Discussion of:

"Optimal conventional and unconventional monetary policy in the presence of collateral constraints and the zero bound"

Brendon, Paustian and Yates

By

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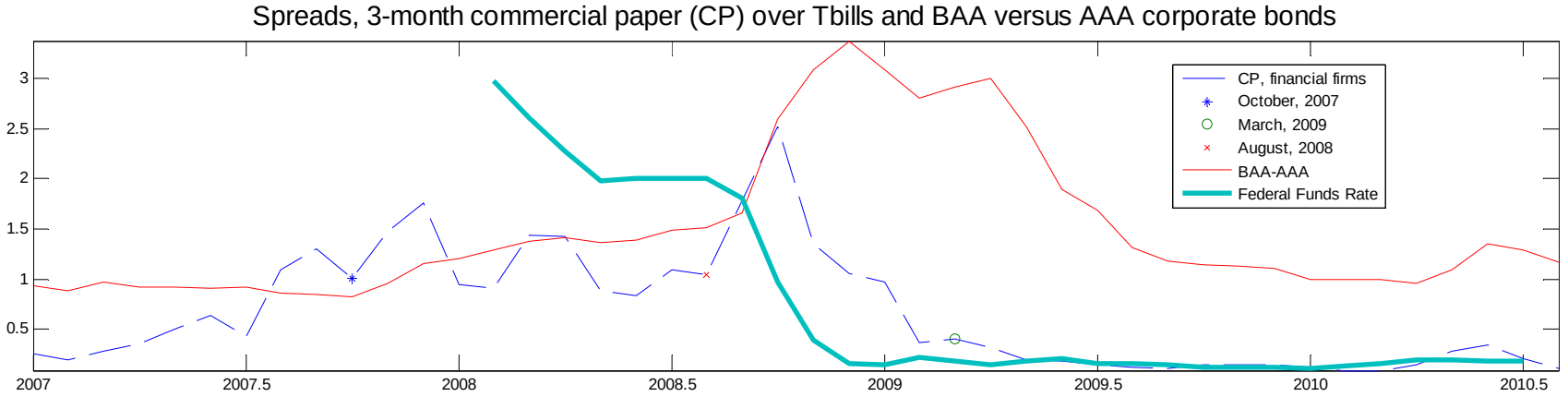
Background

- Coincidence of two phenomena:
  - Shocks that originated inside the intermediation process.
  - Conventional monetary policy rendered ineffective by binding zero lower bound (ZLB).
- Monetary authority responded with ‘unconventional monetary policy’.
- Purpose of this paper is to shed light on the impact of unconventional monetary policy in response to a financial market shock, when zlb binding.


Spreads, 3-month commercial paper (CP) over Tbills and BAA versus AAA corporate bonds
CP, financial firms
October, 2007
March, 2009
August, 2008
BAA-AAA
Federal Funds Rate
3
2.5
2
1.5
1
0.5
2007
2007.5
2008
2008.5
2009
2009.5
2010
2010.5

Conventional Zero Bound View

- Identity:

$$\text{expenditures} = \text{GDP}$$

- If one group reduces spending, then GDP must fall unless another group increases.

- Another group increases if real rate drops:

$$\frac{Q}{\pi^e}$$

- If *Q* is at lower bound and π^e cannot rise, have a problem.

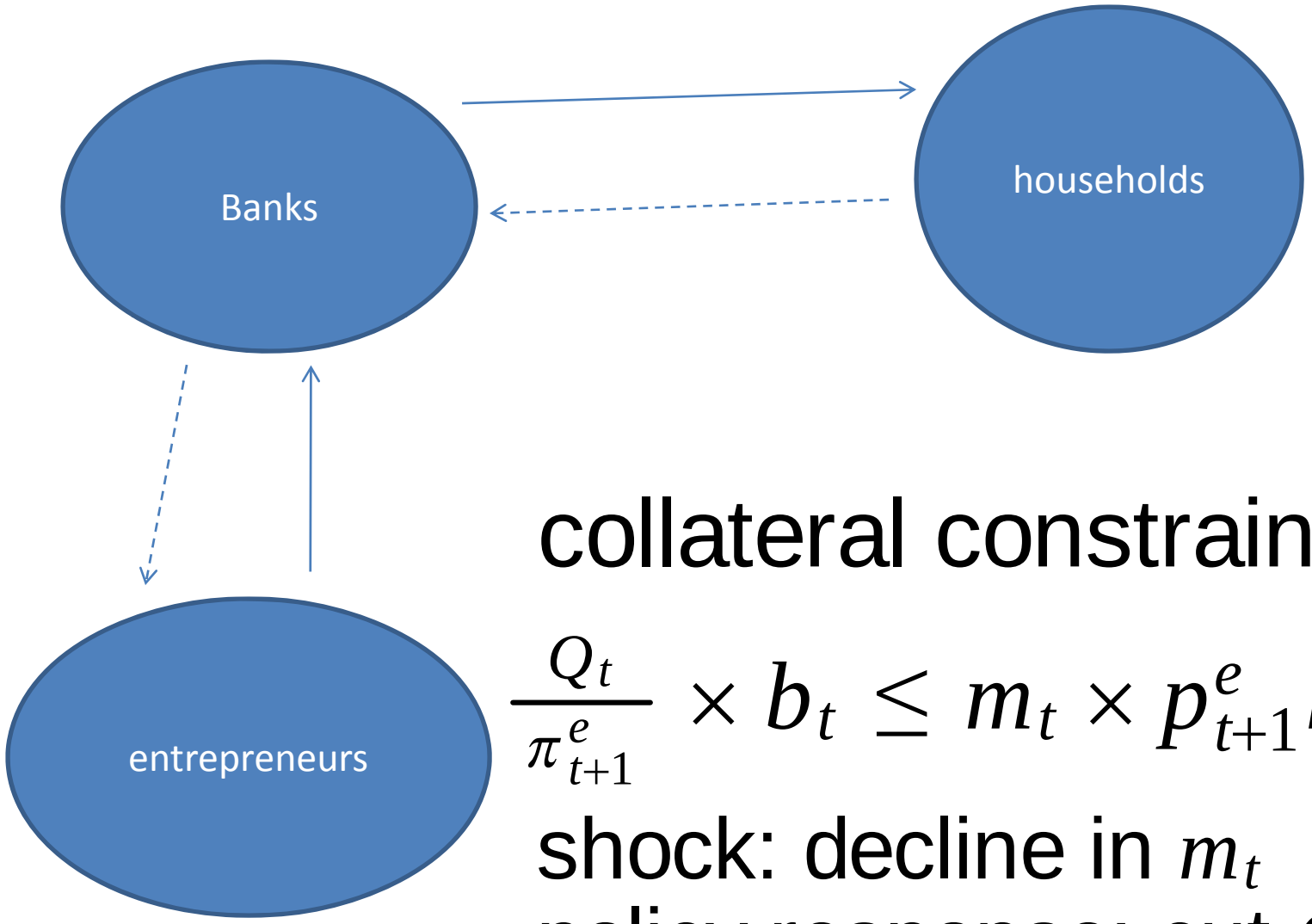
Conventional ZLB View, cnt'd

- Several reasons π^e may not rise….all presume a lack of commitment in monetary policy
  - Ex post, monetary authority would not deliver high inflation (Eggertsson).
  - Monetary authority spent years persuading people it would not use inflation to stabilize economy. Fears consequences of loss of credibility in case it raises π^e now for stabilization purposes.
- In the presence of commitment, ZLB not a big problem.

Conventional ZLB View, cnt'd

- Options for solving zlb problem
  - Direct: increase government spending
  - Tax credits
    - Investment tax credit
    - 'cash for clunkers'
  - Increase anticipated inflation
    - Convert to a VAT tax in the future (Feldstein).
  - This paper: interest rate subsidy to borrowers.
    - Direct effect on private spending.
    - Indirect effect through collateral constraint.

Model



collateral constraint

$$\frac{Q_t}{\pi^e_{t+1}} \times b_t \leq m_t \times p^e_{t+1} h_t$$

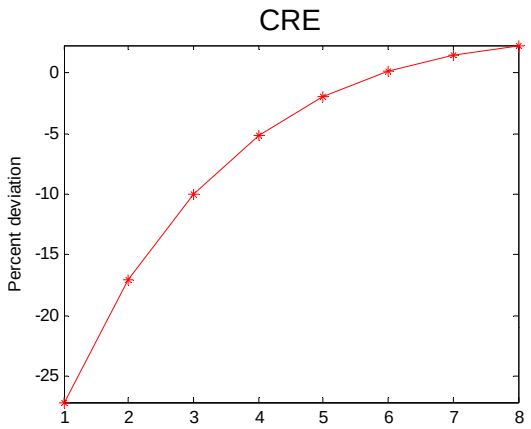
shock: decline in m_t

policy response: cut Q_t

- The key potential contribution here is the numbers……

- Let’s first look at what happens under a Taylor rule…..

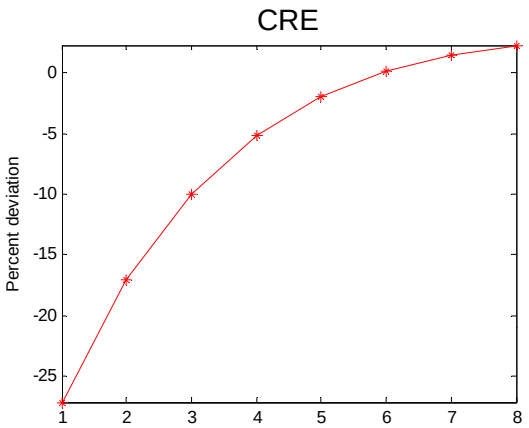
Drop in *m*, Taylor Rule Policy

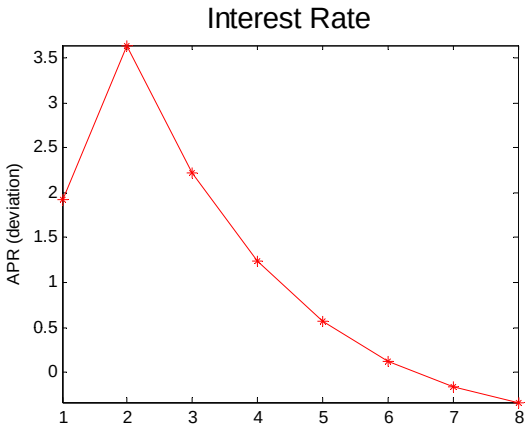


Entrepreneurs respond with sharp sale of real estate, converted to residential real estate.

Seems like too big a drop!

Drop in *m*, Taylor Rule Policy

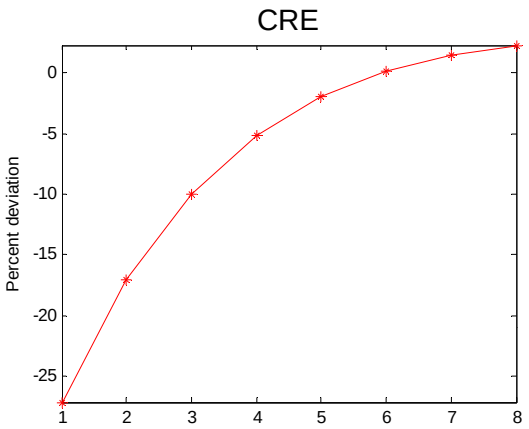


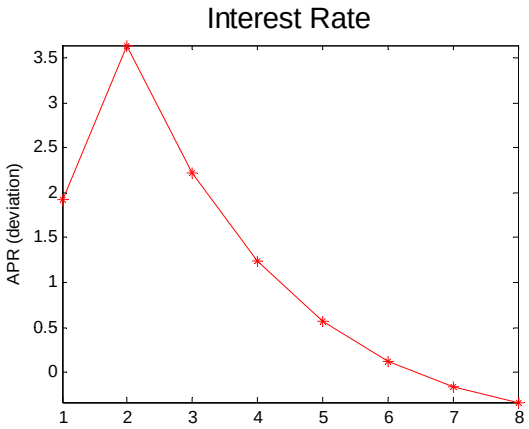


Interest rate rises!

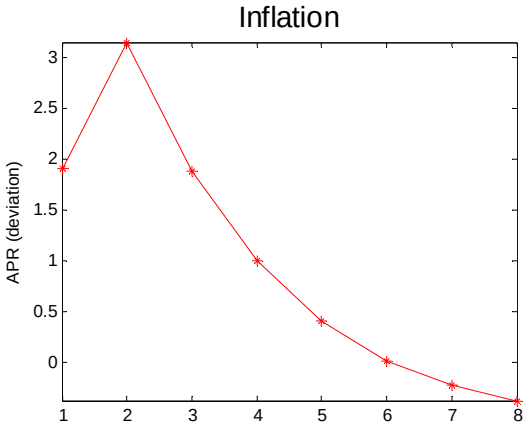
No violation of zero lower bound
No interest rate spread.

Drop in *m*, Taylor Rule Policy





Inflation rises, also counterfactual

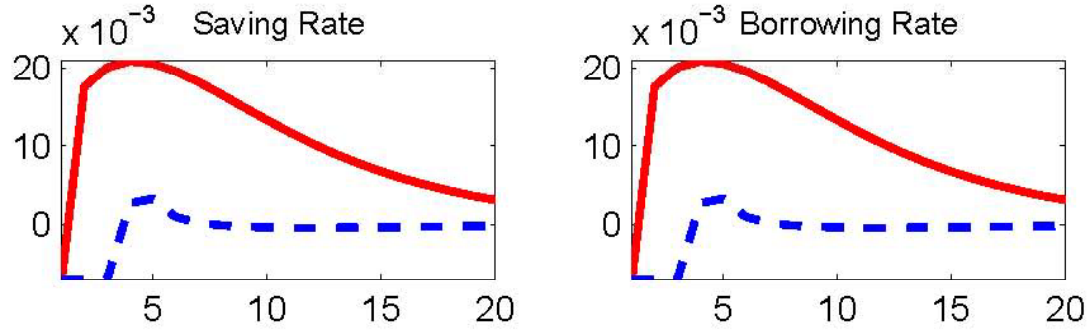


- If one takes the Taylor rule as a serious representation of monetary policy leading up to fall 2008.

- Then, joint hypothesis of model and financial shock is rejected by the data.
  - Misses zero bound, drop in inflation

- Paper supposes that policy is better represented as ‘equilibrium under discretion’

Consequence of the Shock Under Alternative Representation of M Policy



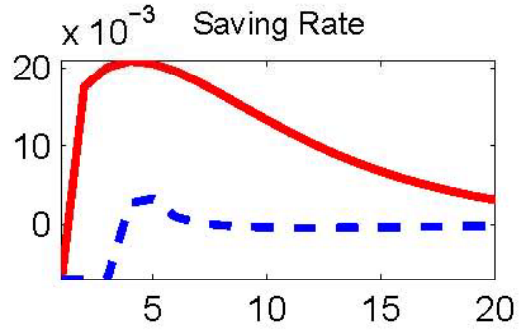
Simulation with no unconventional monetary policy.

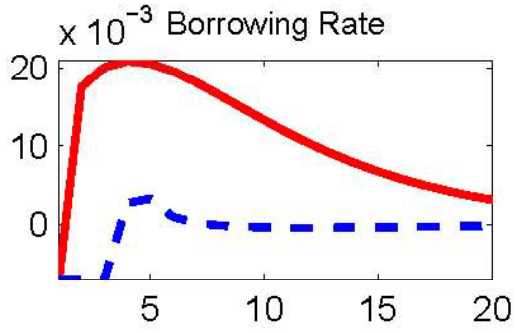
Zero lower bound binding for only one period.
Interest rate jumps by 8 annualized percentage points above steady state.

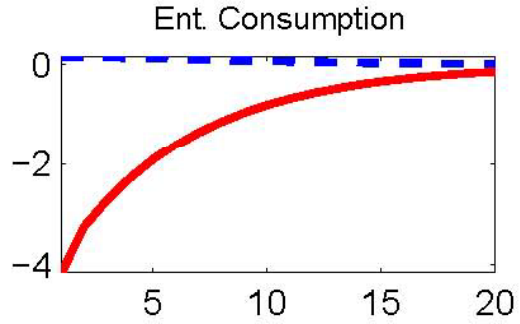
Real effects are very large.

discretion commitment

Consequence of the Shock Under Alternative Representation of M Policy







c_t^e ~ 'entrepreneurial consumption'

$$\log\left(\frac{c_t^e}{c^e}\right) = -4$$

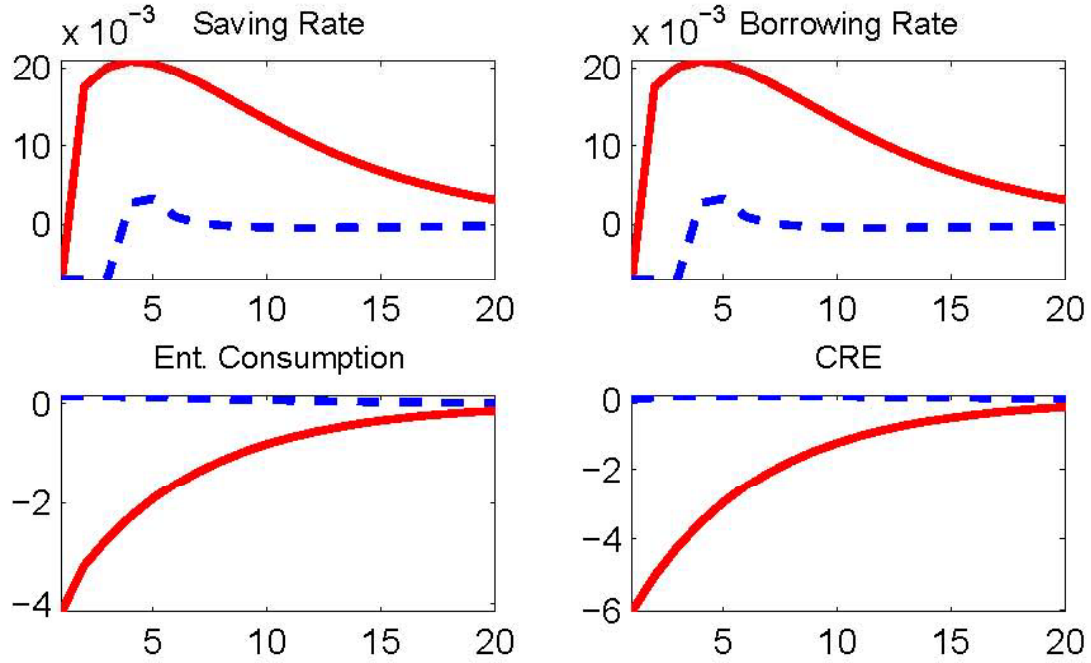
$$\rightarrow \frac{c_t^e}{c^e} = 0.02$$

drop seems way too big!

if you shrink the shock, most likely lose zlb

discretion commitment

Consequence of the Shock Under Alternative Representation of M Policy

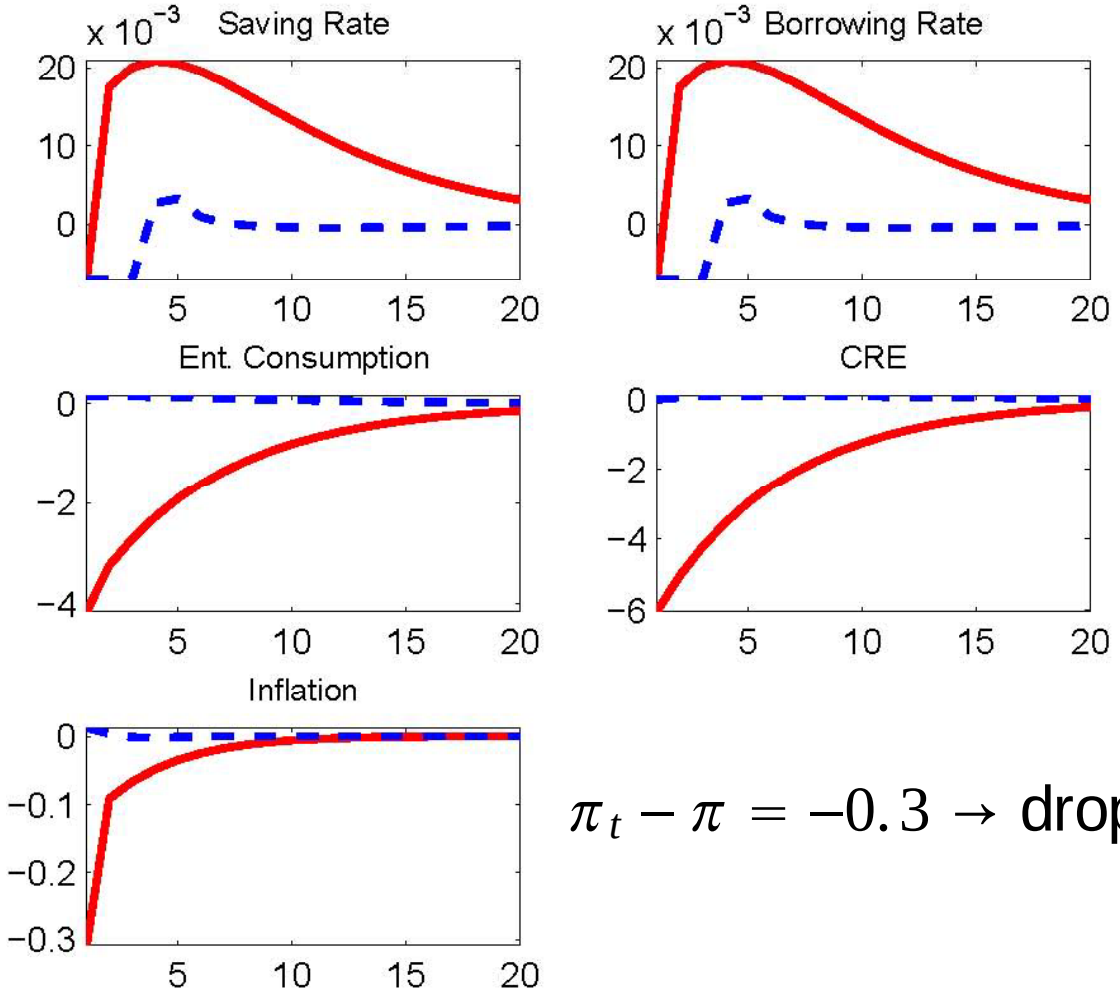


h_t^e~'commercial real estate'

$$\log\left(\frac{h_t^e}{h^e}\right) = -6 \rightarrow \frac{h_t^e}{h^e} = 0.00$$

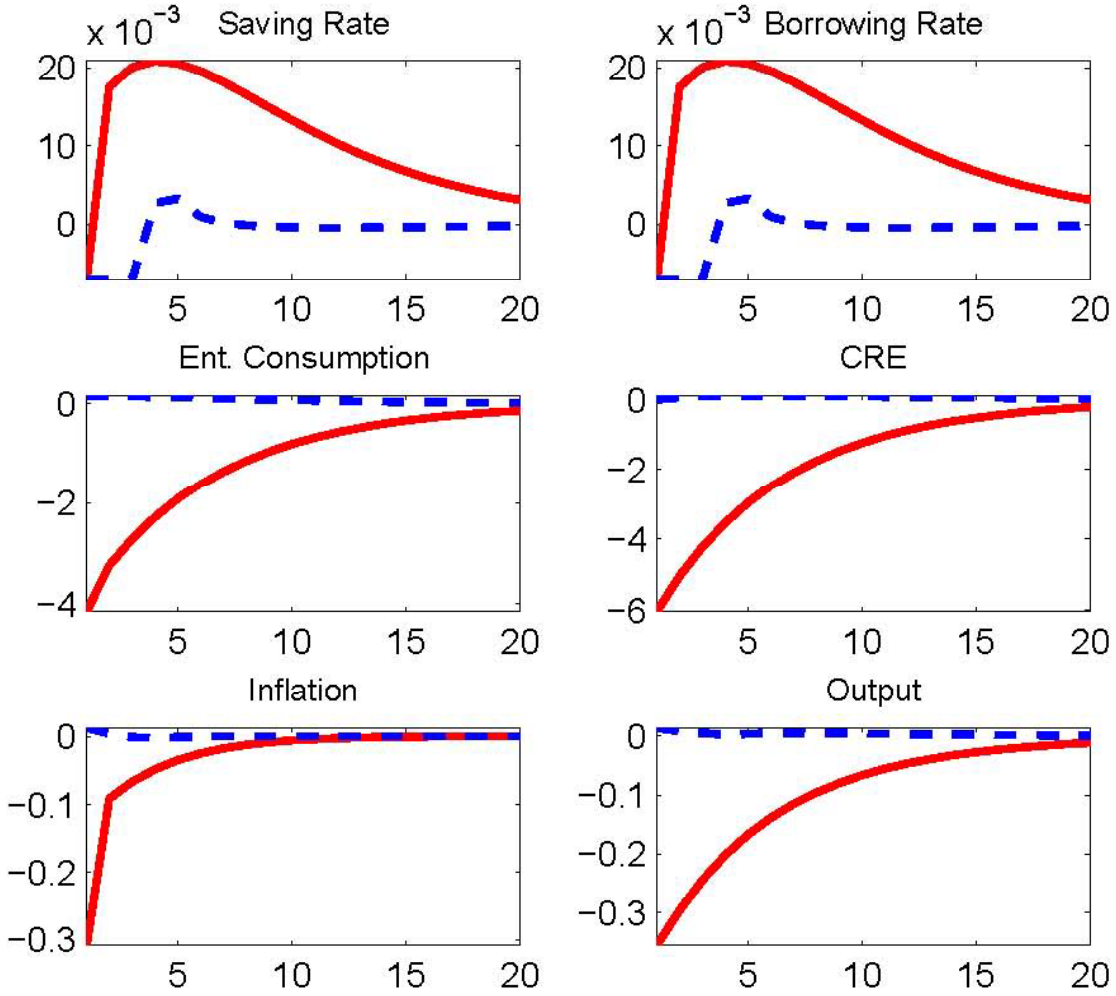
discretion commitment

Consequence of the Shock Under Alternative Representation of M Policy



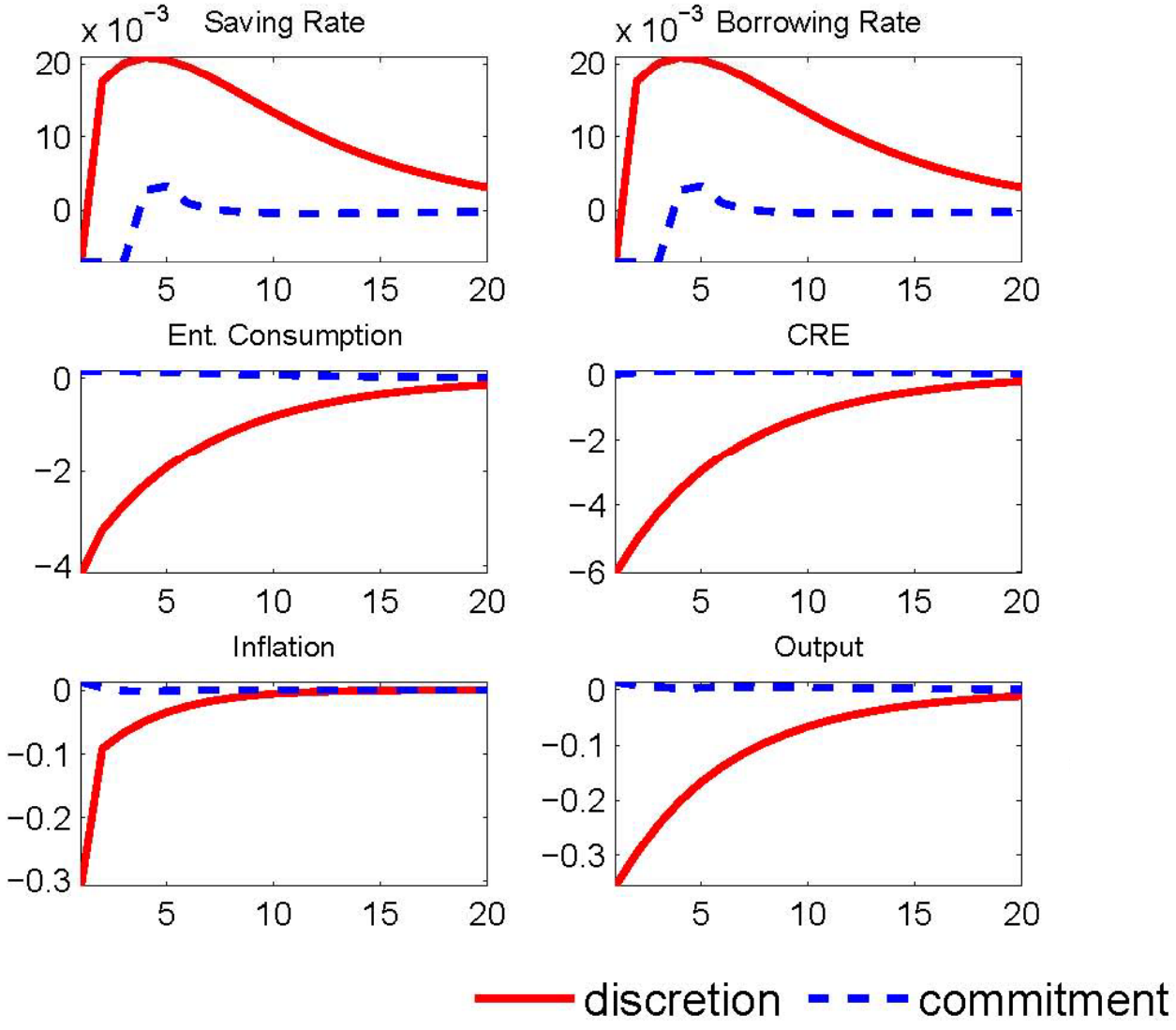
$\pi_t - \pi = -0.3 \rightarrow$ drop in inflation 120% APR

Consequence of the Shock Under Discretion



Output drops 30%

Consequence of the Shock Under Discretion



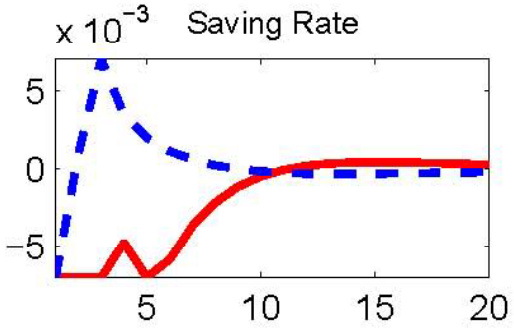
Shock has little effect under commitment, consistent with 'conventional wisdom'

- Quantities seem implausibly large.
  - At least, approximation error must be large.
  - Shrinking the shock unlikely to help because it will make the zlb non-binding.

- However, the simulations correspond to a counterfactual.
  - They do not factor in unconventional monetary policy.

- I'll look at this next.

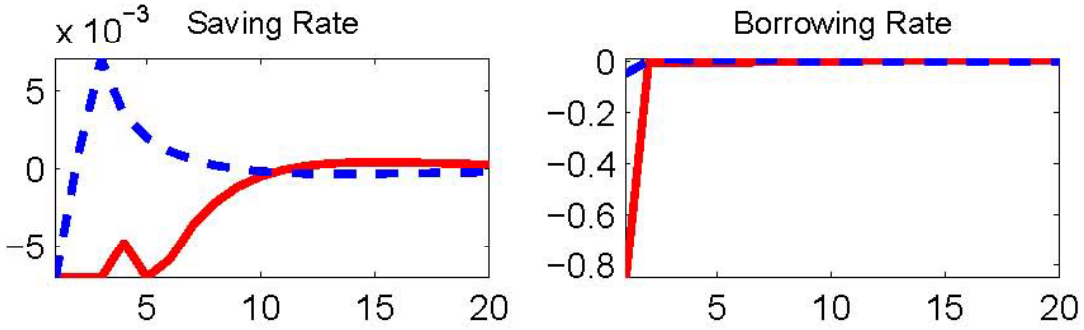
Consequence of the Shock Under Discretion, with Unconventional MP



Now, interest rate is at zlb for a longer period.

discretion commitment

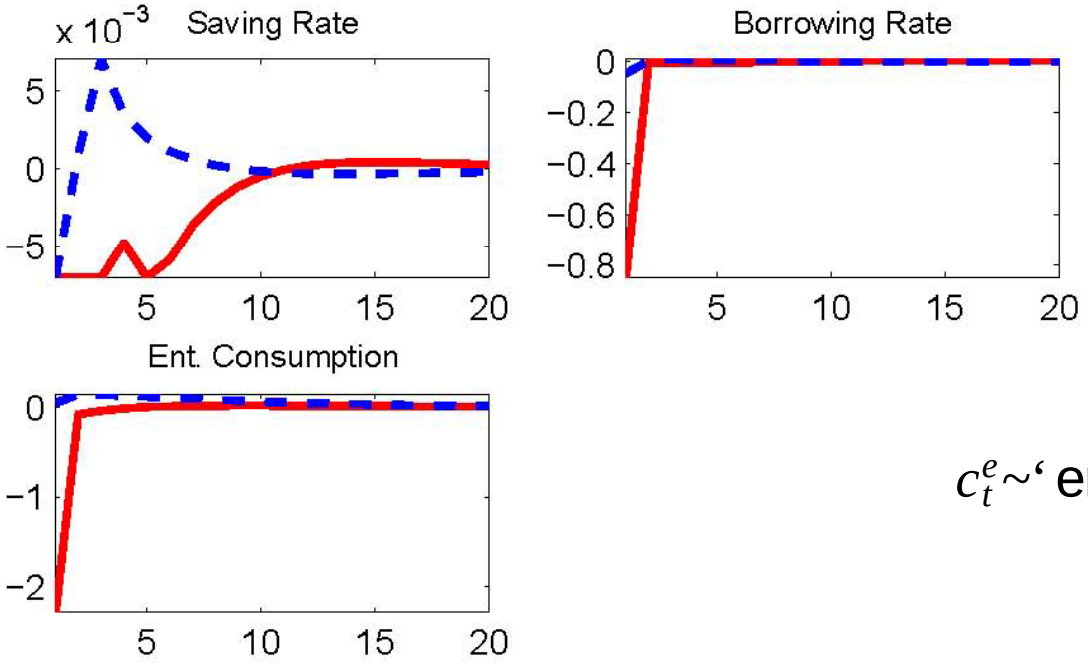
Consequence of the Shock Under Discretion, with Unconventional MP



$r_t - r = -0.8 \rightarrow r_t$ cut 320% APR

discretion commitment

Consequence of the Shock Under Discretion, with Unconventional MP



c_t^e~'entrepreneurial consumption'

$$\log\left(\frac{c_t^e}{c^e}\right) = -2$$

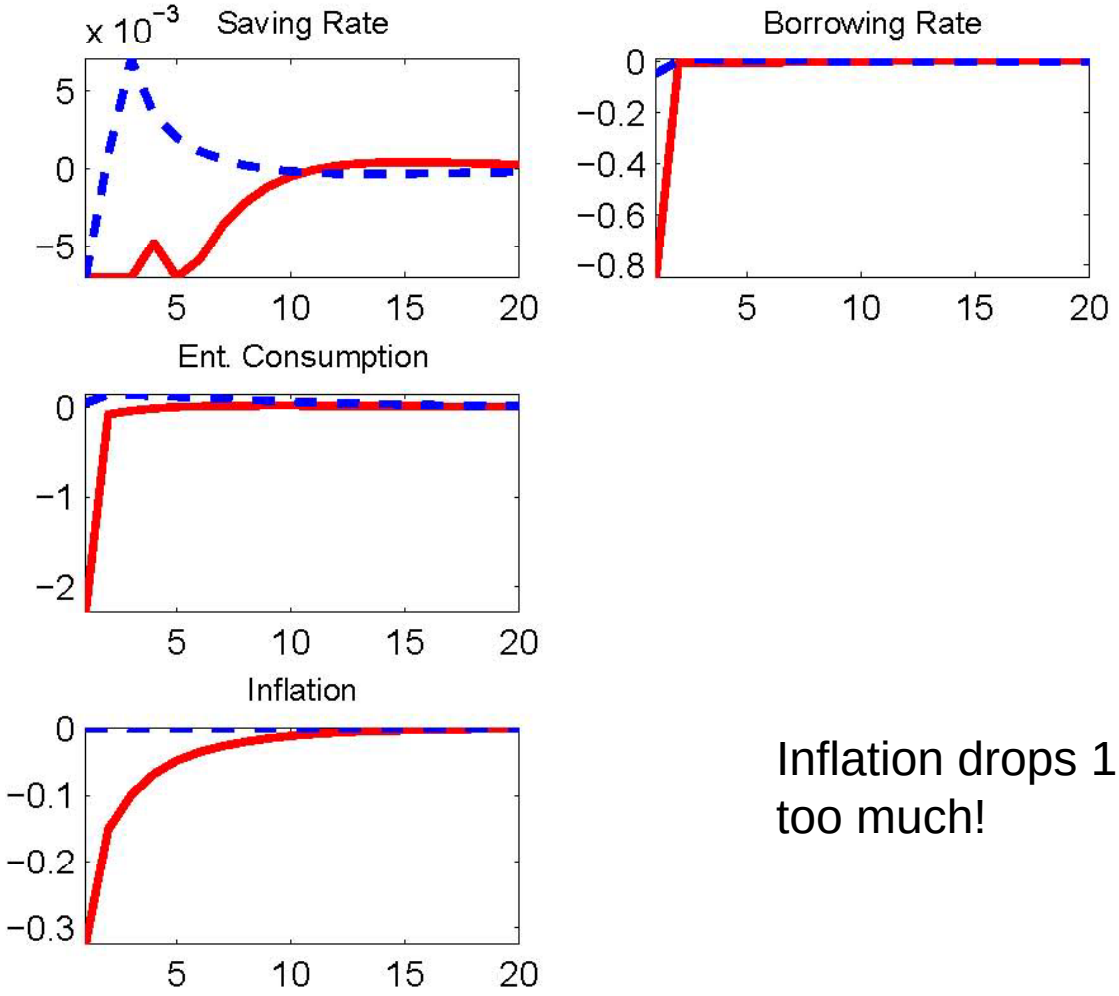
$$\rightarrow \frac{c_t^e}{c^e} = 0.14$$

This drop is smaller than occurs absent unconventional monetary policy

Explains why welfare benefits of unconventional monetary policy are so great.

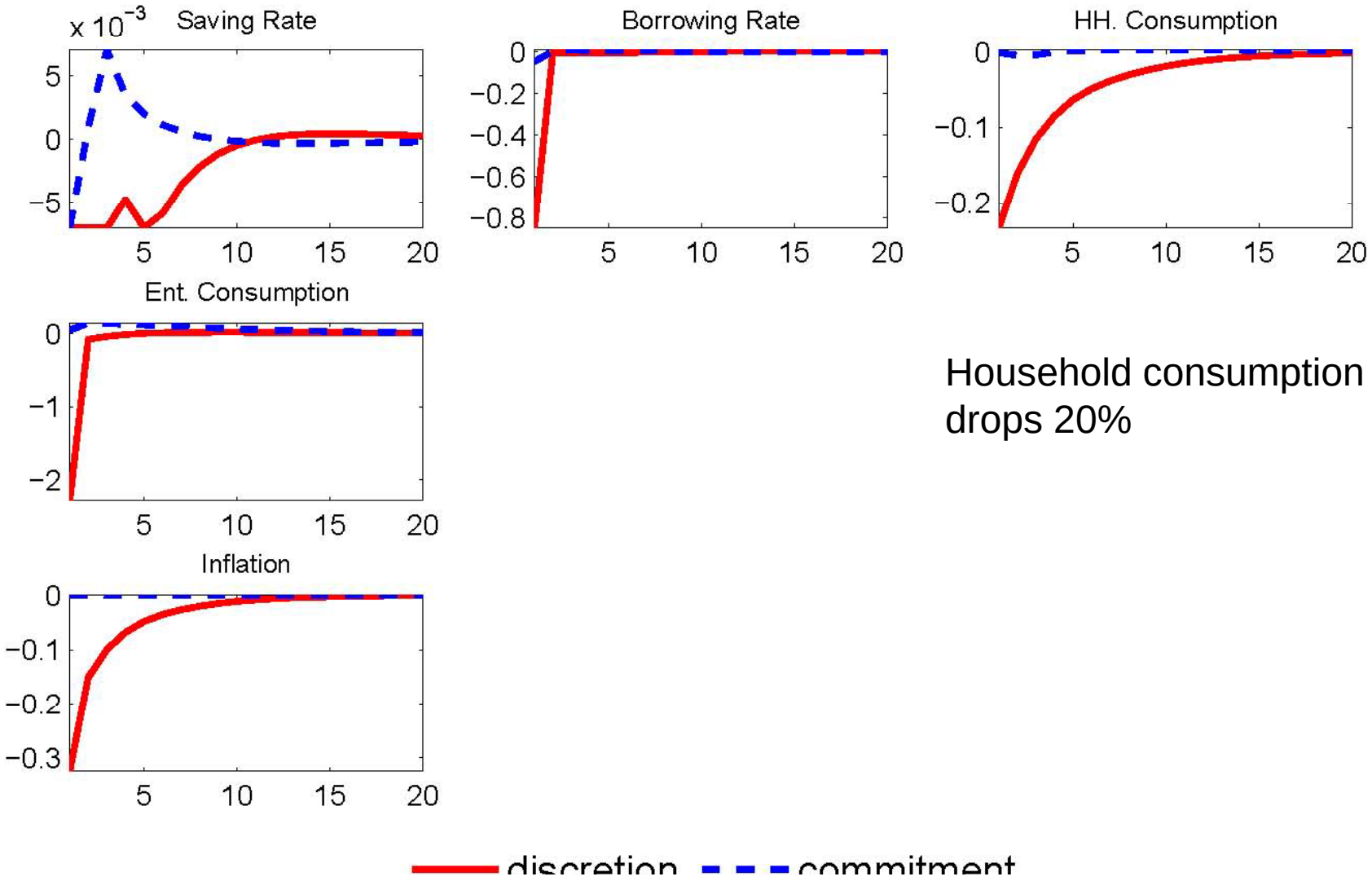
discretion commitment

Consequence of the Shock Under Discretion, with Unconventional MP



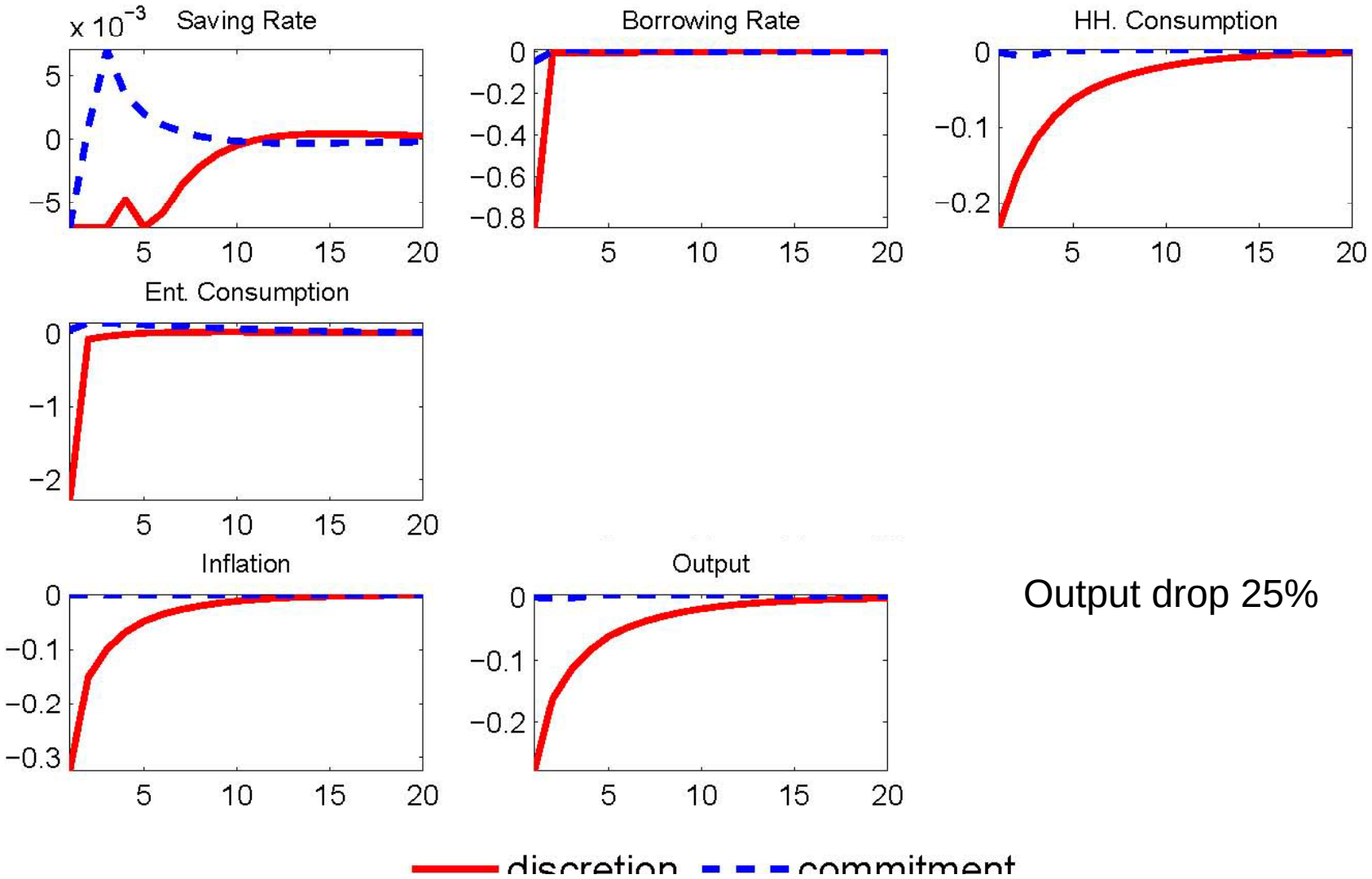
Inflation drops 120% (APR) too much!

Consequence of the Shock Under Discretion, with Unconventional MP



Household consumption drops 20%

Consequence of the Shock Under Discretion, with Unconventional MP



Output drop 25%

Conclusion

- Not clear the model provides a plausible scenario for why economy hit the zero bound in early 2009.
  - The model has too many counterfactual implications.
- Model lacks an explanation for the huge spreads in late 2008.
  - Is it missing something essential about the crisis?
- The finding that unconventional monetary policy generates huge welfare gains seems founded on implausible implications for entrepreneurial consumption.