

# Fiscal Policy Signalling in Government Bond Issues

**Tal Sadeh**

Tel Aviv University

**Yehuda Porath**

Bank of Israel

International Political Economy Society

Georgetown University

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# Background

- Sustainability of government debt and credibility of fiscal commitments increasingly preoccupy scholars and policy makers.
- Disappointment from *'Democratic Advantage'*, hard fiscal rules (unilateral, multilateral), market discipline.
- Attention increasingly given to signaling mechanisms in which words are matched by deeds (costly talk).

# Our argument

- **When default is not a serious risk, long-sighted DMOs can send signals to the public about their government's' future fiscal performance.**
- **DMOs can do this by issuing longer debt when they expect good news or shorter debt when they expect bad news.**

# Our argument

- By doing so DMOs assume higher costs of debt, but build their credibility with market makers.
- **Such signals are likelier in large issues and in times of fiscal stress (when DMOs are especially anxious to maintain credibility with market makers).**

# Our model

- DMO loss function grows with debt cost, but falls with maturity of debt stock, and coverage ratio:

$$(1) L_{DMO}(x) = qi_{eff}(x) - \lambda\varphi \frac{\Delta X(x)}{X} - \lambda \frac{q_m(x)}{q}$$

$X$  = maturity at issuance;

$\lambda$  = importance of long debt stock and coverage ratio  
(benchmarking)

$\varphi$  = DMO long-sightedness

$q$  = amount issued (\$)

# Our model

- Optimal maturity at issuance is:

$$(6) \quad x^* = x_m + \frac{\varphi q^2}{2\theta X(Q + q)} - \frac{q^2 \{ \alpha + \mu \pi^e + \psi \varepsilon^e - \varphi (i_f - S_G) \}}{2\lambda \theta}$$

$x_m$  = market preferred maturity

$S_G$  = privileged expectation for rise in  $i$  (bad news)

$i_f$  = market expectation for rise in  $i$



# Our model

- **Complex relationship between  $x^*$  and  $\varphi$  :**
- **(8)  $\frac{\partial x^*}{\partial \varphi} = \frac{q^2}{2\theta\lambda} \cdot \left\{ \frac{\lambda}{X(Q+q)} + (i_f - S_G) \right\}$**
- **long-sighted DMOs increase maturity ( $x^*$ ) when:**
  - **DMO expects good news (low  $S_G$ )**
  - **Market is pessimistic (high  $i_f$ )**
  - **Small and short debt stock (low  $X(Q+q)$ )**

# Our dataset

- We test our hypotheses on 26 democratic and credible (A- or more) countries in 2004-12.
- **Our unique dataset includes:**
  - Almost 25,000 issues of government debt, aggregated to monthly frequency;
  - Yield curve data;
  - **credit ratings (S&P, Fitch and Moody's).**



# Our dataset

- **Compilation of legal texts defining the autonomy of DMOs (proxy for DMO long-sightedness).**
- **Fundamental sources of government turnover (proxy for DMO long-sightedness);**
- **A total of 2,383 country-month observations.**

# Issuance Data

- **Data was compiled from DMOs, Ministries of Finance and Bloomberg.**
- **Includes all types of national sovereign debt, issued or legally backed by the central government (such as provincial or municipal debt, if similarly rated).**

# Issuance Data

- **Excludes:**
  - **Non-tradable debt;**
  - **Monetary policy instruments;**
  - **Retail debt with limited transferability and early redemption options (savings bonds);**
  - **Issues shorter than 3 months (cash management).**

# Issuance Data

- **Maturity at issuance:**
  - Value-weighted average time to maturity of all issues during the month (using current X-rates);
- **Further issuance parameters:**
  - amount, yield, price, currency, indexation, interest rate variability, coverage ratio.

# Defining more autonomous DMO

- Delegated some authority in deciding issuance parameters (amount issued, maturity, interest rate, and timing of issuance) ;

## Or at least:

- Elected policy makers cannot disregard the advice of non-elected professionals.
- Austria, Denmark, Slovakia, Korea, Sweden, US.

# Defining non autonomous DMO

- A single elected policy maker can dictate the parameters of debt issuance (11 countries).
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An alternative (expansive) definition of autonomous DMOs:

- Any DMO that does not qualify as non-autonomous: Australia, France, Germany, Hungary, Ireland, Israel, Italy, Norway, Portugal + 6 more autonomous DMOs.



# Regression

- Fixed Effects linear regression with clustered standard errors (3×4 versions).
- Non-stationary variables (yield curve slope and debt stock) were differenced
- Change in credit rating in 1-3 month lead as proxy for privileged DMO information.

# Regression

- Time-varying variables lagged to reduce likelihood of endogeneity (except issuance parameters: quantity, indexation, foreign).
- **Dummy for the fiscal stress period since Sep 2008**
- **Year dummies**
- **Month dummies**
- **Lagged dependent variable**

# Results

- All DMOs lock-in low rates if the market expects them to rise, and the issue is extremely large.
- Since September 2008 DMOs have paid closer attention to the costs of debt (yield curve slope).
- Issues in August, November and December are 0.7-1.6 years shorter than otherwise.

# Results

- Short-sighted DMOs act opportunistically on privileged news; Long-sighted DMOs do not.
- DMOs with greater autonomy from elected policy makers issue 2.3-3.3 years shorter, 1-3 months ahead of a deterioration in credit rating.
- This is evidence of signaling by autonomous DMOs.