

## Quantitative Analysis of ESBies

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### Extended Abstract

In a recent proposal to fix the European debt crisis, Brunnermeier et al. (2011) say that at the core of the crisis lies a fundamental (and often forgotten) issue: the lack of safe assets. They argue that such an asset has to be liquid, have minimum risk of default and be denominated in a stable currency. Lacking such an instrument, sovereign debt has been treated as the safe asset and regulators have allowed this. Moreover, national governments have coerced domestic banks to take more public debt than what prudence would dictate.

This state of affairs creates a number of problems, among them one that we want to study in detail. It creates a “diabolic-loop” between sovereigns and banks: encouraged by lax regulation, European banks hold too much of their national debt, which far from being safe creates speculation on the solvency of banks. Sovereign, on the other hand, face a risk of having to bail-out the banks, which increases the riskiness of their debt and hence further affects the bank’s balance sheets.

Brunnermeier et al. (2011) push the idea that in order to break this loop we need to create European safe assets (which they call European Safe Bonds, and abbreviate as ESBies) that banks can hold without being exposed to sovereign risk. They propose to create an European Debt Agency (EDA) that buys sovereign bonds of member nations (according to fixed weights) and creates two securities. The first security (ESBies) grants the right to a senior claim to the payments of the bonds in the EDA portfolio. The second security would be composed of the junior tranche of the portfolio. Regulation would promote bank holdings of the safe ESBies, while the junior bonds would be sold to willing private investors in the market. The key lies on “pooling” and “tranching”. Having a diversified portfolio of sovereign bonds (i.e. pooling), the EDA revenues would not be overly affected by any individual sovereign default. Creating small enough number of senior securities (i.e. tranching) makes ESBies safe and transfer virtually all the repayment risk to the junior instrument.

The objective of our paper is to quantify the effect of adopting such a policy, through the lens of a model in the tradition of Eaton and Gersovitz (1981). Specifically, we incorporate a banking sector into a quantitative model of sovereign default calibrated to match features of the European countries under fiscal and banking distress.<sup>1</sup> We use this model to (i) present to present a quantitative evaluation of the

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<sup>1</sup>The modeling is along the lines of our previous work, highlighting the importance of long-duration bonds ( Hatchondo and Martinez, 2009, and Hatchondo et al., Forthcoming) and the role of the banking sector in channeling and amplifying sovereign risk (Sosa-Padilla, 2015).

ESBies proposal and (ii) discuss the optimal parameters to implement this proposal. Welfare implications are not *a priori* obvious: breaking the “diabolic-loop” would make banks stronger, but will also reduce the cost of default risk. Such a general equilibrium effect is interesting to study and may pose a cautionary note on policy proposals like the one in Brunnermeier et al. (2011).

## References

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