Diabolic Loop
between
Sovereign & Banking Risk

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How do these concepts hang together?

- Diabolic-Loop (Doom loop)
  - Sovereign-banking-nexus
- Financial repression
- Financial dominance
- Liquidity risk nexus
- Safe assets
  - Flight to safety
  - Cross border flight
Diabolic loop: Gov. on both sides

Government/sovereign debt →

<table>
<thead>
<tr>
<th>Banks</th>
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<td>Mortgage Loan</td>
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<td>Equity Guarantee</td>
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Government guarantee
Diabolic loop

- Direct nexus

- Banks
  - Sov. Debt
  - Mortgage Loan
  - Equity Guarantee

- Sovereign Risk
  - PV (taxes)
  - PV (expen)
  - Guarantee
Diabolic loop

- **Direct nexus**

![Diagram of financial relationships]

- Banks
  - Sov. Debt
  - Mortgage Loan
  - Deposits
  - Equity
  - Guarantee

- Sovereign Risk
  - PV (taxes)
  - PV (expen)
  - Guarantee
Diabolic loop

- **Direct nexus**
- **Indirect nexus**

Diagram:

- Sovereign Risk
- PV (taxes)
- PV (expen)
- Guarantee
- Deposits
- Equity
- Guarantee
- Mortgage Loan
- Sov. Debt
- Banks
Diabolic loop

- **Direct nexus**

- **Indirect nexus**

- **Trigger:**
  - Banking crisis (Ireland, Spain)
  - Sovereign crisis (Portugal, Greece)
Link between banking & sovereign CDS

- Banking CDS spread and sovereign CDS spread
Implications of diabolic loop

- Twin crisis – High correlation
  - Banks and governments will be in a crisis at the same time
- Crisis is much worse (if it can’t avoided)
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- Non-linear response to shocks
Implications of diabolic loop

- Twin crisis – High correlation
  - Banks and governments will be in a crisis at the same time
- Crisis is much worse (if it can’t avoided)

- Non-linear response to shocks

![Graph showing non-linear relationship between Price and Fundamental Risk]

Holding out longer, but **dropping off a cliff**
### Who insures whose credit risk?

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<td><strong>Intention</strong></td>
<td>Lower Equity†</td>
<td>Push safe asset onto banks</td>
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<td>Obtain gov. guarantee</td>
<td>Cheap gov. funding</td>
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Who insures whose liquidity risk?

Why should government issue long-term bonds?

Two views - dual role of default-free long term gov. bond (no credit risk)

1. Banks insure governments against rollover risk
   • .. But what if banks are undercapitalized? ⇒ “Empty” insurance

2. Government insures banks
   • “The I Theory of Money” – redistributive monetary policy
   • Cut short-term interest rate – buy bonds through OMO
     ▪ Value of long-term bond rises
     ▪ “stealth recapitalization” of distressed sector
Cross-border implications

- “Nationalization” of sovereign debt holdings
  - Default on domestic banks is politically more costly
  - Domestic banks willingness to pay is higher
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- Country without a “safe asset”
  - Option 1: buy foreign safe asset
    - Large cross-border capital flows
  - Option 2: bet on own sovereign debt

- Solution: European safe asset
  - Without joint liability (ESBies)
Maturity implications

- In times of crisis government can dilute long-term debt
- Issuance of becomes more short-term
- Term spread widens
In sum

- Diabolic-Loop (Doom loop)
  - Sovereign-banking-nexus
- Financial repression ↔ Financial dominance
  - Extracting cheap funding/guarantees
- Default risk nexus (mutual guarantee)
- Liquidity risk nexus
- Safe assets
  - Flight to safety
  - Cross border flight
Further points/facts:

- Banks’ holding of sovereign debt (see ESRB Sovereign risk report)
  - Before 1990s: 35%-40%
  - Prior crisis: 5%-10%
  - Crisis: domestic banks stepped in

- Type of crisis
  - Specie
  - Foreign $%
  - Domestic crisis is typically solved by means of inflation

- Regulation
  - Capital/liquidity requirements won’t bite
  - Large exposure limits have bite (better diversification)
  - ESBies – but how to deal with Sweden, Czech republic

- Basel does not require zero risk weight
- Is QE an opportunity to get sovereign debt of bank’s balance sheet
- CB as primarily source of liquidity (vastly expanded balance sheet)