What History Has (or Hasn’t) Taught Us

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Based on This Time is Different:
Eight Centuries of Financial Folly
with Kenneth Rogoff

The Philadelphia Fed Policy Forum
Policy Lessons from the Economic and Financial Crisis,
December 4, 2009
Where are we at present in a historical global context?

Taking stock...
Varieties of crises: World aggregate, 1900-2008

A composite index of banking, currency, sovereign default and, inflation crises, and stock market crashes (weighted by their share of world income)

Banking, currency, default, and inflation crises (BCDI index)

- Panic of 1907
- WWI-hyperinflation
- Great Depression
- WWII-more defaults
- Global recession and crash
- Oil shock-inflation
- Emerging market crises and Nordic and Japanese banking

Reinhart and Rogoff
World export growth, 1928-2009
(annual percent change)

Average (1928-2008) = 7.8

+/- one standard deviation

2009 estimate

Reinhart and Rogoff
Global stock markets during global crises: Composite real stock price index (end-of-period)

Index (t) 1928 = 100
as of: November 30, 2009

Index (t) 2007 = 100
Causes, antecedents, and amplifiers of banking crises
Periods of high international capital mobility have repeatedly produced international banking crises, not only famously as they did in the 1990s to the present, but historically.
Banking crises and capital mobility, 1800-2008

Capital Mobility and the Incidence of Banking Crisis: All Countries, 1800-2007

Capital Mobility (left scale)
Share of Countries in Banking Crisis, 3-year Sum (right scale)
Financial liberalization and the sequencing of crises

Reinhart and Rogoff, 2008c: no clear sequence of domestic versus external default

Diaz-Alejandro's "goodbye financial repression, hello financial crash"
- Stocks and real estate market crashes—economic slowdown begins

Reinhart-Rogoff "twin crises"

Kaminsky-Reinhart "twin crises"

Capital controls introduced or increased around this time

Reinhart and Rogoff
The “this time is different syndrome”

- **Is rooted in the firmly-held beliefs that:**
  - **Financial crises are something that happen to other people in other countries at other times;**
  - **Crises do not happen here and now to us.**
  - **We are doing things better, we are smarter, we have learned from the past mistakes.**
  - **As a consequence, old rules of valuation are not thought to apply any longer.**
One plausible diagnosis of the crisis

“Overindebtedness simply means that debts are out-of-line, are too big relative to other economic factors. It may be started by many causes, of which the most common appears to be new opportunities to invest at a big prospective profit... such as through new industries... Easy money is the great cause of over-borrowing.”
This diagnosis . . . comes from Irving Fisher (1933).

There are quantitative parallels as well.
Quantitative parallels to post-war banking crises in industrialized countries

Leading indicators:

- Large capital inflows
- Sharp housing and equity price run-ups
- Inverted V-shaped growth trajectory
- Marked rise in indebtedness
As in earlier episodes, many of these capital inflow bonanza episodes have ended badly…

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<tr>
<th>Countries with recent notable capital inflows</th>
<th>2006</th>
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Real Housing Prices and Banking Crises

Index $t-4=100$

Average for banking crises in advanced economies

Average for the "Big 5" Crises

US, 2003=100
This is what it looks like now...
Real Housing Prices and Banking
Crises

Index $t-4=100$

- Average for banking crises in advanced economies
- US, 2003=100
- Average for the "Big 5" Crises
- Mar-09

Reinhart and Rogoff
For real equity prices, this is what it looked like then...
Real Equity Prices and Banking Crises

US, 2003=100

Average for banking crises in advanced economies

Average for the "Big 5" Crises
This is what real equity prices look like **now**...
Real equity prices and banking crises

Average for banking crises in advanced economies

Index $t-4=100$

Average for the "Big 5" Crises

US, 2003=100

10-Nov-09
As to real per capita GDP, this was then...
Real GDP Growth per Capita and Banking Crises

(PPP basis)

Average for banking crises in advanced economies

Average for the "Big 5" Crises
Based on the October IMF *World Economic Outlook* estimates for 2009, this is what real per capita GDP looks like now.
Real GDP growth per capita

Average for banking crises in advanced economies
Average for the "Big 5" Crises

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Amplifiers of the boom-bust cycle include:

- Procyclical macroeconomic policies
- Hidden debts (implicit guarantees)
- Overvalued currencies
- Poor regulation
- Even worse supervision
- Outright fraud
- Myopic rating agencies
The aftermath of financial crises
Past and Ongoing Real House Price Cycles and Banking Crises:
Peak-to-trough Price Declines (left panel) and Years Duration of Downturn (right panel)

Percent decline

-60 -50 -40 -30 -20 -10 0

Ongoing

-35.5 percent

Percent decline

Austria, 2008
Hungary, 2008
US, 1929
UK, 2007
Iceland, 2007
Malaysia, 1997
Thailand, 1997
Korea, 1997
Ireland, 2007
Norway, 1899
Argentina, 2001
US, 2007
Sweden, 1991
Spain, 1977
Historical Average
Japan, 1992
Norway, 1987
Indonesia, 1997
Finland, 1991
Colombia, 1998
Philippines, 1997
Hong Kong, 1997

Duration in years

0 5 10 15 20

6 years

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Housing price declines through September 2009

Reinhart and Rogoff

-70 -60 -50 -40 -30 -20 -10 0

Spain, 2008
Philippines, 1997
Colombia, 1998
Finland, 1991
Indonesia, 1997
Norway, 1987
Japan, 1992
US, 2007
Ireland, 2007
UK, 2007
UK, 2007
Ireland, 2007
Korea, 1997
Thailand, 1997
Malaysia, 1997
US, 1929
Spain, 2008

-35.5 percent

Historical Average
Ukraine, 2008
Spain, 1977
Sweden, 1991
Iceland, 2007
Norway, 1899
Argentina, 2001
UK, 2007
Ireland, 2007
Korea, 1997
Thailand, 1997
Malaysia, 1997
US, 1929
Spain, 2008

Percent decline

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Past and ongoing real equity price cycles and banking crises:
Peak-to-trough price declines (left panel) and years duration of downturn (right panel)
Past Real Per Capita GDP Cycles and Banking Crises: Peak-to-trough

Percent Decline in Real GDP (left panel) and Years Duration of Downturn (right panel)

Spain, 1977

Japan, 1992

Norway, 1987

Philippines, 1997

Sweden, 1991

Hong Kong, 1997

Colombia, 1998

Korea, 1997

Historical Average

Malaysia, 1997

Finland, 1991

Thailand, 1997

Indonesia, 1997

Argentina, 2001

US, 1929

Percent decrease

-9.3 percent

Duration in years

1.9 years

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Past Unemployment Cycles and Banking Crises: Trough-to-peak
Percent Increase in the Unemployment Rate (left panel) and Years Duration of Downturn (right panel)

5.8 percent increase through October 2009

7 percent

Malaysia, 1997
Indonesia, 1997
Japan, 1992
Thailand, 1997
Philippines, 1997
US, 2007
Hong Kong, 1997
Norway, 1987
Korea, 1997
Argentina, 2001
Historical Average
Sweden, 1991
Spain, 1977
Colombia, 1998
Finland, 1991
US, 1929

4.8 years
Government revenues suffer as the crisis lingers

Real Government Revenues and Banking Crises
(annual percent changes)

Bail-out costs are only part of the story why public debt surges after the crisis

Reinhart and Rogoff
Thus, the true legacy of financial crises is more government debt...

Cumulative increase in public debt in the three years following the banking crisis

Index=100 in year of crisis

Average is 186.3
Debt crises followed in the wake of banking crises
What has history taught us?

- Severe financial crises are protracted affairs. There is a view that we have weathered the global crisis, such celebration may be premature.

- Seldom do countries (advanced or emerging) simply “grow” their way out of debts. High levels of debt are associated with sub-par growth.

- Governments that in the past inflated away or outright defaulted on their debts may do so again.

- This problem is not a likely imminent scenario for most countries—it is a concern for the medium term.