A Decade of Debt

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Outline: Variations on debt themes

**Most advanced economies**
Debt overhang, deleveraging, unemployment, double dips?

**The European risks**
From financial crash to debt crisis—more restructurings

**Major emerging markets**
The “capital inflow problem”

**A global issue**
The return of financial repression?
In the spirit of Jan Tinbergen, this lecture connects at least three of his recurring themes...

- Business cycles (gone sour)
- A global—North-South scope
- Lessons from the Past...
Advanced economies: Debt Overhang, deleveraging, unemployment, double dips?


Advanced Economies

Emerging Markets

Reinhart

Emerging markets: Credit boom, crisis and debt overhang, 1978-1990

Advanced Economies

Emerging Markets
Real per capita GDP growth
(from Reinhart and Reinhart)

Real per capita GDP growth rates are significantly lower during the decade following severe financial crises and the synchronous world-wide shocks.

The median post-financial crisis GDP growth decline in advanced economies is about 1 percent.

(from about 3.1 to 2.1 percent per annum)
In 7 of 15 episodes there was a double dip

The renewed weakness had “external origins”
Unemployment rates (from RR)

In the ten-year window following severe financial crises, unemployment rates are significantly higher than in the decade that preceded the crisis.

The rise in unemployment is most marked for the five advanced economies, where the median unemployment rate is about 5 percentage points higher. (from 2.7 to 7.9 percent)
In ten of the fifteen post-crisis episodes, unemployment has not fallen back to its pre-crisis level, not in the decade that followed...
Deleveraging is often *delayed* and is a *lengthy* process *lasting about seven years*. The decade that preceded the onset of the 2007 crisis fits the historic pattern.

If deleveraging of private debt follows the tracks of previous crises, credit restraint will damp employment and growth for some time to come.
The European risks—more restructurings?
Historically, public debt buildups have often ended in sovereign debt crises.

*There is a systematic link between debt/GDP and the incidence of default.*
Sovereign Default, Total (domestic plus external) Public Debt, and Inflation Crises: World Aggregates, 1826-2010 (debt % of GDP)

Reinhart and Rogoff (2011)

Total public debt/GDP, world average (in percent, solid line, right axis)

Percent of countries with annual inflation over 20% (dark bars, left axis)

Percent of countries in default or restructuring (pale bars, left axis)
Our main findings on debt overhangs are:
Duration of debt overhangs

- Debt overhangs are protracted...
- 20 of the 26 episodes lasted more than a decade.
- The 6 shorter episodes lasted about 7 years (5 of these were after WWI and WWII)
- Across all cases the average duration is 23 years.
Real GDP and Debt Overhangs: Basic Calculus of Cumulative Effects

Baseline growth for debt/GDP < 90% average=3.5
Cumulative difference after 23 years is 24%

Baseline growth for debt/GDP > 90% average minus 1.2%
Major emerging markets
The “capital inflow problem” again?
Sustained large capital inflows can be *too much of a good thing*...
Are capital flow bonanza episodes more crisis prone? Banking crises

Probabilities of a Banking Crisis: 1960-2007

- Lowest income:
  - Zimbabwe
  - Zambia
  - Nigeria
  - Côte
  - Thailand
  - Peru
  - Paraguay
  - El Salvador
  - Colombia
  - Bolivia
  - Angola
  - Algeria
  - Venezuela
  - Romania
  - Mexico
  - Hungary
  - Chile
  - Argentina
  - Singapore
  - Norway
  - Finland

- Highest income:
  - Finland

Unconditional versus Conditional on bonanza.
A global issue
The return of financial repression?
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.

(Options (iv) and (v) are only viable for domestic-currency debts).
Financial repression

... includes directed lending to government by captive domestic audiences (such as pension funds), explicit or implicit caps on interest rates, regulation of cross-border capital movements, and (generally) a tighter connection between government and banks.

It is a subtle type of debt restructuring...
Main results of Reinhart and Sbrancia (2011)

In the heavily regulated financial markets of the Bretton Woods, restrictions facilitated a sharp and rapid reduction in public debt/GDP ratios from the late 1940s to the 1970s.

Low nominal interest rates reduced debt servicing costs while a high incidence of negative real interest rates liquidated the real value of government debt.
# Real Interest Rates Frequency Distributions: Advanced Economies, 1945-2011


### Real interest rates

<table>
<thead>
<tr>
<th>Share of observations at or below</th>
<th>1945-1980</th>
<th>1981-2007</th>
<th>2008-2011</th>
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<tbody>
<tr>
<td>0</td>
<td>46.9</td>
<td>10.5</td>
<td>49.5</td>
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<tr>
<td>1 percent</td>
<td>61.6</td>
<td>25.2</td>
<td>82.1</td>
</tr>
<tr>
<td>2 percent</td>
<td>78.6</td>
<td>36.2</td>
<td>97.2</td>
</tr>
<tr>
<td>3 percent</td>
<td>88.6</td>
<td>55.0</td>
<td>99.5</td>
</tr>
</tbody>
</table>

### Legend

- **1945-1980** (Blue line)
- **1981-2007** (Red line)
- **2008-2011** (Green line)