

# Global Financial Instability: Act III of the Greek Tragedy Explained

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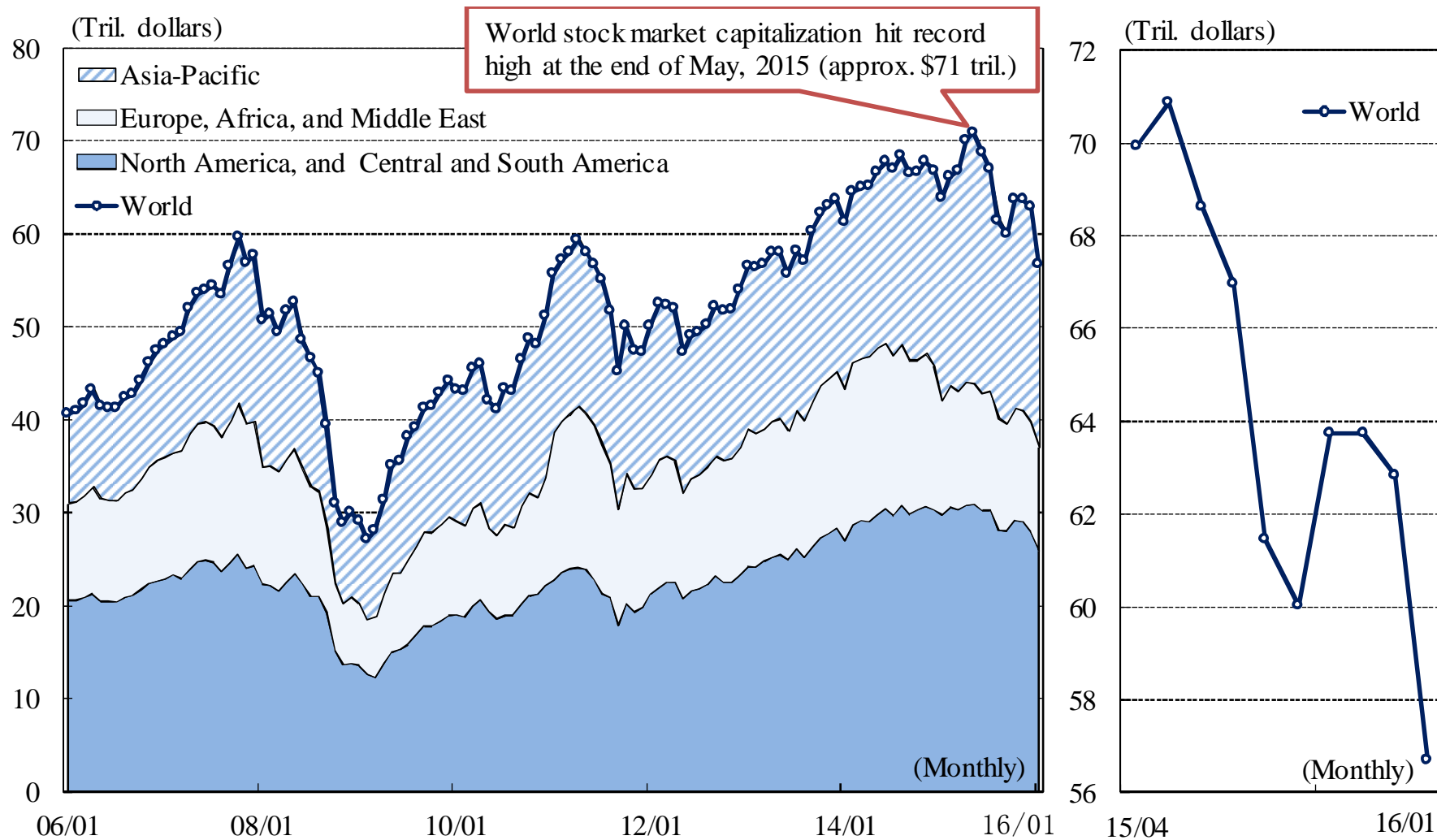


# I . Four Major Risks to the Global Economy

1. The 15-trillion-dollar drop in world stock market capitalization marked the start of “Act III of the Greek tragedy”, triggered by four major risks to the global economy.

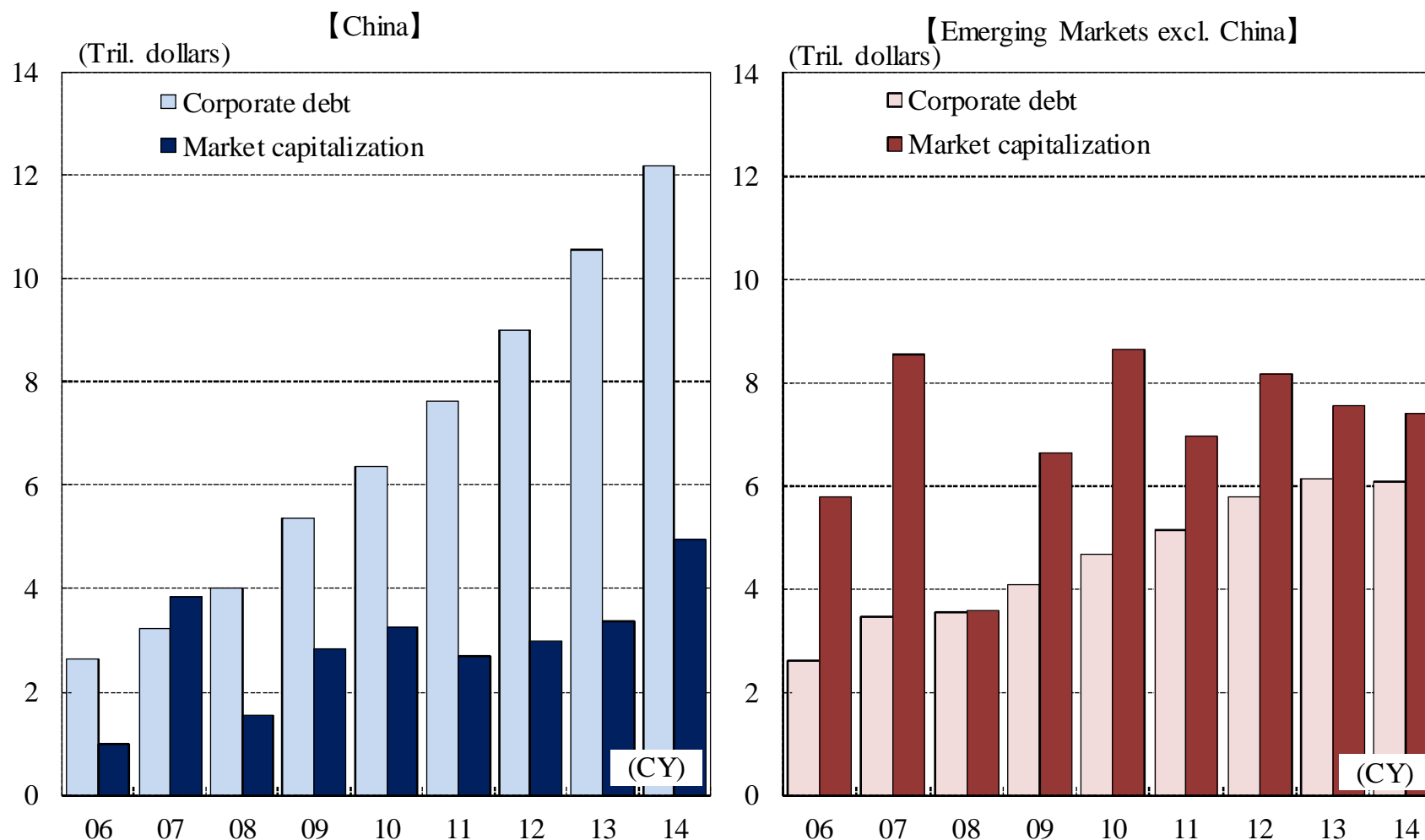
1. US Fed’s process of raising interest rates (unwinding of long-sustained Quantitative Easing) and the emerging risk of US recession
2. Slower growth in emerging economies, particularly in China, massive devaluation of the Renminbi, and the arising risk of bankruptcies through accumulated corporate debt (Memories of the Asian currency crisis)
3. Sudden drop in primary commodity prices, especially in oil prices, and the emerging risk of a plunge in high-yield bond prices (Memories of the Russian financial crisis)
4. Delays in writing off non-performing loans in the Euro Area’s banking sector, increasing US subprime auto loans, and rising delinquency rate of US student loans point to new financial risks (Memories of the Euro crisis)

# Fig. 1 World Stock Market Capitalization



Source: World Federation of Exchanges

# Fig.2 Corporate Debt In Emerging Economies



Source: IMF, *Global Financial Stability Report*, Oct 2015

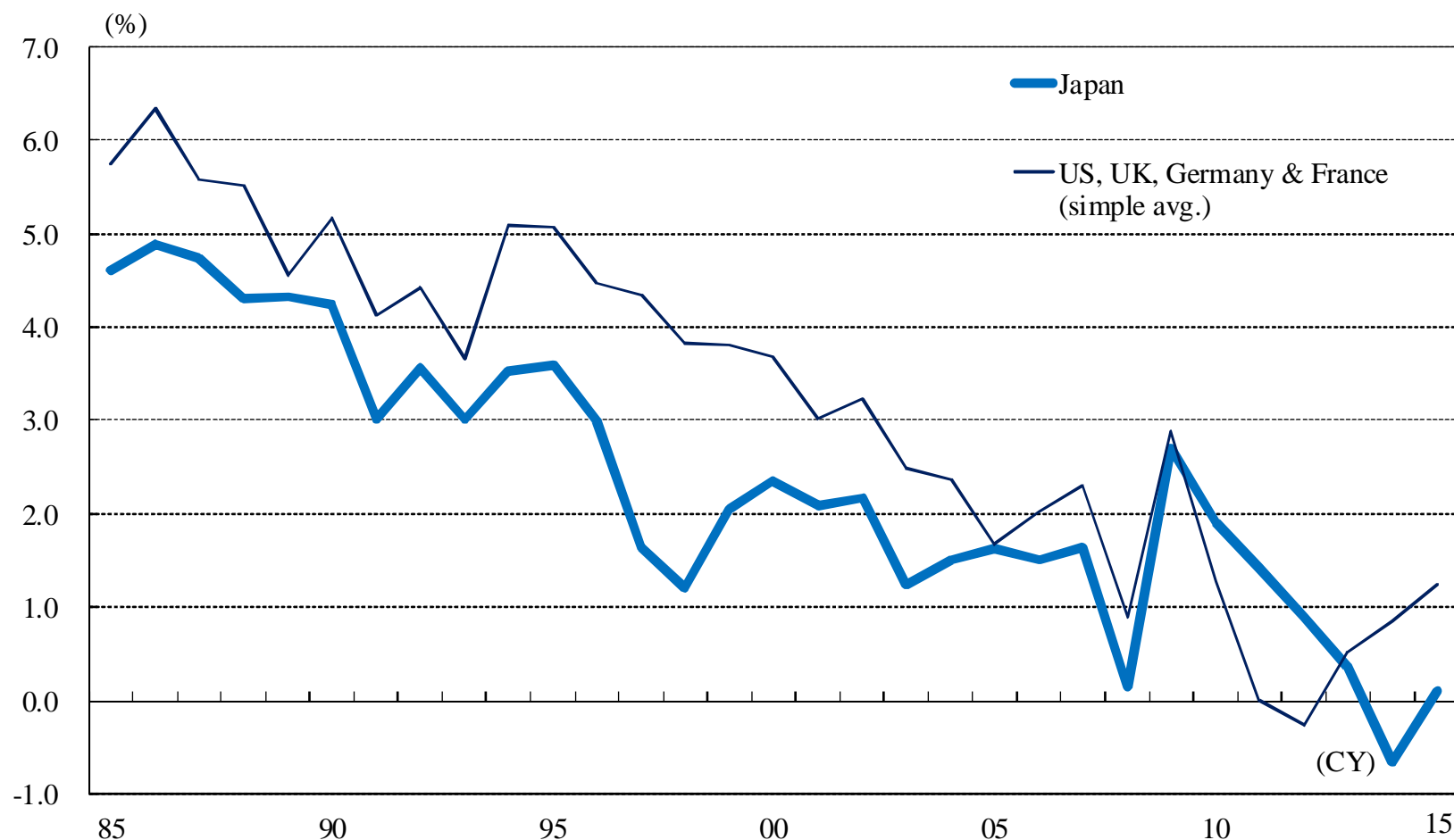
## II . Secular Stagnation and the Negative “Natural Rate of Interest”

1. Act III of the Greek Tragedy is playing out against a backdrop of sluggish global recovery, declining potential growth rate (due to shrinking population and low labor productivity growth), low inflation and low interest rates falling further into negative territory.

- The real long-term interest rates of developed economies have continued on a declining trend, to almost zero levels. This suggests that growth in these economies may slow in the near future.
- The real interest rate, which restores the investment-savings balance to desirable levels (i.e. the “natural rate of interest”), has fallen into negative territory, not only in Japan, but also in the US and the UK.

2. If nominal interest rates fall to zero percent, central banks need to either boost “inflation expectations” or adopt a “negative interest rate policy”, so that the real market interest rate becomes lower than the “natural rate of interest”.

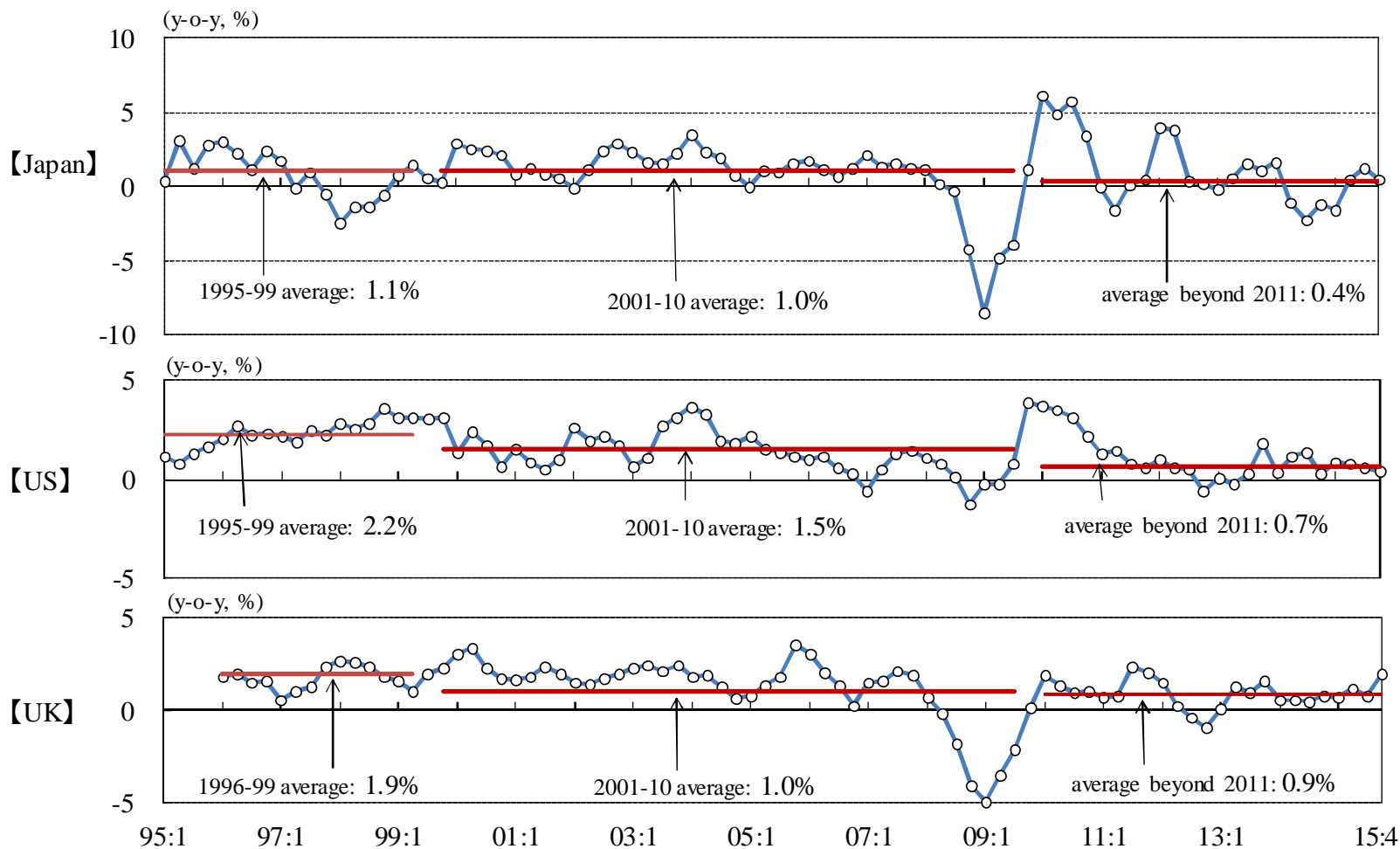
# Fig.3 Real Long-term Interest Rates Declining Across the World



Note: The direct effects of the consumption tax hikes in Japan are excluded.

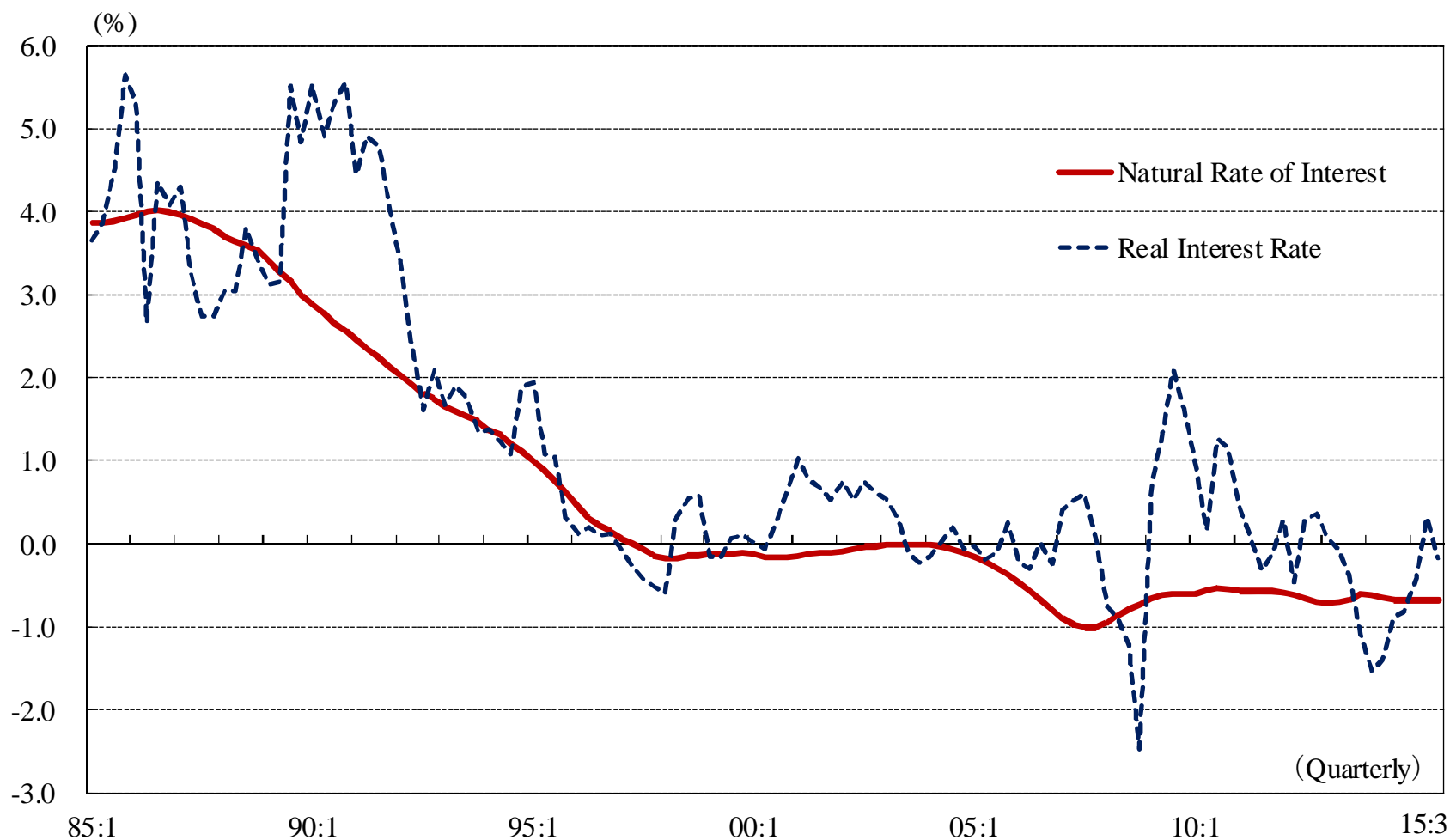
Source: Ministry of Finance, Bank of Japan, OECD

# Fig.4 International Comparisons of Labor Productivity Growth



Source: Cabinet Office, Ministry of Internal Affairs and Communications (Japan); Department of Commerce, BLS (US); Office for National Statistics, Eurostat (UK) (Quarterly)

# Fig.5 The “Natural Rate of Interest” and Real Interest Rate in Japan



Source: Estimated by JCER Financial Research Team



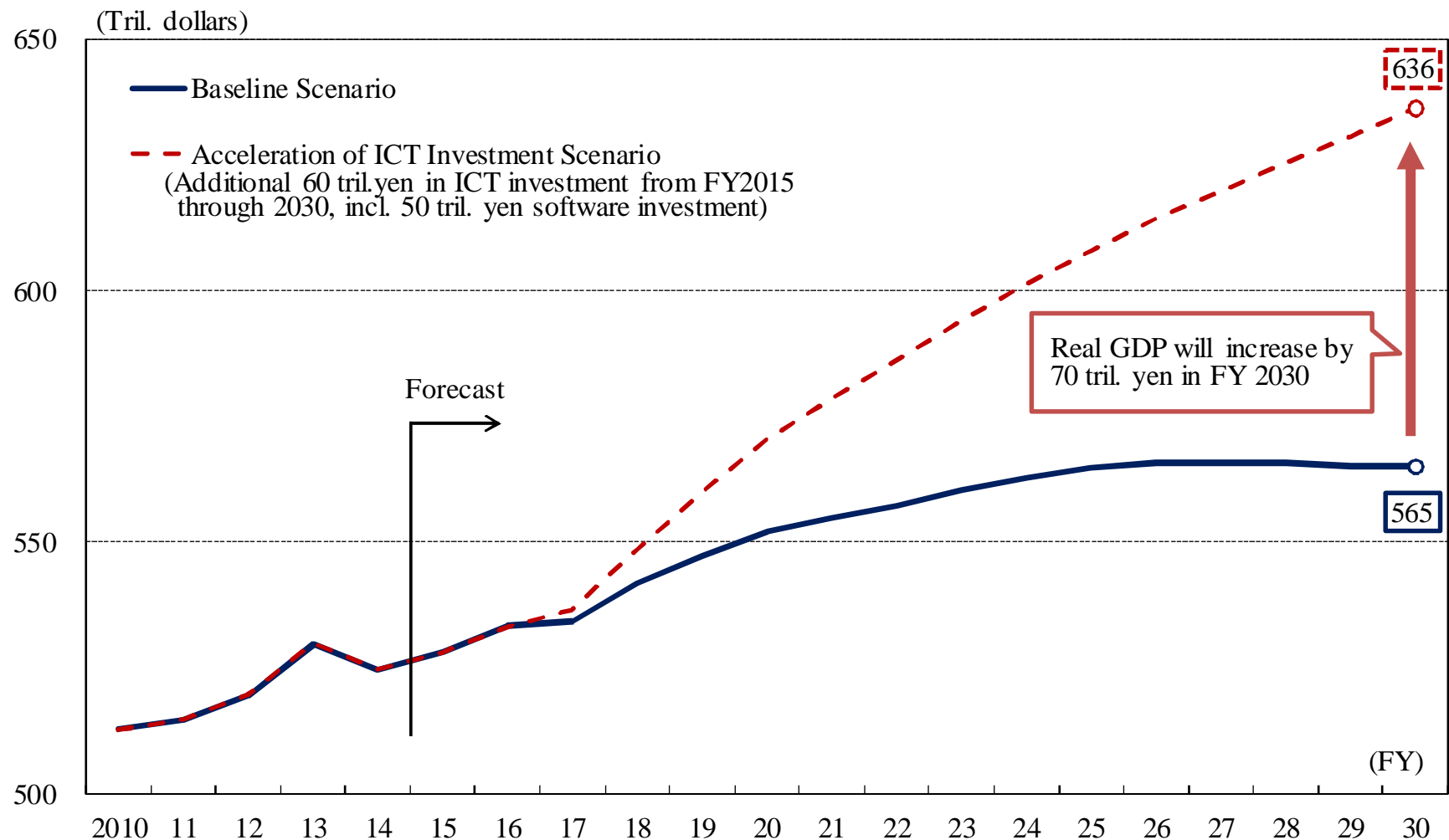
## III. Japan's Policy Responses

1. Japan's optimal policy responses to overcome deflation and to recover from secular stagnation; (1) adopt a “negative interest rate policy”, and (2) raise the “natural rate of interest” to positive values.
2. Raise the “natural rate of interest” to positive values by; (1) halting the shrinking population and raise the fertility rate to 1.8 (8 trillion yen childcare support needed), and (2) doubling labor productivity levels (=real wage levels given unchanged terms of trade) through technology innovation by utilizing the Internet of Things (IoT), big data and Artificial Intelligence (AI).
3. Aim to establish a cashless society with the 2020 Tokyo Olympic Games coming up, by incorporating Fintech, symbolic to technological innovation.
4. In the area of fiscal policy, Japan needs to map out the “Partnership for Quality Infrastructure” (110 billion dollars) as the joint action of G7 countries, putting the partnership into practice.
  - According to OECD estimates, putting the “Collective Action on Public Investment” into effect will lead to a decline in the government debt-to-nominal GDP ratio.

## IV. Accelerating Innovation by Creating a Cashless Society

1. The establishment of a cashless society will bring safety and convenience for all. Access to huge transaction data will become a new stimulus to business industries and regional economies (big data analysis).
2. The Japanese Government has launched actions toward a cashless society; making credit card usage more convenient, enacting new legislation for digital currencies and enhancing services for overseas visitors.
3. Countries in northern Europe are far more ahead. Denmark is preparing new institution which allows retailers etc. to refuse accepting cash from customers. Japan should also enhance a cashless society.
4. ICT plays a key role. Innovative technologies (e.g. big data analysis, digital currency and smart contract) create new businesses (unicorn companies) in the global market. Increased software investment, which supports innovative technologies, will contribute to Japan's economic growth (boost real GDP by 70 trillion yen in FY2030 and create more than 5 million jobs in total by that time).

# Fig.6 Estimated Real GDP Growth through Increased Software Investment



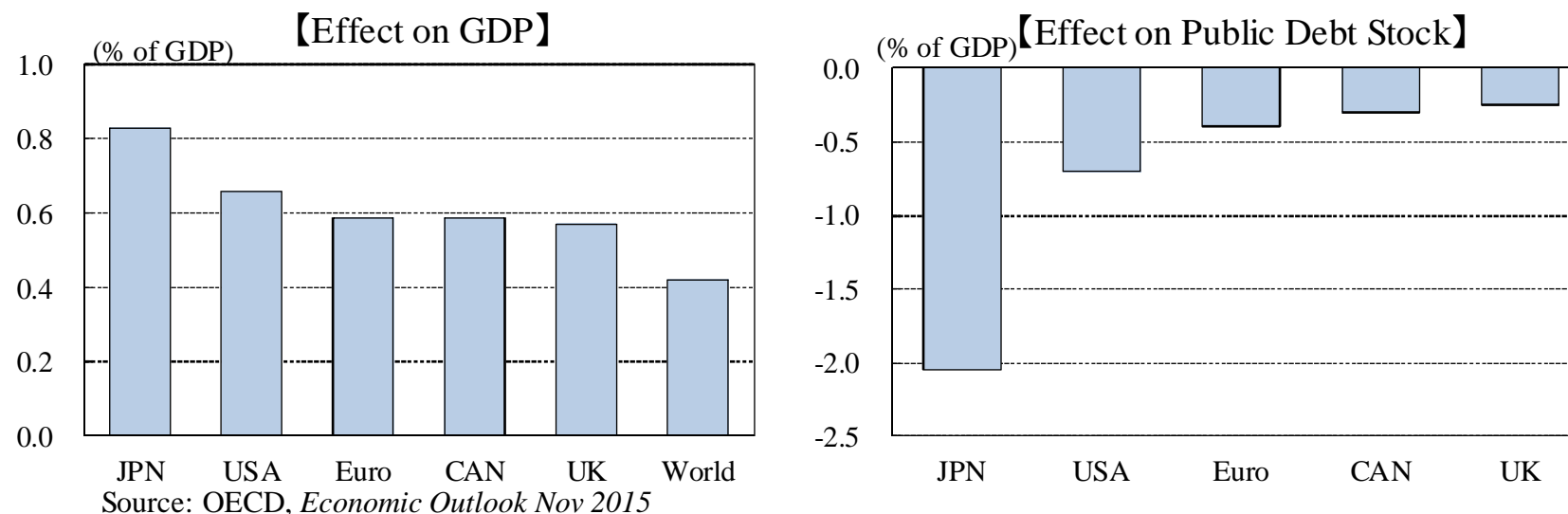
Source: Forecast by JCER

# V. OECD's Collective Action on Public Investment

## “Partnership for Quality Infrastructure” in the Asian Pacific region

- 110 billion dollars (13 trillion yen) over the next five years (Prime Minister Shinzo Abe)
- Announced at the “21st International Conference on the Future of Asia”, sponsored by Nikkei and JCER (May 2015)
- ⇒ In line with OECD's proposal “Collective Action on Public Investment”

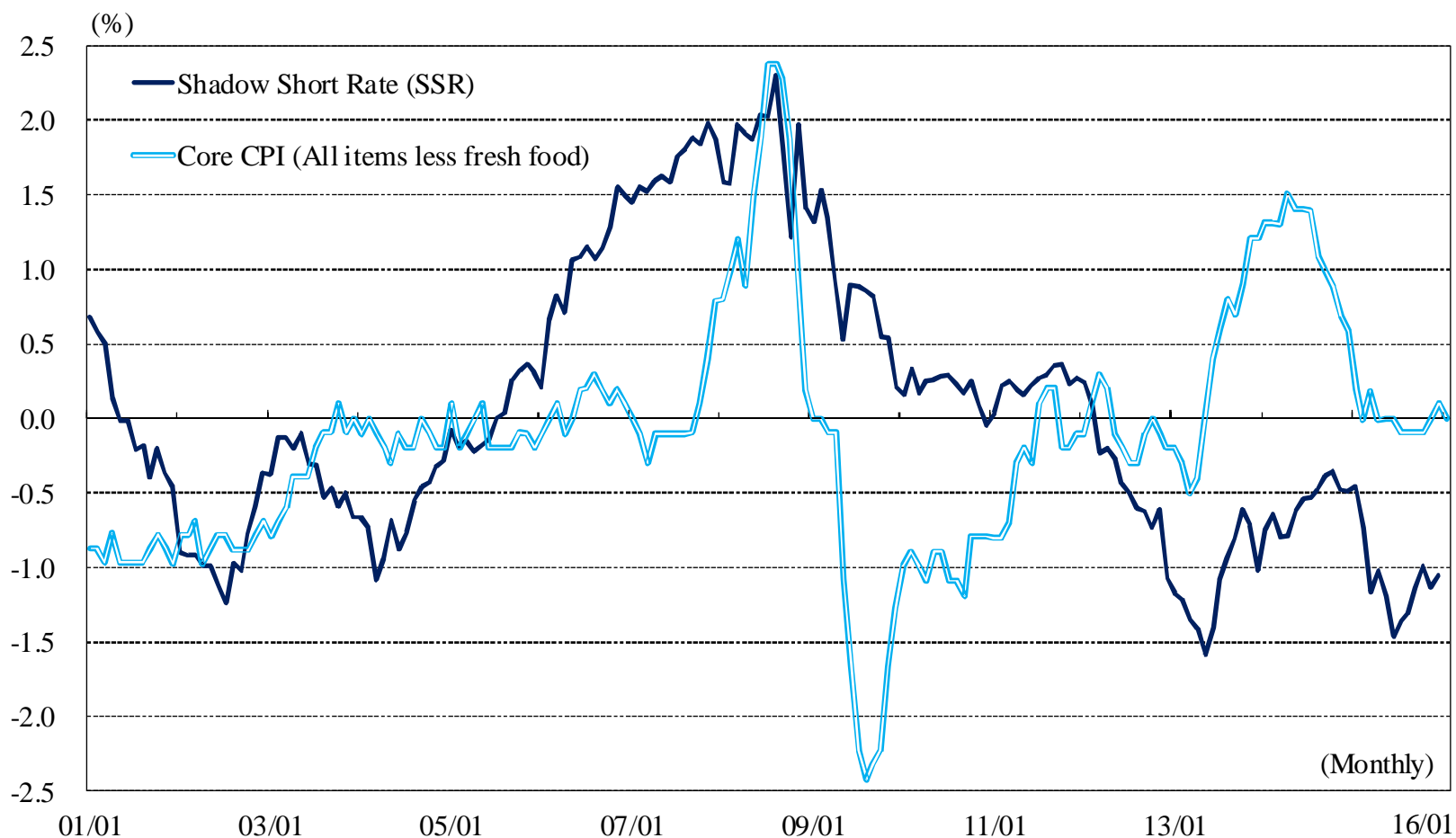
【Fig.7 Effects of a 0.5% GDP Public Investment Stimulus by All OECD Economies】



## (Reference) The “Shadow Short Rate (SSR)”

1. When market interest rates turn negative, an “option value” arises to hoard cash so as to avoid negative interest rates.
  - By estimating the “option value”, the “Shadow Short Rate (SSR)” can be calculated ( $SSR = \text{market nominal rate} - \text{“option value” of hoarding cash}$ )
  - Since the late 1990’s when Japan’s short-term nominal interest rate faced the Zero Lower Bound (ZLB), the SSR has fallen into negative territory and currently stands at around minus 1%.
2. If we interpret the SSR as the rate which restores the investment-savings balance to desirable levels, the policy rate needs to be cut to the same level as the SSR to overcome deflation.

# Fig.8 Japan's "Shadow Short Rate (SSR)" and Inflation Rate



Note: The direct effects of the consumption tax hikes are excluded.

Source: Estimated by JCER Financial Research Team with reference to Bank of Japan, Bauer and Rudebusch (2016)