The Challenge to Japan's Economy in the Global Setting

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contents

- Outlook of world and Japanese economies
- Financial Tsunami
- Aging society
- Japanese fiscal deficit
- Strong Japanese Yen
- Concluding remarks

Section1
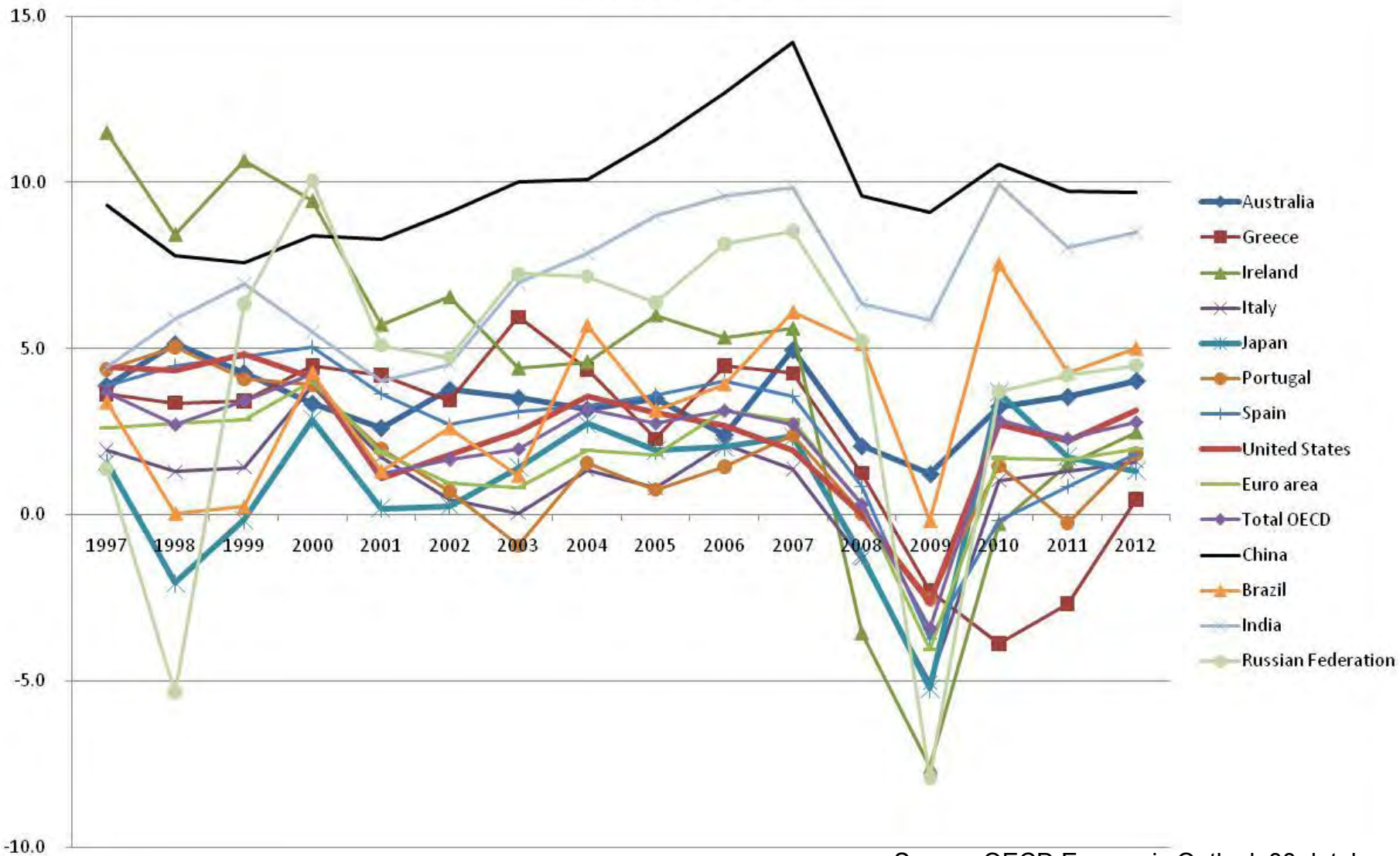
Outlook of World and Japanese Economy

Macroeconomic Outlook

- Economic Growth

- Inflation

- Unemployment

- Global trade
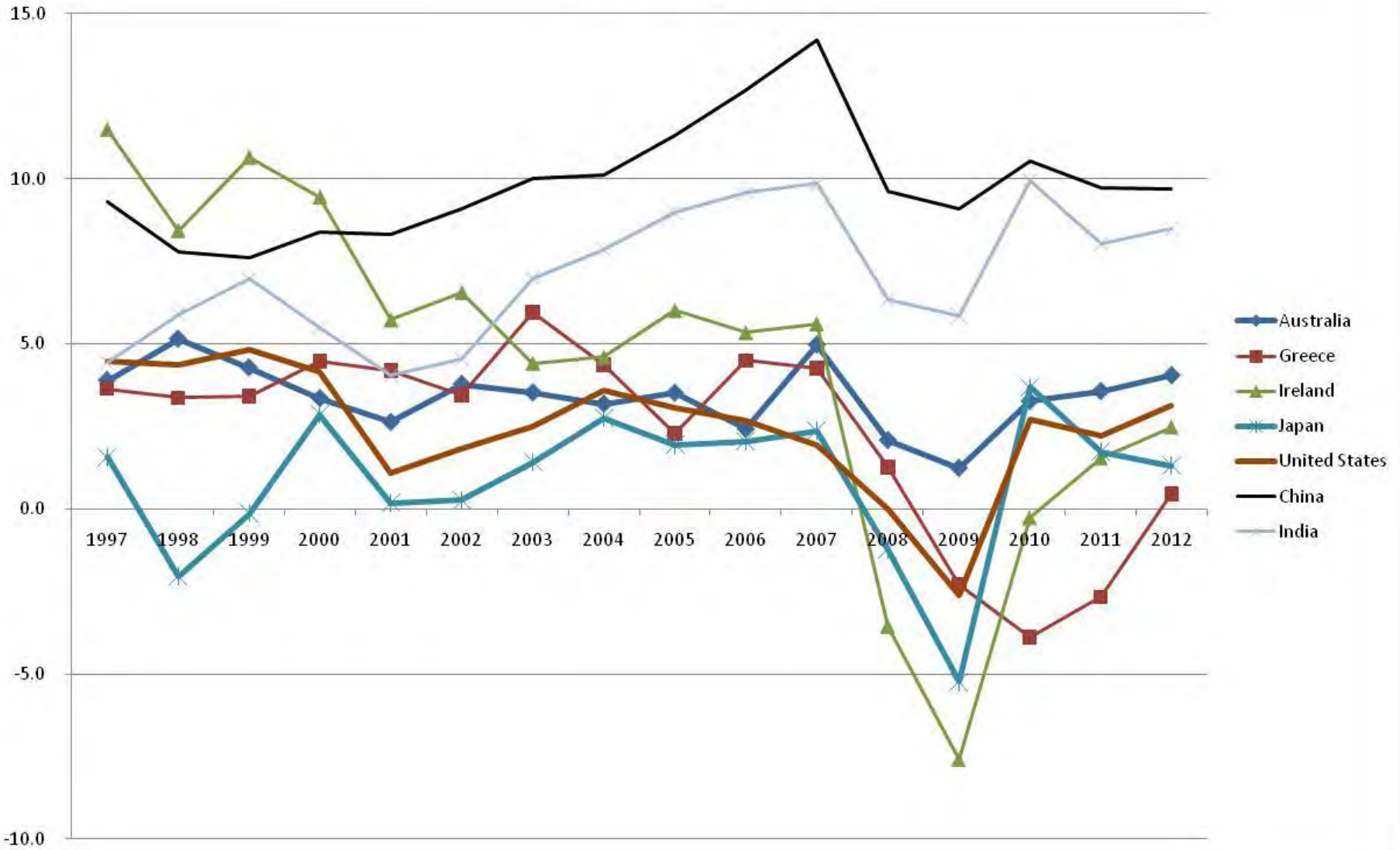
Macroeconomic Outlook

- **Economic Growth**
- Inflation
- Unemployment
- Global trade

Real GDP growth

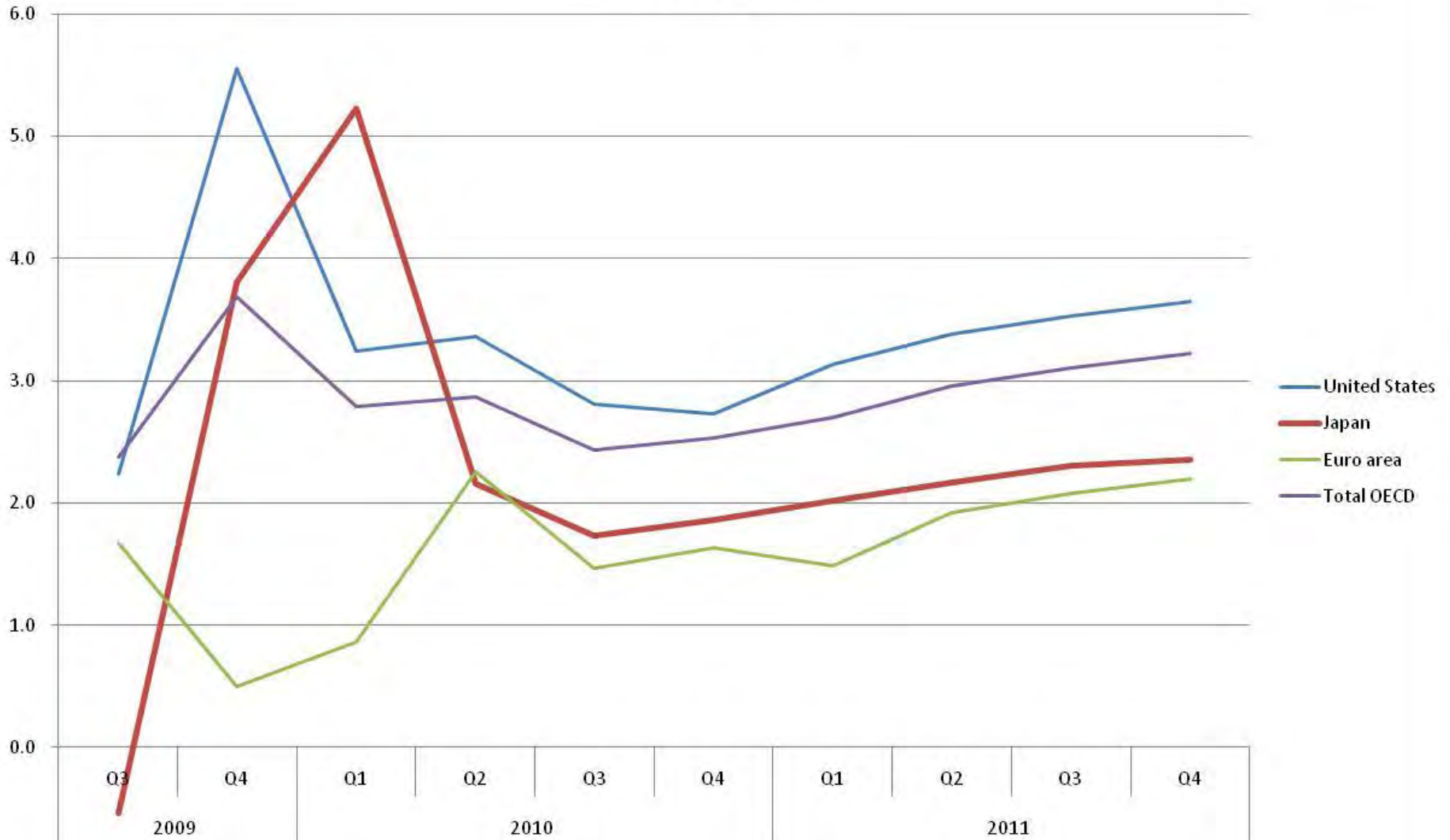*Source:* OECD Economic Outlook 88 database.

Real GDP growth

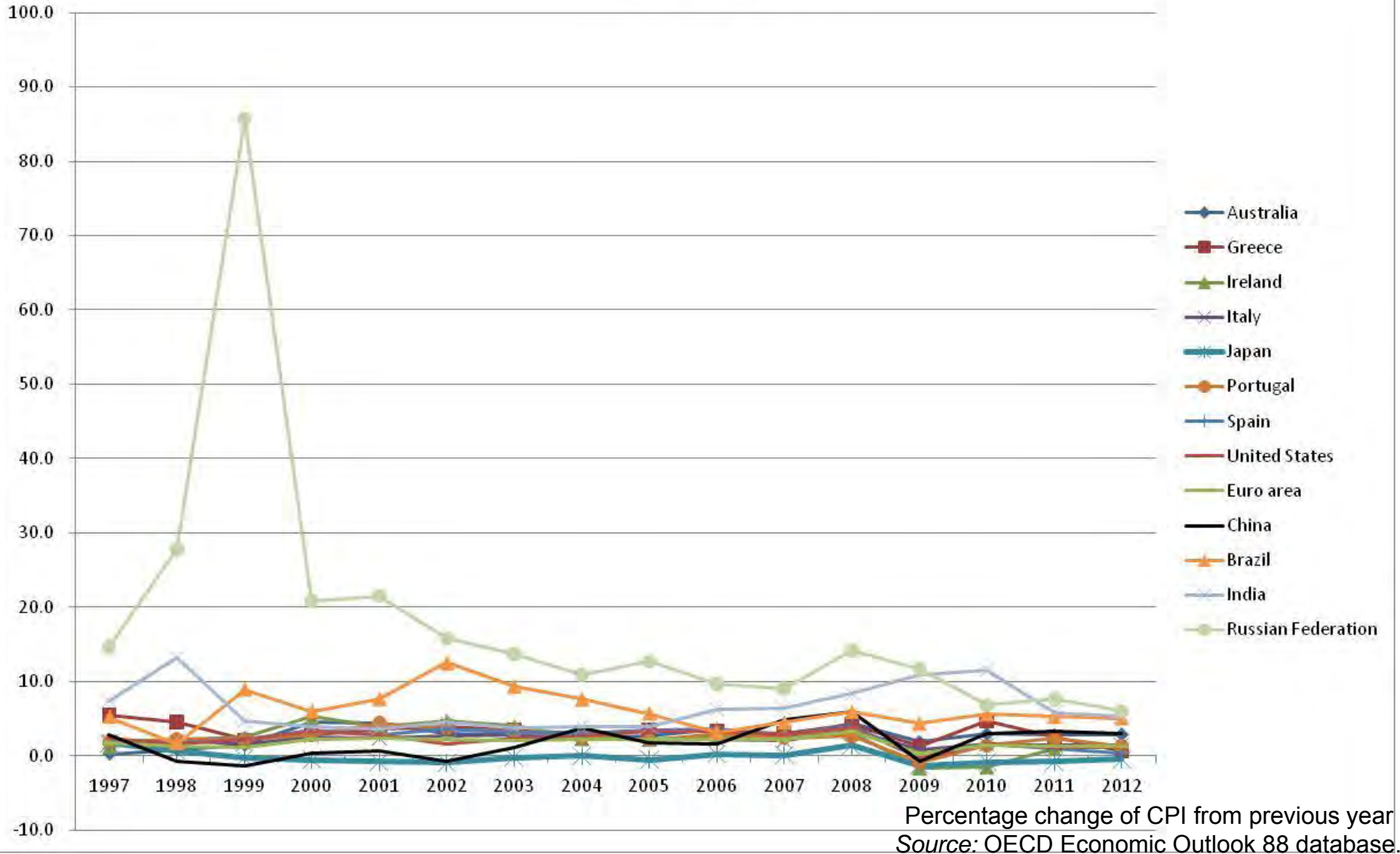*Source:* OECD Economic Outlook 88 database.

Real GDP growth

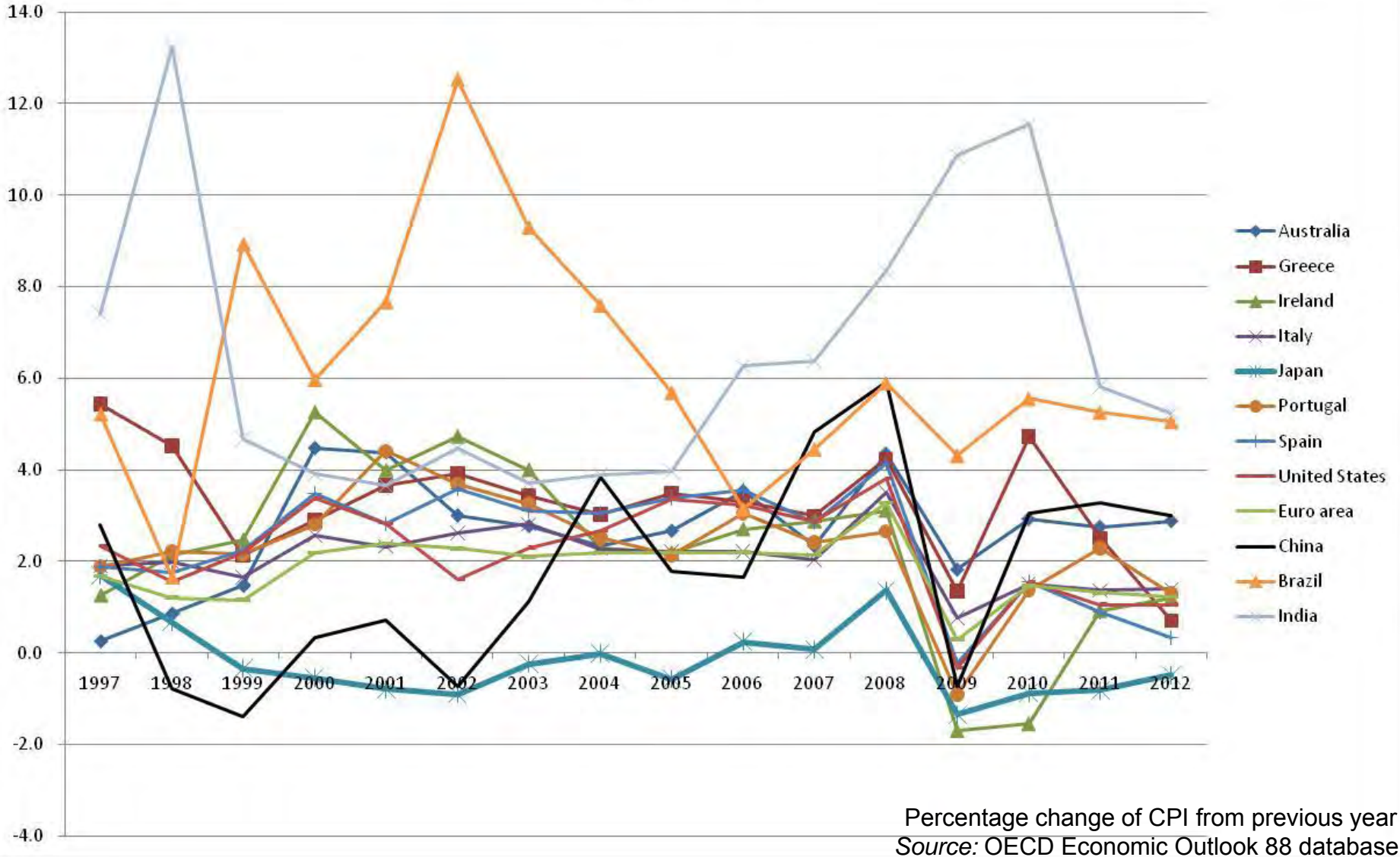Source: OECD Economic Outlook 87 database.

Macroeconomic Outlook

- Economic Growth
- Inflation
- Unemployment
- Global trade

Inflation

Percentage change of CPI from previous year
Source: OECD Economic Outlook 88 database.

Inflation

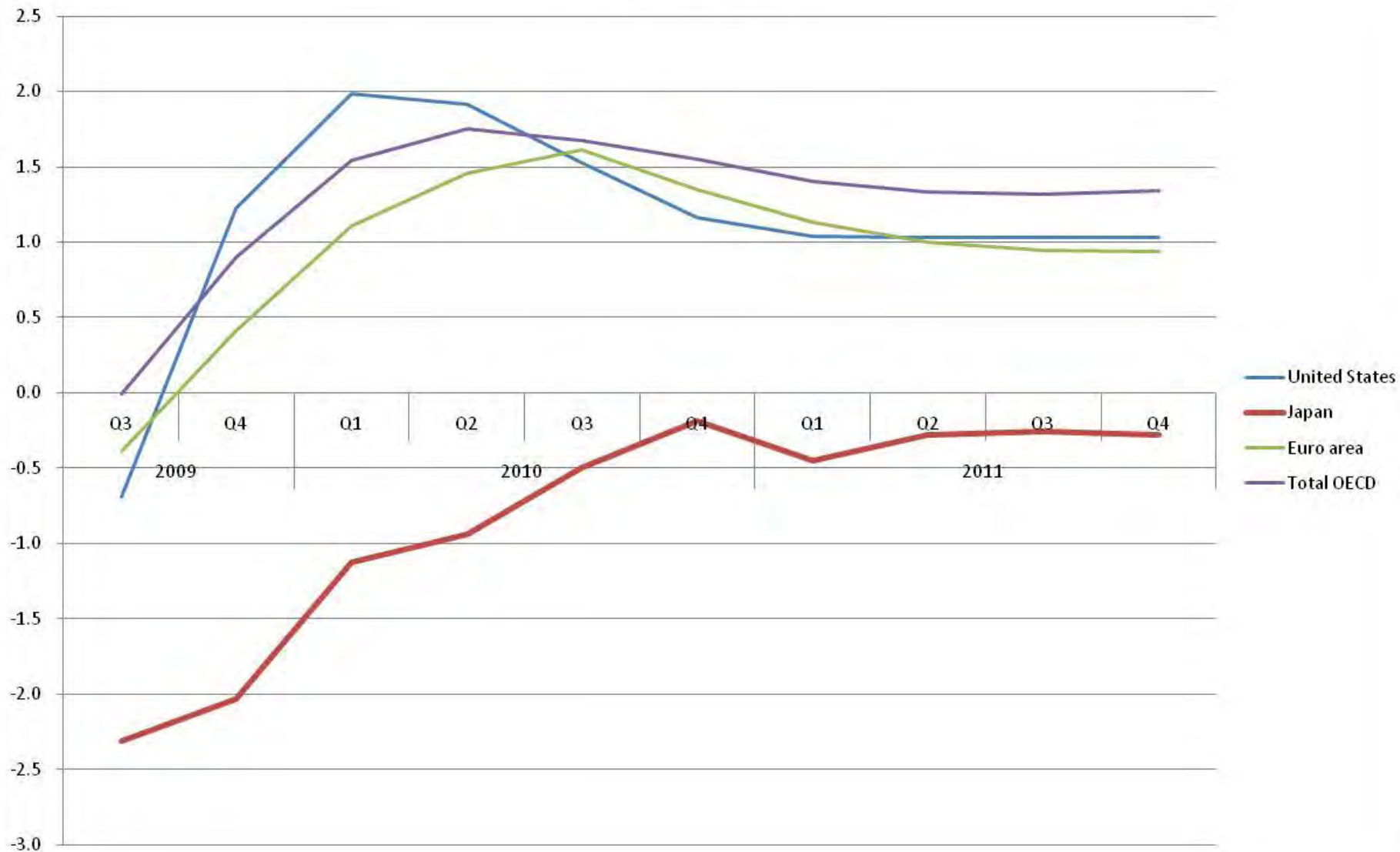Percentage change of CPI from previous year
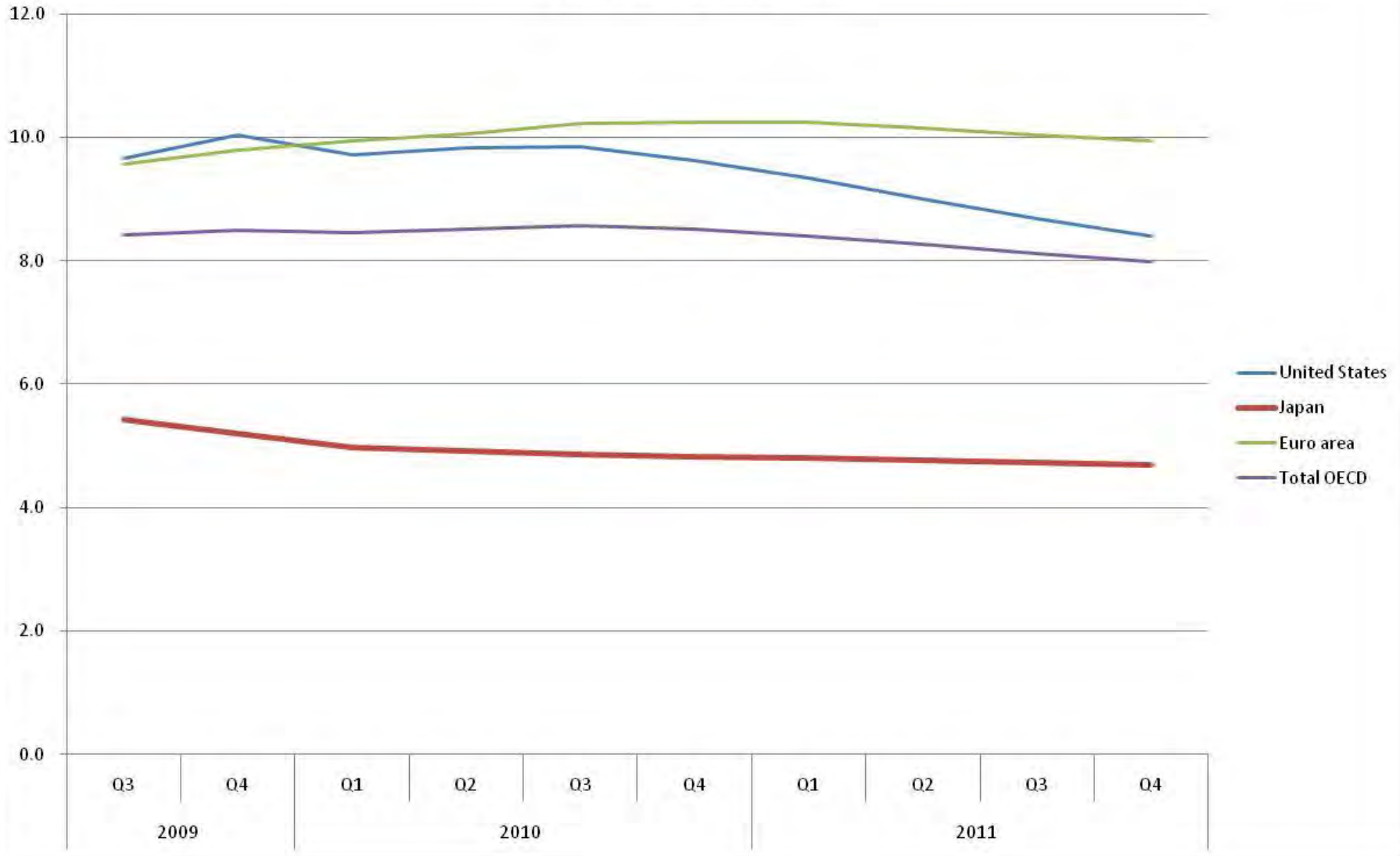*Source:* OECD Economic Outlook 88 database.

Inflation

Source: OECD Economic Outlook 87 database.

Macroeconomic Outlook

- Economic Growth
- Inflation
- **Unemployment**
- Global trade

Unemployment rate

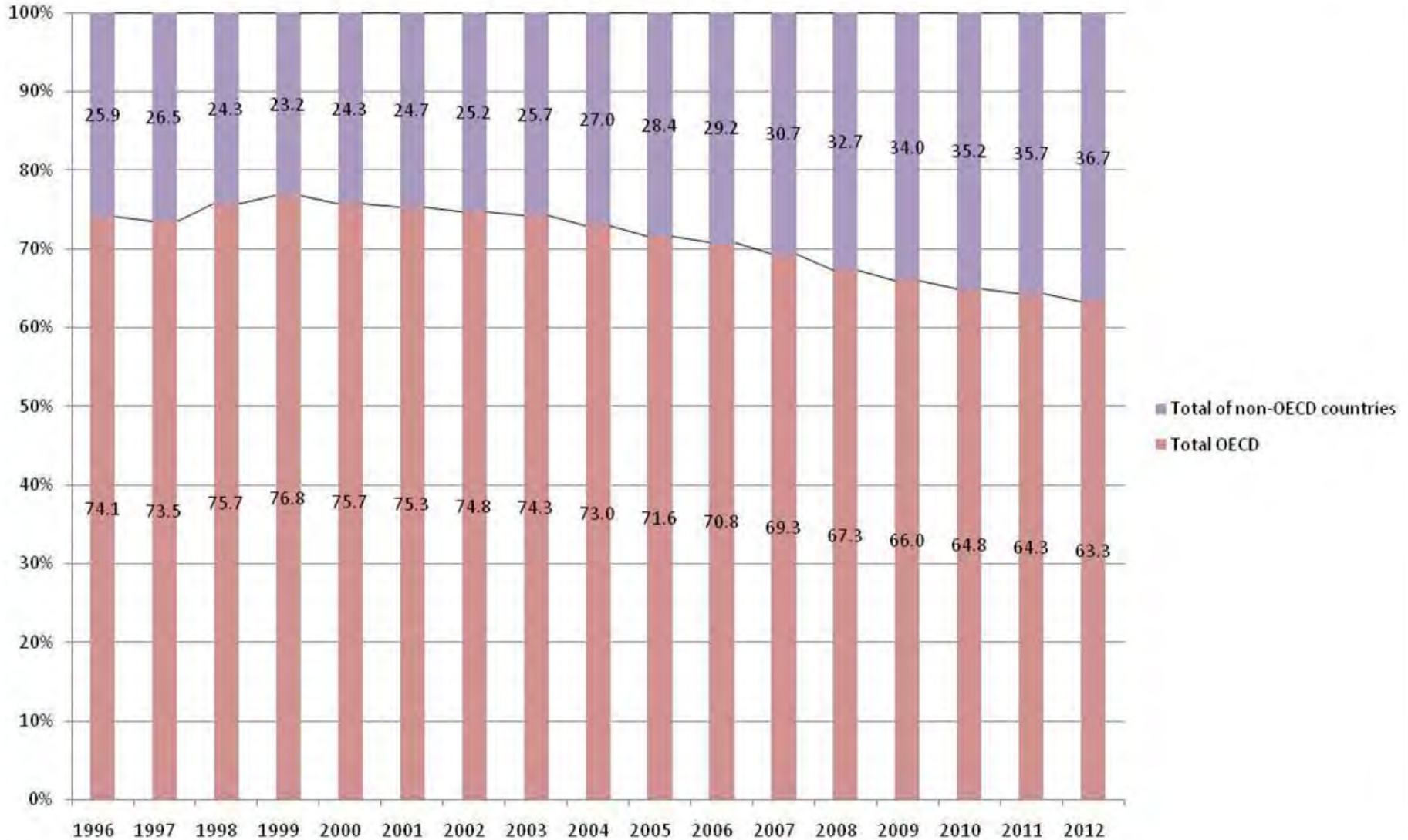Source: OECD Economic Outlook 87 database.

Unemployment

Source: OECD Economic Outlook 87 database.

Macroeconomic Outlook

- Economic Growth
- Inflation
- Unemployment
- **Global trade**

Source: OECD Economic Outlook 88 database.

Shares in world exports

Legend: Total OECD (green), Total of non-OECD countries (red)

Values for Total OECD:
1996: 74.3, 1997: 73.9, 1998: 76.0, 1999: 75.4, 2000: 72.8, 2001: 73.1, 2002: 72.4, 2003: 71.5, 2004: 70.1, 2005: 67.4, 2006: 66.0, 2007: 65.4, 2008: 63.6, 2009: 64.0, 2010: 61.8, 2011: 61.5, 2012: 60.9

Values for Total of non-OECD countries:
1996: 25.7, 1997: 26.1, 1998: 24.0, 1999: 24.6, 2000: 27.2, 2001: 26.9, 2002: 27.6, 2003: 28.5, 2004: 29.9, 2005: 32.6, 2006: 34.0, 2007: 34.6, 2008: 36.4, 2009: 36.0, 2010: 38.2, 2011: 38.5, 2012: 39.1

Source: OECD Economic Outlook 88 database.

Section 2

Financial Tsunami
---How They Damaged the Japanese Economies---

Purpose

1. **Retest two hypotheses by using the evaluation of investors:** a risk premium for bonds issued by such industries

2. **Check the policy announcement effects by event studies.**

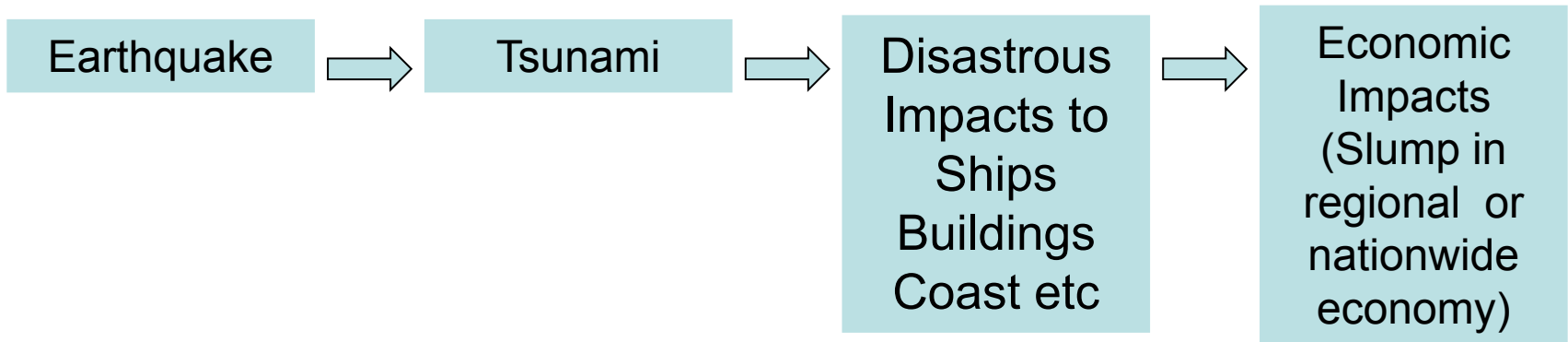Implication of retest ? (If both hypotheses are correct)

- relief policy should be prescribed with an emphasis in non-manufacturing industry causing tsunami

- the lessons from the Japanese tsunami are not necessarily applicable to the present Japanese slump by the US tsunami.
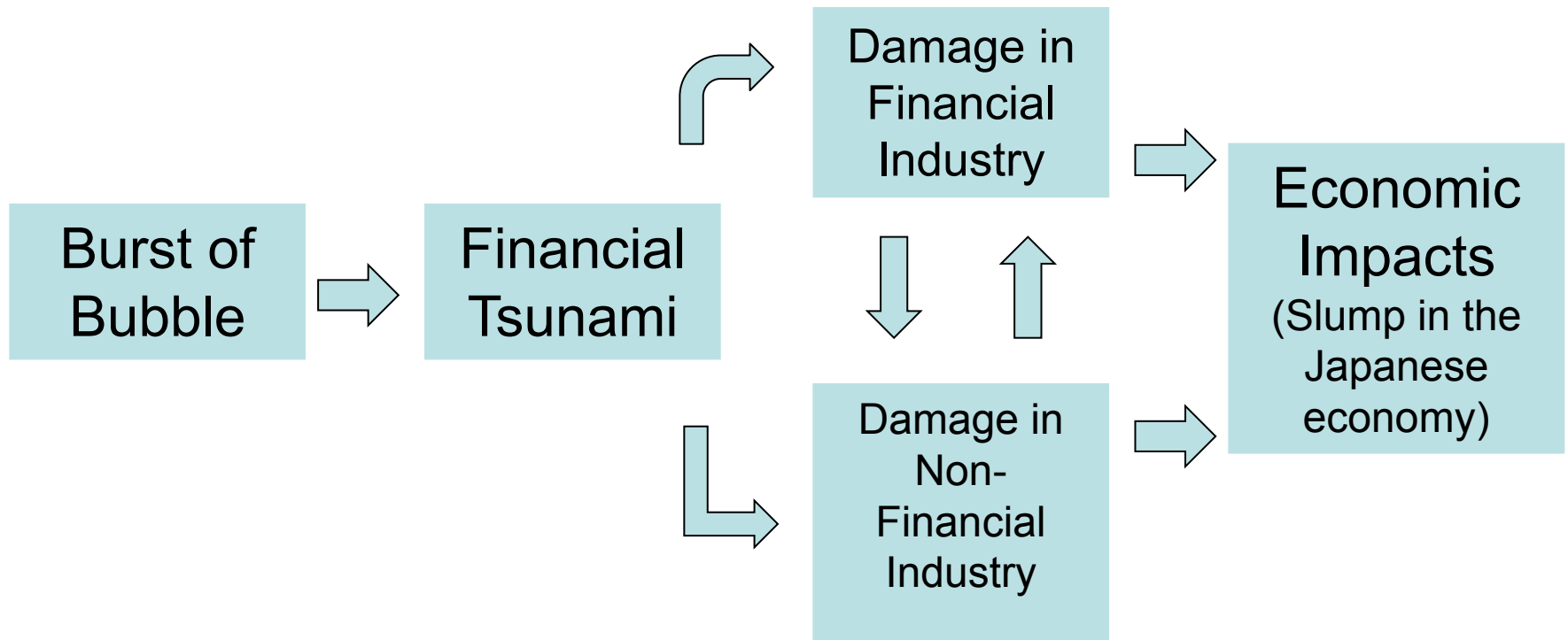
Implication of checking the policy effects ?

It shows us whether the policy is appropriate to an identified cause of economic slump based on retest.

Tsunami

津波（Tsu-Nami）＝津harbor ＋波wave

Earthquake	⇒	Tsunami	⇒	Disastrous Impacts to Ships Buildings Coast etc	⇒	Economic Impacts (Slump in regional or nationwide economy)

Financial Tsunami

The specification of risk change process :

NF→F   Out→F

$$\begin{pmatrix} r_{SWAP,t} \\ r_{IND,t} \end{pmatrix} = \begin{pmatrix} \alpha_1 \\ \alpha_2 \end{pmatrix} + \begin{pmatrix} \beta_{11} & \beta_{12} \\ \beta_{21} & \beta_{22} \end{pmatrix} \begin{pmatrix} r_{SWAP,t-1} \\ r_{IND,t-1} \end{pmatrix} + \begin{pmatrix} \delta_1 \\ \delta_2 \end{pmatrix} r_{EURO,t-1} + \begin{pmatrix} \varepsilon_{1,t} \\ \varepsilon_{2,t} \end{pmatrix}$$

F→NF   Out→NF

$$\begin{pmatrix} \varepsilon_{1,t} \\ \varepsilon_{2,t} \end{pmatrix} \Bigg| \Psi_{t-1} \sim N \left(\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} h_{1,t} & \rho\sqrt{h_{1,t}h_{2,t}} \\ \rho\sqrt{h_{1,t}h_{2,t}} & h_{2,t} \end{pmatrix} \right)$$

$$\log h_{i,t} = \gamma_{i0} + g(z_{i,t-1}) + \gamma_{i3} \log h_{i,t-1} + \gamma_{i4} \log h_{j,t-1}$$

$$g(z_{i,t-1}) = \gamma_{i1} \left(\frac{|\varepsilon_{i,t-1}|}{\sqrt{h_{i,t-1}}} - 2\pi \right) + \gamma_{i2} \frac{\varepsilon_{i,t-1}}{\sqrt{h_{i,t-1}}}$$

The maximum likelihood estimate $\hat{\theta}$ for $\theta = (\alpha, \beta, \gamma, \delta, \rho)$ will be assumed to be asymptotically normal and consistent with a covariance matrix equal to the inverse of Fisher's information matrix (traditional inference procedures are available).

Financial Tsunamis hit Japanese Economy

1. Japanese Tsunami
   - Burst of the bubble in the Japanese Stock and Real estate markets in 1990

2. Asian Tsunami
   - Asian Financial Crisis in 1997

3. US Tsunami
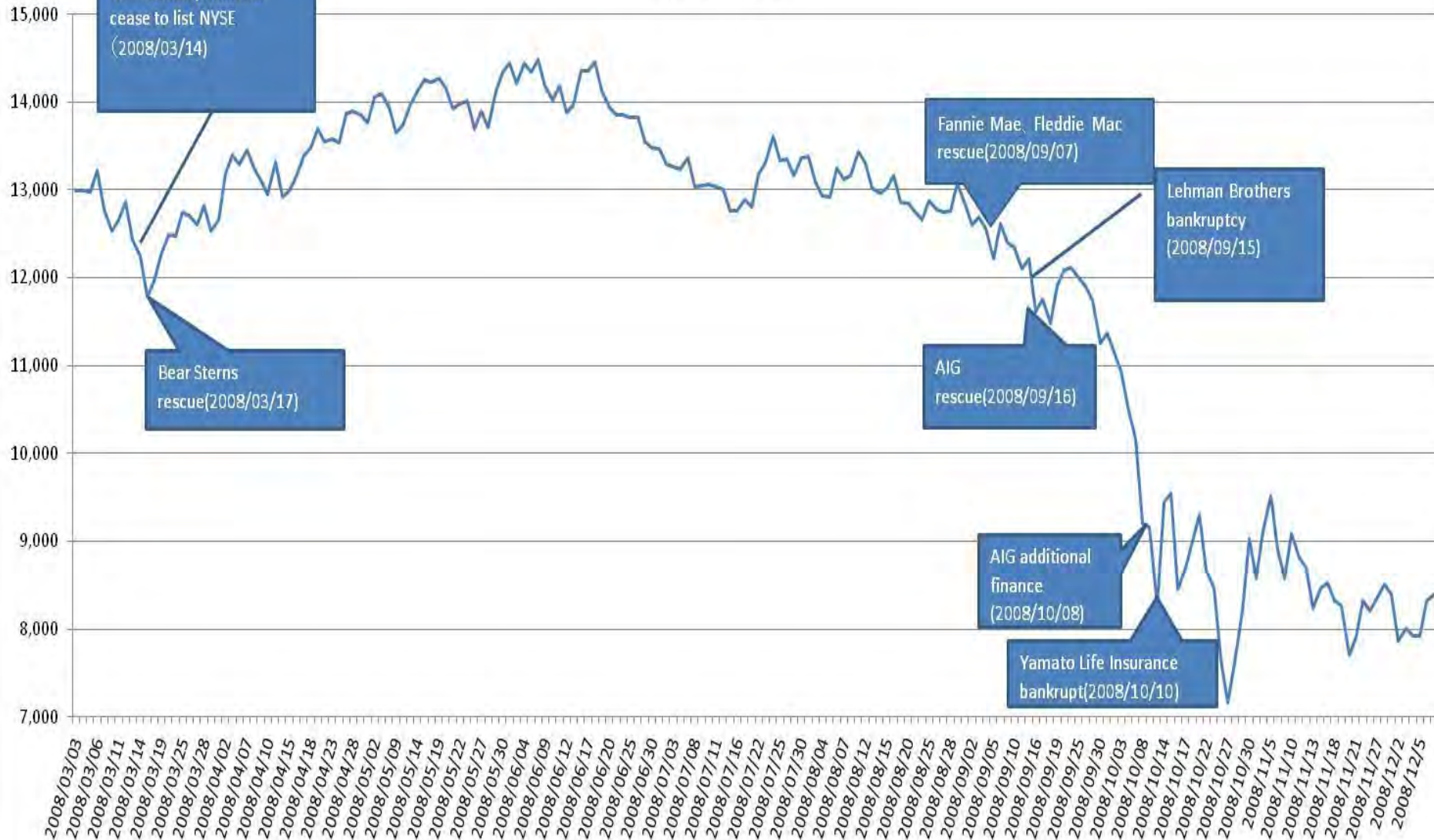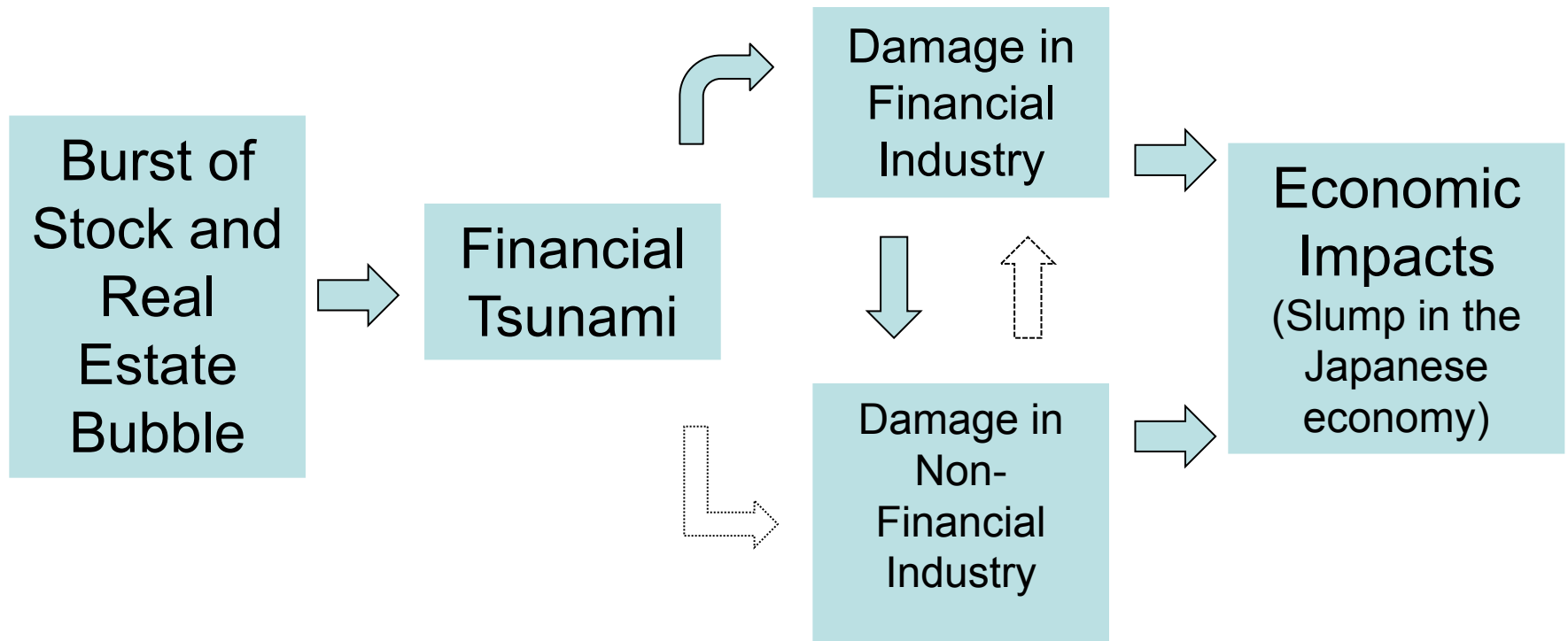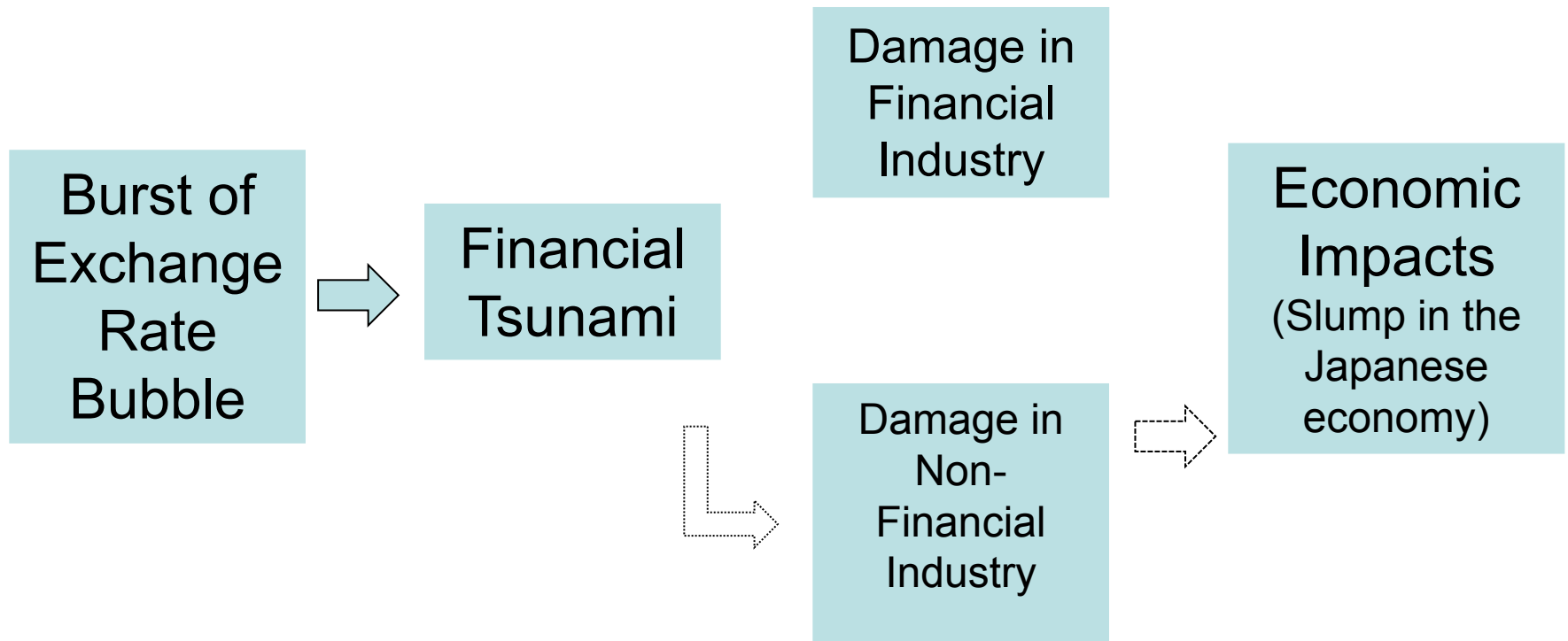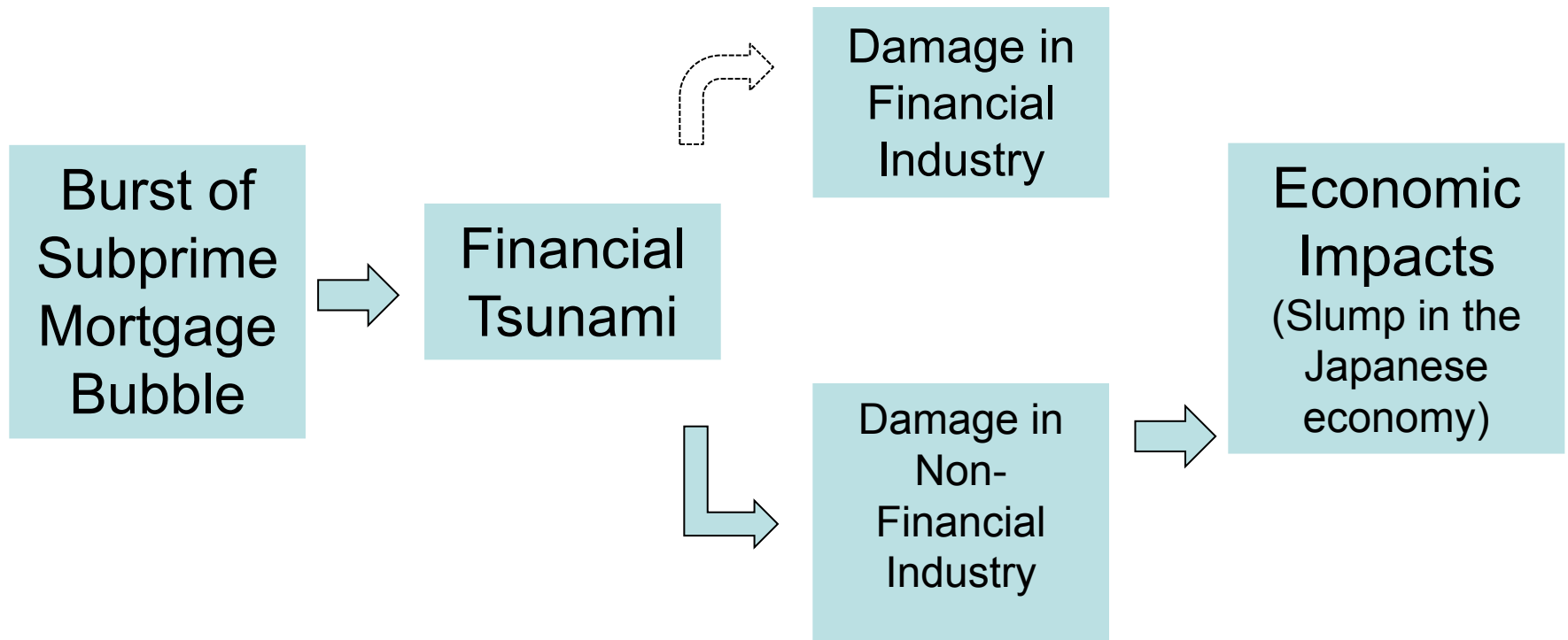   - global financial crisis in 2008

Nikkei 225

Nikkei 225

New CenturyFinancial cease to list NYSE (2008/03/14)

Bear Sterns rescue(2008/03/17)

Fannie Mae, Fleddie Mac rescue(2008/09/07)

Lehman Brothers bankruptcy (2008/09/15)

AIG rescue(2008/09/16)

AIG additional finance (2008/10/08)

Yamato Life Insurance bankrupt(2008/10/10)

Japanese Financial Tsunami 1990

Asian Financial Tsunami 1997

Burst of Exchange Rate Bubble → Financial Tsunami

Damage in Financial Industry

Damage in Non-Financial Industry

Economic Impacts (Slump in the Japanese economy)

US Financial Tsunami 2008

Burst of Subprime Mortgage Bubble → Financial Tsunami → Damage in Financial Industry / Damage in Non-Financial Industry → Economic Impacts (Slump in the Japanese economy)

Effectiveness of Policies

- ## JP tsunami
  - Most of the banking policies were effective at least for the financial industry

- ## Asian tsunami
  - Most of the international policy harmonization were effective

- ## US tsunami
  - No domestic policy was effective
  - International policy coordination was effective

Section 5
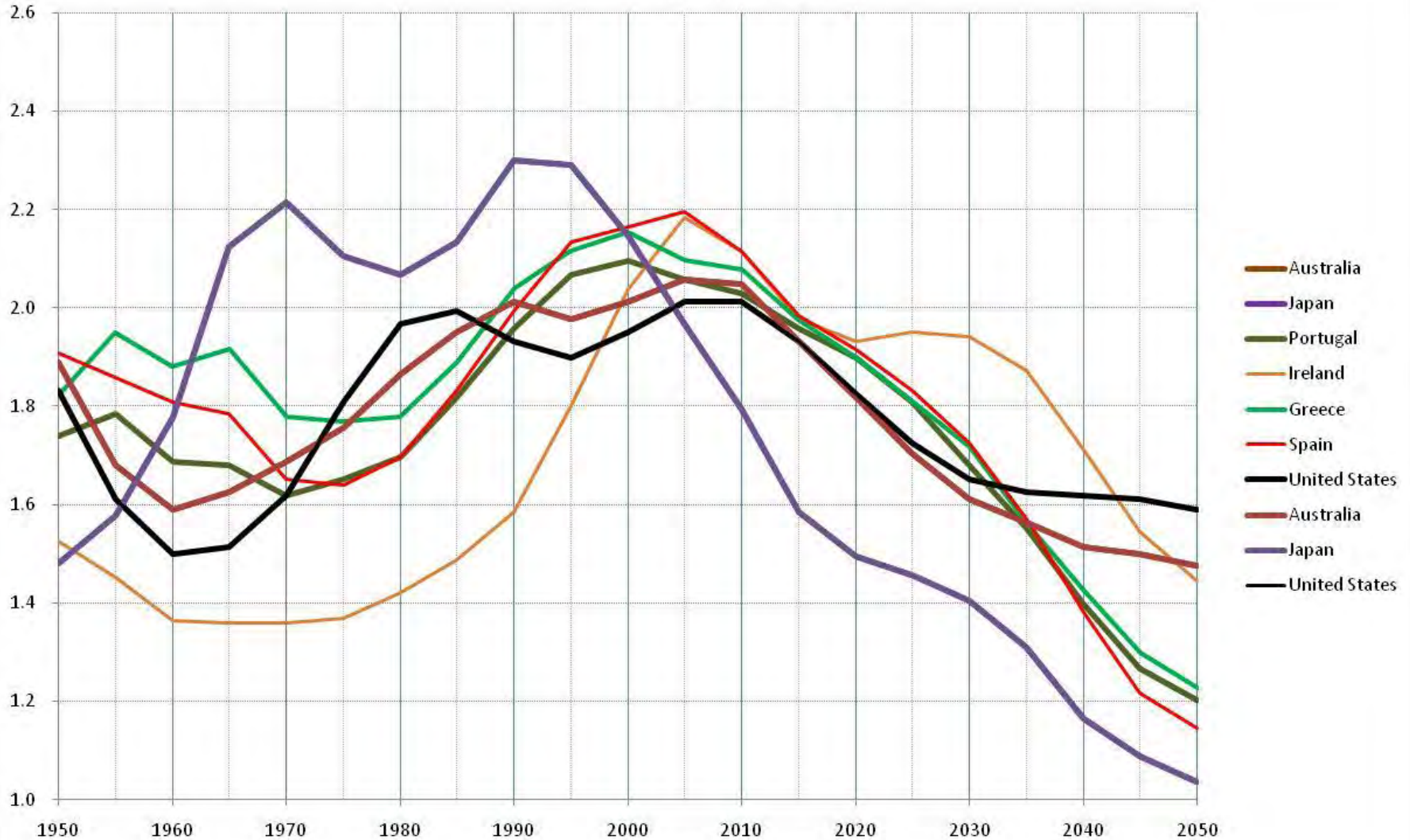
AGING SOCIETY

Population Aging

- **Inverse Dependency Ratio**
  - # of working age/ # of non-working age
  - How many working people is/will be supporting one non-working people
  - Working age=15 to 64
  - Non-working age= 0-14 & 65+

Inverse dependency ratio
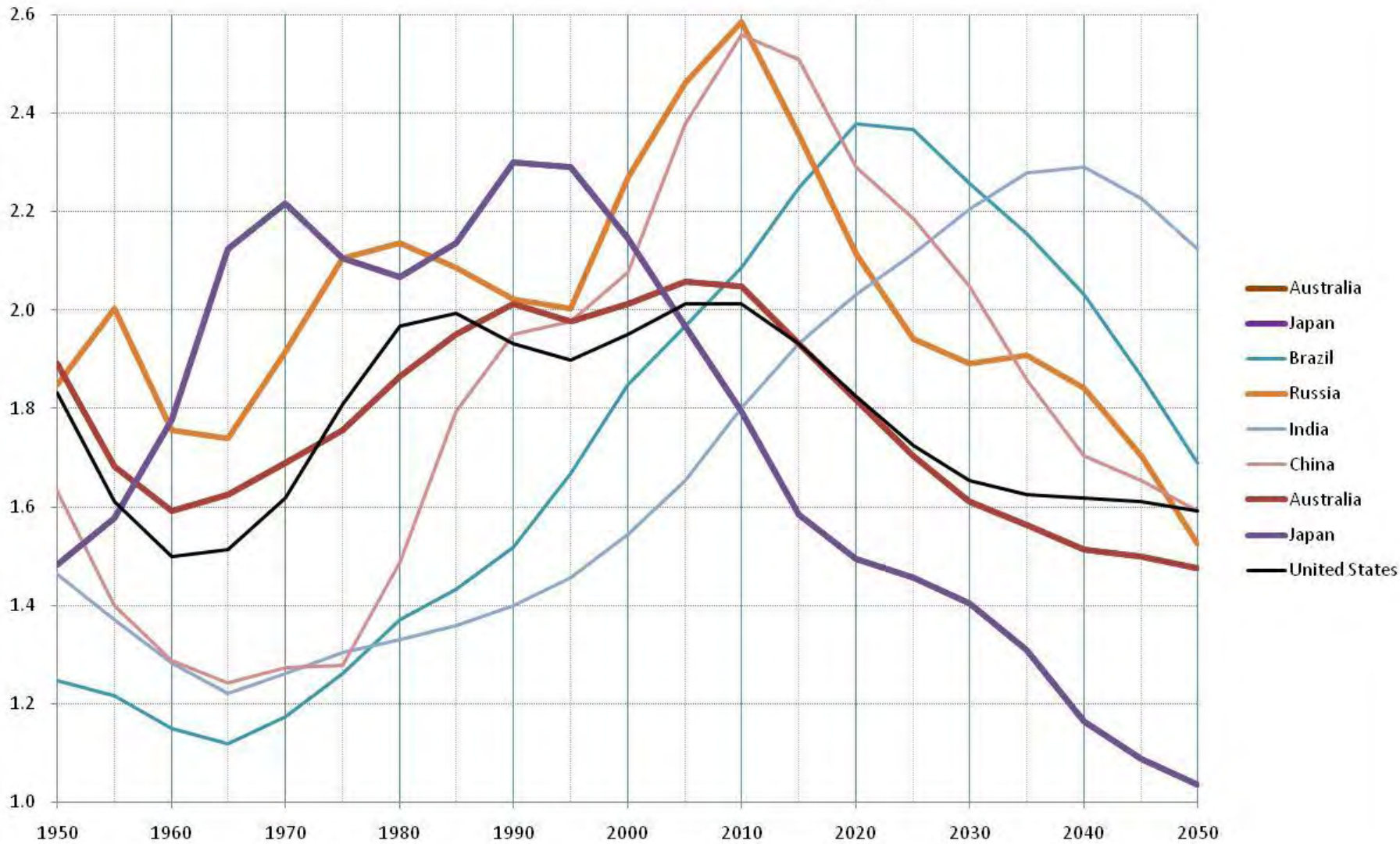
Legend: Australia, Japan, Brazil, Russia, India, China, Australia, Japan, United States

Inverse dependency ratio

Legend:
- Australia
- Japan
- Portugal
- Ireland
- Greece
- Spain
- United States
- Australia
- Japan
- United States

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*,

Inverse dependency ratio
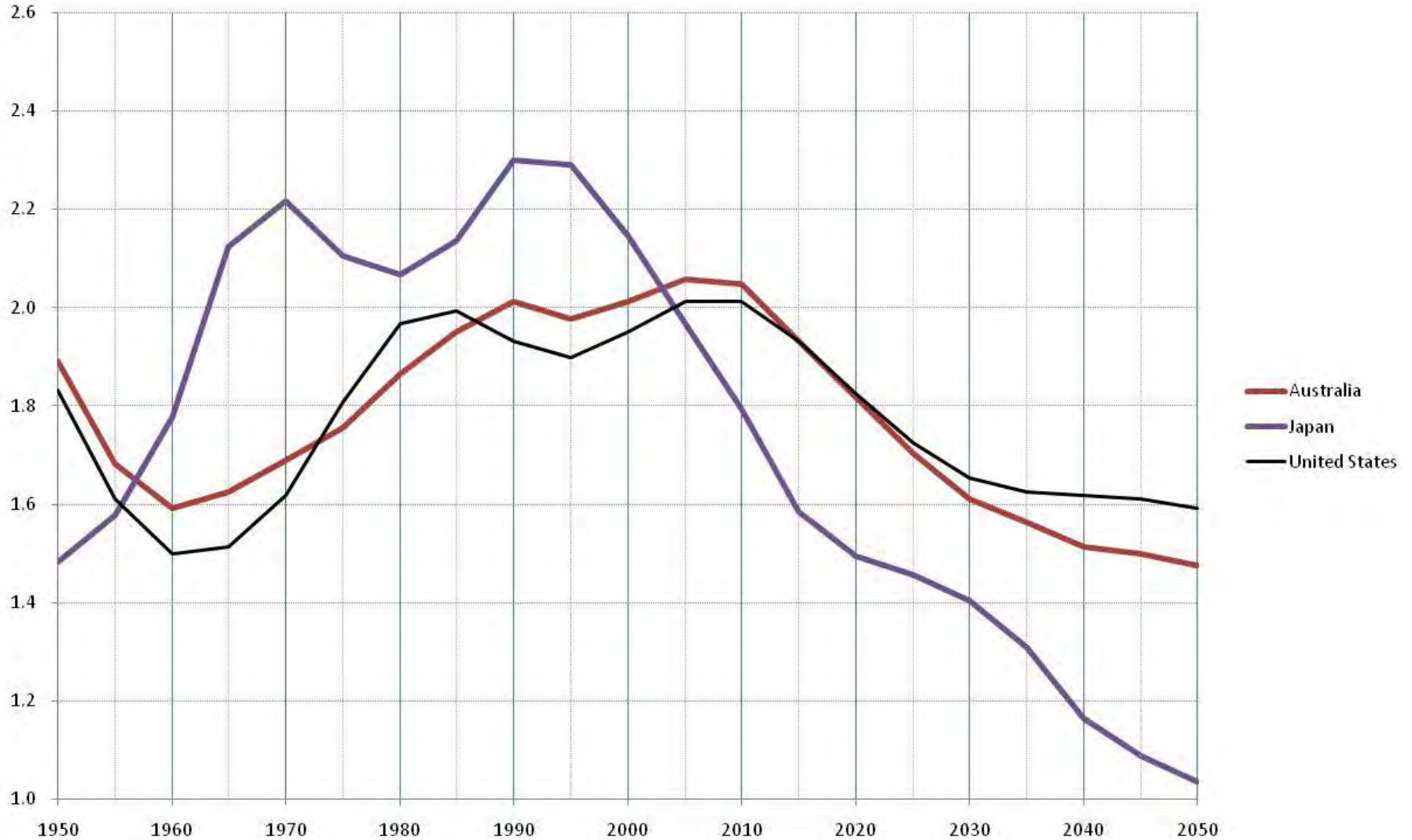
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*,

Toyoharu Takahashi (Chuo/ANU)   18 Mar 2011   35
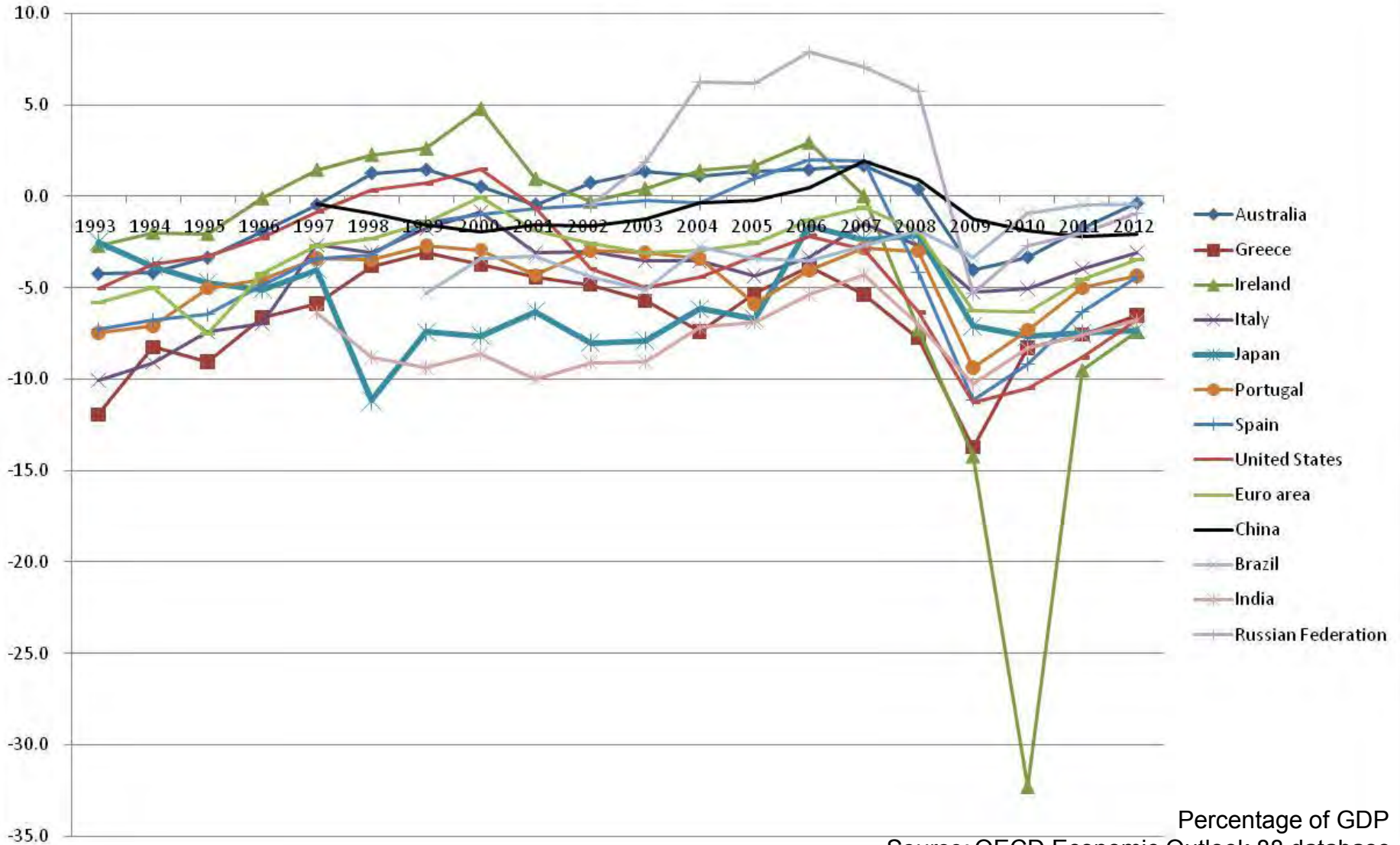
Policies for aging

- Child allowance
  - The DPJ has promised a 26,000yen a month child allowance.
  - "Women don't need a child allowance, they need services," she says, especially more day-care centers open longer hours.
- Reform on pension funds

Section 3

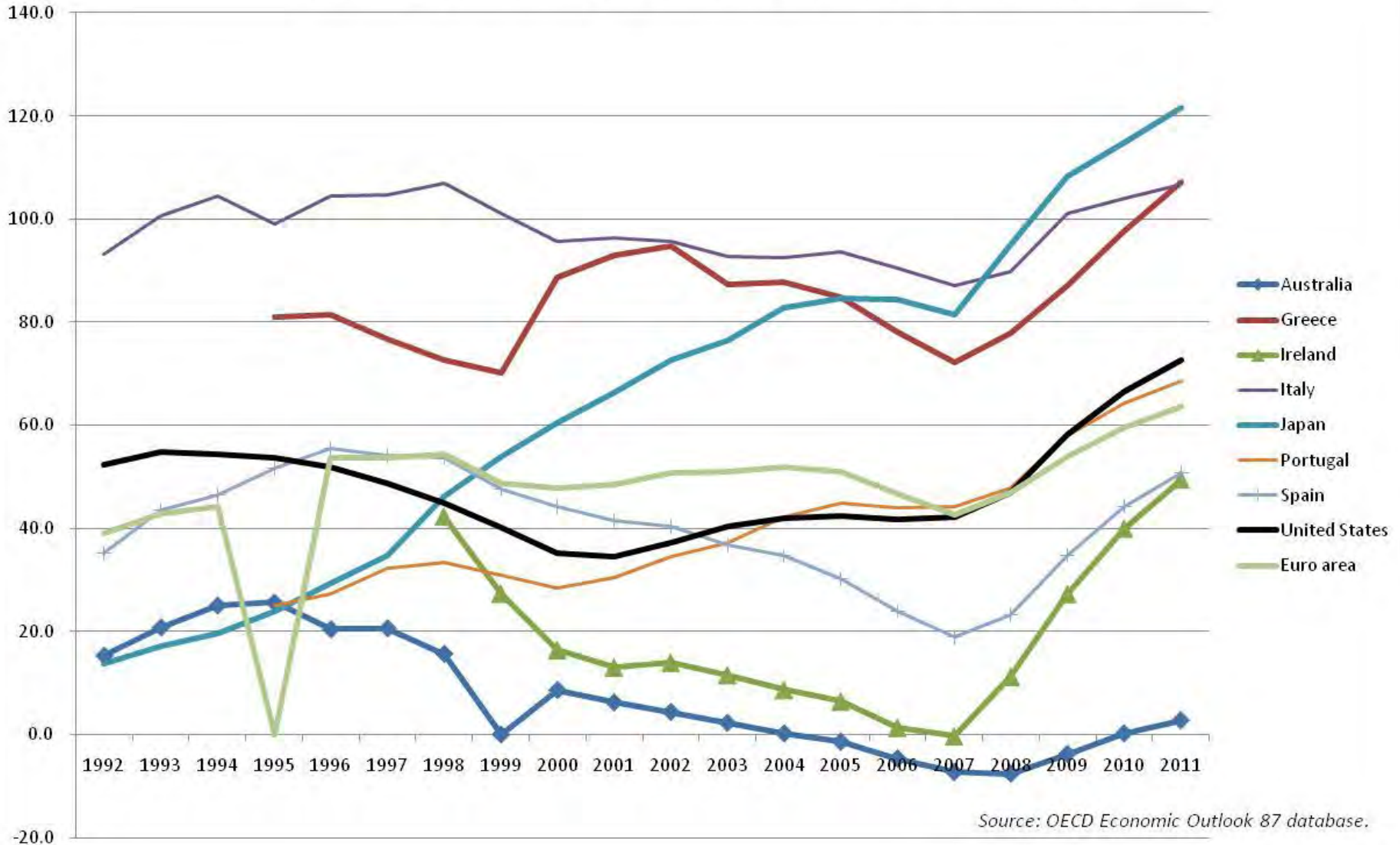# Japanese Fiscal Deficit and Yield on JGB

Fiscal Deficit

Percentage of GDP
Source: OECD Economic Outlook 88 database.

General government net financial liabilities % of nominal GDP

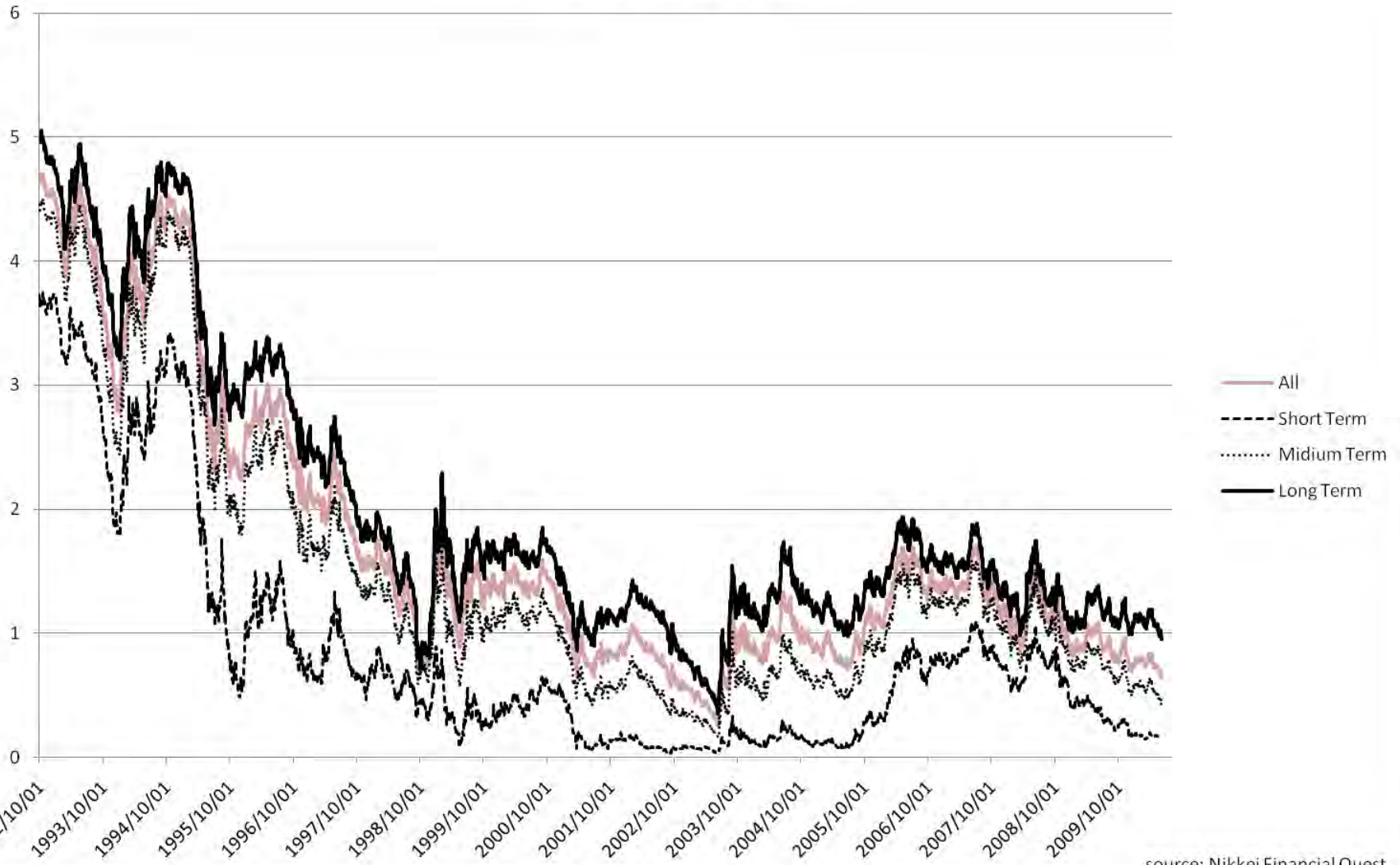Source: OECD Economic Outlook 87 database.
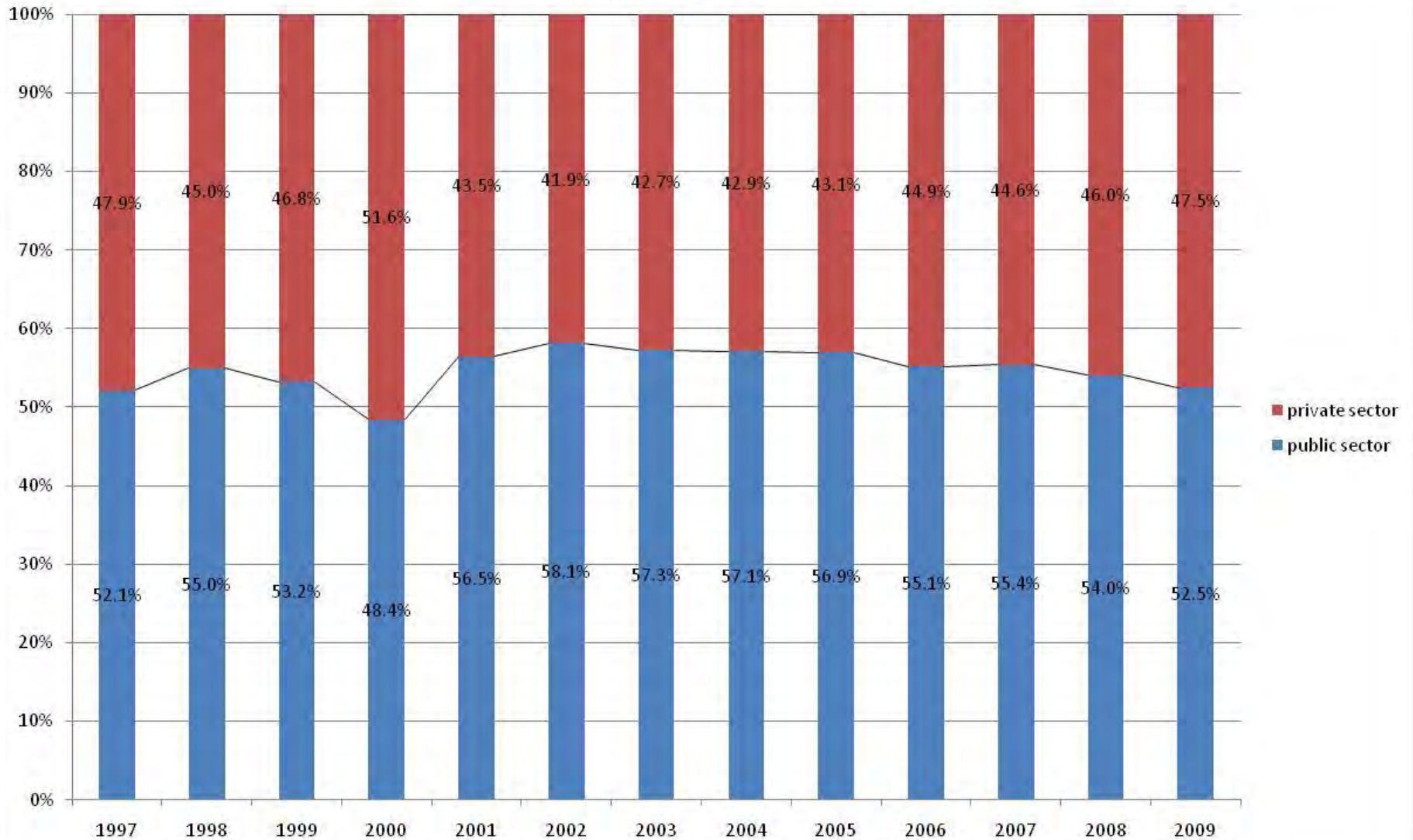
Yield on JGB
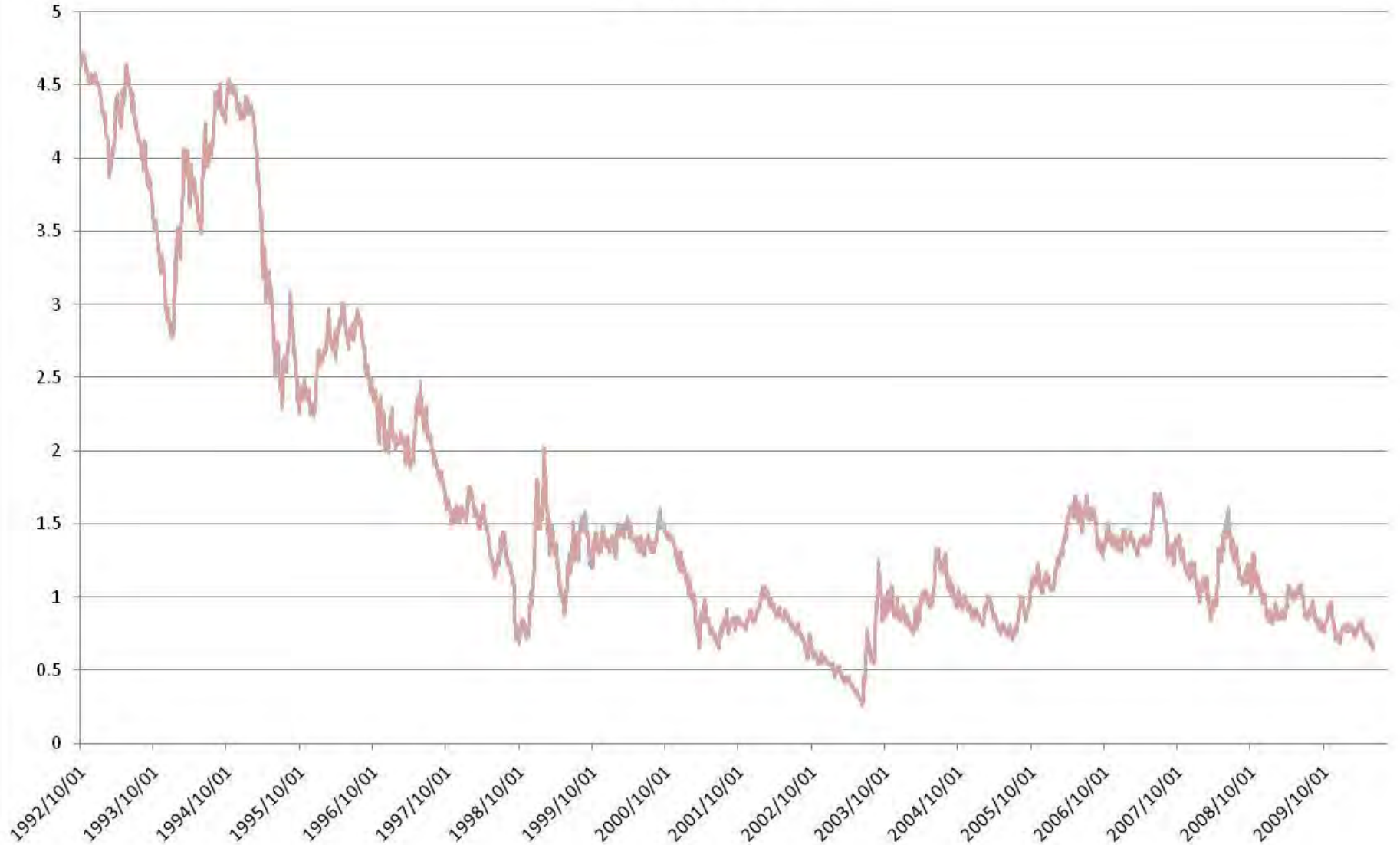
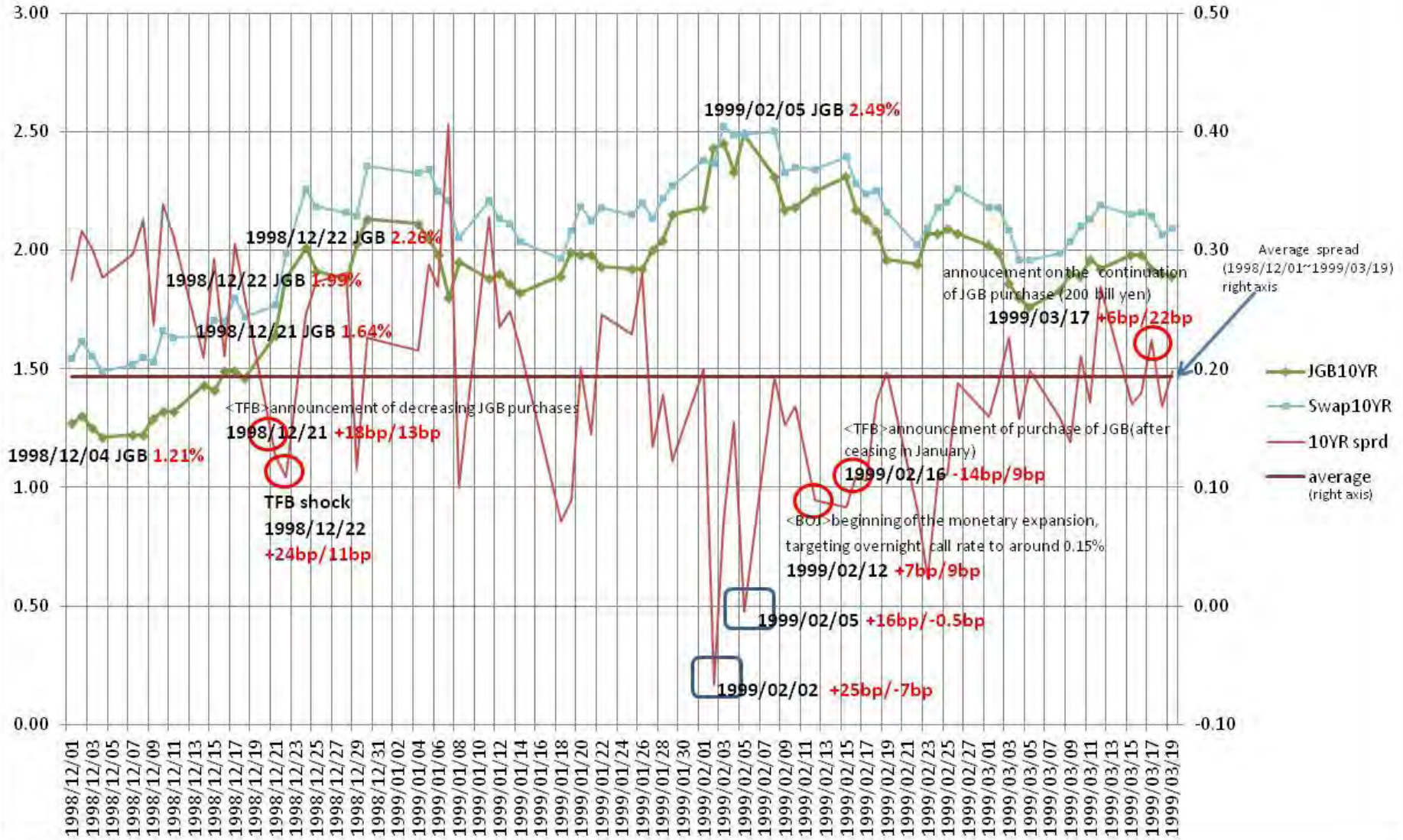Source: Nikkei Needs Financial Quest

Yield on JGB

source: Nikkei Financial Quest

JGB holdings by sector

Source: Bank of Japan Flow of Funds Accounts 2010

Yield on JGB and IRS

Source: Bloomberg
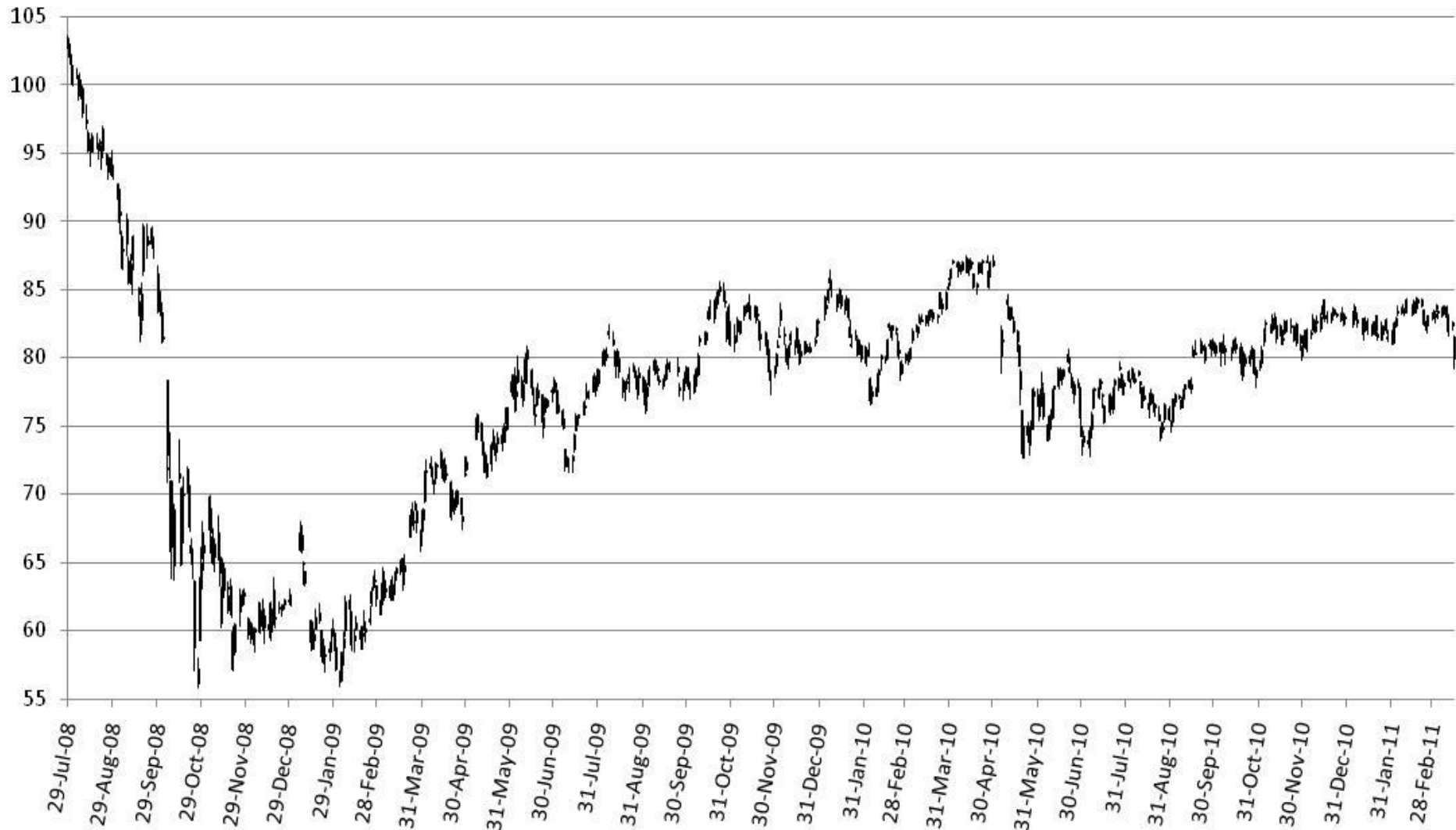
Section 4

STRONG JAPANESE YEN

JPY/USD
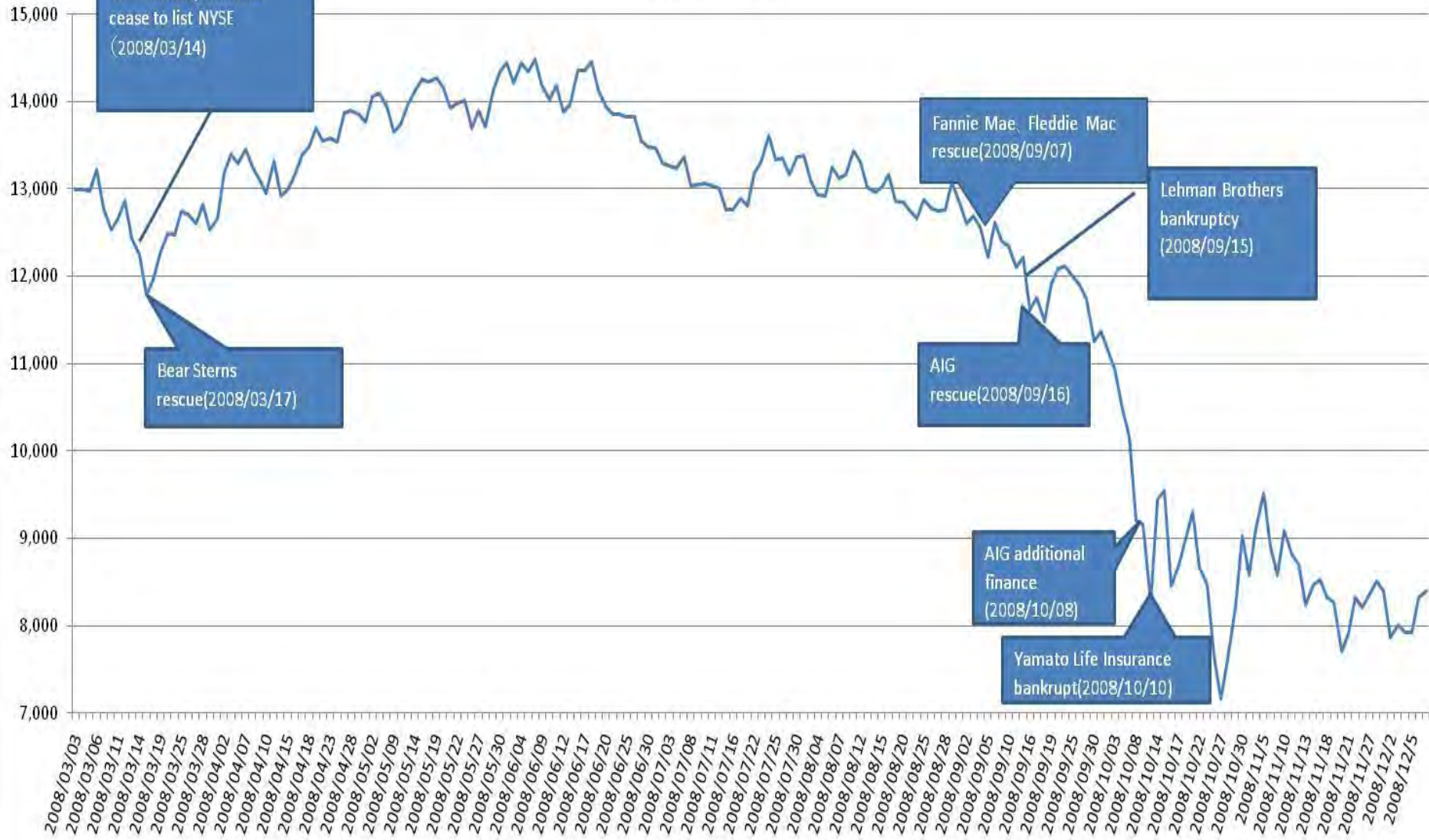
JPY/AUD

Nikkei 225

Nikkei 225

Section 6

Concluding Remarks

Future of the Japanese Economies

- Crisis Scenario
- Positive Scenario
- Muddle Through

Crisis Scenario ⇒ road to bankruptcy

- Society aging can't support social welfare system

- Lack of political leadership for the tax increase

- Government deficit grow too rapid to finance

- Economic growth remains low level due to an accelerated overseas production

Positive Scenario⇒ V-shaped recovery

- Political accord will be made
- Total fiscal reform will accomplished
- Domestic demand will increase due to the increase in confidence of future economic situation
- Productivity will increase

Muddle Through

- Fiscal deficit remains high level
- Yield on JGB still low, due to the low demand for funds in private sector

THANK YOU!

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