

Discussion of: Capital Controls: A Normative Analysis

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*The views expressed in this paper are those of the authors should not be attributed to the Federal Reserve Bank of San Francisco or the Federal Reserve System.

Examines a timely question

1. Are capital controls beneficial?
2. Studies an environments in which, capital controls can be used to:
 - Foster greater international risk sharing
 - TOT movements do not necessarily enhance risk sharing
 - Manage output fluctuations
 - Strategic TOT manipulation (TOT externality)
3. Emphasize the importance of the trade elasticity
4. Role for coordination, since national policies reduce international risk sharing

Is this the right framework for the question?

1. Emphasis typically on concerns about:
 - RER appreciation
 - hot money
 - large inflows
2. More recently, emphasis on capital controls as a “macro-prudential” policy in models with pecuniary externalities
 - Korinek (2009), Bianchi (2011)
 - Constrained-efficient allocation improve on competitive equilibrium

Pecuniary externality: CDL (2010, 2011)

1. Competitive equilibrium with incomplete asset markets:
 - Suboptimal int'l capital flows reflecting inefficient wealth movements across countries due to pecuniary externalities
 - Strength of pecuniary externality depends on trade elasticity
2. For instance, TOT can move the “wrong” way following productivity shocks (negative transmission)
 - HH spend higher income on Home goods
 - TOT improve (pecuniary externality)
 - Boosts increases in relative wealth and consumption
 - Inefficient borrowing and CA deficit
3. Capital controls can be used to improve on the competitive equilibrium allocation

First best allocation

1. Efficient TOT movements dictate

$$\tilde{T}_t^{fb} = \frac{\sigma(\tilde{Y}_{H,t}^{fb} - \tilde{Y}_{F,t}^{fb})}{4(1 - a_H)a_H(\sigma\phi - 1) + 1}$$

2. Change in net foreign assets can be characterized by

$$\tilde{W}_t^{fb} - \beta^{-1}\tilde{W}_{t-1}^{fb} = \sigma^{-1}(1 - a_H)[2a_H(\sigma\phi - 1) + 1 - \sigma]\tilde{T}_t^{fb}$$

Allocation with incomplete asset markets

First-best allocation :

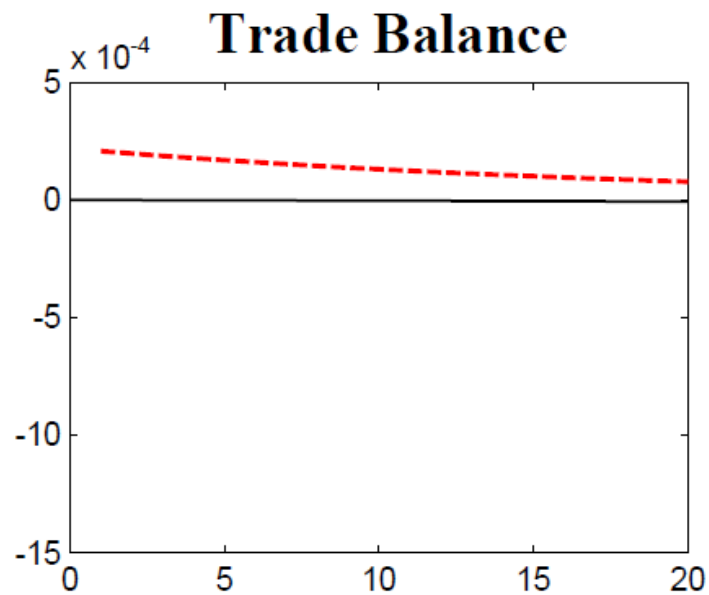
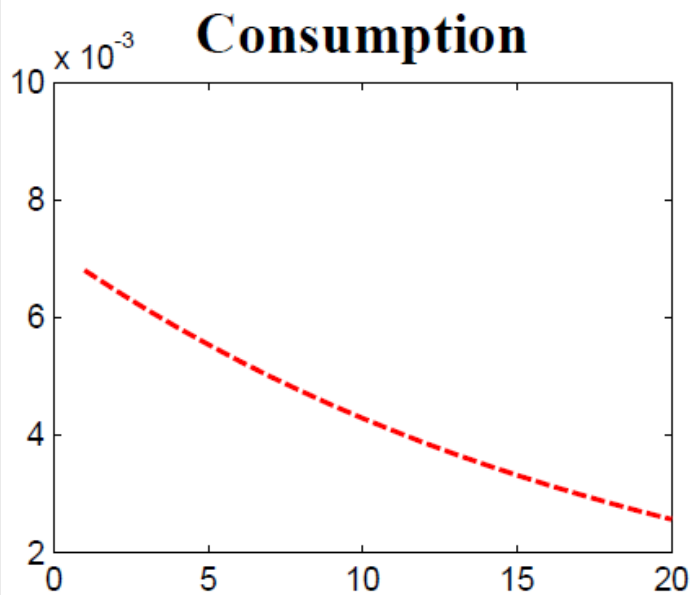
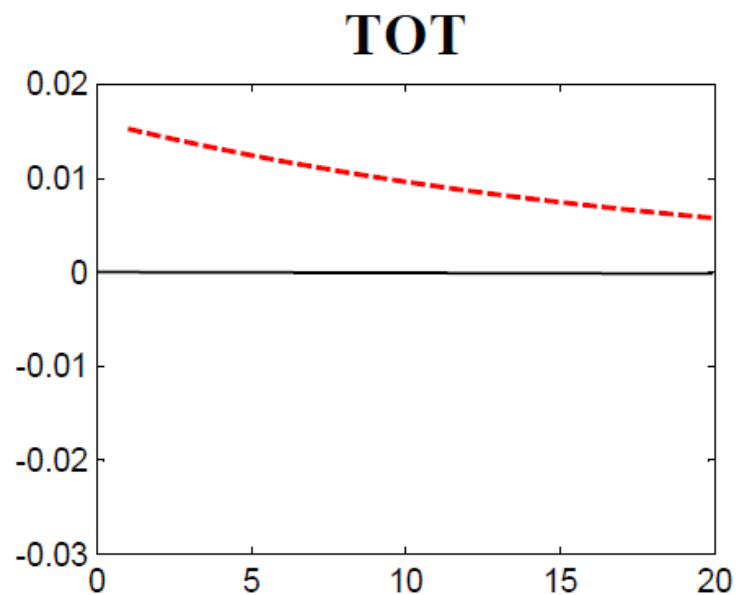
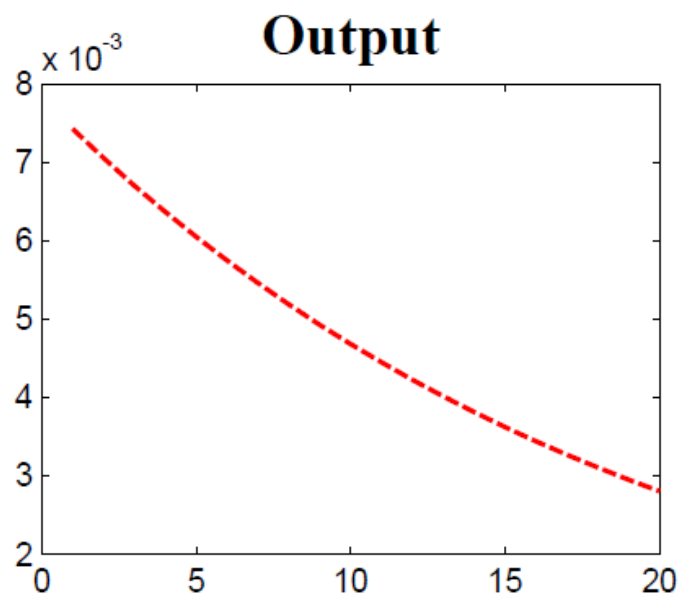
$$\tilde{W}_t^{fb} - \tilde{W}_{t-1}^{fb} = \sigma^{-1} (1 - a_H) \beta [2a_H (\sigma\phi - 1) + 1 - \sigma] \tilde{T}_t^{fb}$$

Incomplete markets allocation

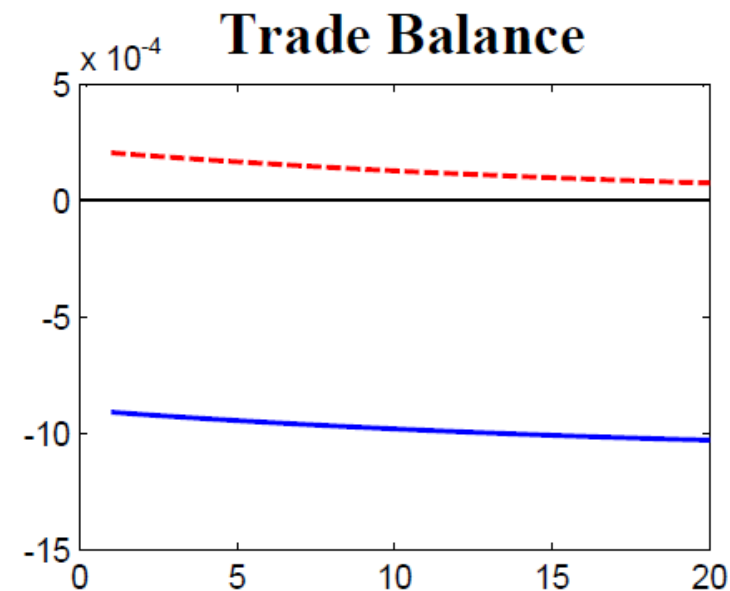
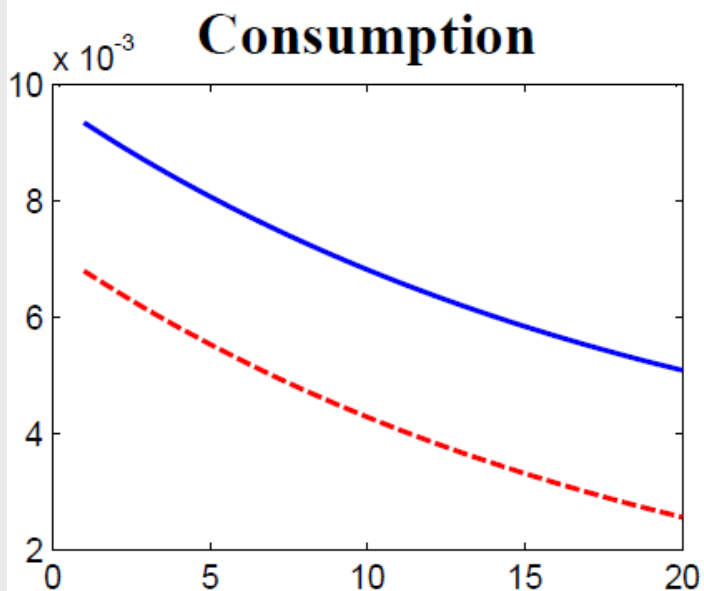
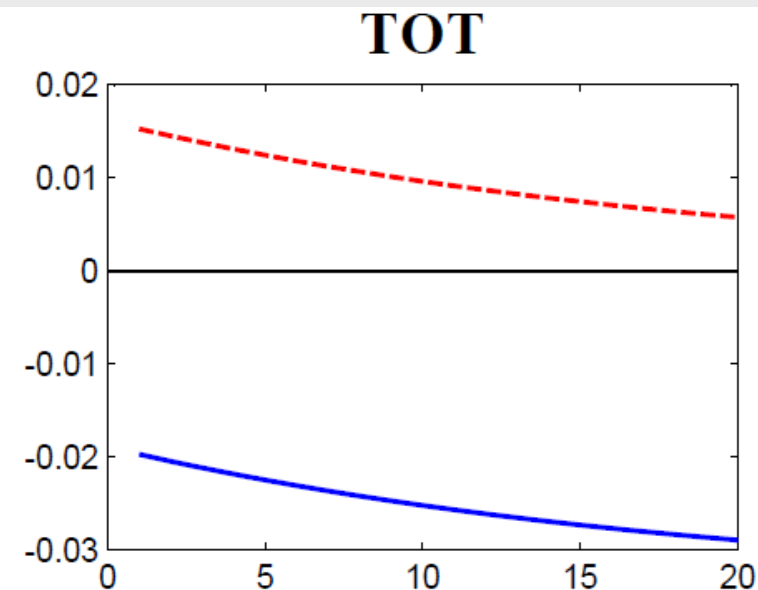
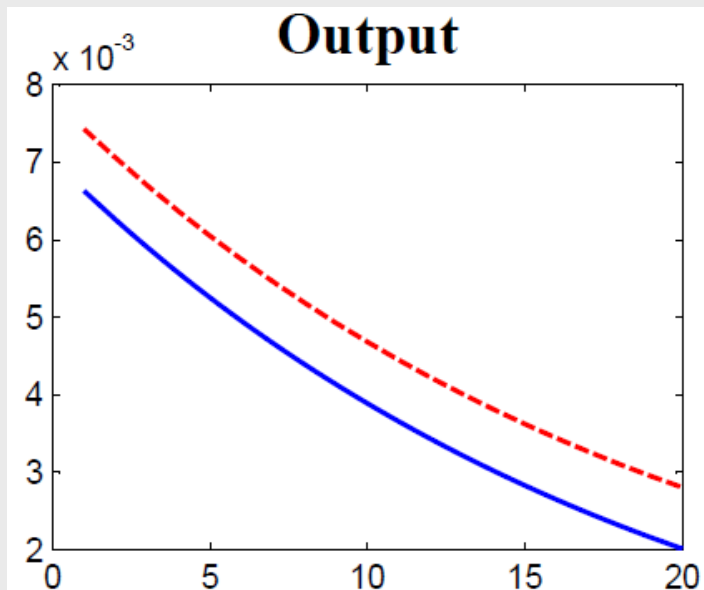
$$\hat{W}_t - \beta^{-1} \hat{W}_{t-1} = -(\beta^{-1} - 1) \hat{W}_{t-1} - \sigma^{-1} (1 - a_H) \sum_{j=0}^{\infty} \beta^j [2a_H (\sigma\phi - 1) + 1 - \sigma] E_t(\Delta \tilde{T}_{t+1+j}^{fb})$$

- Inefficient NFA dynamics because it sub-optimally responds to *expected* future shocks
- Reflects inefficient terms of trade movements

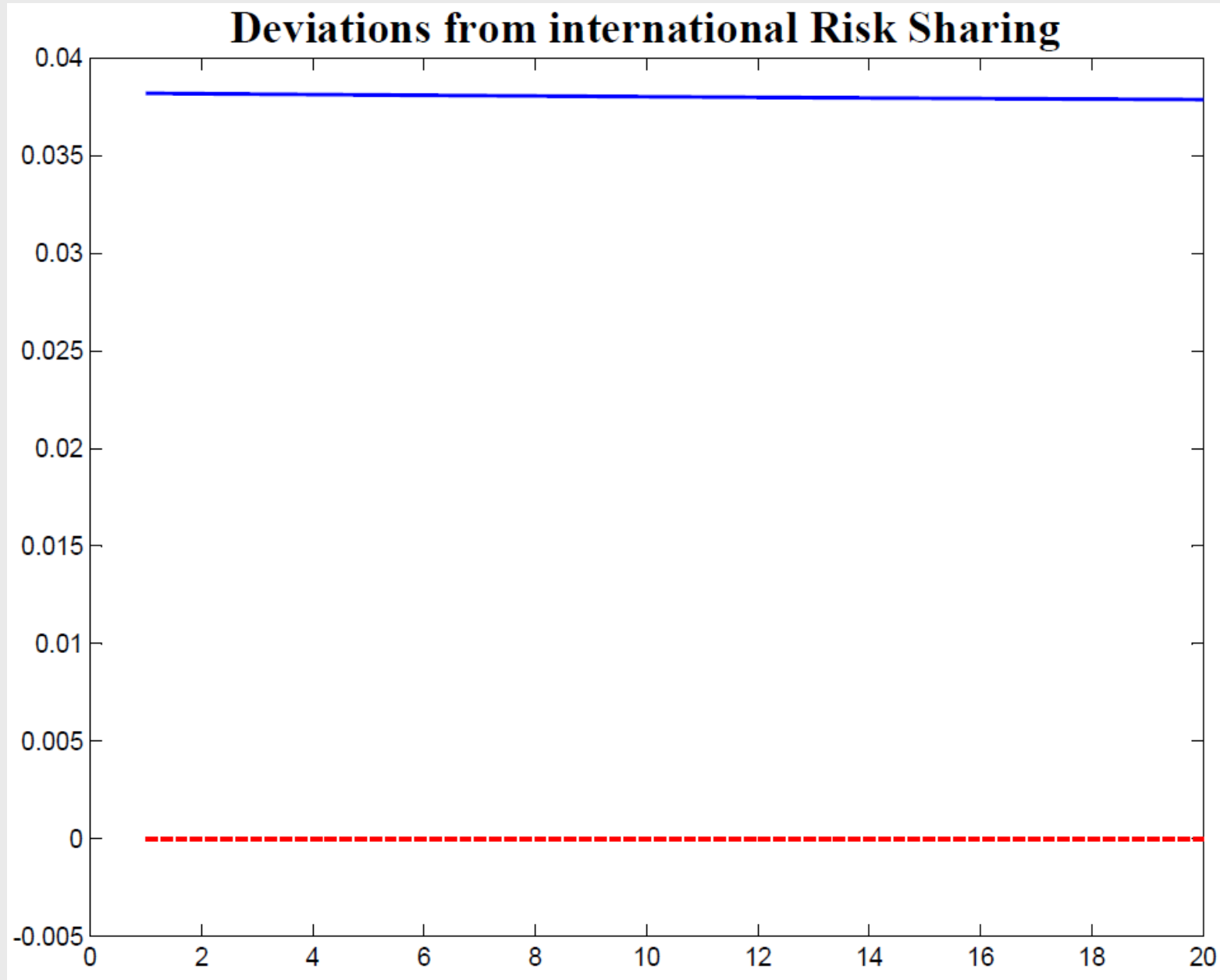
First best: low trade elasticity



Incomplete markets: low trade elasticity



International risk sharing



Inefficient risk sharing: sticky prices + lcp

Deviations from international risk sharing

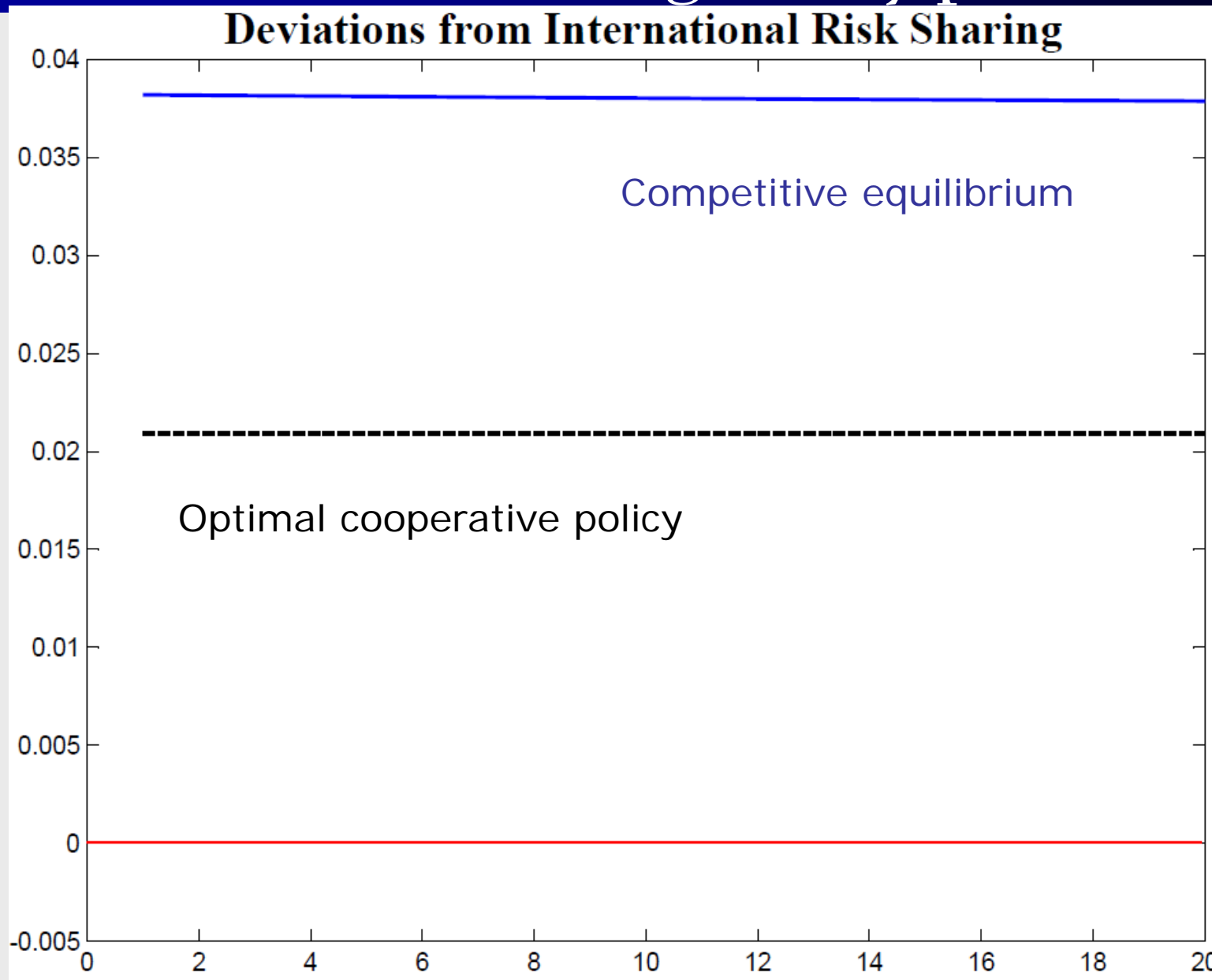
$$D_t^{gap} = \sigma \left(\hat{C}_t^{gap} - \hat{C}_t^{*gap} - R\hat{E}R_t^{gap} \right)$$

Rewriting:

$$D_t^{gap} = \sigma \left(\hat{Y}_{H,t}^{gap} - \hat{Y}_{F,t}^{gap} - 2(1 - a_H)\hat{T}_t^{gap} \right) - R\hat{E}R_t^{gap} \\ - 2\sigma \left(\hat{W}_t^{gap} - \beta^{-1}\hat{W}_{t-1}^{gap} \right)$$

Where, e.g., $\hat{W}_t^{gap} = \left(\hat{W}_t^{gap} - \tilde{W}_t^{fb} \right)$

International risk sharing: sticky prices + lcp



Conclusion

Stylized, but relevant, framework to study capital controls

1. Could emphasize the role of pecuniary externalities more
2. Should examine capital control under a negative international transmission of shocks
3. Overall, need more work to determine what is the appropriate second-best policy?

Allocation with incomplete asset markets

First-best allocation:

$$W_t^{fb} - W_{t-1}^{fb} = \sigma^{-1}(1 - a_H)\beta[2a_H(\sigma\phi - 1) + 1 - \sigma]T_t^{fb}$$

Incomplete markets allocation

$$\hat{W}_t - \beta^{-1}\hat{W}_{t-1} = -(\beta^{-1} - 1)\hat{W}_{t-1} + \sigma^{-1}(1 - a_H)\sum_{j=0}^{\infty}\beta^j[2a_H(\sigma\phi - 1) + 1 - \sigma]E_t(\Delta\tilde{T}_{t+1+j}^{fb})$$

Constrained-efficient allocation

$$W_t^{fb} - W_{t-1}^{fb} = \sigma^{-1}(1 - a_H)\sum_{j=0}^{\infty}\beta^j[2a_H(\sigma\phi - 1) + 1 - \sigma]E_t(T_{t+1+j}^{fb} - T_{t+j}^{fb})$$

Sticky prices and Monetary policy

Incomplete markets allocation

$$\begin{aligned}\hat{W}_t - \beta^{-1}\hat{W}_{t-1} = & -(\beta^{-1} - 1)\hat{W}_{t-1} - \sigma^{-1}(1 - a_H) \sum_{j=0}^{\infty} \beta^j [2a_H(\sigma\phi - 1) + 1 - \sigma] E_t(\Delta\tilde{T}_{t+1+j}^{fb}) \\ & - \sigma^{-1}(1 - a_H) \sum_{j=0}^{\infty} \beta^j [2a_H(\sigma\phi - 1) + 1 - \sigma] E_t(\Delta\hat{T}_{t+1+j}^{gap})\end{aligned}$$

- Inefficient capital flows bc of the response to *expected* efficient changes in TOT and to TOT misalignments
- Monetary policy takes into account effects of misalignment on capital flows