

# The Global Decline in Growth Rate and Possible Policy Responses

Panel Discussion

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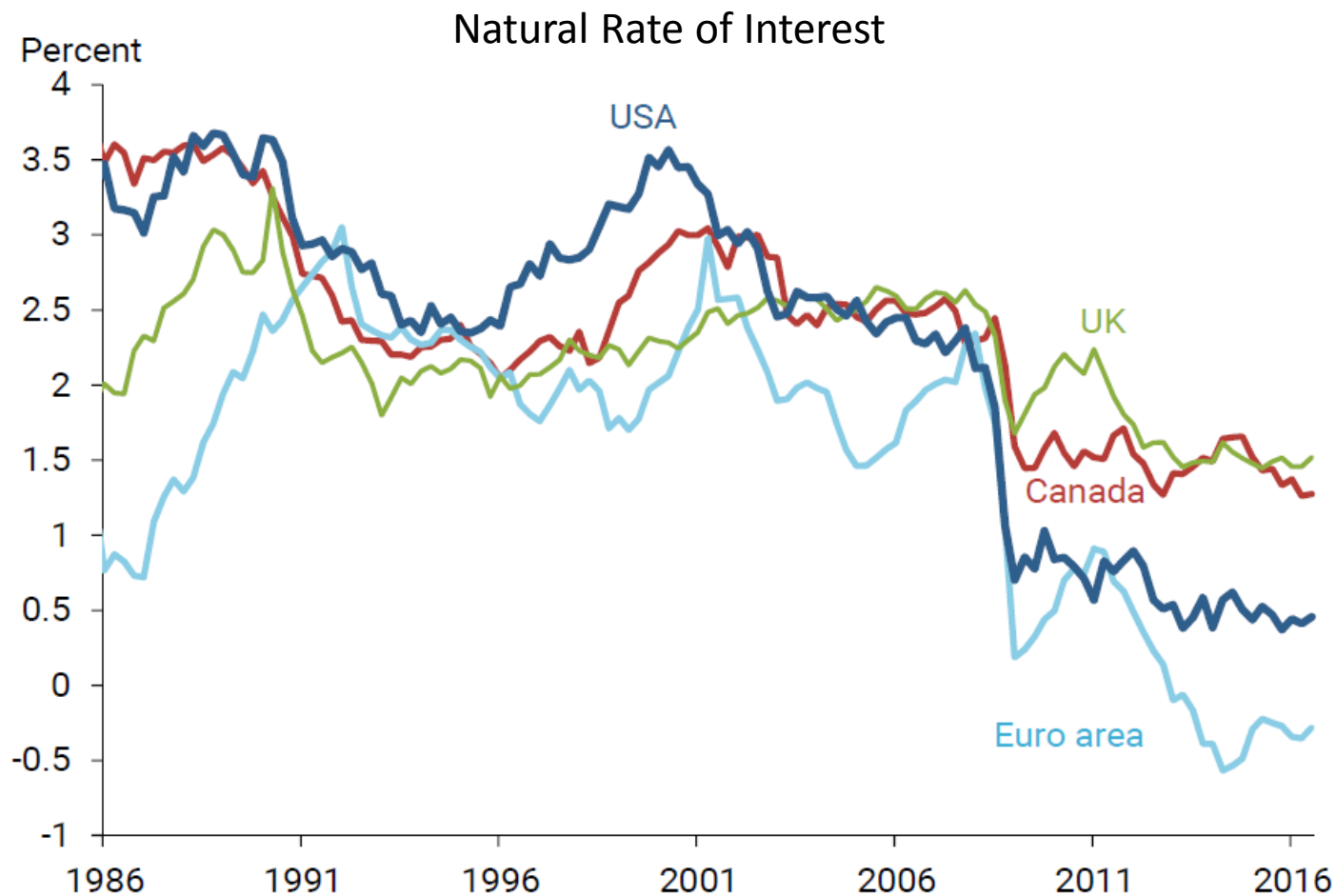
# Fig.1 Growth of Labor Productivity, 1999-2017

|                                                                          | United States | Japan | United Kingdom | Euro Area | EU-28 |
|--------------------------------------------------------------------------|---------------|-------|----------------|-----------|-------|
| <i>Labor Productivity Growth (GDP per hour, annual average, percent)</i> |               |       |                |           |       |
| 1999-2006                                                                | 2.9           | 2.2   | 2.3            | 1.5       | 1.9   |
| 2007-2014                                                                | 1.2           | 1.2   | 0.1            | 0.6       | 0.7   |
| 2014                                                                     | 0.6           | 0.2   | 0.3            | 0.6       | 0.7   |
| 2015                                                                     | 0.8           | 1.3   | 0.7            | 0.5       | 0.9   |
| 2016                                                                     | 0.5           | 0.5   | 0.4            | 0.7       | 0.8   |
| 2017 (Projection)                                                        | 1.0           | 1.1   | 1.0            | 0.8       | 1.0   |

Notes: Growth rates are based on the annual percentage of difference of each variable. Regional GDP and labor productivity growth rates are aggregated using shares in nominal PPP converted GDP. Growth rates for 1999–2006 and 2007–2014 are the averages of yearly growth rates.

Source: The Conference Board “Total Economy Database (Adjusted Version)”, May 2017

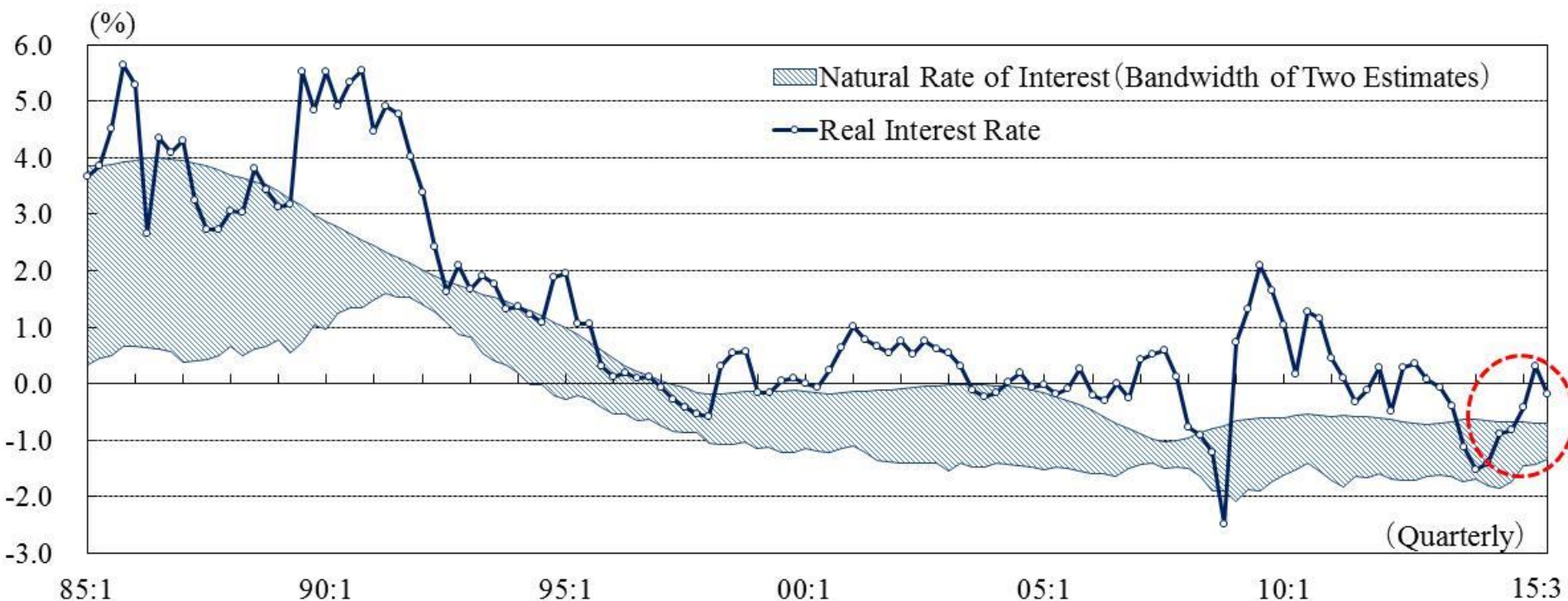
# Fig.2 Estimates of R-star for Four Economies



Source: Holston, Laubach, and Williams (2016).

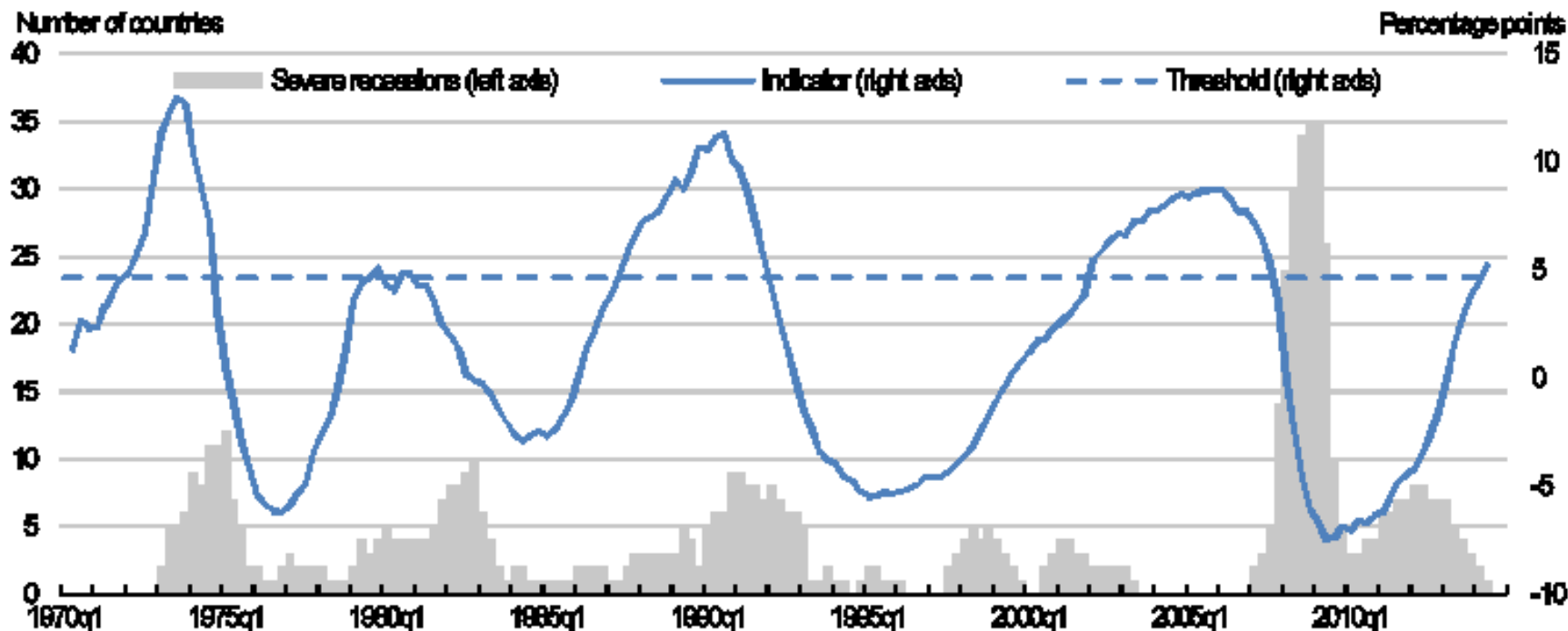
Source: John C. Williams "Three Questions on R-star" FRBSF Economic Letter Feb. 21 2017

# Fig3. Japan's "Natural Rate of Interest" and Real Interest Rate



Source: Estimated by JCER Financial Research Team

# Fig.4 Global Real House Price Index

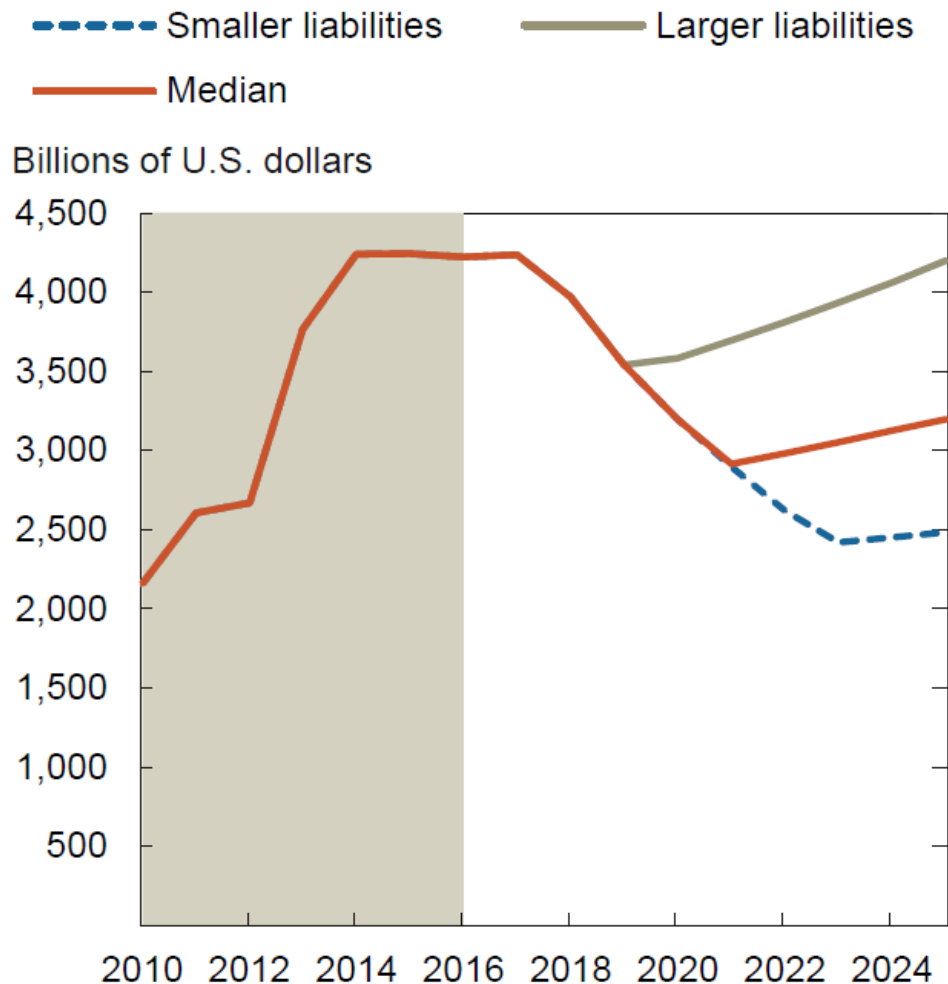


Notes: Grey areas represent the number of countries identified as being in a severe recession (from peak to trough). The global real house price index is constructed as a GDP-weighted average across OECD countries and is measured in deviation from trend.

Sources: Hermansen, M. and O. Röhn (2017), “Economic Resilience: The Usefulness of Early Warning Indicators in OECD Countries”, OECD Journal: Economic Studies, Vol. 2016, OECD Publishing.

Iwata, K., Jean S., Kastrop, C., Loewald, C., and Véron, N., “Policy Note on Resilience and Inclusive Growth”, May 24, 2017.

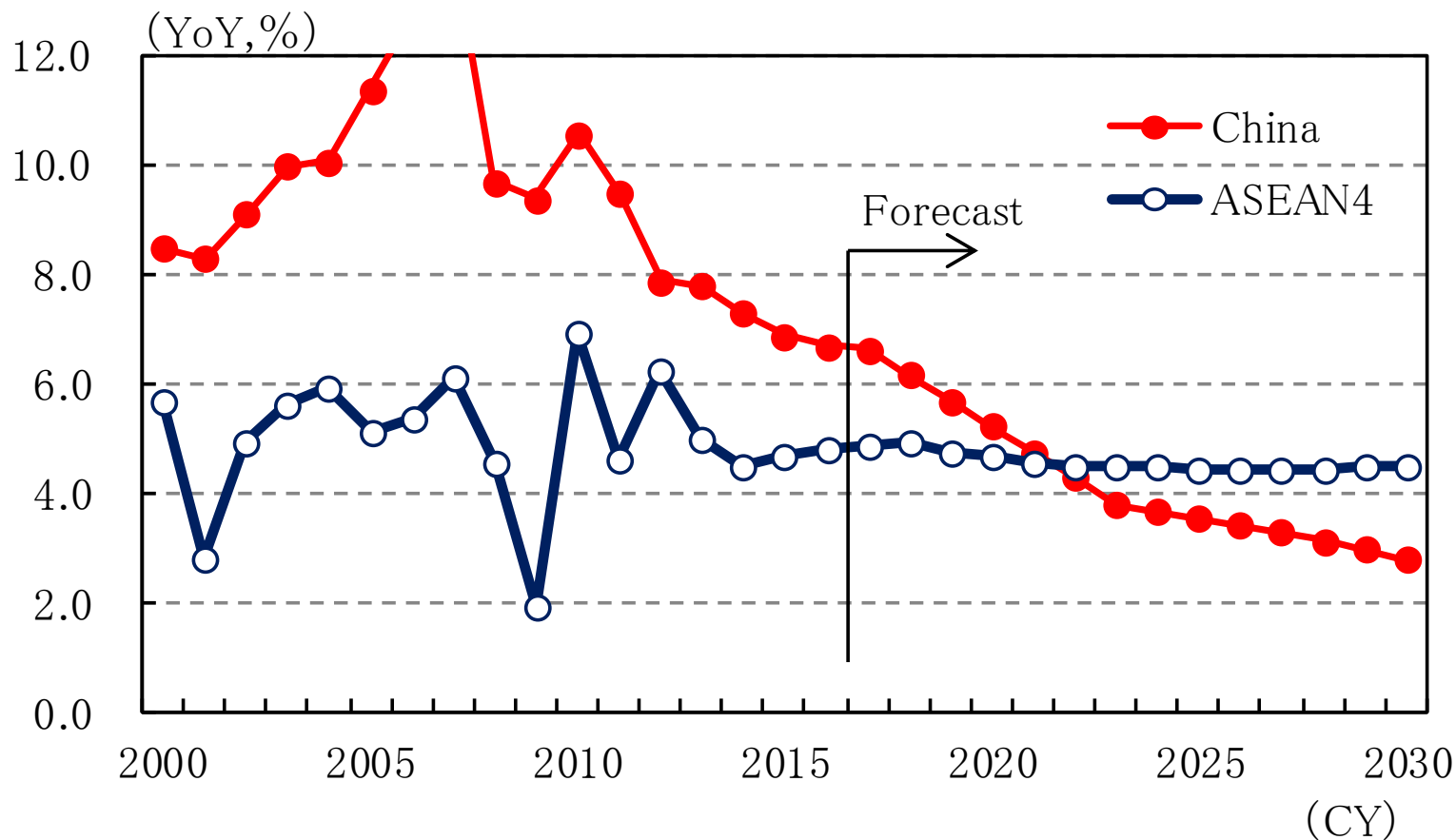
# Fig.5 Projected SOMA Domestic Securities Holdings : Alternative Liabilities Scenarios



Notes: Figures for 2010–16 (shaded area) are historical settled holdings. Smaller and Larger liabilities are based, respectively, on the 25th percentile and 75th percentile responses to a question about the size and composition of the Federal Reserve’s long-run balance sheet in the New York Fed’s June 2017 Surveys of Primary Dealers and Market Participants

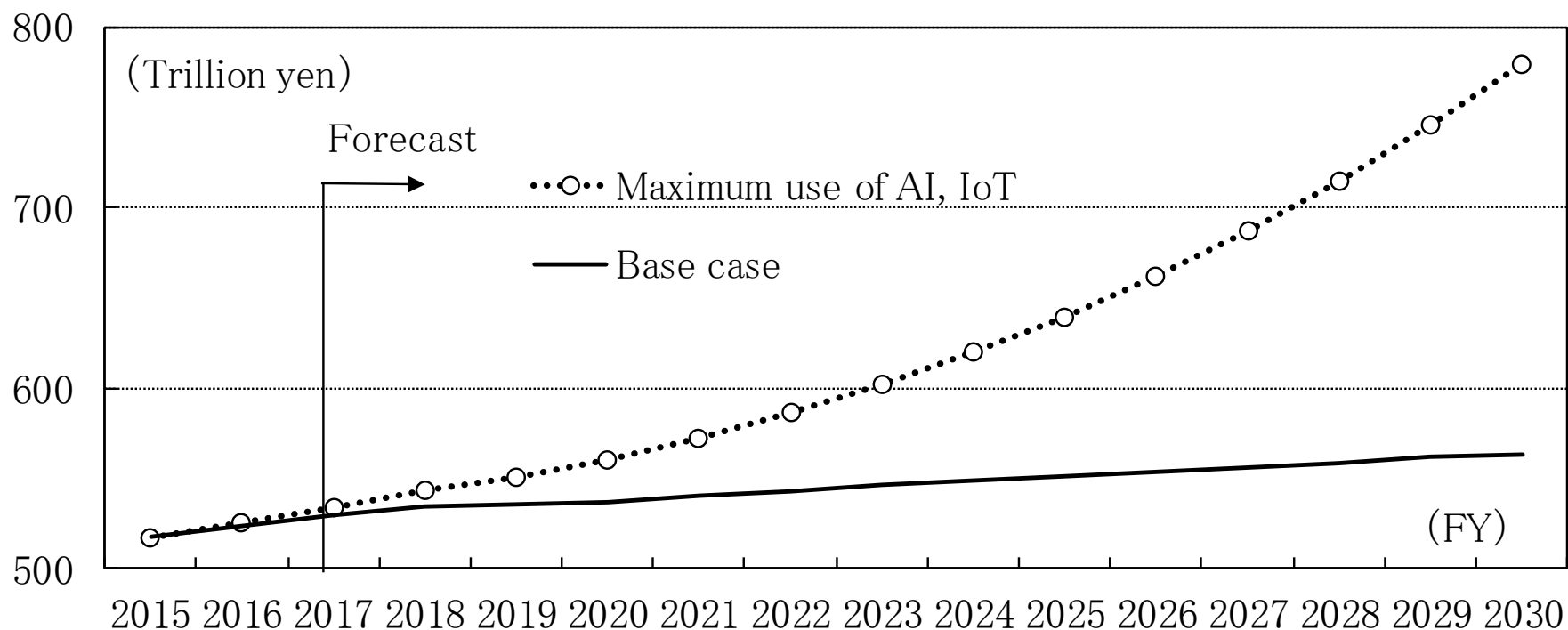
Source: Federal Reserve Bank of New York

# Fig.6 Real GDP Growth in China and ASEAN4



Source: Haver Analytics, JCER

# Fig.7 Accelerating Growth Rate by 4%: Top 10 Japanese Companies' Use of AI and IoT



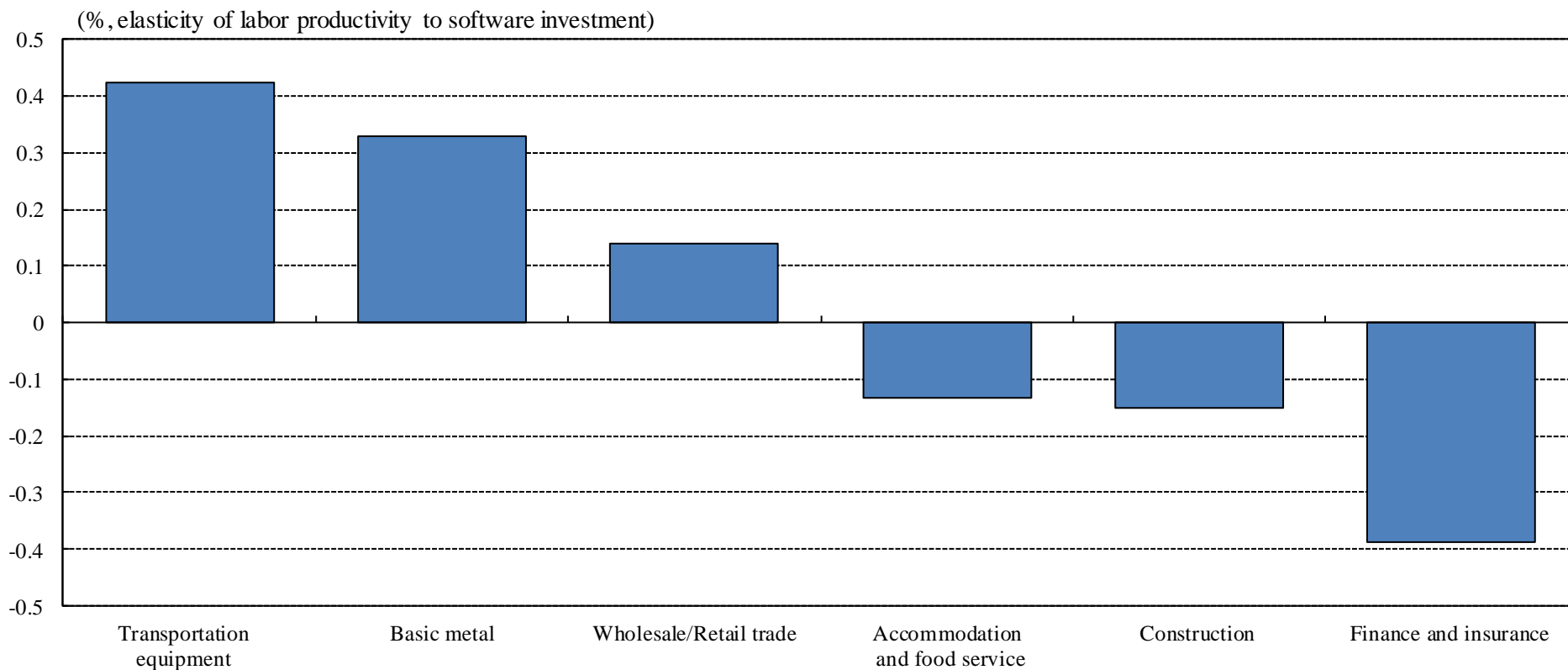
Source: JCER Policy Proposal Report “Industry 4.0 in Japan”, May 25, 2017, in Japanese



# Fig.8 The Top 10 Most Innovative Japanese Companies in AI and IoT Use

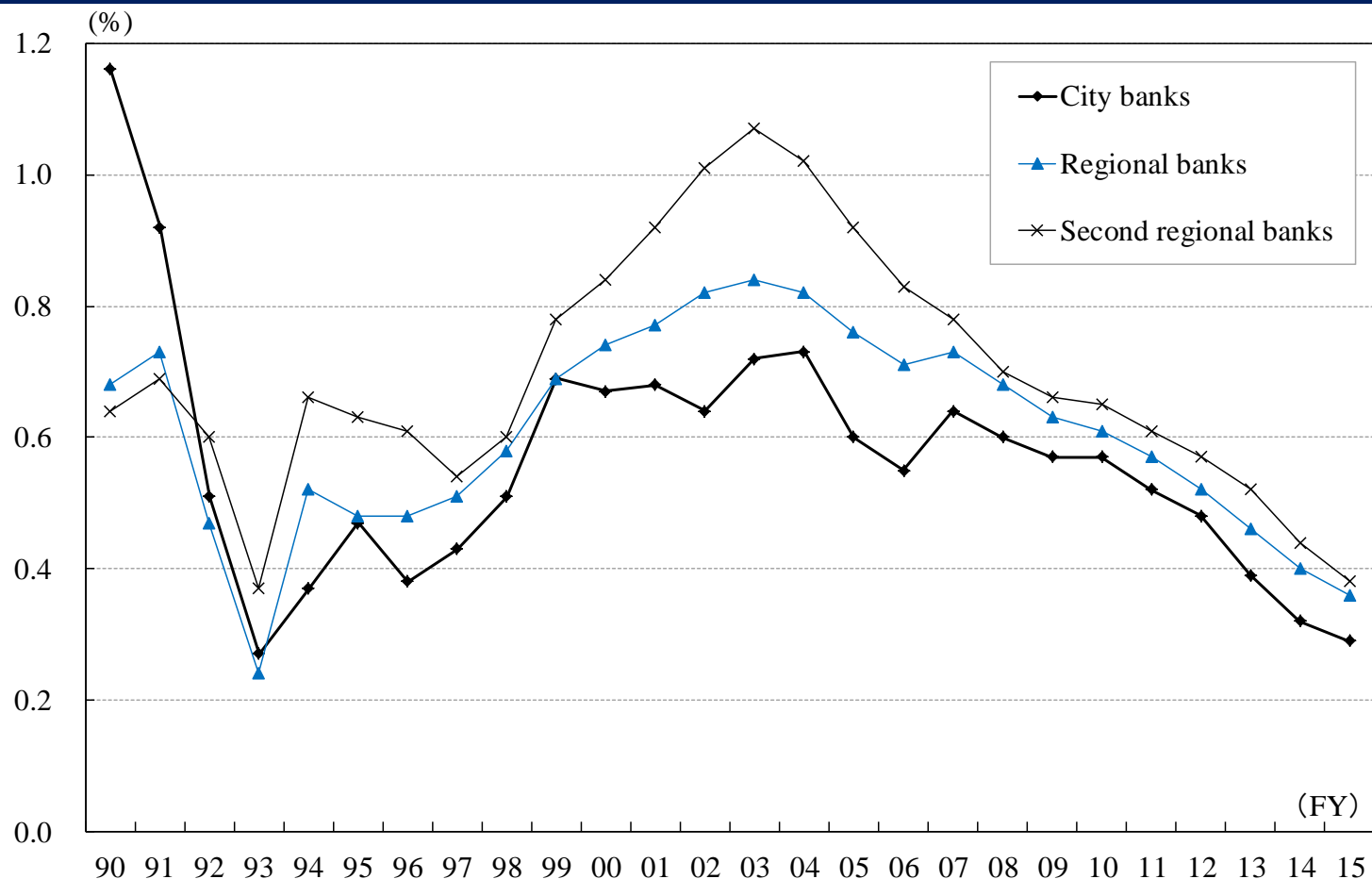
|    | IoT                            |    | AI                                   |
|----|--------------------------------|----|--------------------------------------|
| 1  | AMADA HOLDINGS CO.,LTD.        | 1  | KONICA MINOLTA, INC.                 |
| 2  | DAIWA HOUSE INDUSTRY CO., LTD. | 2  | NTT DATA Corporation                 |
| 3  | Anonymous                      | 3  | Anonymous                            |
| 4  | Anonymous                      | 4  | Nomura Research Institute, Ltd.      |
| 5  | SUMITOMO CORPORATION           | 5  | Mitsubishi UFJ Financial Group, Inc. |
| 6  | KONICA MINOLTA, INC.           | 6  | Hitachi, Ltd.                        |
| 7  | Suntory Holdings Limited       | 7  | CHUGAI PHARMACEUTICAL CO., LTD.      |
| 8  | Tokyo Century Corporation      | 8  | Ajinomoto Co., Inc.                  |
| 9  | Anonymous                      | 9  | FUJITSU LIMITED                      |
| 10 | Anonymous                      | 10 | N/A                                  |

# Fig.9 Software Investment and Labor Productivity



Source: JCER Policy Proposal Report “Industry 4.0 in Japan”, May 25, 2017, in Japanese

# Fig.10 Investment yield by business category(expenses deducted)

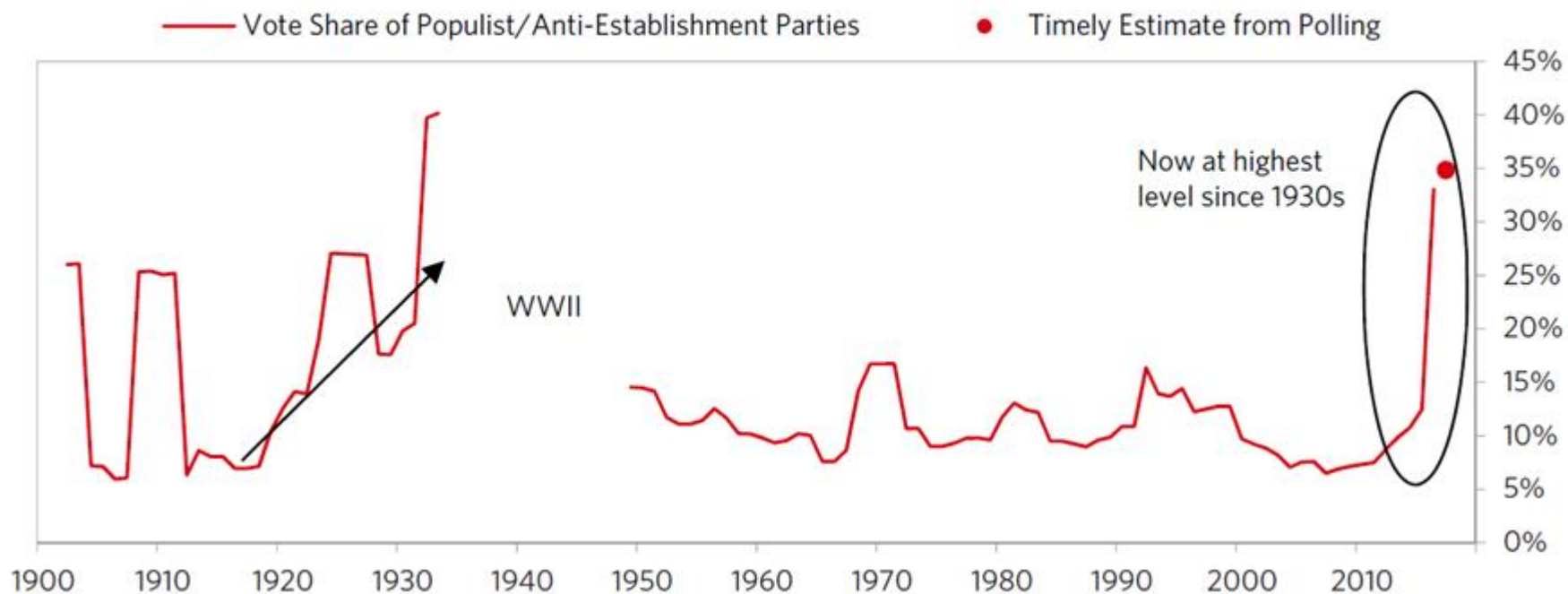


Note: Investment yield(expenses deducted) = loan investment yield – deposit yield – expense ratio

Data: Japanese Bankers Association

Source: JCER Financial Team Annual Report, March 31, 2017.

# Fig.11 Developed World Populism Index



Source: Bridgewater “Daily Observations”, March 22 ,2017