

Can a populist government keep down government bond yields? A public bank to circumvent the prohibition of monetary financing

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Populist challengers to EU policy from Italy and Greece



Figure: Di Maio (Cinque Stelle) and Salvini (Lega Nord)



Figure: Yanis Varoufakis and Alexis Tsipras (Syriza)

Italian short and long term government bond yields, October 25, 2018



Figure: 2 yr bond: Currently at 1.5%, up from below 0% before the new government, but below 7% high of 2011



Figure: 10 yr bond: Currently at 3.5%, up from 1.2% in 2016, but below 7% high of 2011

Prohibition on Monetary Financing Article 123 TFEU

- 1 Overdraft facilities or any other type of **credit facility with the European Central Bank** or with the central banks of the Member States (hereinafter referred to as "national central banks") **in favour of** Union institutions, bodies, offices or agencies, **central governments**, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be **prohibited**, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.
- 2 Paragraph 1 shall not apply to **publicly owned credit institutions** which, in the context of the **supply of reserves by central banks**, shall be given the **same treatment** by national central banks and the European Central Bank **as private credit institutions**.

Prohibited and allowed monetary financing

- 1 **Direct Monetary Financing** : Eurosystem buys bonds of a central government of Euro Area
- 2 Quantitative Easing (**Indirect Monetary Financing**) : Eurosystem buys bonds that a central government has already sold to (private) buyers in bond market
- 3 **Public bank option to government finance** : Public bank buys government bonds, uses it as collateral with Eurosystem to get more reserves, then buys more government bonds

Stylized balance sheet of the public bank

Assets

Government bonds

- Held To Maturity

Deposits at the CB

- Required reserves
- Excess reserves

Liabilities and Capital

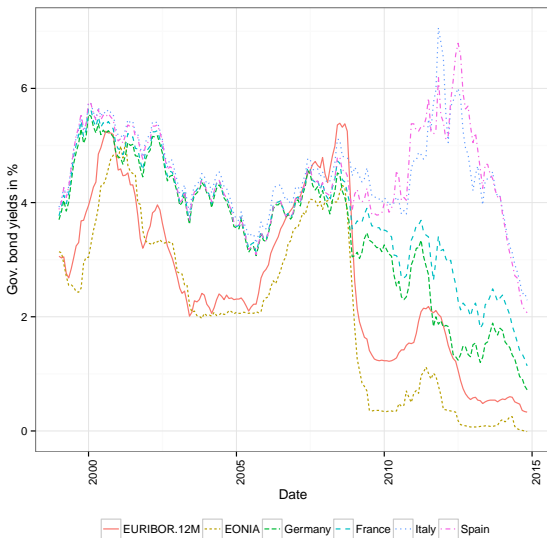
Borrowed funds

- ECB refinancing operations
- Loans from banks
- Deposits of non-banks

Equity capital

- Stock

Profitability of the bank



Example: Leveraging up of a bank investing in government bonds with maturities above ten years and issued by a central government with credit quality 1 or 2

Financing round	Initial reserves (in millions)	Securities bought in this round (in millions)	Funds received as cash for securities collateral at ECB (in millions)	Total securities bought (cumulative, in millions)
Initial capital	100	100	95	100
2	95	95	90.25	195
3	90.25	90.25	85.74	285.3
5	81.45	81.45	77.38	452.4
10	63.02	63.02	59.87	802.5
20	37.74	37.74	35.85	1283.0
50	8.10	8.10	7.69	1846.1
100	0.62	0.62	0.59	1988.2

Credit quality steps and the corresponding valuation haircuts of a fixed coupon government bond

How much can a bank leverage up after n rounds?

Define $c = 1 - h$, h ... collateral haircut percentage

$$\text{Max. Leverage ratio at } n \text{ rounds} = \frac{1 - c^n}{1 - c} \quad (1)$$

ECB Haircut scheme	Haircuts by maturity		
	0-1 years	1-3 years	>10 years
Credit quality 1 and 2 ¹	0.5	1	5
Credit quality 3 ²	6	7	13

¹ Ratings AAA to A-

² Ratings BBB+ to BBB-

Credit quality steps and the corresponding valuation haircuts of a fixed coupon government bond

How much can a bank leverage up (when $n \rightarrow \infty$)?

$$\text{Max. Leverage ratio} = \frac{1}{1 - c} \quad (2)$$

$$\text{Max. Gov. bonds bought} = \text{Initial capital} \cdot \text{Max. Leverage ratio} \quad (3)$$

Theoretical maximum leverage ratios

	0-1 years	1-3 years	>10 years
Credit quality 1 and 2	200	100	20
Credit quality 3	16.7	14.3	7.7

¹ Ratings AAA to A-

² Ratings BBB+ to BBB-

Margin calls from NCB to the public bank if market bond price falls by 5% in selected funding rounds (10yr bond)

Finance round	Change in bond price in %	Approximate margin call by NCB (millions)	Margin call in terms of capital of the public bank, in %
4	0	0	0
5	-5	-21.5	21.49
10	-5	-38.1	38.12
20	-5	-60.9	60.94
60	-5	-90.6	90.62
90	-5	-94.1	94.06

Potential issues for the public bank that turn out to be fine

- Profitability: Interest income (high yield sovereign bonds) greater interest expenses (ECB main refinancing rate)
- Regulatory capital requirements for sovereign bonds: Basically zero
- Revaluation risk of bonds for profitability: No revaluation necessary when bonds are 'held to maturity'
- Full allotment: Money directly from ECB, no auctions, no recourse to interbank market necessary

Potential issues for the public bank that can turn out to be problematic

- Central bank margin calls when bond prices fall
- Solution that requires ECB cooperation, but not change of EU treaties:
Change valuation of bonds to theoretical valuation and base haircut on that (take ratings out of the regulatory system)
- National solution 1: Take in deposits to cover potential margin call losses
- National solution 2: Operate only on the shorter end of the maturity spectrum, don't leverage up to maximum and keep more capital as central bank reserves to cover margin calls
- ECB can shut down funding mechanism for individual counterparties

Conclusion on public bank option to government finance

- In principle, it can be done!
- Easier and more worthwhile to implement for better rated countries (A- or higher) under the current system
- Difficult to do for worse rated countries (credit quality 3 with BBB rating), Italy now one of them (was not before 2017)
- Alternative solutions: Patriotic savings bank (?), or a set of already existing banks
- Overall, ECB/Eurosystem control over money creation pretty watertight if governing council is united
- Still: Worthwhile option to explore given idiosyncratic situation and bank structure of the country