

# "Effects of divergent monetary policies, with focus on Japan"

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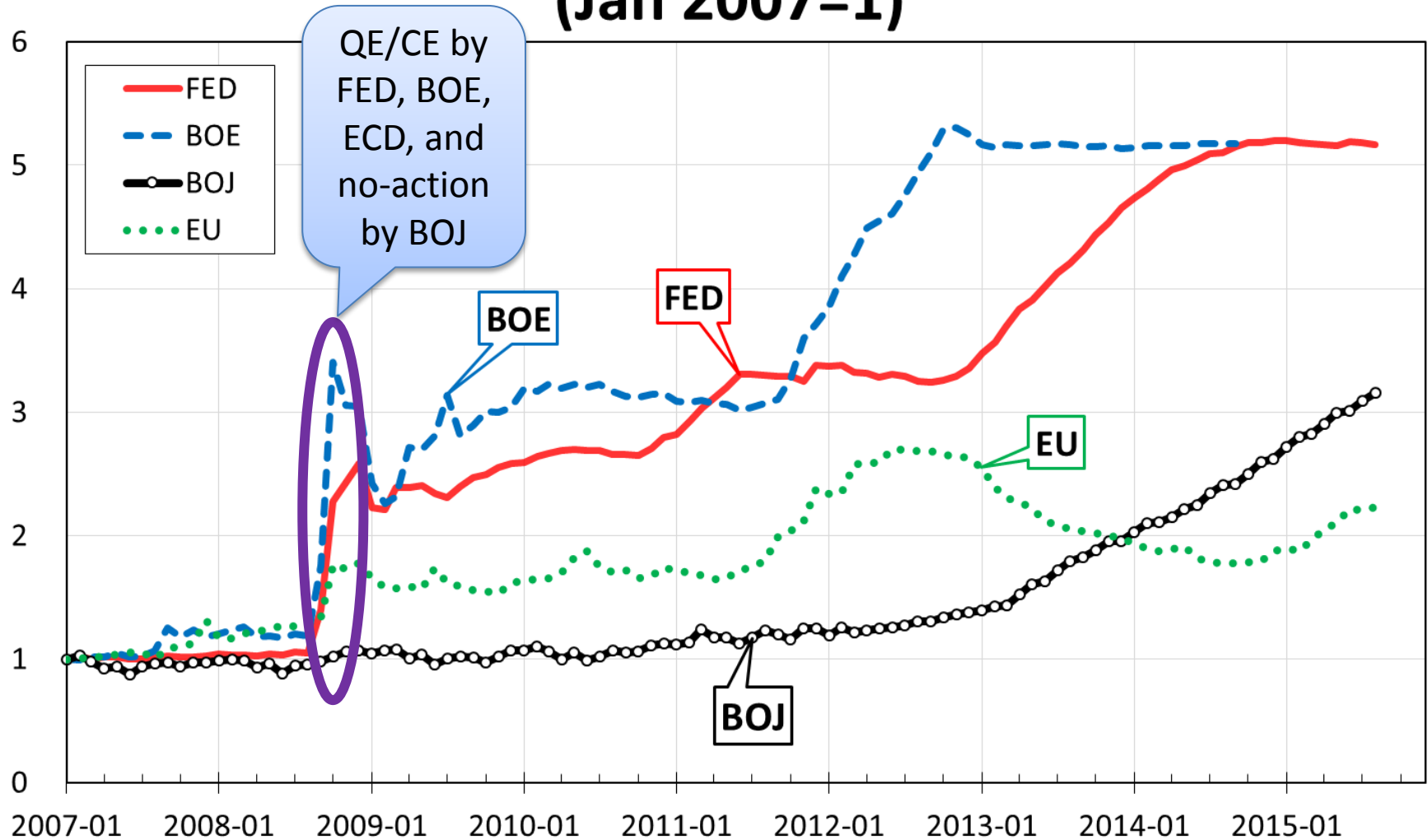
# Summary

- Paths of FRB, BOJ, ECB and BOE
  - Interest rates and Balance Sheets
  - Inflation targeting regime
- “Japanization”
  - Japanese stagnation and deflation
  - Advanced economies
  - Korea and other EMs
- Japanese monetary policy evolution
  - Deflationary trap
  - Inflation targeting, finally (2013/01)
  - QQEs (2013/04; and 2014/10)
  - Abenomics

# FRB, BOJ, ECB, BOE

- The policy interest rate has been virtually zero since the early 2009 in the 4 central banks (Big 4)
- QE (expansion of B/S) occurred in the Big 4, but in different timings
  - FRB and BOE adopted QEs in the early 2009
  - ECB increased B/S, decreased B/S, and increasing again
  - BOJ did not start QEs until April 2013
  - FRB is contemplating an “exit” from zero interest rate
- The Big 4 have adopted the 2% inflation targeting regime
  - ECB is nuanced (below but close to 2%)

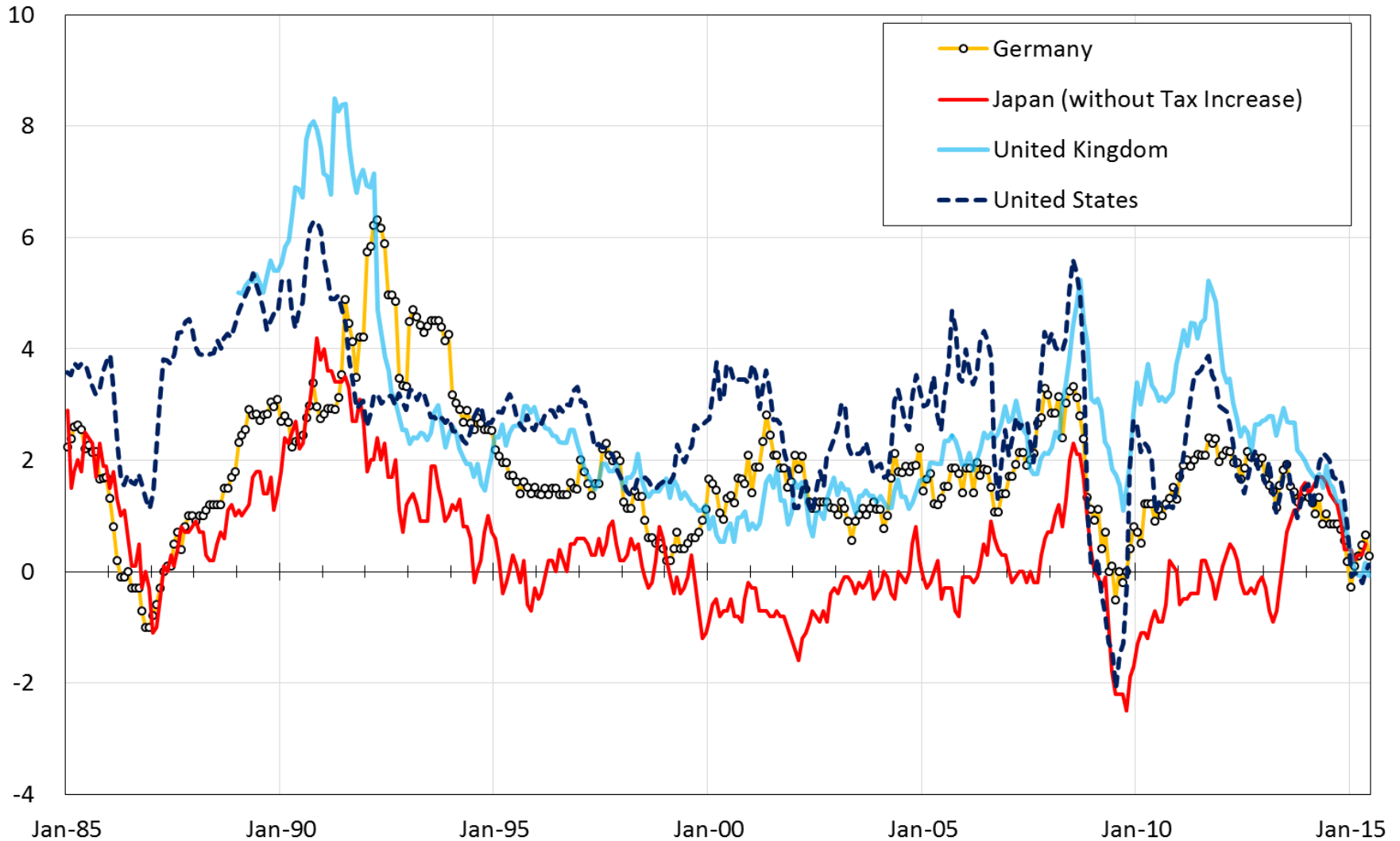
# Balance Sheets of 4 Major Central Banks (Jan 2007=1)



# *Japanization*: Definition

- Japanization: A period (a decade or two) of
  - Sustained **deflation**. Below targeted inflation rate ( $\pi < 0 < \pi^*$ )
  - Sustained **stagnation**. Growth rate below potential ( $g < g^*$ )
  - **Low nominal interest rate**. At or near Zero Lower Bound ( $i = 0$ )
    - With deflation, real interest rate is positive
  - Flattening yield curve
    - 10-yr bond rate becomes lower
- Policy.
  - Monetary policy: ZIRP and QE
    - But, QE alone may not work
  - Fiscal policy: Fiscal stimulus
    - But, fiscal stimulus ends up with large debt
- Are we all “Japanized”?

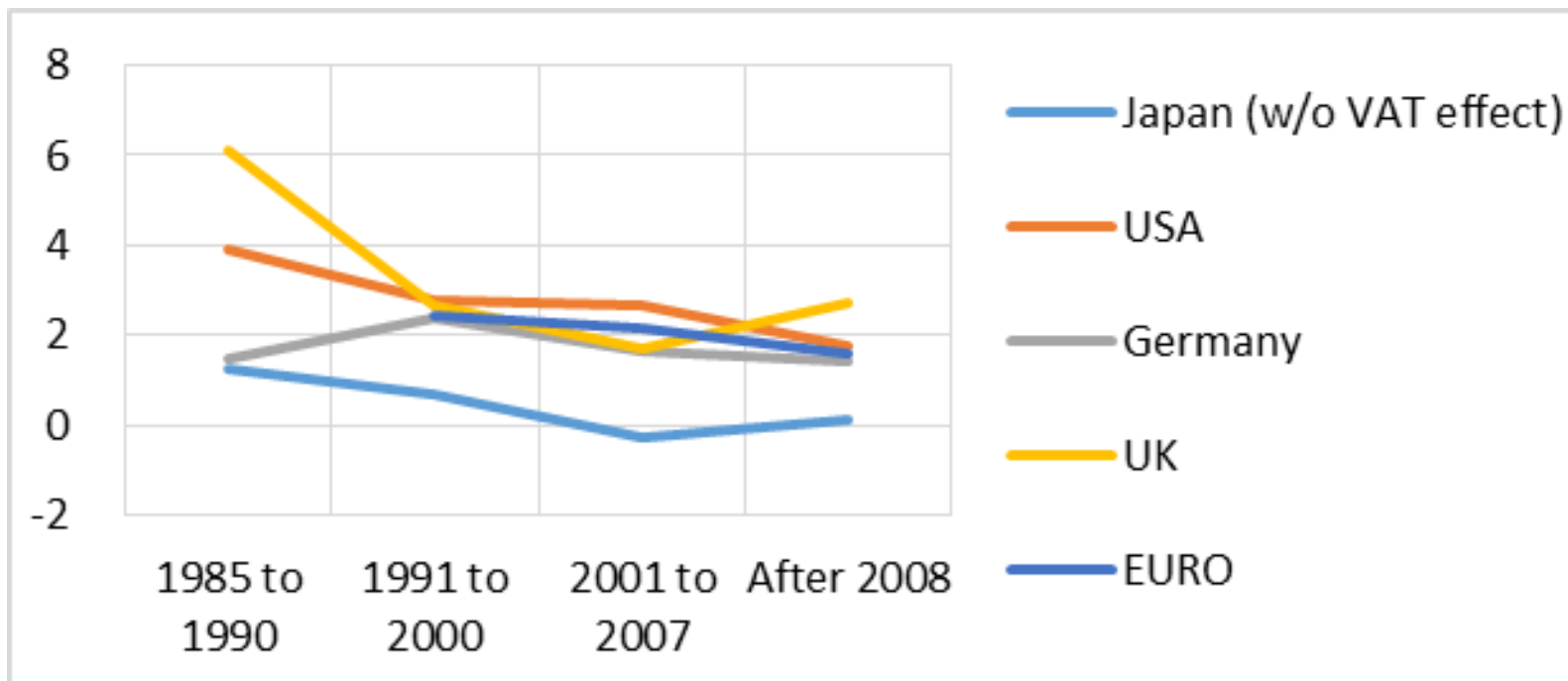
# Inflation rates (headline)



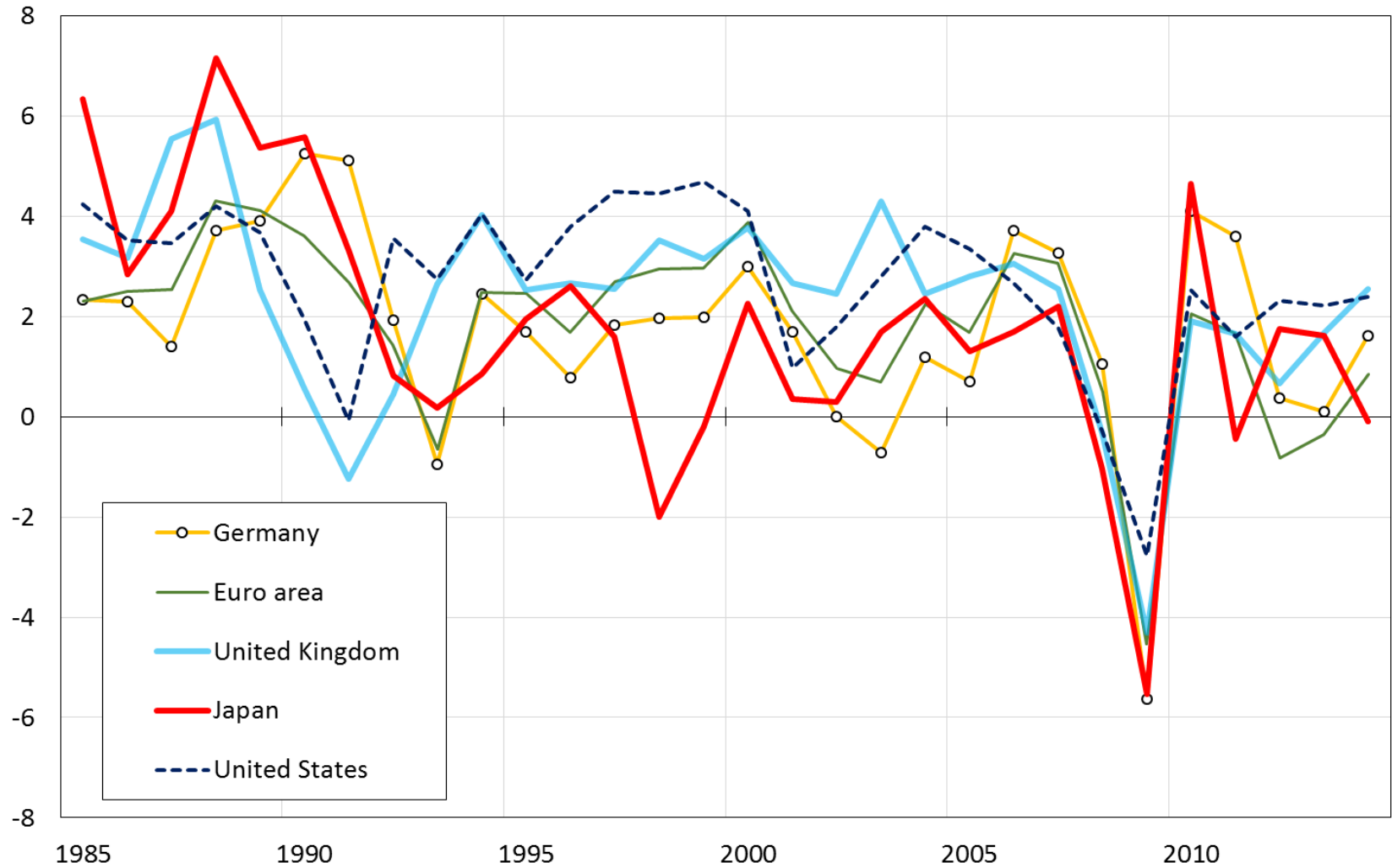
Source: IMF and MIC(Japan).

### Inflation rate (headline CPI)

	1985 to 1990	1991 to 2000	2001 to 2007	After 2008
<b>Japan (w/o VAT effect)</b>	1.279	0.678	-0.269	0.104
<b>USA</b>	3.904	2.803	2.692	1.792
<b>Germany</b>	1.509	2.394	1.647	1.423
<b>UK</b>	6.098	2.695	1.701	2.722
<b>EURO</b>		2.423	2.187	1.621



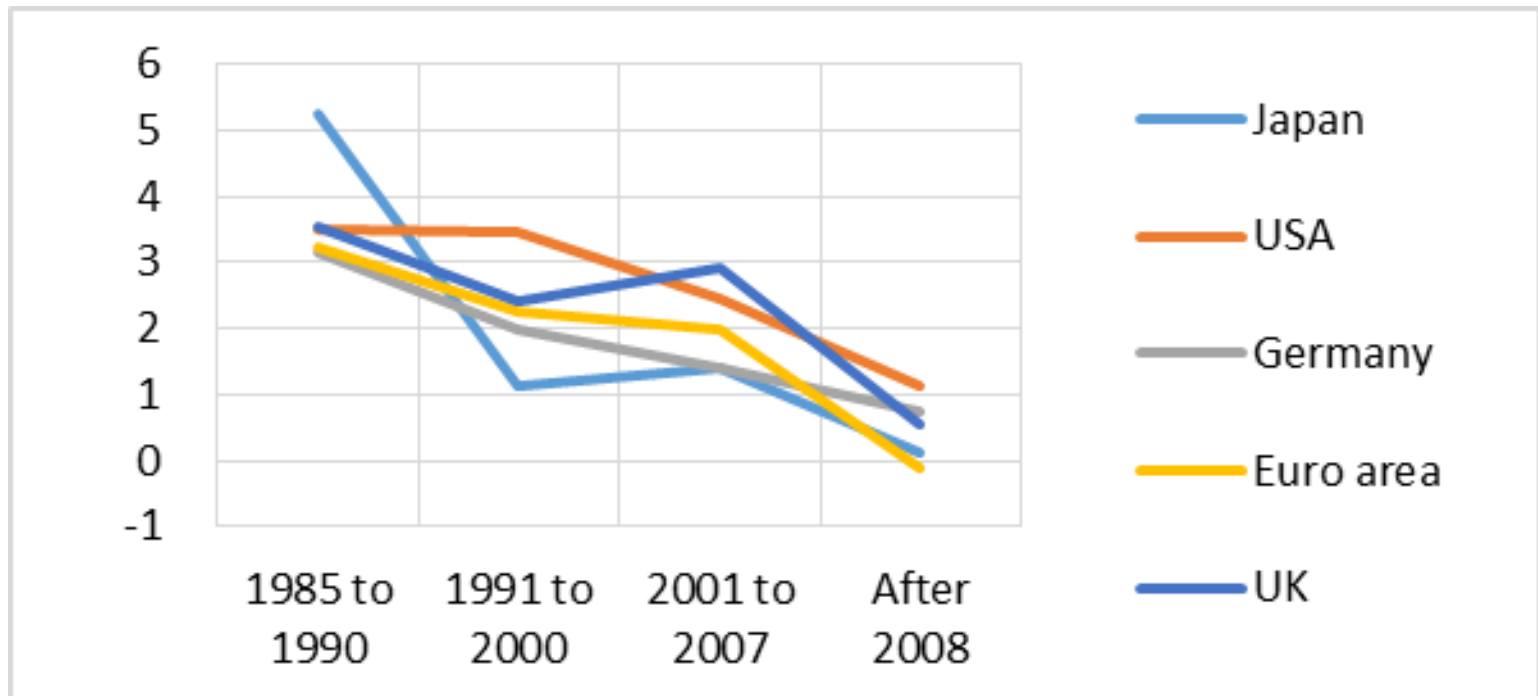
# Growth Rates



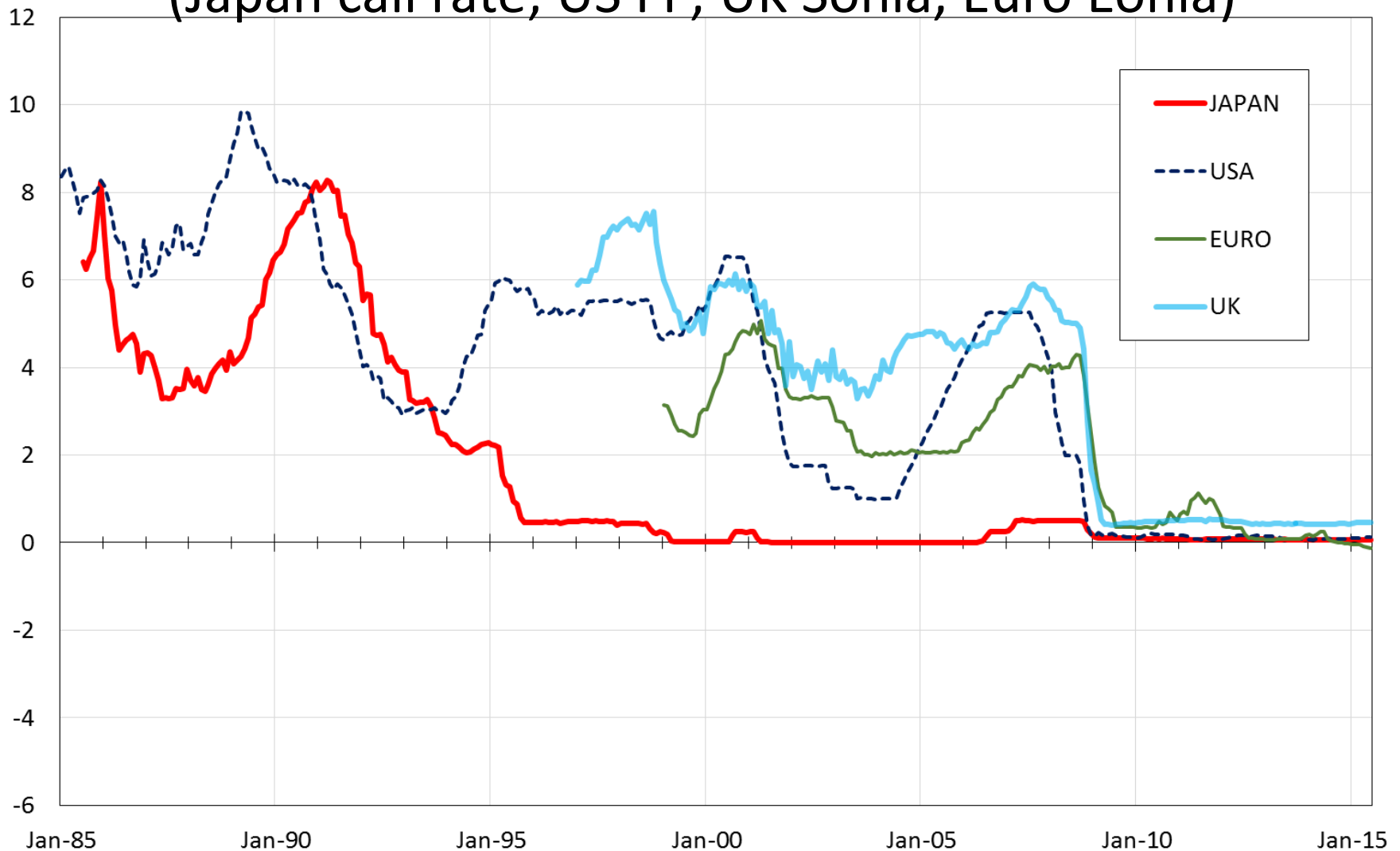
Source: World Bank, World Development Indicators.

### GDP growth (annual %)

	1985 to 1990	1991 to 2000	2001 to 2007	After 2008
<b>Japan</b>	5.227	1.138	1.411	0.128
<b>USA</b>	3.503	3.449	2.449	1.142
<b>Germany</b>	3.146	1.978	1.408	0.740
<b>Euro area</b>	3.228	2.255	2.001	-0.097
<b>UK</b>	3.540	2.406	2.896	0.542



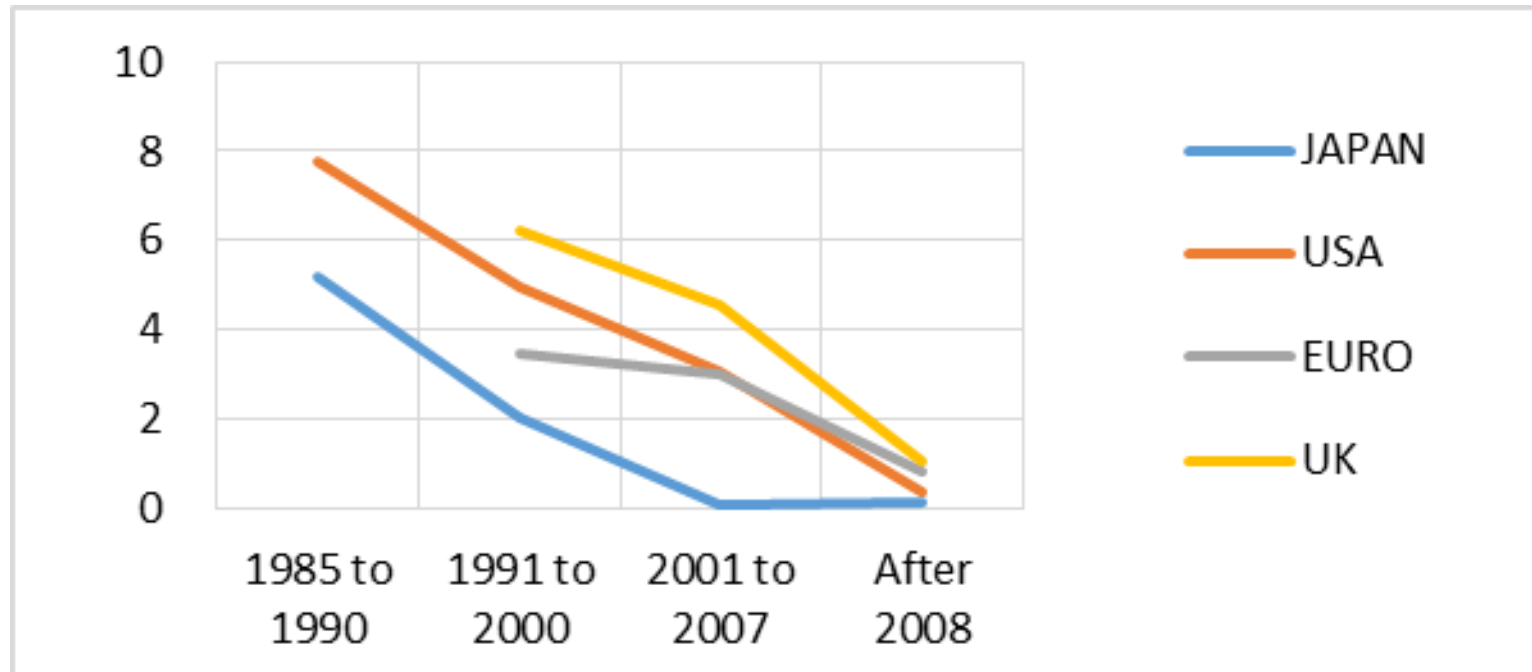
# Nominal Short Interest Rate: Policy Rate (Japan call rate; US FF; UK Sonia, Euro Eonia)



Source: BOJ, FRB, ECB and BOE.

**short (policy) rate, Nominal**

	1985 to 1990	1991 to 2000	2001 to 2007	After 2008
JAPAN	5.170	2.015	0.094	0.133
USA	7.741	4.959	3.033	0.368
EURO		3.431	2.975	0.835
UK		6.203	4.556	1.026



# *Japanization* as an extreme case of the recent trends in $\pi$ , $g$ , $i$

- In advanced economies, there have been long-run trends of
  - Disinflation -> deflation (only in Japan)
  - Declining growth
  - Declining (nominal and real) interest rate
- Deflationary equilibrium
  - Under deflation, ZIRP cannot generate negative real rate
  - Deflation and low growth may persist

# Why Japan first?

- Why did “*Japanization*” occur in Japan?
  - Why only Japan did deflation happen?
  - How others avoided deflation, so far
- What caused *Japanization*?
- Is *Japanization* equivalent to a deflationary trap?
- How to escape from the Japanization?

# Japan

- First advanced economy to experience
  - Deflation (since 1998)
  - ZIRP
  - QE (without communication and FIT)
  - Population (total and working age) decline

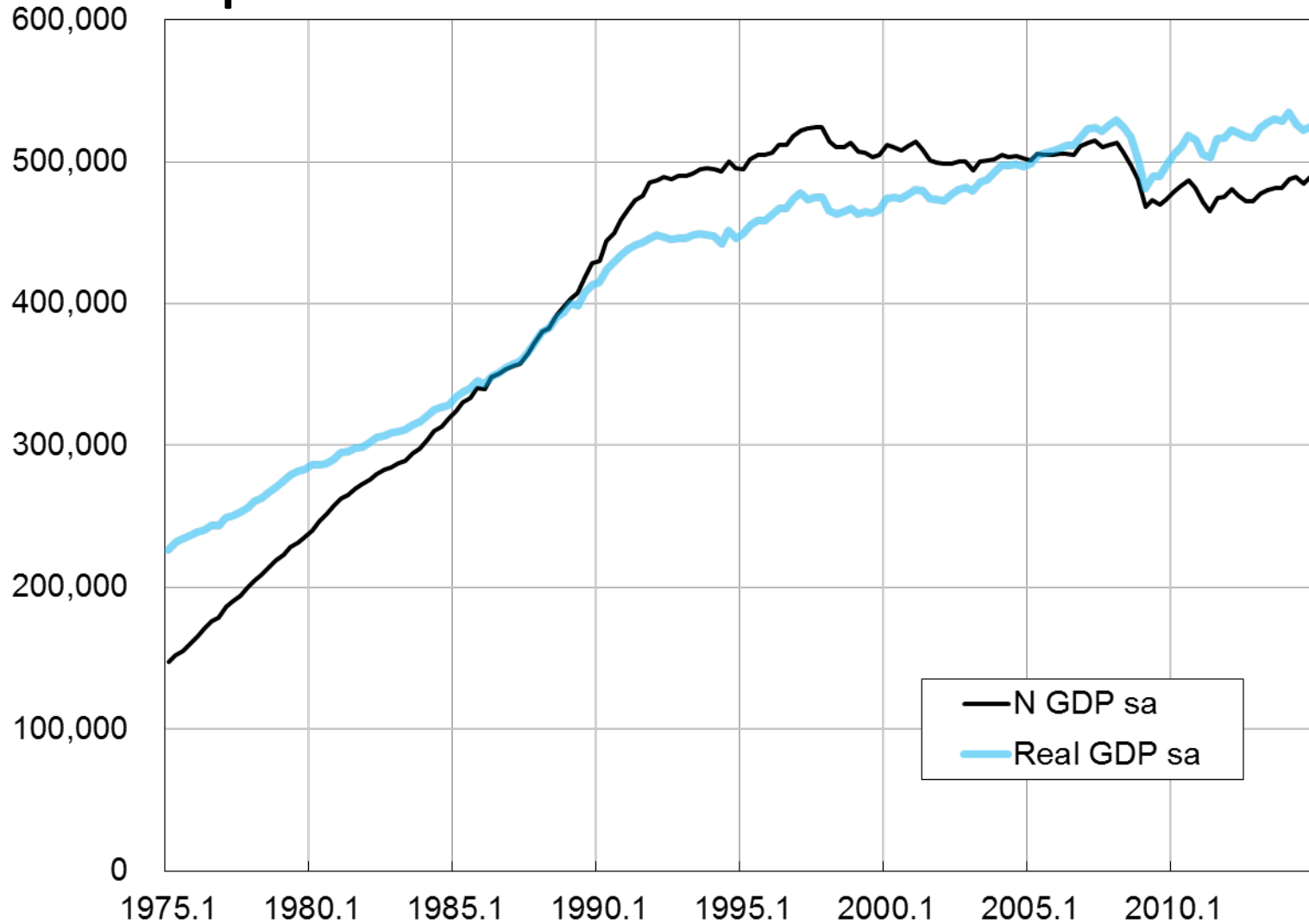
# Why Japan?

## First Country to experience ...

- Long stagnation (20 years) →
- Long deflation (15 years) →
- Long ZLB (15 years)
- Declining nominal interest rate →
- Long low real interest rate →
- Fiscal stimulus, tried but accumulated debts
- Flight to safety after the banking crisis (1997)
- Attempt to escape deflation (since December 2012)

# Stagnation:

## Japanese nominal and real GDP

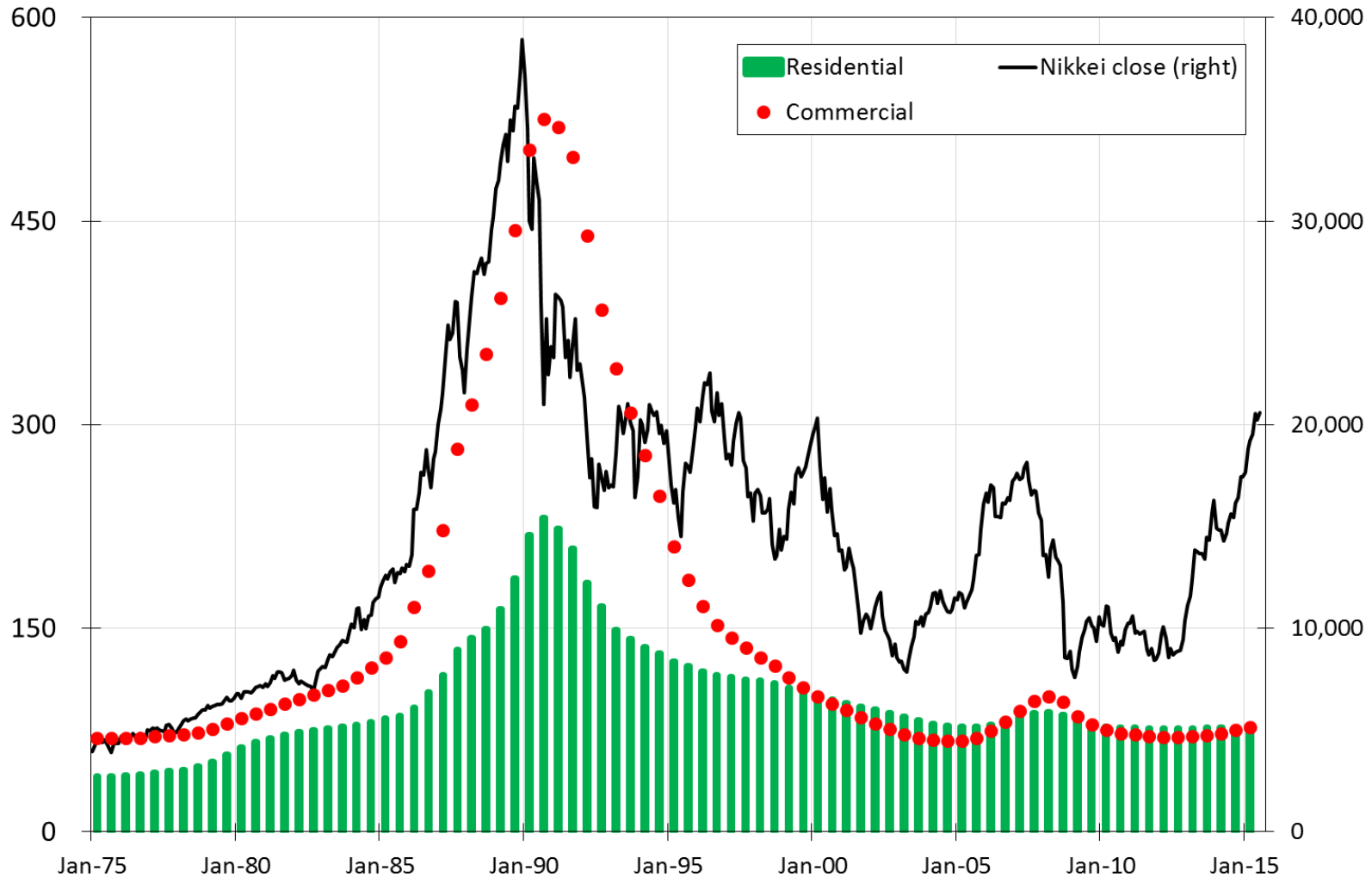


# Why Japan?

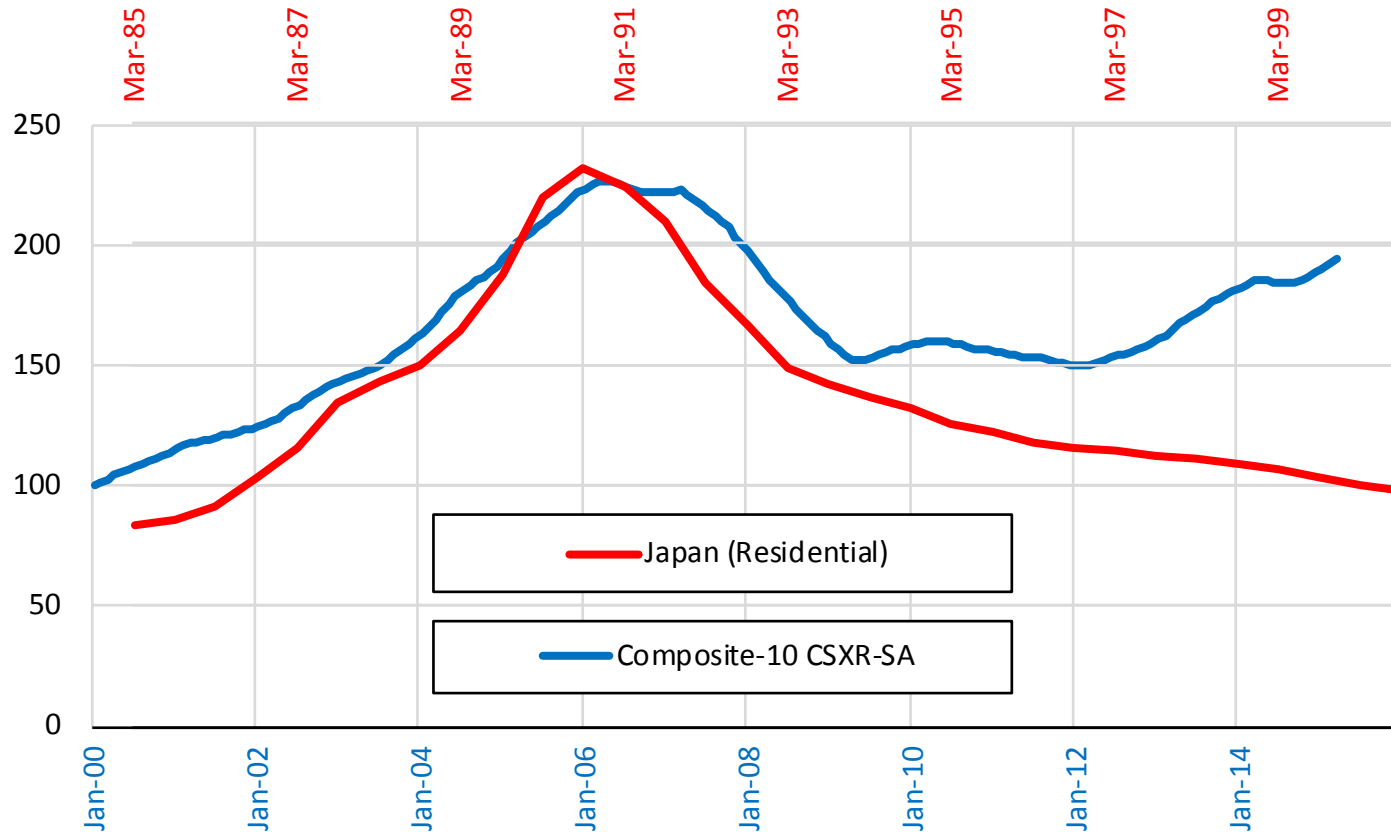
## Several differences

- Under deflation, real interest rate rose with deflation
  - Real interest rate NOT declining → Figure 3.5
  - Disinflation (but positive), 1990-1997
  - Deflation, 1998-2012
- Multiple equilibria:
  - Deflationary trap vs. normal growth equilibrium
- Demography
  - Aging has advanced so that demographic change is lowering the saving rate (NOT raising the saving rate)  
→ No saving glut

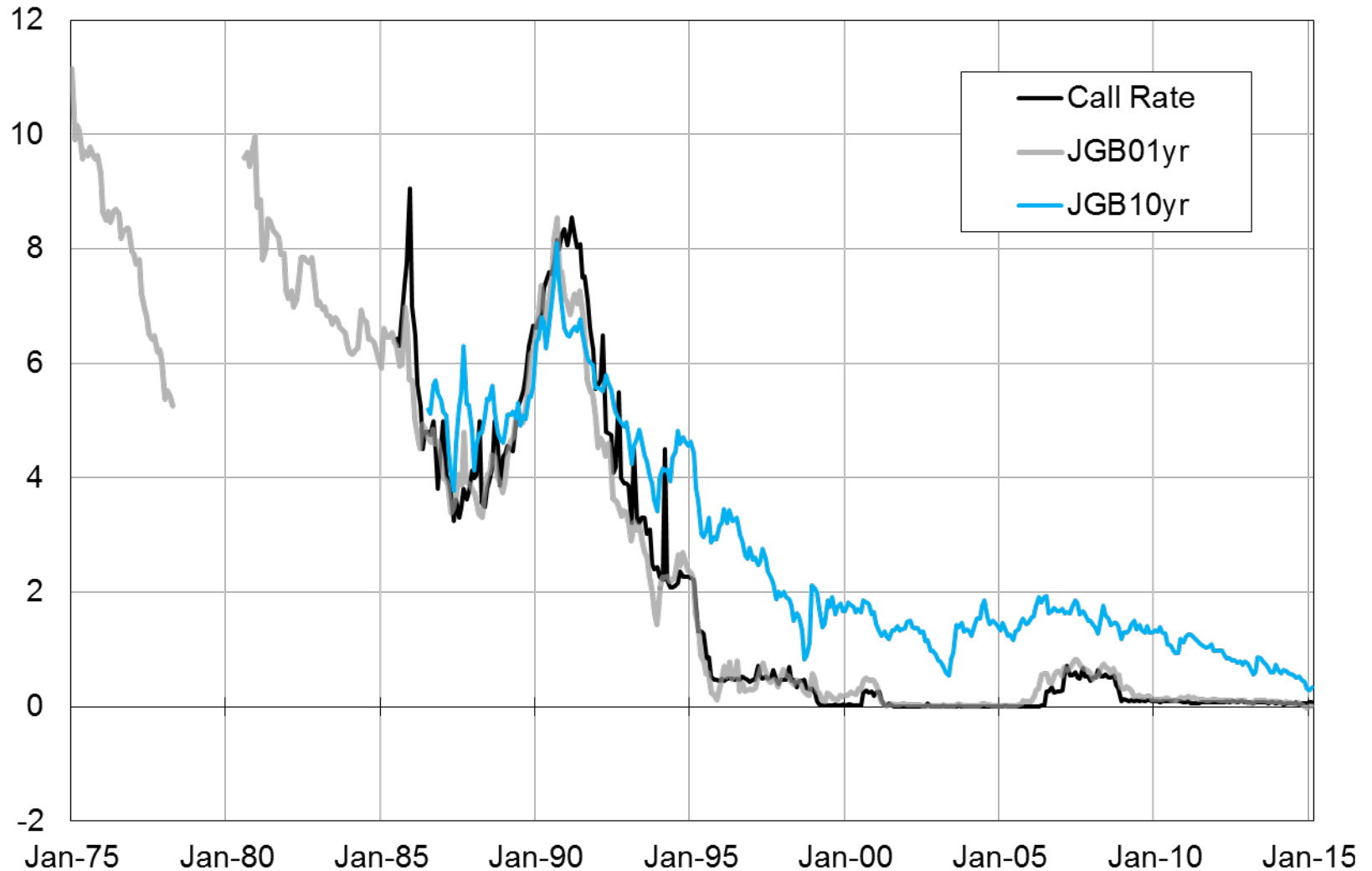
# Land prices (residential and commercial) with Nikkei225



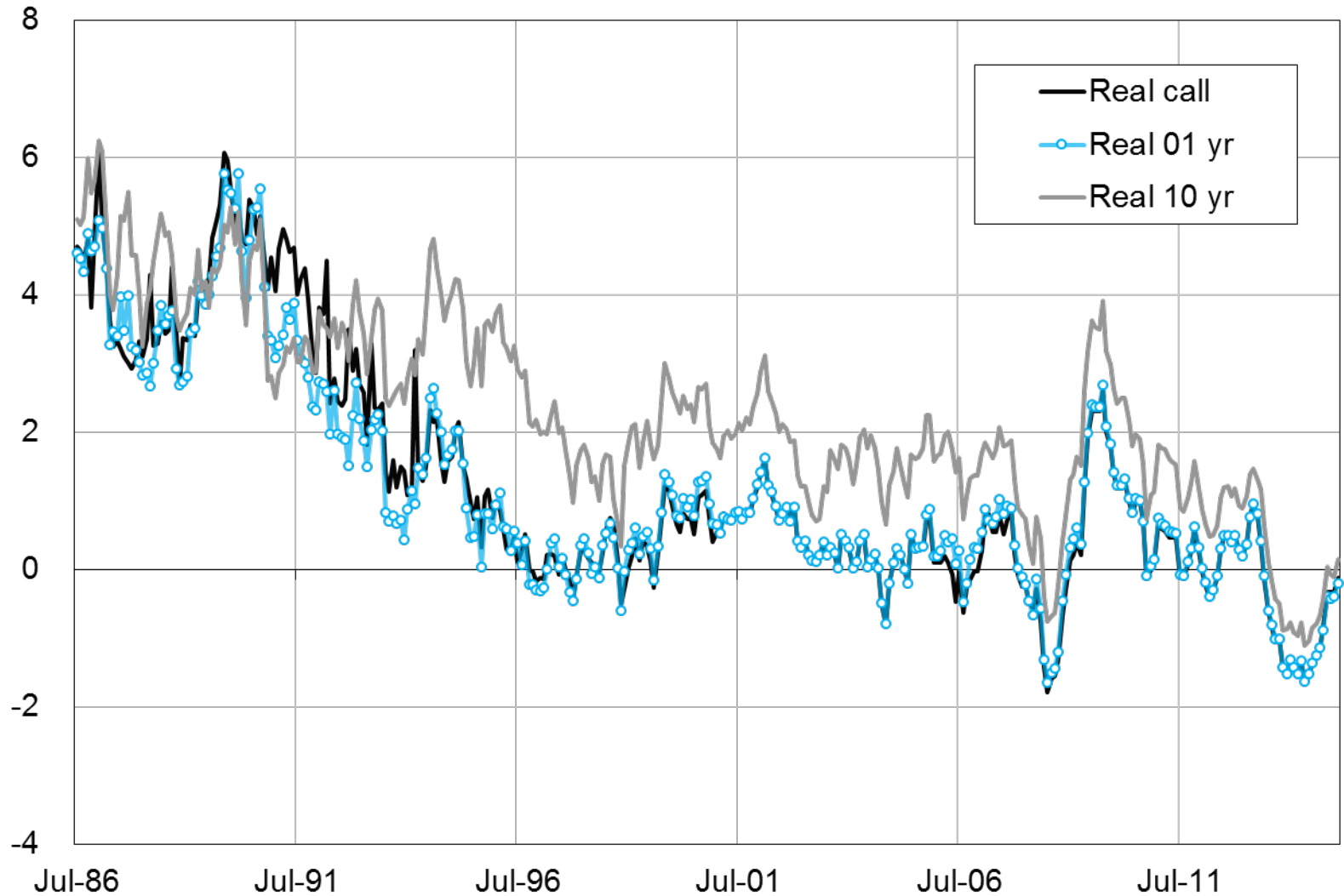
# Land prices: US-Japan comparison



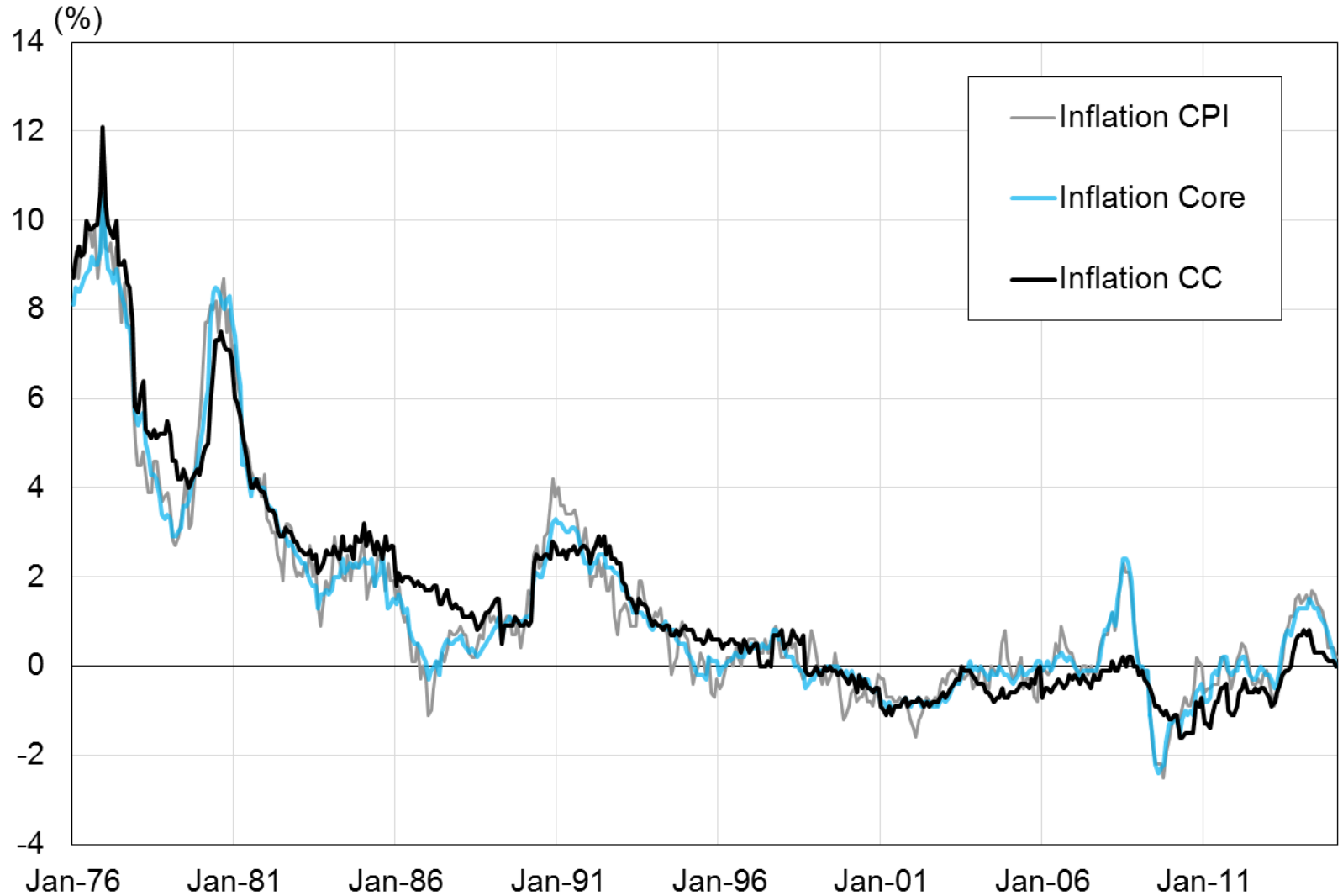
# Japanese nominal interest rates



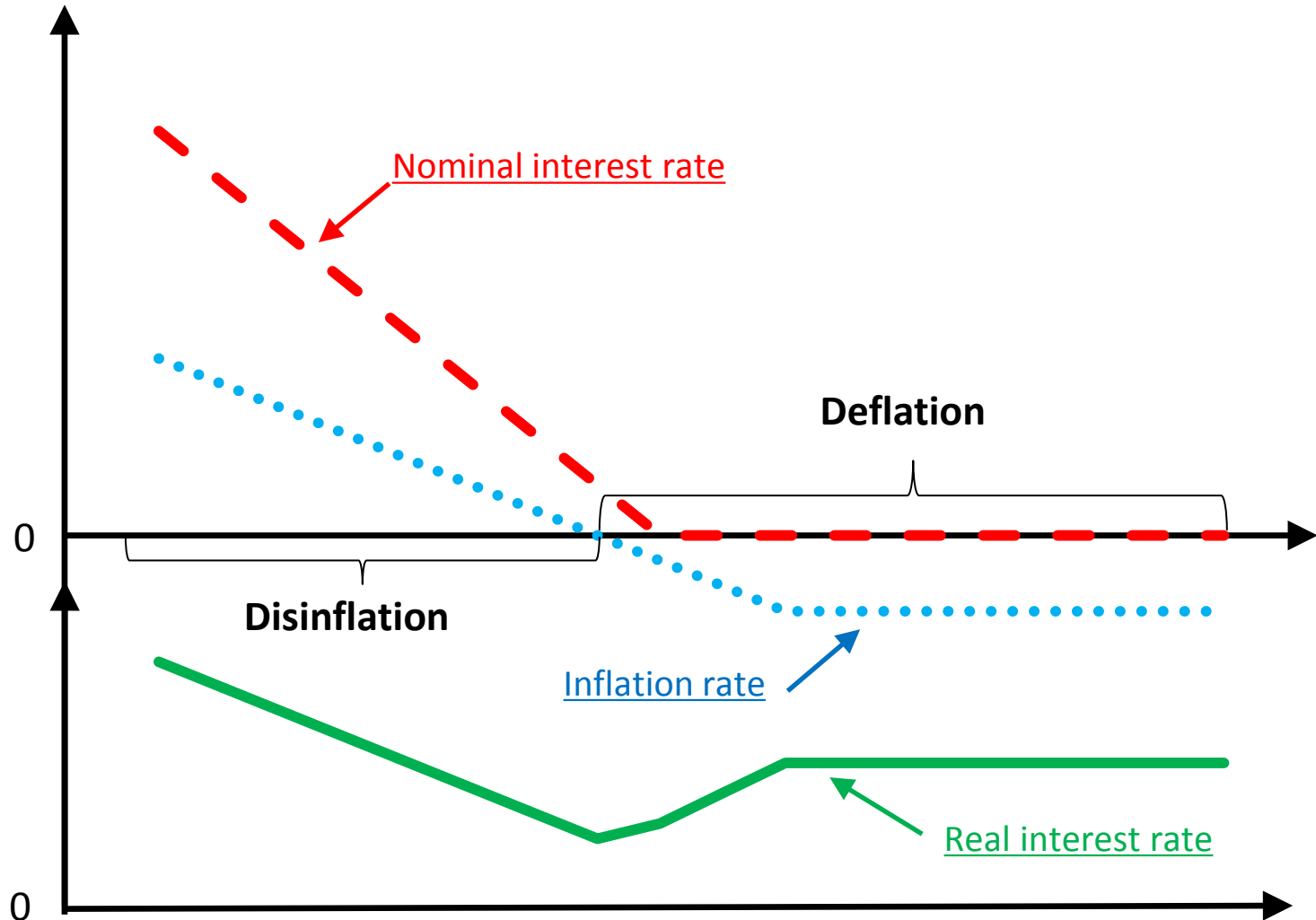
# Japanese real interest rates



# Japanese inflation rates



# Disinflation and Deflation



# Policy Mistakes details

- Financial stability
- Monetary policy
- Fiscal policy

# Causes

- Bubble
  - Bubble burst → NPLs (Zombie) → Banking crisis (1997)
  - Lesson: No bubble? Or no “levered” bubble?; Macro-Pru
  - Which is worse, declining asset prices or serial bubble?
- Policy mistakes
  - Monetary policy too tight?
    - Cleansing view, 1990-91
    - Inflation target, effectively at 0%, 1998-
  - Fiscal policy, untimely?
    - Not effective, because of contents?
- Deflationary trap
  - Danger of deflationary trap, underestimated
  - Lesson: Avoid deflation; Get out early if fallen into
  - *Abenomics* is a policy package to escape from the trap

# Monetary Policy and Fiscal Policy

- QE: failure and success
  - Failures
    - ZIRP (1999-2000), ended prematurely
    - QE 0 (2001-2006), lower long rate, but no cure on deflation
    - ZIRP (2009-2012), no cure on deflation
  - Success
    - QQE (2013- ), large impact on JPY and NIKKEI
      - Portfolio rebalance and signaling
  - Lesson: Needed is QE + 2% FIT + Commitment
- Fiscal policy, continuously stimulative, but
  - Except 2003-07
  - Debt/GDP increased from 65% in 1990 to 240% in 2014

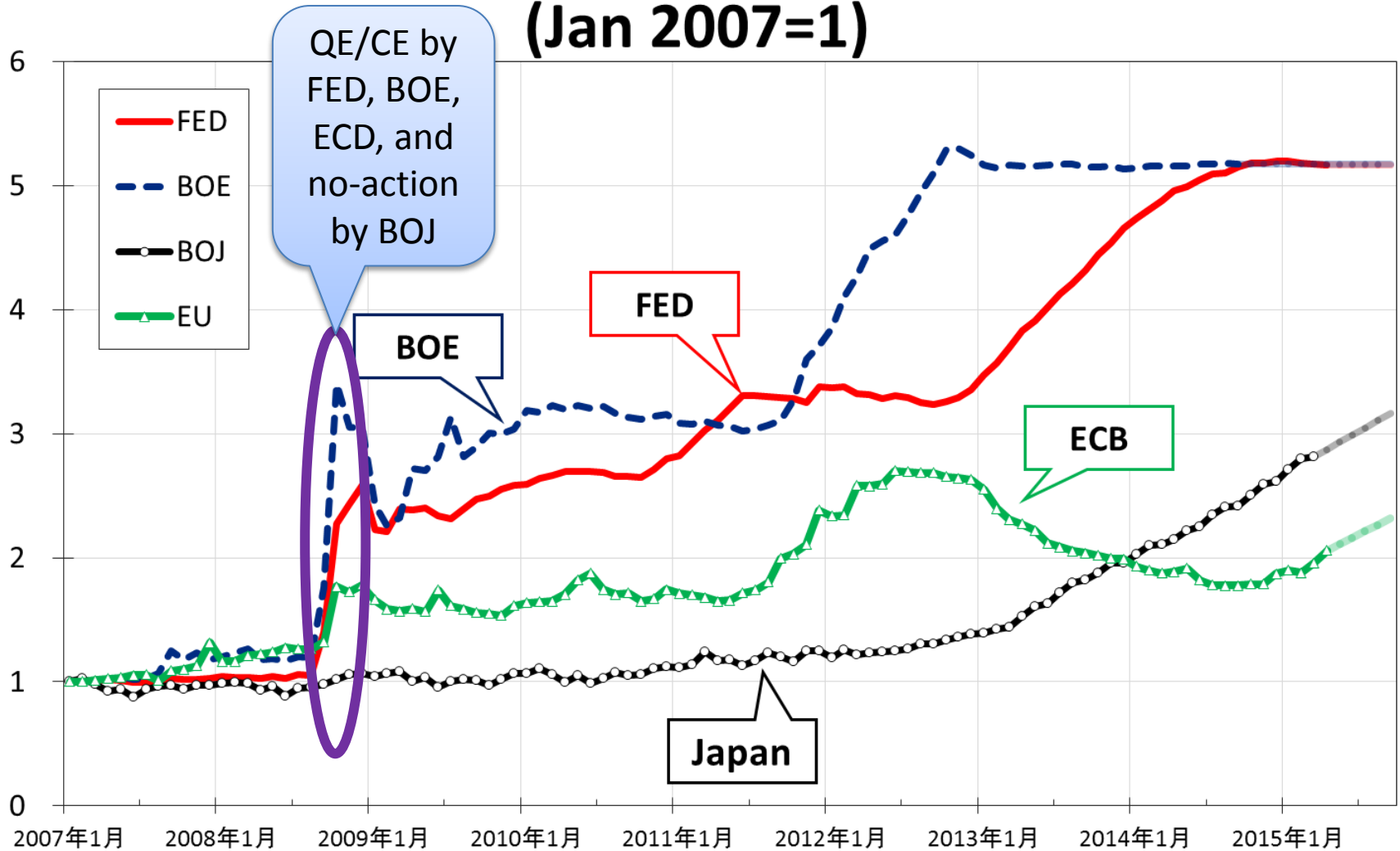
# Deflationary trap

- Multiple equilibrium
  - Normal equilibrium (inflation target equilibrium)
  - Deflationary equilibrium (deflationary equilibrium)

# Early QE with right communication, 2008 IV - 2013

- US
  - After the Lehman Brothers collapse, Chairman Bernanke decided massive expansion in asset purchases (QE1)
  - FRB did QE2 and QE3
- UK
  - Governor Mervyn King expanded B/S by purchasing Gilt (long bonds)
- ECB
  - Purchased covered bonds; no QE
- BOJ
  - No QE until 2013

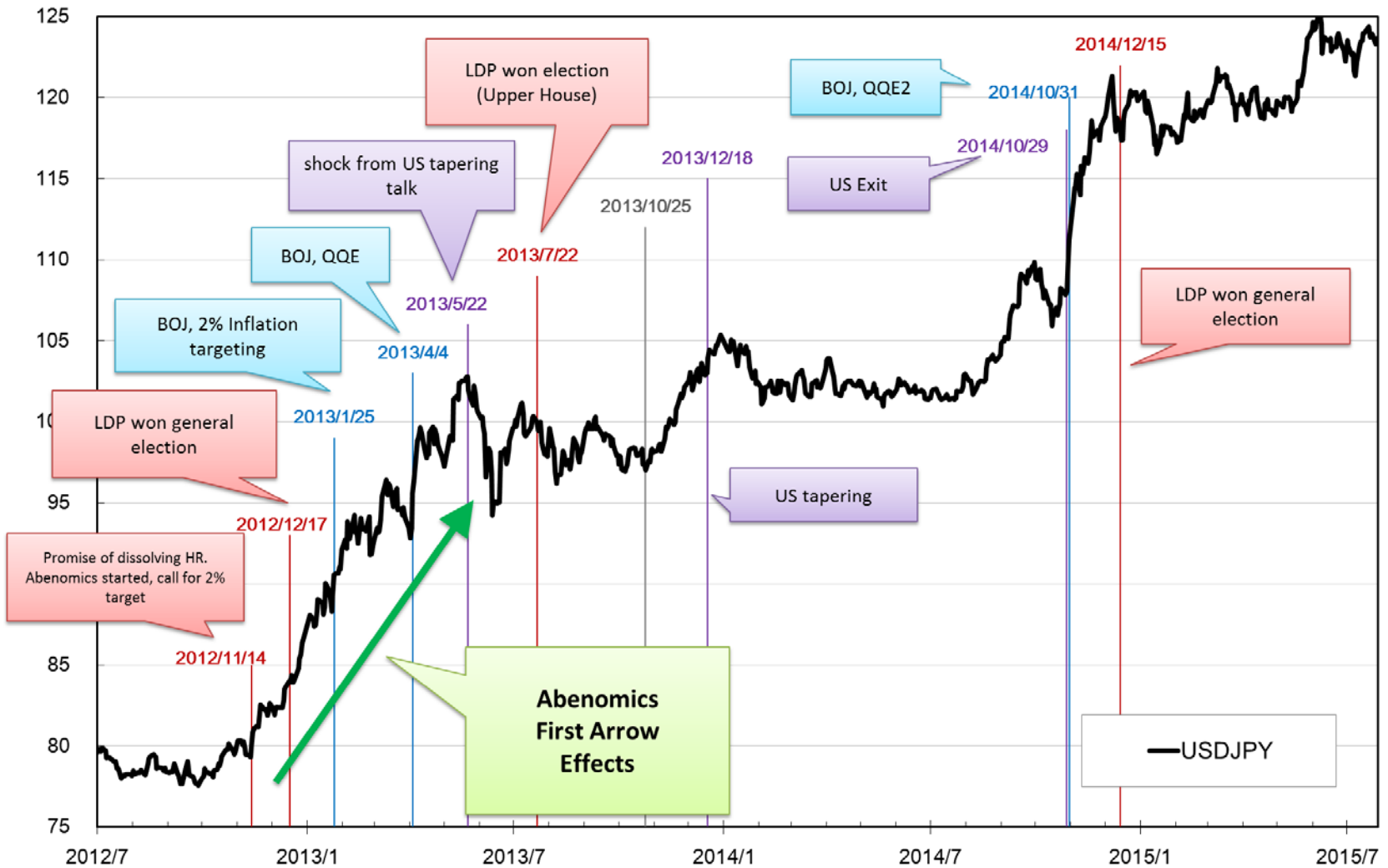
# Balance Sheets of 5 Major Central Banks (Jan 2007=1)



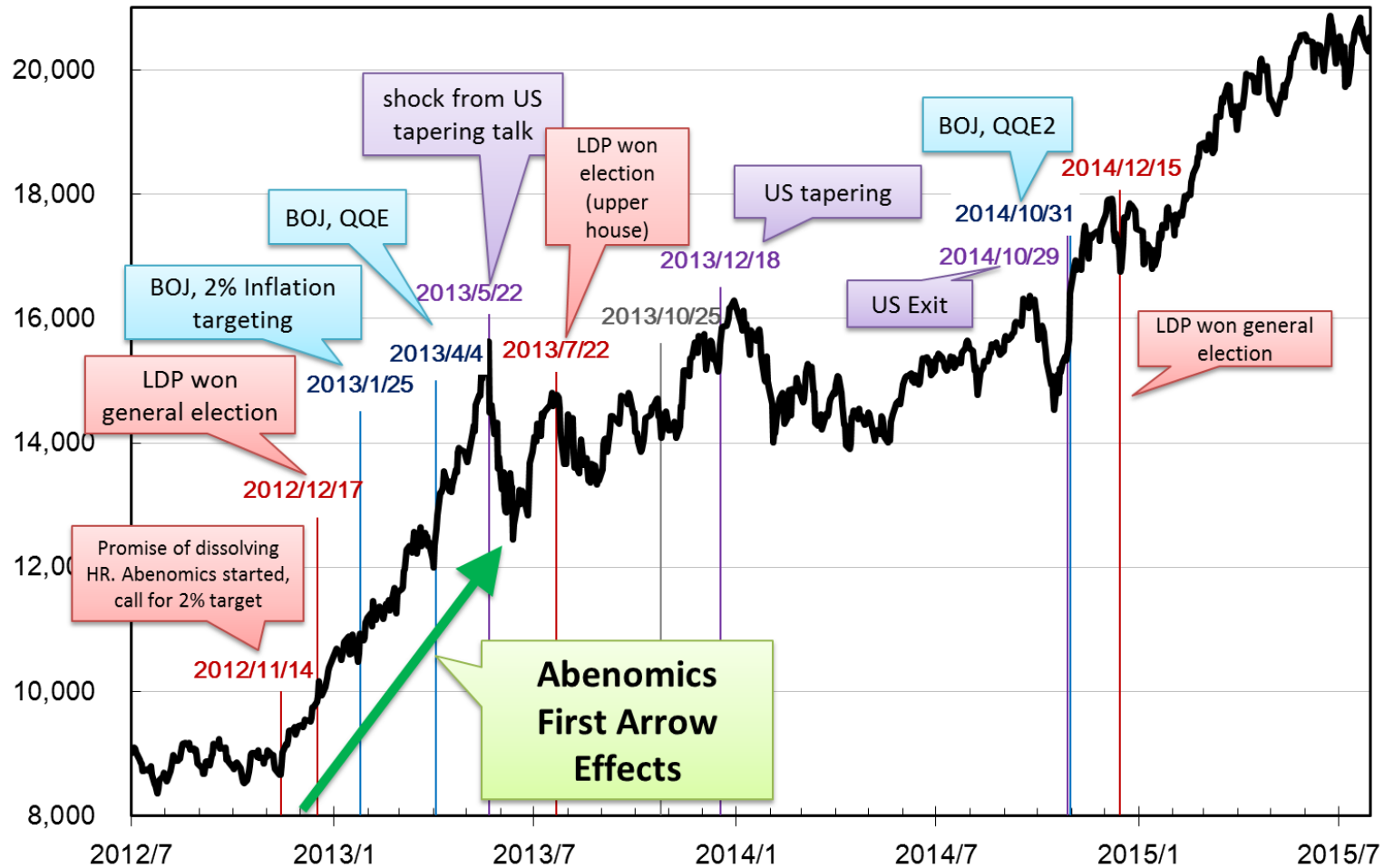
# Grate Escape from Deflation: *Abenomics*

- Communication
- Three Arrows
- (1) Inflation targeting and QQE
- (2) Fiscal stimulus and Consolidation
- (3) Growth Strategy

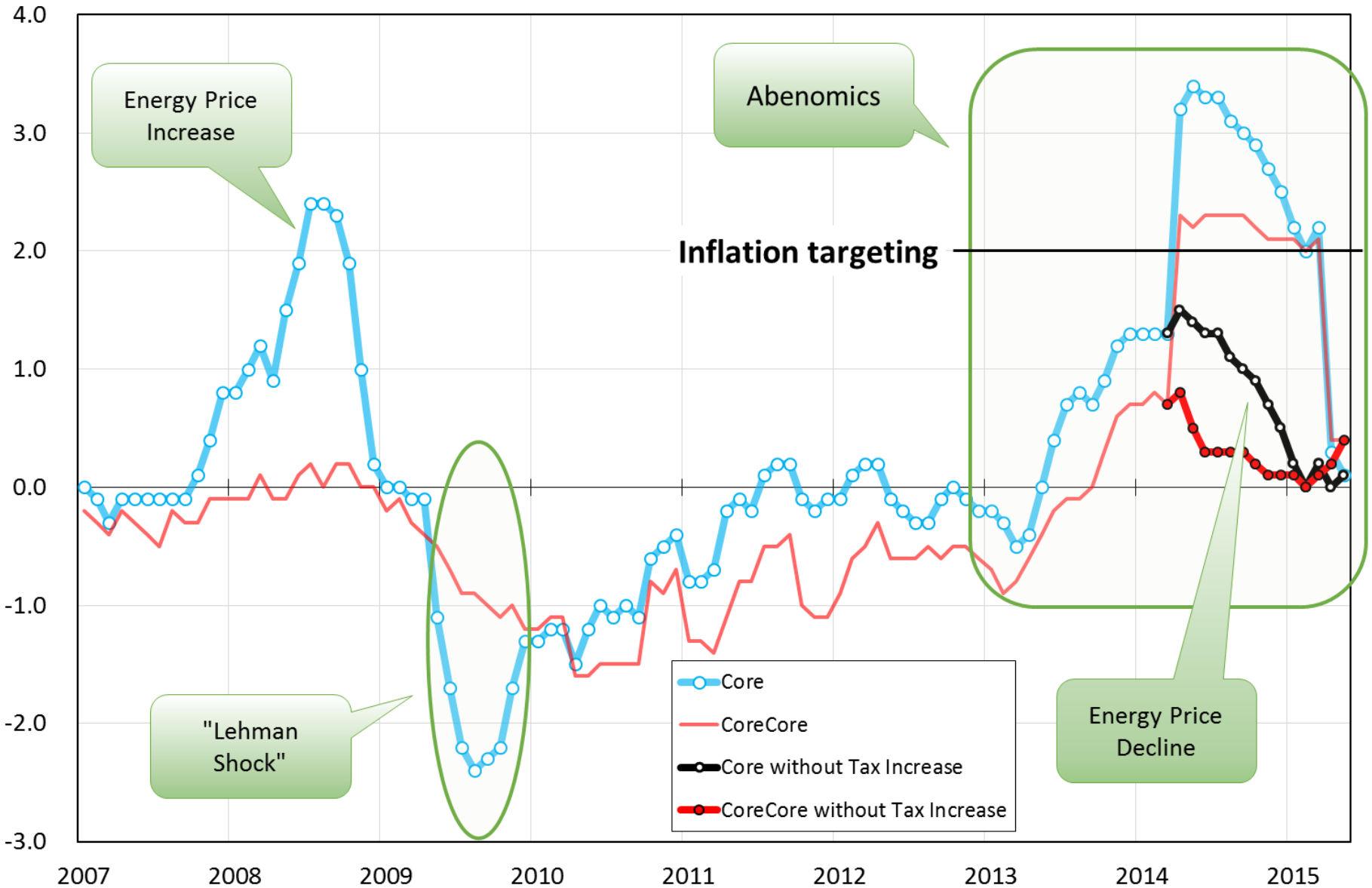
# Yen/USD (2012/7/1/- 2015/7/30)



# Nikkei 225 (2012/7/1/- 2015/7/30)



# Inflation rate: Core and CoreCore



# Jump from a bad equilibrium to a good equilibrium

- QQE impact
  - Channels
    - Portfolio rebalance
    - Changing inflation expectation → Lowering real interest rate
  - Virtuous cycle
    - Asset inflation → wealth effect and inflation expectation → Consumption & Investment → Stronger demand → inflation → Inflation expectation confirmed

# Concluding Remarks

- Japanization
  - Deflation
  - Stagnation
  - Low interest rate, nominal (short, long)
  - Low interest rate, real (short, long)
- Happened only in Japan
- Came close in US, UK, Euro zone
- Why in Japan
  - Series of bad shocks with bad policies
- Great Escape of Deflation in Japan
  - Abenomics, on the way