

Evolution of Quantitative Easing

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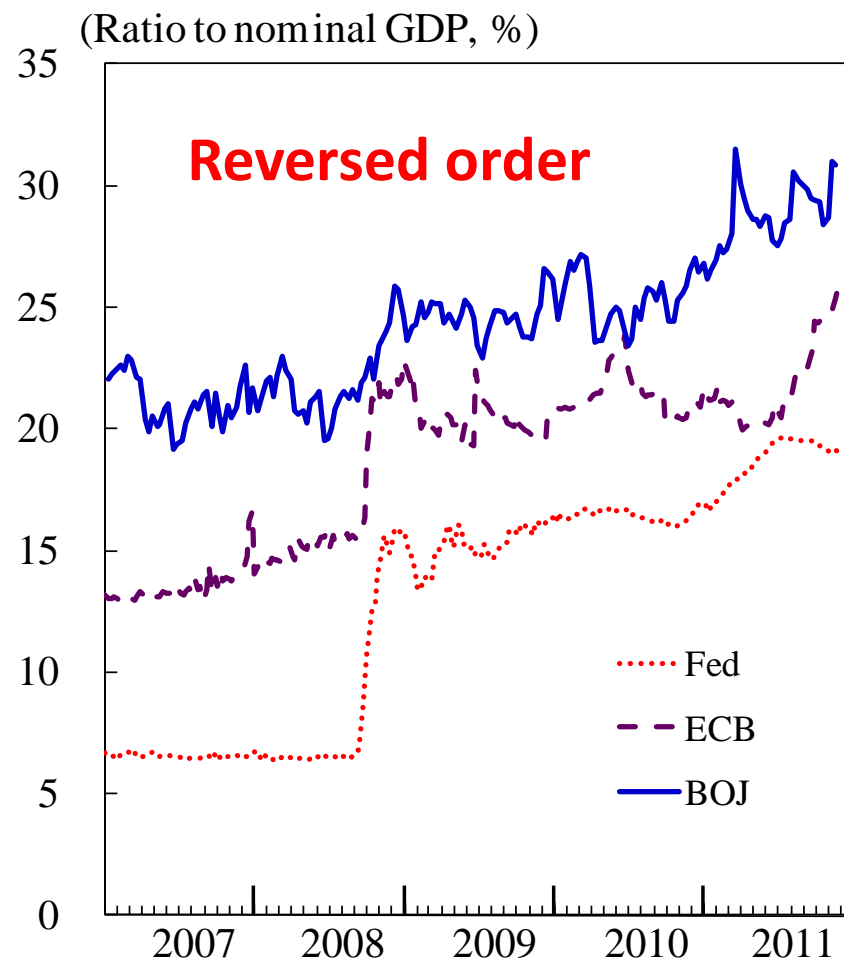
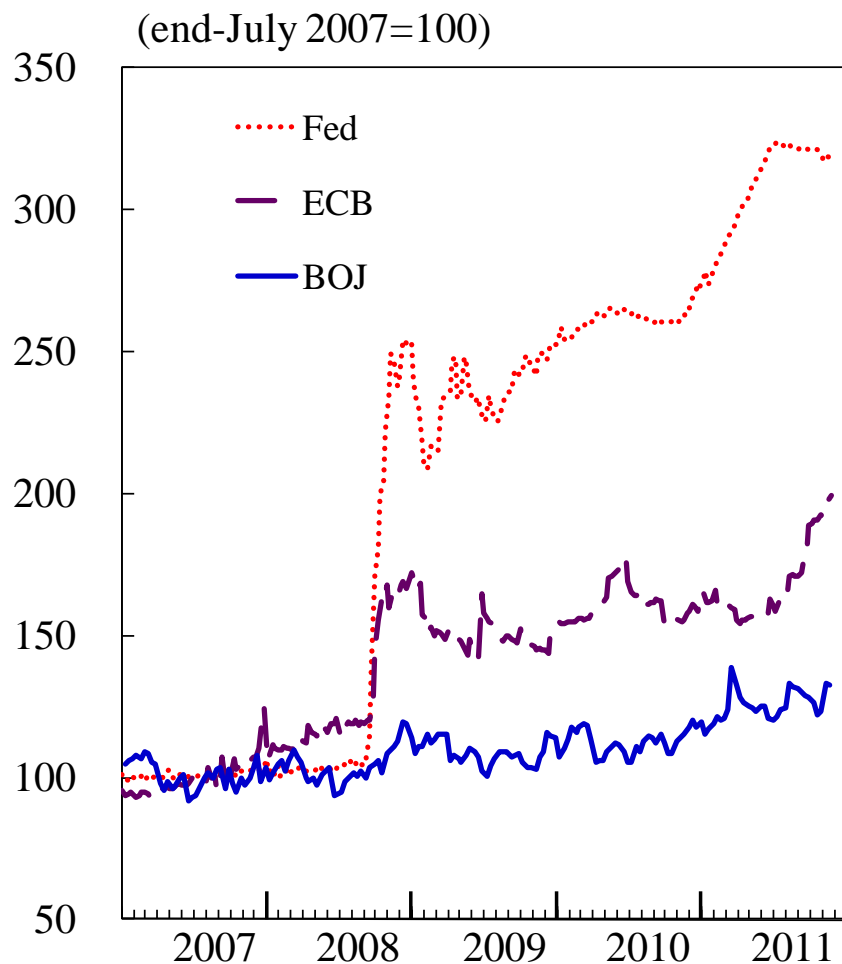
Bank of Japan

Disclaimer: The views expressed are solely the responsibility of the presenter, and should not be interpreted as reflecting the official views of the Bank of Japan.

Plan of Today's Talk

1. Overview of Policy Response to the Recent Financial Crisis in the Major Economies
2. BOJ's policy under ZLB
3. Role of CB B/S
4. Discussion
 - Border w/ Fiscal Policy
 - Unconventional vs. commitment
 - Portfolio rebalancing channel
 - Acute pain vs. chronic illness

CB Balance Sheets



Sources: Board of Governors of the Federal Reserve System, *Factors Affecting Reserve Balances*; Bank of England, *Monetary & Financial Statistics*; European Central Bank, *Monthly Bulletin*; Bank of Japan, *Economic and Financial Statistics Monthly*.

From CE to QE2

- “Credit Easing (CE)” (Bernanke, Jan 2009):
 - Conceptually distinct from BOJ’s QE
 - BOJ: Focus on the quantity of bank reserves? (Reserve targeting + Policy commitment)
 - Fed: Emphasis on the asset side of CB B/S
 - Too narrow definition of QE?
 - Differences in financial and economic conditions
 - Wider credit spreads + Dysfunctional credit markets
 - Stimulative effect
 - Mix of lending programs and securities purchases
 - More nature of financial system stability measures?

From CE to QE2 (Cont'd)

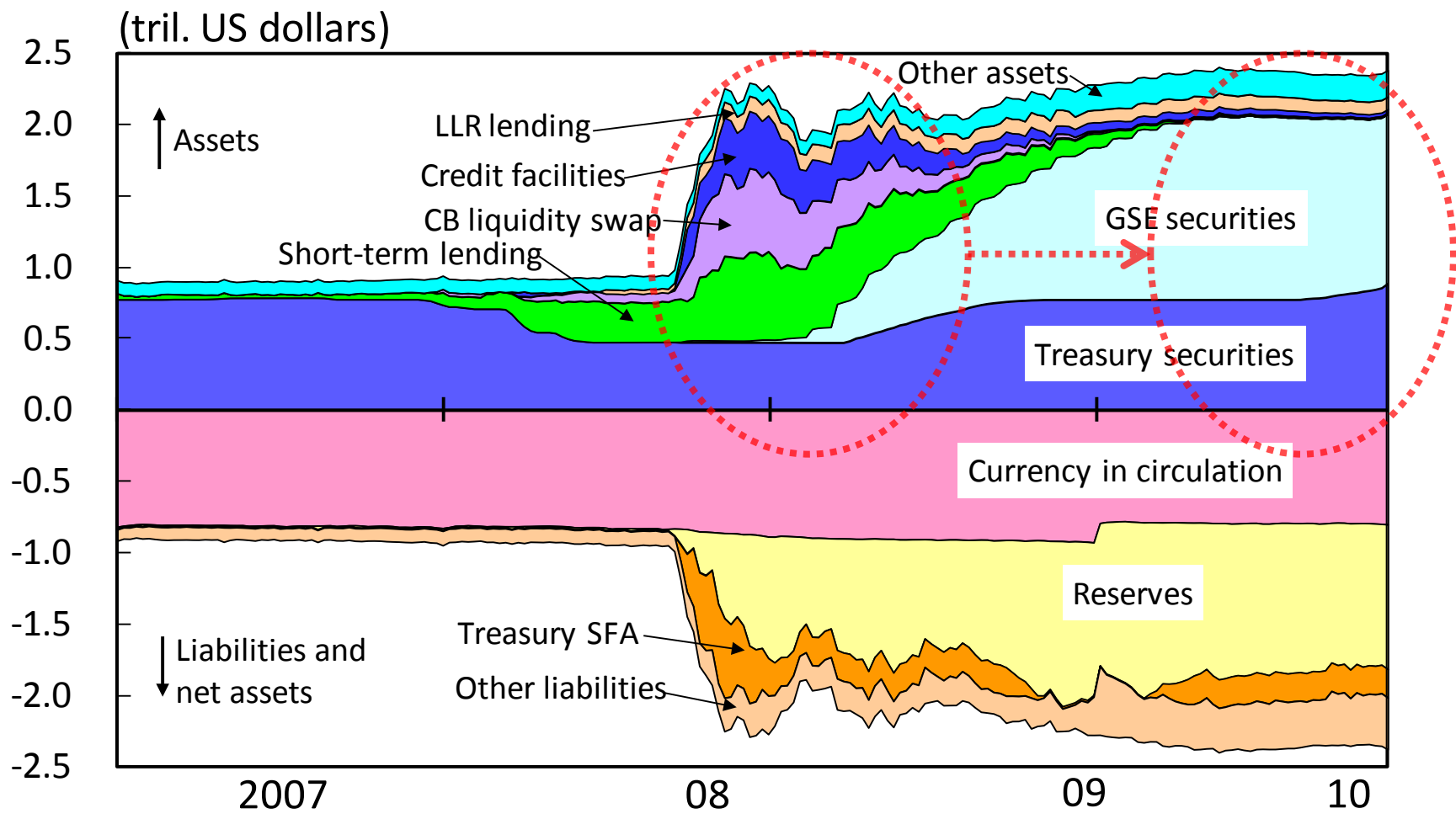
- QE2? (Bernanke, Oct 2010):
 - Securities purchases:
 - A different tool than O/N interest rate control
 - But with similar goals and transmission mechanisms
 - Transmission through well-functioning F-system
 - Macroeconomic stabilization policy
 - Fed policy describing as QE → Inappropriate
 - QE: Changing the quantity of bank reserves
 - Weak channel in the US context
 - Securities purchases: Portfolio rebalancing channel
 - Too narrow definition of QE?

From CE to QE2 (Cont'd)

- Operation Twist? (Sep 21, 2011):
 - Maturity extension program:
 - Extension of the average maturity of the securities in the Fed's portfolio
 - Sell \$400 bill. of Short-term Treasury securities by end-June 2012, and buy longer-term Treasury securities
 - Additional stimulus to support the economic recovery by reducing longer-term interest rates
 - Reduction of the supply of longer-term Treasury securities
 - Interest rate arbitrage b/w longer-term securities, considered as close substitute for longer-term Treasury securities
 - Changes in the composition of Fed's securities holdings w/o affecting the overall size of Fed's B/S

Fed's Balance Sheet

To be updated



Source: Board of Governors of the Federal Reserve System, *Factors Affecting Reserve Balances*

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Japan's MP under ZLB

- Zero Interest Rate Policy (ZIRP, from Feb 1999 to Aug 2000):
 - Commit to zero rate until deflationary concerns are dispelled
- Quantitative Easing Policy (QEP, from Mar 2001 to Mar 2006):
 - Commit to CAB targeting until CPI inflation becomes stably zero or above
 - Supplementary measures of credit policy

Japan's MP under ZLB (Cont'd)

- Financial Assets Purchased:
 - Outright purchase of JGBs
 - A kind of credit easing
 - Outright purchase of ABCPs and ABSs
 - Equity purchase from financial institutions
 - CP repos

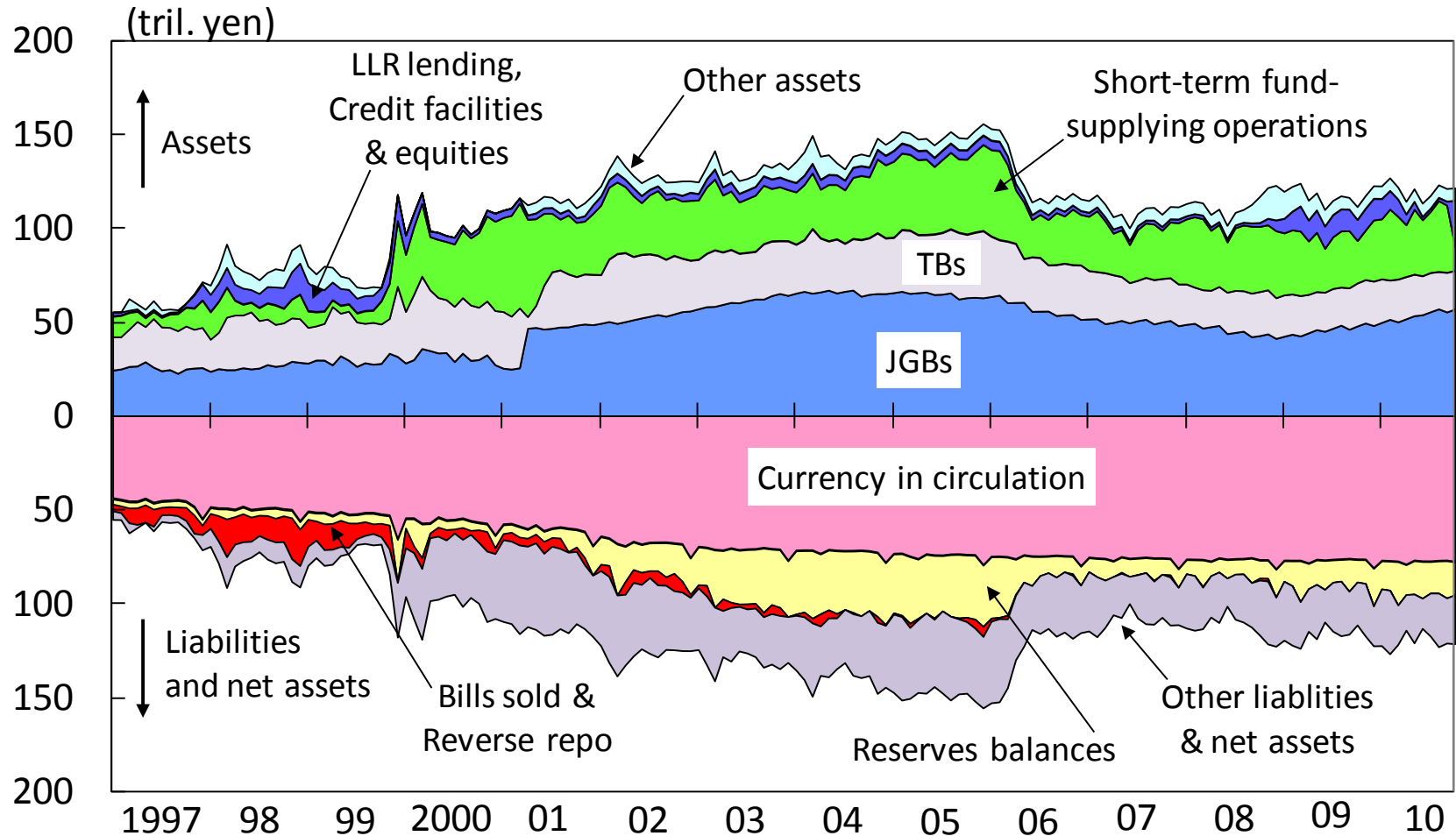
Involved most of the elements in the unconventional policy measures taken in the recent global financial crisis (Shirakawa, Oct 2010)

Japan's MP under ZLB (Cont'd)

- BOJ's Recent Measures:
 - Fund-provisioning measure to facilitate strengthening of the foundations for economic growth(May 2010)
 - Comprehensive monetary easing (Oct 2010)
 - Clarification of maintaining virtually zero interest rates
 - Clarification of the time horizon to maintain the virtually zero interest rate policy
 - Establishment of an asset purchase program (JGBs, CPs, SBs, ETFs, RIETs,...)

BOJ's Balance Sheet

To be updated



Source: Bank of Japan, *Economic and Financial Statistics Monthly*.

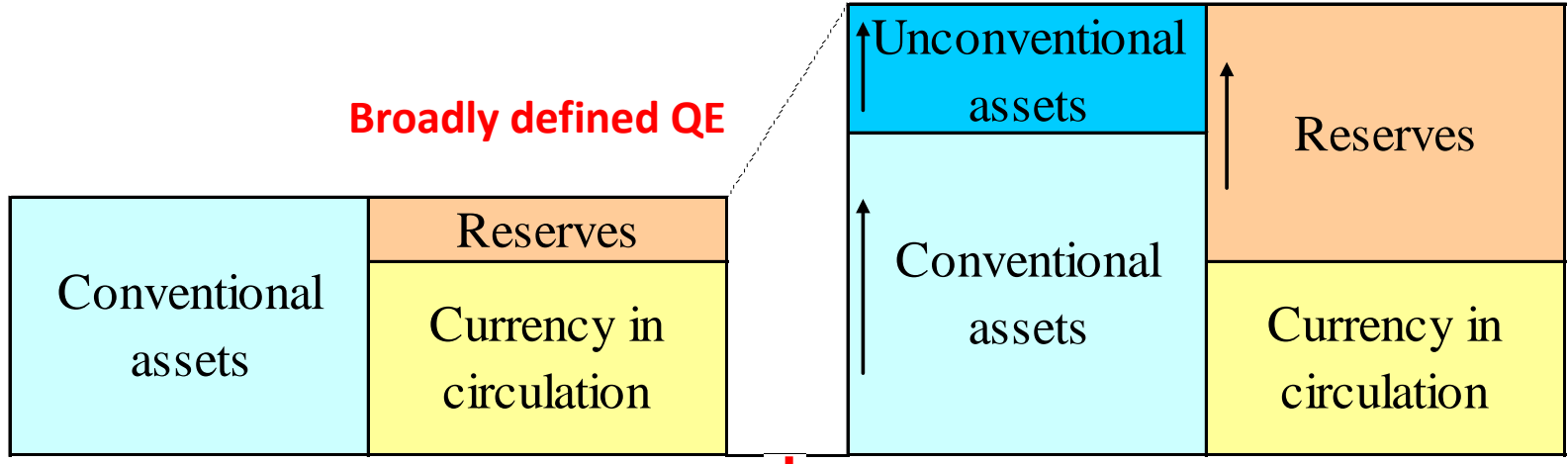
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CB B/S under Unconventional Policy

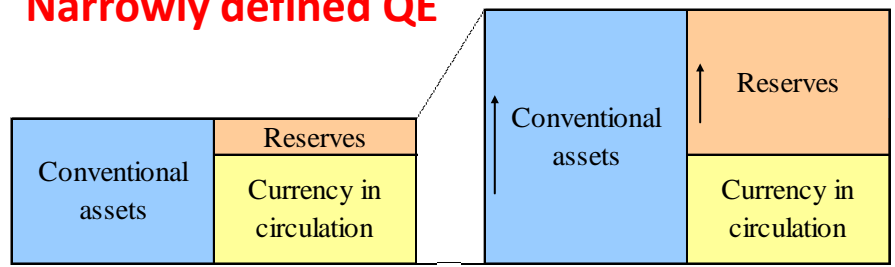
(Observed unconventional monetary policy)

Broadly defined QE



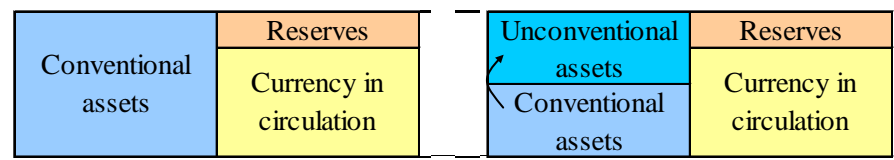
(Size)

Narrowly defined QE



(Composition)

Narrowly defined CE



Role of CB B/S

(Macroeconomic Stabilization)

- A natural extension of MP under ZLB:
 - Stimulus effects through portfolio rebalancing channel
- Imperfect substitutability b/w assets:
 - Composition: short- and long-term government securities
 - Size: Monetary base and non-money assets

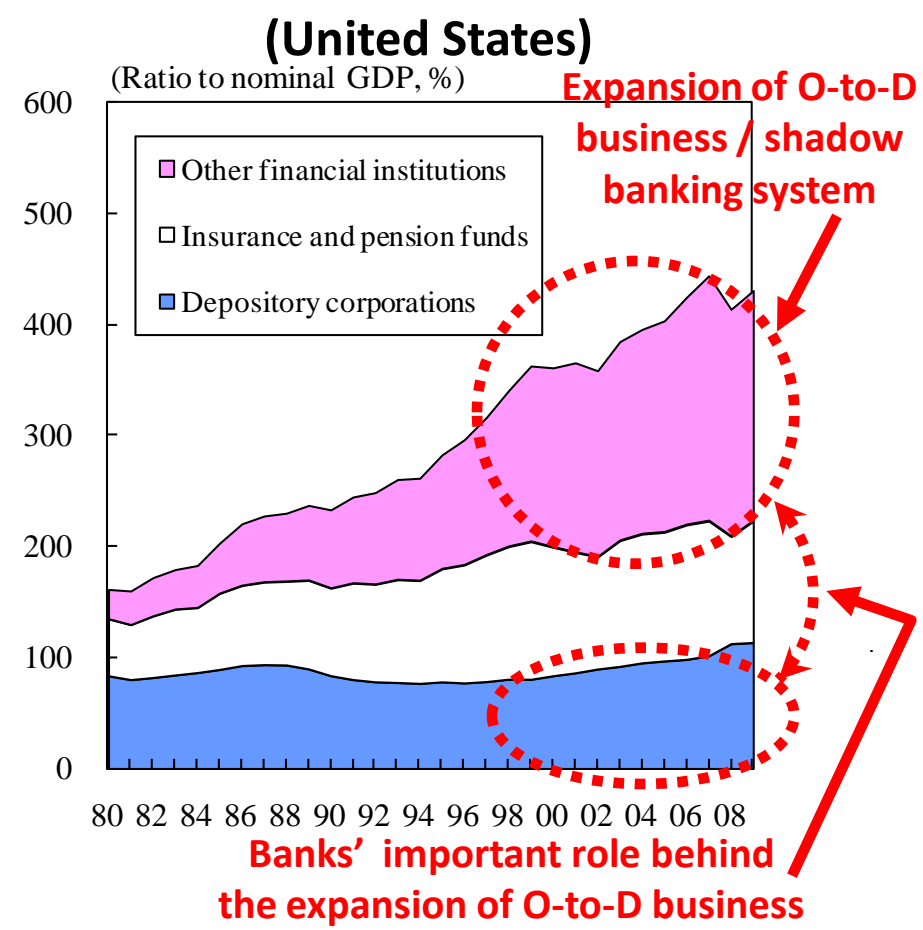
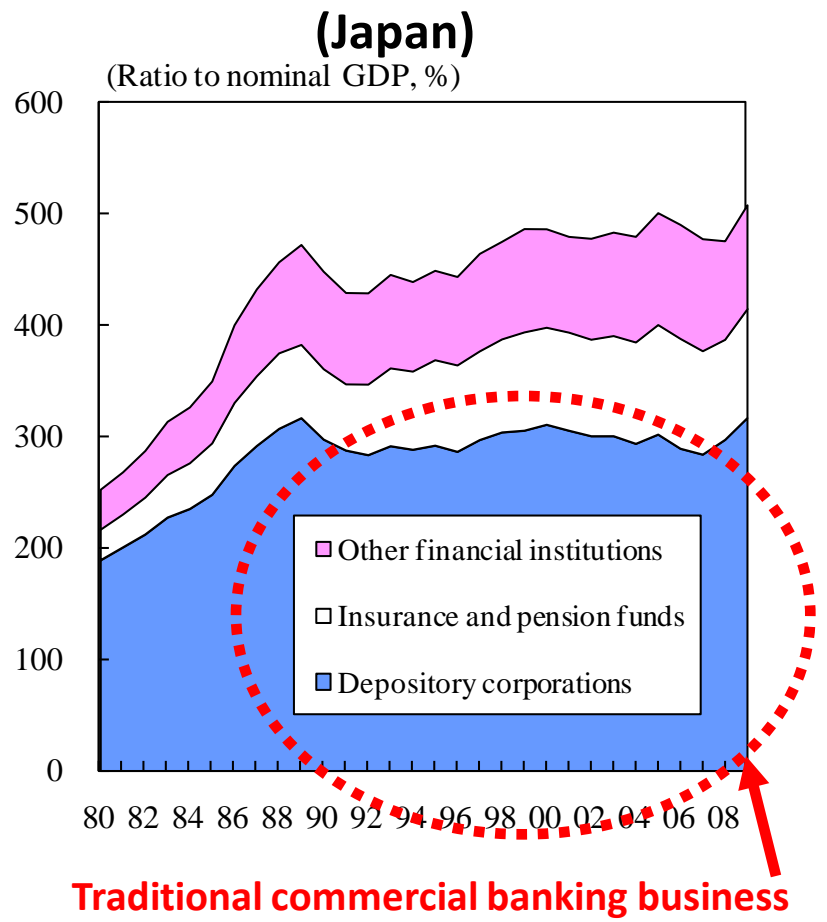
Magnitude of portfolio rebalancing effect

(Financial Stabilization)

- Not pure MP, but emergency operations to rescue F-system
 - Stabilization of F-system
- Liability side:
 - Excess reserves → Funding liquidity risk
- Asset side:
 - Unconventional assets → Substitution of dysfunctional private financial intermediation

Differences in financial structure

Financial Structure



Note: Other financial intermediaries include securities investment trusts, nonbanks, financial dealers and brokers, and financial auxiliaries.
Source: Bank of Japan, "Flow of Funds Accounts."

Note: Other financial intermediaries include investment trusts, financial dealers and brokers, nonbanks, and funding companies.
Source: Federal Reserve, "Flow of Funds Accounts of the United States."

Policy Focuses

	Macroeconomic stabilization		Financial stabilization
BOJ's QE	Limited	Focus >	Effective
Fed's CE	?	<	Highly Effective
QE2/MEP	?	>	

An Understanding of QE

- Policy Responses to F-Crises:
 - Combine two elements of CB B/S
 - Size: Reserve provision, Unconventional asset purchases
 - Composition: Conventional / unconventional assets
 - Enhance the overall effects of unconventional MP
 - Consider CB's environments and restrictions
- (Broadly Defined) Quantitative Easing:
 - Package of unconventional policy measures
 - Absorb the shocks hitting the economy
 - Stimulate the economy through portfolio rebalancing

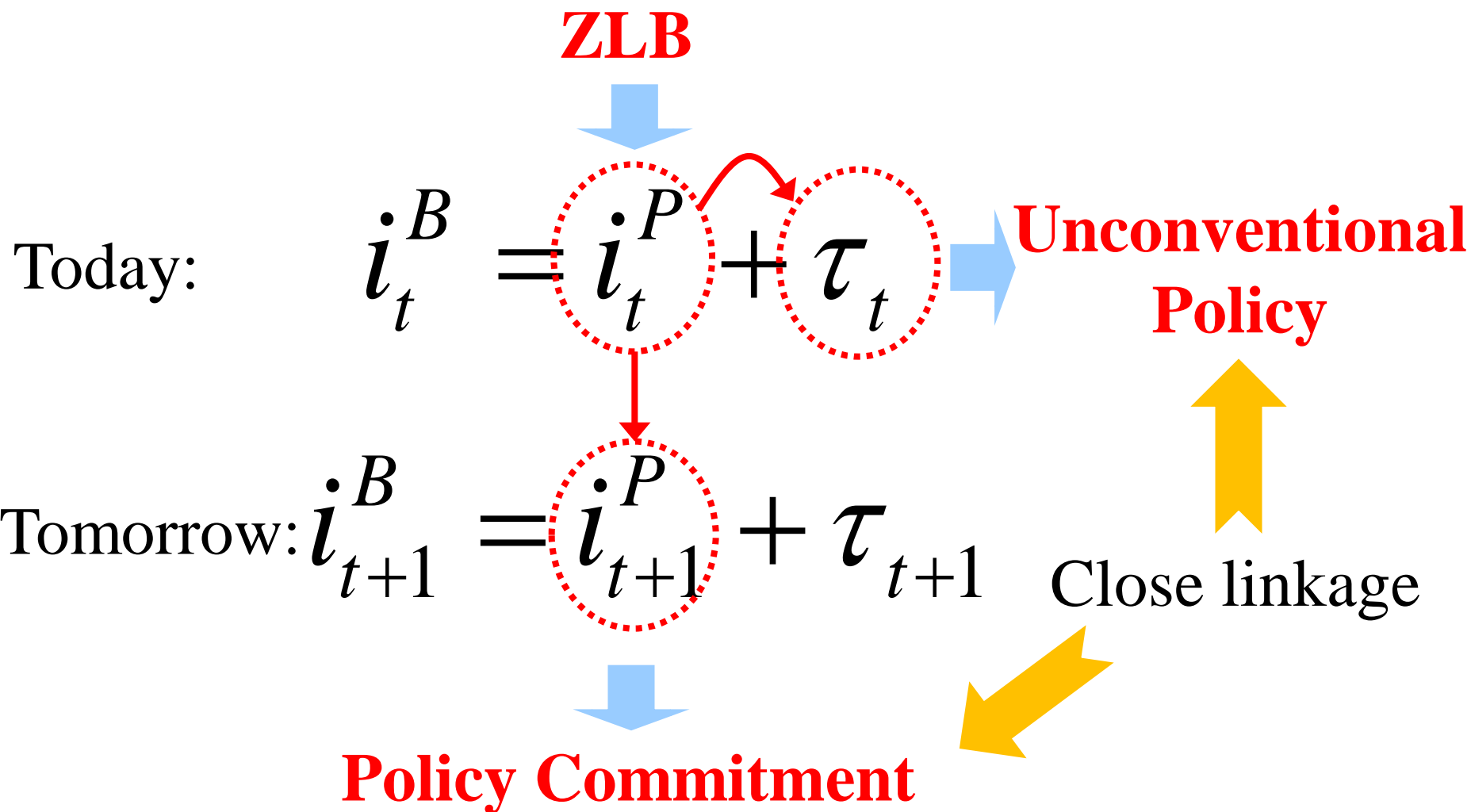
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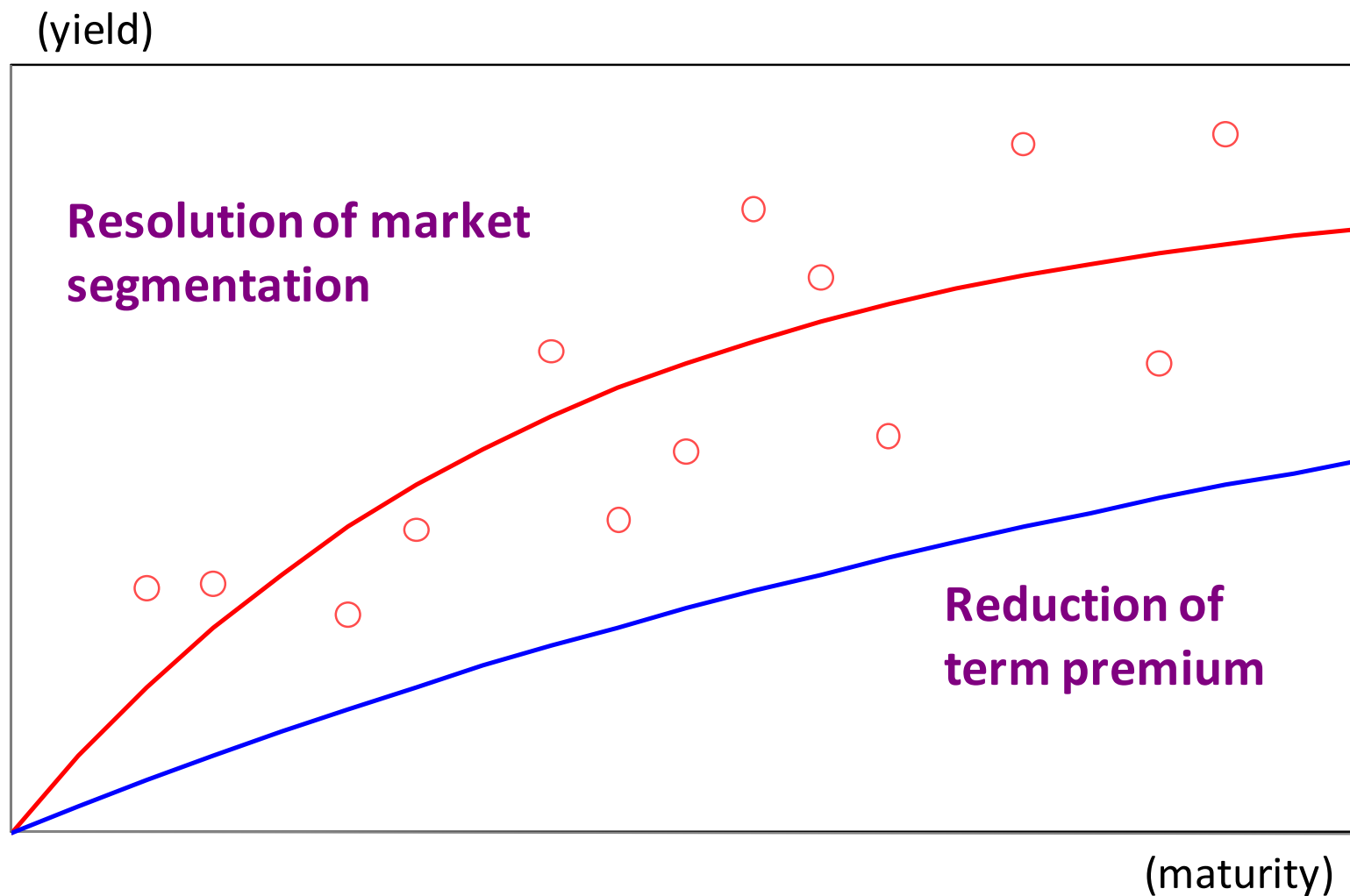
Fiscal Policy Elements

- Large-scale Asset Purchases:
 - Approaching the Territory of Fiscal Policy:
 - Undertaking of counterparty risk and credit risk
 - Not pure liquidity provisions
 - Intervention of private-sector resource allocation
- Other Measures?
 - Helicopter Money = Gov expenditure financed by the CB underwriting of Gov bonds

Unconventional vs. Commitment



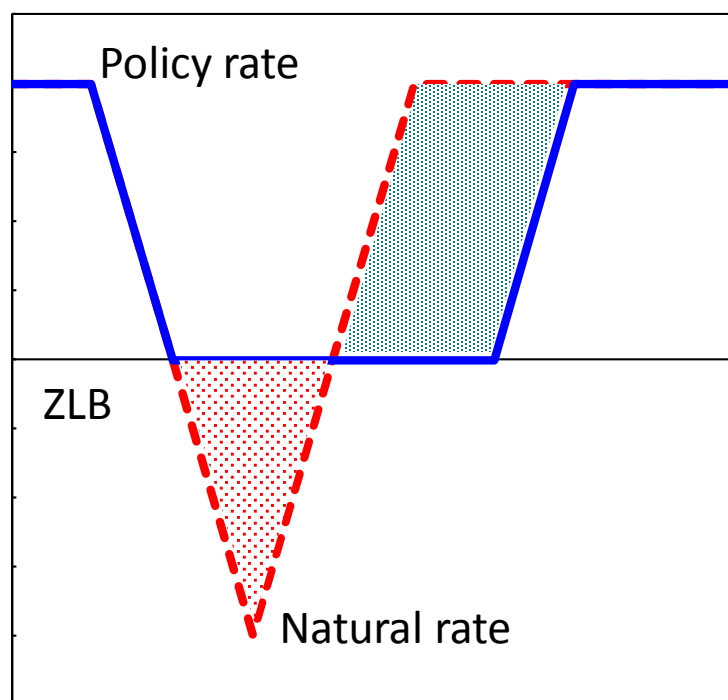
Portfolio Rebalancing



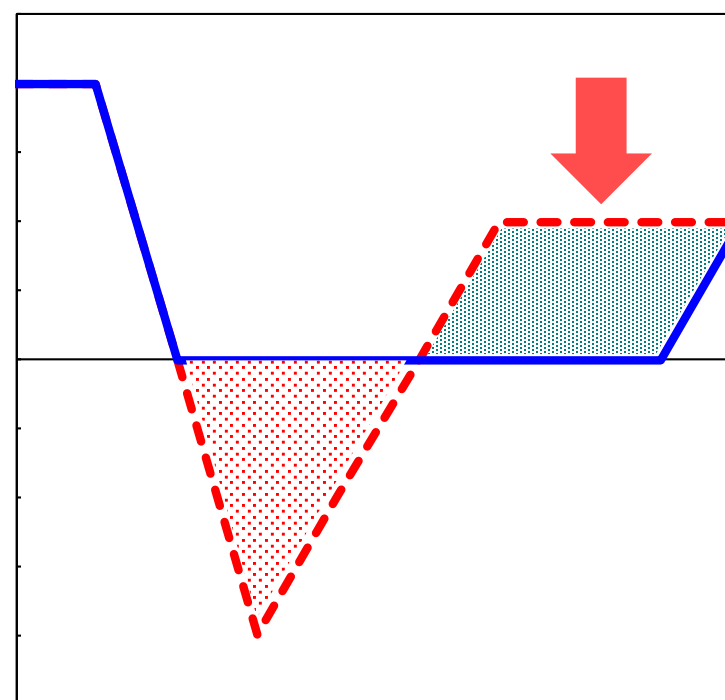
Policy Commitment under ZLB

To compensate the CB's inability to lower the rate below zero by altering MKT-expectations about the future course of MP.

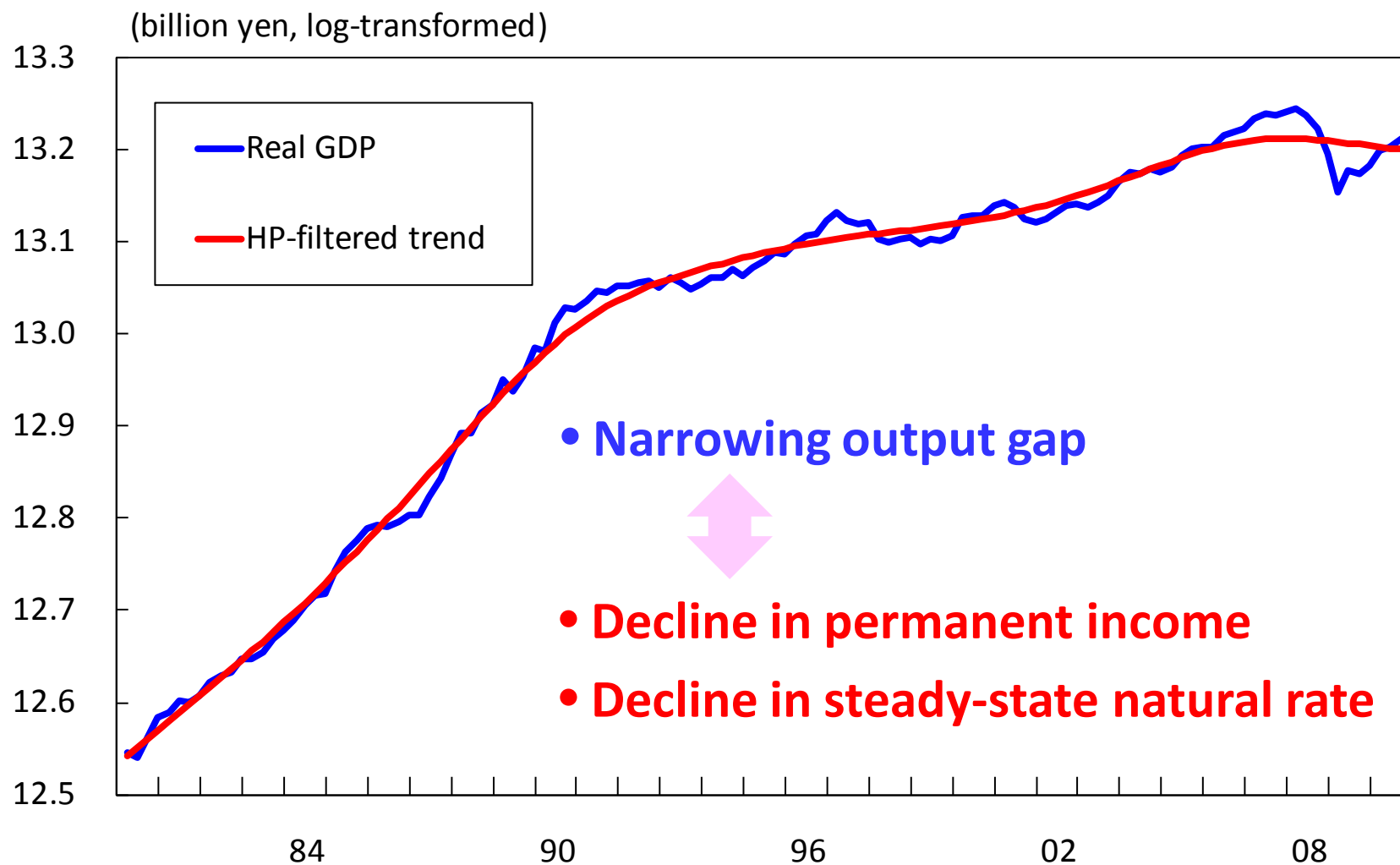
(Constant Steady-state)



(Downward Shift in Steady-state)



Declined Trend Growth Path



Acute Pain vs. Chronic Illness

- Financial and Economic Conditions after the Burst of a Bubble
 - Acute pain ← Malfunctioning interbank Mkt
 - Chronic illness ← Balance sheet adjustment
- Nature of Unconventional Policy
 - Buy time policy until substantial progress in balance sheet adjustment
 - Not cure-all policy measures

Policy Challenges

- Policy Environment in Japan:
 - Hampered trend growth path
 - Structural implications for monetary policy beyond a single business cycle
- Monetary Policy management under a Declined Trend Growth Path:
 - Not just an issue of macroeconomic stabilization
 - Restoration of trend growth path
 - ←→ Enhancement of stimulative effects of monetary policy

Summary

- Quantitative Easing:
 - Package of unconventional policy measures to absorb the shocks hitting the economy
- Role of CB B/S:
 - Stimulus effects through portfolio rebalancing
 - Not pure MP, but emergency operations to rescue financial system
- Policy Challenges to Japan:
 - Monetary Policy management under a Declined Trend Growth Path
 - Not just an issue of macroeconomic stabilization