Discussion of: International Portfolio Equilibrium and the Current Account

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The Issue

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- Is country specific risk well shared among nations?
- On average residents of developed countries hold a large fraction of their wealth in domestic assets
- Is this evidence that country specific risk is not well shared (Baxter and Jermann)?
- This paper argues that this is not the case; portfolio home bias is consistent with complete risk sharing

Outline

- The setup
- Results and intuition
- More on international risk sharing

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- The current account

The set-up

- Two-countries, two goods pure exchange economy
- Country 1 produces apples, consumes lots of apples and some bananas, Country 2 symmetrical

$$E \sum \beta^t U(c_t), E \sum \beta^t U(c_t^*)$$

$$c_t = G(a_t, b_t), c_t^* = G(b_t^*, a_t^*)$$

$$\begin{aligned} A_t &= a_t + a_t^* \\ B_t &= b_t + b_t^* \end{aligned}$$

$$A_t = A_{t-1} + \varepsilon_t \qquad B_t = B_{t-1} + \varepsilon_t^*$$

The approach

- Solve for efficient allocation (static problem)
- Consider environment with int'l stock trading
- Show that there exist stock holdings for which the **linearized** FOC of the planning problem hold in the stock equilibrium
- Compute these stock holdings
- Compare them with data

The logic

In a symmetric stock equilibrium

$$\begin{aligned} c_1 &= \lambda d_1 + (1-\lambda) e d_2 \\ e c_2 &= \lambda e d_2 + (1-\lambda) d_1 \end{aligned}$$

solving for diversification $1-\lambda$

$$1-\lambda = \frac{1}{2} - \frac{1}{2}\frac{c_1 - e c_2}{d_1 - e d_2}$$

If in an efficient alloc. $\frac{c_1 - e c_2}{d_1 - e d_2}$ constant and finite then a constant portfolio decentralize it

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- Examples

- One good model $e = 1, c_1 = c_2 \rightarrow 1-\lambda = 1/2$

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- Log Utility: $c_1 - ec_2 = 0 \rightarrow 1-\lambda = 1/2$, for every σ

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- Examples

- CRRA preferences $1-\lambda = \frac{(1-s)((1-2\alpha)-\sigma(1-2\alpha\phi))}{1-\sigma-4\alpha(1-\phi\sigma)(1-s)}$

Key parameters

$$G(a_t, b_t) = \left[\alpha a_t^{\frac{\phi-1}{\phi}} + (1-\alpha) b_t^{\frac{\phi-1}{\phi}}\right]^{\frac{\phi}{\phi-1}}$$

Here
- Elasticity of substitution, ϕ
- Home bias in consumption, α
- Risk Aversion

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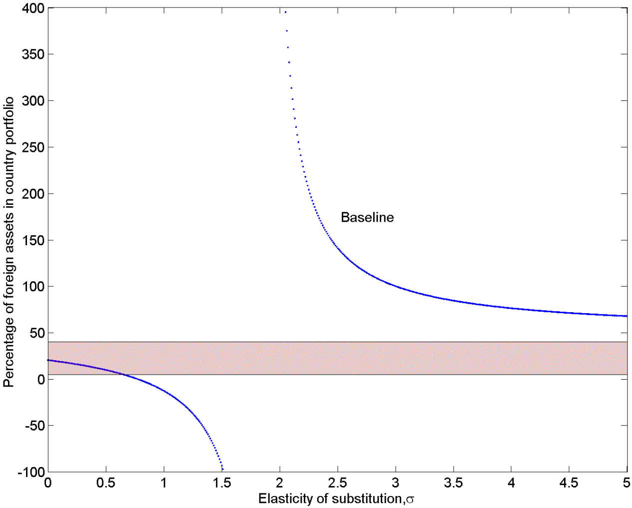
In Heathcote Perri (2005) also
- Undiversifiable Labor Income share
- Investment share

Diversification in the baseline



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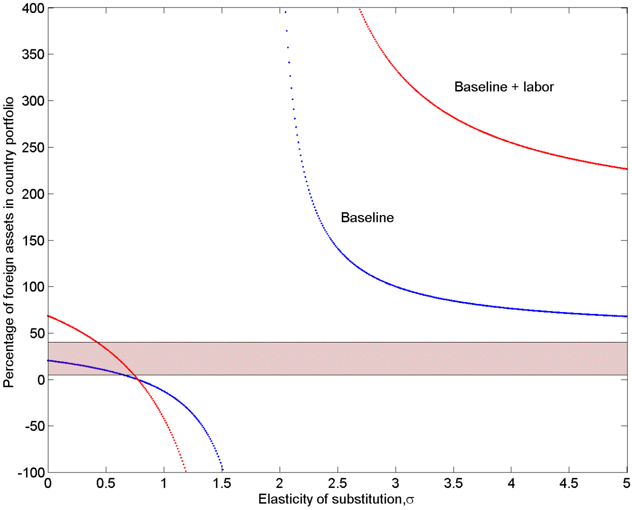


Is then country specific risk perfectly shared?

Risk sharing has a more direct implication

$$\begin{aligned} U_c G_a &= U_{c^*} G_{a^*} \\ U_c G_b &= U_{c^*} G_{b^*} \end{aligned}$$

which implies

$$U_c = U_{c^*} e$$

This relation is at the heart of the portfolio results presented here, but, unfortunately does not hold in the data (Backus Smith puzzle)

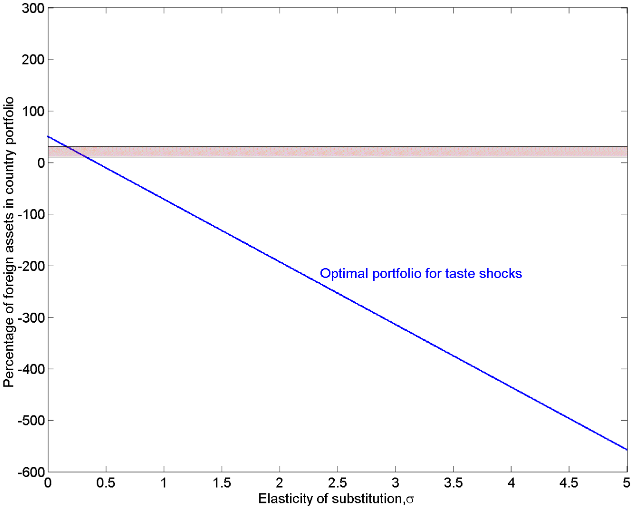
A solution?

What if there are taste shocks so that

$$U_c = xU_{c^*}e$$

Obviously the Backus Smith puzzle can be solved. But how does the portfolio look like?

Diversification with taste shocks



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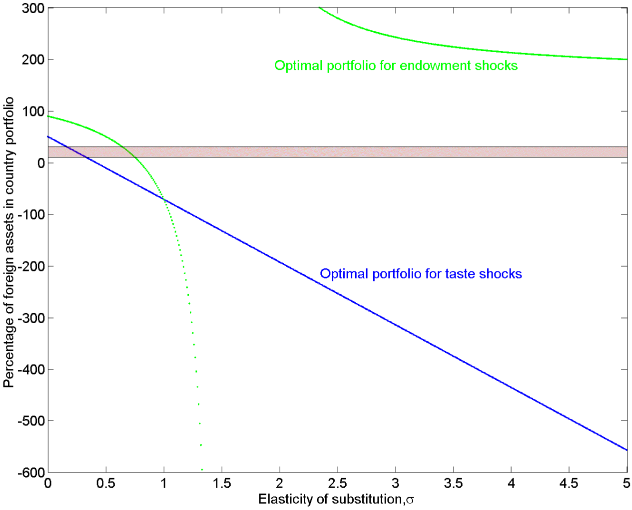

The current account

Empirical counterpart of current account in the model?

$$\Delta NFA = CA = NX + NFP = X - M + NFP = X_C + X_I - M_C - M_I + NFP$$

Paper uses ΔNFA, but since there is no investment the right measure should be

$$\Delta NFA - X_I + M_I$$

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Probably the correction is important!

Conclusions

- This paper provides a useful way of computing portfolio that decentralize efficient allocations
- The current set-up is a bit too simple to fully understand the data