THE GLOBAL FINANCIAL CRISIS: LESSONS FROM JAPAN

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The Global Financial Crisis: Lessons from Japan

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Part I  Japan’s Lessons in 1990s

1. The Current Global Crisis

2. Origin of the Crisis: Decade of “Sequential Bubbles”

3. Causes of Sequential Bubbles

4. Measures Taken So Far

5. What Japan Did?
   - Financial Stabilization
   - Monetary Policy
   - Fiscal Policy

6. What is Needed Further?

7. How to Prevent the Emergence of Bubbles

8. Summary: Lessons from Japan
Comparison of Financial Crisis Scales

(1) Dow Jones Industrial Average

Present (Oct. 2007=100)

Great Depression (Aug. 1929=100)

(2) Real GDP in the U.S.

Present (100 for 2007)

Great Depression (1929=100)

(Notes) Sources: Bloomberg, Bureau of Economic Analysis, OECD “Economic Outlook”
Asset Price Bubbles in Japan and U.S.

(Notes) Source: Japan Real Estate Institute, Bloomberg, S&P
Global Imbalance of Current Account

Long-term Real Interest Rates in U.S. and Japan

(\%)

U.S.  Japan
Proportion of Working Age Population in U.S. and Japan

(%)
“Vicious Circle” of the Financial Sector and the Real Economy in U.S. and Europe

Financial Sector

- Financial Institutions’ Inadequate Risk Management
- Higher Leverages of Financial Institutions
- Expansion of Capital Inflow from Abroad

Financial Market Turmoil
- Deterioration of Financial Institutions’ Balance Sheets

Further Deterioration of Balance Sheets in Financial Institutions

Financial Crisis

Global Imbalance

Real Economy

Housing Bubbles

Burst of Housing Bubbles
- Decline in Prices of Securitized Products
- Credit Crunch
- Increase of Toxic Asset

Decline in Private Consumption
Decline in Business Investment
Decline in Export
Decline in Housing Investment

Deterioration of Real Economy
# Size of Toxic Asset Losses in Japan and U.S.

<table>
<thead>
<tr>
<th>Japan in 1990s</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Performing Loans (NPLs)</td>
<td>Toxic Asset Losses (estimates)</td>
</tr>
<tr>
<td><strong>Total Amount of NPLs at its peak</strong></td>
<td>IMF estimates (U.S.-originated)</td>
</tr>
<tr>
<td>(March, 2002)</td>
<td>2.2 trillion $</td>
</tr>
<tr>
<td>43.2 trillion yen (8.5% to GDP)</td>
<td>(IMF, January 2009)</td>
</tr>
<tr>
<td>(0.44 trillion $)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Disposal of NPLs</strong></td>
<td>BOE estimates</td>
</tr>
<tr>
<td>99 trillion yen</td>
<td>1.6 trillion $</td>
</tr>
<tr>
<td>(1.0 trillion $)</td>
<td>(Bank of England, Financial Stability Report, October 2008)</td>
</tr>
</tbody>
</table>
What Japan Did?: Financial Stabilization

Japanese Government

- Credit guarantee for SMEs: 29 trillion yen
- NPL disposal with corporate revival: Government guarantee 10 trillion yen

Bank of Japan

- Liquidity provision (including the purchase of risk assets)
- Purchase of equities for 2 trillion yen

Financial Institutions

- NPLs peaked at 43 trillion yen. (8.5% of the nominal GDP)
- Total NPLs disposed from 1992 to March 2008: 99 trillion yen

Enterprises

- Setting a target for NPL reduction by half
- Consideration to financing of SMEs

Depositors

- Disclosure and Off-balancing of NPLs

Deposit Insurance Corporation of Japan

- Protection of deposits
- Prevention of credit contraction

- Purchase of NPLs: 10 trillion yen
- Costs for bank failure: 19 trillion yen
- Recapitalization: 12 trillion yen

Loans

- Strict Assessment
- Liquidity provision
- Purchase of equities for 2 trillion yen

Deposits
## Japan’s Response to Financial Crisis in 1990s

(as of Sept. 2008; Billion yen)

<table>
<thead>
<tr>
<th>Description</th>
<th>Total Amount</th>
<th>Of which: Recovered Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deposit Insurance Corporation</strong></td>
<td>47,060</td>
<td>31,818</td>
</tr>
<tr>
<td>Purchase of Troubled Assets</td>
<td>9,776</td>
<td>9,596</td>
</tr>
<tr>
<td>Capital Injection</td>
<td>12,427</td>
<td>10,539</td>
</tr>
<tr>
<td>Cost related to Bank Failures (Deposit Insurance Payout etc.)</td>
<td>18,868</td>
<td>6,824</td>
</tr>
<tr>
<td>Others (Cost related to Bank Nationalization)</td>
<td>5,989</td>
<td>4,859</td>
</tr>
<tr>
<td><strong>BOJ’s Purchase of Shares held by Banks</strong></td>
<td>2,018</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>49,078</td>
<td>31,818</td>
</tr>
<tr>
<td>Government Guarantee for Credit to SMEs</td>
<td>28,944</td>
<td></td>
</tr>
<tr>
<td>Government Guarantee for IRCJ(Industrial Revitalization Corporation of Japan)</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>88,022</td>
<td></td>
</tr>
</tbody>
</table>

Source: Council on Economic and Fiscal Policy
BOJ and Fed: Expansion of Balance Sheets

Source: BOJ, Cabinet Office, FRB and Ministry of Commerce
Japan’s Growth After Bubble Burst

Japan’s GDP continued to grow after bubble burst

Source: Cabinet Office, Japan Real Estate Institute
Fiscal Stimulus Packages from 1990s to 2002

Accumulated total size of fiscal stimulus packages including public works by local governments and loans to SMEs (1992—2002) : 145.1 trillion yen

Accumulated central government expenditure (1992—2002) : 59.9 trillion yen
What Japan Did on Fiscal Front

Fiscal measures played a role in supporting the economy

Source: Cabinet Office, OECD, IMF
Part II Avoiding Another “Lost Decade”

1. Recession in Japan
2. Silver Lining
3. New Policy Strategy
4. Policy Package Measures
5. Fiscal Sustainability
Indices of Industrial Production in Past Economic Cycles

(Peak = 100)

October 2007 at peak
February 1991 at peak
November 1973 at peak

(Notes) Indices of Industrial Production, Ministry of Economy, Trade and Industry
Contribution Rate in the Phase of Economic Expansion

The three economic expansions in the 1990s were led by external demand.
Current Account Balance in Japan

Source: Ministry of Finance
Major cause of negative growth: sharp decline in export

<table>
<thead>
<tr>
<th>Country</th>
<th>Growth Rate</th>
<th>Contribution of Domestic Demand</th>
<th>Contribution of External Demand</th>
<th>Export Contribution</th>
<th>GDP Ratio</th>
<th>Rate of increase/decrease</th>
<th>Import Contribution</th>
<th>GDP Ratio</th>
<th>Rate of increase/decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>-12.1</td>
<td>(-0.5)</td>
<td>(-11.8)</td>
<td>(-10.0)</td>
<td>16.0</td>
<td>11.1</td>
<td>16.0</td>
<td>-44.9</td>
<td>(-1.8)</td>
</tr>
<tr>
<td>U.S.</td>
<td>-6.3</td>
<td>(-6.2)</td>
<td>(-0.2)</td>
<td>(-3.4)</td>
<td>12.6</td>
<td>(-23.6)</td>
<td>12.6</td>
<td>15.8</td>
<td>-19.6</td>
</tr>
<tr>
<td>Germany</td>
<td>-8.2</td>
<td>(0.3)</td>
<td>(-8.4)</td>
<td>(-14.3)</td>
<td>50.9</td>
<td>(-26.2)</td>
<td>50.9</td>
<td>44.0</td>
<td>-13.5</td>
</tr>
<tr>
<td>France</td>
<td>-4.4</td>
<td>(-3.1)</td>
<td>(-1.2)</td>
<td>(-4.2)</td>
<td>29.8</td>
<td>(-13.3)</td>
<td>29.8</td>
<td>(3.1)</td>
<td>33.0</td>
</tr>
<tr>
<td>U.K.</td>
<td>-6.1</td>
<td>(-8.8)</td>
<td>(2.9)</td>
<td>(-4.3)</td>
<td>27.0</td>
<td>(-14.9)</td>
<td>27.0</td>
<td>29.5</td>
<td>-21.5</td>
</tr>
</tbody>
</table>

Source: Cabinet Office
Real effective exchange rates

(Index 1990=100)
Output gap

(Notes) Estimated by Cabinet Office

(Quarter)

(Year)
Employment

Unemployment rate and ratio of effective job offers to application

Employment Conditions (DI)

(Diffusion index of "Excessive employment" minus "Insufficient employment", %points)

Inventory

Index of Inventory and Inventory Ratio

Production Forecast

(Sources) Indices of Industrial Production, Ministry of Economy, Trade and Industry.
Real GDP growth rate forecast for the first quarter in 2009
(quarter-on-quarter, seasonally-adjusted at annual rate (%))

<table>
<thead>
<tr>
<th>Forecast period</th>
<th>Real GDP Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 10~12</td>
<td>-12.1</td>
</tr>
<tr>
<td>2009 1~3</td>
<td>-12.9</td>
</tr>
<tr>
<td>2009 4~6</td>
<td>-1.4</td>
</tr>
<tr>
<td>2009 7~9</td>
<td>-0.6</td>
</tr>
<tr>
<td>2009 10~12</td>
<td>0.5</td>
</tr>
<tr>
<td>2010 1~3</td>
<td>0.9</td>
</tr>
<tr>
<td>2010 4~6</td>
<td>0.9</td>
</tr>
<tr>
<td>2010 7~9</td>
<td>1.0</td>
</tr>
<tr>
<td>2010 10~12</td>
<td>1.7</td>
</tr>
<tr>
<td>2011 1~3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2009 January-March Forecast</th>
<th>-12.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>After the 2nd preliminary GDP quarterly estimate (average of 18 institutions, March 23)</td>
<td>-12.9</td>
</tr>
<tr>
<td>ESP Forecast (average of 38 institutions, April 14)</td>
<td>-12.8</td>
</tr>
</tbody>
</table>
Economy Watchers Survey

DI for judgement of current conditions

DI for judgement of future conditions

(Notes)
Source: Cabinet Office
Positive Signs of the Chinese Recovery

Automobile Sales in China

Urban Investment in Fixed Assets
(contributions by industry)

(Notes) 1. Source: China Association of Automobile Manufacturers
2. In China, the following measures are undertaken to stimulate auto sales under the package for auto industry.
   i) From 20 January to 31 December 2009, purchase tax on cars with engines under 1.6 liters was reduced from 10 percent to 5 percent.
   ii) From 1 March to 31 December 2009, farmers who upgrade their three-wheeled vehicles and low-speed trucks to mini-trucks or purchase new mini-vans with engines under 1.3 liters are subsidized by 10% of the sales price.

(Notes) 1. Source: National Bureau of Statistics of China
2. "1-2(09)" means "from January to February in 2009".
Positive Signs of the Chinese Recovery

Value Added of Industry (by Region)

<table>
<thead>
<tr>
<th>Region</th>
<th>Value Added in 2007 (%)</th>
<th>Export Amount in 2007 (YoY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perl River Delta and the surrounding region (Guangdong, Fujian, etc)</td>
<td>15.4</td>
<td>34.5</td>
</tr>
<tr>
<td>Yangtze River Delta (Jiangsu, Zhejiang, Shanghai)</td>
<td>22.2</td>
<td>39.1</td>
</tr>
<tr>
<td>Bohai Gulf Economic Region (Shandong, Hebei, Beijing, Tianjin)</td>
<td>21.1</td>
<td>14.7</td>
</tr>
<tr>
<td>North-east region (Liaoning, Heilongjiang, etc)</td>
<td>8.8</td>
<td>4.2</td>
</tr>
<tr>
<td>Central region (Henan, Hubei, etc)</td>
<td>17.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Western region (Sichuan, Inner Mongolia, etc)</td>
<td>14.8</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(Notes) 1. Source: National Bureau of Statistics of China
2. The growth rate is calculated based on weighted average of output of each region.

Purchasing Manager Index (PMI) of the Manufacturing

(Notes) 1. Source: China Federation of Logistics & Purchasing
2. PMI of manufacturing is a set of comprehensive leading indices. It reflects the cyclical situation of the economy through the changes of each index, and reflects the overall economic trend by using the comprehensive index. Its critical point is 50. When the index is larger than 50, it indicates that the performance of manufacturing market is good or improving. When this index is lower than 50, it shows that the situation of the market is not good or worsening.
**A Path for Overcoming the Economic Crisis**

1. **Japanese economy is facing “twin crises”**
   - Short-term crisis – the risk of a negative spiral
   - Structural crisis – responding to a “great adjustment” of the global economy

2. **Basic principles for overcoming the economic crisis**
   1. Nationwide cooperative actions
   2. Actions suited to various economic phases
   3. Taking a comprehensive approach over a multi-year time horizon

3. **Size and impact of the policy package**
   - Size:
     - Central government expenditure: 15.4
     - Total size: 56.8 (trillion yen)
   - Impact on real GDP growth in FY2009: 2%
   - Employment: 0.4 to 0.5 million jobs (in one year)

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**Size and fiscal resources**

- **Size of the policy package**
  - Central government expenditure: 15.4
  - Total size: 56.8 (trillion yen)

- **Fiscal resources**
  - Reserves in the Special Account for Fiscal Investment and Loan Program, construction bonds, special contingency budget
  - Special deficit-financing bonds if those funds are insufficient
I. Immediate measures – Avoiding a negative spiral

<Central gov. exp.: 4.9, Total size: 44.4> (trillion yen)

1. Measures to support employment
   - subsidies for employment adjustment, support for re-employment and development of vocational skills, creation of new jobs, protection for dispatched workers, housing and daily-life support measures, etc

2. Financial measures
   - SMEs, stock market, housing and land transactions, etc

3. Front-loading of public works projects
Ⅱ. Growth Strategy—Investing for the future

<Central gov. expenditure: 6.2, Total: 8.8>

1. The low-carbon revolution
   i. Solar power generation
   ii. Fuel-efficient vehicles and energy-efficient equipments
   iii. Revolution of transportation and infrastructure
   iv. Turning into a resource-rich country

2. Health, longevity and child-rearing
   i. Local health care services and new medical care technologies
   ii. Improvement of working conditions for long-term care workers and enhancement of long-term care capacity
   iii. Support for child-rearing and education

3. Realizing the potential power of Japanese economy and development of new infrastructure
   i. Realizing the potential power of the agricultural, forestry and fisheries industries
   ii. Development of cutting edge technologies, enhancing human resources and support for SMEs
   iii. Development of infrastructure for cooperation between regions and the enhancement of the competitiveness of regions
   iv. Realizing the potential power by utilizing IT
   v. “Soft power” and tourism
“Policy Package to Address Economic Crisis”

III. Easing anxiety and enhancing vitality – Employing every policy tool

1. Revitalization of regions
   ● Revitalization of regional transportation
   ● Support for regional development and revitalization

2. Safety and security
   ● Social security
   ● Drastic enhancement of consumer policy
   ● Disaster management and safety measures
   ● Improvement of systems for safety and security

3. Support for local governments
   ● Financial support for local governments

IV. Tax Reform
   ● Reducing gift tax for purchasing houses as a temporary measure
   ● Reduction in tax on special expenses of SMEs
   ● Expansion of tax incentives for R&D
Effect of Economic Stimulus Packages
Image of the real GDP growth path

Total Amount: 56.8 trillion yen
Central Government Expenditure: 15.4 trillion yen

Comprehensive Immediate Policy Package: 11.5 trillion yen


Immediate Policy Package to Safeguard People’s Daily Lives: 37 trillion yen

The “three-stage rocket” of economic countermeasures

Total Amount: 75 trillion yen
Fiscal measures: 12 trillion yen

Without the “three-stage rocket” of economic countermeasures and the Policy Package to Address Economic Crisis

Projections by international organizations:
-6 ~ -7% (calendar year 2009)
2 to 3% lower than the average of advanced economies
Effect of Economic Stimulus Packages
Image of the unemployment rate development path

Without the “three-stage rocket” of economic countermeasures and the Policy Package to Address Economic Crisis

- Comprehensive Immediate Policy Package: 11.5 trillion yen
- Immediate Policy Package to Safeguard People’s Daily Lives: 37 trillion yen
- Policy Package to Address Economic Crisis

The “three-stage rocket” of economic countermeasures

Total Amount: 75 trillion yen

Central Government Expenditure: 15.4 trillion yen

Unemployment rate with the Policy Package to Address Economic Crisis

Unemployment rate without the Policy Package to Address Economic Crisis

Effect of Economic Stimulus Packages

Crisis Phase

Bottom-out Phase

Aug. 29, 2008
Oct. 30, 2008
Dec. 19, 2008
Apr. 10, 2009

4.0%
3.5%
Three Economic Stimulus Packages in 2008 (75 trillion yen)

• “Comprehensive Immediate Policy Package” (August 29)
  1st Supplementary Budget for FY2008
  approx. ¥11.5 trillion
  approx. ¥1.8 trillion

• “Measures to Support People’s Daily Lives” (October 30)
  2nd Supplementary Budget for FY2008
  approx. ¥26.9 trillion
  approx. ¥4.8 trillion

• “Immediate Policy Package to Safeguard People’s Daily Lives” (December 19)
  1. Fiscal Measures
     (Tax Reform)
     approx. ¥10 trillion
     approx. ¥1.1 trillion
  2. Financial Measures
     approx. ¥33 trillion

Total (excluding duplication)
  approx. ¥75 trillion

Fiscal measures
  approx. ¥12 trillion (approx. 2% of GDP)

Financial measures
  approx. ¥63 trillion
Primary Balance and Public Debt

Source: OECD