

In the aftermath of the euro crisis

Lessons and dealing with debt overhang

Inter oves locum praesta. Et ab haedis me sequestra.

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Introduction

The euro area (EA) incomplete monetary union has prevented neither

- **a decade of gross underestimation of risk** at all levels: households, firms, banks, governments, countries not specific to the EA.
- **a decade of polarization of risk**, that has fragmented the economic and financial space of the EA along national borders, specific to the EA.

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- its institutions and policies do not anchor risk differentials to fundamentals;
- country risk magnifies shocks, causing borrowing costs to diverge across member states.

Polarization and slow recovery: two sides of same coin

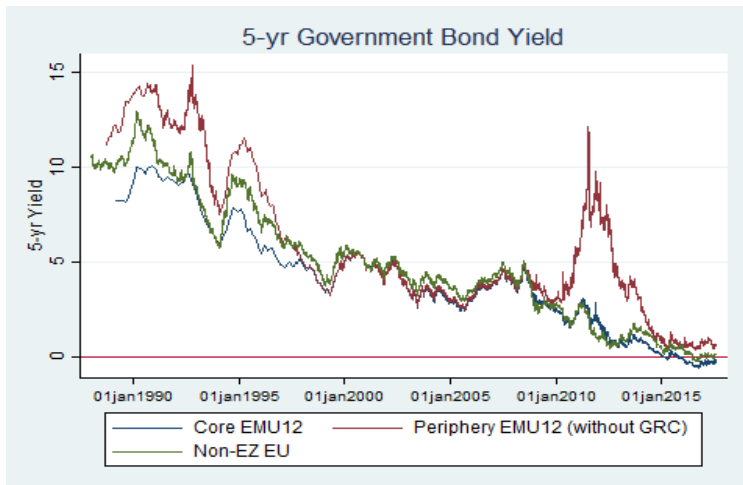
Country risk polarization has

- interfered with transmission of monetary policy, reducing effectiveness and feeding disagreement on appropriate stance
- reduced the scope for fiscal policy, leading to procyclical contractions and/or precautionary budget policies.

Slow recovery in turn has fed divergence and risk polarization.

The depth and persistence of divergence in the EA after 2010 (especially relative to the US) went well beyond issues in stabilization of national business cycle, emphasised by OCA theory.

Risk polarization: the 1990s and the EA crisis



Four key policy issues in risk polarization

investigated by ADEMU

Well understood that self-fulfilling sovereign debt crises can arise when debt stock reach some critical thresholds.

- What enhanced vulnerability to these crises in the EA (as opposed to US, UK)?
- How does sovereign risk transmit to borrowing costs of firms and households, causing polarization?

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The institutional development of OMTs (joint with ESM, QE and agreement on banking union) was the first effective response:

- How and why can a central bank shield the economy from self-fulfilling run on government debt? What issues are specific to a monetary union?

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- How can the EA structure a permanent macroeconomic framework—delivering enough fiscal and policy stimulus in response to large downturns?

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- How can the EA structure a permanent macroeconomic framework—delivering enough fiscal and policy stimulus in response to large downturns?

The EMS has contributed to contain the EA crisis—EMS loans have maturities and spreads that differ sharply from IMF practice.

What can be learnt from the EA experience concerning the most effective way to bailout countries in crisis?

Key policy issues in risk polarization

investigated by ADEMU

- Corsetti and Dedola, “The Mystery of the Printing Press: Monetary Policy and Self-fulfilling Debt Crisis.” Journal of European Economic Association, December 2016.
 - Schumpeter Lecture, Meetings of the European Economic Association, 2015
 - Ari, Corsetti and Dedola “Debt Seniority and Sovereign Debt Crises,” 2018
- Corsetti, Erce and Uy “Debt Sustainability and Lending Institutions”, with Aitor Erce and Timothy Uy, 2016
- Corsetti, Dedola, Jarocinski, Mackowiak, and Schmidt. “Macroeconomic stabilization, monetary-fiscal interactions, and Europe’s monetary union”, 2016
- Ongoing work by with Eichengreen Hale, Corsetti Erce and Uy, Corsetti and Teulings

What changes when a country joins a currency union

- policy instruments: conventional and unconventional policy, supporting the gov't bond market (so-called monetary backstop), lender of last resort for banks;
- margins of adjustment (policy targets): exchange rate, inflation, price level, and the implied seignorage revenue of inflationary reduction of the debt burden;
- possible constraints on instruments: availability of international reserves, effective Lower Bound on policy rates;
- access to international liquidity assistance (IMF or common institutions).

At the birth of the euro, some functions/instrument may have been 'lost in translation', enhancing vulnerability to country-risk polarization crises.

What has changed for countries in the EA?

	Euro area	National currency
Instruments	Common monetary policy rates	National monetary policy if only as an option through realignment of parity (ERM of the EMS)
	Monetary Backstop of government debt after Sept. 2012 OMTs (provided country in ESM program)	Monetary Backstop of government debt provided monetary framework is credible
	Lending of last resort to banks with backstop of national banking systems primarily guaranteed by national fiscal budgets still. (Banking union under construction)	Lending of last resort to banks with backstop of national banking systems guaranteed by national fiscal budgets

What has changed for countries in the EA?

	Euro area	National currency
Margin of adjustment (policy targets)	<p>External euro exchange rate</p> <p>National inflation and common long-run price level</p>	<p>Bilateral exchange rate</p> <p>National inflation and national long-run price level</p> <p>Seigniorage and scope for (moderate) inflationary reduction of debt burden</p>
Constraints on instruments	<p>Effective (zero) lower bound</p>	<p>International reserves</p> <p>Effective (zero) lower bound</p>
International liquidity and official lending	<p>European Stability Mechanism (ESM), IMF, bilateral</p>	<p>IMF, bilateral</p>

Lost in translation: monetary backstop

“Public debt is in aggregate not higher in the euro area than in the US or Japan... [T]he central bank in those countries could act and has acted as a backstop for government funding. This is an important reason why markets spared their fiscal authorities the loss of confidence that constrained many euro area governments’ market access.”

Mario Draghi, Jackson Hole Speech, August 22, 2014

It took quite a bit of intellectual engagement and political bargaining to reform institutions while providing emergency response the the crisis. In 2012, the OMTs came together with ESFS/ESM, a reform of fiscal criteria and most importantly a road map including banking union.

“The mystery of the printing press”

Model encompassing

- discretionary optimizing independent fiscal and monetary policy makers
- consolidated vs independent budget
- rollover vs fundamental default risk
- outright default and/or inflationary debasement possible
- conventional and unconventional monetary policy

“The mystery of the printing press”

Rich model important to clarify that eliminating self-fulfilling debt crises

- need not (and in general does not) require the central bank to threaten high inflation;
- does rest on balance sheet policies, to the extent that a central bank has leverage capacity and can borrow at rates free of the risk of outright default;
- requires neither effective ex-post purchases of debt, nor financial repression/moral suasion to have intermediaries buying debt.

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Rich model important to clarify that for backstop policies to be credible, were markets to doubt the backstop and challenge the bank, the central bank must be expected to be:

- willing to purchase debt ex post (off-equilibrium)
- able to purchase enough debt at default-free rate, up to eliminate the government incentives to default over raising surpluses

Key: if challenged to act and purchase debt, prospective losses in case of fundamental default may force the central bank to monetize/deviate from its objective.

Prospective inflation may undermines credibility of backstop, unless fiscal authorities are either willing to recapitalize central bank (grant seniority to CB), or strongly adverse to inflation.

“The mystery of the printing press”

Key: prospective losses ECB in much better position than national banks, given its strict mandate and a large size relative to each EA member state.

But risk of losses and moral hazard requires agreement on burden sharing and pre-conditions for access.

Macroeconomic stabilization

Even if OMTs program has eliminated the possibility of self-fulfilling runs on debt, the program per se falls short of creating the conditions for accommodative fiscal policy

- as a precondition to access OMTs, a country's fiscal policy must be approved by the other member states.
- after the OMTs, the fiscal stance has remained effectively non-accommodative

But a key lesson from the crisis is that, in response to large shock, monetary and fiscal policy must act together.

- Delink the response to large shock from country-risk polarization.

Fiscal sustainability, stabilization, risk reduction

Example of Euro-area fund to reduce vulnerability to large shocks.

- Common Fund issues non defaultable bonds, can buy member state government bonds in the primary market, has sufficient power to tax and weaken fiscal parameters in response to large shocks
 - Democratically accountability
- Fiscal criteria
 - Regulate access to the fund
 - The fund will be obligated not to purchase bonds issued by countries that violate them
- Debt restructuring mechanism
 - Minimizing costs of default
 - Maintaining integrity of the euro area
 - Restoring access to the fund

Macroeconomic Stabilization, Monetary-Fiscal interactions, and Europe's monetary union, by Corsetti Dedola Jarocinski, Mackowiak and Schmidt

“Debt sustainability and the terms of official loans”

- The terms of official loans affect governments' incentives to issue, repay, or default on debt:
hence they matter for how much debt a country can sustain, just like tax capacity, spending and inflation
- How does setting different terms (maturity and price) of official loan affect debt sustainability? What are the trade-offs in varying them?

Official Lending Terms in the euro area

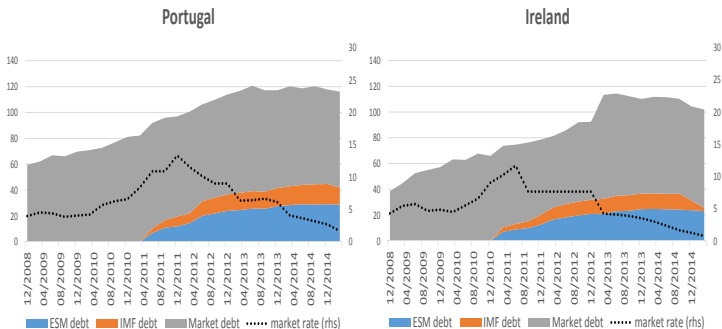
Maturities and marginal lending rate

			Dec-10	Dec-11	Dec-12	Dec-13	Dec-14
Ireland	EFSF/ESM	Maturity	7.5 years	15 years	15 years	22 years	22 years
		Interest rate	525 bps	272 bps	255 bps	226 bps	226 bps
	IMF	Maturity	7 years	7 years	7 years	7 years	7 years
		Interest rate	337 bps	321 bps	307 bps	309 bps	404 bps
Portugal	EFSF/ESM	Maturity	-	15 years	15 years	22 years	22 years
		Interest rate	-	277 bps	233 bps	210 bps	210 bps
	IMF	Maturity	-	7 years	7 years	7 years	7 years
		Interest rate	-	321 bps	307 bps	309 bps	404 bps

Sources: International Monetary Fund, European Commission, European Financial Stability Facility, European Stability Mechanism and Bloomberg.

Debt Composition and Market Spreads

ESM debt includes EFSM loans (for Ireland, also bilateral loans from DK and UK)



“Debt sustainability and the terms of official loans”

Model features

- Optimizing discretionary government facing rollover and fundamental (output) risk after Conesa Kehoe
- Official Long-Term (LT) vs Short-Term (ST) loans, at different (below-market) rates
- Quantitative analysis of case study (Portugal)

Main insight: Efficient Bailout

Structure repayment cash flow and spreads as to

- make government indifferent between defaulting and servicing the debt in stress circumstances, that is,
- turn the cost of default into collateral, with efficiency gains for the consumers.

Required below market official lending rate

- depends on the probability and cost of default, relative to the borrowing capacity in states of the world in which the country would not default in an equilibrium with no official lending.
- above or below the lender financing costs.

Ineffective without caps on the country borrowing.

Main insight: trade-off

- With fundamental and rollover risk, official loans raise the debt level below which default is not optimal—widen the “safe region”.
- But there is a key trade-off:

A higher average debt in the wider safe regions lowers the debt at which default occurs because of fundamental reasons (recession)

A debt pact needed as a counterpart of official lending.

Which margin is more effective: maturity or spreads?

- Quantitatively, the model replicates the Portuguese experience in 2011-2015 in a key dimension:
debt spreads fall endogenously upon the country accessing IMF-style and ESM-style programs, and debt composition evolves as observed in the data as countries use official debt.
- Official loans matter for thresholds of sustainable debt
 - Depending on the terms of official lending, the sustainable debt level can either be as low as 80% of GDP, or as high as 180% of GDP.
- Counterfactual exercises: sustainability more sensitive to official loan maturity than spread.

Sustainability: ongoing work

Quantitative model

- Objective function of the lender
- Value-at-risk analysis of interventions

Political economy models

- Why different countries may have different attitude towards debt (Corsetti Teulings)

Taking stock

Lesson from historical and comparative analysis of European crises:
In the 1990s, governments in crisis countries were able to prevent a full fledged financial crisis—and contain ‘diabolic loops’—through

- conservative fiscal and monetary policy
- yes! extensive backstop of banks, and
- a moderate but positive growth of nominal income (inflation around 5 percent),

Key: while initial size of the banking problems was arguably contained, losses could have escalated endogenously.

Taking stock

In the current crisis, with delay, the EA was able to provide monetary backstop to sovereign in 2012, after many quarters during which unanchored sovereign risk created substantial damaged.

- After all, you would expect that the strongest EA institution would eventually act.

But uneven and insufficient backstop of banking system (directed to core countries first, constrained on crisis countries) still feed endogenous and persistent divergence of financial and macro conditions.

Taking stock

Monetary backstop not enough

- together with QE and ESM, arguably stabilized gov't debt markets (on the role of the ESM, see Corsetti Erce and Uy 2017).
- but has not relaxed incentives to run contractionary budget policies

EA still quite vulnerable to (endogenous or exogenous) tail risk of large contractionary shocks (see e.g., ECB Discussion Paper 1988).

Vis-à-vis the risk of global recession, the argument for flexible exchange rates appear stronger.

It is up to us to make it clear that, with reasonable policymaking countries in the EA are not necessarily at a disadvantage,

- provided the ECB and EA governments can ensure some degree of nominal income growth, e.g., by pursuing forward guidance with full understanding that the long-run price level is an important target.