Crawford School Dialogue

Asia’s Economic Transformation: Implications for Australia
Presented by the Arndt-Corden Department of Economics and the Crawford School

Tuesday, 12 March, 2011
Weston Theatre, J G Crawford Building 132, Lennox Crossing, ANU
• Japan’s economic situation: strengths and weaknesses
• Prospects before the disaster
• Connection to the region
• Impact of the disaster
  – In Japan
  – In the region
• Implications for Australia
Japan was recovering pre GFC

The Real GDP Growth

- EU
- Japan
- United States
Crawford School Dialogue
Asia’s Economic Transformation

• Strengths
  – Longest sustained post-war expansion 2001-6, despite yen strength.
  – Growth sources balanced.
  – Financial system reform in place. Corporate governance reforms gradually taking place.
  – Govt debt domestically held.

• Weaknesses
  – Demography.
  – Mixed Productivity and below-potential growth.
  – Govt debt still growing.
  – Lack of policy direction – pernicious deflation.
Source: IGR 2010 and UN World Population Prospects: 2008 revision (median growth scenario) cited in speech by Dr Ken Henry to the Australia-Japan Roundtable Sydney Sept 30, 2010
Dependency Ratio

Source: IGR 2010 and UN World Population Prospects: 2008 revision (median growth scenario) cited in speech by Dr Ken Henry to the Australia-Japan Roundtable Sydney Sept 30, 2010
Output gap remains wide

(% of GDP)

Source: CAO, Macquarie Research, August 2010
### Table 1.4. Labour productivity growth by sector

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td></td>
<td>6.0</td>
<td>1.9</td>
<td>7.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Total services</td>
<td>40 to 99</td>
<td>2.1</td>
<td>1.7</td>
<td>1.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Market services</td>
<td>40 to 74</td>
<td>2.2</td>
<td>1.8</td>
<td>2.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Non-market services</td>
<td>75 to 99</td>
<td>1.6</td>
<td>1.2</td>
<td>-0.6</td>
<td>-1.8</td>
</tr>
<tr>
<td>Total economy</td>
<td>1 to 99</td>
<td>3.6</td>
<td>1.9</td>
<td>2.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Source: 2009 EU KLEMS Database.
Figure 4: Measured Total Factor Productivity in Japan

These are indices of Japanese total factor productivity, 1995 = 100. Sectoral value-added productivity figures are constructed from less aggregated industry data using Törnqvist indices with value added weights.


Growth Outlook at end 2010

- Industrial production grew 15.4% y-o-y to August 2010
- Prices falling -0.8% over 2010
- Unemployment 5.2%
- Oct 2010 consensus for 2010: 2.7% – 3.0% (IMF 2.8%)
  - US 2.7%, UK 1.5%, Australia 3.1%
- Consensus 2011: 1.3% – 1.7% (IMF 1.5%)
Source: IMF Regional Economic Outlook, Asia and Pacific, Oct 2010, p 1
Japan in the Asian region

1.1.14 Share of exports to Asia-10 in total exports, eight economies

- Brazil
- Mexico
- Saudi Arabia
- South Africa
- France
- Germany
- Japan
- United States

Note: Asia-10 are China, People's Rep. of; Hong Kong, China; India; Indonesia; Korea, Rep. of; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand.

Source: ADB, Asian Development Outlook 2011, p 12
On average, exports to Japan account for about 10 percent of East Asia’s total exports.

Source: IMF Direction of Trade Statistics.

1. Share of Japan in exports and imports, 2009

Source: ADB, Asian Development Outlook 2011
2. Japan's outward FDI stock, end-2009

Source: ADB, Asian Development Outlook 2011,
Governments have a significant share of external debt denominated in yen

in percent of total government external debt

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>60</td>
</tr>
<tr>
<td>Vietnam</td>
<td>40</td>
</tr>
<tr>
<td>Philippines</td>
<td>30</td>
</tr>
<tr>
<td>Indonesia</td>
<td>30</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>25</td>
</tr>
<tr>
<td>Mongolia</td>
<td>20</td>
</tr>
<tr>
<td>Malaysia</td>
<td>20</td>
</tr>
<tr>
<td>China</td>
<td>15</td>
</tr>
<tr>
<td>Fiji</td>
<td>10</td>
</tr>
<tr>
<td>Cambodia</td>
<td>5</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Haver.

### IMPACT OF THE EARTHQUAKE

The March 11, 2011 northeast earthquake and the 1995 Kobe earthquake: some comparisons

<table>
<thead>
<tr>
<th>March 11, 2011 northeast earthquake and tsunami – estimates</th>
<th>The 1995 Kobe earthquake</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Damage</strong></td>
<td></td>
</tr>
<tr>
<td>Estimates range from $122 to 235 billion</td>
<td>$100 billion (around 2 percent of GDP)</td>
</tr>
<tr>
<td>(2.5 to 4 percent of GDP)</td>
<td></td>
</tr>
<tr>
<td><strong>Death toll</strong></td>
<td></td>
</tr>
<tr>
<td>15,214 (dead and missing)</td>
<td>6,434</td>
</tr>
<tr>
<td><strong>Cost to private insurance</strong></td>
<td></td>
</tr>
<tr>
<td>$14–33 billion*</td>
<td>$783 million</td>
</tr>
<tr>
<td><strong>National budget for reconstruction</strong></td>
<td></td>
</tr>
<tr>
<td>$12 billion from current budget. Much more in FY2011.</td>
<td>$38 billion over 2 fiscal years</td>
</tr>
</tbody>
</table>

Sources: Government of Japan and private estimates and projections as of March 17, 2011.

Note: * AIR World estimate.
Damage estimates

• Damage could be from 16 trillion yen ($200 billion) to as much as 25 trillion yen ($309 billion) - an amount almost four times the cost of Hurricane Katrina on the U.S.

• This is close to 6% of GDP, compared with around 2% of GDP damage from Kobe earthquake and does not include impact of ongoing radiation-related damages

• But also does not account for rebuilding effects – CAO is much more optimistic
<table>
<thead>
<tr>
<th>Stock</th>
<th>FY 2011 First half</th>
<th>Second half</th>
<th>FY 2012</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Damages to the stocks (Social capital, Housing, Private plant &amp; equipment)</td>
<td>around 16~25 trillion yen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact on GDP in the disaster area</td>
<td>-1¼ ~ -1/2</td>
<td>-1¼ ~ -1/2</td>
<td>-2¼ ~ -1¼</td>
<td>-2¼ ~ -1¼</td>
</tr>
<tr>
<td>Decline in production due to the damage done on private plant &amp; equipment</td>
<td>-1¼ ~ -1/2</td>
<td>-1¼ ~ -1/2</td>
<td>-2¼ ~ -1¼</td>
<td>-2¼ ~ -1¼</td>
</tr>
<tr>
<td>Impact on GDP in the non-disaster area (1) via supply-chain connections</td>
<td>-1/4 ~ -1/4 (x2)</td>
<td>-1/4 ~ -1/4 (x2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Impact on GDP in the non-disaster area (2) via constraint on electric power supply (x3)</td>
<td>-α₁</td>
<td>-α₂</td>
<td>-β</td>
<td>-γ</td>
</tr>
<tr>
<td>Impact of Reconstruction of damaged stocks (assuming a scenario where reconstruction takes 3 years) Increase in production corresponding to the gross fixed capital formation (x4)</td>
<td>2 ~ 3</td>
<td>3 ~ 5</td>
<td>6 ~ 9 1/2</td>
<td>5 ~ 7 3/4</td>
</tr>
<tr>
<td>Total impact on GDP</td>
<td>1/2 ~ 2 1/4</td>
<td>2 ~ 4 1/4</td>
<td>3 3/4 ~ 8 1/4</td>
<td>2 3/4 ~ 6 1/2</td>
</tr>
<tr>
<td>In percent of real GDP (annualized)</td>
<td>1/4 ~ 3/4</td>
<td>3/4 ~ 1 1/2</td>
<td>3/4 ~ 1 1/2</td>
<td>1/2 ~ 1 1/4</td>
</tr>
</tbody>
</table>

Cabinet Office of Japan, Monthly Economic Update, March 2011
Impact in the region

• Trade links – if J growth slows by 0.25- 0.5% exports from EA slow by 0.75 to 1.5% (World Bank) plus production chain effects

• Financial flows – banks, portfolio investment, FDI?, aid?

• Exchange rate valuations on govt debt held in yen. 1% appreciation causes 0.25% rise in debt service ratio for region.

• Food and commodity prices?
Japan’s banks’ cross-border lending has grown

Source: http://www.roubini.com/analyst-monitor/252901/cross_border_bank_lending_and_international_exposures__who_s_most_exposed_to_the_u_s__
IMPLICATIONS FOR AUSTRALIA

• Treasurer has warned of bad effects from declining exports – why?
• If no reconstruction takes place and Japan’s GNP drops drastically this could occur but
• More likely that recovery will begin by 3rd or 4th quarter if fiscal spending starts soon.
• And can expect increased demand for commodities (coal, LNG, steel) and food to replace lost production.
A worst case scenario – with no fiscal spend and a savings rise

Figure A8: Simulated Effects of the March Earthquake on Australia’s Exports to Japan