

Spillovers from monetary policy shocks: Session discussion

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Spillovers 101: a roadmap to the discussion

Let's start from scratch

Three approaches interacting with and intersecting each other

- **A really truly vey absolutely unashamedly simple introduction**
 - You'll see what I mean
- **What do we (think we) know**
 - A summary of conventional wisdom on monetary spillovers
- **What did we learn this morning**
 - Selected highlights from the three papers

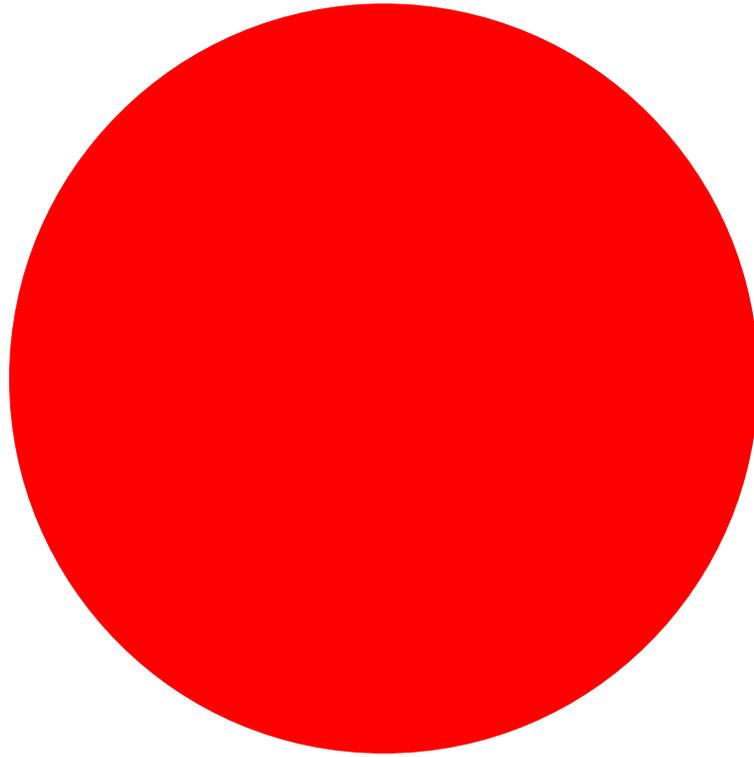


Back to the basics: In case you need to explain monetary spillovers to a 2-yr old daughter...

... you may want to think of
global demand
as a pie



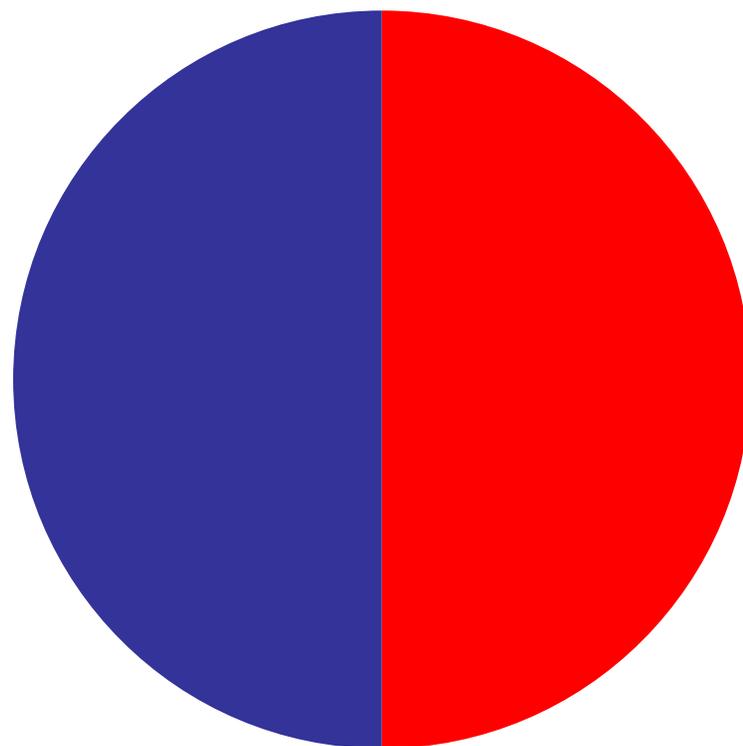
Something like this



- Global demand or similar concept, easily expandable metaphor depending on context



And you can cut the pie into slices



- Global demand for Home products
- Global demand for Foreign products

Now, stuff happening in one country...

- ...can affect the size of the whole pie (expenditure increasing/ income-absorption effects)
- ...as well as the way the pie is split into slices (expenditure shifting effects)



For instance, monetary policy: Part 1

Consider the effects of a US monetary expansion

- **Exchange rates** abroad appreciate (**expenditure shifting**):
 - Exports to US become more expensive
 - Imports from US become cheaper
- Global demand reallocated toward US goods



For instance, monetary policy: Part 2

Consider the effects of a US monetary expansion

- **Domestic demand** increases (expenditure increasing):
 - US monetary policy raises nominal incomes and expenditures
- Higher domestic demand for domestic goods **and** imports



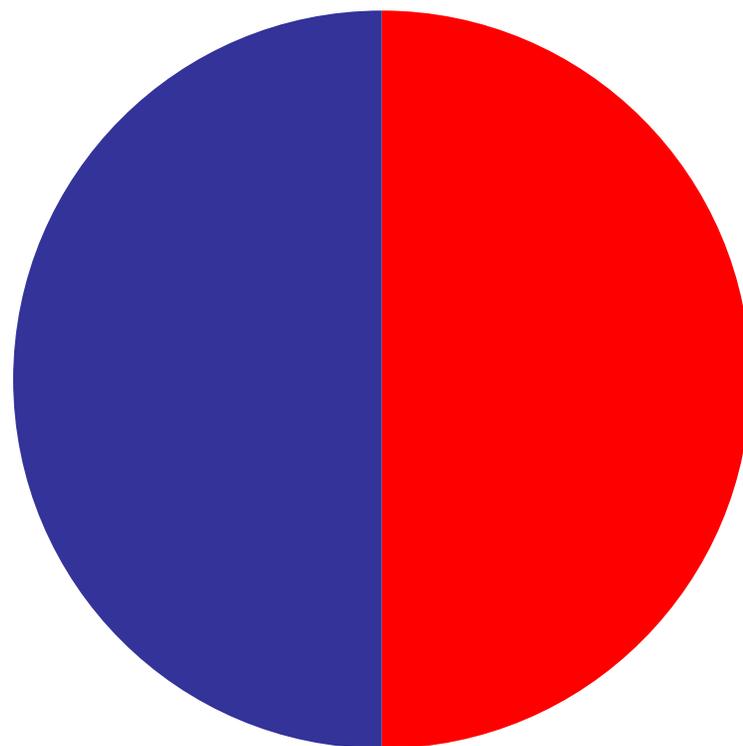
For instance, monetary policy: Part 3

Consider the effects of a US monetary expansion

- **Financial spillovers** abroad (likely **expenditure increasing**):
 - US stimulus lowers domestic longer-term yields
 - Capital flows out of the US into financially interconnected economies
 - Abroad:
 - Credit expands, lowering yields and borrowing costs and raising other asset prices such as equity
 - Local exchange rate appreciation may improve corporate and financial balance sheets, but may reduce equity prices

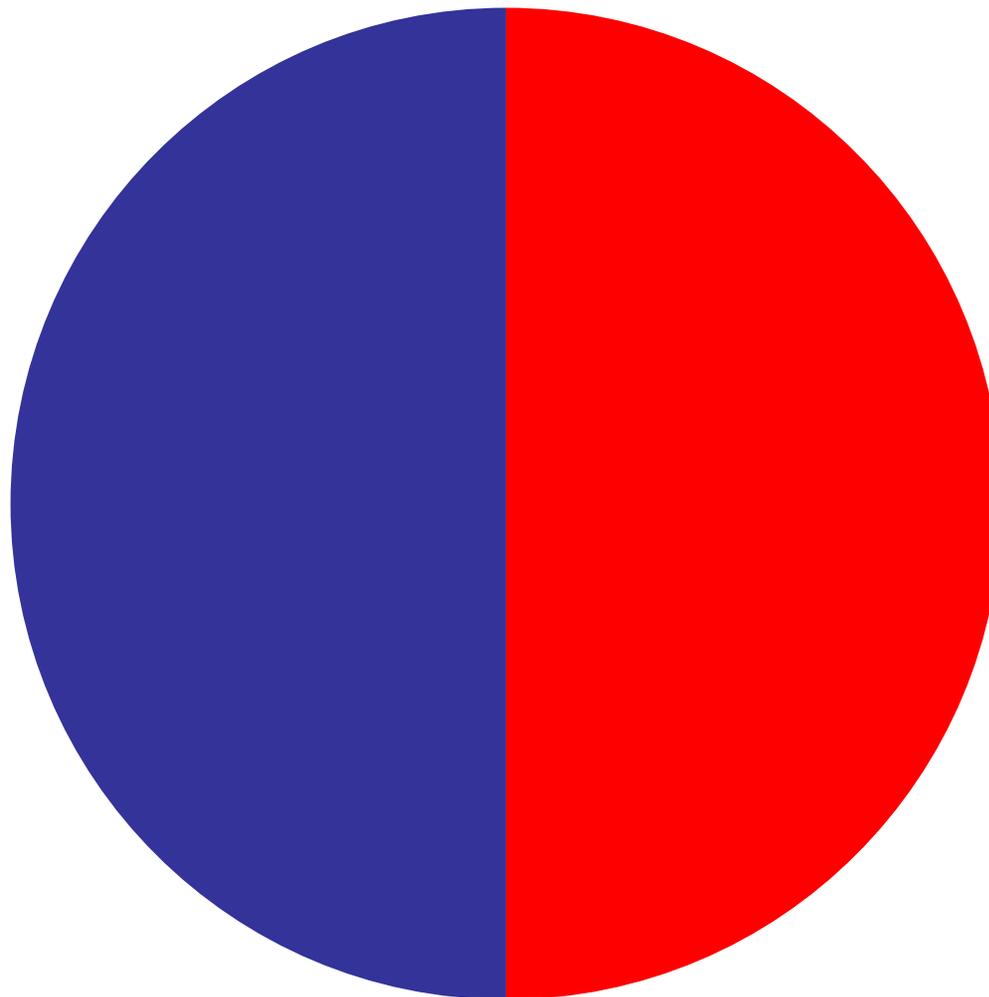


US monetary policy: start with pie and slices



- Global demand for Home products
- Global demand for Foreign products

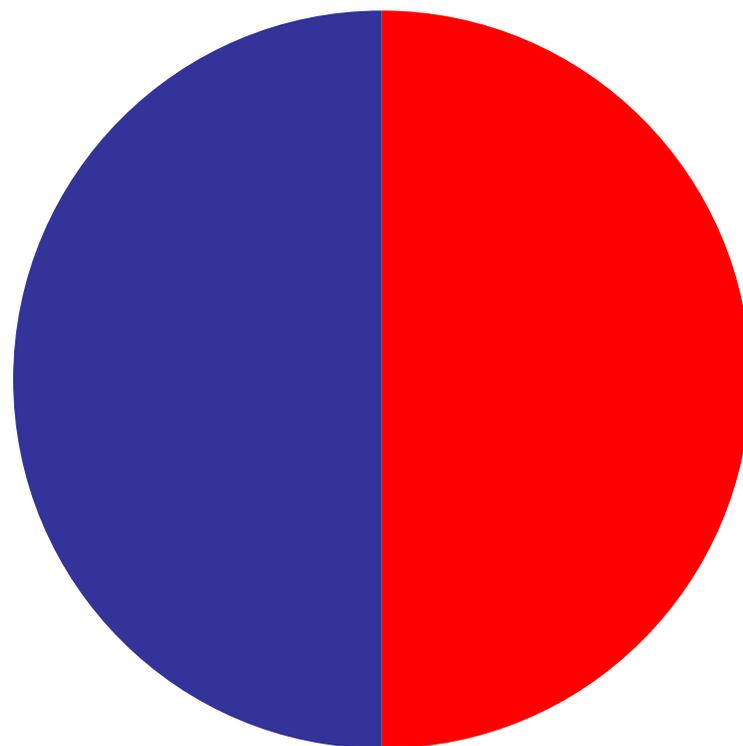
US monetary expansion has an expenditure increasing effect



■ Global demand for Home products

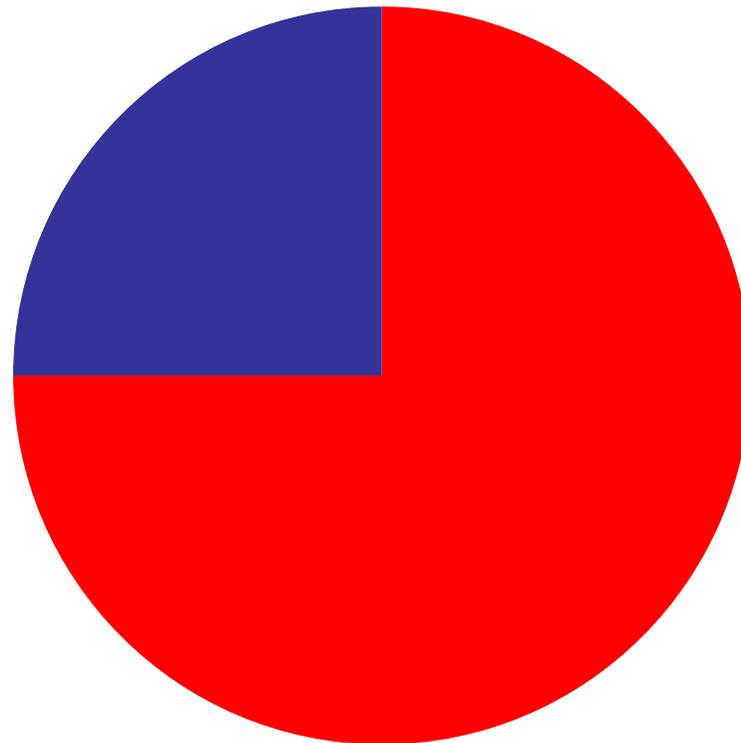
■ Global demand for Foreign products

Back to the initial pie



- Global demand for Home products
- Global demand for Foreign products

US monetary expansion has an expenditure shifting effect



- Global demand for Home products
- Global demand for Foreign products

Two effects: Spillovers of US monetary stimulus

- Rest of the world gets a smaller slice of a bigger pie
- If new slice **smaller** than initial slice: **negative spillovers** to ROW
- If new slice **bigger** than initial slice: **positive spillovers** to ROW
- Needless to say, sign of these effects flips in case of US monetary tightening

Back-of-the-envelope estimates of policy spillovers

- Assume monetary easing sufficient to lower 10-year US Treasury yields by 25 basis points
- **Exchange rate channel**
 - Lowers dollar about 1 percent
 - Boosts US net exports by 0.15 percent of GDP
 - Lowers foreign GDP about 0.05 percent
- **Domestic demand channel**
 - Raises domestic demand by 0.5 percent
 - Raises US imports by 0.15 percent of GDP
 - Raises foreign GDP about 0.05 percent
- **Financial spillovers channel**
 - Lowers foreign yields by 10 basis points
 - Raises foreign GDP about 0.25 percent

Positive or negative transmission?

- **Exchange rate channel:**
 - Lowers foreign GDP about 0.05 percent
- **Domestic demand channel:**
 - Raises foreign GDP about 0.05 percent
- **Financial spillovers channel:**
 - Raises foreign GDP about 0.25 percent

- First two channels offset each other, so financial spillovers dominate
- But overall effect not very large
 - see Ammer, Erceg, Kamin and De Pooter, “International Spillovers of Monetary Policy”, <http://www.federalreserve.gov/econresdata/notes/ifdp-notes/2016/international-spillovers-of-monetary-policy-20160208.html>

Cuaresma, Dobbelhofer, Feldkircher and Huber (CDFH 2016)

- Contractionary US monetary policy shock (100bps policy rate hike) leads to
 - Persistent fall in international output
 - Drop in global inflation rates
 - Rise in international rates
 - Stronger real dollar
- Heterogeneity of spillovers across countries
- Changes in transmission of policy shocks over time (larger in mid 1990s - mid 2000s, except output responses particularly pronounced during Great Recession)

Caveat: Things do not always go as expected...

From the WSJ, March 17 2016

MARKETS

Global Currencies Soar, Defying Central Bankers

From Japan to Norway, currencies are rising despite policies aimed at weakening them

Despite the Bank of Japan's efforts to push down its currency and jump-start the economy with negative interest rates, the yen is up 8% this year and is at its strongest level against the dollar since October 2014. European central bankers are having similar problems containing the strength of the euro and other currencies.

Size and direction of monetary policy spillovers cannot be boiled down to a single coefficient

- Previous estimates suggest US monetary policy spillovers are positive but not very large
- Estimates are in line with a number of studies, but other studies have found negative spillovers
- In particular, the spillover effects
 - are likely to differ across recipient countries depending on various country-specific features
 - may vary through time (CDFH 2016)
 - may differ depending on whether domestic monetary stimulus involves conventional or unconventional monetary policy

Almeida, Straub and Van Robays (ASVR 2016)

- Time-varying and state-contingent spillovers
 - Response of exchange rate and trade balance to US monetary shocks has increased over time
 - Response depends on cyclical conditions in US
 - During good times US tightening reduces US GDP, appreciates dollar, imports drop but exports fall more than imports, foreign trade balance and output increase (on balance expenditure switching effects predominate)
 - During US recession, US tightening improves US trade balance as imports fall more and on balance income absorption effects dominate (question is why does monetary policy tightens in bad times)

Ok, I get the slice stuff. Is that all?

- No. We need to move from positive to normative space
- Foreign country cares about its slice being not too small (underemployment, low growth) but not too big either (overheating, inflation...).
- Let's say there is a Goldilocks **equilibrium** slice...



Oh yes, when I am hungry I like a big slice, but not so much when I have indigestion

- Exactly
- The fact that monetary spillovers are likely positive does not say much about whether they stabilize or destabilize the global economy
- Depending on asymmetric business-cycle positions, monetary policy spillovers may prove either stabilizing or destabilizing for the global economy depending on whether they push ROW closer or further away from equilibrium



Oh, this is fun. So, do I get my Goldilocks slice or what?

- Good question
- Maybe the ROW slice is too small and US monetary stimulus brings the ROW closer to equilibrium
- **Maybe US monetary stimulus makes the foreign slice of the pie too big**



A scenario of monetary policy spillovers stabilizing the global economy

- Consider case where the US experiences a negative shock (such as Great Recession) while ROW is doing fine
 - If US monetary policy does not respond strongly to shock:
 - Contraction in US domestic demand lowers US imports, foreign GDP falls as well:
 - **ROW is hit by US recession**
 - If US monetary policy responds aggressively to shock
 - US GDP falls by less, US imports fall by less
 - **Foreign GDP falls by less** as well
- US expansionary policy in the interest of both US and ROW
 - spillovers from US monetary policy stabilize global economy (2008 and 2009, US spillovers magnified by easing actions by other central banks)

A scenario of monetary policy spillovers destabilizing the global economy

- When different economies are at different points in their business cycles, policy spillovers may not be stabilizing
- 2010 as an example (?)
 - Weak recovery in US and other advanced economies
 - Solid rebound in Emerging Market Economies (EMEs)
 - EMEs may not have needed additional stimulus
 - US monetary stance eased in response to recession, possibly pushing foreign output and inflation further away from equilibrium

Hey, did you forget my Goldilocks slice?

- Well, let's not overstate stabilizing/destabilizing role of spillovers
- Jury is still out on this, but let's just say that regardless of spillovers from trading partners, autonomous policymakers can adjust policy to keep output and inflation near their targets
- Even if monetary policy spillovers push an economy away from equilibrium, independent monetary policy in a floating exchange rate regime can (help to) push the economy back toward equilibrium (consistent with Trilemma)



Caceres, Carriere-Swallow and Gruss (CCSG 2016)

- Co-movement of financial conditions and interdependence of interest rates
 - Symptom of lacking monetary autonomy in small open economies?
 - Or endogenous central bank response to synchronized economic conditions?
- Authors argue standard estimation of monetary spillovers overstate limits to monetary autonomy when business cycles are highly synchronized
 - Confirming conventional wisdom, spillovers are larger in countries with fixed exchange rates
 - Highly synchronized financial conditions may reflect synchronized incentive to react to deleveraging shocks in global financial markets, and do not warrant capital controls (macroprudential policies) to insulate small open economy from US shocks

To sum up: Three layers of spillover concepts

1. Transmission of policy shocks (estimates of net expenditure shifting and increasing effects)
2. Welfare dimensions of spillovers (stabilizing/destabilizing effects depending on asymmetric business cycle conditions)
3. Endogenous policy response by ROW under floating rates (ROW not an innocent bystander, can react to spillovers and avoid importing inappropriate policy stance from abroad at least to some extent)

Back to 2016: Normalization and policy divergence

- Concerns have been expressed about spillovers from future normalization of US monetary policy
- Considerations discussed before still apply:
 - Estimated effects of spillovers may not be particularly large
 - Normalization of US policy predicated on continued strength in US economy, which supports foreign activity
 - Foreign central banks concerned with tighter financial conditions can loosen their monetary stance
 - On the contrary, foreign policymakers concerned with a depreciating local currency can tighten their stance

▫ ... and happy birthday...

