

NEW BONDS TO MAKE THE EUROZONE SAFER

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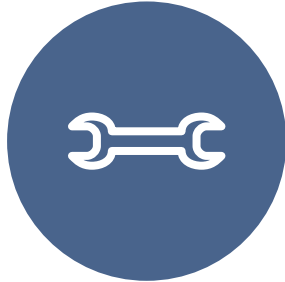


NEW BONDS VS STATUS QUO: A DECISION MATRIX

	Eurobonds	Red / Blue Bonds	Accountability Bonds	Synthetic Eurobonds	ESBies	ESIM
Strengthening the Euro						
Fiscal discipline incentivized	-	+	+	0	0	+
Euro strengthened as a global currency	+	0	-	0	+	0
Crisis Performance						
Prevention of excessive rate spikes in crises	+	-	-	0	0	+
Doom loop broken	+	+	0	0	+	+
Political Feasibility						
Political resilience of the mechanism	0	-	-	0	+	-
Implementation possible	-	-	+	+	+	+



EUROBONDS (2011)



How does it work?

- Bonds are issued jointly by eurozone member states with joint and several liability
- Completely replaces national issuance of debt
- Each member is fully liable for the entire issuance
- Positive effect on stability and integration, but risks of moral hazard remain



What are the goals?

- Promotion of further eurozone integration
- Increased liquidity and lowered borrowing costs, especially in times of financial distress
- Resolution of the eurozone debt crisis and mitigation of the bank-sovereign doom loop
- Ending speculative attacks on the Euro
- Creation of safe haven assets, satisfying the global demand for risk-free assets and strengthening the Euro's position against the US dollar as a reserve currency

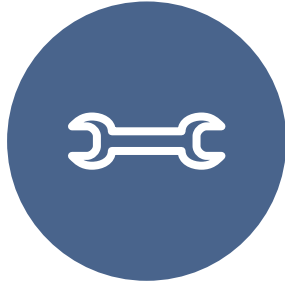


What are the problems?

- Entirely incompatible with the no-bailout clause
- Higher interest rates for very solvent countries like Germany, the Netherlands and Austria
- Moral hazard through free-riding
- Diminishes the signaling role of financial markets
- Requires ESM treaty changes



RED / BLUE BONDS (2010, 2011)



How does it work?

- Version of Eurobonds: Eurozone countries pool up to 60% of their GDP as senior sovereign, Blue debt with joint and several liability, and everything above the threshold remains as Red debt with individual liability
- Bond collectivization: countries with credible fiscal policies are allowed to borrow up to 60% of their GDP in Blue debt, whereas countries in weaker fiscal positions are only allowed to borrow a lower proportion in Blue Bonds
- The threshold up to which countries are allowed to issue Blue Bonds is determined by an Independent Stability Council



What are the goals?

- Strengthening the Euro as a global currency, with Blue Bonds enjoying high trust and trading volumes akin to the US dollar
- Lower sovereign bond yields for sustainable government debt below 60% of national GDP combined with higher sovereign bond yields for unsustainable debt
- Disciplining effects through the higher marginal cost of borrowing in Red Bonds
- Overall reduction of debt
- Orderly defaults on Red Debt are possible without affecting Blue Debt

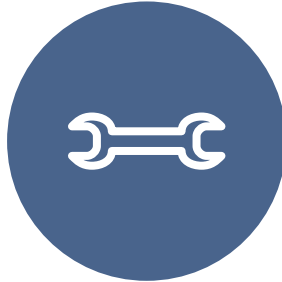


What are the problems?

- During crises, interest rate spikes on Red Debt are likely
- Why is 60% the save and appropriate threshold? How to ensure that it isn't raised in a crisis?
- Challenging introduction with current debt levels above 60% of GDP for most countries
- Disincentive to reduce debt once below 60% of national GDP
- Requires treaty changes as Blue Bonds are pooled debt



PURPLE BONDS (2018)



How does it work?

- Similar to Red / Blue Bonds¹ (which could ultimately be an end-state that replaces Purple Bonds)
- Slow 20-year transition to Purple Bonds: every year 1/20th of overall debt is split into Purple and Red debt, ensuring that at the end of the transition only debt below 60% remains as Purple debt
- Any debt above the threshold would remain Red debt after the transition, which isn't backed by any restructuring guarantees
- There is a no restructuring clause on Purple Bonds under an eventual ESM program
- Unlike Blue Bonds, Purple Bonds continue to be issued by national governments that are also individually responsible for their Purple debt. In crisis, the ESM instead of other eurozone governments takes over



What are the goals?

- Ensuring a smooth and gradual transition without juniorizing any current debt stocks
- Bonds remain traded on open financial markets, avoiding complex financial instruments
- Avoids the moral hazards of common debt
- Allows the ECB to purchase up to 50% of a nation's bonds, similar to supranational bonds, rather than the current 33% under present treaties

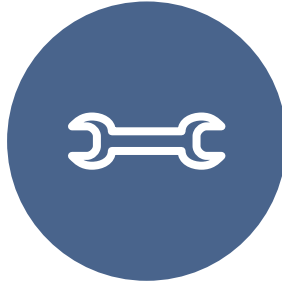


What are the problems?

- Contains some elements of collective responsibility, as the ESM would be responsible for all Purple debt, thus there is some moral hazard
- In the long run Purple Bonds have the same weaknesses as the Red / Blue concept: there is little incentive to reduce debt below the 60% threshold, the threshold is arbitrary and susceptible to political manipulation during crises, and interest rates would spike on Red debt during such
- Requires ESM treaty changes

¹ Excluded from the decision matrix as the rating would be the same for Red / Blue Bonds

ACCOUNTABILITY BONDS (2015, 2018)



How does it work?

- If a member state's structural budget deficit exceeds 0.5% of GDP, as defined in the European fiscal compact, excess debt is issued as Accountability Bonds (ABs)
- ABs are 5-year junior government bonds, losing their value when the government defaults or enters an ESM program
- If a country's debt-to-GDP ratio (incl. ABs) exceeds 120% of GDP, redemption and interest payments on ABs are suspended
- ABs are automatically rolled over unless the volume of a country's normal bonds is less than 60% of its GDP
- Countries with a debt-to-GDP ratio of 120% or more today are subject to a transitional agreement
- Banking supervision treats ABs as risky assets, so banks are only allowed to hold them in a limited number of cases and the ECB cannot purchase any



What are the goals?

- Investors are bailed-in during a crisis
- No collectivization of national debt
- Enforcement of EU debt regulation: market discipline against too high debt as bailouts are less likely
- Sovereign bond markets become susceptible to destabilization
- There is no rigid threshold (e.g. all bonds for debt exceeding 60% of GDP are junior), but a flow-based issuance of ABs contingent on a country's structural deficit

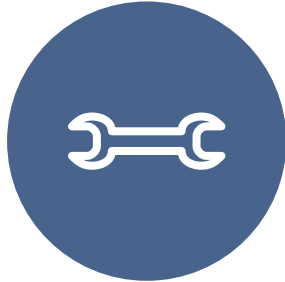


What are the problems?

- Who will buy the ABs? This could create an illiquid market as pension funds and banks most likely have to refrain from buying such bonds
- High volatility: a mere rumor of ESM intervention would send the ABs into freefall. During crises, these interest rate spikes could destabilize the entire government bond market
- Without outstanding ABs there is no (new) incentive for debt reduction beyond the structural deficit threshold
- With outstanding ABs there is no strong incentive for debt reduction below 60% of GDP
- Politically not palatable



SYNTHETIC EURO BONDS (2011)



How does it work?

- A European mutual debt fund, whose members' shares are in proportion to their GDP, offers pooled tradeable securities, the Synthetic Eurobonds
- No built-in guarantees or bailouts by other member states – the Syn Eurobonds' payoffs will simply be the combined interest rate payments of the bonds held by the fund
- No joint liability of eurozone governments
- The ECB should accept only Syn Eurobonds as collateral in the open market and stop accepting bonds from individual states
- This proposal is similar to ESBies without tranching



What are the goals?

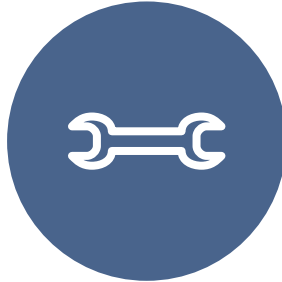
- All members' funding requirements can be covered by Syn Eurobonds, unlike other proposals
- No bailouts, no moral hazard, no cross-subsidization between countries and no public funding
- Synthetic Eurobonds replace risky national sovereign debt – if a country defaulted, the payoffs would only be affected according to its proportion in the portfolio
- Quick implementation, no treaty changes required



What are the problems?

- What happens if larger economies default, for example Italy or Spain?
- Without tranching, they are significantly less safe than ESBies
- No solution to the fundamental problem of excessive debt in some countries, only partial solution to the sovereign-bank doom loop

ESBIES (2011, 2016, 2017)



How does it work?

- A European Debt Agency buys, pools and securitizes eurozone bonds according to countries' shares in eurozone GDP or ECB capital
- There is a senior safe tranche (ESBies) of 70% and a junior tranche (EJBies) of the remaining 30%
- There should be an upper limit of k% of a country's outstanding bonds that ESBies can encompass, so that a sufficient number of those are traded on open markets. This helps in reflecting the true value of the underlying assets and avoids the mispricing of ESBies. ESBies are always paid out first by the issuer, after which the junior EJBies receive the rest
- Debt worth about 60% of eurozone GDP, roughly €6tn, should be securitized. Hence, the proposal would create about €4.2tn of safe AAA assets, defaulting once every 600 years, with yields similar to or below German Bunds. The remaining €1.8tn in less safe but investment grade EJBies would yield around 6% in normal times



What are the goals?

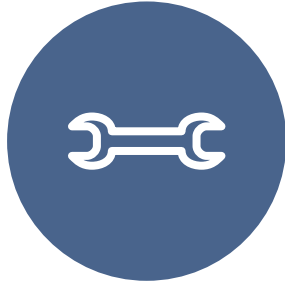
- Solves the scarcity and asymmetric supply of Euro-denominated safe assets vs the US, approximately doubling the supply of safe eurozone assets
- No treaty changes are required, ensuring a swift implementation
- No joint liability, as governments continue to issue all bonds, facing their own credit spreads
- No weighting by market portfolio of outstanding debt, which would lead to moral hazard problems
- Eliminates the doom loop between sovereign and bank risk, if banks and insurers mostly hold ESBies rather than national bonds



What are the problems?

- The upper limit of a country's included debt k% means that high-debt countries would see very little debt included in ESBies due to the large differences in debt-to-GDP ratios among eurozone members
- Banks in periphery countries might turn to other risky assets in order to maintain competitive refinancing rates, because the yields of ESBies would be below their countries' own bonds
- A major crisis involving several defaults would make ESBies significantly less safe than initially assumed – high yields for all assets would follow as credit spreads in weaker countries widen

ESIM (2011, 2018)



How does it work?

- A European Sovereign Insurance Mechanism allows the ESM to function as a bond insurer
- Countries could buy insurance against potential haircuts of, for instance, 20%, making their bonds a lot safer, thus yielding lower interest rates.
- Premiums should be based on a country's long-term credit rating as opposed to monthly or quarterly economic data. If these indicators improve, the insurance fees will decline
- The final decision on the premiums are made by the ESM Board of Governors
- There is a maximum amount of bonds that can be insured with the ESIM, so excessive borrowing faces significantly higher interest rates
- In the event of a payout, the ESIM receives bonds and pays out cash or short-dated ESM Notes



What are the goals?

- Efficient use of ESM funds through a multiplier (€1 can insure up to €5)
- No capital has to be raised in capital markets, and investors are bailed in
- The ESIM lends credibility to the promise that debt restructuring is only considered a last resort
- Interest rate payments will be lower for most countries up to a certain point of reasonable debt, above which there is an incentive to eliminate that uninsured debt
- A fast and simple implementation is ensured, as the ESIM merely expands the ESM's toolbox



What are the problems?

- There may be few incentives for low-interest countries like Germany to participate in the scheme, as the insurance premiums will likely eliminate all gains from lower interest rates
- The upper volume of insurable bonds, the attachment point as well as the maximum insurance width are thresholds susceptible to political manipulation during a crisis

APPENDIX



APPENDIX: FURTHER PROPOSALS

European Investment Bank (EIB) Bonds: Paul De Grauwe (LSE) & Wim Moesen (KU Leuven), 2009

- Eurozone members participate in bond issuances on the basis of their equity share in the EIB in terms of proceeds and coupon payments, which are based on a weighted average of the yields observed in each government bond market
- Collective liability: the governments are liable according to their equity shares in the EIB
- + Guaranteed access to liquidity for higher risk countries
- + No free riding problem → countries pay same interest rate when issuing government bonds on their own
- – Does not protect weaker economies from volatile interest rates → not of much use in a crisis

Trichet Bonds: Nicholas Economides (NYU) & Roy C. Smith (NUI), 2011

- Similar to “Brady Bonds” that resolved the Latin American debt crisis in the late 1980s
- 30-year bonds collateralized by zero-coupon bonds of the same duration issued by the ECB
- The zero-coupon bonds will be sold by the ECB to the countries issuing Trichet Bonds, which will be offered in exchange for outstanding sovereign debt of the countries at market value (~65-70% of face value). The exchange is offered at market value, so it does not involve a “bailout” of weaker countries
- The guarantee of the principal with the zero-coupon ECB bond collateral increases the quality of the Trichet Bonds compared to existing sovereign debt
- The market for the new Trichet Bonds will be liquid and likely trade at appreciating prices as refinancing risks are reduced
- + The long duration of Trichet Bonds resolves an immediate crisis caused by short term expirations of debt. Trichet bonds allow distressed countries to defer maturities over a longer period and give time for effective economic reforms
- + Avoids bailouts → no moral hazard and defaults

APPENDIX: FURTHER PROPOSALS

Eurobills: Thomas Philippon (NYU) & Christian Hellwig (Toulouse), 2011

- Eurozone members set up a joint debt management office (DMO) to issue Eurobills with maturities of less than a year
- The DMO manages issuances and redemptions and monitors the allotments of each country
- At the beginning of each quarter, the DMO issues Eurobills to cover all countries' needs. On the dates where individual treasuries normally conduct their own auctions, the debt is bought directly by the DMO
- No country can have more than 10% of its GDP in Eurobills outstanding at any point in time, and no country can issue any new short-term debt on their own
- If there were Eurobills left without bids, the ECB would step in to retain those, which must then be repurchased by member states within one quarter. If a member state is unable to do so, others have to step in to cover its obligations
- Joint and several liability of the eurozone members

Structured Eurobonds: Alexandra Hild (Bayreuth), Bernhard Herz (Bayreuth) & Christian Bauer (Trier), 2011

- Structured Eurobonds are originated by an independent institution, the Special Purpose Vehicle (SPV)
- The SPV invests in a pool of eurozone government bonds and issues a new asset – a Structured Eurobond with several subordinated tranches
- By pooling EMU countries' debt securities and by tranching the new product, the Eurobonds credit quality is increased above that of the underlying asset pool
- + Due to diversification interest savings should be achieved
- + All EMU member states (high and low rated countries) can obtain profits due to interest savings
- – No solution for bad budgetary policies of heavily-indebted countries

APPENDIX: FURTHER PROPOSALS

EMU Fund Bonds: Wim Boonstra (Chief Economist of Rabobank), 2011

- Creation of a central agency (EMU Fund) that raises debt on behalf of the EMU and assigns it to individual member states
- The interest due from member states on the funds they obtain will depend in part on their government finances. The larger a government's deficit and the higher its debt, the higher its interest rate
- Strengthening of the Stability and Growth Pact (SGP) → more effective and gradually more stringent sanctions. Not in the form of fines but rather political sanctions, e.g. loss of voting rights in the ECB or Council of Ministers. The EMU funds can also impose additional terms for lending if a country's performance slips further
- Voluntary participation, but once you are in you cannot leave
- The EMU fund will operate at profit, which could then be added to the fund's reserves, building a financial buffer
- + Creates a large and liquid common bond market. Central banks would no longer buy bonds of individual member states, and weaker countries would be shielded from volatile interest rates
- + Strong countries will not find themselves facing a problem every time a weaker country flounders
- + Countries that are out of line will be gradually confronted with rising financing costs. Instead of paying higher interest rates to investors, weaker countries pay a surcharge to the EMU fund

E-Bonds: Mario Monti (Bocconi), 2010

- A senior public intermediary would issue a single bond backed by a diversified portfolio of euro area sovereign debt bought at face value
- Funding costs would be passed on to the sovereigns in proportion of volumes held in the portfolio
- This intermediary would also be endowed with some capital to increase the safety of E-bonds
- + Lower average borrowing costs for high-debt countries but significantly higher marginal borrowing costs, as such acting as a disciplining device