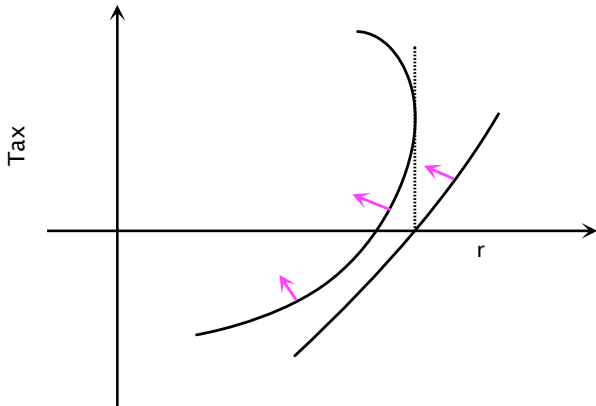
$$C_B \left(r, \frac{\delta}{1+r} - D \right)$$

- So more responsive policy $\rightarrow$ more borrowing ex ante

Normative implications: rigid policy

- Suppose interest rate not adjusted in response to shock
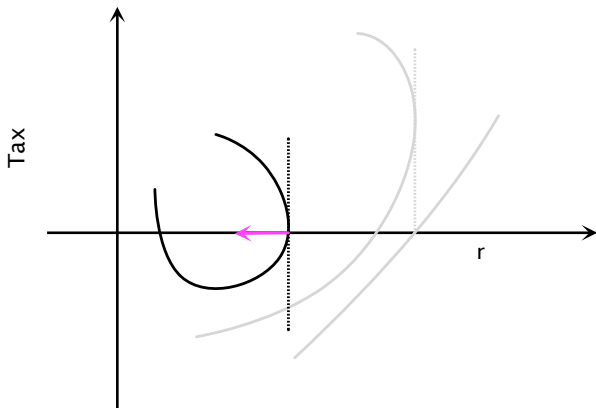- Then there is a welfare benefit from macropru

$$\frac{dW}{d\tau} > 0$$

Output gap targeting

- Suppose interest rate adjusted to replicate flex price allocation
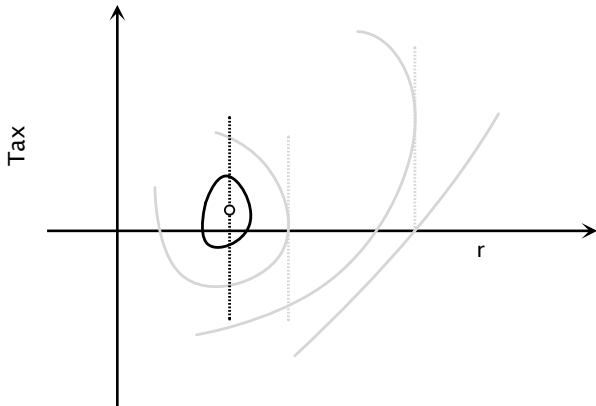- The benefit from macropru goes away, reducing further r beneficial

$$\frac{dW}{d\tau} = 0, \frac{dW}{dr} < 0$$

Optimal policy

- Suppose r chosen optimally
- Now benefit from macropru reappears

$$\frac{dW}{d\tau} > 0$$

Implications

- In our simple model:

    - Does the moral hazard concern means that it should be less aggressive in fighting the recession? No

    - Does it mean that macropru more needed when monetary policy is more responsive? Depends on where in policy space

    - Are ex ante macropru and ex post monetary policy complements or substitutes? Depends on where in policy space

Mechanism

- Two type of externalities here:
  - Aggregate demand externality: increased spending by an agent increases income of other agents

$$\frac{dY}{dD} = \frac{\partial C_A}{\partial D} - \frac{\partial C_B}{\partial D} > 0$$

  - Pecuniary externality: increased borrowing by an agent increases the interest rate, reallocating from borrowers to lenders
- Both go in the direction of too much borrowing in our model
- At output targeting first externality vanishes

Broader lessons and connections

- It is the CB inability to respond to the shock ex post that creates more need for macropru, not excess activism
- In our model excess activism only arises if CB overdoes it and end up with positive output gap (general?)
- Quantitative impressions:
  - small benefits of P-externality based macropru in Benigno et al. (2013) with optimal monetary policy
  - large benefits of AD-externality based macropru in Schmitt-Grohe & Uribe (2016)

Broader lessons and connections (continued)

- ZLB is clear example where monetary policy is constrained and that makes macropru useful
  - Korinek & Simsek (2016) and Farhi & Werning (2016) show it at ZLB
- We also extend our model to ZLB+non-conventional policy
- General question of complementarity/substitutability of ex post and ex ante policies
  - Korinek & Jeanne (2016) bailout model with substitutability
  - Farhi & Tirole (2012) bailout model with complementarity