ESBIES - EUROPEAN SAFE BONDS

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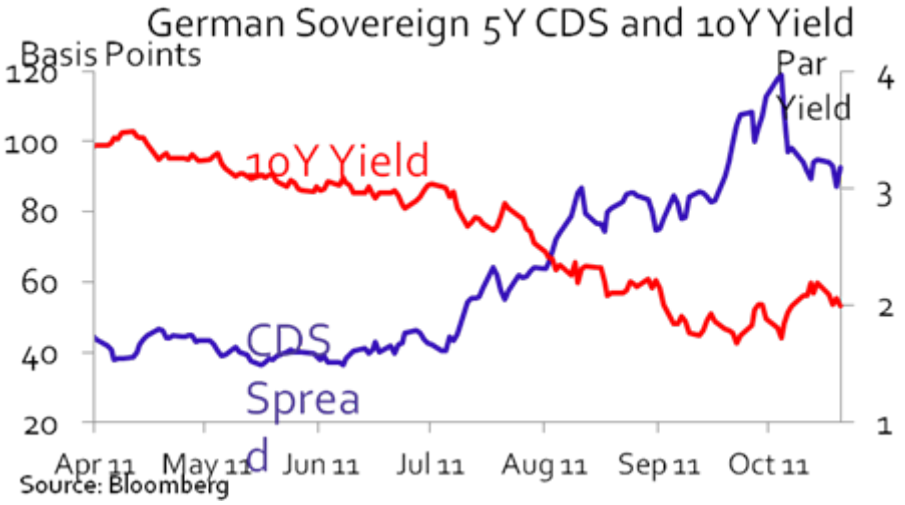
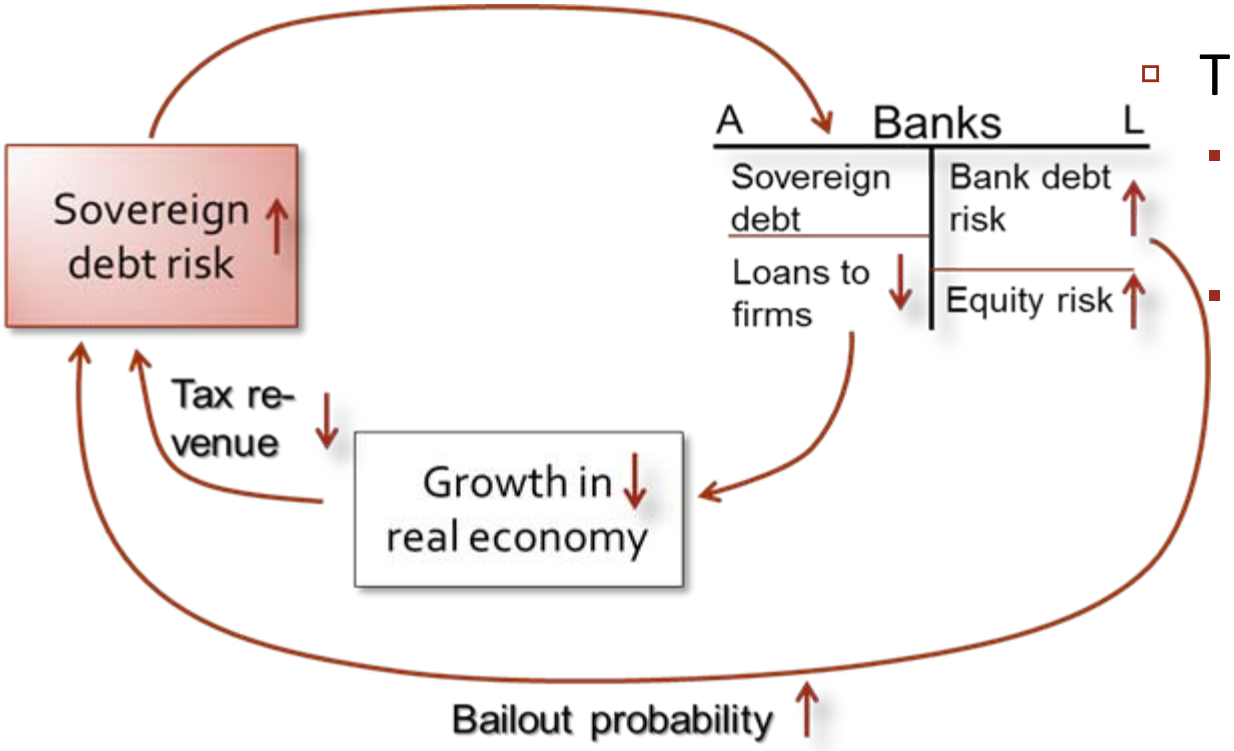
Crisis diagnosis 1: Flight to safety

coordinate on which safe asset to flock to in times of crisis
-appreciates in times of crisis



Crisis diagnosis 2: Diabolic Loop

Contagion due to diabolic loop – "twin crisis"



- Trigger
  - Bank insolvency (Ireland, Spain)
  - Public debt/slow growth (Greece, Portugal, Italy)

Banks need safe asset for transactions (collateral, Basel II and III prudential regulation)

Our brief

- Propose an instrument that allows for joint borrowing
  - That allows us to eliminate within-euro flight to safety and its asymmetric consequences
  - And that benefits from gigantic world-wide pool of cash in search of safe assets (Bund only safe asset in Euro today)
  - And can reduce close connection between national treasuries and national financial sectors
- And which is politically feasible
  - That rules out in our view transfer-union elements/joint liability
  - No treaty changes

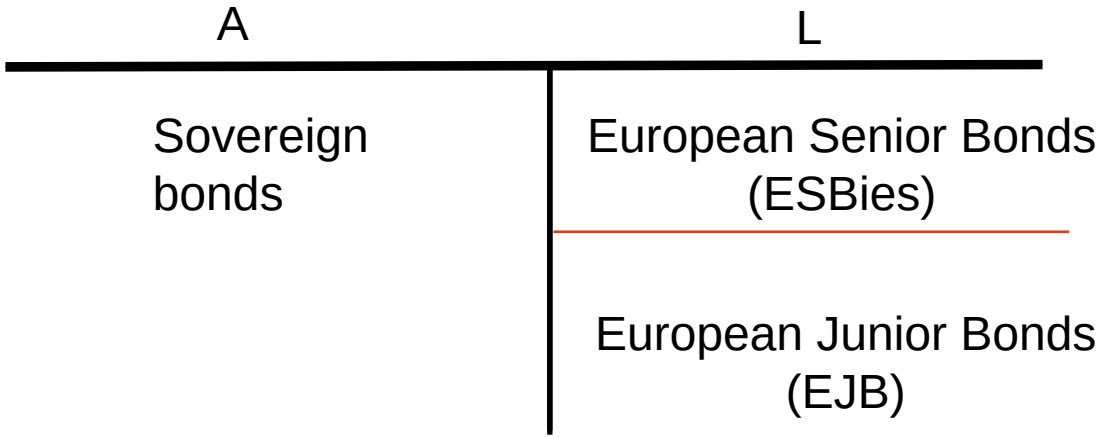
The ESBies proposal

- European debt agency (EDA) buys sovereign bonds from each EZ member.
  - Fixed proportions (60%) relative to lagged GDP.
  - In secondary market!! (uses market prices)
- It issues senior bond (ESBies) and junior bond (EJB).
  - ESBies are fixed fraction of total collateral (70%).

- Large market: Esbies around 4tn.

- Pass-through: No joint guarantees!

The ESBies proposal: EDA



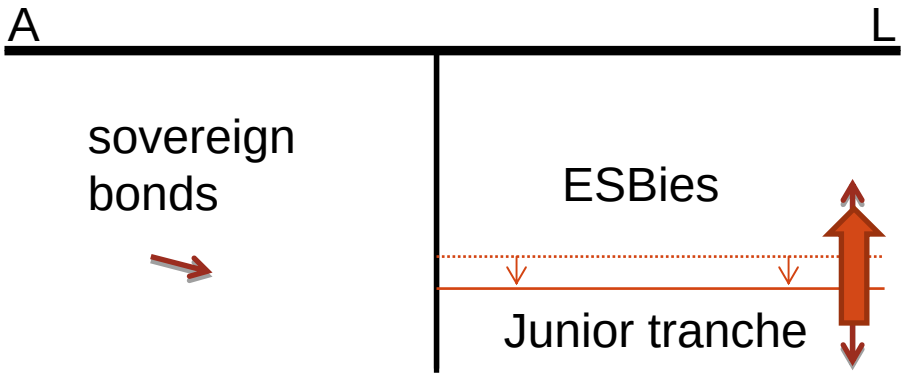
Proposal breaks diabolic loop…

Breaks diabolic loop between banking and sovereign credit risks

- ECB grants ESBies preferential treatment + haircuts for sovereign debt
- Appropriate Basel risk weights + higher weights for sovereign debt

… redirects flight-to-safety flows…

- Create standardized/safe Euro asset in huge scale.
  - Liquidity/safety premium.
    - 0.7% (in normal times) * 3.9 tn = 27.3 bn per annum (NPV=2.730 tn)
- Redirect flight-to-safety (FTS) flows from across national borders to across tranches.
  - Flows are distortionary and are amplifying the crisis.
  - FTS premium earned only by AAA countries.



… and stabilizes markets in the short run

- Give credible path out of current panic: moving us back to the good equilibrium
  - Increases sovereign debt prices by preventing bad illiquidity equilibrium, market freeze, fire sale prices
- Initially, focus on newly issued sovereign debt
  - Primary market purchases in proportion to GDP
  - Ex. Could buy €940bn in Italian debt, next 3 years
  - At least 3 years for all countries to make necessary structural adjustment and ride out business cycle
- Program countries (Greece, Ireland, Portugal) would not participate in ESBies until later

Comparison with Eurobills and Blue bonds

- Some similarities
- Key advantages
  - Feasibility
  - Size
  - Discipline

Key similarities with other two proposals (Eurobills / blue bonds)

- All feature a safer senior and a risky junior tranche
  - By time (Eurobills)
  - By GDP level (Blue/Red)
  - By default (Senior/Junior) ESBies
- Two pillar strategy to fight moral hazard: market discipline and inter-governmental mechanism must complement EU level authority.
  - In our case governments face individual prices for their own debt, for the entirety of it
- All proposals ask for changes in banking regulation towards new definition of safe asset

Key advantage of our proposal: Feasibility

No joint and several liability (JSL), no need to treaty changes.

- JSL increases borrowing capacity ex-ante (a country's default becomes its guarantor's default increasing incentive to pay up)
- JSL gives rise to moral hazard
  - Lower for ESBIES, the EDA only purchases bonds on the secondary market, and only up to 60% of each country's GDP
- But JSL increases risk of contagion ex-post where default of some (say Italy) could collapse finances of all eurozone countries
- De facto, North subsidizes the South staking its own credibility. High cost that appears to exceed the benefit of avoiding spillover effects.
- Lack of JSL makes ESBies a lot more palatable to North

Advantage (2): Size

- Flight-to-safety (FTS) flows are large.
  - 100 bp reduction of German bund yields, despite increase in CDS premia, and despite a 2.1 tn bond market.
- Large size of ESBies (3.9 tn) ensures that price volatility caused by FTS flows will be limited.
- Same for Blue/Red bonds.
- But not for Eurobills (0.7 bn).
  - FTS flows could cause high volatility at short end of yield curve – still distortionary!
    - Zero short rates? Monetary policy?
  - FTS flows are across maturities.
- FTS flows are a pain for Switzerland; a blessing for US!

Advantage (3): Discipline

- Fiscal discipline (rules and monitoring) must be augmented by market signals.
  - ESBies use market signals:
    - EDA buys sovereign bonds in the secondary market.
- They do so more effectively than Blue/Red bonds.
  - Suppose that country X goes from 60% to 61% debt/GDP.
    - ESBies: Interest rate increases on entire 61% of debt.
    - Blue/Red bonds: Interest rate increases only on 1% of new debt since 60% is guaranteed.
- Redemption fund proposal relies mainly on monitoring.

Other differences with Eurobonds

- require coordinated fiscal discipline, which is hard to achieve in a *credible* way (see SGP failures); less necessary with ESBies
- require European Treaty changes because of JSL
- have no « exit threat » point (exit) and no credible conditionality for participation (entry)
- eliminate national sovereign debt instruments and the **derivatives** trading on them, e.g., sovereign CDS, which are a useful price signal about fiscal policy; ESBies keep sovereign debt and derivative markets open

Blue-red bonds (Delpla & von Weiszacker)

- Each country issues 2 types of sovereign bonds:
  - Blue bonds: senior, JSL (=eurobonds), allocation recommended by council 7 voted by 17 parliaments, max allocation of blue bonds is 60% of GDP
  - Red bonds: junior, no JSL, banks/ECB cannot hold red bonds
- All same issues with JSL as for eurobonds (but limited to blue bonds)
- Moral hazard/free-rider problem: Blue bonds affect marginal cost of debt which depends on risk of other countries.
- Having 2 types of sovereign bonds with seniority structure causes legal issues with « selective default »

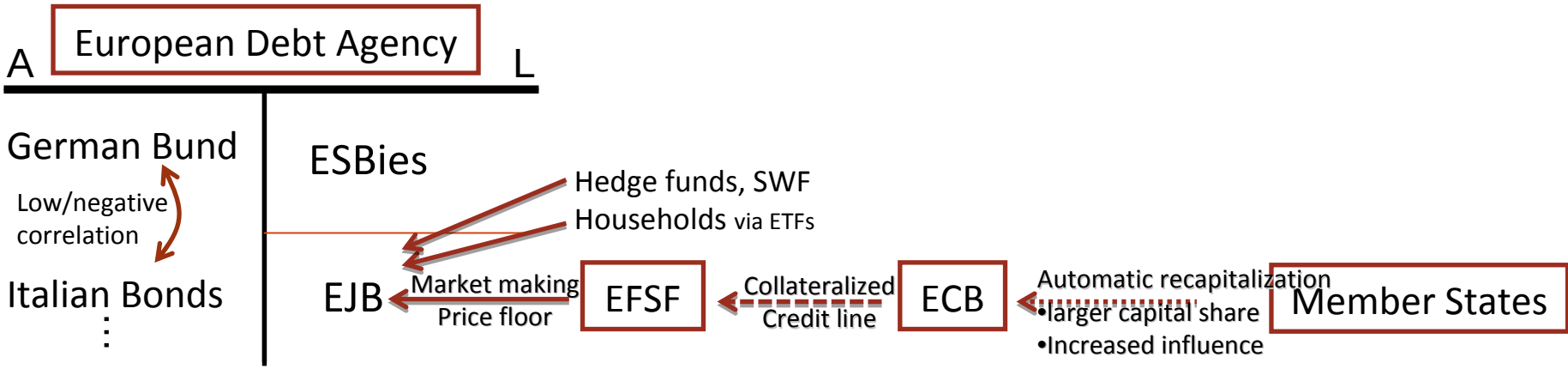
Eurobills

- are like eurobonds, but only short-term (<1yr) and limited to 10% of Europe's GDP (800bn euros); ESBies would be as large as 4tn euros.
- are **too small** to to be credibly used as quasi-money by banks in the euro-zone and too small to break the ties between banks and own government debt.
- do not solve the multiple equilibrium problem whereby sovereigns that lack market trust may be forced to default; just postpones it.
- suffer from the same issues with JSL as eurobonds, especially as mission creep inevitably increases size of program

Transition to ESBies

- Long-run architecture vs. transition.
- Phase 1
  - Focus on newly issued sovereign debt.
    - Increases sovereign debt prices (flight to safety, multiple equilibria).
    - Allows market to learn about new funding structure + reopens markets.
- Phase 2 (optional - in the long-run after market have stabilized)
  - Swap existing holding of sovereign debt by banks.
    - At market prices.
    - Requires additional recapitalization of banks.
    - Break diabolic loop between sovereign and bank insolvencies.

Transition – Phase 1



- If need to sell EJB, in the very short-run similar to blue bond solution…
- … but in the long run no moral-hazard distortion.

ESBies Participating Nations

- Eurozone members, but not
  - Greece, Portugal, Ireland.
    (part of the ESFS before launch of ESBies)

- Note difference to levering up EFSF .

  (which contains only (highly correlated) troubled assets)

Conclusion

- Redirect flight-to-safety flows to minimize distortions.
  - Not across national borders.
  - Not across yield curve.
  - But across tranches – way less distortionary!
- Augment fiscal discipline by market signals.
- Reform to long-run architecture:
  - Provide safe asset to break diabolic loop between bank and sovereign insolvencies.

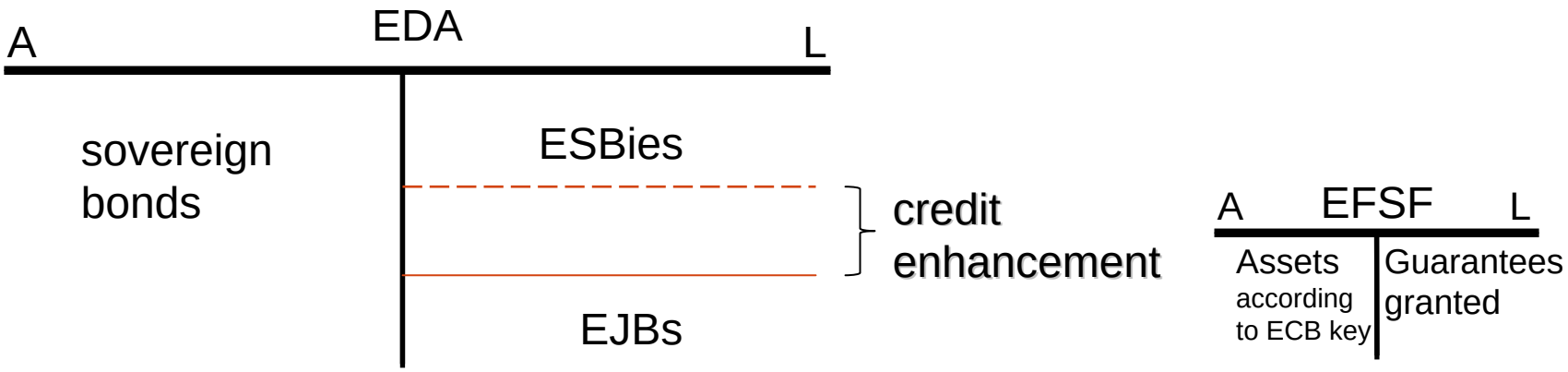
QandA

Q1: % of EJBs?

- Design principle: maximize safety, not profits!
- We propose X=30% based on conservative assumptions on
  - Sovereign default probabilities
  - Their correlation across countries
    - Different macro scenarios
    - Overlay contingencies, if Italy goes, Spain goes with very high likelihood, etc.
  - Loss given default given the credit rating
  - ESBies would sustain losses in only 0.8% of 5-yr simulations (once every 600 years)

Q2: Credit enhancement for ESBies

- Concern: Standardization across various issues



- Credit enhancement cannot be provided privately
- EFSF (later ESM) could provide this guarantee
- Would be a useful way to “leverage” its monies

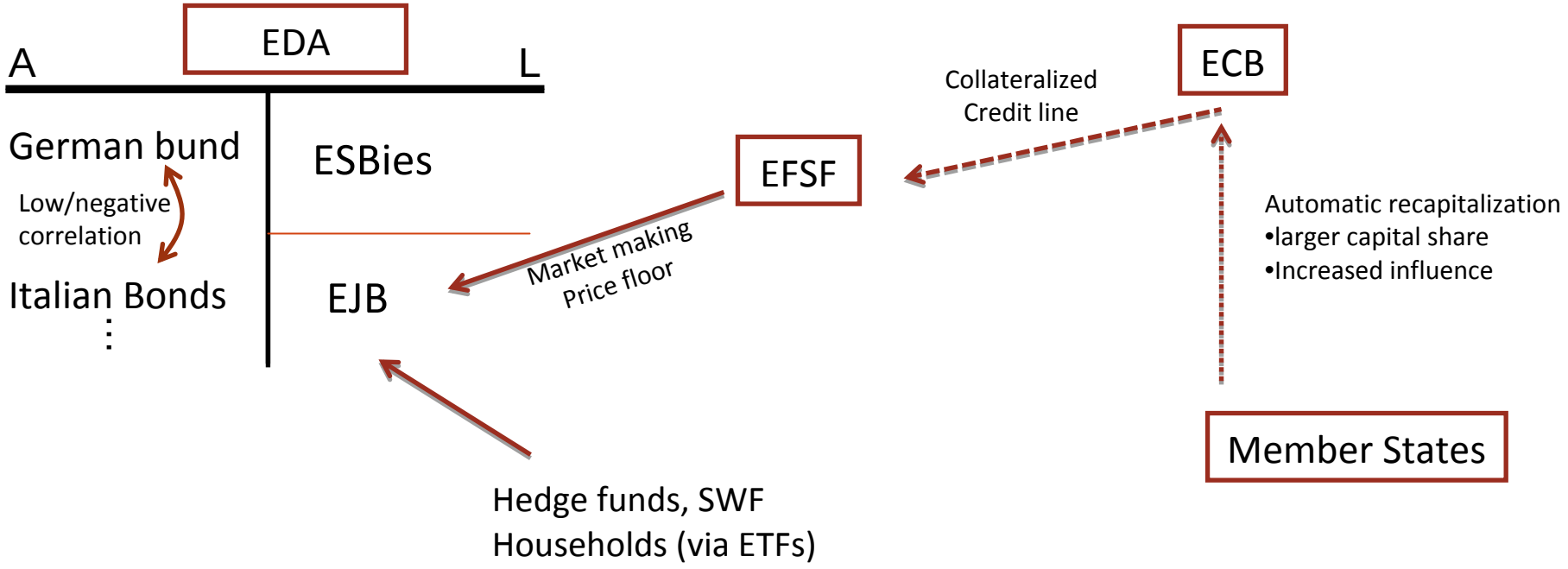
Q3: Governance of EDA

- Mechanical: portfolio weights according to strict, stable, credible, and transparent rules
- In crisis, temptation to lift 60% limit
  - Strict governance is important
  - Open yourself up to private law suits from
    - Former/current ESBies holders
    - Former/current EJB holders
- Needed to provide truly safe security
- The EDA is not a bailout vehicle!

Q4: Who buys the EJBs?

- High risk, high return: 10yr EJBs currently 10% p.a.
- Hedge funds and sovereign wealth funds
  - Can't they take on levered sovereign risk already?
  - Yes, a hedge fund can buy the portfolio of sovereigns on margins and lever it up, but margin calls may force deleveraging at the worst possible time
  - EJBs provide fixed embedded leverage
- "Retailize" junior bond
  - Design ETFs for retail investors with EJB as underlying
  - Recall: State bonds in the US are mostly held by households, as are many European sovereign bonds

Q5. EFSF as market maker for EJB



Q.6. Didn't CDOs bring us in this mess?

- Instrumental a government entity do the structuring to avoid repeat of private-label securitization disaster of 2000s
- ESBies
  - Are simple and very transparent
  - Asset side contains liquid sovereign bonds with a traded price
  - Objective is not to largest ESBies tranche, but maximum safety
  - We use extremely high correlation assumption

Q.7. Will EDA break even?

- Concern: situation where the EDA
  - Buys individual sovereign bonds at high ask price
  - Sells ESBies and EJBs at low bid price
- 3 options of sovereign bond purchases
  1. Only on the secondary market
  2. Primary market as regular bidder
  3. Primary market with fixed quantity (like submitting market order)
- Recommendation: Option 2, since temporary price pressure from option 1 may be non-trivial

Q8: Remaining sovereign debt illiquid?

- Illiquid sovereign bonds would have low prices, little price discovery
- But ESBies and EJBs will be more liquid and if the EDA makes profit off this extra liquidity, it can be redistributed back to the national Treasuries
- If sovereign debt < 60% of GDP
  - Country gets average (best of) AAA rated country
  - Provides incentive to lower debt/GDP ratio

Q9: Don’t you force banks to realize losses?

- Not relevant for initial phase (EDA only does primary market purchases)
- Later, swap of sovereign bonds for ESBies could trigger banking book losses and may necessitate bank recapitalization, but…
  - The introduction of ESBies will stabilize the market (if communicated well as part of a long-run package)
  - Market prices will increase and allow a restructuring
  - Redistribution of liquidity premium (which is very high right now) towards peripheral countries

Q10: Maturity transformation

- Should the European Debt Agency (EDA) be active in maturity transformation?
  - No. Otherwise who should be the LOLR?
- How to ensure this?
  - EDA can only buy according to weights per maturity
    - E.g. one year paper up to 5% of GDP, two year paper up to …
  - Demand pressure will make it attractive for each sovereign to adjust their maturity structure to EDA's demand
- What maturity of ESBIES should the EDA issue?
  - whole yield curve

Q11: Don't ESBies also create externalities?

- Isn't it the case that if a country's probability of default increases, it will increase the yield of EJBs, increasing funding costs for all? And that the country does not internalize this effect on others?
- Not with perfect market liquidity.
  - Without ESBies, misbehaviour of country X hurts its existing creditors, but the country would bear the full cost on all new debt.
  - With ESBies, it's the same. Price of new debt drops. Indeed, the country would have to sell some of its debt in the market and some to the EDA, but at market price.
  - Note, ESBies/junior bond is just repacking
- With imperfect market liquidity
  - Some externalities might arise, but small in scale.

Q12. Why can't private sector create ESBies?

- Redirecting flight-to-safety flows requires change in equilibrium.
  - Focal "safe harbor asset": Price increases at times of crises.
  - Change in equilibrium requires massive coordination.
  - Private sector does not internalize stabilization benefits.
- EDA can issue at much large scale, and can reap much larger liquidity externalities.
- EDA can better commit to high standardization.

Other elements of the euro-nomics plan

- Diabolical loop causes other issues:
  - Sovereign default in Greece might trigger bank run in Portugal
  - Deposit insurance purely fiscal matter, no CB backup
  - Some countries' banking systems are large relative to GDP (Ireland, Belgium, etc.): too-big-to-save
- Solution: avoid bank runs by moving bank resolution and deposit insurance from sovereign to European level
- Principle: regulating authority also responsible for possible shortfalls

Other elements of the euro-nomics plan

- European FDIC (EDIF)
  - Funded by member banks (based on usage)
  - Credit line from ECB (irrevocable) as bridge financing
  - Requires harmonization of national rules
- European bank resolution mechanism (ERM)
  - Scope: all transnational banks, additional national banks (to 50% of GDP), all “SIFIs” (maybe including large insurance companies, shadow banks)
  - Quantitative liquidity and solvency triggers for intervention before technical solvency
  - Qualitative triggers useful during systemic crises

Other elements of the euro-nomics plan

- Bailing out Greece may make Portuguese, Spanish, … defaults more likely since there are fewer resources to support all
- Making sovereign default more credible:
  - Necessary to have a monetary union without fiscal union
  - Monetary union without sovereign bankruptcy = full-scale fiscal union!
- Practical ideas:
  - Early-warning systems by “binding” recommendations from independent European fiscal council; enforcement by constitutional courts. How credible are such plans?
  - Debt modifications: make new interest rates depend on GDP growth and debt forgiveness contingent on micro- and macro targets