RECENT MACROECONOMICS OF CHINA

APPENDICES TO LECTURES 10 & 16

i. Is China’s current slowdown a new trend? If so, is it a middle-income growth trap?

ii. Countercyclical use of macro-prudential policies by China & some other Asian countries.

iii. Did China’s GDP surpass the US in 2014?
Appendix (i): Transition to slower growth path

• Growth in 2014-15 is slowing down to about 7% (officially)
  – Convergence (K/L ratio, urban migration, technical catch-up, …)
  – Middle-income trap? e.g., Eichengreen, Park & Shin (2012)
  – Regression to the mean: Pritchett & Summers (2014)

• Transition with hard-landing or soft-landing?
  – Debt
    • Leverage becomes unsustainable when growth slows.
    • Bad loans in the shadow banking system.
  – Some needed reforms & the Third Plenum of 2013
    • Rural land rights and hukou system
    • Market orientation
    • Environment
  – The need to shift composition of GDP
    • From Investment and Net Exports, to Consumption
    • From Manufacturing to Services
“Is there a middle-income growth trap?”


“Formal evidence on growth slowdowns and middle-income traps has suggested that at per capita incomes of about US$16,700 in 2005 constant international prices, the growth rate of per capita GDP typically slows from 5.6 to 2.1%.

Using regression and standard growth accounting techniques, recent analysis (Eichengreen, Park, and Shin 2011) suggests that growth slowdowns are essentially productivity growth slowdowns

Pritchett & Summers (2014): Regression to the mean fits the data better than middle-income trap

“ Asiaphoria Meets Regression to the Mean,” NBER WP No. 20573, Lant Pritchett and Lawrence Summers
Appendix (ii):
Macro-prudential policies in Asia

Specific examples of macro-prudential policies

• Banks: reserve requirements
  – E.g., higher on fx liabilities than domestic.

• Stock market: Margin requirements

• Housing market:
  • Maximum Loan/value ratio
  • Maximum Debt service/income ratio
  • Prohibition on foreign-currency mortgages

• A surprising possible conclusion – Emerging Market countries are successfully applying these tools in a counter-cyclical manner more than are the US and other advanced countries.
Federico, Végh & Vuletin (2014) find that developing countries use reserve requirements counter-cyclically far more than advanced countries do.

Asia-Pacific & other EM countries take macro-prudential actions more often than advanced countries do -- Kuttner & Shim (2015)

<table>
<thead>
<tr>
<th>Policy actions by type and region</th>
<th>Asia-Pacific (15)</th>
<th>Central and eastern Europe (15)</th>
<th>Latin America (7)</th>
<th>Middle East and Africa (4)</th>
<th>North America (2)</th>
<th>Western Europe (19)</th>
<th>All economies (60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>absolute number</td>
<td>per decade</td>
<td>absolute number</td>
<td>per decade</td>
<td>absolute number</td>
<td>per decade</td>
<td>absolute number</td>
</tr>
<tr>
<td>Reserve requirement</td>
<td>201</td>
<td>7.5</td>
<td>218</td>
<td>8.4</td>
<td>87</td>
<td>7.9</td>
<td>6</td>
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<tr>
<td>Credit growth</td>
<td>9</td>
<td>0.3</td>
<td>7</td>
<td>0.3</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
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<tr>
<td>Liquidity</td>
<td>30</td>
<td>1.1</td>
<td>4</td>
<td>0.2</td>
<td>6</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>General credit total</td>
<td>240</td>
<td>9.0</td>
<td>229</td>
<td>8.8</td>
<td>93</td>
<td>8.4</td>
<td>6</td>
</tr>
<tr>
<td>LTV</td>
<td>56</td>
<td>2.1</td>
<td>11</td>
<td>0.4</td>
<td>2</td>
<td>0.2</td>
<td>0</td>
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<tr>
<td>DSTI</td>
<td>20</td>
<td>0.7</td>
<td>12</td>
<td>0.5</td>
<td>1</td>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td>Risk-weighting</td>
<td>14</td>
<td>0.5</td>
<td>19</td>
<td>0.7</td>
<td>5</td>
<td>0.5</td>
<td>3</td>
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<tr>
<td>Provisioning</td>
<td>16</td>
<td>0.6</td>
<td>10</td>
<td>0.4</td>
<td>6</td>
<td>0.5</td>
<td>1</td>
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<tr>
<td>Exposure limits</td>
<td>11</td>
<td>0.4</td>
<td>8</td>
<td>0.3</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
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<tr>
<td>Targeted credit total</td>
<td>117</td>
<td>4.4</td>
<td>60</td>
<td>2.3</td>
<td>14</td>
<td>1.3</td>
<td>5</td>
</tr>
<tr>
<td>Housing-related tax</td>
<td>50</td>
<td>1.9</td>
<td>23</td>
<td>0.9</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>407</td>
<td>15.2</td>
<td>312</td>
<td>12.0</td>
<td>107</td>
<td>9.7</td>
<td>11</td>
</tr>
</tbody>
</table>

Notes: The figures in the columns labelled “per decade” are the absolute number of policy actions taken in all economies in one region, divided by the sum of the number of coverage years for each economy in the region, and then multiplied by 10 so that it represents the average number of actions taken in a decade. The number of coverage years for each economy used to calculate the average value is the difference between June 2012 and the earlier of the following two years: (1) the first for which official source materials from central banks and financial authorities were reviewed in order to identify relevant measures; and (2) the first year in which a relevant policy action appears in the database.

Kuttner & Shim (2015): Ceilings on ratios of Debt Service to Income significantly affect housing credit.

Chinese housing prices came down in 2012, but had yet another cycle in 2013-14.


Appendix (iii):
Has China’s GDP surpassed the US?

Headlines, December 2014:

**CHINA SURPASSES U.S. TO BECOME LARGEST WORLD ECONOMY**

...based on the latest 6-year update from the World Bank’s International Comparison Program.
The facts

• On the one hand, China’s economic miracle is genuine:
  – Growth ≈ 10% p.a. for 3 decades is historic.
  – It took the UK 58 years to double income, starting from 1780
    • US: 47 years, from 1839
    • Japan: 35 years, from 1885
    • Korea: 11 years, from 1966
  – But it took China only around 8 years, from 1987!

• On the other hand, China is still poor as of 2014:
  – It ranks only midway among 190 countries (85th, just above Peru).

• The claim to rival US in size comes from multiplying a middle income-per-capita times 1.3 billion people.
35 years of strong Chinese growth

China’s GDP
% increase on a year earlier

Sources: Haver Analytics; National Bureau of Statistics

Economist.com
China was the world’s largest economy two centuries ago, and appears headed for #1 again.

The global contribution by major economies from 1 AD to 2008 AD according to estimates by Angus Maddison (2007), *Contours of the World Economy I-2030AD*, (Oxford University Press).
Measuring GDP

New data suggest the Chinese economy is bigger than previously thought

May 3rd 2014

A world of difference

GDP per person at PPP* and share of global population, 2014 forecast

Sources: International Comparison Programme; IMF; The Economist

*Purchasing-power parity

China’s GDP reportedly passed the US in 2014.

But that is a mis-application of the PPP numbers from the World Bank’s ICP project.
Use PPP rates to compare income per capita

• e.g., to judge if:
  – governments have successfully raised living standards;
  – a country is rich enough to cut pollution;
  – the currency is “undervalued,” given its income.

Use actual exchange rates to compare GDP

• e.g., to judge:
  – How big is the market, from the view of multinational companies?
  – How big should a country’s quota be in the IMF?
  – How many ships can its navy buy?
  – How big is the global role for its currency?
Measuring GDP
Using actual exchange rates gives a different answer:
The US is still 83% bigger than China.
China GDP reached US in 2014 only if measured in PPP terms.

### Share of World GDP

**USD terms, 2014**
- China: 13%
- United States: 23%
- European Union: 24%
- Rest of world: 34%
- Japan: 6%

**PPP terms, 2014**
- China: 16%
- United States: 17%
- European Union: 16%
- Rest of world: 46%
- Japan: 4%

Sources: IMF, World Economic Outlook; and IMF staff calculations.
China has *not* yet overtaken the US.

In 2021, even under aggressive projections: real growth differential = 5%; real appreciation = 3%.

*Author’s calculations. (Thanks to Qing Yu.)*