Multinational Banks and Financial Stability

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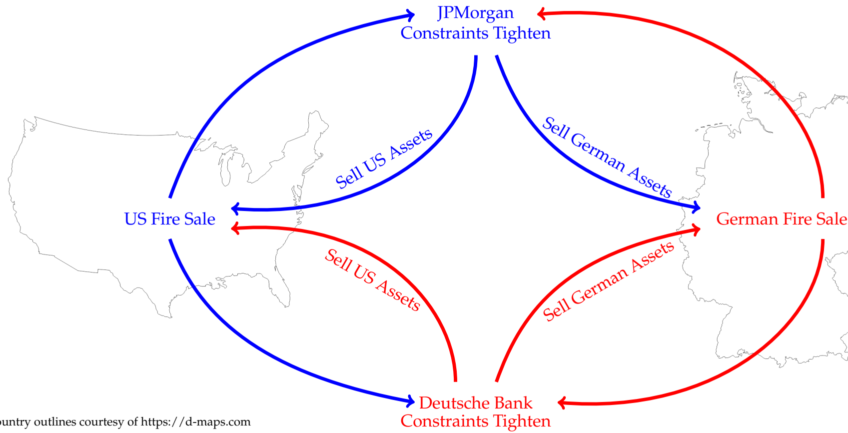
Discussion by Mark Aguiar

Overview

- Extremely elegant and important paper
- Key contribution:
  - Maps a well-studied phenomenon (pecuniary externalities in global financial markets) into the classic paradigm of competitive equilibrium
  - Can then apply deep but familiar results from GE
  - "Correct" price of externality can be set non-cooperatively by national regulators
- Mapping not ex ante obvious but quite intuitive ex post – like many great papers
- Raises some unanswered interesting questions – primarily to do with market power and time consistency

Fire Sale Spillovers



Country outlines courtesy of https://d-maps.com

A Simple Environment

- First, consider the "ex post" problem of liquidating assets
- To map into the authors' paper, suppose each country endowed with X units of "stuff" (pollution, liquidated assets, etc) that needs to be placed in "landfills/markets".
- Payoff to Home is $u\left(\theta(X-x), \theta^{*} x, x^{*}\right)$
  - $X - x$ is Home stuff in own landfill
  - x is Home stuff shipped to Foreign
  - x^* is stuff rec'd from Foreign
  - θ, θ^* is a quality/taste shifter of landfill
- $u_2 > 0$, $u_3 < 0$ and u concave
- Symmetric payoff for Foreign: $u(\theta^*(X - x^*), \theta x^*, x)$

Efficient Allocation

- Suppose efficient allocation is $x = x^* = \omega X$, $\omega \in (0, 1)$
- Can be implemented via competitive market via usual assumptions:
  - Concavity
  - Countries are price takers
- $p = 1 = u_1/u_2$ is relative price of a unit of Home landfill
- Also can be implemented with quotas set by global planner

National Regulator

Quantities

- Set foreign quota to zero:

$$\max_{x,\bar{x}^*} u(\theta(X - x), \theta^* x, \bar{x}^*) \text{ s.t. } x \leq \bar{x} \text{ and } \bar{x}^* \geq 0$$

- No compensation for $u_3 < 0$ absent side payments
- If x affects θ, ignore impact on Foreign $u^*(\cdot, \theta x^*, \cdot) \Rightarrow$ too much dumping at home

National Regulator

Tariffs

- Will set tariff to p!
- Achieve globally efficient outcome
- Endogenous X: An additional relative price needs to be set efficiently (tax on ex ante investment)
- Note that price/regulation treats fire sales equally regardless of Home vs. Foreign

National Regulator

Tariffs cont'd

- Why no discrimination ex post?
- Think of a country producing a final composite good – access to an investment opportunity or pollution market
- Charges a fee up front for access and then a state-contingent price ex post
- Optimal strategy is to maximize quality/efficiency of ex post opportunity to get high ex ante price
- Equate ex post price to ex post marginal cost
- Ex ante price globally efficient <u>only</u> if country has zero market power

Hold-up Problem?

- Two-part tariff: Price of entry and then a state contingent price of liquidation ex post
  - Ex post efficiency raises price of entry
  - Diamond-Mirrlees intermediate inputs
- Commitment is crucial
  - Equal treatment not time consistent
  - Like a tax on capital

More on market power

- May charge an inefficiently high entry price
- Similar to optimal tariff/ToT manipulation
- Bagwell-Staiger work on GATT/WTO points to a possible solution
- Does GATT-like agreement to correct market power change the ex post efficiency result?

Rent seeking

- Lobbying and rent seeking
- Is this why quantity restrictions are often used in practice?

Conclusion

- Extremely nice paper
- Applied theory at its best
- Ideally – widely read by both academics and policy makers