Monetary Policy and Resilience

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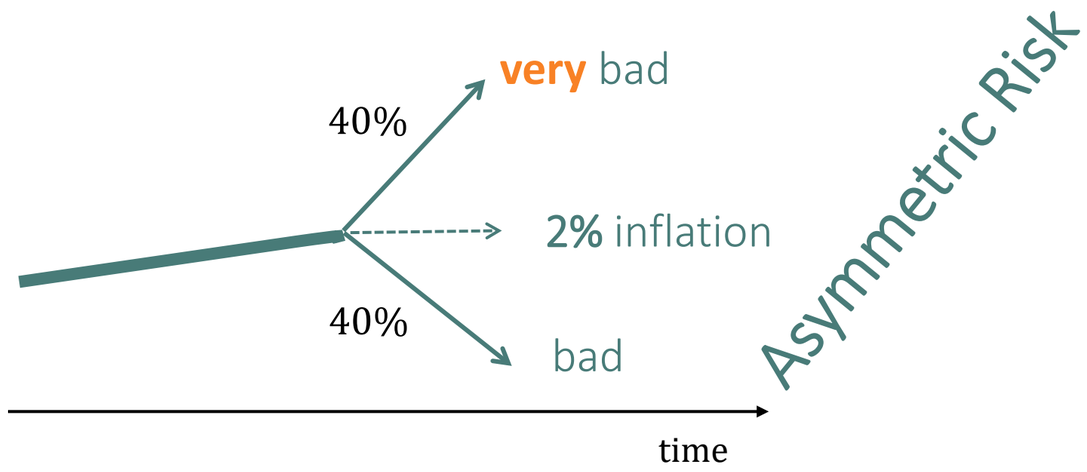
Monetary Policy: Risk Management Approach

- Deterministic thinking (outdated)
- **Risk** approach
  - probability
  - + impact (disutility) of contingency events



Monetary Policy: Risk vs. Resilience Approach

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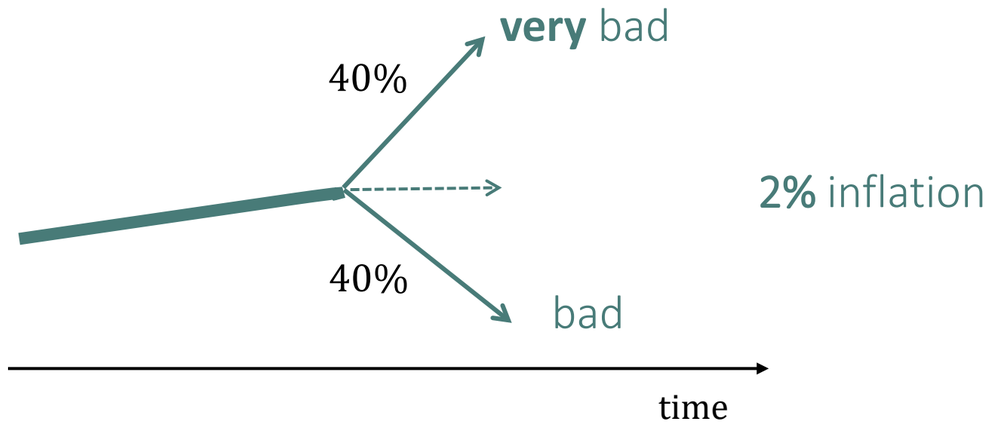

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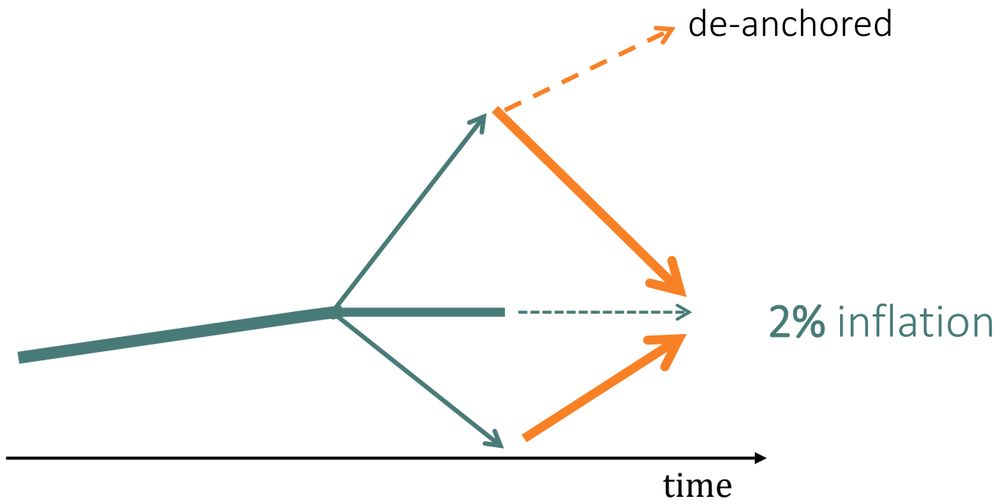

- **Resilience** approach
  - test waters, take risk
  - reacts on new info, latest when bouncing back is in danger

the reed

Monetary Policy: Risk, Robustness vs. Resilience Approach

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the reed

- **Robustness** approach
  - works in most (incl. “worst”) circumstances
  - reaction mostly not needed, autopilot, limited/coarse conditioning, rigid rules

Rigidity ≠ stability

the oak

Roadmap

- Monetary Policy:
  Risk, Robustness, Resilience Approach

- **Resilience Management**
  - Distance Tipping points: Buffers, …
  - Reaction: via rules or discretion

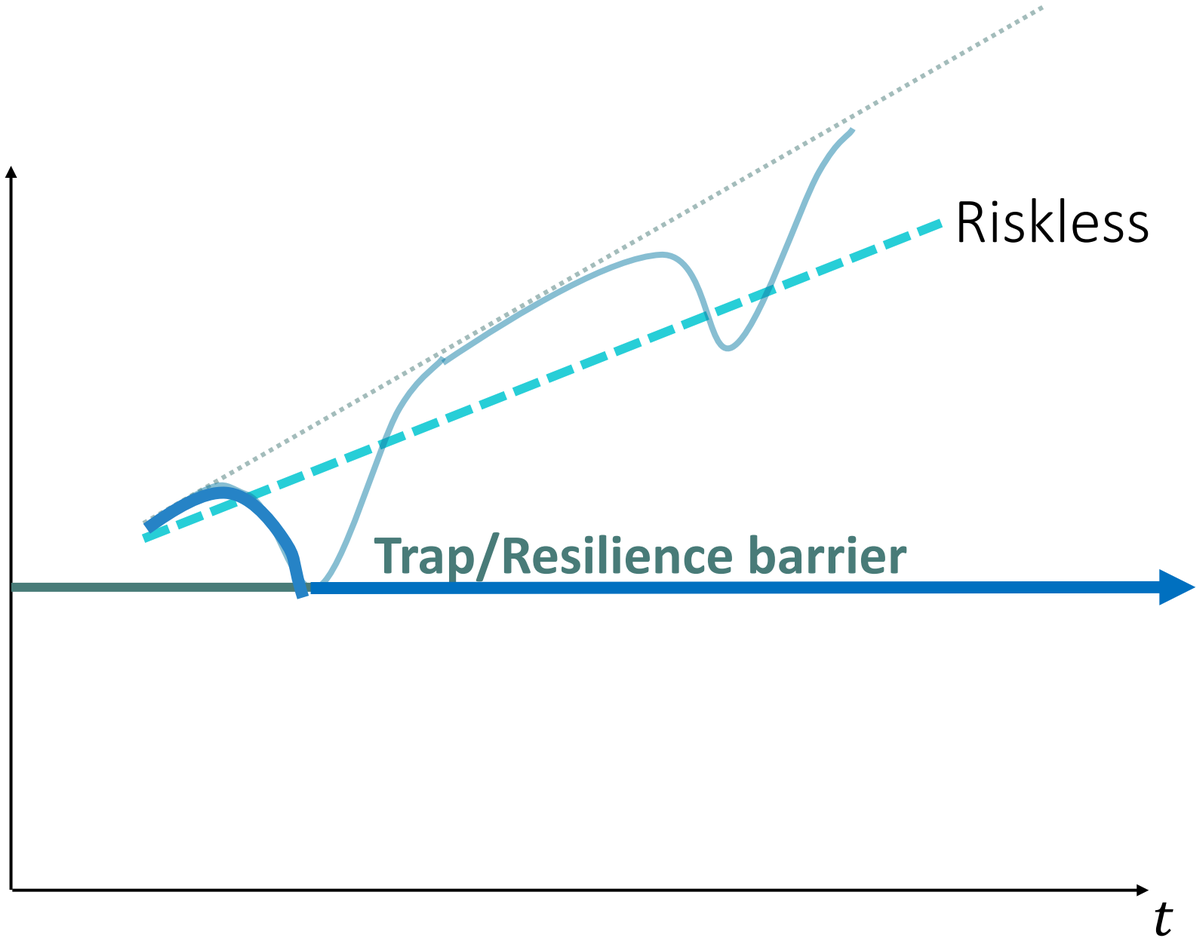
- Traps
  - Forward Guidance
  - Fiscal Dominance: Central Bank independence
  - Financial Dominance

- Structural Changes

- International Resilience

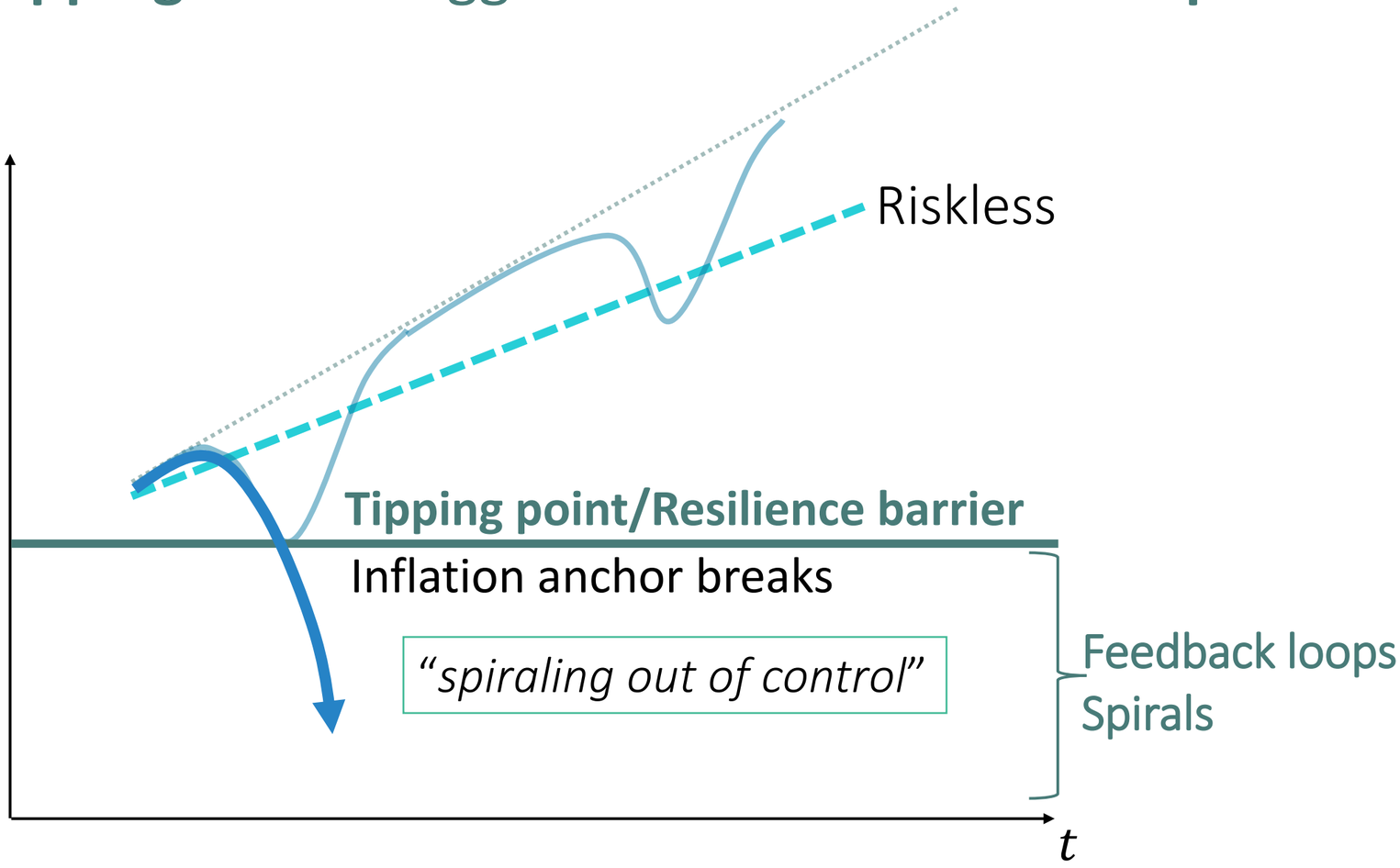
Resilience Barrier path dependencies, “points of no return”

- **Traps**



Resilience Barrier path dependencies, “points of no return”

- Traps
- **Tipping Points** triggers adverse **feedback loops**



Resilience Destroyers

path dependencies, “points of no return”

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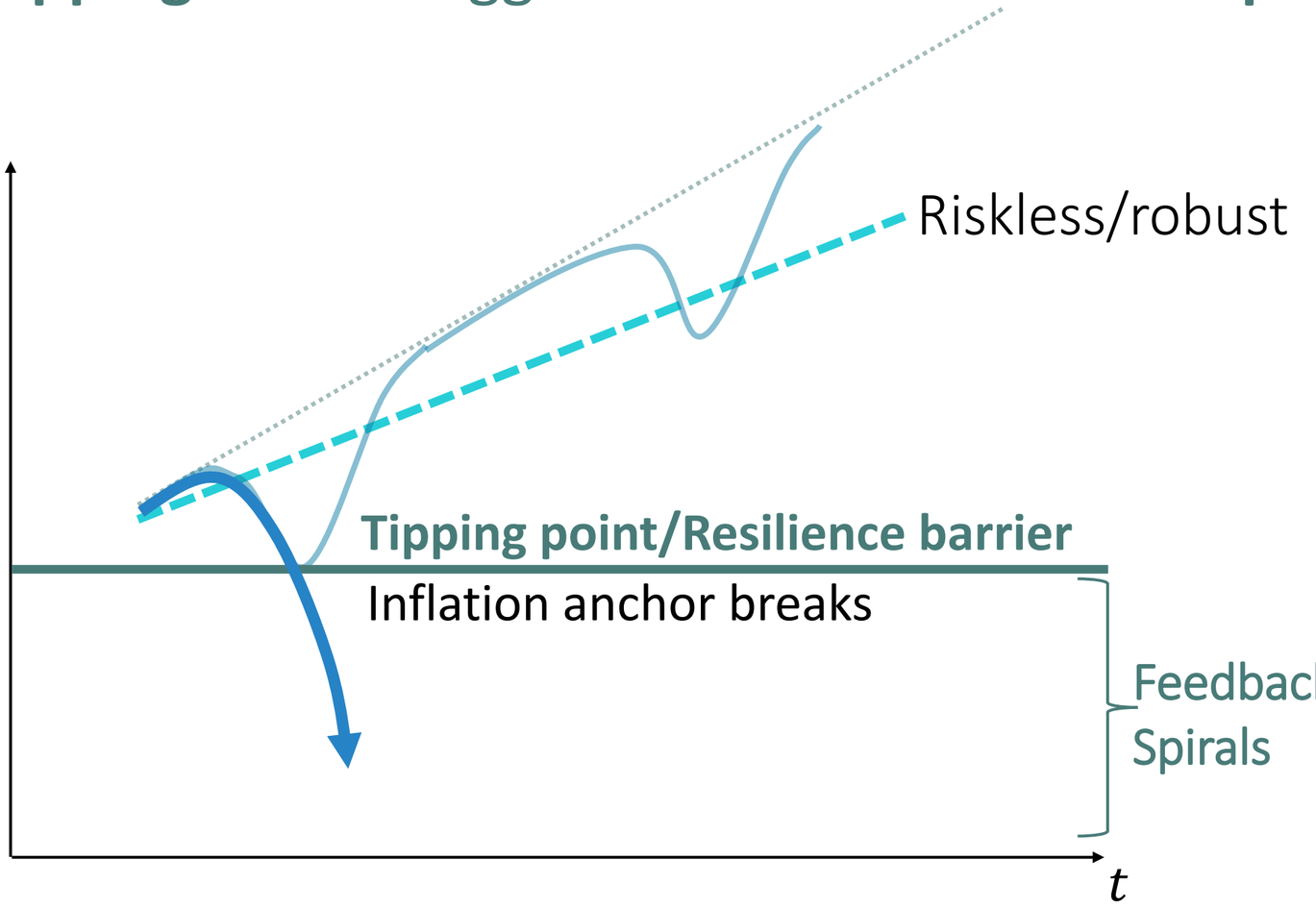
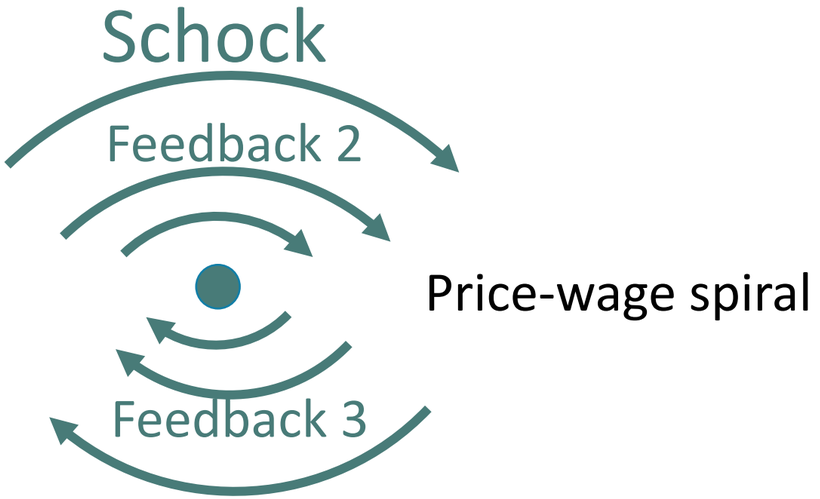
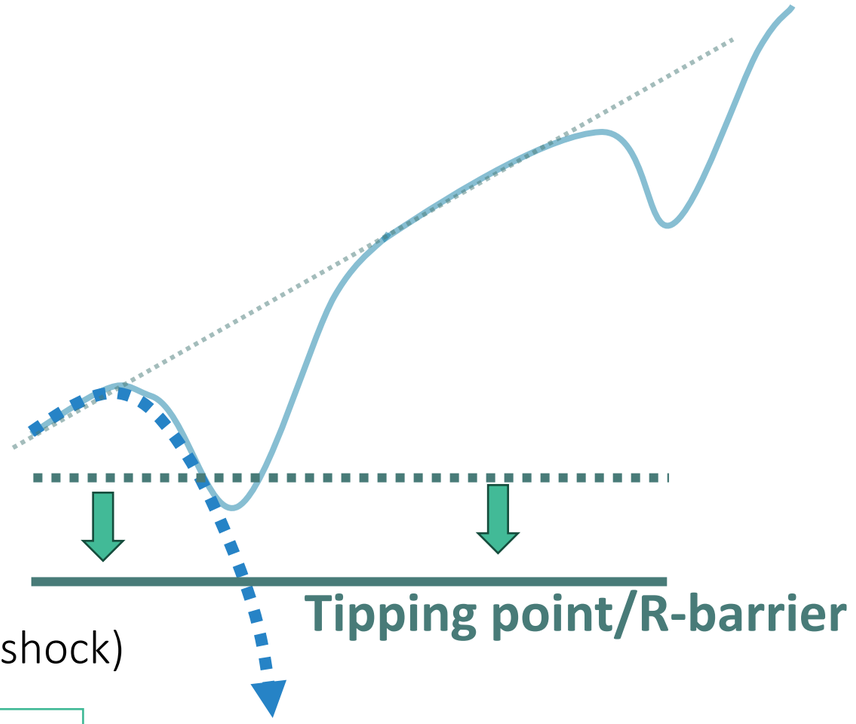
- **Tipping Points** triggers adverse **feedback loops**





Resilience Management

1. **Push barrier**/tipping point further **away**
   - *ex-ante* investment
   - **Buffers**, reserves, war chest, (specific) redundancies
   - No overheating of the economy
     - Like moving ahead without keeping tipping point at a distance
       Sahm Rule: if $u < u^* - .5\%$, then unemployment jumps (after a shock)



When does rubber band break? Thicker rubber band

Also for robustness

2. **Agility: react *earlier*** to turn around

Resilience Management

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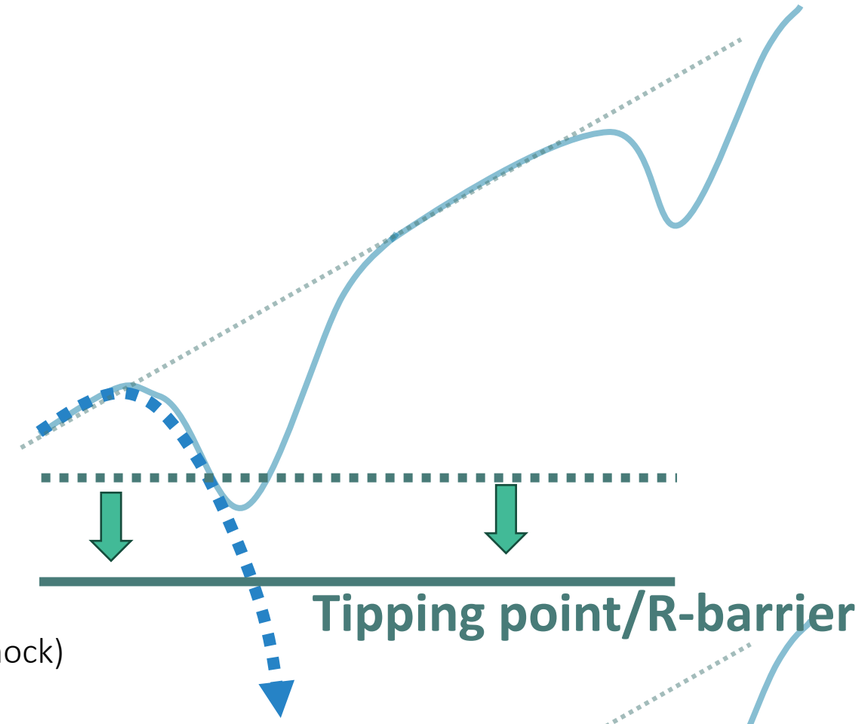
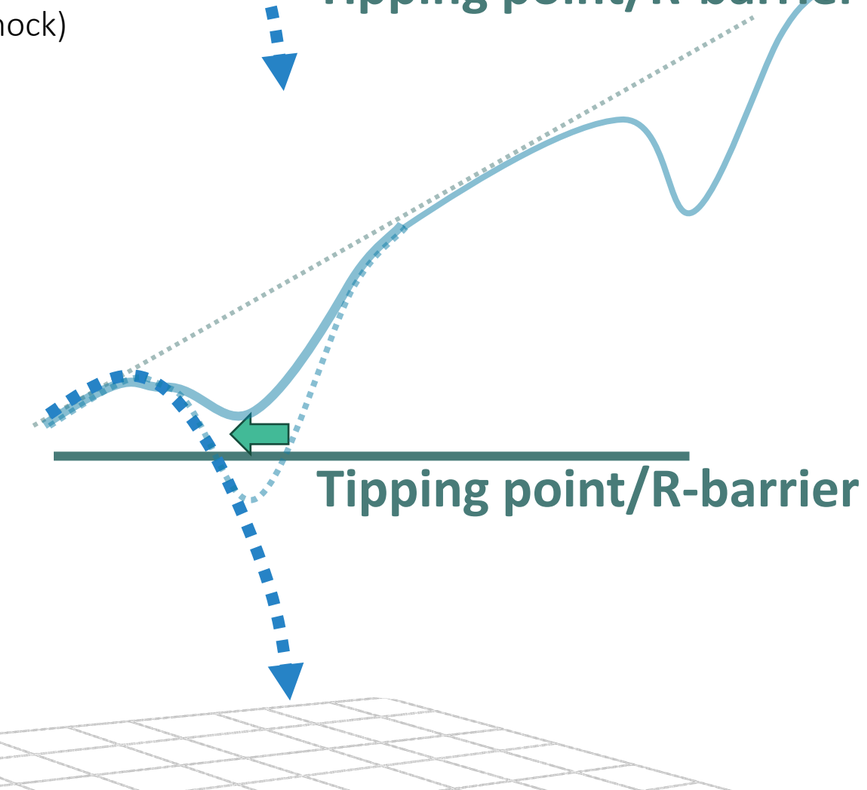


2. **Agility: react *earlier*** to turn around (≠ rigidity)
   a. **(Re)action** (of CB) in timely fashion
      - ex-post discretion vs. ex-ante rule (automatic algo)

      Large shock vs. a sequence of shocks

   b. **Expectations of others**: Re-re-actions



2a. Reaction: Prediction and Time

Challenges for CB's reaction:

- **Predictability** of inflation declines ↓
- **Reaction time**
  Monetary Policy acts with long and variable lags

⇒ "behind the curve"

Lesson:

More responsiveness to data (higher Taylor coefficient)

More buffers

2a. Reaction: Optimal Rule/Discretion Mix

- Discretion (ex-post)
  + easy to adjust to new circumstances
  - monetary policy has no power

  - Problem if
    Time-inconsistency is severe

Rules/algorithm (ex-ante)
- adjust as specified ex-ante
+ complicated rules are difficult to communicate

unforeseen contingencies are severe
unobservable to public contingencies
communication to public

2b. Expectations of Others: Inflation Anchor

- Strength/credibility of inflation anchor
- De-anchoring = spiraling out of control (or simply limited amplification (price-wage spiral))
- Higher order **beliefs coordination** (convention, common knowledge (David Lewis))
  - *Uncertainty* what others' belief (about others' beliefs …)
  - *Disagreement*
  - *Opaqueness whether wage increase is compensation for*
    - *past price increase*
    - *expected future price increase*
- Strengthening the inflation anchor:
  - **Focal point** on anchor
  - **+ no other focal point:** creates confusion/uncertainty about alternative beliefs
  - Narrative is key

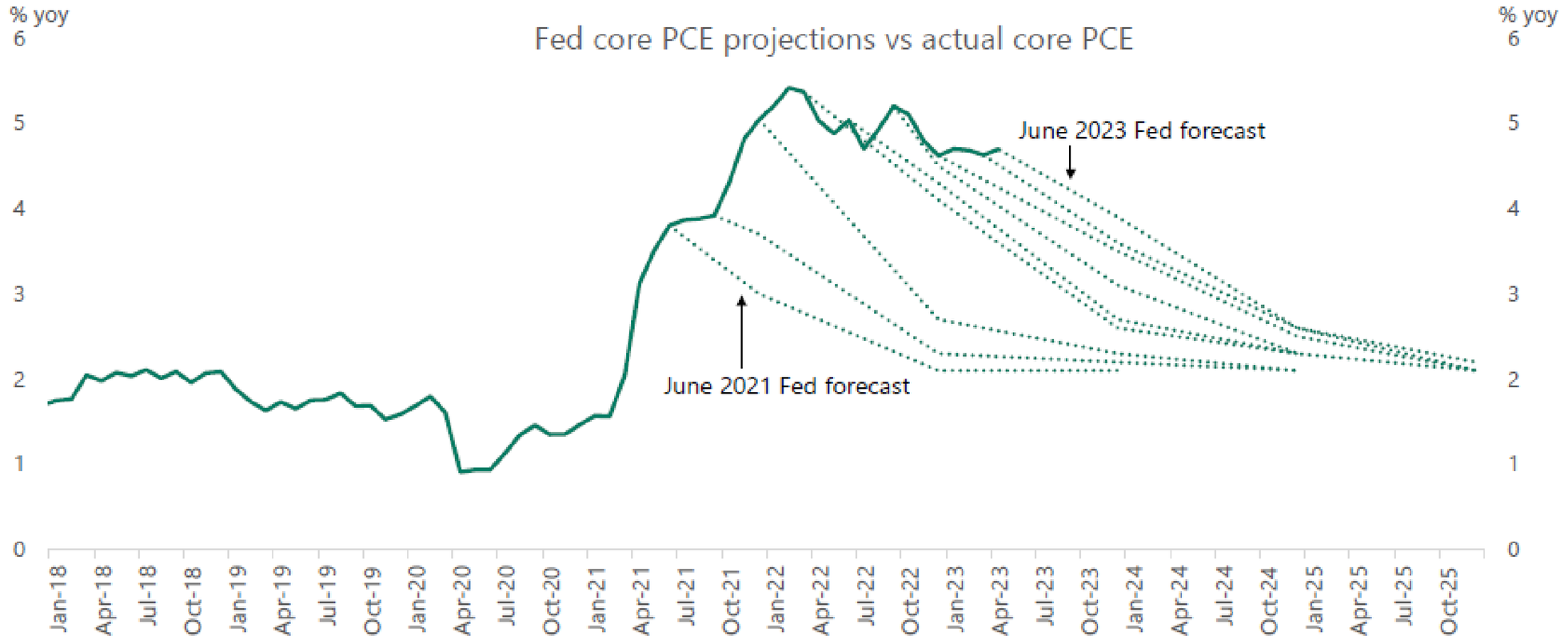
- Re-anchoring at 3%
  - How to create common knowledge at different level?

Danger: “Anchor Assumption”

- **Inflation anchor** implicitly **assumed**
  - VAR, stationary DSGE
  - ⇒ transitory bias

Rubber band can’t break by assumption

➡ Resilience is assumed



Source: Federal Reserve Board, BEA, Bloomberg, Apollo Chief Economist.

Risk vs. Resilience Diversification

- **Risk diversification**
  - Spread across many, each a bit
  - “don’t put all eggs in one basket”
    - Example: Many MoPo instruments a bit, instead of one a lot

- **Resilience diversification**
  - Initiate many, scale up after realization
  - “open many doors, so that can easily and swiftly react”
  - Increases agility, reaction speed

Co-Resilience

- Risk: Covariance, CoVaR
  - Co-movement btw X, Y

- Co-Resilience:
  - X-process realization **affects mean-reversion** of Y-process

  - Example:
    Negative shock on **financial stability** (uses up resources) and
    moves **tipping point** for price stability closer ⇒ less resilience in **price stability**

Changes and Challenges

- *What's new?*

Implications for Central Banks

1. Limited inflation **predictability + Polycrises**
   - Supply/ demand, idio/systematic risk, temporary …

MoPo lags and behind the curve

2. High **gov. debt level**,
   Fiscal policy impacts inflation

Monetary-Fiscal Interaction
- from coexistence to rivalry/blame game
- Central Bank independence

3. High **private debt level + inflation**
   High asset prices, depressed risk premia

Monetary-Financial Stability Interaction
- from congruence to trade-off
- Demand management vs. Fin stability

4. **Transition phase** due to Structural Changes
   - Green transition, WfH, De-globalization, Demographics
   - Digital Money/ CBDC etc.

r^* and risk premium transition

Roadmap

- Monetary Policy:
  Risk, Robustness, Resilience Approach

- Resilience Management
  - Distance Tipping points: Buffers, …
  - Reaction: via rules or discretion
  - Risk vs. Resilience: Diversification and Comovement

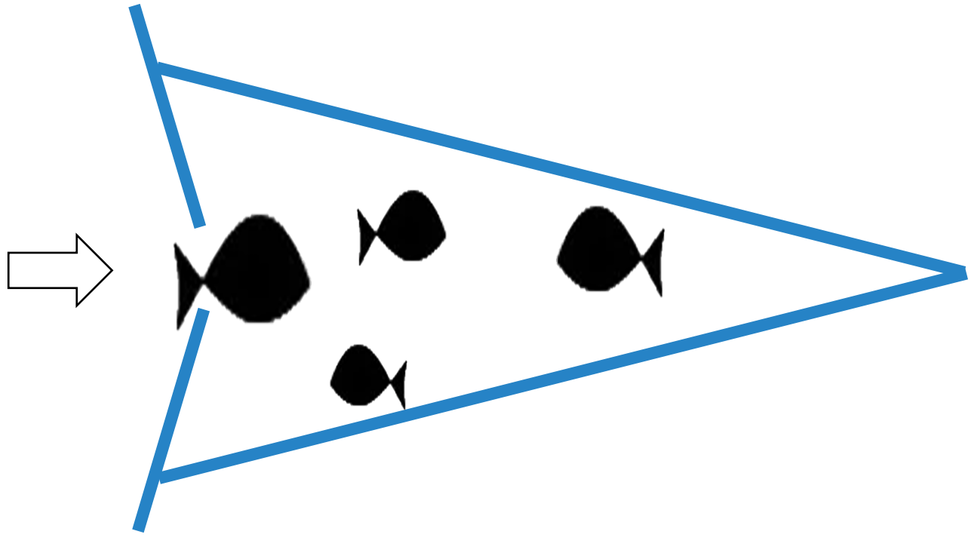
- **Traps**
  - Forward Guidance
  - Fiscal Dominance: Central Bank independence
  - Financial Dominance

- Structural Changes

- International Resilience

Trap thinking

- Trap = “no bouncing back” = no resilience



- Avoiding traps requires ex-ante thinking
- Limit Odyssean **forward guidance**
- How to avoid “**fiscal dominance trap**”?
  - Central Bank **Independence**
  - Communication and backing by general public
    - Political pressure
- How to avoid “**financial dominance trap**”?
  - **Macro-pru**dential regulation
    - Ensure that financial sector does not constrain monetary policy room

Trap 0: (Hidden) Forward Guidance

- Explicit Odyssean Forward Guidance “traps” future MoPo

- Hidden Forward Guidance
  - “Data driven approach”
  - Sequencing
    - Only raise interest after QE is completed

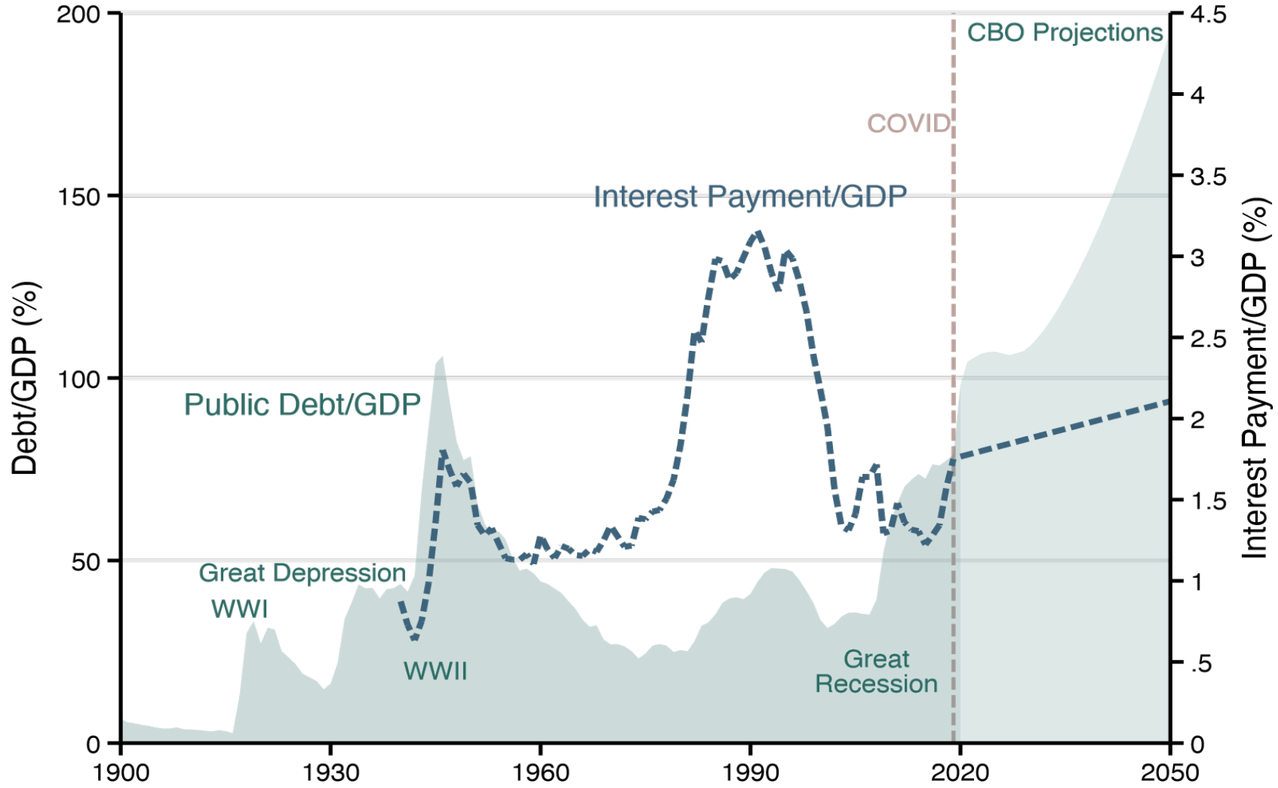
Trap 1: Fiscal Dominance (over Monetary)

- Fiscal policy impacts on inflation. 2 views: (i) aggregate demand (ii) FTPL+
- Monetary tightening has much large fiscal implications
  - Due to high debt level

➡ Central Bank-Government tensions/political pressure

FTPL vs. Sargent-Wallace

- Budget holds out-of-equi-librium or not



Trap 1: Fiscal Dominance – Central Bank Independence

- Legal, international treaty
- **Capitalization** of CB's balance sheet
  - Interest rate payments on reserves to private banks
    - CB funding cost has doubled (BIS bulletin)
    - Loss on long-dated assets due to QE
  - Headline risk
    - Delay QT to avoid realizing capital losses Trap
  - Lesson: **Risk-focus** (not size-focus) of CB balance sheet

New Tool:
Required vs. excess reserves

- Monetary Dominance & Sovereign **debt restructuring** costs
  - Ultimate subgame as shifter of bargaining power in game of chicken

- Monetary Dominance and **CB communication**
  - Narrative + blame game

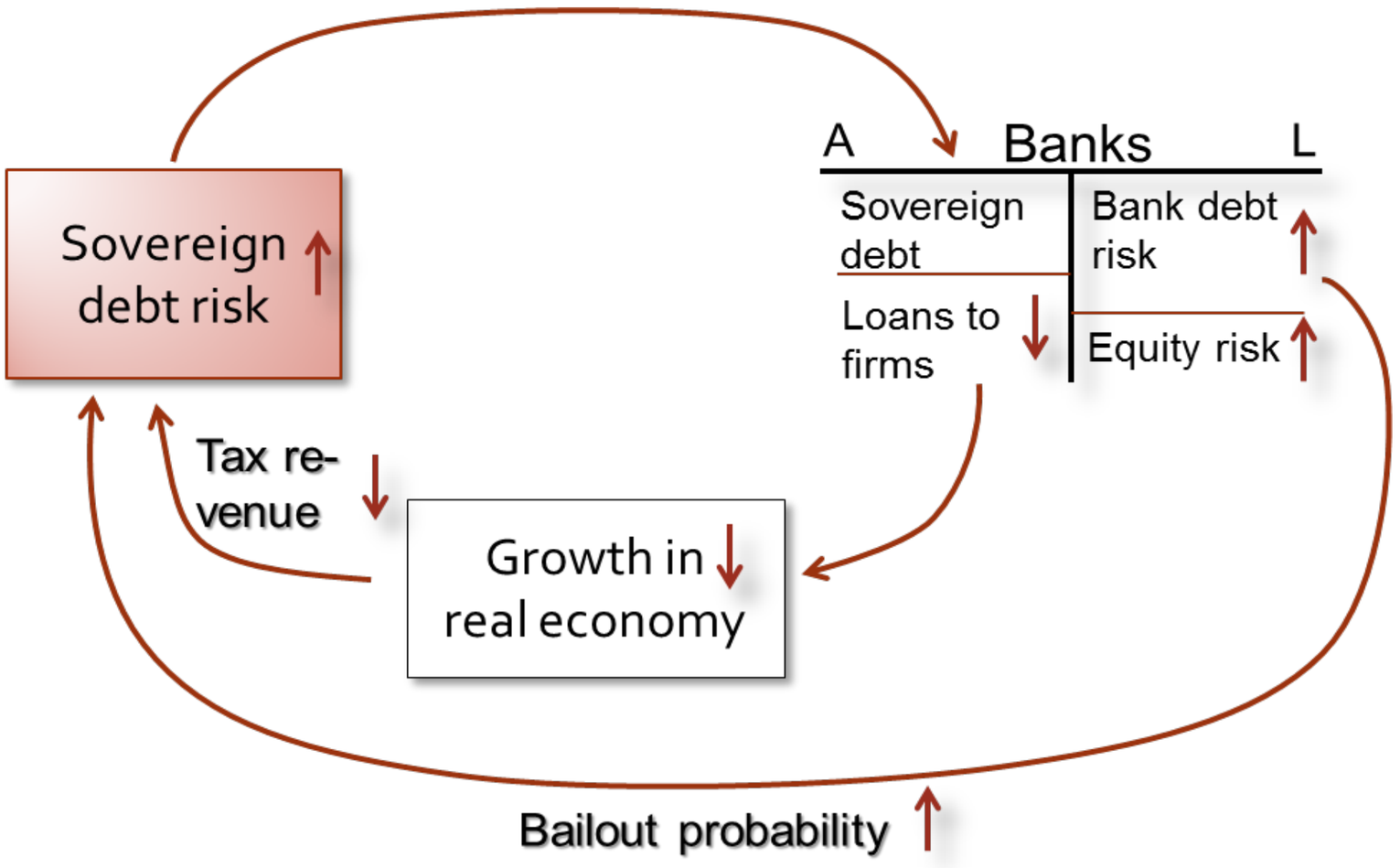
Trap 2: Financial Dominance (over Monetary)

- Low inflation environment: **concurrence** btw price and financial stability
  - Monetary loosening boosts demand and financial stability
  - “Whatever it takes” approach is feasible
- High inflation environment: **trade-off**
  - Price vs. financial stability
  - Expect less intervention
    ⇒ higher inflation expectations

- CB distorted asset price signals
  - Short vs. pro-longed intervention

Trap 2: Financial Dominance – Doom/Diabolic Loop

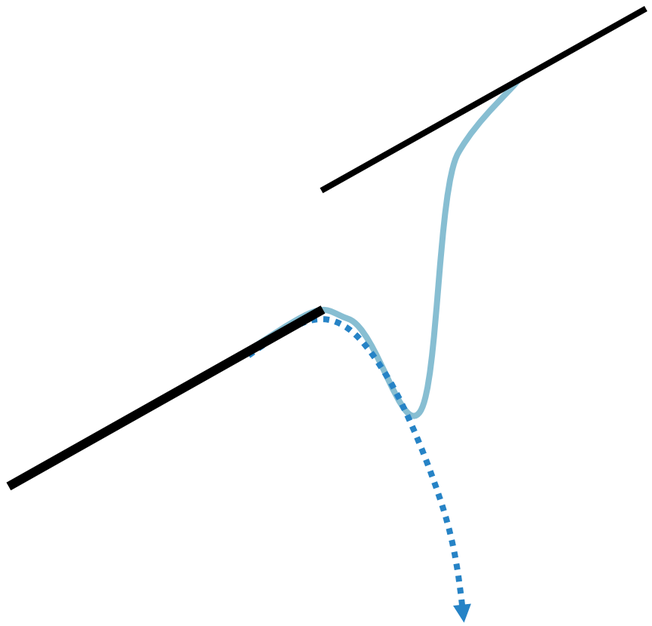
- Doom/Diabolic Loop



Resilience after Structural Changes: Transitions Phase

- MoPo is not designed for structural changes, but can accommodate transition
- Impacts r^* and risk premia

1. **Green transition** r^* increases
   - Reduced investment in dirty technology
   - Destruction of dirty and increase in green technology
2. **Work from home**
   - More leisure, lower labor income
   - Productive loss/gain?
3. **Demographic change**
   - More saving followed by more dissaving
4. **De-globalization**
   - Efficiency loss (via trade barriers)
   - For export nations also negative demand
5. **Digital Money**



Roadmap

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- **International Resilience**
  - Risk sharing vs. Beggar-Thy-Neighbor
  - US Monetary Policy Spillovers
  - Global Flight to Safety: GloSBies

Resilience via Flexible Exchange Rates vs. Buffers

1. Exchange Rate Devaluation

- Implicit “transfer” at the expense of other countries

1. **Global risk sharing arrangement** (ex-ante perspective)
   - Temporary & mutual
   - Helps to bounce back (Phoenix miracle)
     - If debt is denominated in domestic currency (no “original sin”)
2. **Beggar-Thy-Neighbor**
   - Continuously

2. Fixed Exchange Rate & Buffers via Reserves

- Foreign reserves push resilience barrier further away
- … but private sector issues more foreign denominated debt
- Push risk into the tails

What's a Safe Asset? What is its Service Flow?

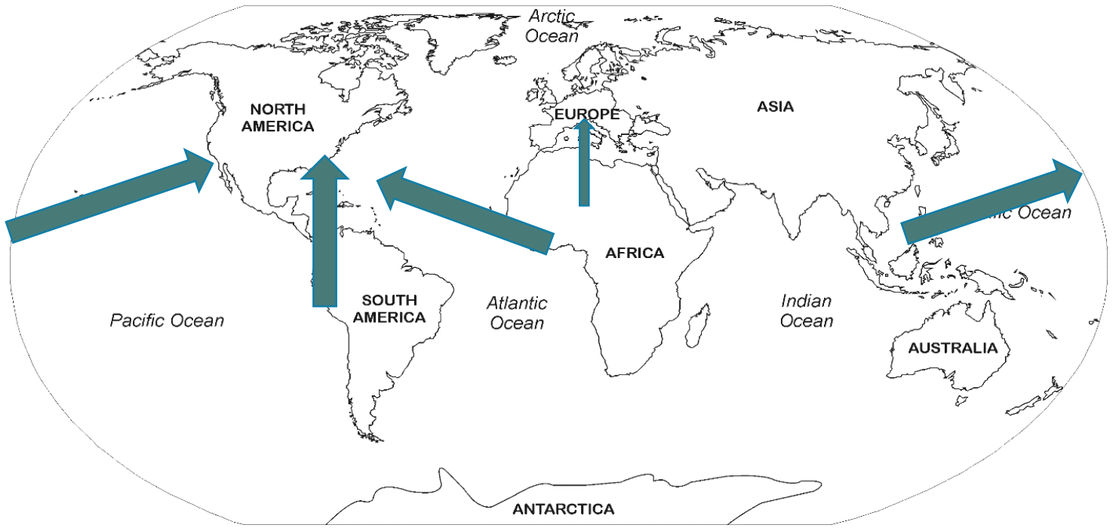
- **Good friend analog:**
  - Can sell at
    (i) high price and
    (ii) low-bid ask spread in crisis times (info insensitive)
  1. In personal need: (idiosyncratic risk)
  2. In crisis times: (systematic risk/hedge)
     - Negative CAPM-β
  - Precautionary savings
    - Low (cash flow) interest rate $r < g$
- **Safe asset tautology:** it is safe because it is perceived to be safe

$$P_t = E_t[PV_{r^{**}}(\text{cash flow})] + E_t[PV_{r^{**}}(\text{service flow})]$$

Example: interest = 0 from re-trading

International: Flight to Safety

- Risk-on, Risk-off Flight-to-safe asset



- Problem: Safe asset is *asymmetrically supplied* by AE

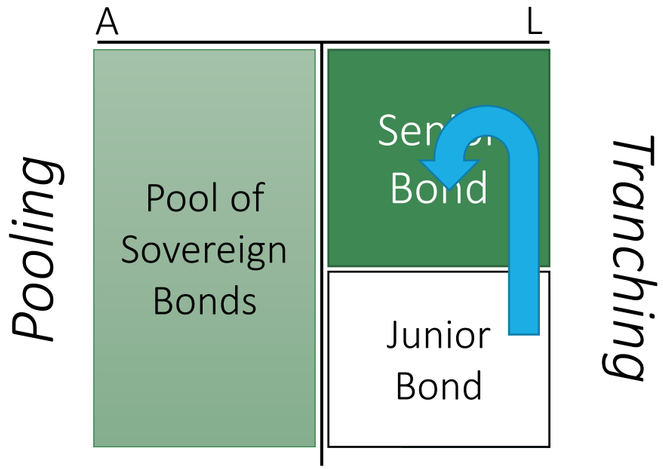
  Flight-to-safety ➡ cross-border capital flows

- Debt issues at times of global crisis
  - For AE at inflated prices eases conditions
  - For EM at depressed prices worsens conditions
- *Paradox: "Poor insure rich Paradox"*

A Safe Asset for EM: Rechanneling Approach

- Address root cause: Safe asset is supplied asymmetrically

- Create globally supplied safe asset for EME via pooling & tranching



Rechannel:
Instead of cross-border
Across asset classes

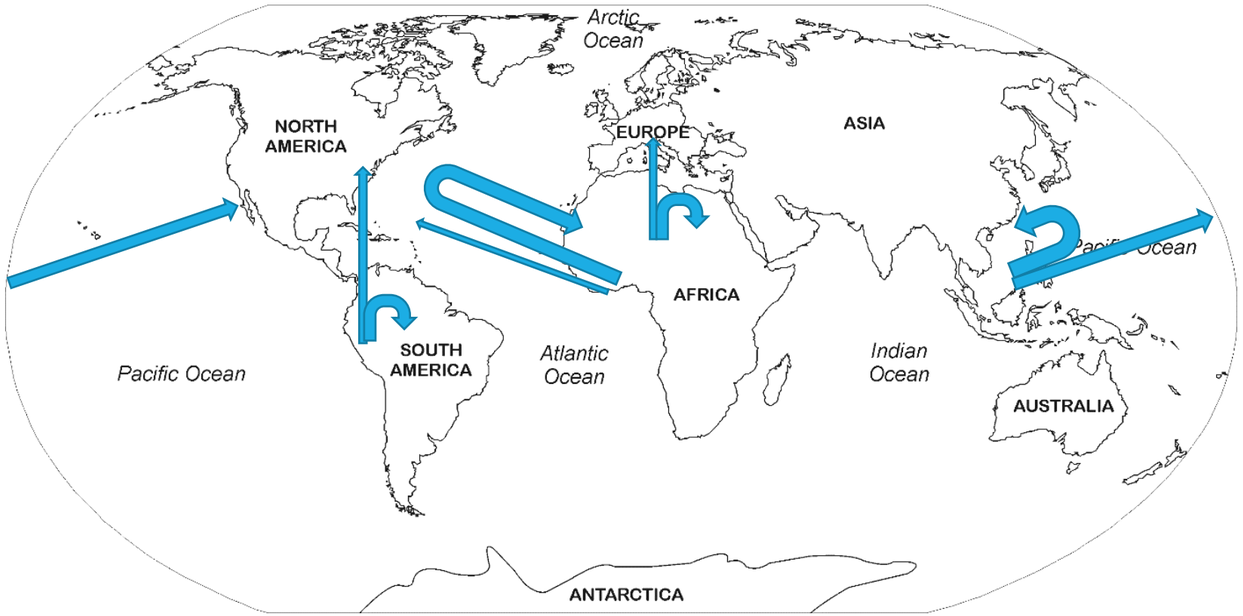
- Expand ESBies idea for euro area to EME:
  "SBBS (Sovereign-Bond Backed Securities) for the world"
  Euro-nomics group 2011, 2016, 2017

International: Flight to Safety

- Risk-on, Risk-off ➡ Flight to safe asset

- Channels back some of flight-to-safety capital flows

  fewer cross-border capital flows



Conclusion: Resilience and Monetary Policy

- **Risk** management approach
  - probability
  - + impact (disutility)
    of contingency events

- **Resilience** management approach
  - Inflation bounced back
    - Temporary adjustment helps to manage shocks/transition phases
    - Maintaining “inflation anchor” is key (Common knowledge)
  - Avoid traps
    - Forward Guidance
    - Financial dominance
    - Fiscal dominance

- **International** Resilience