Peterson Institute for International Economics

Europe's search for a safe asset

PIIE seminar on safe assets
March 23, 2018

Jeromin Zettelmeyer
(based on joint work with Alvaro Leandro)

Outline

1. Creating safe assets “by contract”, as outlined by Governor Lane, seems an attractive idea. So why is there so much opposition to it?
    - Bottom line: “It’s just a CDO”.
2. Alternative ways to create safe assets for the euro area
    - Bottom line: there are other good ideas, including some that have not been properly debated yet.
    - However, none dominates ESBies, and all are likely draw intense opposition from at least one veto player.
3. Conclusions, and the *likely* way forward

Outline

1. Creating safe assets "by contract", as outlined by Governor Lane, seems an attractive idea. Why, then, is there so much opposition to it?
    - Bottom line: "It's just a CDO".
2. Alternative ways to create safe assets for the euro area
    - Bottom line: there are other good ideas, including some that have not been properly debated yet.
    - However, none dominates ESBies/SBBS, and all are likely draw opposition from at least one veto player.
3. Conclusions, and the *likely* way forward

SBBS: the first, second, and third looks

1. First look: A great idea.
    - Create safe assets through a combination of seniority and diversification
    - No explicit guarantees, no redistribution, limited impact on national bond markets. Hence, all red lines should be observed.
2. Second look: Maybe not. The devil is in the details.
    - A complicated proposal, with lots of potential unintended consequences.
3. Third look: (1) SBBS task force report (2) PIIE WP 18-3.
    - Work through all the details. Discover some problems, but also solutions. In the end, the first look was basically right.

Why, then, is there so much opposition to the idea?

1. Many people are still in phase 2 (second look). Tons of concerns that can ultimately addressed (and have been) .
2. “It’s just a CDO”.
    - Yes indeed, it is. So what?
    - “It’s just a CDO” turns out to be a label for a slew of arguments, often from opposing sides of the Euro area debate, reflecting specific interests, and a bit of ideology.

“It’s just a CDO” – German style

Peterson Institute for International Economics

Key concern: “mutualization through the back door”

1. Senior tranche not really safe (“It’s just a CDO”!) - Easily refuted.
    - “Not really safe” only under extreme loss-given-default (lgd) assumptions (100%). With lgd of 50-90%, senior tranche safe as long as either D/NL/AU/FIN or D/F do not default
    - Senior tranche needs bailout only when there is no-one left to do the bailout
2. In a crisis, no one will buy junior tranche. This clogs up entire pipeline of issuance, requiring a bailout. – Also easily refuted.
    - Can ensure market access by excluding countries from portfolio that have lost access.
    - Even if junior tranche were to lose access, consequence would be more national issuance, not a big bailout.

“It’s just a CDO” – Italian style

Peterson Institute for International Economics

Key concern: because SBBS is “just a CDO”, it will not fly unless combined with tougher regulation of sovereign exposures. This may increase cost of issuing sovereign debt, particularly in “south”

- Brunnermeier et al (2016) proposal argued for a coordinated introduction of SBBS and regulation to dissuade banks from holding national bonds
- ESRB HTLF (2018) drops this idea (to overcome Italian opposition).
- Italy: Does not like SBBS because of its association with regulation debate. Worries that regulation debate may come back, because without it SBBS cannot fly.
- Can also turn this around: SBBS may not fly, because resistance to change in regulatory treatment of sovereign exposures is intense

“It’s just a CDO” – European federalist style

Key concern: give us real fiscal federalism – not some weird financial engineering substitute.

- “Holding out” for Eurobonds (with mutualization) or a bonds issued by European budget.
- Examples: De Grauwe (2018), Münchau (2018).
- Problem: fiscal federalists may have to wait for a very long time. In the meantime, financial instability continues.

Outline

1. Creating safe assets "by contract", as outlined by Governor Lane, seems an attractive idea. Why, then, is there so much opposition to it?
    - Bottom line: "It's just a CDO".
2. Alternative ways to create safe assets for the euro area
    - Bottom line: there are other good ideas, including some that have not been properly debated yet.
    - However, none dominates ESBies/SBBS, and all are likely draw opposition from at least one veto player.
3. Conclusions, and the *likely* way forward

Can we create “safety without tranches” (and without mutual guarantees)?

Three ideas

1. SBBS without tranching but with capitalization
2. A Euro area leveraged sovereign wealth fund
3. Debt issued by a senior financial intermediary (“E-bonds”)

Target volume: at least ≈ 25% of Euro area GDP. Why?

- We show that SBBS can be used to easily produce around this amount (without impairing liquidity of national bond markets)
- Need 16% alone to replace euro area government securities held by euro area banks.

SBBS without tranching (but with capital).

Identical to SBBS, except that the buffer protecting holders of the "safe" security is not a junior tranche, but just capital.

SBBS

Assets	Liabilities
Government bonds (100)	ESBies (70)
	EJBies (30)

Untranched SBBS (capitalized)

Assets	Liabilities
Government bonds (100)	Safe asset (100)
Cash (28)	Capital (28)

Problems:

1. Requires one large public intermediary
2. To achieve safety level of ESBies, need capital buffer of ≈ 28%. So, for safe asset of 25% of euro area ≈ 0.28x0.25 = 7% of GDP in capital ≈ €780 billion!
    - By comparison: ESM €80 paid in; €622 callable.

Euro area leveraged sovereign wealth fund

- Use small national contributions to start up a euro area leveraged sovereign wealth fund, which gradually capitalizes itself out of retained earnings.
- When desired debt volume and capital levels have been reached, stop growing, and pay a dividend back to taxpayers.

Assets	Liabilities
Diversified international portfolio	Safe asset
Cash	Capital

Problems:

- Does not create demand for national sovereign bonds that replaces potential decline in demand from banks
- The only thing more damning than “it’s a CDO!” may be: “it’s a hedge fund!”

E-bonds (Monti, 2010)

Peterson Institute for International Economics

Like SBBS, achieve safety through combination of seniority and diversification. However, seniority now refers not to senior tranche but to preferred creditor status of intermediary itself.

- Senior intermediary buys sovereign loans at face value, issues plain vanilla bond, and charges all borrowers its funding cost
- Benchmark case: no capital

Assets	Liabilities
Senior government loans	Safe asset

Dramatically different properties from SBBS and any other proposal described above

- loss distribution, redistribution, impact on borrowing costs

Comparison of loss distribution

Potential losses of alternative safe assets and selected bonds
(in percent)

	5-year exp. loss rate	PD	Value at Risk (VaR)				
			5%	4%	3%	2%	1%
ESBies (Senior SBBS)	0.42	4.3	0.0	0.0	1.4	5.9	18.4
E-bonds	0.51	30.7	1.4	3.9	7.3	8.9	9.3
Capitalized intermediary	0.50	4.8	0.0	3.0	5.7	9.0	17.6
E-bonds + 2% capitalization	0.24	4.5	0.0	1.9	5.3	6.9	7.3
E-bonds + 5% capitalization	0.12	3.7	0.0	0.0	2.3	3.9	4.3
German bund	0.50	1.4	0.0	0.0	0.0	0.0	32.0
French bond	1.94	3.7	0.0	0.0	48.0	48.0	60.0
Belgian bond	2.64	4.8	0.0	50.0	50.0	62.5	62.5

PD = Probability of default

Source: ESRB HLTF (2018), Leandro and Zettelmeyer (2018) and authors' calculations based on the simulation model of Brunnermeier et al 2017 (adverse calibration)

Redistributive effects of E-bond proposal

Peterson Institute for International Economics

In € billion unless otherwise stated. Rates and flows refer to 5-year horizon

	Debt volume in portfolio	Portfolio share (%)	Expected loss rate, intermediary (%)	Expected losses caused	Expected losses absorbed	Expected transfer (>0 means recipient)
Germany	768.4	29.2	0.00	0.00	3.02	-3.02
Netherlands	168.6	6.4	0.00	0.00	0.66	-0.66
France	560.9	21.3	0.00	0.00	2.20	-2.20
Spain	280.3	10.7	0.91	2.55	1.10	1.45
Italy	420.9	16.0	0.27	1.13	1.65	-0.52
Portugal	46.5	1.8	2.52	1.17	0.18	0.99
Greece	28.3	1.1	14.26	4.03	0.11	3.92
Other countries	353.7	13.5	0.41	1.44	1.39	0.05
Total	**2627.6**	**100.0**	**0.39**	**10.33**	**10.33**	**0.00**

- Cause of redistribution: intermediary charges all borrowers the same interest rate (its funding cost), regardless of riskiness.

Borrowing cost implications of E-bond proposal

Peterson Institute for International Economics

1. Due to subordination of bonds to loans held by senior intermediary, borrowing cost in market goes up.
    - Given loss-given-default l distributed among fewer bondholders.
    - Example: taking $l = 0.5$, Portuguese yield would increase from 2.1% in October 2017 to 3%; Italian yield from 1.8% to 2.25%.
2. If intermediary sets a purchase cap as a share of borrower GDP, countries at the maximum will see *marginal* borrowing costs rise (because extra debt = bond issues at higher rates).
3. However, offset by lower borrowing costs via intermediary (charges everyone funding cost ≈ German yield).
4. Net effect: Low borrowing cost countries could pay a bit more, some high borrowing cost countries a bit less.

Conclusion

1. There are several attractive "safe asset" ideas out there that require neither mutual guarantees nor tranching.
2. However, neither dominates SBBS in a technical sense. They simply have somewhat different properties.
3. My favorites: (1) a Euro area leveraged SWF; (2) lightly capitalized E-bonds.
4. However, alternatives seem to cross even more red lines than SBBS.
    - Capitalized SBBS w/o tranching: needs a lot of capital (> ESMx2)
    - Leveraged SWF: "OMG – it's a hedge fund with public debt!"
    - E-bonds: *both* disciplining effect (South will hate) and mildly redistributive effect (North will hate).

So, what is likely to happen?

- None of the alternatives will gain traction
- SBBS will be allowed to go forward on a purely market-driven basis, without changing regulation of sovereigns.
- This will not allow them to really take off – but regulation, market may develop; people may lose their fear.
- ”Break” may or may not come. Depends on change in bank regulation that – at a minimum – incentivises diversification of sovereign exposures, including via SBBS (Véron, 2017).
- This change could possibly be a consequence of a grand bargain involving European Deposit Insurance (Bénassy-Quéré et al 2018; Schnabel and Véron, 2018).

Backup slides

Peterson Institute for International Economics

Classifying proposals for safe assets

Peterson Institute for International Economics

		Order of seniority and diversification	
		Seniority first, then diversification	Diversification first, then seniority
Seniority achieved at the level …	… of the debt instrument (tranching)	• Safe assets as senior tranche of national sovereign debt (Wendorff and Mahle 2015). Subsequently, diversification of senior tranches on bank balance sheets.	• Safe assets as senior tranche of collateralized debt obligations backed by a diversified portfolio of sovereign debt bought at market prices (Brunnermeier et al. 2011, 2017)
	… of the safe asset issuer (no tranching)	• "E-bonds" issued by a senior intermediary that lends to sovereigns at face value and passes on funding costs (Monti 2010) • Debt issued by a Euro area budget authority against assigned revenue stream	

Impact of E-bond proposal on marginal and average costs: example

Peterson Institute for International Economics

Standard interest parity condition:

$$(1+r)(1-p) = (1+r^*) - (1-l)p$$

Where r = risky interest rate p = default probability, r^* = risk-free interest rate and l = loss given default.

Example : $r^* = 0.33\%$, $r = 1.82\ \%$. Assume $l = 0.5$. This implies $p = 2.9\%$.

Suppose risky rate refers to junior tranche of size s. Then, condition becomes:

$$(1+r_s)(1-p) = \begin{cases} (1+r^*) & \text{for } l \geq s \\ (1+r^*) - p(1-l/s) & \text{for } l < s \end{cases}$$

For Italy, $s = 0.78$ in E-bond proposal (intermediary would by only buy 22% of debt securities, because of ceiling of 25% of GDP). Implies $r_s = 2.24\%$. *Marginal cost of debt would increase by 42 basis points.*

But impact on *average* debt cost is unchanged. Assume intermediary can issue at 0.36% (just over safe interest rate). Then, new borrowing cost is:

$$0.78 * 2.24 + 0.22 * 0.36 = 1.83\%$$