Bond Convenience Yields in the Eurozone Currency Union

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Outline

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  1. Endogeneity
  2. Credibility of Government (what makes EU special)
- Conclusions

This Paper: Convenience Yield Differentials

- Old term structure literature fails to establish a link between government deficits and interest rates: Evans (1987) and Plosser (1987).
- Main Contribution: **Convenience yield differentials** reflect the relative fiscal conditions of member countries.

This Paper: Convenience Yield Differentials

- Old term structure literature fails to establish a link between government deficits and interest rates: Evans (1987) and Plosser (1987).
- **Main Contribution: Convenience yield differentials** reflect the relative fiscal conditions of member countries.
- Convenience yields represent how much risk-adjusted return investors are willing to forgo to hold bonds:

$$\mathbb{E}_t\left[M_{t,t+1}P^{i,h}_{t+1}(1-\chi^i_{t+1})\right]\underbrace{\exp(c^{i,h+1}_t)}_{\text{wedge}} = P^{i,h+1}_t$$

wedge measures the “extra safety and liquidity” provided by bonds compared to bonds with identical payoffs.

Main Result

- The intertemporal government budget condition is:

$$\sum_{h=0}^{H} Q_{t-1}^{i,h+1} P_t^{i,h} = \underbrace{\mathbb{E}_t \left[\sum_{j=0}^{\infty} M_{t,t+j} \left(T_{t+j}^{i} - G_{t+j}^{i} \right) \right]}_{\text{NPV of surpluses}}$$

$$+ \underbrace{\mathbb{E}_t \left[\sum_{j=0}^{\infty} M_{t,t+j} \sum_{h=1}^{H} Q_{t+j}^{i,h} P_{t+j}^{i,h} (1 - e^{-c_{t+j}^{i,h}}) \right]}_{\text{NPV of seigniorage revenues}}$$

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- Main result:

$$\mathrm{Cov}_t \left(\left(\mathbb{E}_{t+1} - \mathbb{E}_t\right) \sum_{j=1}^{h} M_{t,t+j} \left(T_{t+j}^{i} - G_{t+j}^{i} + \kappa_{t+j} D_{t+j} \right), \left(\mathbb{E}_{t+1} - \mathbb{E}_t\right) \lambda_{t+h}^{1} \right) > 0$$

- **Positive** relation between fiscal news and bond convenience yields

Empirical Findings

Convenience yield differentials are defined as:

$$\lambda_t^i - \lambda_t^{\text{GE}} \equiv \underbrace{(\delta_t^i - \delta_t^{\text{GE}})}_{\text{5y CDS spread}} - \underbrace{(y_t^i - y_t^{\text{GE}})}_{\text{5y yield spread}}$$

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1. On average, convenience yield differentials are negative relative to Germany.
2. *X-section:* Countries with higher surpluses earn higher convenience yields than countries with lower surpluses.
3. *Time-series:* When a country improves its fiscal conditions, its convenience yield rises.

Comment 1: Endogeneity

Effect of Fiscal Information on Convenience Yields

- Authors show that fiscal conditions help explain the variation in convenience yield differentials across time.
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  where $\Delta\tilde{s}_t^i$ is the relative change in the government surplus-to-GDP ratios between country i and Germany.
- Link government surplus in year t with yield and CDS data at the end of June in year $t+1$.
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- *"In doing so, we allow six months' time for the fiscal information to affect debt markets"*.
- Problem: Too many things are going on... $\rightarrow$ endogeneity

An Example: Spring 2020

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Unconventional Monetary Policy				
PEPP: 03/18/2020	-100.25	-17.80	-36.90	-15.74
German Ruling: 05/05/2020	20.01	1.71	5.27	2.73
Extension PEPP: 06/04/2020	-17.63	-3.44	-7.26	-3.64
Fiscal Announcements				
Next Gen Fund: 4/23/2020	-23.53	-4.14	-0.91	-4.99
Next Gen Fund: 5/18/2020	-28.20	-6.89	-16.12	-6.26
Next Gen Fund: 7/21/2020	-10.52	-1.00	-4.38	-1.33

Why Do We Care?

- Changes in yields (and convenience yields) happen for many reasons.
- Unconventional monetary policy announcement induced some of the largest changes in sovereign yield spreads since European debt crisis in 2011-2012, see Corradin, Grimm, and Schwaab (2021).
- EU wide fiscal announcements also matter (not just through its effect of the shared interest rate). $\Rightarrow$ Risk-sharing motive: Fiscal risk is removed from weak countries' balance sheets to shared budgets.
- Hard to disentangle effects and establish a causal relationship between **fiscal shocks** and convenience yields.

What Can We Do?

- Older literature that tries to identify fiscal shocks via a *narrative approach*, see Ramey and Shapiro (1998) “war dates”.
- As in the monetary policy literature, we can look at **fiscal announcements**:
  - **EU wide fiscal spending packages** such as the EU Next Generation Fund: ECB predicts that debt-to-GDP ratio of Italy and Spain could decrease by 10 percentage points by 2031, see, Bańkowski et al. (2022).
  - **Country level** fiscal spending announcements
- Budget-**improving** vs budget-**worsening** announcements
- 09/27/18: Italy’s ruling coalition surprised markets and its European partners when it announced its plan to increase the Italian public deficit to 2.4% of GDP in 2019, even though the previous government had promised a decline of the deficit to 0.8%.

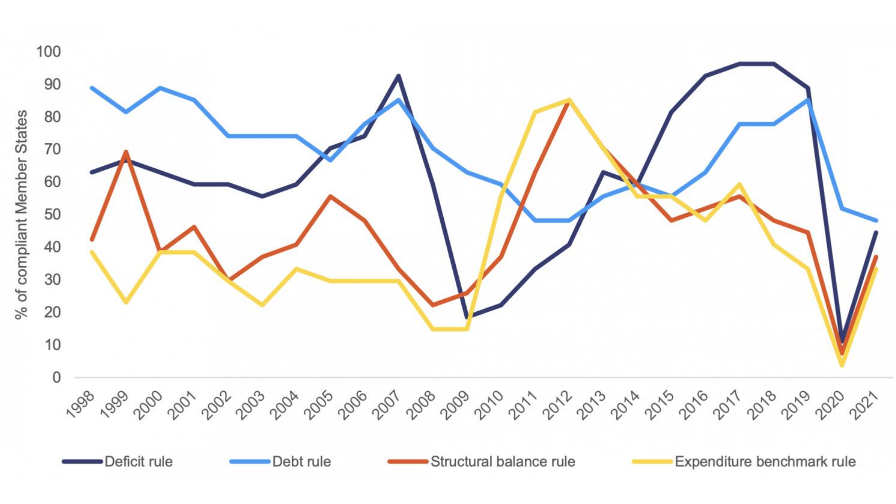
Italy	*Belgium*	*Spain*	*France*
46.39	1.59	5.91	0.81

Comment 2: Credibility of Government

EU Debt/Expenditure Rules

- EU Stability and Growth Pact:
  - Deficit rule
  - Debt rule
  - Structural balance rule
  - Expenditure benchmark rule
- Suspended until 2023

EU Debt/Expenditure Rules



Source: Compliance tracker of the European Fiscal Board Secretariat

Lord of the Spreads

- 05/28/18: 100bps increase in spread (largest two-day change since 2011/2012) when Italy's president appoints former IMF official to pass next budget and plan elections.
- *"We have no fears. The Italian economy is sound. Italian business is sound. So the economic reforms will provide all the answers that the so-called markets and the lords of the spread are waiting for."* Salvini on Deutsche Welle 09/04/18
- Lega Nord and 5* back down from fiscal plans that promised to push deficit to more than 3% of GDP in violation of EU rules $\Rightarrow$ spread narrows sharply.
- 09/29/21: Mario Draghi calls EU fiscal rules "obsolete", projects budget with large deficits

Italy	*Belgium*	*Spain*	*France*
2.01	0.43	1.34	0.63

Taking Stock

- EU is special because member countries' spending/deficit cannot exceed certain thresholds.
- Market seems to care about who is running the country/credibility of government. Two people can say similar things but yields react differentially.
- Meloni significantly toned down euroskepticism, promises to install technocrats $\Rightarrow$ Italian spreads not significantly different from other countries
- The level of surplus-to-GDP ratio may not reveal the full picture
- Too-big-to-fail

Conclusions

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- Short-run movements in yield/convenience yield differentials maybe explained by both monetary and fiscal shocks
- In order to establish a causal relation, we need some exogenous shock
- Large political component in what surplus-to-GDP means in EU
- Important agenda