Discussion of "The Eurozone: The Sudden-Stop that Wasn't and Target2 Imbalances" by Aaron Tornell

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Real pleasure to discuss this paper.

Remarkably intelligent way to stir debate and raise controversy. Going to be a hit in the classroom.

Of course, paper deliberately seeks strong reaction to issues it raises and its message.

Aaron doesn't work with chisel and watercolors. He works with axe and chainsaw.

As a result, don't expect details and nuances. Expect provocation and challenge. On a topic already surrounded by much public controversy...

In terms of policy evaluation, I pretty much disagree with everything in paper (but this is not venue to emphasize policy and institutional dimensions, let alone normative considerations)

Instead, let me use my 10 minutes to focus on model: its framework, results, message and implications.

Very friendly discussion meant to be absolutely constructive, as paper is "preliminary and incomplete"

The theoretical framework: Target2 as a black hole

Consider small open economy belonging to a monetary union.

Proxy for Periphery country, except model rules out many key elements of current debate on adjustment in Periphery

- Price taker. No worries about inflation (nor deflation). No changes in relative prices, productivity, competitiveness gap etc. affecting trade and current account

- By assumption, no option of exit from monetary union. No Grexit scenario, no redenomination risks

- No sovereign debt, no "standard" fiscal sustainability analysis.

- No business cycle fluctuations to deal with. Households and firms play secondary role (private consumption is constant).

All action goes through "interest groups", agents with power to extract resources ("fiscal appropriations") from rest of economy.

Groups borrow from banks and obtain funds g used to finance consumption or "maintain a safe bank account abroad".

Domestic banks are controlled by groups. They lend to groups, borrow from foreigners and refinance themselves through NCB.

Foreigners lend to banks. Their loans are guaranteed by NCB.

If state of nature is good, foreigners keep rolling over their loans

If state of nature is bad, foreigners call in their loans. NCB steps in and comes to rescue. Injects fresh capitals into banks, they pay foreign investors, make new loans to groups.

Note: bad states are absorbing (when "crisis" comes it stays forever)

NCB's bailouts are implemented through domestic credit expansion.

Question is: how does the NCB fund itself? By selling assets? By increasing money supply and seigniorage revenue? Through transfers from domestic Treasury?

Answer: None of the above. Instead, through Target2. Substantially by borrowing from other NCBs. More like running an endless tab within Eurosystem without worrying about eventual settlement.

Quote: *"ECB by-laws allow Target2 balances to have infinite maturity and to grow without bound."*

This is pretty much the whole story.

Interest groups in the Periphery are fiscally "voracious" by nature.

They are the puppeteers, banks and NCB are their puppets, foreigners are happy bystanders who never lose.

Target2 allows all these happy campers to party all night long.

All losses and liabilities are dumped into an accounting black hole of infinite gravity and zero mass where they disappear forever and never resurface.

Some preliminary comments

According to model, Target2 provides distortionary opportunity for a small country within Eurozone to refinance their losses for free.

P.15: "The ample power that NCBs and domestic regulators have over domestic credit expansion, makes them politically weak. It generates *strong temptations for powerful groups to influence—or capture—the regulators.* In the typical small economy, this temptation is checked by the NCB's stock of gold and internal reserves. In the Eurozone, *Target2 has weakened such discipline. It has opened the possibility for an NCB to borrow from the Eurosystem and extend domestic credit beyond its stock of gold and internal reserves*"

But obviously this story cannot work for *all* Eurozone countries simultaneously.

Yet Target2 is there for any Eurozone economy who wants to use it (and possibly abuse it).

Why do some countries exploit it and others do not? Which country-specific characteristics lead to gaming the system?

Model is silent on this.

Are interest groups active only in Eurozone Periphery and not in the Core? If so, why is this the case?

In fact, what exactly happens in the Core? It has to be mirror image of Periphery, with accumulation of Target2 claims on Eurosystem in exchange for reduction in domestic credit.

It is not enough to argue that there is political opposition to Target2 imbalances. From a logical (and methodological) viewpoint this is not a statement consistent with equilibrium

Are we thinking about negative fiscal voracity with groups lobbying for fiscal repudiations?

More on this later when we discuss λ.

Also, paper seems to suggest that country's willingness to engage in structural reforms is strong in emergency situations, but shrinks when short-term monetary policy accommodation reduces their urgency.

P.2: "When the ECB has used its big bazooka to avoid a liquidity squeeze and open a window of opportunity for governments to adjust, *politicians have responded by reducing their enthusiasm for painful measures.* The delay and watering-down of reforms has made more acute such emergency situations, which in turn have increased the pressure for the ECB to intervene."

But model has no supply and demand of reforms, no endogenous fiscal adjustment

Whatever ECB does or does not, there is no mechanism why its actions can affect likelihood of reforms.

Generally speaking, if one writes a model in which appetite for reform is exogenously given and immutable, one cannot use that model to argue that monetary policy is ineffective because it does not affect probability of reform. This is true by construction!

Same applies to conditionality: it simply plays no role in model

What we may need is model in which groups lose during a crisis, so they have an incentive to invest in lobbying for reform (which is generally costly but reduces probability of crisis).

Fiscal or monetary policy would reduce short-term social losses from adverse shocks, but by doing so it would reduce urgency to reform.

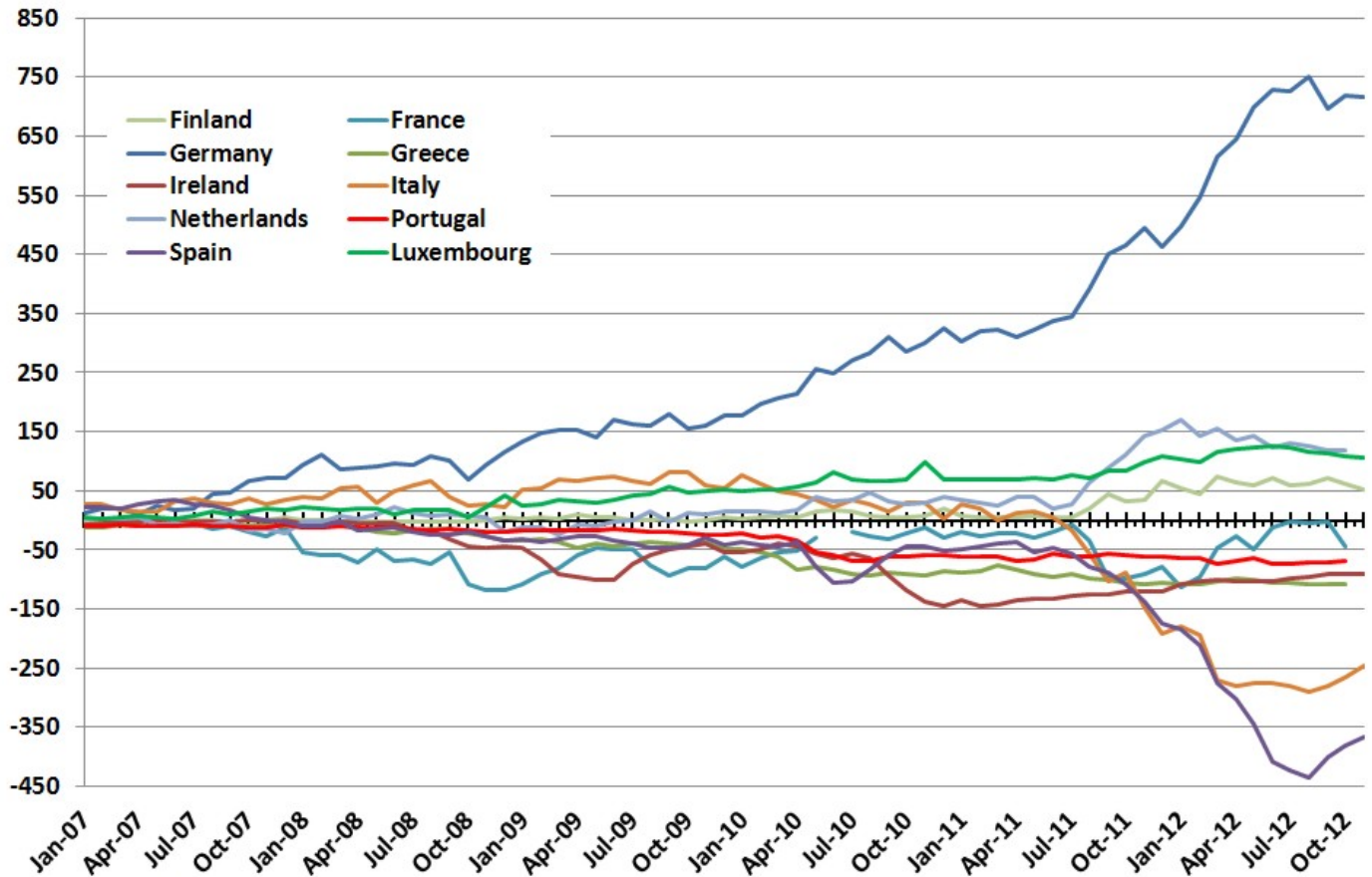So optimal policy would maximize over trade-off between costs from reforming and costs from crisis.

But this is not what we have in this model

With all this in mind, let's revisit paper. Take abstract as a useful summary.

Imbalances across Eurozone countries are growing at an alarming pace.

(Not exactly, they are stabilizing. See picture)

Net Balance with the Eurosystem / Target [bn €]

Legend:
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Netherlands
- Portugal
- Spain
- Luxembourg

Euro Crisis Monitor
Institute of Empirical Economic Research
Osnabrück University

This situation, which resembles the Latin American crises of the 1980s, raises a number of critical issues. What are the mechanisms by which the Target2 liabilities of Southern Eurozone countries have been generated? Is this process stabilizing or will the Eurozone break up?

(Model has little to say on this, as Eurozone does not break up by assumption)

Why have Southern Eurozone countries not implemented adjustment fast enough?

(Again, model has nothing to say about why some countries adjust and others do not. Model only considers "bad" countries)

What are effects of the ECB's non-conventional policies? In the absence of conditionality, the benefits of greater ECB monetary generosity are squandered in equilibrium.

(Again, no analysis of effects of conditionality in model. A country behaves badly or it doesn't, model doesn't explain why.)

(And model has little to say about ECB policies. What it does is comparative statics on the effects of λ on appropriations and consumption. So we need to spend some time on what "lambda" is all about)

What is λ?

Three notions of domestic credit

- D_t^a actual NCB domestic credit

- D_t "shadow" domestic credit $=$ contingent bailout obligation of NCB, bailout payments in a bad state

- $\bar{D}_t$ upper bound on D imposed by ECB

P.19: "*An NCB cannot increase domestic credit without bound indefinitely* for at least two reasons. First, the ECB requires that *NCBs lend only against eligible collateral,* and that appropriate haircuts be applied to the collateral pledged by banks. Second, even if there was plenty of eligible collateral, the large increase in Target2 liabilities vis-a-vis other NCBs, that would result from an unlimited increase in NCB's domestic credit, would give rise to *political opposition in creditor countries* (we see that happening in Germany and Finland)."

Here comes λ. The upper bound evolves over time (arbitrarily) according to:

$$\bar{D}_{t+1} - \bar{D}_t = \lambda[\bar{D}_t - D_t] + rD_t$$

- If at time t NCB uses fully its ability to provide bailout credit and $\bar{D}_t = D_t$, then $\bar{D}_{t+1} = (1+r)D_t$. Next period ceiling increases only by amount needed to cover interest payments.

- If at time t NCB does not use fully its ability to provide bailout credit and $\bar{D}_t > D_t$, then next period ceiling increases more than interest payments

To clarify: suppose at time t there is no bailout, $D_t = 0$, even if ECB would accept some bailout payments $\bar{D}_t > 0$.

Next time, $\bar{D}_{t+1} = (1 + \lambda) \bar{D}_t$: ECB tomorrow tolerates even higher bailout payments (even if NCB has not asked for them!)

And this goes on and on: potential amount of allowed bailout credit keeps going up

My experience with budgetary allocations goes exactly in the opposite direction: if current expenses are less than budgeted, next year my budget is likely to shrink as administration revises my projected needs!

Instead in model budget for bailouts keeps expanding. No reason for that (law of motion is completely arbitrary, λ is exogenous).

How does paper motivate λ?

P.20: "The parameter λ captures Eurosystem policies that determine the ability of an NCB to extend domestic credit indefinitely. For instance, *an increase in λ may reflect a decision by the ECB to relax collateral rules* in this particular country and in this way *increase the availability of collateral pledgeable at the NCB*."

But I think right way to model this would have been:

$$D_t \leq \ \lambda \ \bar{D}_t$$

with some law of motion for $\bar{D}$. In this case λ would be a haircut on banks' pledgeable collateral at NCB $\bar{D}$, consistent with above interpretation.

Instated, note that λ is *not* an index of NCB's ability to borrow from ECB and lend to groups: when NCB maxes up its credit from ECB, λ does not affect size of current bailouts!

Maybe λ does not play a big role in model, so we should not worry too much about all this.

Unfortunately λ is *the* key parameter in the model. In equilibrium, fiscal appropriations of group i are

$$g_{i,t} = \frac{\lambda - \beta}{n - 1}(\bar{D}_t - D_t)$$

where β is risk-free return on group's investment assumed (ad hoc) to be lower than λ and n is number of groups.

So: ECB starts off with a level of λ which is excessive (if ECB chose $\lambda = \beta$ there would be no fiscal appropriations and no imbalances in equilibrium)

Of course, increasing λ would not do much in this context: ECB is already too profligate, and higher λ only allows groups to increase their rents and capital outflows!

This has nothing to do with accommodative countercyclical monetary policy!

And as mentioned earlier model says nothing about probability of reforms as function of λ.

Algebra, not economic logic, requires law of motion specified as above to generate internal equilibrium solution.

Ultimately, there is an inconsistency between formal specification and intuitive interpretation

Conclusion

As a provocation and intellectual brain fodder, this is masterful.

What has all this to do with Target2? Not much I am afraid until model is extended to general equilibrium analysis

What has all this to do with structural reforms and adjustment in Europe? Model has nothing to say on this

What has all this to do with ECB monetary policy? Little, and even this little is murky due to disconnect between algebra and intuition in characterization of collateral pledgeability and NCB-ECB institutional links