Reflections on Debt: A Global Perspective

Carmen M. Reinhart

Peterson Institute for International Economics, NBER, and CEPR

Peterson Institute for International Economics
September 9, 2011, Washington, DC
This presentation draws on:


Themes: Challenges in the aftermath of the crisis

- **The advanced economies:** Public and private debt overhang, deleveraging, lower growth and high unemployment

- **The emerging markets:** Sustained large capital inflows, inflationary pressures, overheating/bubble risks
Themes: Variations on debt themes

- From financial crash to debt crisis:
  *The European risks*
- Growth in a time of debt:
  *Most advanced economies*
- The “capital inflow problem:"
  *Major emerging markets*
- The return of financial repression?
  *A global issue*
Private debts on the eve of financial crises

Prior to the subprime crisis that began in 2007, debts, notably private—domestic and external—surged in many advanced economies, most notably in Europe.
United States: Total Public and Private Debt/GDP, 1916-2010

1933, suspension of the Gold Clause default (shaded)

First year of banking crises (black lines)
The legacy of financial crises: In 2008, we suggested

- Financial crises were protracted affairs.
- Deep financial crises had major adverse consequences for government finances.
- The impacts in the aftermath went beyond bailout costs and stimulus packages—revenues implode-leading to a surge in public debts.

Cumulative Increase in Public debt in the Three Years Following Systemic Banking Crisis: Selected Post-World War II Episodes

Index=100 in year of crisis

- Malaysia, 1997
- Mexico, 1994
- Japan, 1992
- Norway, 1987
- Philippines, 1997
- Korea, 1997
- Sweden, 1991
- Thailand, 1997
- Historical
- Spain, 1977
- Indonesia, 1997
- Chile, 1980
- Finland, 1991
- Colombia, 1998

186.3 (an 86 percent increase)
Since the crisis, public debts in the advanced economies have surged in recent years to levels not recorded since the end of World War II, surpassing previous peaks reached during the First World War and the Great Depression.
From financial crash to debt crisis
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)

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)
Debt and growth
Using and extending the data developed in our recent book, we studied the average economic growth and inflation performance at different levels of government and external debt.

Our results incorporate data on forty-four countries spanning about two hundred years. Taken together, the data incorporate over 3,700 annual observations covering a wide range of political systems, institutions, exchange rate and monetary arrangements, and historic circumstances.
We divided the experience into 4 debt/GDP buckets

- 0 to 30 percent
- 30 to 60 percent
- 60 to 90 percent
- 90 percent and above—this last bucket is relatively rare
Our main results are as follows:

The empirical relationship between (gross central) government debt and real GDP growth is fairly weak for debt/GDP ratios below 90 percent of GDP. At or above 90 percent, growth deteriorates markedly, with median growth rates falling by 1 percent, and average growth rates falling considerably more.

*Surprisingly, we find that the threshold for public debt is similar in both advanced countries and emerging markets.*
Turning to emerging markets, capital flows and crises
Are capital flow bonanza episodes more crisis prone? Inflation crises (Reinhart and Reinhart, 2009)


<table>
<thead>
<tr>
<th>Lowest income</th>
<th>Zimbabwe</th>
<th>Zambia</th>
<th>Nigeria</th>
<th>Myanmar</th>
<th>Peru</th>
<th>Guatemala</th>
<th>El Salvador</th>
<th>Ecuador</th>
<th>Colombia</th>
<th>Angola</th>
<th>Algeria</th>
<th>Turkey</th>
<th>Romania</th>
<th>Poland</th>
<th>Mexico</th>
<th>Mauritius</th>
<th>Hungary</th>
<th>Costa Rica</th>
<th>Chile</th>
<th>Argentina</th>
<th>Korea</th>
<th>United</th>
<th>Portugal</th>
<th>Italy</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
The decade after a severe financial crisis: After the Fall
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.
Unemployment Rate in the Decade Before and the Decade After Severe Financial Crises: Post-WWII, Advanced Economies

Probability density function, five advanced economies


<table>
<thead>
<tr>
<th></th>
<th>t-10 to t-1</th>
<th>t+1 to t+10</th>
</tr>
</thead>
<tbody>
<tr>
<td>median</td>
<td>2.7</td>
<td>7.9</td>
</tr>
<tr>
<td>min</td>
<td>1.1</td>
<td>2.5</td>
</tr>
<tr>
<td>max</td>
<td>6.1</td>
<td>21.2</td>
</tr>
<tr>
<td>obs.</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>
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...
The return of financial repression?

- The collective buildup of public debts in the advanced economies during WWI was largely unwound through default in the 1930s.
- The even larger buildup in public debts of WWII was unwound partially through steady growth—but, more importantly, through “financial repression.”
Real Interest Rates Frequency Distributions: Advanced Economies, 1945-2011

Real interest rates
Share of observations at or below

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0 percent</td>
<td>46.9</td>
<td>10.5</td>
<td>49.5</td>
</tr>
<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>
The return of financial repression?

To deal with the current debt overhang, similar policies to those documented here may re-emerge in the guise of prudential regulation rather than under the politically incorrect label of financial repression. Moreover, the process where debts are being “placed” at below market interest rates in pension funds and other more captive domestic financial institutions is already under way in several countries in Europe.