"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)

QE/CE by FED, BOE, ECD, and no-action by BOJ
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).

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### Inflation rate (headline CPI)

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<tbody>
<tr>
<td><strong>Japan (w/o VAT effect)</strong></td>
<td>1.279</td>
<td>0.678</td>
<td>-0.269</td>
<td>0.104</td>
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<tr>
<td><strong>USA</strong></td>
<td>3.904</td>
<td>2.803</td>
<td>2.692</td>
<td>1.792</td>
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<tr>
<td><strong>Germany</strong></td>
<td>1.509</td>
<td>2.394</td>
<td>1.647</td>
<td>1.423</td>
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<tr>
<td><strong>UK</strong></td>
<td>6.098</td>
<td>2.695</td>
<td>1.701</td>
<td>2.722</td>
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<tr>
<td><strong>EURO</strong></td>
<td>2.423</td>
<td>2.187</td>
<td></td>
<td>1.621</td>
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Growth Rates

Source: World Bank, World Development Indicators.
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<tr>
<td>Japan</td>
<td>5.227</td>
<td>1.138</td>
<td>1.411</td>
<td>0.128</td>
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<tr>
<td>USA</td>
<td>3.503</td>
<td>3.449</td>
<td>2.449</td>
<td>1.142</td>
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<tr>
<td>Germany</td>
<td>3.146</td>
<td>1.978</td>
<td>1.408</td>
<td>0.740</td>
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<td>Euro area</td>
<td>3.228</td>
<td>2.255</td>
<td>2.001</td>
<td>-0.097</td>
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<tr>
<td>UK</td>
<td>3.540</td>
<td>2.406</td>
<td>2.896</td>
<td>0.542</td>
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Nominal Short Interest Rate: Policy Rate
(Japan call rate; US FF; UK Sonia, Euro Eonia)

Source: BOJ, FRB, ECB and BOE.

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<tbody>
<tr>
<td>JAPAN</td>
<td>5.170</td>
<td>2.015</td>
<td>0.094</td>
<td>0.133</td>
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<tr>
<td>USA</td>
<td>7.741</td>
<td>4.959</td>
<td>3.033</td>
<td>0.368</td>
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<tr>
<td>EURO</td>
<td>3.431</td>
<td>2.975</td>
<td>0.835</td>
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<tr>
<td>UK</td>
<td>6.203</td>
<td>4.556</td>
<td>1.026</td>
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**short (policy) rate, Nominal**

![Graph showing short (policy) rate trends from 1985 to 2008 for JAPAN, USA, EURO, and UK. The graph visualizes the decline in interest rates over time.]
Japanization as an extreme case of the recent trends in $\pi$, $g$, $i$

- In advanced economies, there have been long-run trends of
  - Disinflation $\rightarrow$ 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 \(\rightarrow\) 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) \(\rightarrow\) No saving glut
Land prices (residential and commercial) with Nikkei225
Land prices: US-Japan comparison

- **Japan (Residential)**
- **Composite-10 CSXR-SA**

![Graph showing land prices comparison between US and Japan from Jan-00 to Jan-14](image)
Japanese nominal interest rates

- Call Rate
- JGB01yr
- JGB10yr

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Japanese real interest rates
Japanese inflation rates

- Inflation CPI
- Inflation Core
- Inflation CC
Disinflation and Deflation

Nominal interest rate

Disinflation

Deflation

Inflation rate

Real interest rate
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)

QE/CE by FED, BOE, ECD, and no-action by BOJ
Grate Escape from Deflation: \emph{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)

- Abenomics First Arrow Effects
- BOJ, 2% Inflation targeting
- BOJ, QQE
- LDP won general election
- Promise of dissolving HR. Abenomics started, call for 2% target
- US tapering, 2013/12/18
- US Exit, 2014/10/29
- BOJ, QQE2, 2014/10/31
- LDP won election (upper house), 2013/7/22
- LDP won general election, 2014/12/15
- Shock from US tapering talk, 2013/5/22

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Inflation rate: Core and CoreCore

- Energy Price Increase
- Abenomics
- Inflation targeting
- "Lehman Shock"
- Energy Price Decline

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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