The autumn report focuses on three topics: a rise in long-term interest rates and index-linked government bonds; diverging economic recovery among major countries with different strengths in private consumption; and the world economic outlook for 2004.

1. A Rise in Long-term Interest Rates and Index-linked Government Bonds

Bond Market Changed After Mid-2003

Long-term interest rates have been rising worldwide since mid-June 2003, while the stock markets have been bullish since March. The rise in interest rates so far has two key features: 1) that an improvement of economic prospects contributed mostly to an increase in long-term interest rates, and 2) that there is no sign of inflationary expectations emerging in the financial markets.

Four occasions could be cited concerning a rise in long-term interest rates in major countries since the 1980s: the first half of the 1980s, 1990, 1994, and 1999 (Figure 1). Among them, 1994 is the relevant case for today, in the sense that economic recovery accompanies an increase in interest rates.
At that time, long-term interest rates rose by three percentage points in nominal terms, some of which were attributable to monetary tightening. But it is important to notice that economic recovery was not hampered by rising interest rates.

![Figure 1](image-url)  

**Figure 1  Long-term interest rates in Japan, the U.S, and Germany since the 1980s**

Some Influences Are Expected on the Economy

A rise in long-term interest rates is a natural consequence of economic recovery. Although housing construction is negatively affected by an increase in interest rates, the past experiences warrant that economic recovery leads to self-sustaining expansion through growing income and rising equities.

On the other hand, some issues must be noted. For example, interest rates might move in an excessively volatile fashion, depending on the expectations of investors. Furthermore, rising long-term interest rates would cause budgetary deficits to swell by raising the interest payments burden.

Last but not least is the outcome to institutional investors.
They tend to suffer from capital losses in their financial portfolios on a theoretical basis, as a rise in long-term interest rates means by definition a decline in bond prices.

The Cabinet Office calculated the net effects at the aggregate level of the portfolio assets of all financial institutions in both the United States and Japan as of early September 2003 (Table 1). The results depend heavily on the measurement of the increase in share prices. However, they indicate that the net losses are around 0.5 percent of financial assets in the United States, or even possibly net gains of around 1.0 percent of the assets, and that the net losses are around 0.2 to 0.3 percent of

Table 1  Estimated effects of rising long-term interest rates and stock prices on assets holdings of financial institutions in the U.S. and Japan

(1) Assumptions
(a) Securities in the assets
   the U.S. : US government securities, Municipal securities
   Japan : Central and local government bonds, Public corporations bonds
(b) Corporate bonds, foreign government bonds, foreign share stocks are excluded from calculations.
(c) Changes in long-term interest rates and stock prices are following :

<table>
<thead>
<tr>
<th>Interest rates (difference)</th>
<th>Stock prices (percent change)</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>the U.S. 1.500%pt</td>
<td>Dow Jones 4.45%</td>
<td>June 13 ~ September 2,2003</td>
</tr>
<tr>
<td>Japan 1.183%pt</td>
<td>Nikkei 20.15%</td>
<td>June 12 ~ September 3,2003</td>
</tr>
</tbody>
</table>

Long-term interest rates are yields of 10-year government bonds.

(2) Financial assets as of the end of June 2003

<table>
<thead>
<tr>
<th>Depository corporations (excluding postal savings)</th>
<th>the U.S (billion dollars)</th>
<th>Japan (trillion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>securities</td>
<td>equities</td>
<td>total assets</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>1,615.8  (16.7%)</td>
<td>37.3  (0.4%)</td>
<td>9,670.6</td>
</tr>
<tr>
<td>1,507.5  (14.4%)</td>
<td>3,726.1 (35.6%)</td>
<td>10,462.8</td>
</tr>
<tr>
<td>3,209.9  (16.2%)</td>
<td>2,936.6 (14.8%)</td>
<td>19,841.7</td>
</tr>
<tr>
<td>total</td>
<td>6,333.2 (15.8%)</td>
<td>6,700.0 (16.8%)</td>
</tr>
</tbody>
</table>

3
(3) Results of calculations

<table>
<thead>
<tr>
<th>losses in securities</th>
<th>gains in equities</th>
<th>net effects</th>
<th>gains in equities</th>
<th>net effects</th>
<th>gains in equities</th>
<th>net effects</th>
<th>gains in equities</th>
<th>net effects</th>
<th>gains in equities</th>
<th>net effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depository corporations (excluding postal savings)</td>
<td>127.7</td>
<td>1.7</td>
<td>-126.0 (-1.30%)</td>
<td>4.9</td>
<td>-122.8 (-1.27%)</td>
<td>7.8</td>
<td>4.4</td>
<td>-3.4 (-0.28%)</td>
<td>4.0</td>
<td>-3.9 (-0.32%)</td>
</tr>
<tr>
<td>Insurance and pension funds</td>
<td>119.1</td>
<td>166.0</td>
<td>46.9 (0.45%)</td>
<td>492.5</td>
<td>373.4 (3.57%)</td>
<td>10.3</td>
<td>9.3</td>
<td>-1.0 (-0.22%)</td>
<td>8.3</td>
<td>-2.0 (-0.44%)</td>
</tr>
<tr>
<td>Other financial intermediaries</td>
<td>253.7</td>
<td>130.8</td>
<td>-122.9 (-0.62%)</td>
<td>388.2</td>
<td>134.5 (0.68%)</td>
<td>5.8</td>
<td>4.1</td>
<td>-1.7 (-0.20%)</td>
<td>3.7</td>
<td>-2.2 (-0.25%)</td>
</tr>
<tr>
<td>total</td>
<td>500.5</td>
<td>298.5</td>
<td>-202.0 (-0.51%)</td>
<td>885.6</td>
<td>385.1 (0.96%)</td>
<td>23.9</td>
<td>17.8</td>
<td>-6.1 (-0.24%)</td>
<td>15.9</td>
<td>-8.0 (-0.32%)</td>
</tr>
</tbody>
</table>

(Note) Calculations by the Cabinet Office.

( ): relative to the total financial assets

Financial assets in the case of Japan. It could be concluded that the net losses are likely to be small in both countries, since the losses to bonds are mostly offset by the gains to equities with rising share prices.

**Fiscal Deficits May Bring Higher Interest Rates**

Expanding budget deficits may lead to higher long-term interest rates theoretically. According to empirical studies on the U.S. economy, when fiscal deficits are increased by 1 percent of GDP, long-term interest rates go up by half a percentage point on average. Though the fiscal deficits are on a rising trend recently in major countries, it is judged least likely so far that the above theoretical relation between fiscal deficits and interest rates holds currently. Therefore, it remains important to stick to the budgetary discipline without slippage.

Fiscal deficits are financed by issuing bonds. The government bond market in Japan has the following characteristics (Figure 2): first, the share of holding by public sectors is so large that market liquidity becomes relatively low compared with the other developed countries; second, 10-year bonds are the main type among various maturities.
The index-linked government bonds are scheduled to be issued for the first time in Japan in FY2003. They have been actively traded already in major markets such as those in the United Kingdom and the United States. One merit of the index-linked bonds is that they eliminate from bond holders the risk of decreasing principal in real terms under inflation.
*Monetary Policy Could Utilize the Index-linked Bonds*

The U.S. Federal Reserve Board ("the Fed") recognizes the risk of deflation sufficiently; they implement monetary policy by aiming at stabilizing long-term interest rates at a low level, while they hint at the possibility of an unconventional policy such as purchasing long-term government bonds. As for the monetary operation, the Fed emphasizes the importance of better communications with market participants in order for them to form expectations properly. For such a purpose, the Fed considers its detailed economic outlook to be helpful in enhancing transparency.

Yields of the index-linked bonds provide timely information about inflationary expectations. The experiences in the United Kingdom and the United States reveal that such information may indicate, to a certain extent, the timing of a change in the monetary policy. For example, in the United States, the expected inflation rate is measured by the difference between the 10-year Treasury bond and the 10-year TIPS (Treasury Inflation-Protected Securities). When the expected inflation rate is beyond 2 percent, the monetary policy tends to be tightened (Figure 3). When it is below 2 percent, it seems to ease.

![Figure 3 Relation between inflationary expectations and Federal Fund Rates in the U.S.](image)

(Note) Inflationary expectations = (yields of 10-year government bonds) - (yields of the 10-year index-linked government bonds)
In this way, the index-linked bonds play a significant role in improving transparency and encouraging accountability in monetary policy. They are expected to be fully utilized in Japan through a future beefing up of the index-linked bond market.

2. Diverging Economic Recovery Among Major Countries with Different Strengths in Private Consumption

The world economy slowed its expansion in 2001, and started to recover in 2002. However, divergence in economic recovery was found among major countries (Figure 4). In the United States, the United Kingdom and Canada, strong private consumption underpinned economic recovery. On the other hand, private consumption weakened in continental Europe and Japan, and therefore economic recovery also weakened.

Figure 4  International comparison of the growth rates of consumption and GDP

strong consumption in the U.S., the U.K., and Canada

(1) 1995-2000(average)
In Asia, China and Thailand have been continuing their economic expansions mainly due to the high growth of consumption, although other economies stagnated in 2001.

One main driver of strong private consumption in the United States, the United Kingdom, and Canada is that the prospect for permanent income tends not to worsen in those countries. In fact, potential growth rates did not fall in the 1990s in those countries (Figure 5).
Financial wealth in households decreased markedly due to the collapse of IT bubbles in the United States and the United Kingdom, where housing construction has been boosted mainly due to low interest rates, and house prices have risen sharply since the second half of the 1990s (Figure 6). The rise in house prices led to an increase in non-financial assets in households, which mitigated balance sheet adjustment caused by the collapse of IT bubbles. The ratios of mortgage to non-financial assets in the United States and the United Kingdom were flat after the 1990s (Figure 7). The ratios in Japan, Italy, and Germany rose in the 1990s. The burden might have subdued household spending in those countries.
Figure 6  House prices since the 1990s

rise in the U.S. and the U.K.; weakness in Japan

(Note) 1. The data for Japan refer to those in the metropolitan area.
2. The data for 2003 are extrapolated on the basis of the available data in each country.

Figure 7  Ratio of mortgage to non-financial assets

high ratio in Japan, Germany and Italy

(Note) 1. Source: OECD"Economic Outlook No.73", FRB"Flow of Funds"
2. Non-financial assets include land, house, and durable goods.
There is another factor behind the strong household spending. Households in the United States and the United Kingdom get cash flow equivalents of about four percent of nominal GDP from home equity withdrawal in 2003. Many people believe that this helps boost household spending.

In China and Thailand, growing income is the main factor behind the high growth of household spending. Durable goods have spread quickly in China. Though automobiles are so expensive that few households own them in China, there is a possibility that more and more households will own cars in the future.

China’s household savings rate continues to rise against the high growth of income. In Thailand, the household savings rate declines as the government tries to expand domestic demand.

3. World Economic Outlook

Following the end of the war in Iraq in April 2003, the world economy has begun to gain some recovery momentum.

The U.S. economy is recovering steadily. Though economic expansion in Asia slowed due to SARS, China and Thailand are continuing their economic expansions. In Europe, the economy is stagnating partly due to the appreciation of the euro.

The main scenario for 2004 is that the upturn of the world economy will be led by the U.S. economy. Economic growth rates in Asia will rise, and economic recovery in Europe is expected (Table 2).

Risks on the downside would be the movement of employment in the United States, and an abrupt fluctuation of exchange rates.
Table 2 Economic Outlook by Major Region

<table>
<thead>
<tr>
<th>real GDP</th>
<th>2001</th>
<th>2002</th>
<th>2003 forecast</th>
<th>compared with 6 months ago (in April)</th>
<th>2004 forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>the U.S.</td>
<td>0.3</td>
<td>2.4</td>
<td>2.7</td>
<td>(2.4)</td>
<td>3.9</td>
</tr>
<tr>
<td>Asia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northeast Asia</td>
<td>4.7</td>
<td>6.6</td>
<td>5.5</td>
<td>(5.9)</td>
<td>6.0</td>
</tr>
<tr>
<td>ASEAN</td>
<td>1.6</td>
<td>4.0</td>
<td>3.7</td>
<td>(3.8)</td>
<td>4.8</td>
</tr>
<tr>
<td>Europe</td>
<td>1.6</td>
<td>0.9</td>
<td>0.7</td>
<td>(1.2)</td>
<td>1.8</td>
</tr>
<tr>
<td>Euro Area</td>
<td>1.6</td>
<td>0.8</td>
<td>0.6</td>
<td>(1.1)</td>
<td>1.7</td>
</tr>
</tbody>
</table>

(Note) 1. Figures are an average of forecasts by private institutions published between August and October 2003. Cutoff date is October 10.
2. Northeast Asia includes China, South Korea, Taiwan Province of China, and Hong Kong. ASEAN includes Singapore, Indonesia, Thailand, Malaysia and Philippines. Europe consists of Germany, France, Italy and the U.K.