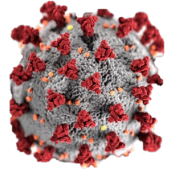


SUERF Baffi Bocconi Lecture

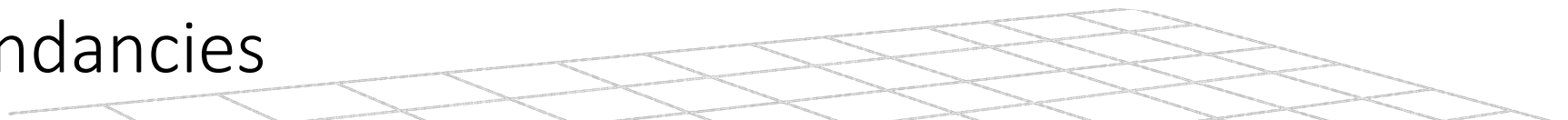
15. Nov. 2021

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

vs.

■ Resilience

- Impact, but bounce back
 - React to shocks



the reed

Redeployable
redundancies

■ Robustness barrier

"I bend, a bow, but I do not break"

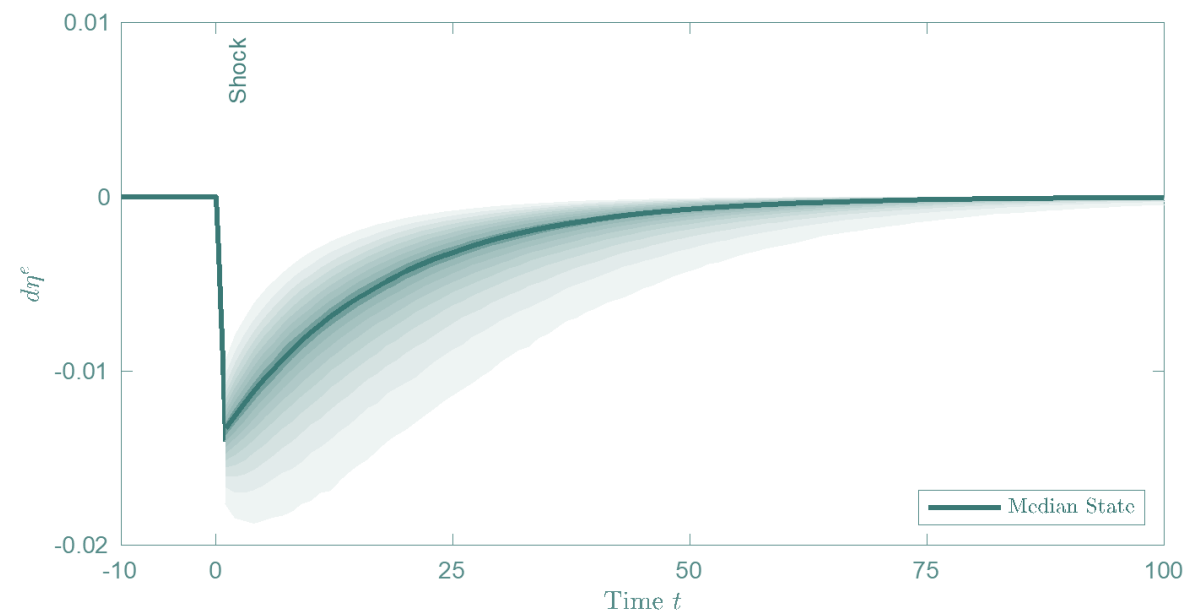
La Fontaine

■ Volatility Paradox

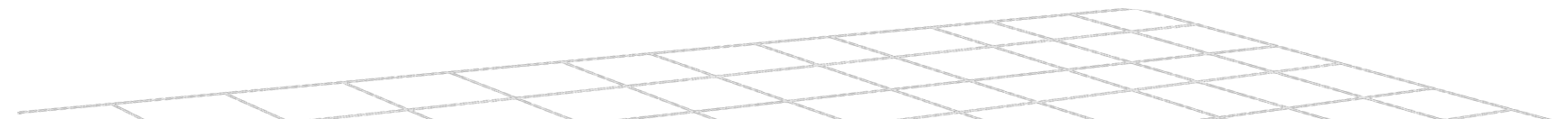
- Learning to be resilient via small risk exposure (human immune system)
- Re-deployable redundancies/buffers
 - + **rigidity is not stability** - **flexible** responses (react/adapt in way which stabilizes society)

Risk avoidance \neq Resilience

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

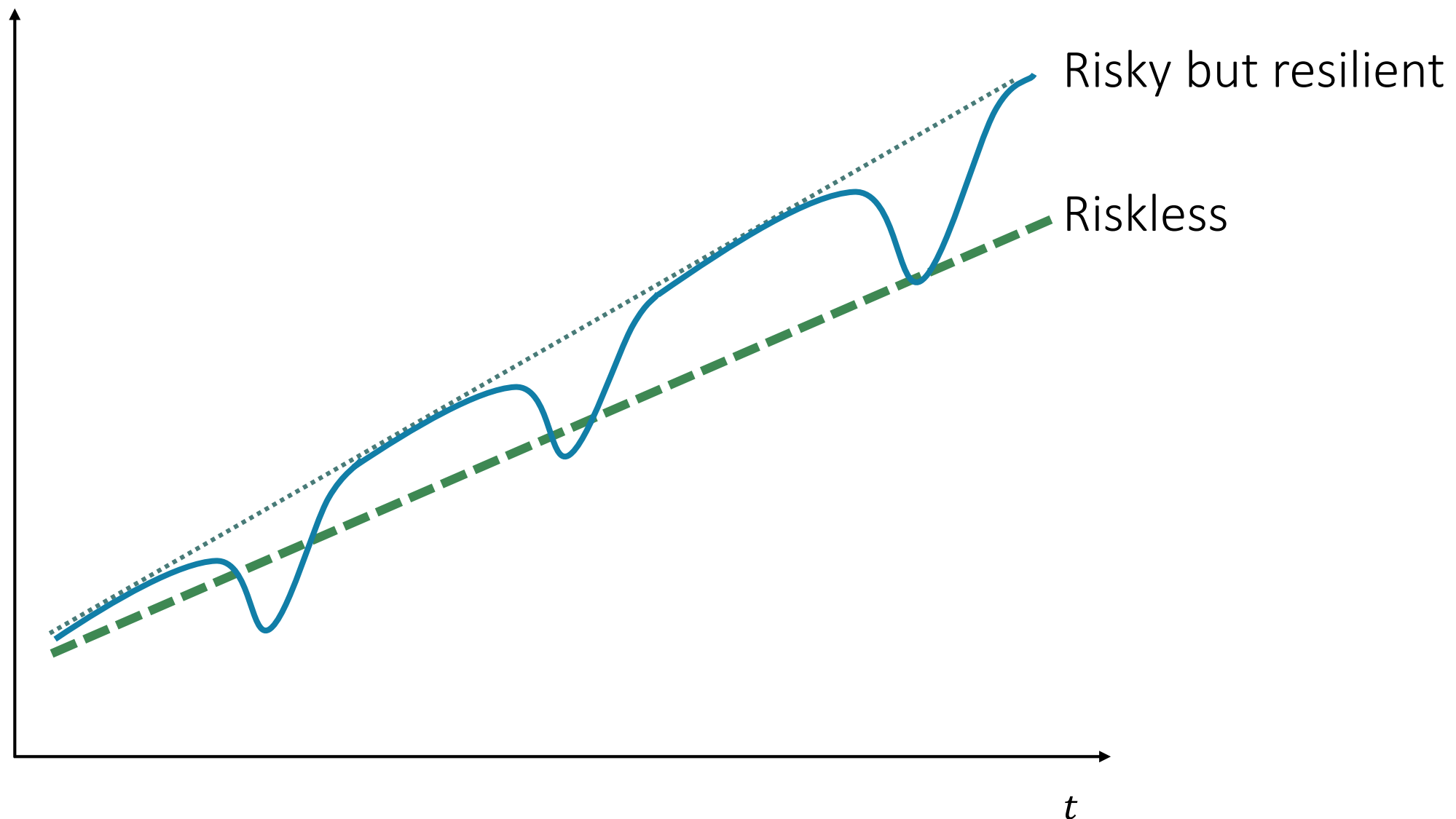


Distributional impulse response (Fanchart)



Ability to Rebound Allows to take Risk \Rightarrow **Growth**

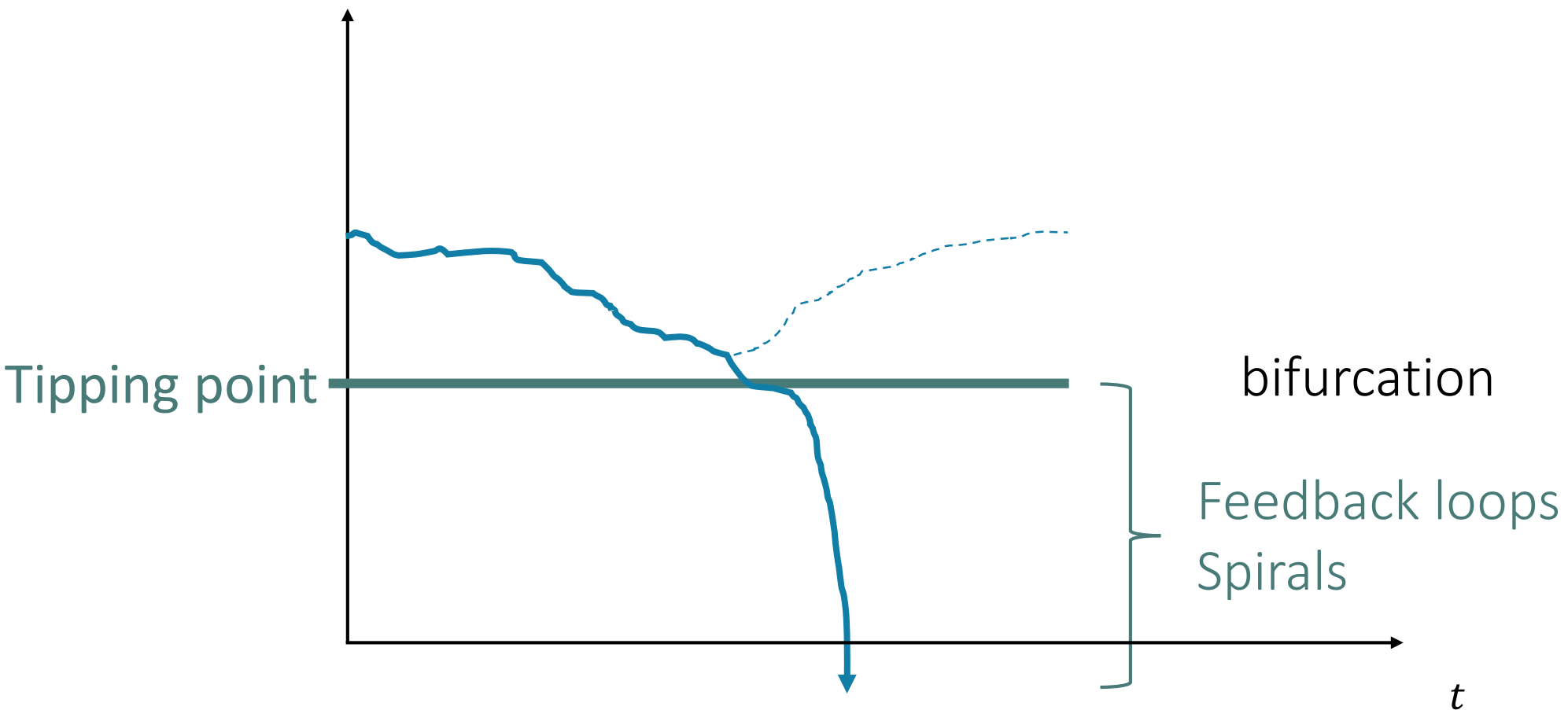
- Resilient path vs. risk avoidance path



Resilience Destroyers

If externality of others' behavior, difficult to avoid

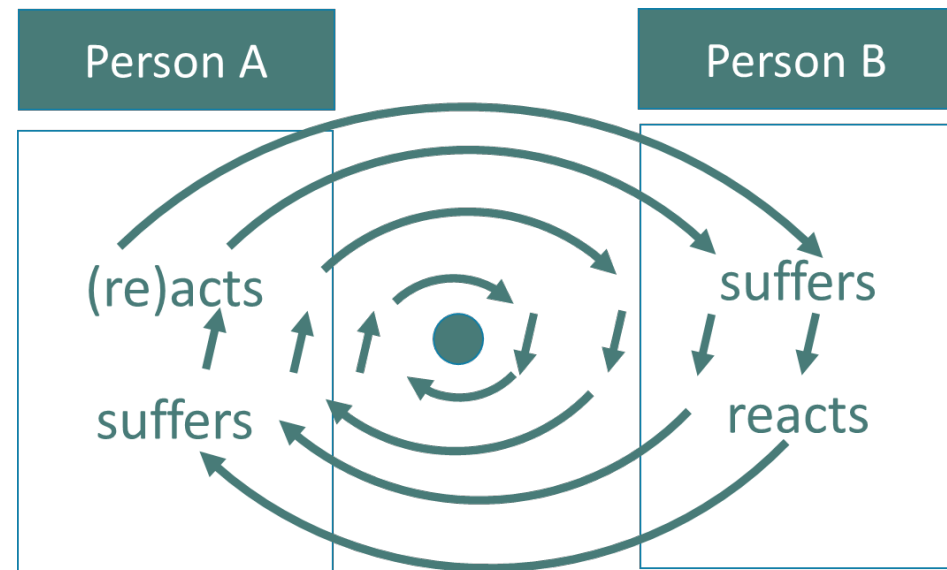
- **Traps:** “points of no return”
- **Feedbacks:**
- **Tipping Points:** path dependency



Climate change: Turning off the Gulf stream

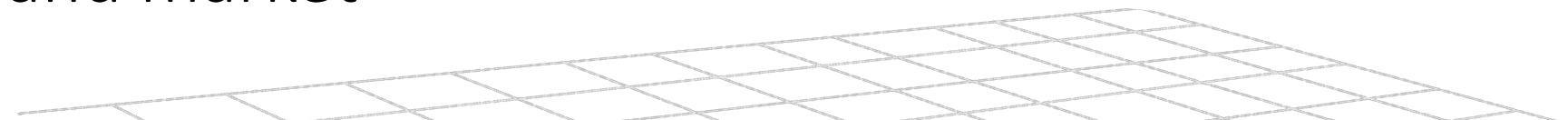
Resilience: Individual, System, Society

- **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



“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

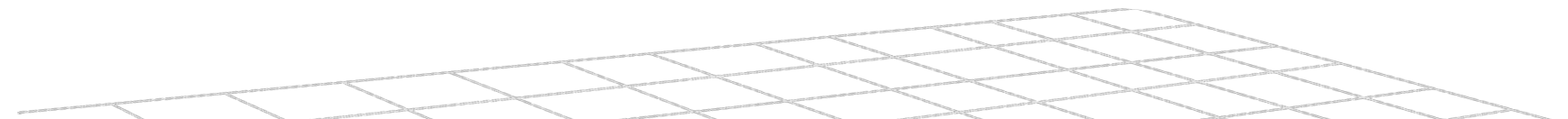
- Vaccines to return to “new normal”

- Macro

- Low interest rate \Rightarrow 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)



Resilience and Policy Implications

- Health

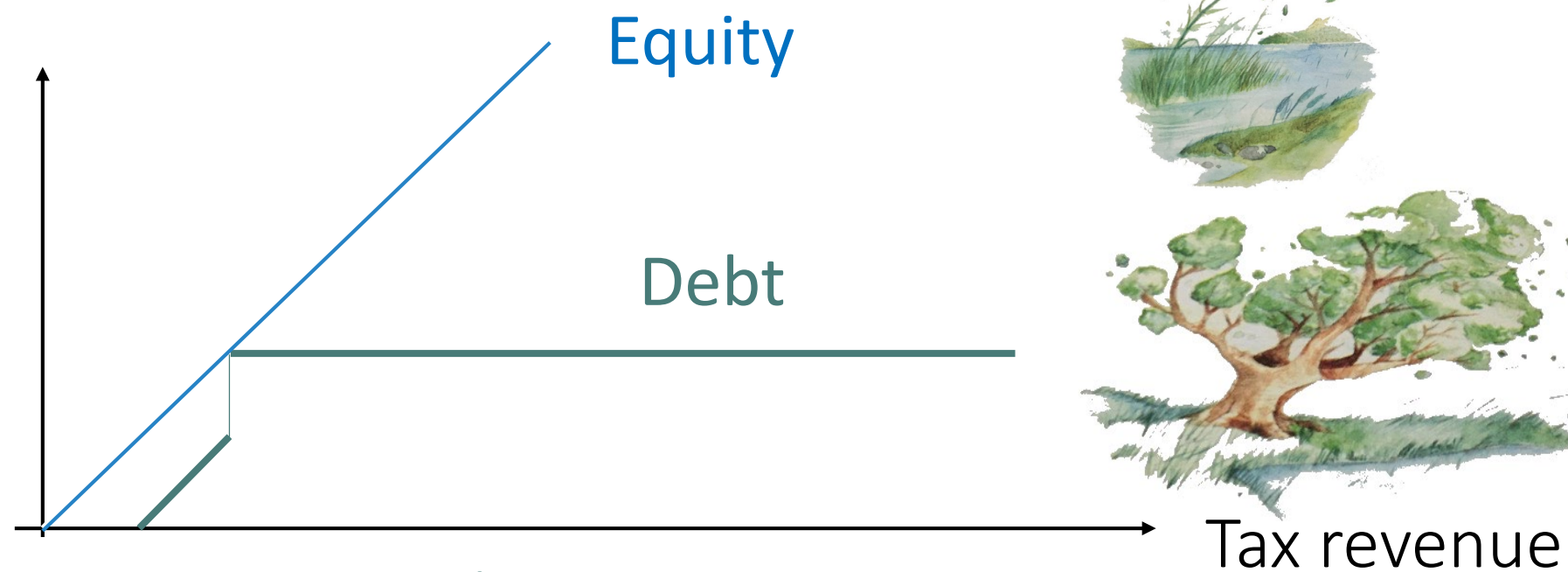
- Vaccines to return to “new normal”

- Macro

- Low interest rate \Rightarrow more fiscal, less monetary resilience

- Finance

- Efficient debt restructuring -- Capital requirements (buffers) (to avoid debt overhang)



“robust”/resistant until it breaks through “Robustness barrier”

Tax revenue

Resilience and Policy Implications

■ Health

- Vaccines to return to “new normal”

■ Macro

- Low interest rate \Rightarrow 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)

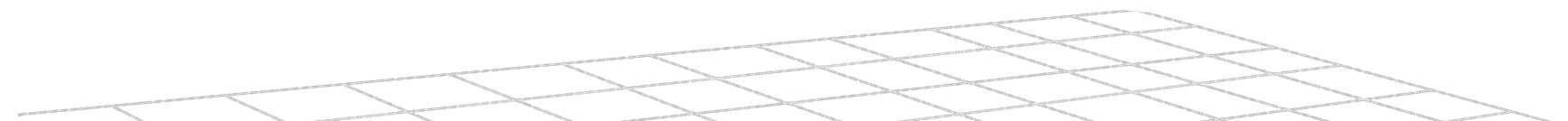
■ Global value chains

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

■ Global geopolitics – global role of the dollar

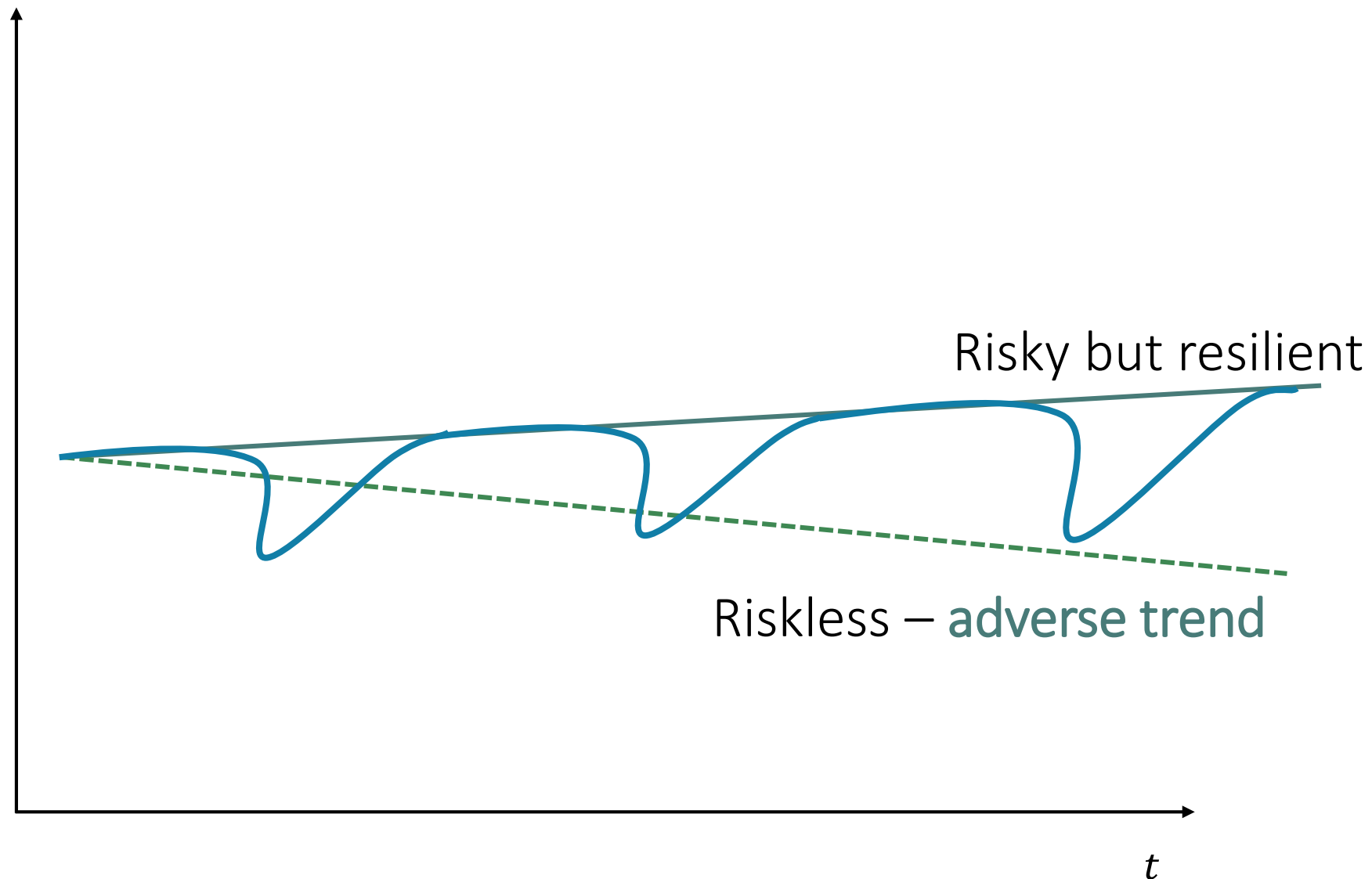
■ Climate change

- Avoid tipping points
- Sustainability = resilience + no adverse trend



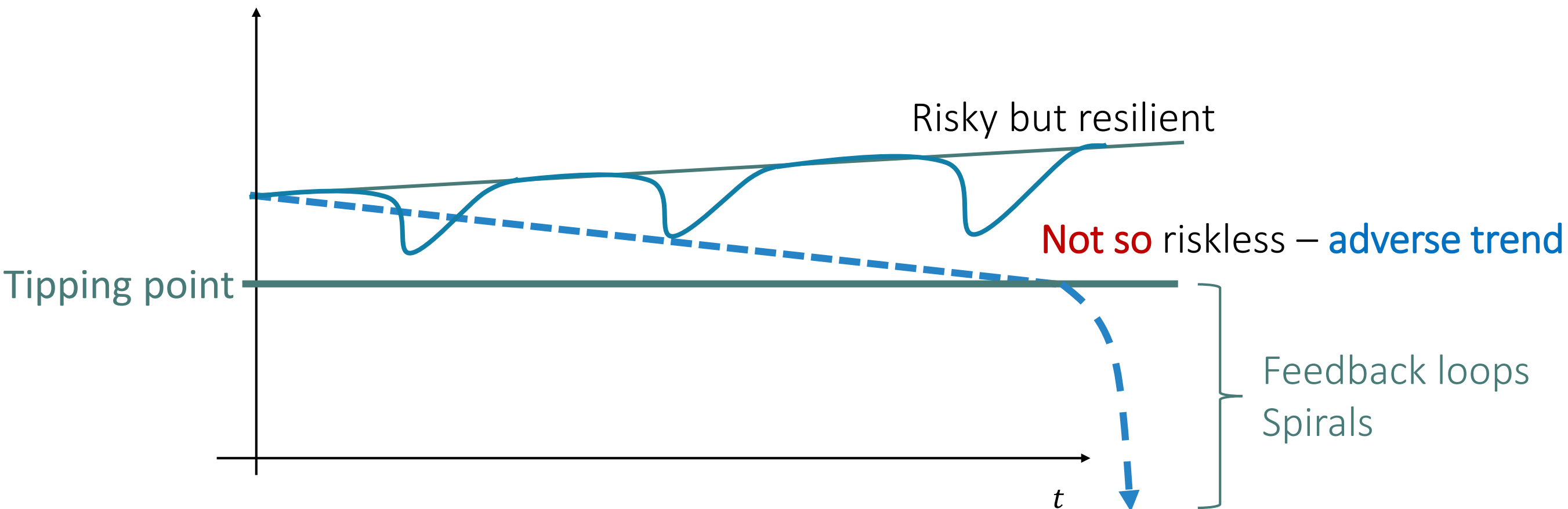
Resilience, Risk, and Growth - Sustainability

1. Resilience +
2. No adverse trend



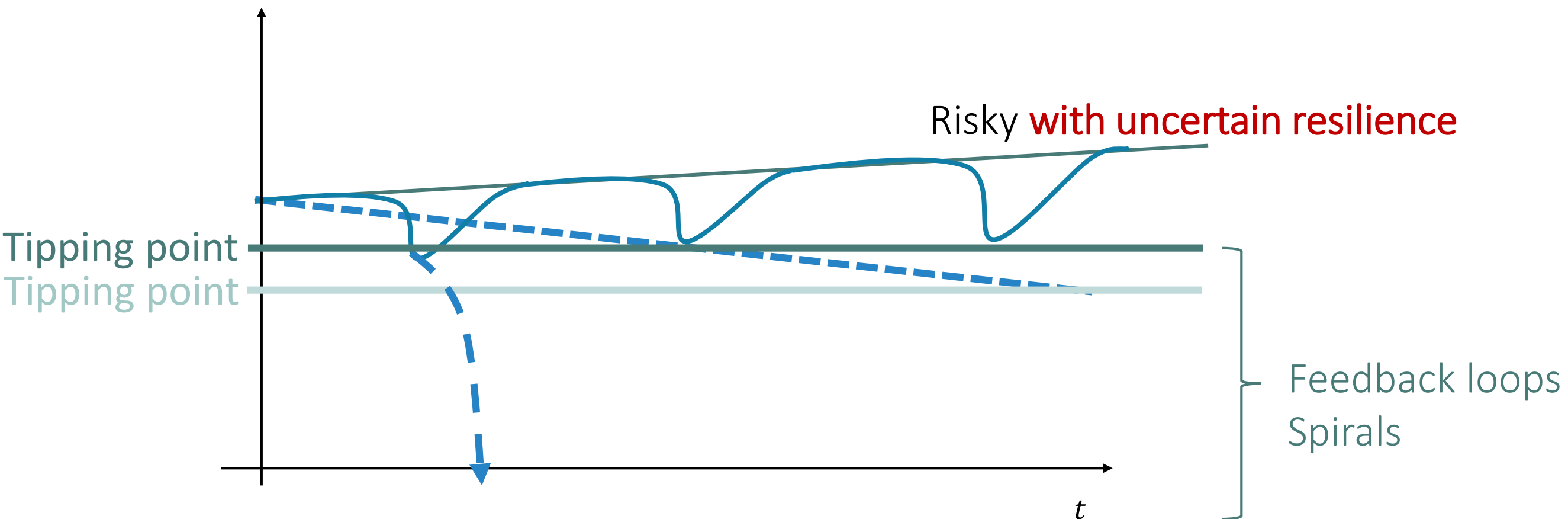
Tipping Points: Resilient Sustainable Path

- Seemingly riskless part with adverse trend
 - Resilience path is only hope

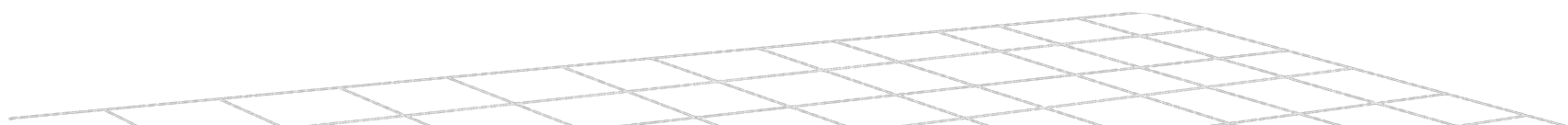


Tipping Points: Resilient Risky Sustainable Path

- Tighter tipping point – resilience strategy is more risky

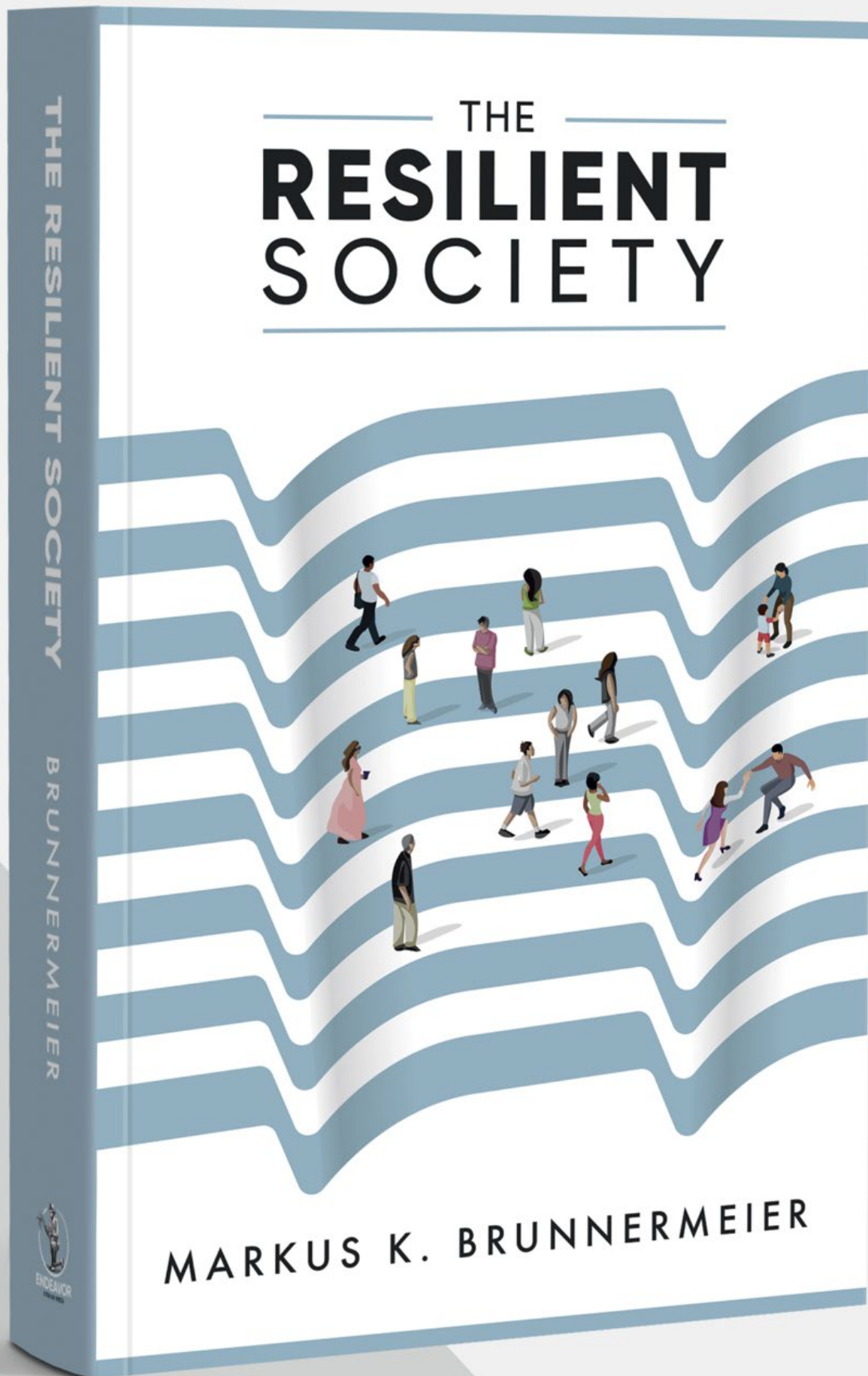


- Uncertain tipping point



Global Finance Conclave

13. Nov. 2021



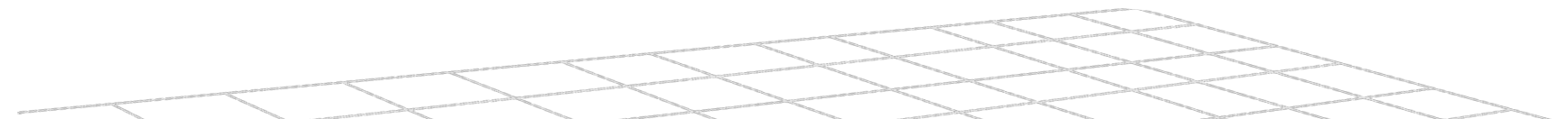
A Personal Conjecture

- 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 \neq Risk and Growth

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

