World Economic Trends I
<The 2018 Spring/Summer Report>

- Review of Risks to the World Economy Posed by Growing Private-Sector Debt -

July 2018
Cabinet Office
Government of Japan
About "World Economy Trends"
This report, published semi-annually since 2002, surveys and analyses the trend of the world economy. This is the 33rd issue.
Chapter 1 Review of risks to the world economy with focus on private-sector debt (Overview)

1. Private-sector debt-to-GDP ratio

(1) Financial and non-financial sectors

After the global financial crisis, debt decreased in the financial sector while it increased in the non-financial sector.

(2) Non-financial sector (developed and emerging economies)

In the non-financial sector, debt leveled off in developed countries while increasing in emerging economies.

2. Private-sector debt outstanding

(3) Household (July-September 2017)

U.S. is extremely indebted, double the extent of the Eurozone.

(4) Non-financial corporate (July-September 2017)

China, ranked 1st, U.S. and Eurozone are extremely indebted.
Chapter 1  Review of risks to the world economy with focus on private-sector debt (Household & Non-financial corporate)

### Household

1. **Debt-to-GDP ratio**
   - After the global financial crisis, debt leveled off in U.S. and Eurozone while continued to increase in Canada and China. (Note) Adapted from BIS.

2. **Deviation of house price-to-income ratio from long-term average**
   - In U.S., Eurozone, and China, the ratio stays around the long-term average while rising high above the average in Canada. (Note) Adapted from OECD. Stat. For China, adapted by Cabinet Office from National Bureau of Statistics of China.

### Non-financial corporate

3. **Debt-to-GDP ratio**
   - After the global financial crisis, debt increased sharply in China. China has been the main contributor for the global increase of corporate debt. (Note) Adapted from BIS.

4. **Debt-to-GDP ratio: China**
   - State-owned enterprises (SOEs) are responsible for most of the debt. With effort to address excessive debt, the ratio fell in 2017. (Note) Adapted by Cabinet Office from BIS, Ministry of Finance of China, National Bureau of Statistics of China.
Chapter 1 Review of risks to the world economy with focus on private-sector debt (Summary)

Evaluating household and corporate debt comprehensively by using two indicators:

1. Debt service ratio (share of household and corporate income used to service debt): Its deviation from the long-term trend;

After the global financial crisis, China and Canada are high above the long-term average.

The Bank for International Settlements (BIS) regards a more than 9%-point deviation of debt-to-GDP ratio from a long-term trend as a warning signal for a possible financial crisis occurring within 3 years. China and Canada are above this threshold, though on a downward trend since 2016.

These indicators suggest that the current state is not under a situation where the possibility of another global financial crisis has been growing year by year. However, private-sector debt in China and Canada should be closely monitored.
A long period of monetary easing drives up house and other asset prices, with excessive private-sector debt piled up. Recessions triggered by private-sector debt reduction and/or falling house prices cause larger declines in real GDP.

(1) Relation between excessive private-sector debt and asset price "bubble"

A decline in interest rates brought about by monetary easing

Prices rise in real estate (residential asset) and other assets.

Excessive private-sector debt

Higher prices of real estate (residential asset) and other assets (collateral) = Greater creditworthiness

Consumption & investment decrease.

Household & Corporate: Balance sheet deteriorates.

Higher asset prices = Greater lending capacity

Bank: Balance sheet deteriorates.

Real estate (residential asset) etc.: Asset prices fall.

Drastic deleveraging Credit squeezing

(2) Recessions associated with private-sector debt reduction and/or falling house prices

20 OECD member countries; Since 1970
Total recessions: 124

- Associated with private-sector debt reduction
  - Associated solely with private-sector debt reduction: 3
  - Associated with private-sector debt reduction and falling house prices: 31
    - Real GDP decline: -2.1%

- Associated with falling house prices
  - Associated solely with falling house prices: 87
  - Real GDP decline: -2.3%

Other recessions: 34

- Real GDP decline: -0.9%

(Notes) 1. Adapted from OECS.Stat and BIS.
2. Decrease of real GDP refers to the median of real GDP declines observed between the peak and trough of a phase.
In the first half of 2018, the world economy, after a period of "slow trade" that had been observed after the global financial crisis, showed continuously synchronized recovery across regions, supported mainly by growing international trade. Moderate recovery of the world economy is expected to continue. However, attention should be given to risks including situation over trade issues.

1. World economy: Current state and outlook

2. Major risks of world economy

- Situations over trade issues;
- Movements of U.S. monetary policy;
- Negotiations for UK withdrawal from EU;
- China's excessive debt problem and drastic fluctuations of real estate prices;
- Fluctuations in financial & capital markets
Chapter 2 Economic Trends and Structural Changes in Major Regions (U.S. economy)

Since the end of the global financial crisis, the U.S. economy has been on a recovery path for nine years. The steady recovery is expected to continue for the time being. Household debt, a risk factor, remains almost unchanged in the ratio to disposable income. The ratio of delinquent mortgages has been falling.

1. U.S. economy: Current state and outlook

   (1) Length of recovery

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Months</th>
<th>(Peak)</th>
<th>(Trough)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>120</td>
<td>Mar 1991</td>
<td>Mar 2001</td>
</tr>
<tr>
<td>2nd</td>
<td>106</td>
<td>Feb 1961</td>
<td>Dec 1969</td>
</tr>
<tr>
<td>3rd</td>
<td>92</td>
<td>Nov 1982</td>
<td>Jul 1990</td>
</tr>
</tbody>
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   (Note) Adapted from National Bureau of Economic Research (NBER).

   (2) Indicators used by NBER to identify peaks and troughs of business cycle

   ![](chart)

   Expected to be the second longest recovery

   (Note) Adapted from U.S. Department of Commerce (DoC), U.S. Department of Labor, FRB, Conference Board, and Macroeconomic Advisers.

2. Household debt

   (3) Household: Ratio of debt outstanding to disposable income

   ![](chart)

   (Note) Adapted from FRB of New York and DoC.

   (4) Household delinquency ratio by type of loan

   ![](chart)

   (Note) Adapted from FRB of New York.
Chapter 2 Economic Trends and Structural Changes in Major Regions (European economy)

The Eurozone economy maintains a moderate recovery, though supply constraints are becoming evident in Germany, etc. The UK is weighed down by uncertainty over Brexit.

1. Supply constraints in Eurozone

As supply-side constraints, "Shortage of labor force" and "Shortage of material and/or equipment" were pointed out by a record-high percentage of companies.

1. Supply constraints in Eurozone

2. Uncertainty in Brexit

Amid uncertainty over Brexit, consumer confidence deteriorated.

(3) UK: Capital investment

Uncertainty over Brexit weighed down capital investment.

(4) UK: Consumer confidence

Amid uncertainty over Brexit, consumer confidence deteriorated.
Chapter 2 Economic Trends and Structural Changes in Major Regions (Asian economy)

In China, the working age population peaked out in 2014, and the economy entered a phase where automation is needed in manufacturing, etc. Mainly with “Made in China 2025,” the government intends to upgrade its manufacturing industry. Recently, they have made advancements in deployment and domestic production of industrial robots.

1. Development of manufacturing industry and decreasing working age population

(1) Value added in manufacturing (nominal)

Backed by cheap and abundant labor force, China’s manufacturing sector grew to generate more value added than U.S. manufactures in 2010. In China, the working age population peaked out in 2014, and the economy entered a phase where automation is needed.

(2) Population by age group

Peak of working age population 1.01 bn. (2014)
Peak of total population 1.44 bn. (2029)

≥ Age 65
≤ 14
15 - 64

(3) Deployment of industrial robots (2016)

The number of industrial Robots per 10,000 employees

Deployment of industrial robots in China is now below the global average.

2020 target (150 units)

(4) Shipments of industrial robots to China

Shipments to china are rapidly growing. Domestic production is also increasing.

Share of robots manufactured in China (RHS)

Target by 2020 (%)