
Richard C. Koo
Chief Economist
Nomura Research Institute
Tokyo
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Exhibit 1. Before the Earthquake, Japan Was Running Increasingly Larger Trade Surpluses even with Strong Yen

Japan’s Trade Balances with Korea, Taiwan and China

Source: Nomura Research Institute, based on Ministry of Finance, Japan, Trade Statistics
Note: Seasonal adjustments by Nomura Research Institute.
Exhibit 2. Industrial Production Fell to the Level of 1987 after the Earthquake

Job offers to applicants ratio (left scale)

Industrial production (right scale)

Note: Forecasts are calculated from METI's survey on planned production.
Sources: Ministry of Economy, Trade and Industry (METI), and Ministry of Health, Labour and Welfare
Exhibit 3. US Housing Prices Are Moving along the Japanese Experience

(US: Jan. 2000=100, Japan: Dec. 1985=100)

Note: per m², 5-month moving average
Sources: Bloomberg, Real Estate Economic Institute, Japan, S&P, S&P/Case-Shiller® Home Price Indices, as of Oct. 28, 2011
Exhibit 4. US Commercial Real Estate Prices Also Falling to Japanese Levels

Source: Nomura Research Institute, based on Moody's/Real Estate Analytics and Japan Real Estate Institute
Exhibit 5. Drastic Rate Cuts Have Done Little to Revive Employment or House Prices

Exhibit 6. US Economy Is still a Long Way from Previous Peak

Sources: US Department of Labor, FRB
Exhibit 7. Euro-Zone Economy Is still a Long Way from Previous Peak

Sources: Eurostat
Exhibit 8. Except in Germany, Industrial Production in Europe Is still Weak

(2005 = 100, Seasonally Adjusted)

- Spain
- France
- Italy
- Germany

Source: Eurostat

(Aug. 2008 =100, Seasonally Adjusted)

- Monetary Base
- Money Supply (M2)
- Loans and Leases in Bank Credit

Sources: Board of Governors of the Federal Reserve System, US Department of Commerce
Note: Commercial bank loans and leases, adjustments for discontinuities made by Nomura Research Institute.
Exhibit 10. Drastic Liquidity Injection Failed to Increase Money Supply (II): EU

(Aug. 2008 =100, Seasonally Adjusted)

Base Money
Money Supply (M3)
Credit to Euro Area Residents

Sources: ECB, Eurostat
Note: Base money's figures are seasonally adjusted by Nomura Research Institute.
Exhibit 11. Drastic Liquidity Injection Failed to Increase Money Supply (III): UK

Sources: Bank of England, Office for National Statistics, UK
Notes: 1. Reserve Balances data are seasonally unadjusted. 2. Money supply and bank lending data exclude intermediate financial institutions.
Exhibit 12. Drastic Liquidity Injection Failed to Produce Drastic Increase in Money Supply (IV): Japan

Note: Bank lending are seasonally adjusted by Nomura Research Institute.
Source: Bank of Japan
Exhibit 13. Japan’s De-leveraging with Zero Interest Rates Lasted for 10 Years

Funds Raised by Non-Financial Corporate Sector

(% Nominal GDP, 4Q Moving Average)

Borrowings from Financial Institutions (left scale)
Funds raised in Securities Markets (left scale)
CD 3M rate (right scale)

Sources: Bank of Japan, Cabinet Office, Japan
Exhibit 14. Japan’s GDP Grew in spite of Massive Loss of Wealth and Private Sector De-leveraging

Nominal GDP (Left Scale)

Likely GDP Path w/o Government Action

Land Price Index in Six Major Cities (Commercial, Right Scale)

Cumulative 90-05 GDP Supported by Government Action: ~ ¥2000 trillion

Cumulative Loss of Wealth on Shares and Real Estate ~ ¥1500 trillion

Sources: Cabinet Office, Japan Real Estate Institute
Exhibit 15. Japanese Government Borrowed and Spent the Unborrowed Savings of the Private Sector to Sustain GDP

Source: Ministry of Finance, Japan
Note: FY 2011 includes 2nd supplementary budget.
Exhibit 16. Premature Fiscal Reforms in 1997 and 2001 Weakened Economy, Reduced Tax Revenue and *Increased* Deficit

Source: Ministry of Finance, Japan
*: estimated by MOF

unnecessary increase in deficit: ¥103.3 tril.
Exhibit 17. US in Balance Sheet Recession: US Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %, quarterly)

- Households
- Rest of the World
- Corporate Sector (Non-Financial Sector + Financial Sector)
- General Government

Shift from 4Q 2006 in private sector: 9.30% of GDP
Corporate: 1.40%
Households: 8.22%

Shift from 4Q 2006 in public sector: 5.80% of GDP

Note: For the latest figures, 4 quarter averages ending with 2Q/11’ are used.
Sources: FRB, US Department of Commerce
Exhibit 18. UK in Balance Sheet Recession: UK Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

(\text{as a ratio to nominal GDP, } \%)}

- Shift from 1Q 2007 in private sector: 8.23\% of GDP
  - Corporate: 2.19\%
  - Households: 6.04\%

- Shift from 1Q 2007 in public sector: 7.11\% of GDP

Note: For the latest figures, 4 quarter averages ending with 2Q/11’ are used.
Source: Office for National Statistics, UK
Exhibit 19. Global Bond Yields* Nearing Japanese Levels

*Note: Excluding Eurozone. As of Oct. 28, 2011.
Source: Bloomberg
Exhibit 20. Euro-Zone Bond Yields Are Diverging Sharply

Note: As of Oct. 28, 2011.
Source: Bloomberg
Exhibit 21. Euro-zone in Balance Sheet Recession: Euro-zone Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %)

Note: For the latest figures, 4 quarter averages ending with 1Q/11’ are used.
Source: ECB
Exhibit 22. Spain in Balance Sheet Recession: Spanish Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

Note: For the latest figures, 4 quarter averages ending with 2Q/11' are used.
Source: Banco de España
Exhibit 23. Ireland in Balance Sheet Recession: Irish Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %)

Corporate Sector
(Non-Financial Sector + Financial Sector)

Rest of the World

General Government

Households

(15)

(10)

(5)

(0)

(5)

(10)

(15)

2002 2003 2004 2005 2006 2007 2008 2009

Shift from 2006 in private sector: 21.55% of GDP
Corporate: 7.29%
Households: 14.26%

Shift from 2006 in public sector: 16.78% of GDP

Sources: Eurostat, Central Statistics Office, Ireland
Exhibit 24. Portugal in Balance Sheet Recession: Portuguese Private Sector Increased Savings Massively after the Bubble

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %)

Shift from 2Q 2008 in private sector:
8.65% of GDP
Corporate: 4.70%
Households: 3.95%

Shift from 2Q 2008 in public sector:
6.21% of GDP

Note: For the latest figures, 4 quarter averages ending with 2Q/11’ are used.
Source: Banco de Portugal
Exhibit 25. Balance Sheet Correction in France Was Minimal

Financial Surplus or Deficit by Sector

(As a ratio to nominal GDP, %)

- Household: 8.2%
- Rest of the World: 6.1%
- Corporate Sector: 3.4%
- General Government: 0.57%
- Financial Deficit: -2.7%

Sources: ECB, Eurostat

Shift from 2006
Private sector: 3.43% of GDP
Corporate: 2.85%
Households: 0.57%

Shift from 2006
Public sector: 4.71% of GDP
Exhibit 26. Balance Sheet Correction in Italy Was Minimal

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %, quarterly)

Note: For the latest figures, 4 quarter averages ending with 1Q/11' are used.
Sources: Banca d'Italia, Eurostat
Exhibit 27. Balance Sheet Correction in Greece Was Minimal

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %, quarterly)

Shift from 2Q 2008 in private sector: 1.18% of GDP
Corporate: 4.27%
Households: -3.09%

Shift from 3Q 2008 in public sector: 1.82% of GDP

Note: For the latest figures, 4 quarter averages ending with 2Q/11' are used.
Sources: Bank of Greece, Eurostat
Exhibit 28. European Banks Are Already on Credit-Crunch Mode

Lending Attitudes of Euro-zone Banks

Source: Nomura Research Institute, based on ECB, The Euro Area Bank Lending Survey.
Note: D.I. are calculated from the answers to the question, "Over the past three months, how have your bank's credit standards as applied to the approval of loans or credit lines to enterprises changed?"
D.I. = ("Tightened considerably" + "Tightened somewhat" ÷ 0.5) - ("Eased somewhat" ÷ 0.5 + "Eased considerably")
Exhibit 29. Sustaining Fiscal Stimulus in Democracy during Peacetime Is Difficult

<table>
<thead>
<tr>
<th>Authoritarian</th>
<th>Democracies</th>
</tr>
</thead>
<tbody>
<tr>
<td>No opposition (if any, quickly suppressed)</td>
<td>&quot;Bond market might rebel&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Big Government is BAD Government&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Wasteful spending&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Monetary Policy should work better&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Aging Population&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Should not use grand-children's credit card&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Structural Reform is what is needed&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Republicans, Tea Party types and Blue Dog Democrats (U.S.)&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Need to beg Chinese to buy more Treasuries (U.S.)&quot;</td>
</tr>
</tbody>
</table>
Exhibit 30. Pre-Mature Withdraw of New Deal Policies in 1937
Worsened Unemployment

*As a percentage of GDP
Exhibit 31. German Fiscal Stimulus Reduced Unemployment Dramatically


Balance Sheets of Banks in Japan

December 1998

Assets

- Credit Extended to the Private Sector: ¥601.6 tril.
- Money Supply (M2+CD): ¥621.5 tril.
- Credit Extended to the Public Sector: ¥140.4 tril.
- Foreign Assets (net): ¥32.7 tril.
- Other Liabilities (net): ¥153.2 tril.

Total Assets: ¥774.7 tril.

Liabilities

Foreign assets (net): ¥74.1 tril. (+41.4)

December 2007

Assets

- Credit Extended to the Public Sector: ¥501.8 tril. (-99.8)
- Money Supply (M2+CD): ¥744.4 tril. (+122.9)
- Credit Extended to the Private Sector: ¥247.2 tril. (+106.8)
- Foreign assets (net): ¥278.1 tril. (+41.4)
- Other Liabilities (net): ¥78.7 tril. (-74.5)

Total Assets: ¥823.1 tril. (+48.4)

Liabilities

Source: Bank of Japan "Monetary Survey"

Balance Sheets of All Member Banks

<table>
<thead>
<tr>
<th>June 1929</th>
<th>June 1933</th>
<th>June 1936</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>Liabilities</td>
<td>Assets</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$45.46 bil.</td>
<td>Credit Extended to the Private Sector</td>
</tr>
<tr>
<td>Deposits</td>
<td>$32.18 bil.</td>
<td>Credit Extended to the Public Sector</td>
</tr>
<tr>
<td>Credit Extended to the Public Sector</td>
<td>$5.45 bil.</td>
<td>Other Assets</td>
</tr>
<tr>
<td>Other Assets</td>
<td>$8.02 bil.</td>
<td>Capital</td>
</tr>
<tr>
<td>Reserves</td>
<td>$2.36 bil.</td>
<td>Reserves</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>Credit Extended to the Private Sector</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>Credit Extended to the Public Sector</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>Other Assets</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>Capital</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td>Reserves</td>
</tr>
</tbody>
</table>

Source: Board of Governors of the Federal Reserve System (1976)  
*Banking and Monetary Statistics 1914-1941* pp.72-79
Exhibit 34. Exit Problem (I): Japanese Corporates Increased Savings Again After Lehman

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %)

Shift from 1Q 2009 in private sector: 6.92% of GDP
Corporate: 5.09%
Households: 1.82%

Shift from 1Q 2009 in public sector: 5.54% of GDP

Balance Sheet Recession

Global Financial Crisis

Note: For figures since 1999, 4 quarter averages ending with 2Q/11' are used.
Sources: Bank of Japan, Flow of Funds Accounts, and Government of Japan, Cabinet Office, National Accounts
Exhibit 35. Exit Problem (II): German Private Sector Refused to Borrow Money after 1999-2000 Telecom Bubble

Financial Surplus or Deficit by Sector

(as a ratio to nominal GDP, %)

- Telecom Bubble
- Households
- Corporate Sector (Non-Financial Sector + Financial Sector)
- General Government
- Rest of the World

Shift from 2000 to 2005 in private sector: 12.06% of GDP
Corporate: 9.26%
Households: 2.80%

Shift from 2000 to 2005 in public sector: 4.62% of GDP

Sources: Deutsche Bundesbank, Federal Statistical Office Germany
Note: The assumption of Treuhand agency’s debt by the Redemption Fund for Inherited Liabilities in 1995 is adjusted.
Exhibit 36. Exit Problem (III): U.S. Took 30 Years to Normalize Interest Rate after 1929 Because of Private Sector Aversion to Debt

Exhibit 37. Recovery from Lehman Shock Is NOT Recovery from Balance Sheet Recession

- **Bubble Burst**
- **Lehman Shock**
- **Likely GDP Path without Lehman Shock**
- **Current Location**

(A) Economic weakness from private-sector de-leveraging
(B) Economic weakness from policy mistake on Lehman

- Weaker Demand from Private Sector De-leveraging
- Stronger Demand from Government's Fiscal Stimulus

Source: Nomura Research Institute
Exhibit 38. US House Prices Are Returning to Traditional DFC Values

(1990/1Q = 100, seasonally adjusted)

- FHFA House Price Index: Purchase Only
- FHFA House Price Index: All-Transactions
- S&P/Case-Shiller: U.S. National Index
- CPI: Rent of primary residence

Note: DFC = Discounted Future Cashflow
Sources: US Department of Labor, FHFA and S&P
Exhibit 39. Stock Adjustment Problem in US Housing Is Still Considerable

Sources: MBA, Bloomberg
Exhibit 40. Multi-Decade Cycle of Bubbles and Balance Sheet Recessions

1. Monetary policy is tightened, leading the bubble to collapse.
2. Collapse in asset prices leaves private sector with excess liabilities, forcing it into debt minimization mode. The economy falls into a balance sheet recession.
3. With everybody paying down debt, monetary policy stops working. Fiscal policy becomes the main economic tool to maintain demand.
4. Eventually private sector finishes its debt repayments, ending the balance sheet recession. But it still has a phobia about borrowing which keeps interest rates low, and the economy less than fully vibrant. Economy prone to mini-bubbles.
5. Private sector phobia towards borrowing gradually disappears, and it takes a more bullish stance towards fund raising.
6. Private sector fund demand recovers, and monetary policy starts working again. Fiscal policy begins to crowd out private investment.
7. Monetary policy becomes the main economic tool, while deficit reduction becomes the top fiscal priority.
8. With the economy healthy, the private sector regains its vigour, and confidence returns.

### Exhibit 41. Euro-Zone Banks Need Low-Cost Unconditional Capital Injection to Avoid Credit Crunch

**Contrast Between Yin and Yang Phases of Cycle**

<table>
<thead>
<tr>
<th>Behavioral principle</th>
<th><strong>Yang</strong> = Profit maximization</th>
<th><strong>Yin</strong> = Debt minimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Phenomenon</td>
<td>Textbook economy</td>
<td>Balance sheet recession</td>
</tr>
<tr>
<td>2) Private sector financial condition</td>
<td>Assets &gt; Liabilities</td>
<td>Assets &lt; Liabilities</td>
</tr>
<tr>
<td>3) Outcome</td>
<td>Greatest good for greatest number</td>
<td>Depression if left unattended</td>
</tr>
<tr>
<td>4) Monetary policy</td>
<td>Effective</td>
<td>Ineffective (liquidity trap)</td>
</tr>
<tr>
<td>5) Fiscal policy</td>
<td>Counterproductive (crowding-out)</td>
<td>Effective</td>
</tr>
<tr>
<td>6) Prices</td>
<td>Inflationary</td>
<td>Deflationary</td>
</tr>
<tr>
<td>7) Interest rates</td>
<td>Normal</td>
<td>Very low</td>
</tr>
<tr>
<td>8) Savings</td>
<td>Virtue</td>
<td>Vice (paradox of thrift)</td>
</tr>
<tr>
<td>9) Remedy for Banking Crisis</td>
<td>a) Localized</td>
<td>Quick NPL disposal Pursue accountability</td>
</tr>
<tr>
<td></td>
<td>b) Systemic</td>
<td>Slow NPL disposal Fat spread</td>
</tr>
</tbody>
</table>