Global Economic Issues

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Europe: (i) Delayed recovery, (ii) deflationary tendencies (iii) Debt overhangs and their resolution (iv) Greece?

Global finance: Equilibrium real interest rates, QE in Europe and Japan, financial repression?

Emerging markets: (i) Capital flow bonanzas and their aftermath (ii) Where are we in the boom-bust cycle? (iii) persistence and duration--Commodities? China?
The 2007-2009 Crisis: Severity measures

- It is premature to construct a definitive measure of the severity of the recent crises.
- Of the twelve countries experiencing a systemic crisis starting in 2007-2008 (France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, Ukraine, UK, and US), only Germany and the US have reached their pre-crisis peak in per capita GDP.
### 12 Systemic banking crises, 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>% change</th>
<th>Number of years</th>
<th>Severity index</th>
<th>Breakeven year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Peak to trough</td>
<td>Peak to trough</td>
<td>Peak to recovery</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2008 France</td>
<td>-3.8</td>
<td>2</td>
<td>9</td>
<td>12.8</td>
</tr>
<tr>
<td>2</td>
<td>2008 Germany</td>
<td>-5.3</td>
<td>1</td>
<td>3</td>
<td>8.3</td>
</tr>
<tr>
<td>3</td>
<td>2008 Greece</td>
<td>-25.8</td>
<td>6</td>
<td>14</td>
<td>39.8</td>
</tr>
<tr>
<td>4</td>
<td>2007 Iceland</td>
<td>-9.9</td>
<td>3</td>
<td>9</td>
<td>18.9</td>
</tr>
<tr>
<td>5</td>
<td>2007 Ireland</td>
<td>-12.6</td>
<td>3</td>
<td>11</td>
<td>23.6</td>
</tr>
<tr>
<td>6</td>
<td>2008 Italy</td>
<td>-10.8</td>
<td>7</td>
<td>14</td>
<td>24.8</td>
</tr>
<tr>
<td>7</td>
<td>2008 Netherlands</td>
<td>-5.0</td>
<td>5</td>
<td>10</td>
<td>15.0</td>
</tr>
<tr>
<td>8</td>
<td>2008 Portugal</td>
<td>-7.4</td>
<td>6</td>
<td>12</td>
<td>19.4</td>
</tr>
<tr>
<td>9</td>
<td>2008 Spain</td>
<td>-9.0</td>
<td>6</td>
<td>11</td>
<td>20.0</td>
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<tr>
<td>10</td>
<td>2008 Ukraine</td>
<td>-14.8</td>
<td>1</td>
<td>12</td>
<td>26.8</td>
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<tr>
<td>11</td>
<td>2007 United Kingdom</td>
<td>-5.9</td>
<td>5</td>
<td>8</td>
<td>13.9</td>
</tr>
<tr>
<td>12</td>
<td>2007 United States</td>
<td>-4.8</td>
<td>2</td>
<td>6</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Summary: Mean

- % change: -9.6
- Number of years: 3.9
- Severity index: 9.9
- Breakeven year: 19.5

Median

- % change: -8.2
- Number of years: 4.0
- Severity index: 10.5
- Breakeven year: 19.2

Standard deviation

- % change: 6.1
- Number of years: 2.2
- Severity index: 3.2
- Breakeven year: 8.6

Note: The italics denote any calculations in which IMF estimates for 2015-2020 are used.
The number of years to recover the pre-crisis peak in per capita GDP in 100 of the worst crises since the 1840s is about 8 years (the median is 6 1/2 years).

In the 2007-2008 wave of crises, the average may come in closer to 10 years.
The incidence of deflation and high inflation, 22 advanced economies, 1945-2015

Share of countries

Share with annual inflation above 10%

Share with deflation

Iceland 2008-200

Japan

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What factors have made this crisis so protracted? What is the end-game?

The list includes:

- the synchronous nature of the crisis,
- the absence of greater exchange rate adjustment,
- austerity,
- the dearth of credit—(external or domestic),
- the lack of deleveraging and write-downs (private or public) almost a decade later.
Private Domestic Credit as a Percent of GDP
Advanced Economies, 1950-2014

Lack of deleveraging (even after 7 years)

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Average 22 Advanced Economies

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Public debt as a percent of GDP: Advanced Economies: 1900-2015

WWI and Depression debts
*advanced and emerging economies*: default, restructuring and conversions--a few hyperinflations

WWII debts:
*Axis countries*: default and financial repression/inflation
*Allies*: financial repression/inflation
What is the endgame?

Throughout history, debt/GDP ratios have been reduced by:

(i) economic growth;
(ii) fiscal adjustment/austerity;
(iii) explicit default or restructuring;
(iv) a sudden surprise burst in inflation; and
(v) a steady dosage of financial repression that is accompanied by an equally steady dosage of inflation.
Official debt is the Greek story now

*Arslanalp and Tsuda, (2014)*

Greece

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![Graph showing debt composition in Greece from 2004 to 2014. The graph displays the percentage of total debt held by Domestic central bank, Domestic bank, Domestic nonbank, Foreign official sector, Foreign bank, and Foreign nonbank. The total debt (rhs) is also shown.](image-url)
"World" Real Short-term Interest Rates, 1870-2015

"World" Real Interest Rate (percent, 3-year moving average)
UK Discount rate 1870-1919 minus CPI inflation
US Discount rate 1920-1956 minus CPI inflation
US Federal Funds rate 1957-2014 minus CPI inflation

Percent of observations

Real Interest rate on T-bills
Share of observations at or below:

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<tbody>
<tr>
<td>-1 percent</td>
<td>-33.9</td>
<td>-5.7</td>
<td>-28.8</td>
</tr>
<tr>
<td>0</td>
<td>-47.8</td>
<td>-11.3</td>
<td>-57.7</td>
</tr>
<tr>
<td>1 percent</td>
<td>-62.8</td>
<td>-23.1</td>
<td>-85.9</td>
</tr>
<tr>
<td>2 percent</td>
<td>-76.5</td>
<td>-38.8</td>
<td>-95.5</td>
</tr>
</tbody>
</table>

real interest rate on 3-month T-bills (percent)
The cross-country incidence of negative real interest rates in advanced economies

Rates are on 3-month T-bills
22 advanced economies, 1945-2015
Probability of a crisis, by type, and the benefit of observing a current account bonanza
Share of countries, 1982 to 2014, percent

By early 2013, in major emerging markets

- Current account deficits had reappeared
- As did credit booms
- And currency overvaluation
- Growth had begun to slow
- Inflation had resurfaced as a concern

And then came the announcement of QE tapering…
Real Commodity Prices: 1854-2015

Real commodity prices index (2005 = 1)
Boughton (1991) 1854-1979
IMF WEO, 1980-2015, Non-Fuel Price Index
deflated by Advanced Economy CPI
The share of EMs with significant current account deficits has risen markedly

Share of emerging market and developing countries with a current account deficit greater than 3 percent of GDP (2-year moving average)

- Debt crisis
- The Asian and Russian crises
- Global financial crisis
China’s fall and rise, 1500-2013

China's share in world real GDP
1500-2013