

Mussa Puzzle Redux

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Outline

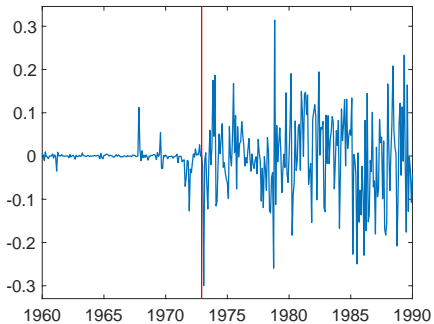
- The key ideas of the paper
- Two comments

The Mussa Facts

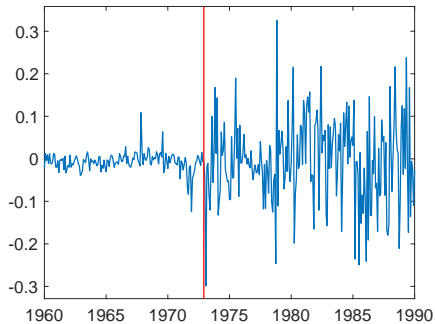
- As US moves from fixed to floating in 1973:
 - ▶ Volatility of Nominal Exchange, e rate increased substantially
 - ▶ Volatility of Prices $\frac{P^*}{P}$ did not change, hence
 - ▶ Volatility of Real Exchange Rate $\frac{eP^*}{P}$ increased substantially

The Mussa Facts

(a) Nominal exchange rate, Δe_t



(b) Real exchange rate, Δq_t

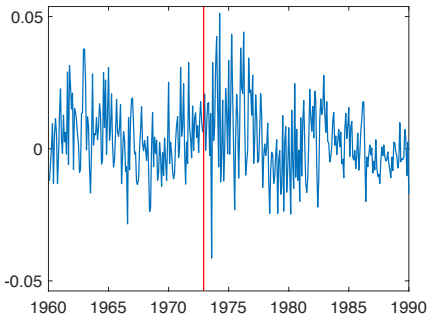


Mussa facts and money neutrality

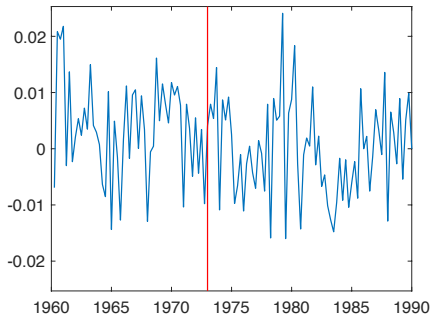
- The Mussa facts are direct evidence against money neutrality:
- Change in monetary policy (Move from fixed to Float) induces a change in properties (volatility) of a real variable (real exchange rate)
- Nakamura and Steinsson (2018)

Additional Mussa facts (Baxter Stockman 89 .. IM 19)

(a) Inflation rate, π_t



(b) Consumption growth, Δc_t



- The real exchange rate is the **only** variable that changed properties!

Additional facts and NK models

- The additional facts provide evidence against standard NK model (where monetary policy has real effects)
- The change in monetary policy needed to get the increase in volatility of the nominal exchange rates should also affect other real or nominal variables

The two questions addressed by the paper

- How can you get a change in monetary policy that only changes nominal and real exchange rate volatility, but not other variables?
- Why, when the real exchange rate change properties, other variables that are directly connected to it do not?

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- Noise traders in each period have large change in relative demand for currencies
- **Peg**: changes in relative demand absorbed by monetary authority (or financial intermediaries), no change in e
- **No peg**: fluctuations in demand for currency result in fluctuations in e
- In both cases currency moves from noise traders to monetary authority (or intermediaries), but it does not affect the rest of the economy
- **Semi neutrality**: other variables (inflation, consumption volatility) not **directly** affected by changes in policy

How about the real exchange rate?

- In a large class of models (Cole-Obstfeld, BKK) real exchange rate directly connected quantities (simply through trade)

$$\frac{\text{Imports}}{Y - \text{Exports}} \sim \text{Real Exchange Rate}$$

- How can you break the connection?
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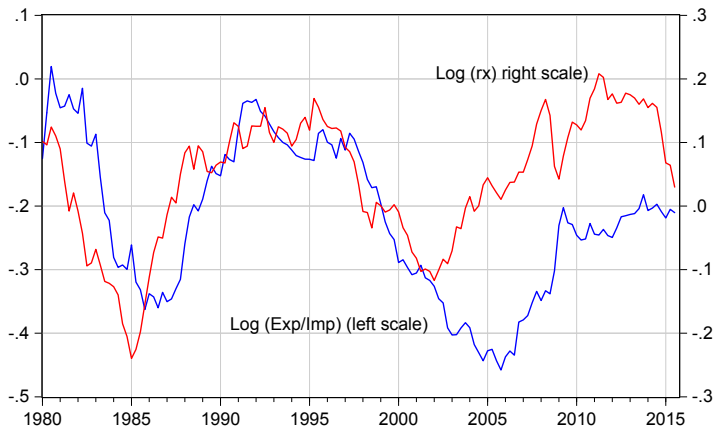
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- How can you break the connection?
- Need trade friction (In proposition 2 $\gamma \sim 0$)
- Success?

Two comments

- Is it real exchange rates really disconnected from real quantities?
- If not, what does this paper teaches us about the case for flexible?

Real Exchange rate disconnect?



- Data show a strong connection between real exchange rate and import/export ratio (Alessandria Choi, 2019), at **lower frequencies**
- Flexible exchange rate regime can lead to low/medium frequency fluctuations in nominal and real exchange rates

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The case for floating weakened?

- Moving from fixed to flexible allow currency demand from noise traders to induce large movements in real quantities (and intertemporal trade)
- Are these changes desirable?
- Heathcote Perri (2013) shows that in a model of "inefficient" real exchange rate fluctuations, better to shut down international financial markets

Conclusions

- Great Paper, makes important progress on the big issue in international macro: what determines nominal exchange rates
- Pushes us to work toward understanding crucial policy issue, the case of flex v/float