Discussion:
“Discouraging Deviant Behavior in Monetary Economics”

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New Keynesian Economies

• Wildly popular version of DSGE models
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- NCG economy with
  - Nominal rigidities
  - Monetary authority
  - Simple rule for monetary policy

Classic feature: 'Taylor Rule'

Monetary policy responds more than 1:1 to inflation

Generates (bounded) determinacy in model

Lines up with intuition/policy-maker advice/historical evidence
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- Classic feature: ‘Taylor Rule’
  - Monetary policy responds more than 1 : 1 to inflation
  - Generates (bounded) determinacy in model
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The “Taylor Rule”

I do not think it means what you think it means.

You keep using that word.
Some issues

- Pair of influential papers (Atkeson et al. [2010] and Cochrane [2011]) criticize standard NK set-up
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• Old (incorrect) logic:
  1. Fed raises nominal rates in response to inflation
  2. Tamps down ‘demand,’ and thus future inflation

• Actual model mechanics:
  1. Fed sets nominal rate to ensure even higher future inflation in response to current inflation
  2. Only one value of inflation fails to explode =⇒ Determinacy
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  - Nominal variables explode, but not real (TVC holds)
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  - Almost always require non-credible threats
  - Monetary authority ‘blows up world’ if economy does not coordinate on desired equilibrium
    - Implement policy that violates private sector eq’m conditions

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- Demonstrate in simple, NK-style model with no uncertainty and a stylized Taylor rule
  1. Equilibrium uniqueness (global)
  2. Implementability
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- Key ingredients
  1. Taylor rule with ‘escape clause’
  2. Production economy
Model Features

1. Representative, infinitely-lived household with CIA money constraint
2. CES final goods firm
3. Monopolistically competitive intermediate goods firms (flexible pricing)
4. Government raises lump-sum taxes, subsidized production, controls money supply
5. Gov’t follows Taylor Rule with ‘escape clause’
   - If $\pi_t \in [\pi_L, \pi_U]$, follow Taylor rule
   - If $\pi_t \notin [\pi_L, \pi_U]$, switch to constant money growth from $t + 1$ onward
Model Results

1. Equilibrium exists, is unique, and is bounded in \([\pi_L, \pi_H]\)

2. Equilibrium implementable without ‘blowing up world’
   - Requires a few more assumptions/bit more nuance about structure of pricing game
   - ‘If everybody else is following expected high-inflation trajectory, I do not have an incentive to raise prices that high.’
Responses to Literature

- Response to Cochrane (2011)
  - Threat to ‘blow up world’ not here
  - Threat is credible: Rules out high inflation as an equilibrium response
  - Largely due to (1) new timing and (2) production economy
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- **Response to ACK (2010)**
  - They propose similar framework but without Taylor rule
  - Show that equilibrium in their non-linear environment not trembling-hand perfect
    - Welfare-inferior money-growth regime implemented
Overall Goal

- Nice paper: Step in the right direction
  - ACK (2010) and Cochrane (2011) dealt serious blow to whole NK structure
  - But linearized NK models are tractable, intuitive, popular, and ring true with historical evidence/policy-maker advice
  - ‘Deserve a defense’
Overall Goal

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- Couple of suggestions for how to advance argument
Suggestion 1

- Model relatively simple: Some elaboration useful
  1. Deterministic economy
  2. Stylized/unique price-setting game
  3. No nominal rigidities
  4. Money growth rule and Taylor rule *both* achieve same allocation
  5. ACK result only holds in non-linear version; linearized equilibrium is trembling-hand perfect
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- ACK present more general model with uncertainty
  - Would be good to try to generalize to their environment to shore up argument
    1. Including liquidity shocks in benchmark model rather than as extension
    2. Nominal rigidities on supply side
    3. Some other extension that drives wedge between implied allocation under Taylor rule vs money growth rule
Suggestion 2

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- Devotes a large section to difficulties with empirical inference
  - “NK models specify policy rules that are a snake-pit for econometricians.”
  - Regression analysis ‘cannot be trusted’ if NK model correct
  - Empirically found ‘successful Taylor rules’ may not actually be as such
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- Some response to these claims would bolster strength of paper as a ‘defense of the Taylor rule’