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Discussion of "How Does Financial Globalization Affect Risk Sharing? Patterns and Channels" by M. Ayhan Kose, Eswar S. Prasad, and Marco E. Terrones (KPT)

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Overview I

Questions: 1) Have international risk sharing increased?

- Answer to 1: Maybe for industrialized countries (not for Emerging, Developing)

Overview II

Questions: 2) Is there an effect of increased capital flows?

- Answer to 2: Capital flows are good for risk sharing (sort of, at least for developed). Some t-stats small, but results too consistent to be spurious.
- But: *Large* flows needed.
- No measurable effect on emerging economies.

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Policy Implications

Financial integration leads to risk sharing benefits

- But only noticeable at the macro level when gross assets holdings are very large
- Typically, such benefits are not even noticed by the public
- During transitions, insurance benefits will likely be swamped by (beneficial) inter-temporal re-allocation of consumption (often due to lower interest rates)

Comments. General:

Thorough empirical analysis.

Little room for nit-picking.

I'll focus on the hard question: How to best measure imperfect Risk Sharing (RS)

Measuring risk sharing

Standard benchmark: Complete Arrow-Debreu markets with contracts written before "world starts." No labor-leisure choice. CRRA-utility. All goods tradeable. No taste shocks. We get the *benchmark*

$$\Delta \log(C_{it}) = \Delta \log(C_{jt}) = \Delta \log(C_{Wt})$$

for all countries i,j; where "W" denotes "world."

Partial Risk Sharing

Assumptions not likely to be true.

The literature seems to indicate that *labor-leisure choice* and *non-tradeable goods* are not so important. However, *Complete Markets* can not hold due to moral hazard.

Want to know: How close to perfect markets?

Partial Risk Sharing

Two types of tests/measures in KPT:

- How closely correlated are consumption growth rates?
- How much are shocks to endowments reflected in consumption (after controlling for world-wide shocks)?

Measuring Risk Sharing—correlations

Correlation measures—is corr$[\Delta \log(C_{it}), \Delta \log(C_{Wt}]$ close to unity?—highly sensitive to taste shocks (and mis-measurement of consumption).

Many indicators that *taste shocks* are important. F.ex.: oil/commodity price shocks, policy shocks, natural disasters, contagious risk aversion, ...

Measuring Risk Sharing—regressions

Regression measures: Is country-specific consumption growth a function of country-specific output (endowment) growth?

Robust to taste shocks (if they don't affect output).

KPT uses *regressions* of consumption on output "RS-cons" which alleviates problems of taste shocks. But not problem free.

Potential Problems with Regression Measure

- opening up to capital flows often results in temporary surge in output and consumption (measured incorrectly as no risk sharing)—financial contracts are not written before the sample starts
- some "taste shocks" may affect both output and consumption (contagion: lower investment and higher saving)
- output growth may not be full endowment shock (capital gains on assets)

What we really want

Want to measure the change in (present and future) expected utility caused by an endowment shock (after consumers have optimally adjusted to the shock)—relative to full RS benchmark.

Heuristic Model I

Assume that countries can sell "shares" in their output and use proceed to buy shares in world output (diversification of income). Receive net factor income from (net) share holdings. "Income smoothing:" Want to smooth Gross National Income (GNI)=Output plus net asset income.

How to model barriers to diversification? fixed costs, trade costs, information barriers, moral hazard,...?

Which barriers are affected by "globalization"?

Heuristic Model II

Countries can also smooth consumption trading "bonds" after shocks are observed. "Consumption smoothing." Large menu of models. (But in reality, consumers also use equity and other assets for inter-temporal smoothing.)
Important issue: Countries may not *want* to smooth persistent shocks to income.

Globalization likely to make bond markets more liquid and affect interest rates as saving moves to capital scarce or high growth countries,...

Suggestion

I suggest *also* measuring RS from regression of GNI on output, measure "income-RS." For US states (benchmark) I have found:

- income-RS increases from decade to decade
- cons-RS varies mysteriously, peak in the 70s
- income is much more correlated across states than consumption

Findings for EU

For EU countries, I find:

- income-RS was about zero until the late 90s and then increased significantly
- cons-RS peaked in 70s, fell sharply in the 80s, and now is slowly increasing
- cons-RS fell during adjustment to Maastricht conditions due to (temporary?) acyclic government saving (another taste shock)

Overall, consumption based measures of RS often miss.

Other issues

- Income based RS may miss capital gains
- Ultimately: utility is from consumption
- Consumption reacts differently to temporary/permanent shocks but we can't well tell one from the other
- Longer frequency regressions (as in KPT) "filters out" temp. shocks (and noise)

Reality

In the absence of natural experiments we have to piece together a picture from bits and pieces. The temporal development in RS is very hard to pin down.

However, *marginal effects* of asset holdings (or other country variables) on RS seem easier to measure—KPT's results quite convincing. In my experience with OECD data, countries need very large asset positions to obtain significant smoothing of shocks but the effect seems robust.

Future

Future work needs to attack issue from many angles: case-studies, large scale macro regressions like KPT, and also *modelling*. Presently, good menu of consumption/savings models.

DSGE models of imperfect diversification give nice insights but are presently too stylized for econometric work.

Ideal: simultaneously models moral hazard (etc.) and savings behavior—challenge for theory and empirical work alike.