Monetary Policy and Sovereign Risk in Emerging Economies

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Discussion by

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THE PAPER IN A NUTSHELL

- Paper combines two benchmark frameworks in the literature: the New Keynesian small open economy model and the model of sovereign debt and default
  - Nominal rigidities
  - Monetary policy follows Taylor rule
  - Government chooses optimally external debt without commitment, can default on debt
- Study interactions between fiscal and monetary policy under default risk
  - Relevant for emerging markets (inflation targeting + default risk)
  - Might be relevant for advanced economies too ...
- Paper emphasizes two mechanisms:
  1. Sovereign risk makes it harder to stabilize inflation (even in absence of debt monetization)
  2. Nominal rigidities discipline Gov't borrowing incentives

THIS DISCUSSION

Great paper. Natural progression of sovereign debt literature

- First generation: real endowment economies (Eaton and Gersovitz, 1981; Aguiar and Gopinath, 2006; Arellano, 2008; ...) → Determinants of default risk
- Second generation: real models with production (Mendoza and Yue, 2012; Bocola, 2016; Perez, 2018; ...) → Implications of default risk for economic activity
- Third generation: models with nominal rigidities (Na et al., 2018; Bianchi, Ottonello and Presno, 2018; ...) → Interactions between monetary and fiscal policy under default risk

This discussion: Review mechanisms and make two points

1. Mechanism 1 appears robust
2. Mechanism 2 may depend on equivalence between fiscal and current account policies

THE MODEL IN ONE SLIDE

- Textbook SOE NK model, given default (D) and borrowing (B') policies of the Gov't

$$c(S) + e(S)^{\rho} = z(D)n(s)\left[1 - \frac{\varphi}{2}(\pi(S) - \bar{\pi})^2\right] \tag{RC}$$

$$e(S)^{\rho} - e(S)c^f(S) = e(S)[B - q(s, B')B'](1 - D) \tag{BoP}$$

$$C(S)^{-1} = \beta i(S)\mathbb{E}_S\left[\frac{C(S')^{-1}}{\pi(S')}\right] \tag{Euler}$$

$$\tilde{\pi}(S) = \frac{\eta - 1}{\varphi}\left[\frac{C(S)N(S)}{z} - 1\right] + \beta\frac{C(S)}{z(D)N(S)}\mathbb{E}_S\left[\frac{z(D')N(S')}{C(S')}\tilde{\pi}(S')\right] \tag{Phillips}$$

$$i(S) = \bar{i}\left(\frac{\pi(S)}{\bar{\pi}}\right)^{\rho_p} \tag{Taylor}$$

$$\frac{C(S)}{C^f(S)} = \frac{\rho}{\rho - 1}e(S) \tag{ToT}$$

- Government chooses policies $\{D, B'\}$ to maximize welfare, given private sector equilibrium

Mechanism 1: Implications of sovereign risk for monetary policy

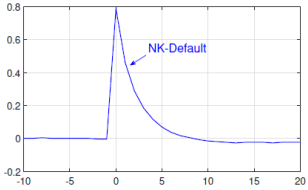
- A default in the model reduces TFP and external debt payments: Inflation increases, Consumption declines
- What happens today when the likelihood of a default increases?

$$C(S)^{-1} = \beta i(S) \mathbb{E}_S \left[\frac{C(S')^{-1}}{\pi(S')} \right] \qquad \text{(Euler)}$$

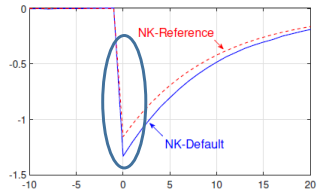
$$\tilde{\pi}(S) = \frac{\eta - 1}{\varphi} \left[\frac{C(S)N(S)}{z} - 1 \right] + \beta \frac{C(S)}{z(D)N(S)} \mathbb{E}_S \left[\frac{z(D')N(S')}{C(S')} \tilde{\pi}(S') \right] \qquad \text{(Phillips)}$$

- In calibrated model, Consumption $\downarrow$ (wealth effects) and Inflation $\uparrow$ (firms start adjusting prices)
- Expectations of a default $\approx$ cost-push shock in standard NK model
- Makes it harder for monetary authority to stabilize inflation

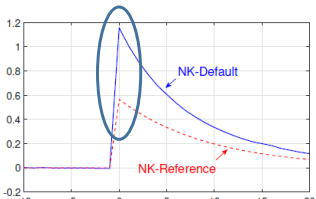
Mechanism 1: Implications of sovereign risk for monetary policy



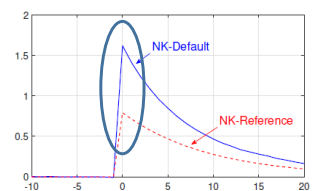
(g) Spread



(b) Domestic Consumption (C)



(e) Inflation (π)



(f) Nominal Interest Rate (i)

Monetary authority needs to raise interest rates more aggressively after a negative shock

My Remarks on Mechanism 1

1. Great insight! Reminds me a little the papers on the stability of fixed exchange rates with realignment clauses (Obstfeld, 1994; Obstfeld, 1996)

2. Technically, result depends on the modeling of default costs as reduction in TFP. However, mechanism appears robust
   - Models with endogenous default costs have similar predictions
   - Would get similar results if defaults are associated to more passive monetary policy
   - In the data, defaults are associated to steep consumption drops and inflation hikes

3. Should operate for any shock that raise the likelihood of a default (even demand shocks)

4. Would be interesting to study optimal monetary policy in this environment
   - Monetary authority should internalize that current real rates affect expectations of future defaults
   - It would behave differently depending on whether is currently exposed to default risk or not

Mechanism 2: Nominal rigidities discipline borrowing incentives

Euler equation for Gov't borrowing

$$\left[q + \frac{\partial q}{\partial B'}\right](1 - \tau_m^X) - \tau_m^C = \beta_g \mathbb{E}_S \left[(1 - D')\frac{C^f}{C^{f\prime}}(1 - \tau_m^{X\prime})\right]$$

- When labor inefficiently low, $\tau_m^X > 0$ and $\tau_m^C > 0$. *As if* debt is more expensive for government
- This is true even when prices are not moving against government $\partial q / \partial B' \approx 0$

From welfare perspective, this might be good because Gov't over-borrows

- Debt-dilution
- $\beta_g < \beta$

Not clear if result surprising: optimal fiscal policy in the model might be countercyclical even in absence of default risk

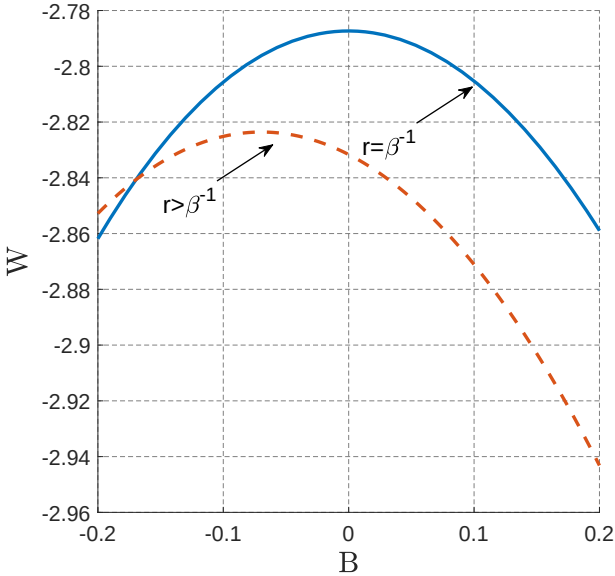
SIMPLE TWO PERIOD EXAMPLE

- No uncertainty ($z_1 = z_2 = 1$). Gov't can commit on debt repayments, no present-bias
- Perfectly sticky prices in period 1, no sticky prices in period 2
- If $r = \beta^{-1}$, variables are time-invariant. No labor wedge at $t = 2 \rightarrow$ no labor wedge at $t = 1$
- If $r > \beta^{-1}$, $c_1 < c_2$. Labor at date 1 inefficiently low
- Optimal borrowing policy of the Gov't satisfies

$$q + \left(n_1 - \frac{1}{c_1}\right) A = \beta \frac{c_1^f}{c_2^f} \qquad A > 0$$

- Idea: By reducing external borrowing, Gov't increases domestic demand

SIMPLE TWO PERIOD EXAMPLE



My Remarks on Mechanism 2

- In the model, Gov't surplus equals net exports

$$NX = B - qB'$$

- Fiscal and current account policies equivalent

- Might be interesting to study borrowing incentives in a model where:
  - The two differs
  - Optimal fiscal policy is countercyclical in absence of default risk

- Consider adding domestic public debt?
  - Breaks the above equivalence
  - Critical to account for recent debt crises (Bocola, Bornstein and Dovis, 2019)

Conclusion

Great paper on an important research agenda

- Default risk considerations are first-order for conduct of monetary policy in EM
- Paper provides model to think about interactions (and start quantifying them)

Suggestions for future steps of research agenda

- Optimal monetary policy in economies with default risk
- Integrating domestic public debt in the framework