CEPR-RIETI Workshop
"Fiscal Sustainability"

Handout

December 10, 2015

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AUSTERITY:

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Austerity

- ▶ What is it?
- ▶ What is its main function? Its optimal size?
- ▶ What are its consequences for macroeconomic activity and welfare?

Standard approach

- ▶ What is it?
- ▶ Typically, a sizable fiscal adjustment (reduction in public borrowing)
- ▶ Is this an informative definition? Perhaps not.
- ▶ What purpose does it serve?
- ▶ High debt (distressed) countries: Helps make debt sustainable (prevent insolvency)
- ▶ "Normal" debt countries: Helps bring cost of public borrowing down

Does it work?

- ▶ Critics: NO, because
- ▶ It depresses economic activity, specially during bad times
    1. Large fiscal multipliers during recessions (Auerbach-Gorodnichenko, 2012, Riera-Crichton, Vegh, Vuletin 2014, Canzoneri, Collard, Dellas, Diba, 2015)
    2. Large multipliers at Zero Interest Bound (Christiano, Eichenbaum, Rebelo, 2011)
    3. Simultaneous implementation in many countries
- ▶ Recession causes reduction of tax revenue $\Rightarrow$ Debt situation deteriorates

A diversion. What is the empirical evidence on the size of fiscal multipliers

- ▶ Ramey and Zubairy, 2014. Longer time sample and a different identification scheme: Absence of any state dependence
- ▶ Cochrane, 2014, Erceg, Linde, 2010. Fiscal policy is not effective at ZLB
- ▶ Corsetti et al, 2014. Small output effects if default premia are present

If austerity does not work, is there an alternative?

- ▶ For debt distressed countries
- ▶ Partial default (debt forgiveness, rescheduling-reprofiling,..)
- ▶ Result from debt overhang literature: Forgiving debt may make it more likely to avoid total default
- ▶ For normal countries. Postponement of adjustment until better times, hoping that this strategy will generate higher growth and smaller deficits

Is this wishful thinking?

Main shortcoming of standard approach

- It focuses on debt limits that arise exclusively from the *ability* to pay
- How relevant is this?
- The sovereign debt literature has instead emphasized *willingness* to pay as the main determinant of the existence of borrowing ceilings.

Austerity in a world where borrowers lack commitment (**credibility**) to repay and they only repay if it is beneficial for them

Dellas, Niepelt, 2014, Austerity
This paper provides

- ▶ A sovereign debt model based **definition** of austerity. Willingness (credibility) is the constraining factor
- ▶ A conceptual **framework** for its study, which seems to correspond well to the German position on austerity during the recent debt crisis in Europe. Namely, that the adoption of austerity signals willingness/commitment to honoring debt obligations.

Definition of austerity:

- ▶ Borrower's consumption level below that supported by debt repayment capacity: The borrower would have been willing to obtain and able to repay a larger loan
- ▶ ⇒ Limits on deficits and debt issued appear to be "painful" and "excessive"

Framework for study of austerity

- ▶ Standard sovereign debt plus incomplete information about borrower type
- ▶ Adverse selection leads to credit rationing and "excessively" low consumption

- ▶ Similarities to monetary policy games – monetary policy credibility (Canzoneri, 1985, Vickers, 1986)
- ▶ Central bankers come in different types (wet vs hard nosed)
- ▶ A society is better off with a the type that has higher commitment to low inflation (the hard nosed)
- ▶ Type is unobservable
- ▶ A hard nosed may have to take unnecessarily tough actions (engineer a recession) in order to establish (signal) his type, i.e. gain credibility

In our case, "hard nosed" fiscal authorities may have to accept austerity in order to gain credibility. The German view.

Summary of key features of our approach
A world where
Features from standard sovereign debt model

- Debt is non-contingent
- Lack of commitment to repay debt
- In case of default, the borrower suffers a cost in terms of output. No exclusion from credit markets
- The borrower may or may not be able to commit to a level of investment
  Features from standard credit rationing model
- The borrower's "type" (willingness to repay, credit risk) is private information

What is austerity and what is its role in this world?

- ▶ For simplicity assume that governments come in two types: A high type that has high commitment to repaying debt (faces large default costs). And a low type who has low commitment to repaying debt (faces low default costs)
- ▶ Definition of austerity: The high type gets (and the country consumes) less funds than the amount supported by his repayment capacity

- The high type suffers austerity because the creditors are
    - **Either** unable to determine the credit risk they face (pooling equilibrium)
    - $\Rightarrow$ They charge a rate that is a weighted average of those for the two types if type were known
    - $\Rightarrow$ Loans are too expensive for the creditworthy type, reducing his desired borrowing
    - **Or**, they are trying to prevent the misrepresentation of credit risks (separating equilibrium)
    - $\Rightarrow$ The creditors offer a good rate but restrict the amount of credit they offer in order to discourage the low creditworthy from masquerading as a high type in order to get a large loan and later default on it

What is the level of austerity in this world? Consider

- ▶ A simple economic environment with two periods and two types
- ▶ The borrowing country starts out in the first period with some outstanding level of debt that is due in that period.
- ▶ The creditors offer a loan package that is conditional on the borrower's current default choice.
- ▶ The borrower takes into account this package and decides whether to default or not. He then gets the corresponding loan package.

Dellas and Niepelt show that

- ▶ If the creditors are "optimistic" about the type of government they face, they will offer a relatively good loan contract and there will be little austerity and no default in the current period.
- ▶ If the creditors do not trust the government much, they will be inclined to offer a very bad loan deal, which if accepted, would entail a great deal of austerity.

- ▶ Is there any way for a high creditworthiness type to avoid getting this very bad deal?
- ▶ YES. But it requires accepting some –perhaps severe– austerity that involves the honoring of current debt obligations and the running of a tight budget (current account).
- ▶ The acceptance of austerity serves as a signal sent by the high type to the creditors to persuade them about his type

Properties of the equilibrium

- ▶ A high type accepts austerity
- ▶ A low type does not accept austerity and defaults
- ▶ Bounds on austerity: The level of austerity suffered cannot be
    1. Too severe, otherwise the high type defaults too
    2. Too low, otherwise the low type masquerades as a high type and does not default
- ▶ In either of these two cases, the default decision has no longer any signalling value (as both types take the same action) and the creditors have no choice but to offer the worse deal

The high type is better off accepting this intermediate level of austerity than not accepting it

INVESTMENT and its signalling role: Does the presence of investment make austerity less severe?

- ▶ In the standard sovereign debt model, investment increases borrowing ceiling because it creates future collateral
- ▶ in Dellas and Niepelt, investment increases borrowing ceiling even if it does NOT create future collateral
- ▶ This due to the fact that the high type values (endogenously) investment more than the low type
- ▶ This opens up the possibility for the high type to use investment to signal his type

BUT

- ▶ The signal requires over-investment: after some level, all of the new loan plus some own funds have to be invested
- ▶ Such over-investment makes the high type's consumption lower than it would have been were it not possible to use investment as a device for that purpose. *It makes austerity worse*
- ▶ At the margin, austerity *increases* with the loan size

- The amount of new loans procured may not be a reliable measure of austerity suffered due to composition (consumption vs investment) effects
- Nonetheless over-investment is optimal (increases the welfare of the high type) because it helps –partly– overcome the adverse selection friction
- In the optimal equilibrium, more severe austerity is associated withe higher growth

Model extensions (inconsequential for main message)

- **Structural reforms** in lieu of investment
  ⇒ Similar results: Structural reform rewarded by more
  funds does not necessarily represent milder austerity

- The extension of more financing in combination with
  stricter requirements for structural reform (as currently
  being implemented in Greece) should not be
  misinterpreted as leniency

- **Spending multipliers**
  - Novel perspective: Multipliers matter for optimal size of austerity through credit risk *identification* channels. Severe austerity may enhance or undermine separation of types
  - Ambiguous relationship between size of spending multipliers and optimal level of austerity

Conclusion

- ▶ Fusion of sovereign debt with credit rationing literatures to create a model of austerity
- ▶ Austerity: consumption excessively low
- ▶ Austerity happens because
    1. Either the borrower's credit risk cannot be identified
    2. Or, as a means of deterring the misrepresentation of credit risks
- ▶ Additional funding conditioned on investment–reforms may constitute *harsher* austerity, but leads to *higher* growth and welfare
- ▶ Optimal austerity may decline in the size of the multiplier if it matters for the *identification* of credit risks

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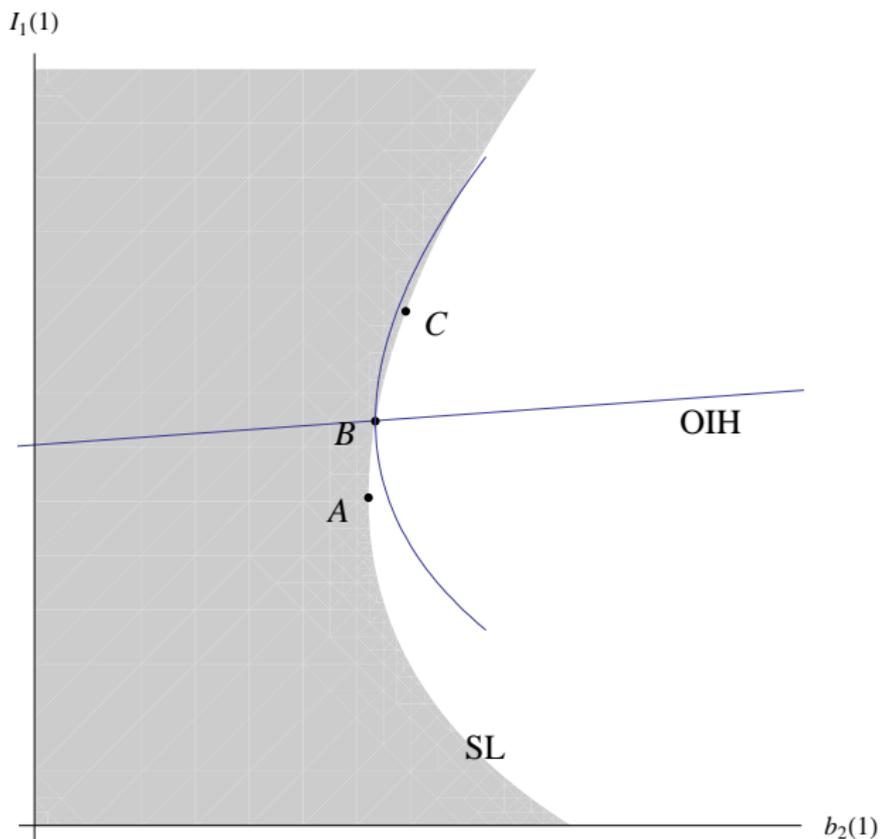
Figure: Indifference curves of high type and selection constraint of low type in (b_2, I_1)-space