Discussion on:

Is Inflation Default?
The Role of Information in Debt Crises

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The paper

Main ingredient I: public debt denominated in domestic currency (Yen) is more resilient to news shocks than because public debt denominated in foreign currency (Euro)

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My discussion: give a try to an alternative simpler model that retains ingredient I and II

An alternative model: stage 2, no price recall

Based on intensive rather than extensive margins

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At stage 2, a strategic trader i has CARA utility function:

$$d_i(q_2) = \frac{E[s|q_2, z_2] - q_2}{\gamma \, Var(s|q_2, z_2)} \quad \text{and} \quad D \text{ fixed}$$

leads to

$$q_2 = w_2 z_2 + \gamma \, Var(s|q_2, z_2) D$$

where $w_2 = \frac{\beta_2}{\beta_0 + \beta_2}$.

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leads to

$$q_1 = w_2 E[s|q_1, z_1] = w_2 w_1 z_1 + \gamma \, Var(q_2|q_1, z_1) D$$

where $w_2 w_1 = \frac{\beta_2}{\beta_0 + \beta_2} \frac{\beta_1}{\beta_0 + \beta_1}$.

Results I

- the lower the precision of information of the marginal agent at final stage, β_2, the lower the reaction of prices to news (z_1)

- Coming back to the original model:
  - in the Yen economy, workers are marginal agent in the last period
  - in the Euro economy, traders are marginal agent in the last period

- traders have higher precision information than workers
  - in the Yen economy the price debt is more resilient to news
  - this implicit insurance comes at a cost

- All this appears in the alternative model

An alternative model: stage 2, with price recall

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leads to

$$q_1 = w_2 z_2 + k_2 z_1 + \gamma \, Var(s|q_2, z_2) D$$

where

$$w_2 = \frac{\beta_2}{\beta_0 + \beta_1 + \beta_2} \quad k_2 = \frac{\beta_1}{\beta_0 + \beta_1 + \beta_2}$$

The model: Euro (alternative, stage 1, with price recall)

Based on intensive rather than extensive margins

At stage 1, a strategic trader i has CARA utility function:

$$d_i(q_1) = \frac{E[q_2|z_1] - q_1}{\gamma \, Var(q_2|z_1)} \quad \text{and} \quad D \text{ fixed}$$

leads to

$$q_1 = w_2 E[s|q_1, z_1] + k_2 z_1 = (w_2 w_1 + k_2)z_1 + \gamma \, Var(q_2|q_1, z_1)D$$

where

$$w_2 w_1 + k_2 = \frac{\beta_2}{\beta_0 + \beta_1 + \beta_2}\frac{\beta_1}{\beta_0 + \beta_1} + \frac{\beta_1}{\beta_0 + \beta_1 + \beta_2}$$

can now be decreasing in β_2

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where

$$w_2 w_1 + k_2 = \frac{\beta_2}{\beta_0 + \beta_1 + \beta_2} \frac{\beta_1}{\beta_0 + \beta_1} + \frac{\beta_1}{\beta_0 + \beta_1 + \beta_2}$$

can now be decreasing in β_2
   - but cannot go above the value for $\beta_2 = 0$!

Results II

- at low levels of β_2, the lower the precision of information of the marginal agent at final stage, β_2, the higher the reaction of prices to news, z_1

- Introducing (nice!!!) caveats to Result I

Bottom line

- Where is the advantage of the extensive margins approach?
    - It seems that a standard CARA model can do the job

- Where are the justifications for the extensive margins approach?
    - private information about public debt?!
    - are extensive margins more volatile than intensive margins?

- none of the main ingredients (nor the nice caveat) rely on the extensive margin approach. Two options:
    - exploit the potential of extensive margins approach
    - simplify the model

Good job!

The paper

- **Issuing Debt: trade-off in currency choice**:
  - foreign currency: main risk is default (Euro)
  - domestic currency: main risk is inflation (Yen)

- <u>Focus</u>: price resilience to news on solvency (Welfare?)
  - foreign: debt is priced by well-informed traders
  - domestic: traders need to anticipate inflation which is driven by less-informed workers

- Results: price more sensitive with more information
  - foreign: better for high performing countries
  - domestic: better for poor performing countries
    - such implicit insurance may come at a cost (quantification?)

The model: Euro (original, stage 2, no price recall)

Based on extensive margins

A strategic trader i puts all her wealth on the bond when:

$$\hat{s}[\theta + (1-\theta)E(1-\delta|x_i, q_2) - q_2] > 0 \quad \text{and} \quad D = 1 - \Phi(\epsilon)$$

leads to

$$q_2 = \theta + (1-\theta)\Phi\left(\frac{w_2 z_2 - \hat{s}}{\sigma_S}\right)$$

where

$$z_2 = s + \frac{\epsilon_2}{\sqrt{\beta_2}}$$

is the private ex. signal received by the marginal trader.