Debt Sustainability and the Terms of Official Support by Corsetti, Erce, and Uy

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## Motivation

• During the European sovereign debt crisis, Cyprus, Greece, Ireland and Portugal received loans from the IMF and the European Stability Mechanism (ESM).

- ESM loans, comparing to IMF loans, featured:
  - longer maturities,
  - lower spreads,
  - bigger amounts.

• Natural experiment for investigating the role of official lending.

## This Paper

- Extend Conesa and Kehoe (2017) with official lending.
  - borrowing and default with rollover risk and output risk
  - Market debt + two types of official lending.
- Trade-off with official loans
  - mitigates rollover risk and raise the default-free debt threshold —country better off with smooth consumption;
  - lowers long-run consumption and welfare due to higher debt —country worse off with higher incentive to default in response to fundamental shocks.
- Quantitative analysis for Portugal 2011–2015.
  - Long-maturity official loans decreased rollover risk—decreased spreads.
  - Replicates the negative comovement of debt and spreads.
  - Less need for austerity, but more likely to default in a recession.
- Counterfactual with different terms of official loans.
  - Differences in maturity of official loans matter more than differences in spreads.

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## Effect of Official Loans

Debt sustainability with official loans



Depend on the trade off between consumption smoothing and long run consumption

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# Comment 1: Dynamics of Market Debt for Portugal

• Gambling for redemption in Conesa and Kehoe (2017)



- Incentive to smooth consumption and increase debt in recession due to the positive probability of recovery.
- Depends on the size of recession, recovery prob., prob of self-fulfilling crisis.
- Assume marginal benefit of government spending is higher in a recession than in normal times.
- Impose the required government expenditure

## Comment 1: Dynamics of Market Debt for Portugal

- Role of official loans in this paper
- Overpredict substitution from market for official debt and underpedict the increase in total debt.



• Illustrate the impact of official loans by examining policy function and price function

## **Comment 2: Official Lenders**

- Country optimally chooses size of single official loan in simple model
- No tradeoff between choosing portfolio of ESM and IMF debt.
  - ESM debt-longer maturity, lower spread;
    IMF debt-shorter maturity and higher spread

- Aassumes the official lenders dictate the size, price, and maturity of official lending
  - Calibration uses the official loans information in the data.
  - Official loan portfolio is exogenously given.
  - Counterfactuals changes the official debt limit by 5% of GDP.

## Comment 2: Official Lender

• Scopes for providing official loans with longer maturity lower rates?

- Official lenders' optimization problem.
  - The official lender's objective functions
  - the constraints for providing official loans.

- Other consideration of official lender
  - ► Conditionality of official loans, e.g. deleveraging requirement.
  - Adverse effects of official bailouts.
  - Spillover

## Comment 3: Early Repayment of Official Loans

• Early repayment of IMF loans saves on interest and hedges ex-rate risk





From IMF country report (2019)

- The paper's prediction on early repayment. Extend analysis beyond 2015.
- How does early repayment affect the debt sustainability?

## Official Debt Sustainability

### • IMF's Public Debt Sustainability Analysis

### Figure 1. Portugal: Public DSA Risk Assessment, 2017–2024

Debt level 1/	Real GDP	Primary	Real Interest	Exchange Rate	Contingent
	Growth Shock	Balance Shock	Rate Shock	Shock	Liability shock
Gross financing needs 2/	Real GDP	Primary	Real Interest	Exchange Rate	Contingent
	Growth Shock	Balance Shock	Rate Shock	Shock	Liability Shock
Debt profile 3/	Market Perception	External Financing Requirements	Change in the Share of Short- Term Debt	Public Debt Held by Non- Residents	Foreign Currency Debt

### Heat Map

#### **Evolution of Predictive Densities of Gross Nominal Public Debt**

**Restricted (Asymmetric) Distribution** 



#### Symmetric Distribution



From IMF country report (2019)

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## Official Debt Sustainability

## • Debt profile vulnerabilities from IMF



From IMF country report (2019)

- This paper: the crisis zone is from 80–100% to 150–180% of GDP, depending on official loans.
- Multi-dimensional indicator of debt sustainability

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## Conclusion

• Interesting and important work

• A lot to learn about the debt sustainability with official support.

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