A Model of Monetary Policy and Risk Premia

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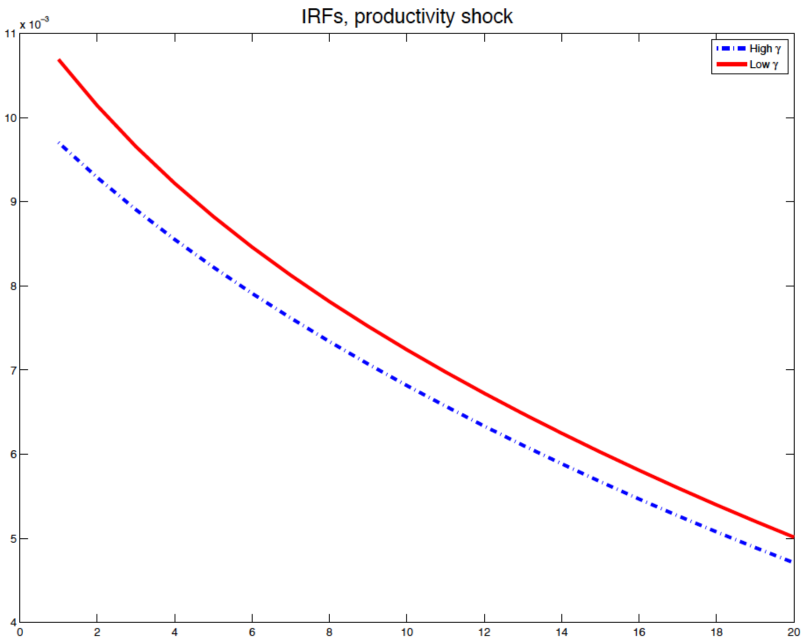
Standard Model of Monetary Policy

- Newkeynesian model with nominal rigidities.
- Monetary policy can undo inefficiencies associated with prices not adjusting sufficiently fast.
- Let's think about a positive technological shock.
- Systematic component vs. monetary policy shock.
- Historical reasons.


IRFs, productivity shock
x 10^-3
11
10
9
8
7
6
5
4
0
2
4
6
8
10
12
14
16
18
20
High γ
Low γ

The Other Roles of Monetary Policy

- But many observers have emphasize that monetary policy can play many other roles.

- For example:

  1. Overcome frictions to trade (models where money is essential).

  2. Eliminate multiplicity of equilibria.

  3. Fiscal aspects.

  4. Redistribution.

  5. Interactions with financial markets.

- After all, Bagehot's dictum is about averting crisis in financial markets (*Lombard Street*, Chapter 7, paragraphs 57-58).

New Generation of Models about Monetary Policy

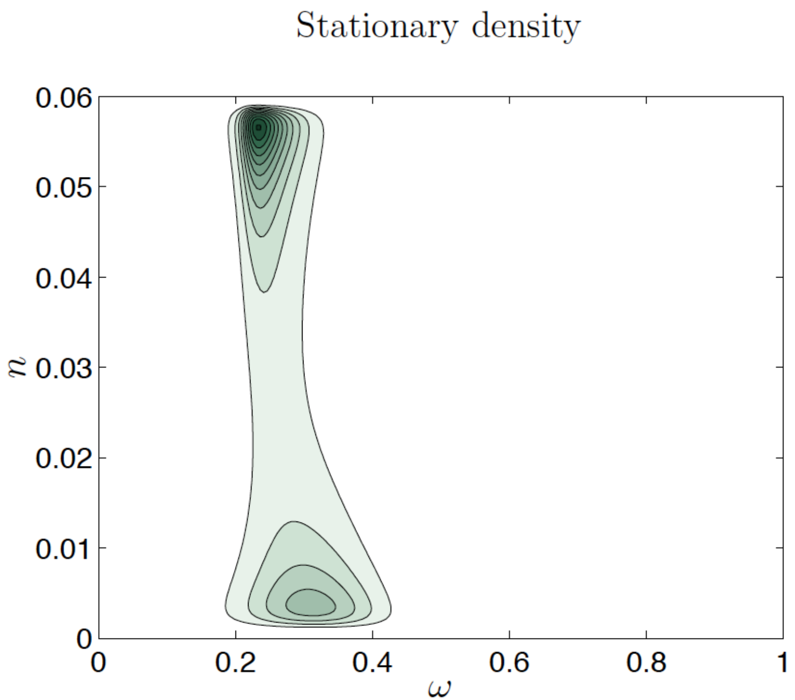
- Point has been revived by the Great Recession.
- New generation of monetary policy models deal with two issues:
  1. Unconventional policy (usually linked with the zero lower bound of nominal interest rates).
  2. Feedbacks between financial markets and monetary policy.
- This paper by Itamar, Alexi , and Philipp (DSS) belongs to this second group, although it has much to say about the first set of issues as well.
- Hence, there is much to praise in it.

DSS: the Model

- Endowment economy.
- Two type of agents; one more risk tolerant than the other (banks *vs.* depositors).
- Agents trade a claim on the aggregate endowment.
- Exogenous reserve requirement.
- Central bank controls the supply of reserves via open market operations.
- Central bank set us the nominal interest rate and solve for the path of reserves that implements it

DSS: the Results

- Lower nominal rates result in increased leverage, lower risk premia and overall cost of capital, and higher volatility.
- Effects of policy shocks amplified via bank balance sheet movements.
- Multimodal stationary density (Fernández-Villaverde and Rubio Ramírez, 2007, and Fernández-Villaverde *et al.*, 2012).
- Analysis of policies:
  1. Greenspan put.
  2. Forward guidance.


Stationary density
0.06
0.05
0.04
0.03
0.02
0.01
0
n
0
0.2
0.4
0.6
0.8
1
ω

The Way Forward

- Production economy.
- Quantitative exercises (calibration, matching model with the data).
- Financial market structure (role of intermediaries).
- Interactions with other motives for monetary policy.

Flowchart of the Model