SUERF Baffi Bocconi Lecture

15. Nov. 2021
Living in a World with Recurrent Shocks

- Health: Pandemic – Covid-19
- Antibiotic resistance
- Financial Crises
- Cyberattacks
- Natural disaster  ... better building of infrastructure
- Uncertainty with new technologies

Crises come typically in pairs/triplets ...

- **Resistance** is futile – resilience will help
- **Resilience** discussed everywhere
  - robustness, risk avoidance, ..., redundancies
Robustness ≠ Resilience

- Robustness
  - withstand, fault tolerant
    - block most (known/unknown) shocks

- Resilience
  - Impact, but bounce back
  - React to shocks

- Robustness barrier
  - "I bend, a bow, but I do not break"
    - La Fontaine

- Volatility Paradox
  - Learning to be resilient via small risk exposure (human immune system)

- Re-deployable redundancies/buffers
  + rigidity is not stability - flexible responses (react/adapt in way which stabilizes society)
**Risk** avoidance ≠ **Resilience**

- **Risk** management - *static*
  - Variance

- **Resilience** management - *dynamic*
  - Mean-reversion
    - bounce “back” to new normal

Distributional impulse response (Fanchart)
Ability to Rebound Allows to take Risk $\Rightarrow$ Growth

- Resilient path vs. risk avoidance path
Resilience Destroyers

If externality of others’ behavior, difficult to avoid

- **Traps:** “points of no return”
- **Feedbacks:**
- **Tipping Points:** path dependency

Climate change: Turning off the Gulf stream
Resilience: Individual, System, Society

- **Individual:** Training, human capital, freedom,
- **System:** Redundancies (networks, global value chains)  
  Buffers (bank capital, ...)
- **Society:**
  - Interaction btw individual’s *externalities* and *responses*
  - Key: Endogenous reaction of others

```
Person A
(re)acts
suffers

Person B
suffers
reacts
```

“Feedback Externalities”

- Social contract: social norms, laws, and market
Outline of Book

- Part I: Society and Resilience

- Part II: 4 Elements of Resilience Management: COVID

- Part III: Macro Resilience
  - Innovation boost vs. Scarring
  - Financial whipsaw
  - Public Debt
  - Inflation whipsaw

- Part IV: Global Resilience
  - EMDE
  - Geopolitics, World order, Global finance, Value chains, Climate
Resilience and Policy Implications

- **Health**
  - Vaccines to return to “new normal”

- **Macro**
  - Low interest rate ⇒ more fiscal, less monetary resilience

- **Finance**
  - Efficient debt restructuring -- Capital requirements (buffers)
    (to avoid debt overhang)
  - Flexible exchange rate -- Foreign exchange reserves (buffers)
    + MacroPru (limited $-debt)

**Distributed Ledger Technology (DLT)**

**Global value chains**

- From “just in time” to “just in case” -- stress tests for GVC (resilience lessons from GFC)

**Global geopolitics**

- Global role of the dollar

**Climate change**

- Avoid tipping points
  - Sustainability = resilience + no adverse trend
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**Graph:**

- **Equity** and **Debt**
- “robust”/resistant until it breaks through “Robustness barrier”

- **Tax revenue**
Resilience and Policy Implications

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  - Sustainability = resilience + no adverse trend
Resilience, Risk, and Growth - **Sustainability**

1. Resilience  +
2. No adverse trend
Tipping Points: Resilient Sustainable Path

- Seemingly riskless part with adverse trend subject to catastrophe risk
  - Resilience path is only hope

![Graph showing Tipping Points and Resilience Path]
Tipping Points: Resilient Risky Sustainable Path

- Tighter tipping point – resilience strategy is more risky
- Uncertain tipping point
Global Finance Conclave

13. Nov. 2021
A Personal Conjecture

- In an increasingly complex society

- **Autocratic societies**
  - Seek **robustness** – attractive feature after crises
  - Suppression, minimize movements/disruptions
  - Surveillance
  - Tighten with each crisis ... no rebound

- **Open/democratic society**
  - More **resilient**
  - May appear wobbly when shock hits but internal mechanism allow for rebound
  - Open to mavericks
  - Transparency and more information flow/aggregation

**Good in**

- **Enforcing rules**

- **Invented universally accepted vaccines**
Extra Slides
Resilience ≠ Risk and Growth

- Japanese GDP
  - Lack of resilience after financial crisis, resilience after Fukushima

![Graph showing real GDP in trillions of yen from 1996 to 2021 with key events labeled: Japanese Banking Crisis, Financial Crisis, Earthquake, and COVID.](image-url)