Debt Sustainability and the Terms of Official Support
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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

  - 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.

  - 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.
Effect of Official Loans

- Debt sustainability with official loans

- Depend on the trade off between consumption smoothing and long run consumption
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 underpredict 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.

- Assumes 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

![Chart showing Portugal: Credit Outstanding to IMF (Billion SDR) and Portugal: Cost Advantage of Early Repurchases (Basis points)]

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**

Heat Map

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Evolution of Predictive Densities of Gross Nominal Public Debt

(Percent of GDP)

- Baseline
- Percentiles: 10th-25th, 25th-75th, 75th-90th

**Symmetric Distribution**

From IMF country report (2019)
Debt profile vulnerabilities from IMF

Debt Profile Vulnerabilities
(Indicators vis-à-vis risk assessment benchmarks, in 2018)

- Lower early warning
- Upper early warning

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
Conclusion

- Interesting and important work

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