



# Monetary Policy during Demographic Changes

G20 Symposium  
January 17, 2019

Institute for Monetary and Economic Studies  
Bank of Japan

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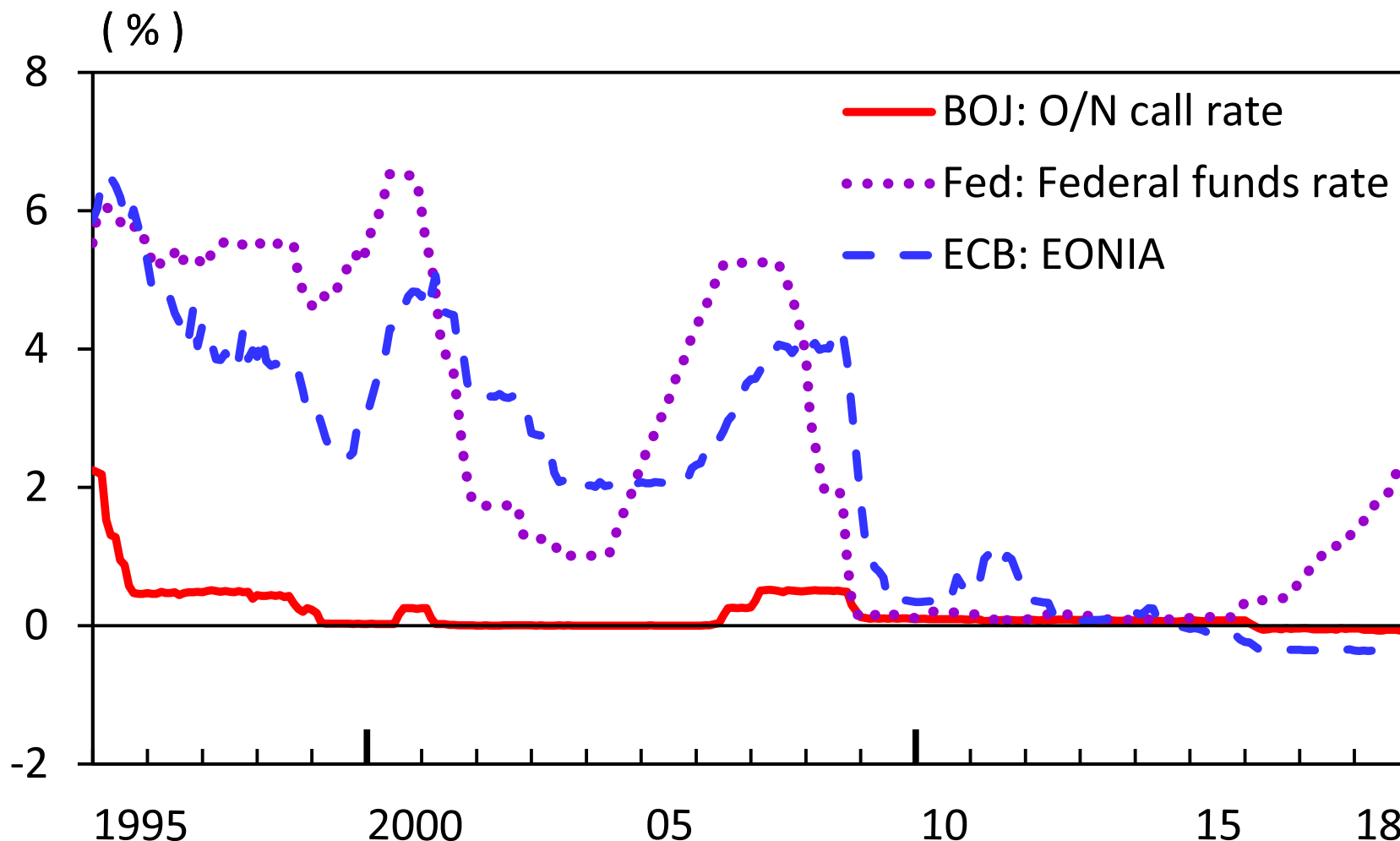
The views expressed herein are those of the presenter and do not necessarily reflect those of the Bank of Japan.

# Plan of Today's Talk

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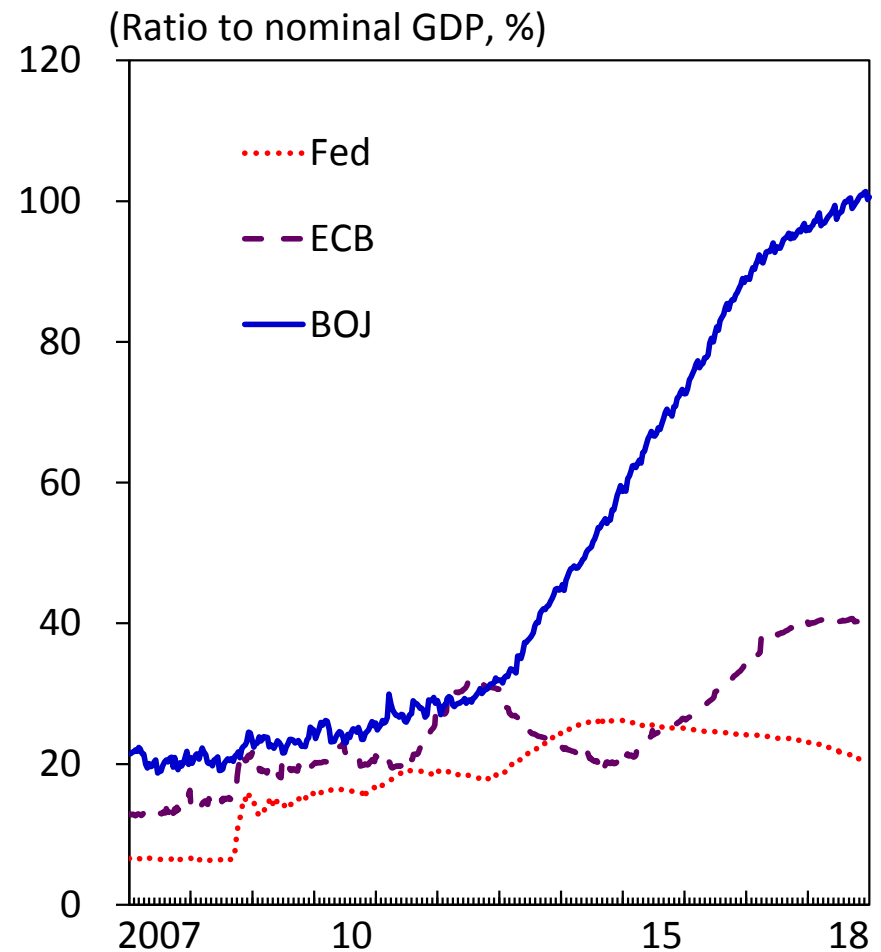
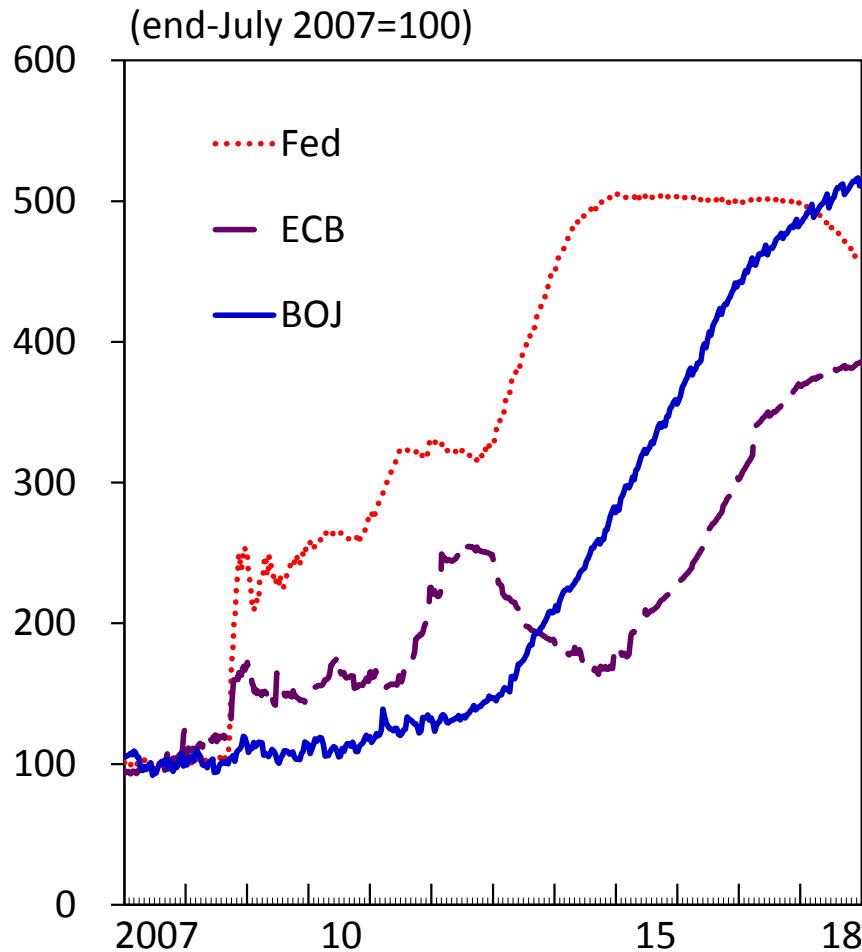
1. Introduction
2. Sequencing of Policy Normalization
3. Monetary Policy Framework
  - Larger CB B/S and M-Mkt Operations
  - Policy guideposts and policy toolkits
  - Policy effectiveness
  - Policy philosophy
4. Revisiting Price Stability Concept

# Overnight Interest Rates



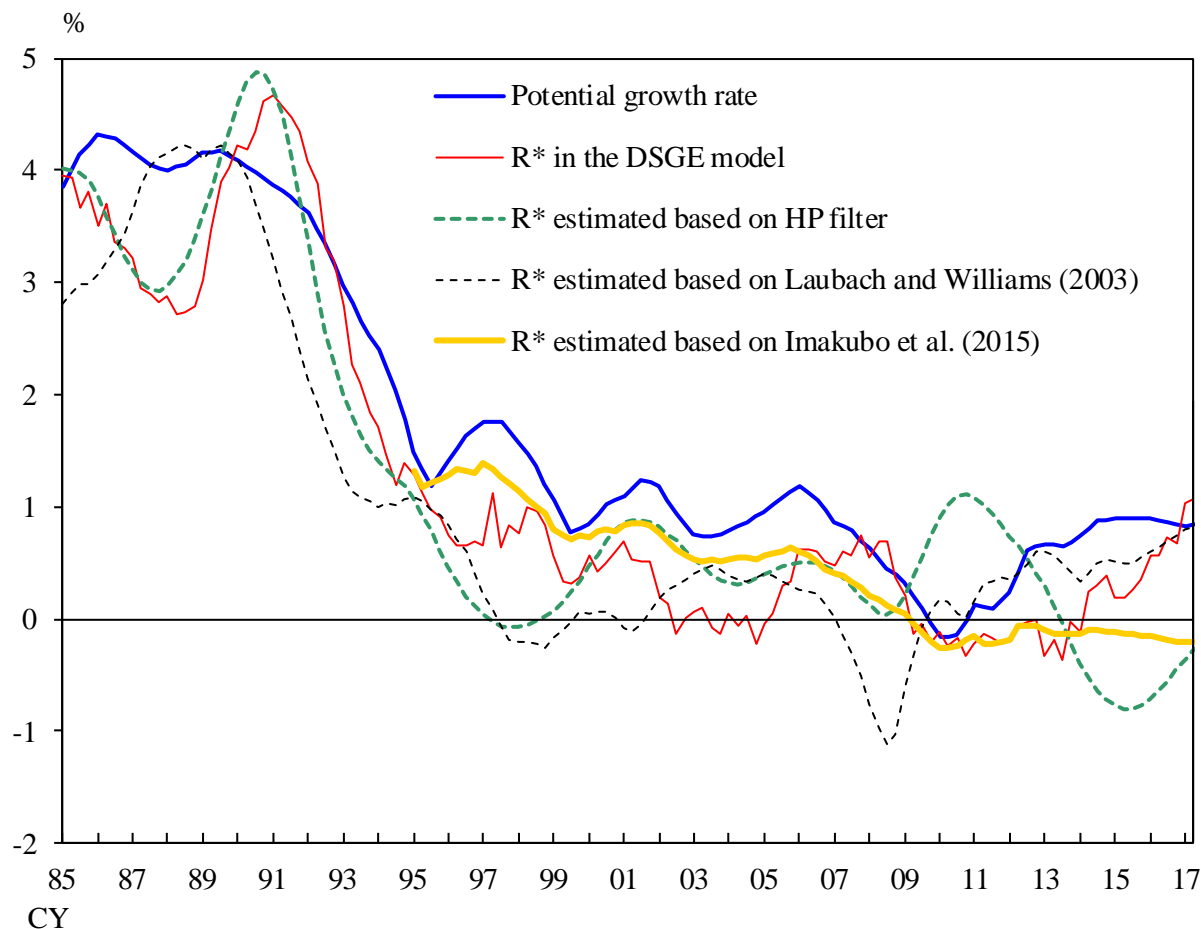
Sources: Board of Governors of the Federal Reserve System, European Central Bank, Bank of Japan

# Balance Sheet Size for Major CBs



Sources: Board of Governors of the Federal Reserve System, European Central Bank, Bank of Japan

# Natural Rate of Interest in Japan



Source: Nao Sudo, Yosuke Okazaki, and Yasutaka Takizuka "Determinants of the Natural Rate of Interest in Japan -- Approaches based on a DSGE model and OG model --," Research LAB No.18-E-1, June 13, 2018

# Plan of Today's Talk

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1. Introduction

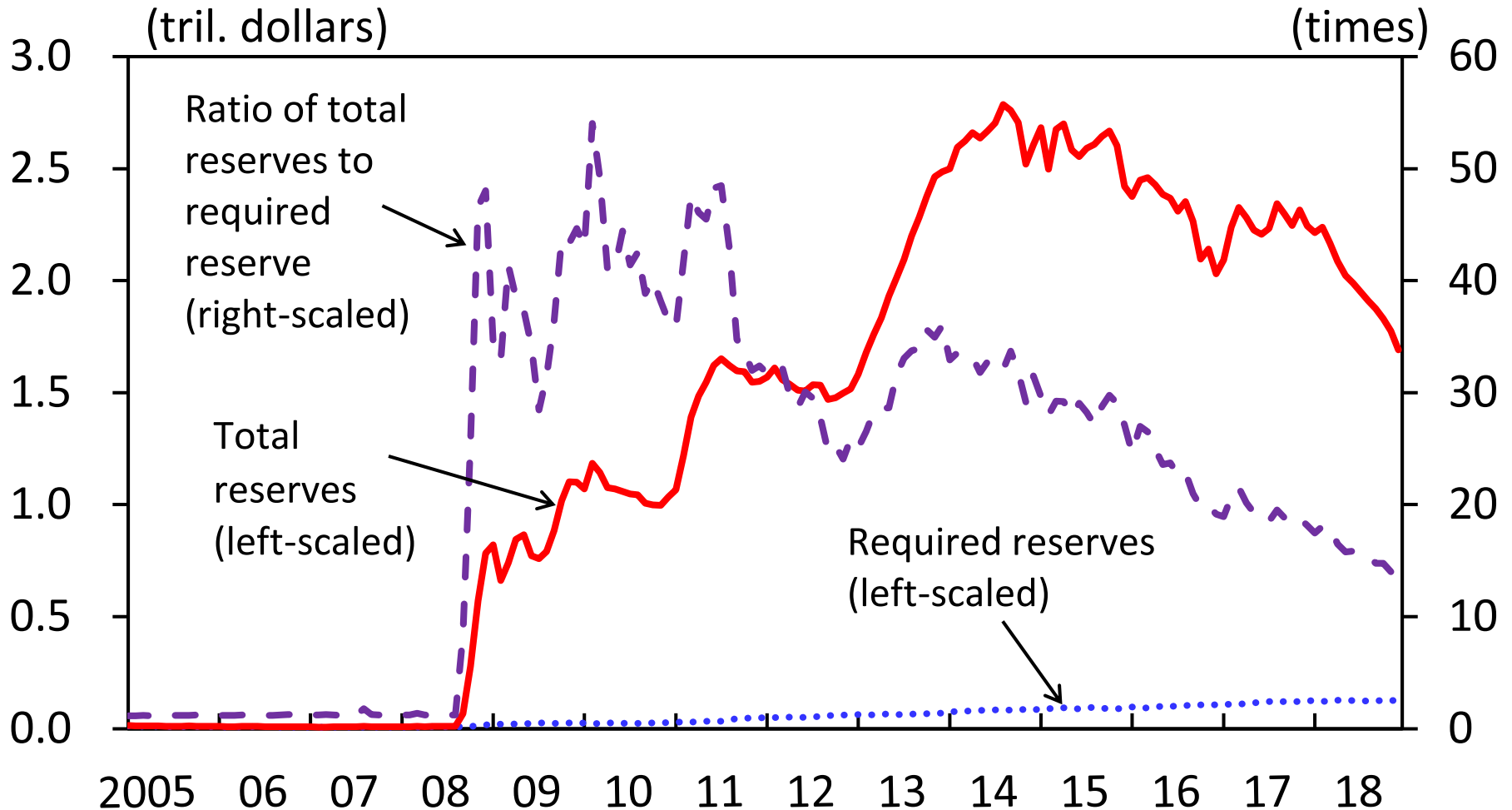
➔ 2. Sequencing of Policy Normalization

3. Monetary Policy Framework

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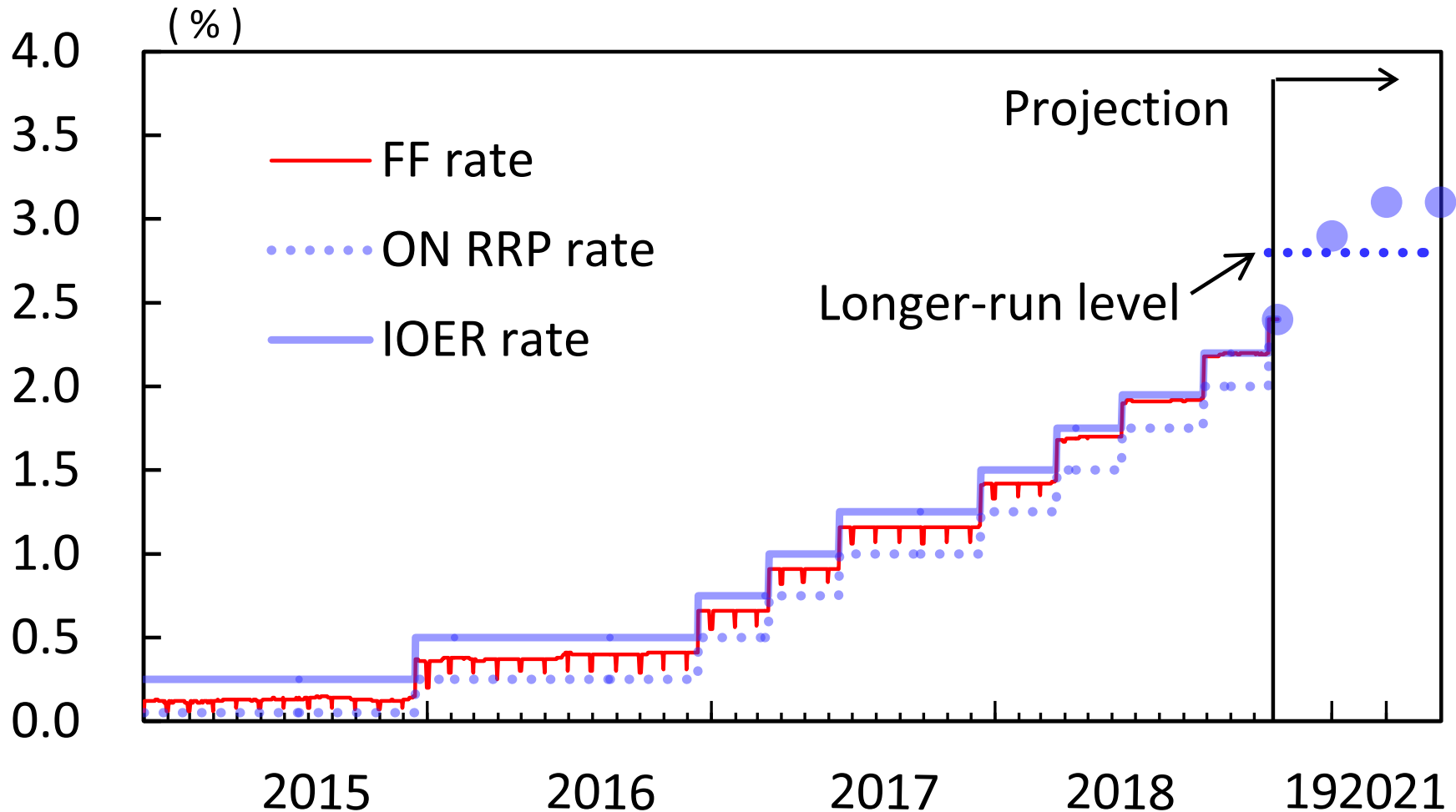
4. Revisiting Price Stability Concept

# Reserve Balances



Source: Board of Governors of the Federal Reserve System

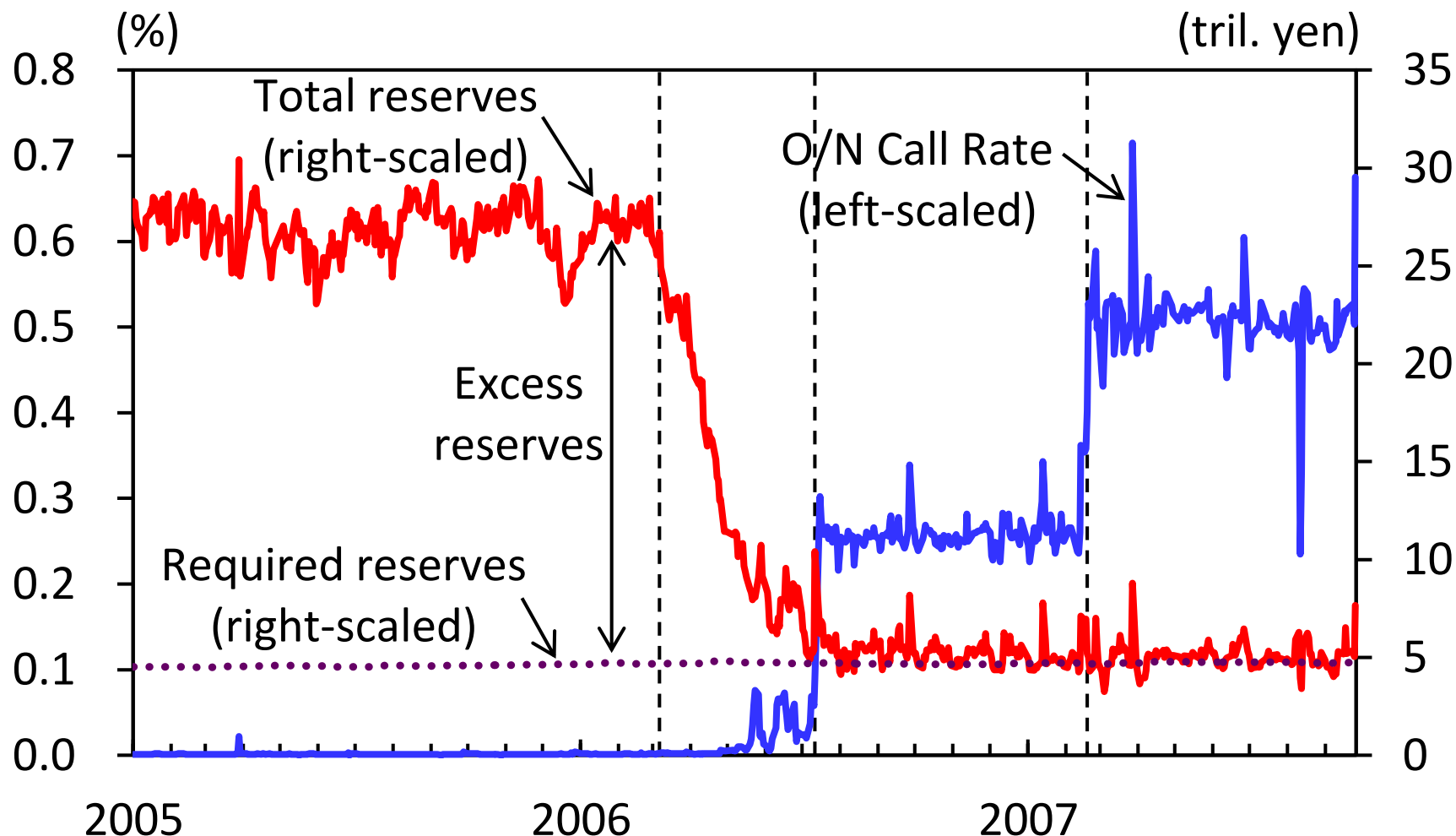
# FF Rate Control



Source: Board of Governors of the Federal Reserve System



# BOJ's Exit from QE in 2006



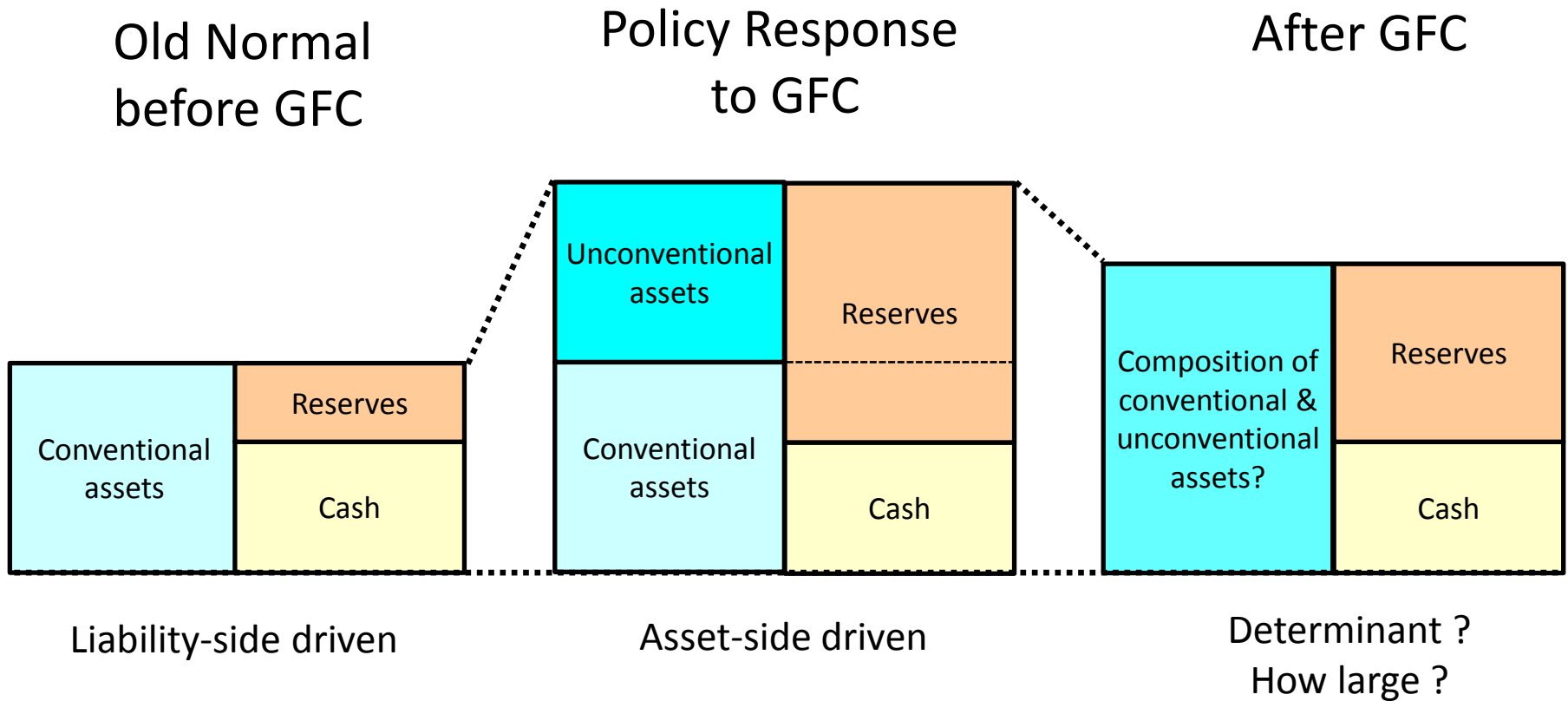
Source: Bank of Japan

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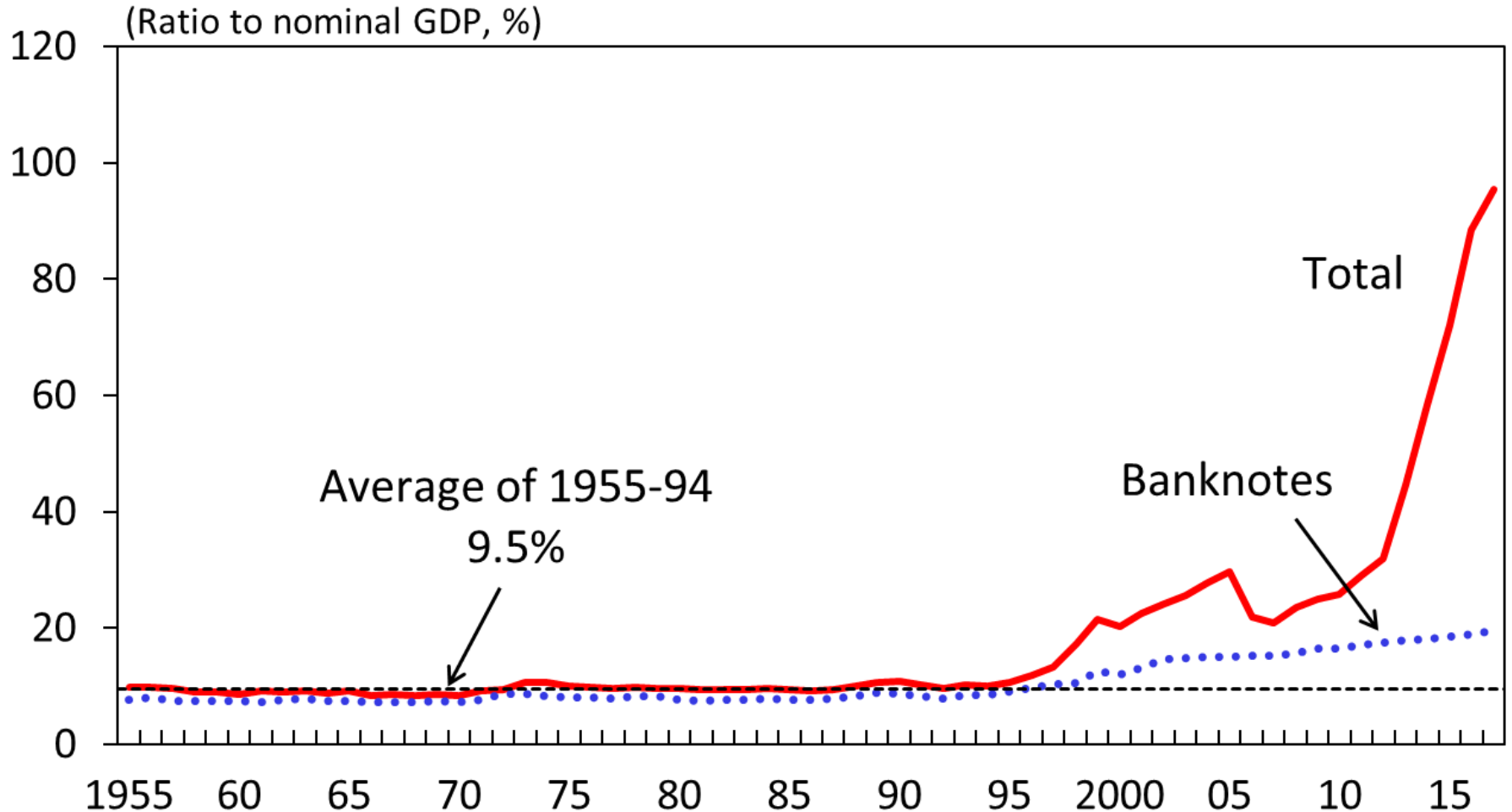
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# Central Bank Balance Sheet



# BOJ Balance Sheet Size

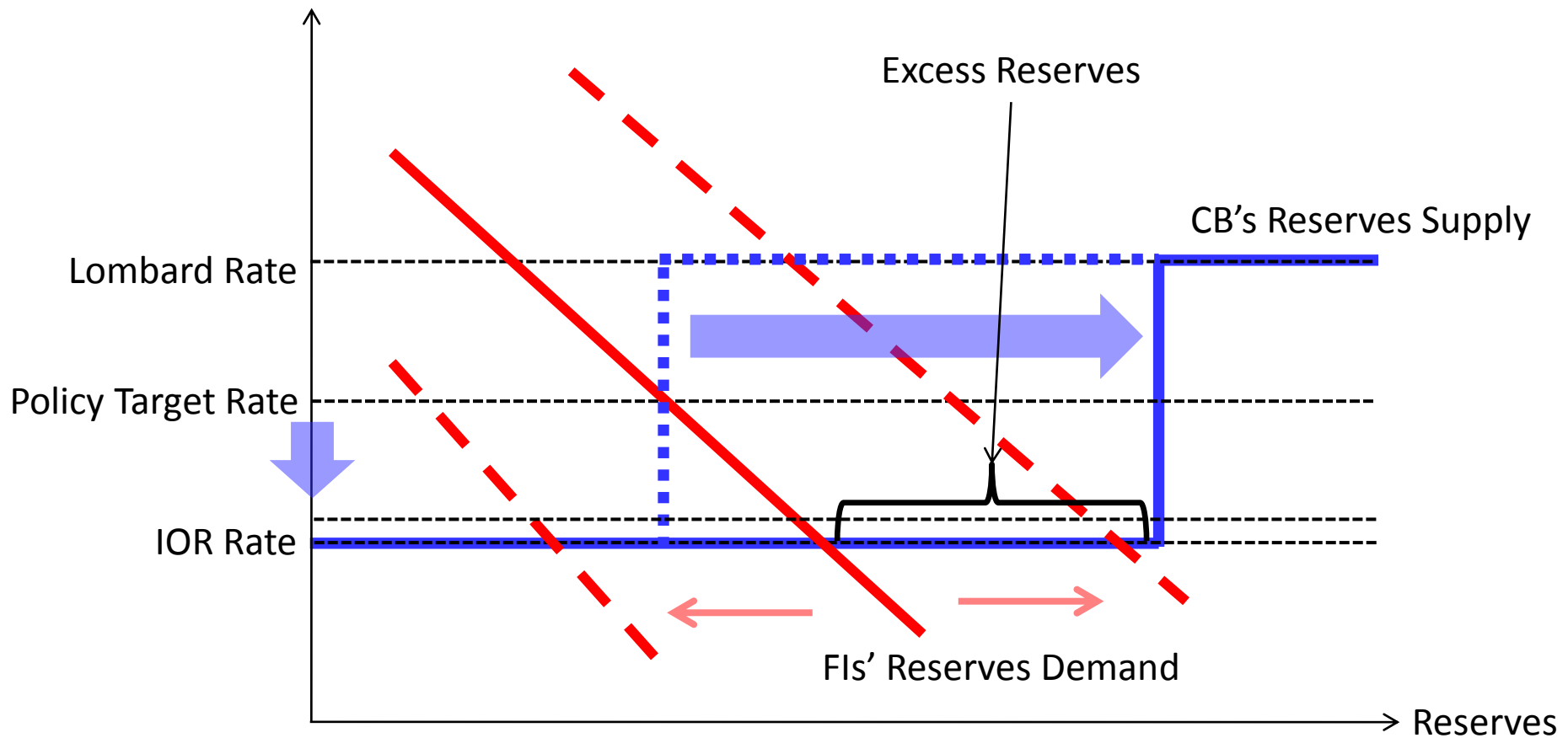


Source: Bank of Japan

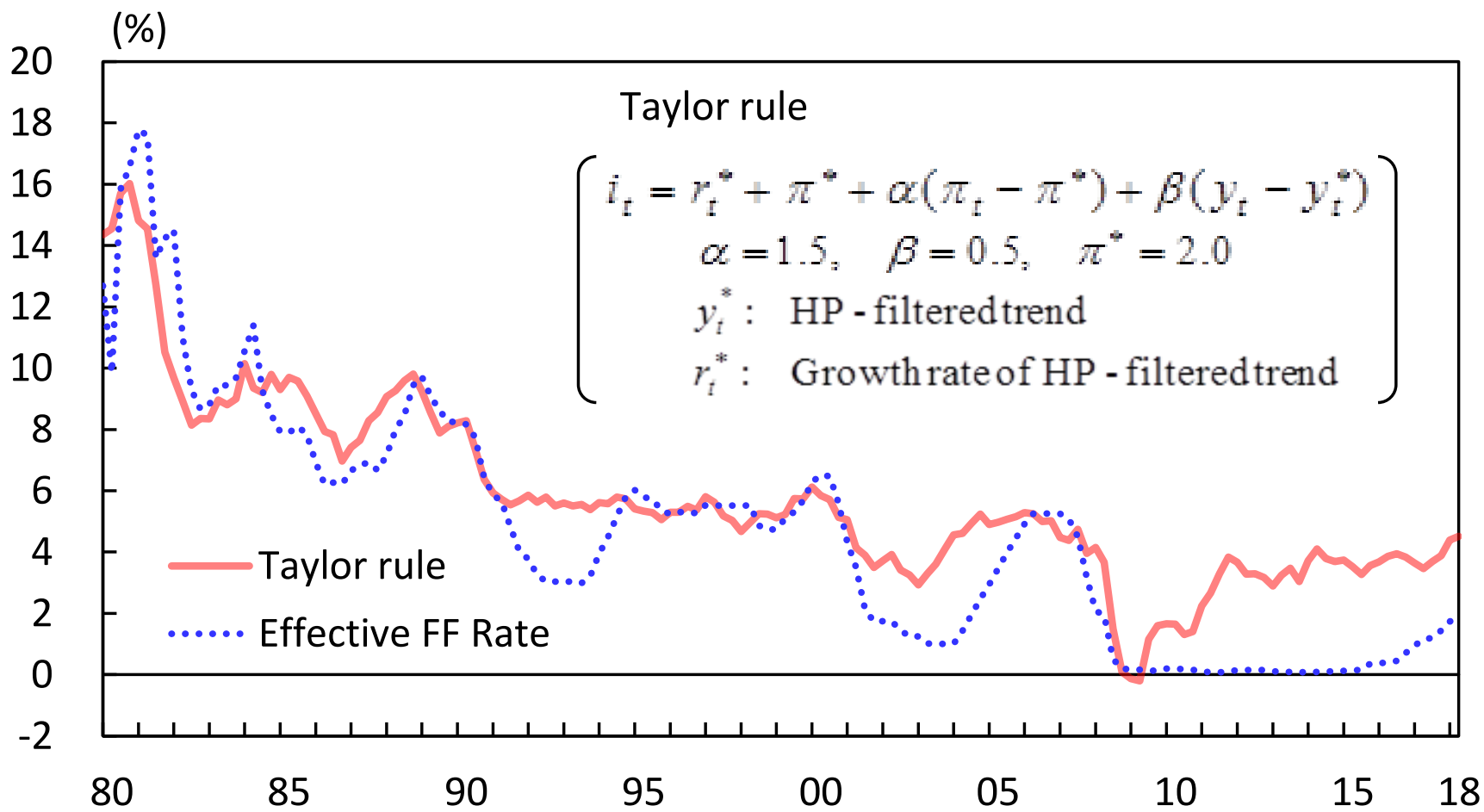
# Money Market Operations

## Corridor $\rightarrow$ Floor

Short-term Money  
Market Rates



# Taylor Rule

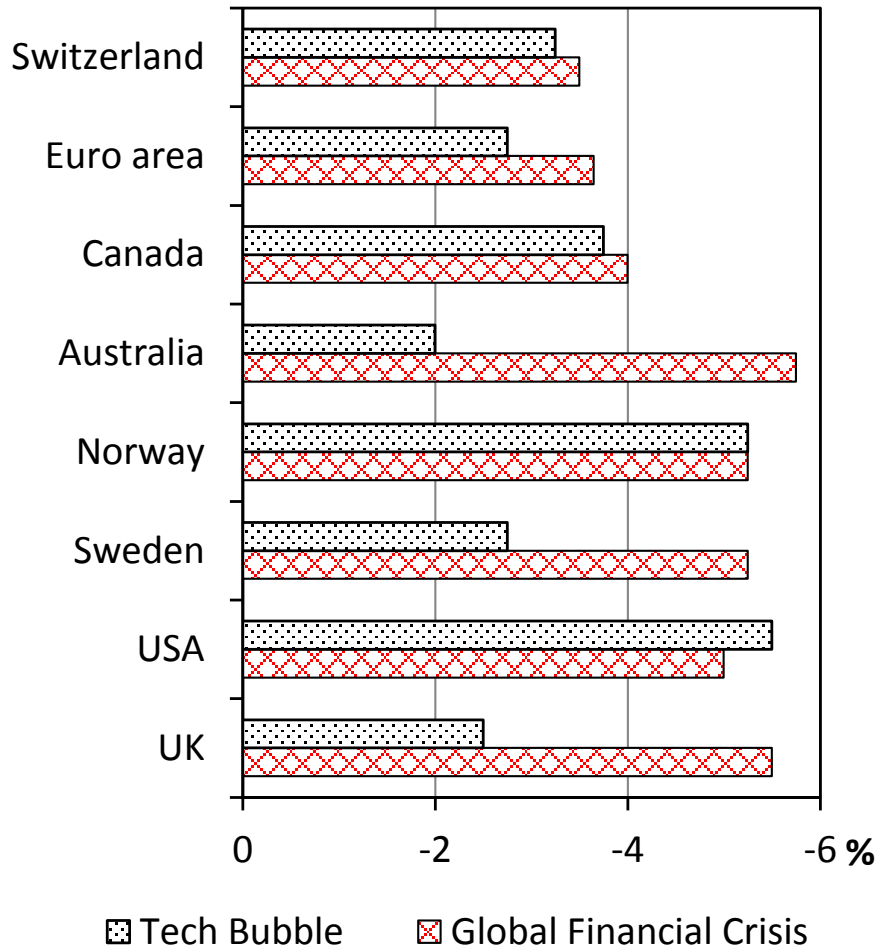


Note: Real GDP and core PCE deflator are used as indicators for output and inflation, respectively.

Source: US Bureau of Economic Analysis

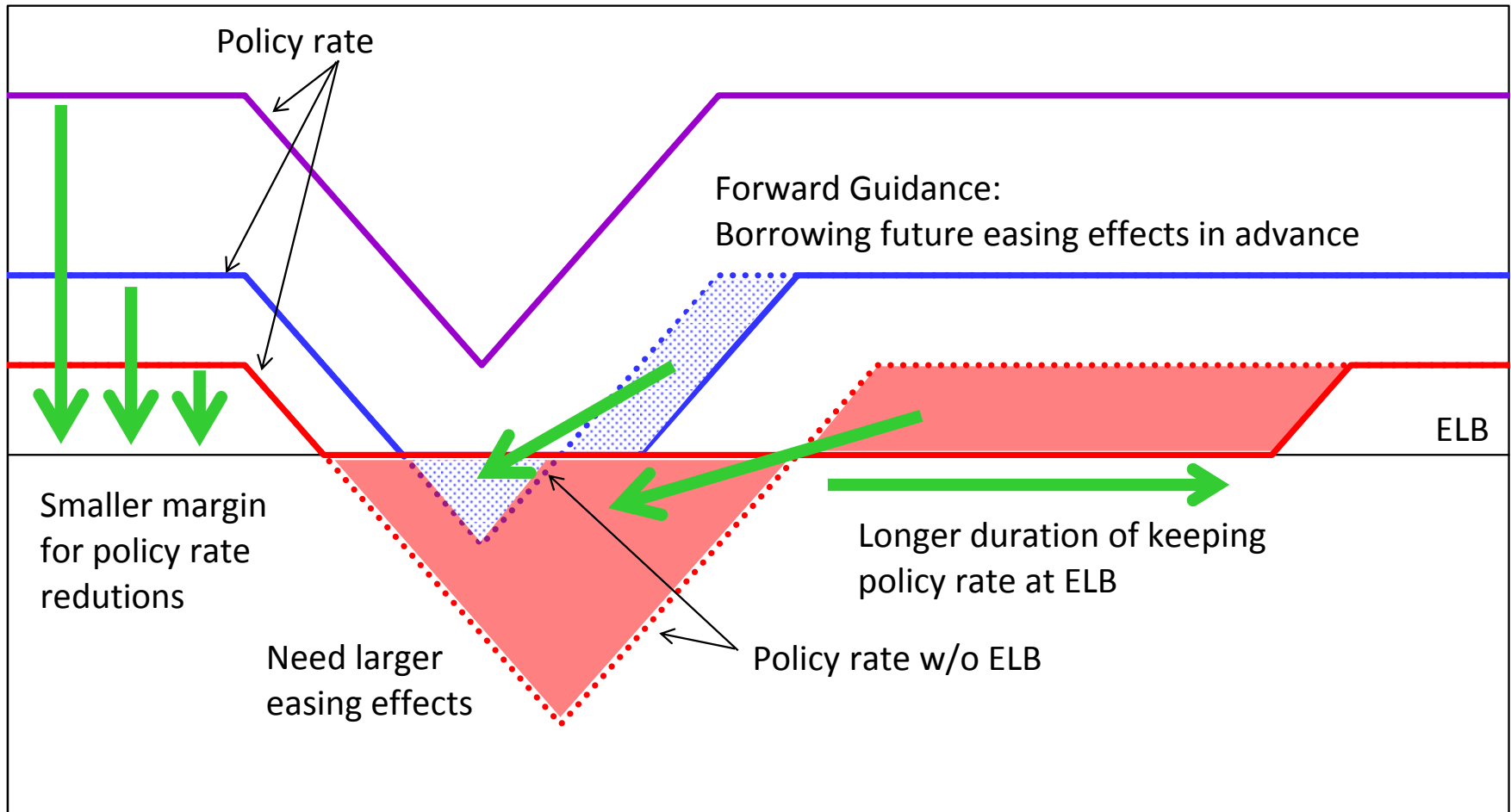
# Margins to Reduce Policy Rates

Policy Rate Reductions



1. Policy responses in the future
  - LSAP?
  - Negative rates?
  
2. Policy effectiveness
  
3. Political and economic risks

# Policy Effectiveness





# Neutrality of MP Operations


- Before GFC:
  - Try to remain neutral
  - In some emergency cases: Intervention to malfunctioning markets, restore market functioning
- In GFC:
  - Intentional & massive interventions
  - Policy effectiveness measured as market impacts
- After GFC?

# Alternative Frameworks

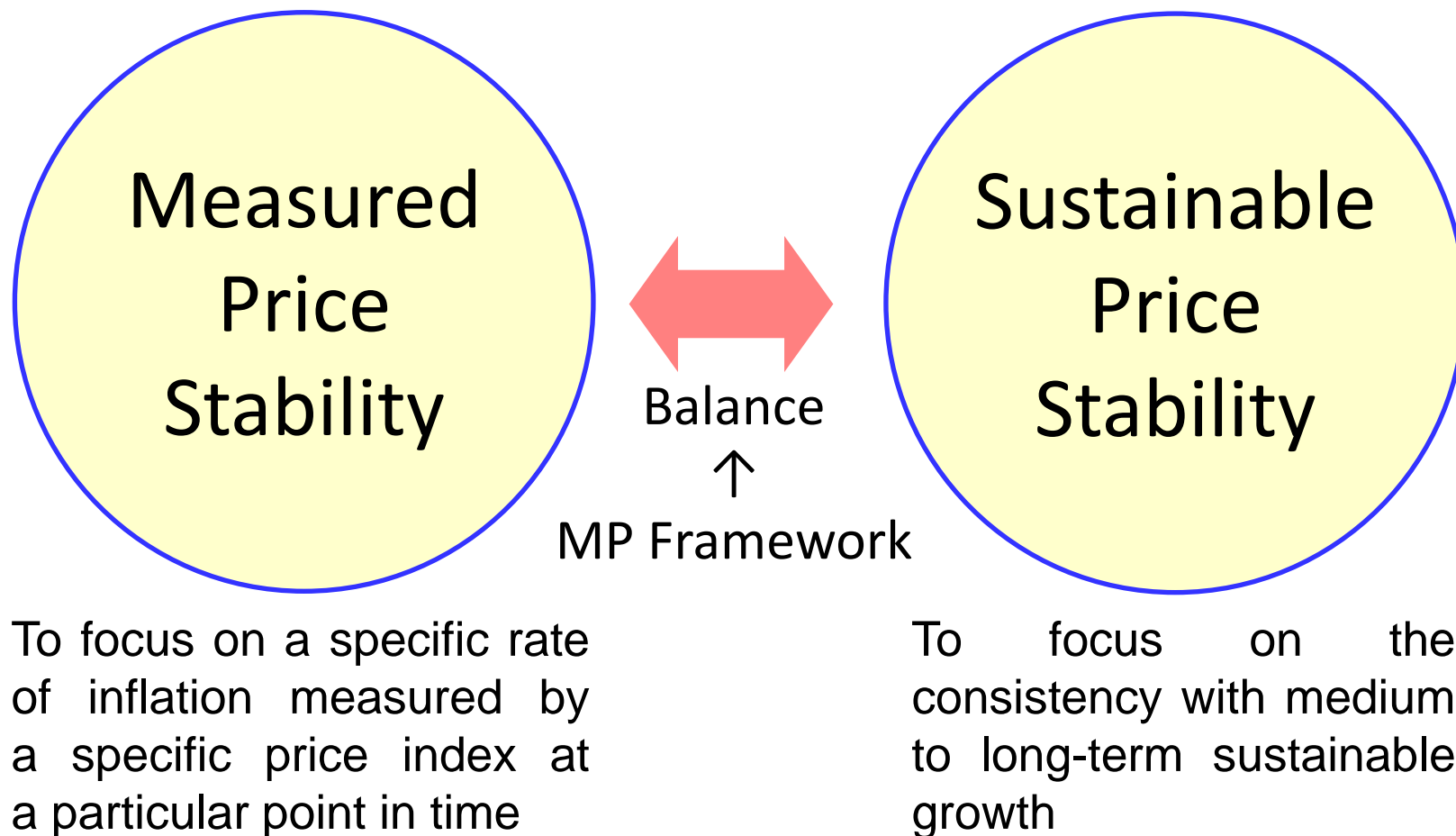
- Flexible IT as a Current Best Practice
- Minor Changes:
  - Higher inflation target
  - Average inflation targeting
  - Price level targeting
- Risk Management:
  - To minimize accumulation of imbalances
  - Longer time perspectives in MP making

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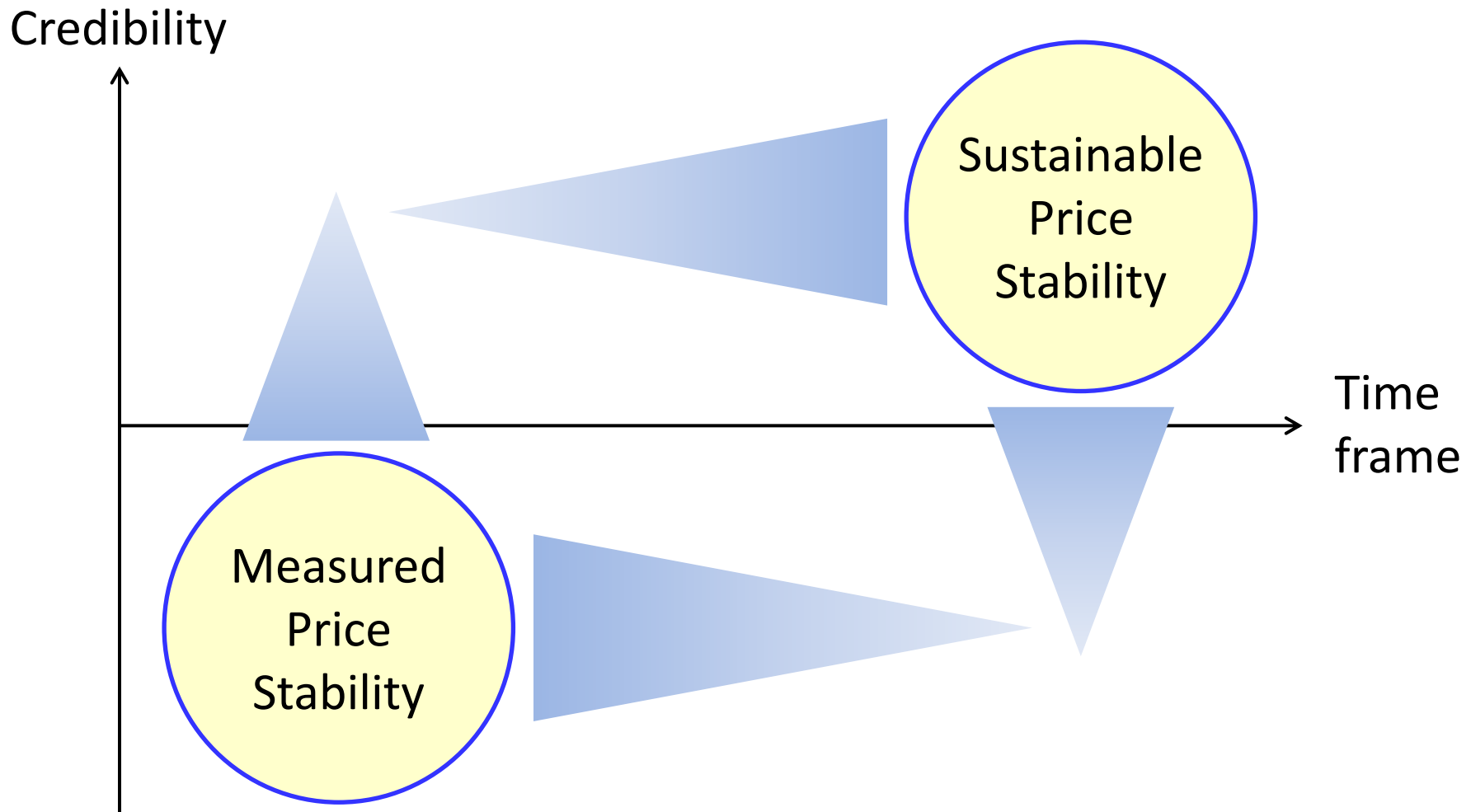
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# Conceptual Basis for Price Stability

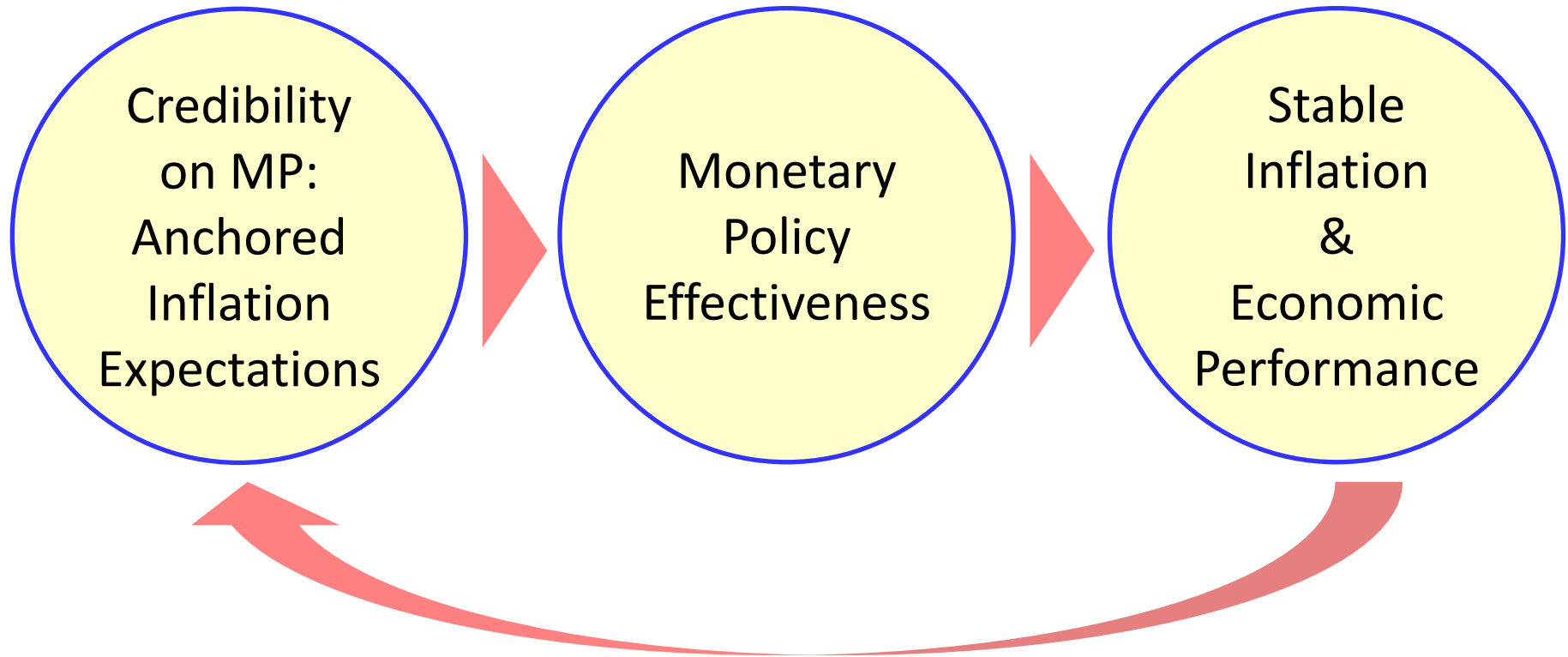


Shigenori Shiratsuka (2001), "Is There a Desirable Rate of Inflation? A Theoretical and Empirical Survey," *Monetary and Economic Studies*, 19(2), Institute for Monetary and Economic Studies Bank of Japan.

# Balancing Two P-Stabilities



# Positive Circle for MP Framework



# Summary

- Effects of Demographic Changes on MP:  
Declined long-run level of policy rates
  - Weaker intertemporal substitution
  - Smaller margin for policy rate reductions
  - New challenges for macroeconomic stabilization
- MP Framework after GFC w/ Larger CB B/S size under Declined Natural Rates:
  - Policy toolkits against large adverse shocks
  - Political and economic risks?

# Summary (Cont'd)

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- Monetary Policy Framework:
  - Avoid unnecessary accumulation of economic and financial imbalances
  - Importance of long-term perspectives to assess sustainability of price stability
  - Prerequisite: Anchored long-run inflation expectations close to the target level