Central Banking

Week 3: Monetary Policy Frameworks and Unconventional Monetary Policy

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March 19, 2025

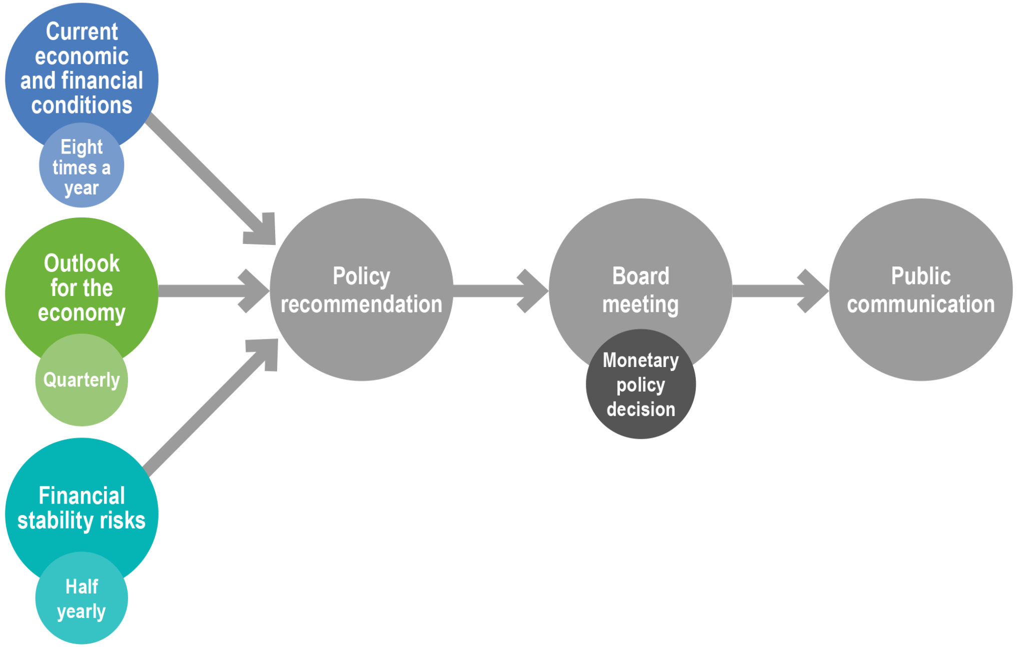
Agenda for Today

1. Monetary policy deep dive
2. Guest speaker from the Reserve Bank of Malawi
3. In-class group activity

1. Monetary policy deep dive

What is Monetary Policy?

- **Definition:** Central bank actions to manage money supply, interest rates, and inflation.
- **Objectives:** Price stability, full employment, economic growth.
- **Instruments:** Interest rates, open market operations, reserve requirements.



Source: RBA

What is Monetary Policy Framework?

- **What is a monetary policy framework?**
  - Defines how central banks achieve **price stability and economic growth**.
  - **Core elements:** Objectives, instruments, transparency, and credibility.
- **Why is this important?**
  - A well-designed framework ensures **stable inflation, financial stability, and effective crisis management**.

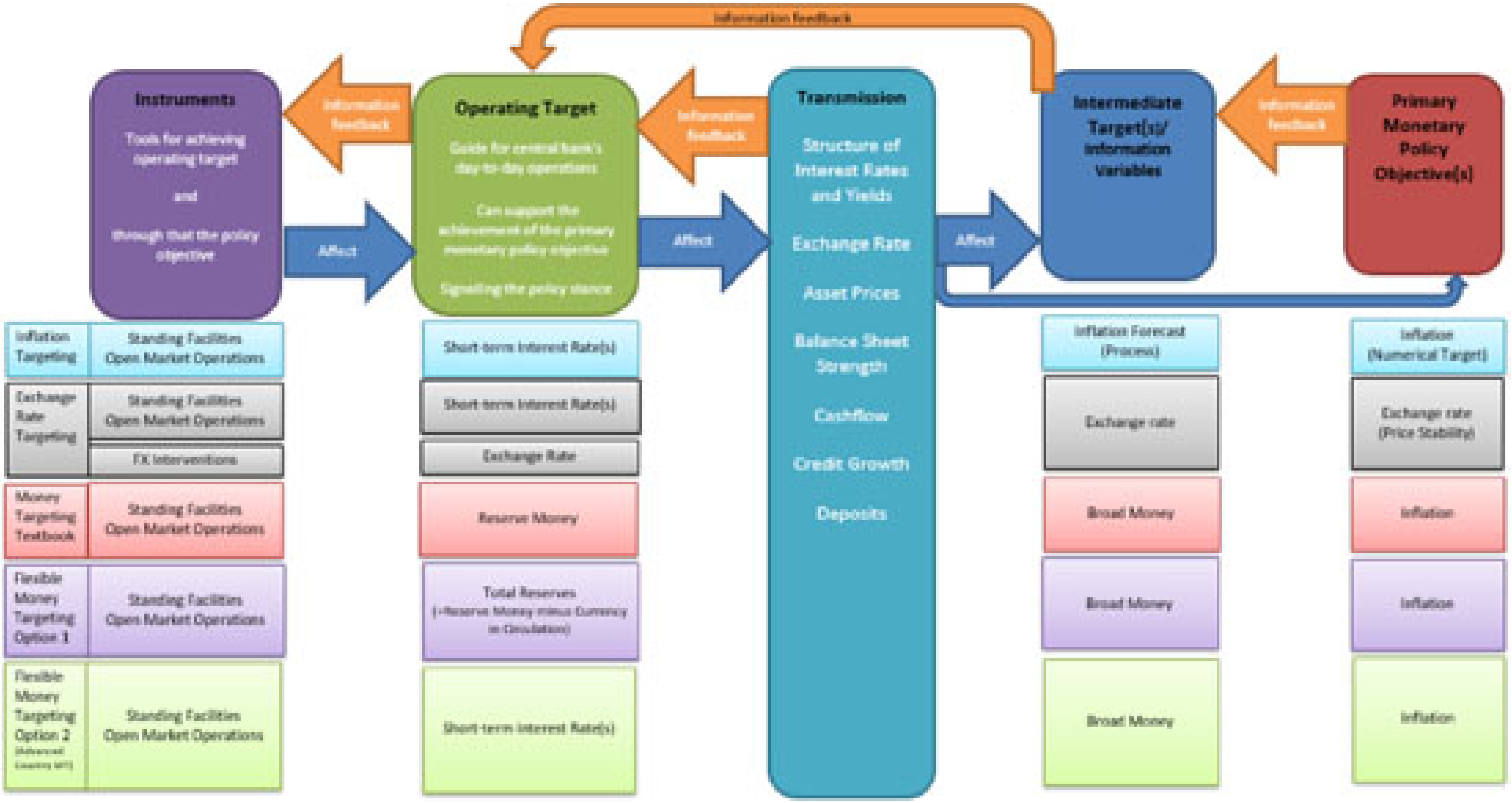
Evolution of Monetary Policy Frameworks

Year	Monetary Policy Framework	Key Features & Developments
Pre-1940s	Gold Standard	Currencies fully backed by gold; limited monetary policy flexibility
1944-1971	Bretton Woods System	Fixed exchange rates pegged to USD; USD convertible to gold
1970s-1980s	Monetary Aggregates Targeting	Central banks control money supply to curb inflation
1990s-Present	Inflation Targeting	Explicit inflation targets; central bank independence emphasized
2008-Present	Unconventional Monetary Policy (UMP)	QE, negative rates, forward guidance after financial crisis
2010s-Present	Macroprudential Policy	Strengthening financial regulation to ensure system stability
2020s-Present	Climate & AI in Monetary Policy	Addressing climate risks, integrating AI for decision-making

The Monetary Policy Framework: Instruments, Targets, and Objectives

- **Instruments:** Tools central banks use to influence the economy.
  - **Interest rates, open market operations, reserve requirements**.
- **Targets:** Goals central banks aim to achieve.
  - **Inflation targets, employment targets, financial stability**.
- **Objectives:** Broader economic outcomes central banks seek.
  - **Price stability, full employment, economic growth**.

Monetary Policy Framework Components



Source: IMF

Policy Rules vs. Discretion in Monetary Policy

- **Policy Rules:** Clear guidelines for policy decisions.
  - **Example:** Taylor Rule links interest rates to inflation and output gaps.
- **Discretion:** Central banks adjust policy based on current conditions.
  - **Example:** Responding to unexpected economic shocks.
- Policy **should not be mechanical** but systematic.
- Challenges in implementing rules:
  - Measuring **output gap** is difficult.
  - Equilibrium policy rate fluctuates.
  - Handling negative interest rates.

Taylor Rule

$$r = p + 0.5y + 0.5(p - 2) + 2$$

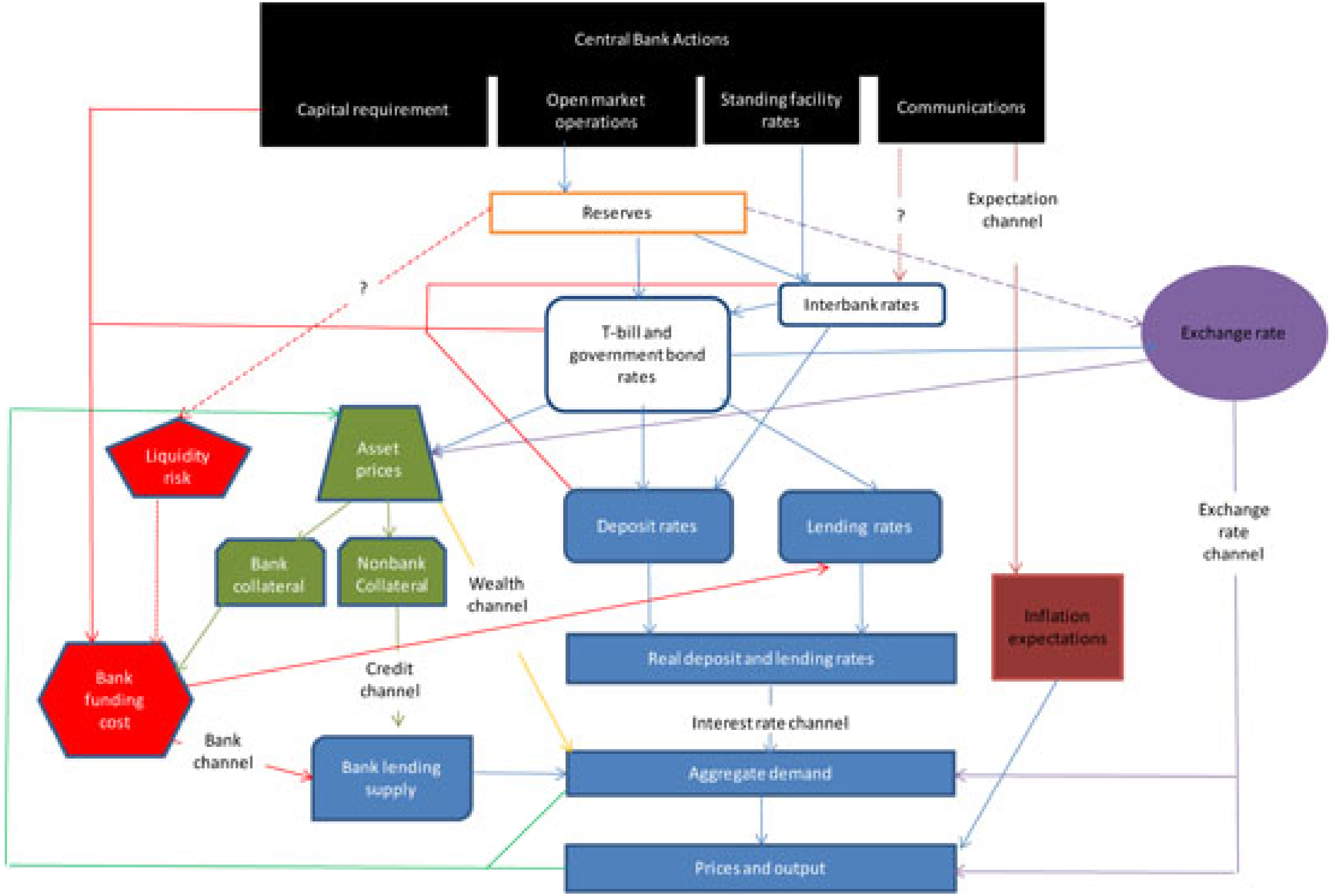
- (r): Policy rate, (p): Inflation rate, (y): GDP deviation.
- Policy rate rises when inflation **exceeds** 2% or GDP is **above trend**.
- Reflects actual central bank decisions over recent years.

Note: with two great people Natalia Zaderey and John B. Taylor

Monetary Policy Transmission Channels

- **How does monetary policy affect the economy?**
- **Key channels:**
  - **Interest rates:** Influence borrowing, spending, and investment.
  - **Exchange rates:** Impact trade competitiveness and capital flows.
  - **Asset prices:** Affect wealth, consumption, and investment decisions.
  - **Expectations:** Shape consumer and investor behavior.

Monetary Policy Transmission Channels



Source: IMF

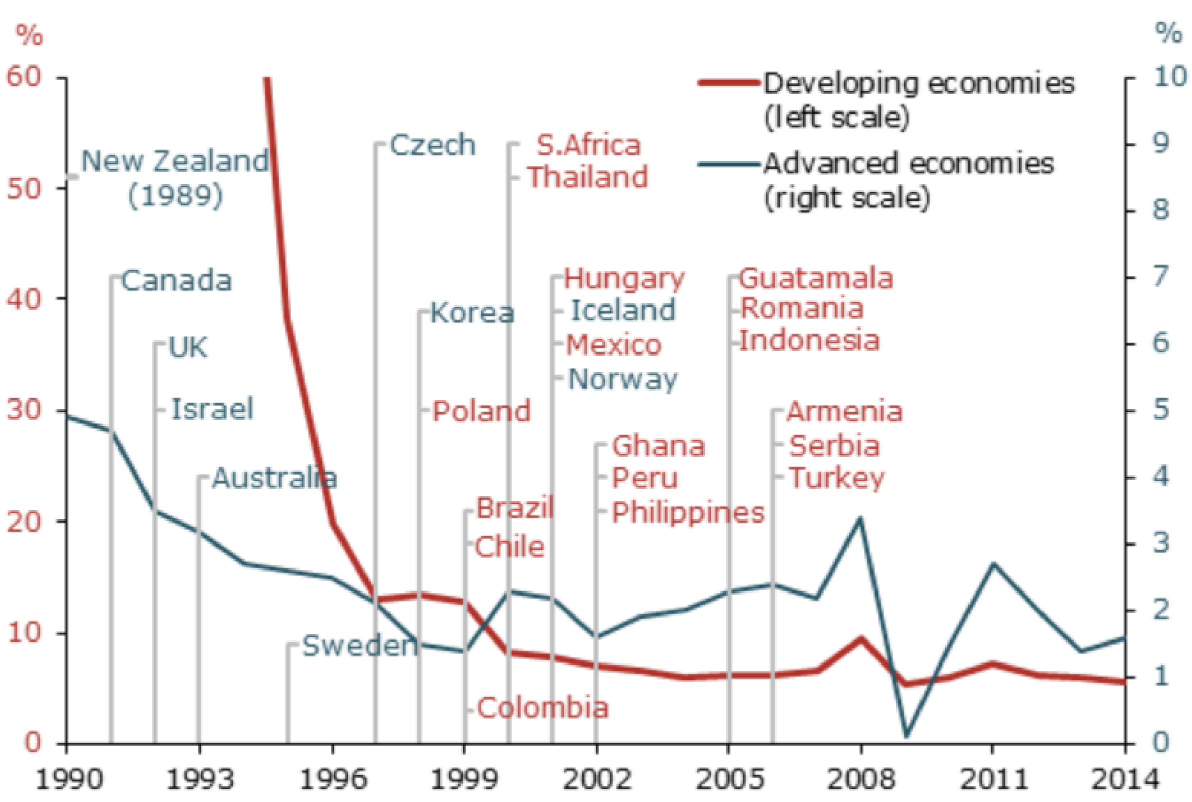
Inflation Targeting: A Key Policy Framework

- Introduced in **New Zealand (1990)**, widely adopted.
- **Core idea:** Maintain inflation within a specified range (e.g., 2% target). - **Key characteristics:**
  - Numerical / explicit **inflation target** (e.g., 2%).
  - **Forecast targeting** based on economic indicators / Forward-looking approach.
  - High **transparency and accountability**, strong central bank **independence**
- **Effectiveness:** Helps anchor expectations, reduces inflation volatility.

Inflation trends before and after adopting inflation targeting.

Figure 1

World inflation and inflation targeting regime adoption



Source: International Monetary Fund.

Central Bank Independence & Transparency

- **Independence:** Critical for credibility and avoiding political influence.
- **Transparency:** Enhances policy effectiveness by shaping expectations.
- **Examples:**
  - European Central Bank (ECB): High independence, formalized communication.
  - Federal Reserve (Fed): Dual mandate (price stability & employment).
  - Bank of Japan (BoJ): Abenomics era influence on policy autonomy.

Table: Central Bank Independence Across Countries

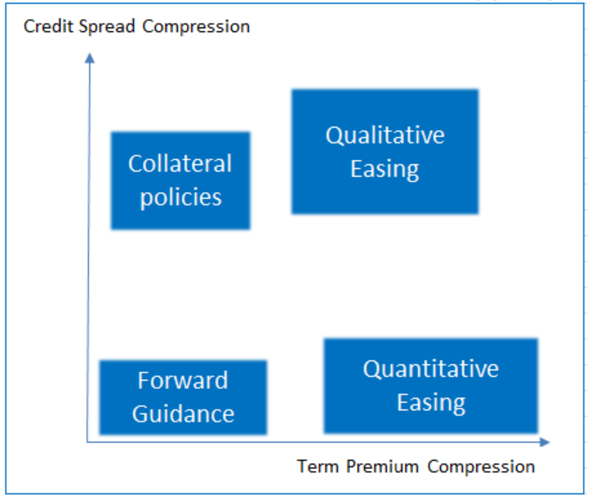
Central Bank	Independence Level	Transparency Score
ECB	High	Strong
Fed	Medium	Moderate
BoJ	Medium	Strong

Unconventional Monetary Policy (UMP): Why It Emerged

- **Traditional tools failed post-2008 financial crisis:**
  - **Interest rates hit zero (Zero Lower Bound - ZLB).**
  - Financial markets **froze**, disrupting policy transmission.
- **Central banks needed new tools to stimulate the economy.**

Dimensions of Unconventional Monetary Policy

Dimensions of non-conventional monetary policy



Source: SRSV Ltd.

Source: Macrosynergy

Types of Unconventional Monetary Policy (UMP)

1. **Negative Interest Rate Policies (NIRP)**:
   - Encourages lending/spending but challenges banks' profitability.
   - Used by ECB, BoJ, Swiss National Bank.
2. **Large-Scale Asset Purchases (Quantitative Easing, QE)**:
   - Central banks buy government & corporate bonds.
   - Reduces long-term interest rates and boosts liquidity.
3. **Forward Guidance**:
   - Central banks signal future policy direction to shape market expectations.
4. **Targeted Lending Programs**:
   - Direct lending support to banks & businesses.

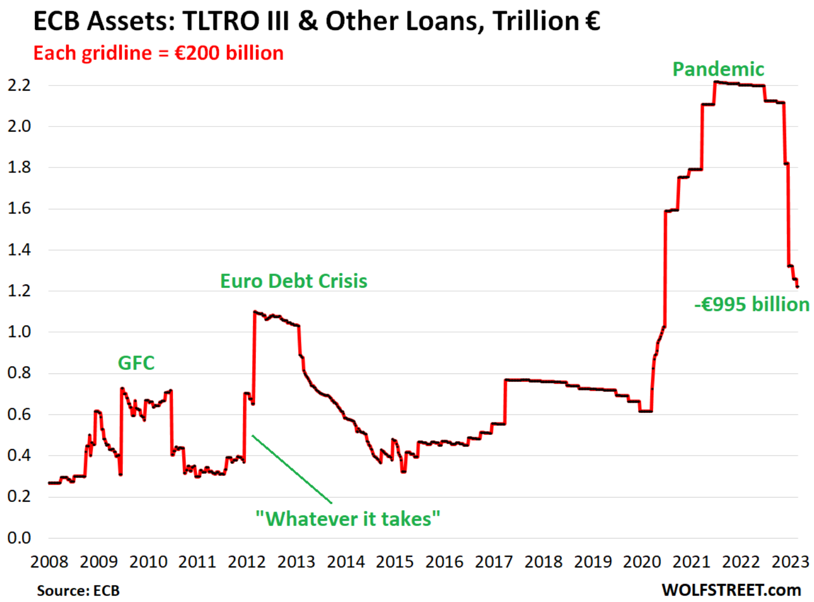
Table: Countries Using Unconventional Policies

Tool	US Fed	ECB	BoJ
QE	✅	✅	✅
NIRP	❌	✅	✅
Forward Guidance	✅	✅	✅

Case Study: ECB's Unconventional Tools

- **Post-2008:** QE program **(Expanded Asset Purchase Programme - APP)**.
- **2014-present:** Negative interest rates on deposits.
- **Pandemic Response:** Pandemic Emergency Purchase Programme (PEPP).

ECB Balance Sheet Expansion



Source: San Wolf Street

Effectiveness and Challenges of UMP

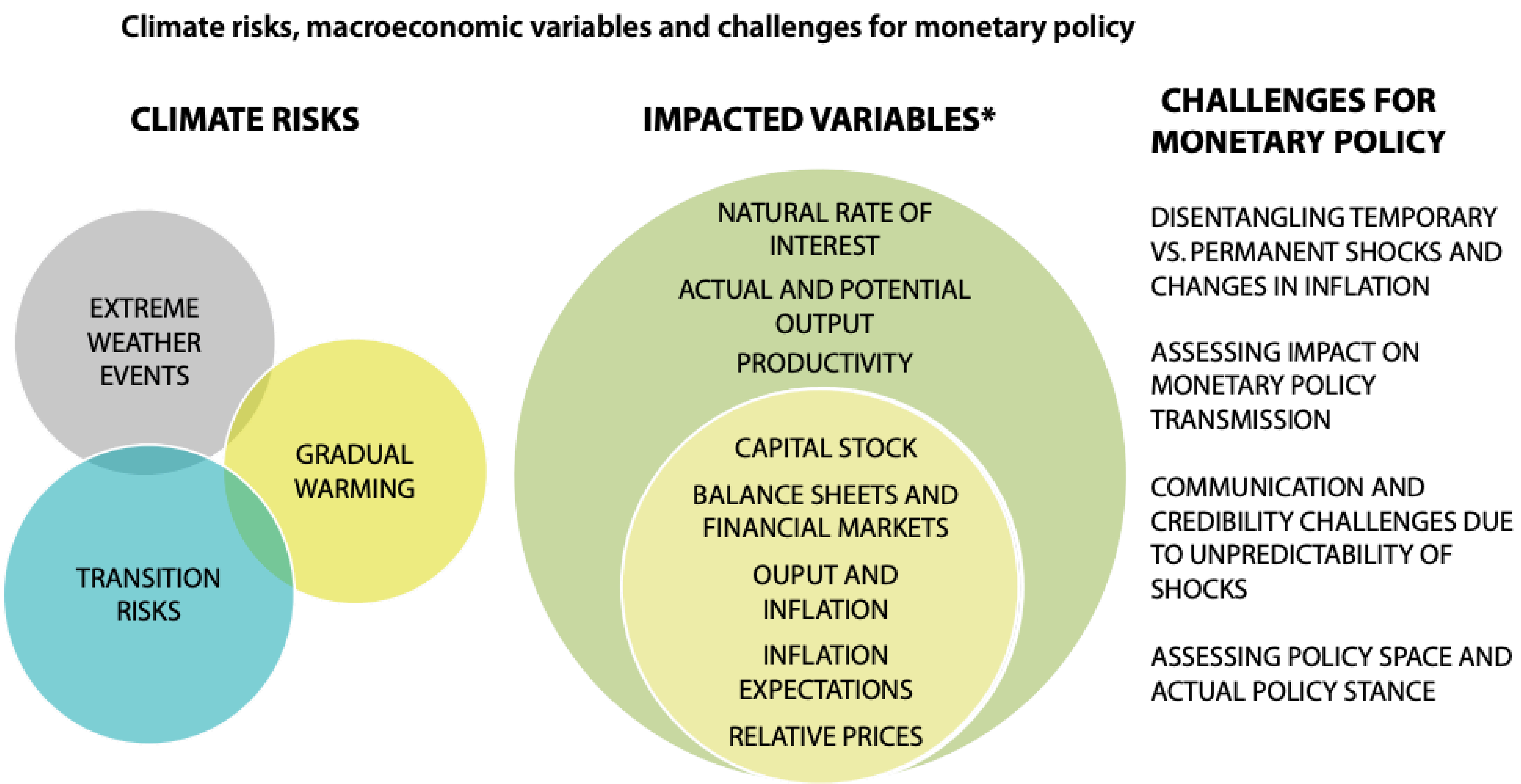
✅ Successes:

- Lowered borrowing costs.
- Prevented deeper recessions.
- Stabilized inflation expectations.

❌ Challenges:

- Side effects on bank profitability (NIRP).
- Risk-taking behavior in financial markets.
- Exit strategy and long-term impact.

Monetary Policy and Climate Change



Source: Forumias

AI, Digital Currencies & Monetary Policy

- **Artificial Intelligence (AI):**
  - Enhancing monetary policy decision-making through data-driven analysis.
  - Improving financial market supervision and fraud detection.
- **Central Bank Digital Currencies (CBDCs):**
  - Transforming payment systems and monetary transmission mechanisms.
  - Example: China's e-CNY, ECB's digital euro.
  - Potential risks: Disintermediation of commercial banks, data privacy concerns.

Discussion Questions

1. How does **inflation targeting** help stabilize the economy?
2. What are the main **advantages and risks** of unconventional monetary policies?
3. Should central banks consider **climate change** in their monetary policy decisions?
4. Will **AI and digital currencies** change the role of central banks?
5. How should central banks **exit from UMP** without destabilizing markets?

Activity: Small-group discussion + case study analysis.

Conclusion & Key Takeaways

- **Monetary policy frameworks evolved** to address modern economic challenges.
- **Unconventional policies were necessary**, but present risks.
- **Climate change & technology** will shape future central banking strategies.
- **Monetary policy remains a critical tool** for economic stability.

Any QUESTIONS?

Thank You!

Next Class

- (Mar 26) Central Banking and Financial Stability
  - The readings will be posted on the course website.

We expect to have a guest speaker from the National bank of Ukraine.