INNOVATIVE FINANCIAL TOOLS FOR GOVERNMENTS AND THE PRIVATE SECTOR

Prof. Alberto Monti
Email: alberto.monti@iusspavia.it

Palazzo del Cinema & Casinó

www.ferma.eu
Financial Management of Climate-related Risks

- **Risk-based** decision making at all levels
- Assessing the potential **economic and financial impacts** of disasters *(short, medium and long term)* **financial vulnerabilities**
- **Fiscal management** of disaster risks *(potential budgetary impacts of emergency response and reconstruction costs / contingent liabilities)*
- Establishing **clear rules** regarding post-disaster **financial assistance / compensation** *(solidarity, efficiency and accountability)*
Impact of Extreme Natural Events on Sovereign Ratings

Chart 2: Net Rating Impact by Peril: Cases with More Than 1/4 Notch Impact

Source: SwissRe, Standard & Poor’s calculations. © Standard & Poor’s 2015.
G20/OECD Framework (2012)

- Risk Assessment
- Risk Financing
  - Financial exposure and capacity
  - Risk financing and transfer
  - Institutional arrangements
International Policy Debate

- **G20/OECD Framework** (2012)
- **APEC Finance Ministers Initiative** *(OECD Report 2013)*
- **GFDRR - Global Facility for Disaster Reduction and Recovery**
- **International development banks (WB, ADB, IDB)**
Policy Options for Governments in Disaster Risk Financing

**Ex ante financing**
- Dedicated reserve fund
- Contingent credit facility
- Insurance
- Cat-linked securities / ARF

**Ex post financing**
- Budget reallocation
- Debt financing / borrowing
- Taxation
- International aid
CAT-linked securities

• **SECURITIZATION** of liabilities (not assets)
• **SPONSOR**
  • Insurance/Reinsurance
  • Corporations
  • Government
• **Special Purpose Vehicle (SPV)**
• **INVESTORS**
  • Institutional investors
  • Secondary market
CAT-linked securities

• SINGLE v. MULTI PERIL

• TRIGGERS:
  a) Indemnity based
  b) Index based (e.g., industry losses)
  c) Parametric (first and second generation)
  d) Model
  e) Hybrid
Private market solutions and institutional arrangements

- Promoting innovative risk transfer tools
  a) Linking risk transfer to risk mitigation
  b) Using technology to reduce transaction costs
  c) Using lending institutions as risk aggregators
  d) Index-based / parametric insurance (agriculture)
  e) Micro-insurance / micro-finance solutions

- Establishing disaster risk (re)insurance schemes
## Disaster (re)insurance schemes
### Legal Framework

<table>
<thead>
<tr>
<th><strong>Hazards covered</strong></th>
<th>All, pre-selected group, single</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope of coverage</strong></td>
<td>Residential property, commercial property, public assets, infrastructures, business interruption</td>
</tr>
<tr>
<td><strong>Role of government</strong></td>
<td><strong>Role in direct compensation</strong></td>
</tr>
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<td></td>
<td><strong>Government reserve funds</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Pre-specified financial assistance arrangements</strong></td>
</tr>
<tr>
<td><strong>Role in insurance markets</strong></td>
<td><strong>Backstop liquidity provider, reinsurer, direct insurer, guarantor</strong></td>
</tr>
<tr>
<td><strong>Key features of schemes for insurance markets</strong></td>
<td><strong>Extent of compulsion</strong></td>
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<td></td>
<td>Mandatory offer, purchase, or extension</td>
</tr>
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Regional risk pooling

- The African Risk Capacity (ARC)
- The Caribbean Catastrophe Risk Insurance Facility (CCRIF SPC)
- The Pacific Catastrophe Risk Insurance Pilot (PCRIP)
- The Southeast Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF) and Europa Re
Regional risk pooling

<table>
<thead>
<tr>
<th>ARC</th>
<th>CCRIF</th>
<th>PCRIP</th>
<th>Europa Re</th>
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<tbody>
<tr>
<td>To assist <strong>AU Member States</strong> in planning, preparing and responding to extreme weather events and, in particular, <strong>drought</strong>, with a view to protecting the food security of vulnerable populations.</td>
<td>To limit the financial impact of <strong>earthquake</strong>, <strong>tropical cyclone</strong> and <strong>excess rainfall</strong> to <strong>Caribbean governments</strong> by quickly providing contingent funds allowing public facilities to continue their operations.</td>
<td>To help participating countries <strong>improve their budget flexibility and strengthen their early response capabilities</strong> by ensuring <strong>rapid access to limited funds for swift post-disaster emergency response actions</strong>.</td>
<td><strong>To jump-start the development of local catastrophe insurance markets in Southeast Europe</strong> by equipping the insurance companies with adequate reinsurance, know-how and technology.</td>
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## Regional risk pooling

### Legal structure

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<tr>
<td>Treaty-based organization composed of two entities:</td>
<td>CCRIF SPC is currently (since 2014) a segregated portfolio company (SPC) registered in the Cayman Islands and supported by a network of service providers.</td>
<td>Pool of country-specific derivative contracts aimed at transferring catastrophic risks to the international reinsurance market via the intermediation of the World Bank.</td>
<td>Swiss-based specialty property catastrophe reinsurance company owned by participating countries. Licensed in Switzerland.</td>
</tr>
<tr>
<td>• the ARC Agency and</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>• ARC Insurance Company Limited, established as a mutual insurance company under the laws of Bermuda.</td>
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</table>
The Italian Case

- ...
- Is there anything we can do?
Institute for Advanced Study IUSS Pavia Workshop

Prof. Alberto Monti
IUSS Pavia
Institute for Advanced Study
Palazzo del Broletto
Piazza della Vittoria, 15
27100 Pavia – ITALY

Web: www.iusspavia.it
Email: alberto.monti@iusspavia.it