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# The First Global Financial Crisis of the 21st Century and its Aftermath

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NBER, and CEPR*

NABE, Washington DC, March 1, 2009

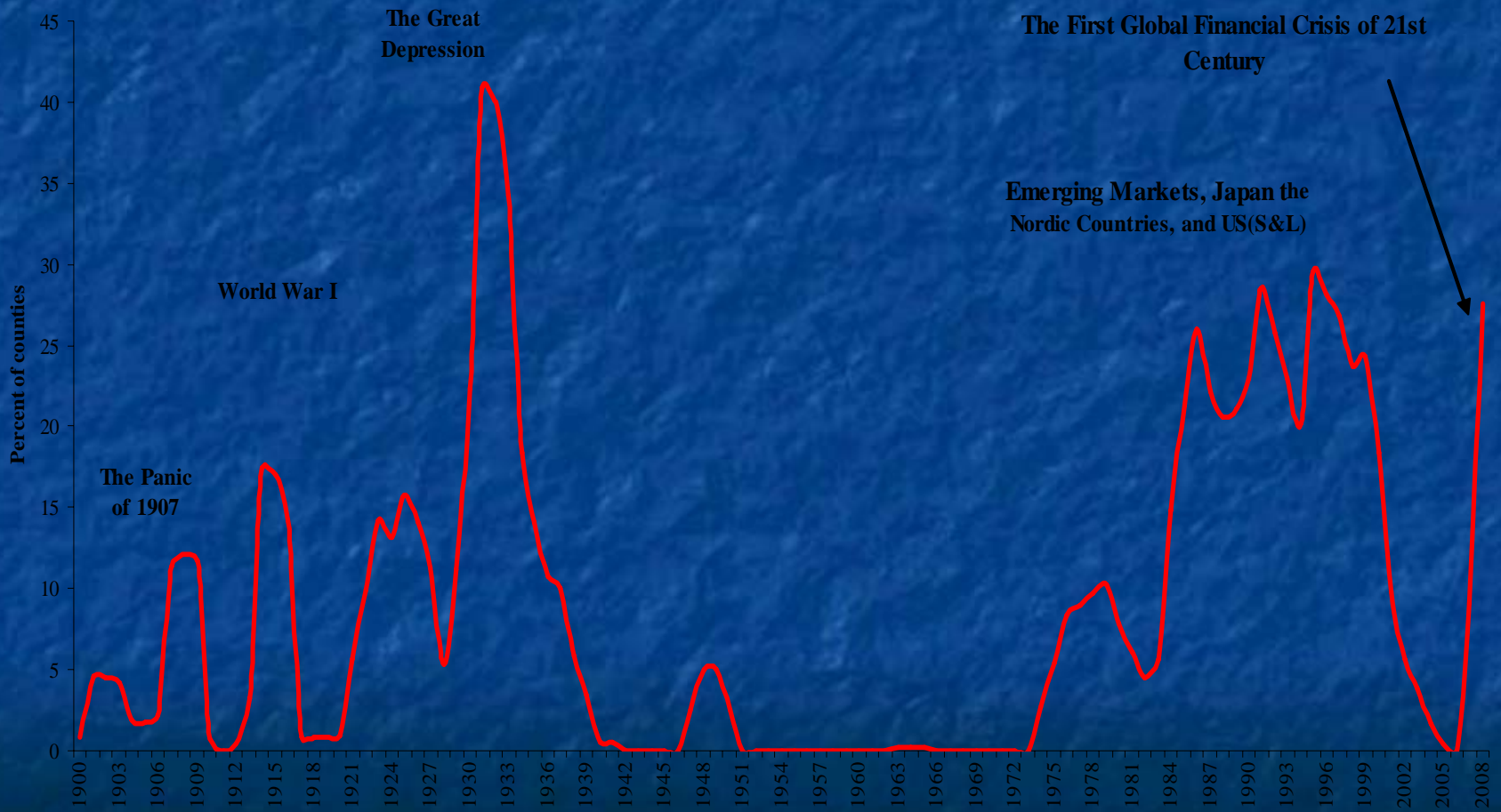
# This talk is based on the following references (in chronological order):

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- Reinhart, Carmen M., and Kenneth S. Rogoff, “Is the 2007 U.S. Subprime Crisis So Different? An International Historical Comparison,” *American Economic Review*, Vol. 98 No. 2, May 2008, 339–344.
- Reinhart, Carmen M., and Kenneth S. Rogoff, “Banking Crises: An Equal Opportunity Menace,” (with Kenneth S. Rogoff), NBER Working Paper 14587, December 2008.
- Reinhart, Carmen M., and Kenneth S. Rogoff, “The Aftermath of Financial Crises,” (with Kenneth S. Rogoff), *American Economic Review*, forthcoming, May 2009.
- *This Time is Different: Eight Centuries of Financial Folly* (with Kenneth S. Rogoff), forthcoming (Princeton: Princeton University Press, 2009)

**Where are we at present  
in a historical global  
context?**

# Proportion of countries with banking crises, 1800-2008 weighted by their share of world income



**Here, we document the duration and depth of the post-crisis crash for selected indicators.**

# Past and Ongoing Real House Price Cycles and Banking Crises:

## Peak-to-trough Price Declines (left panel) and Years Duration of Downturn (right panel)

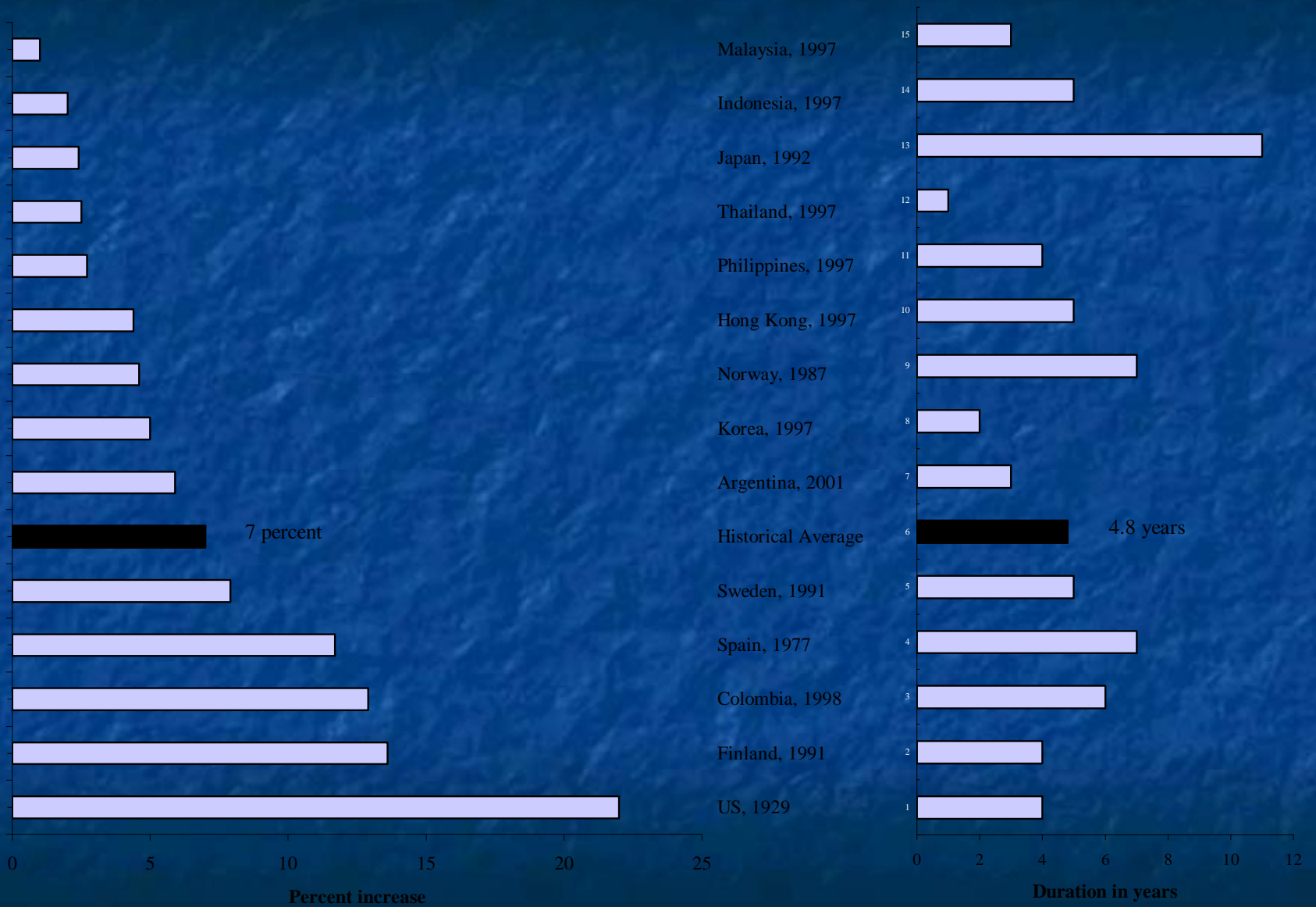


# Past and Ongoing Real Equity Price Cycles and Banking Crises:

## Peak-to-trough Price Declines (left panel) and Years Duration of Downturn (right panel)

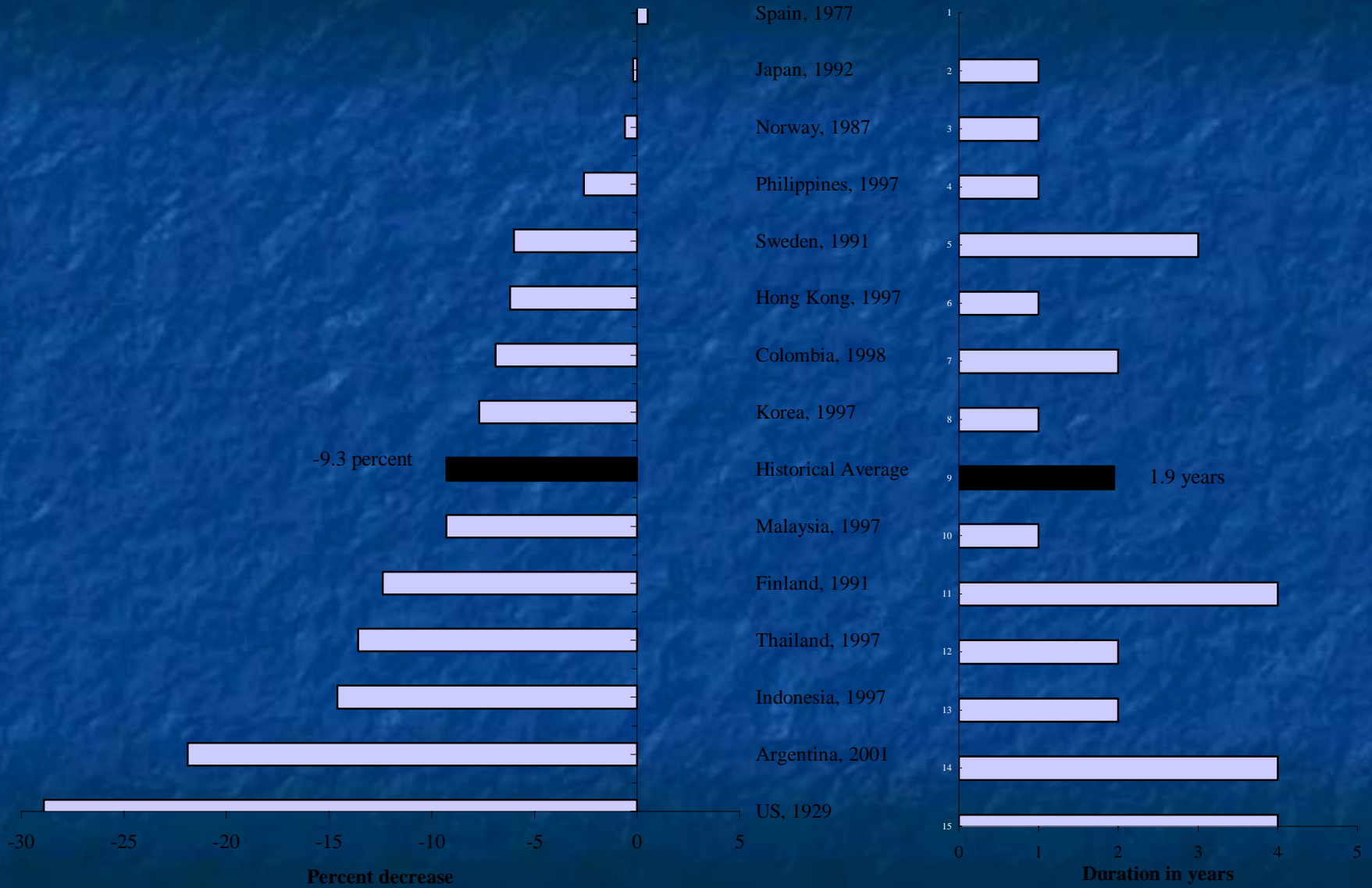


## Past Unemployment Cycles and Banking Crises: Trough-to-peak Percent Increase in the Unemployment Rate (left panel) and Years Duration of Downturn (right panel)



# 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)



# Severe financial crisis summary: Peak-to-trough changes, all countries

Averages	Cumulative % change	Duration
Real housing prices	<b>-36</b>	5 years
Real equity prices	<b>-56</b>	3.4 years
Unemployment, trough-to-peak	<b>7</b>	4.8 years
Real per capita GDP	<b>-9.3</b>	1.9 years

# Financial crises are historically associated with the “deadly D’s”

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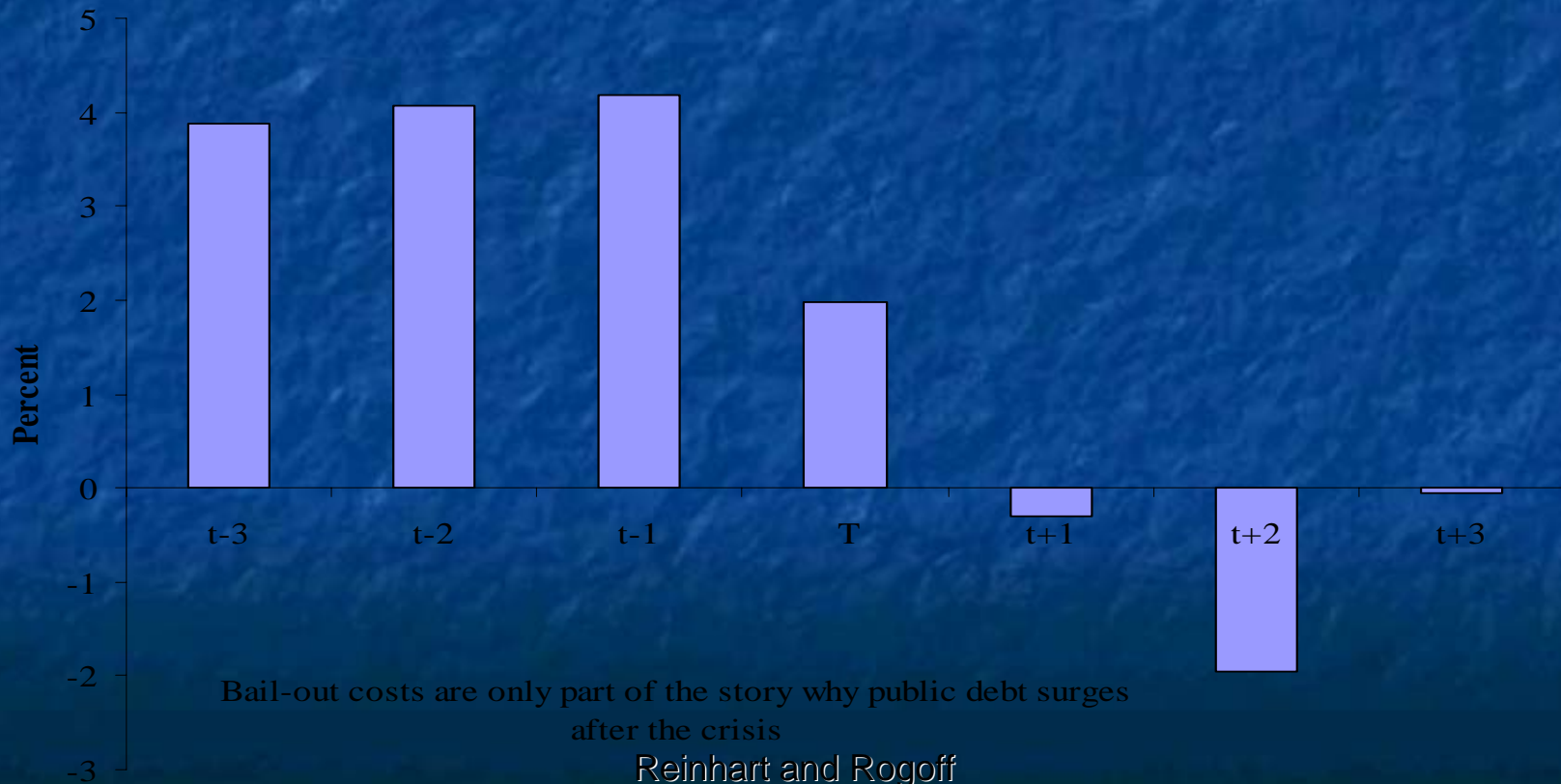
- Sharp economic **downturns** follow banking crises;
- with government revenues shrinking, **fiscal deficits** worsen;
- deficits lead to **debt**;
- as debt piles up rating **downgrades** follow.
- For the most fortunate countries, the crisis does not lead to the deadliest D:
- **default**, but for many it has.

# Fiscal deficits as a percent of GDP

Country (crisis year)	Year before the crisis	Peak deficit (year)	Increase (- decrease) in the the fiscal deficit
<i>Central government balance/GDP</i>			
Argentina, 2001	-2.4	-11.9 (2002)	9.5
Chile, 1980	4.8	-3.2 (1985)	8.0
Colombia, 1998	-3.6	-7.4 (1999)	3.8
Finland, 1991	1.0	-10.8 (1994)	11.8
Indonesia, 1997	2.1	-3.7 (2001)	5.8
Japan, 1992	-0.7	-8.7 (1999)	9.4
Korea, 1997	0.0	-4.8 (1998)	4.8
Malaysia, 1997	0.7	-5.8(2000)	6.5
Mexico, 1994	0.3	-2.3 (1998)	2.6
Norway, 1987	5.7	-2.5 (1992)	7.9
Spain, 1977 <sup>1</sup>	-3.9	-3.1 (1977)	-0.8
Sweden, 1991	3.8	-11.6(1993)	15.4
Thailand, 1997	2.3	-3.5(1999)	5.8

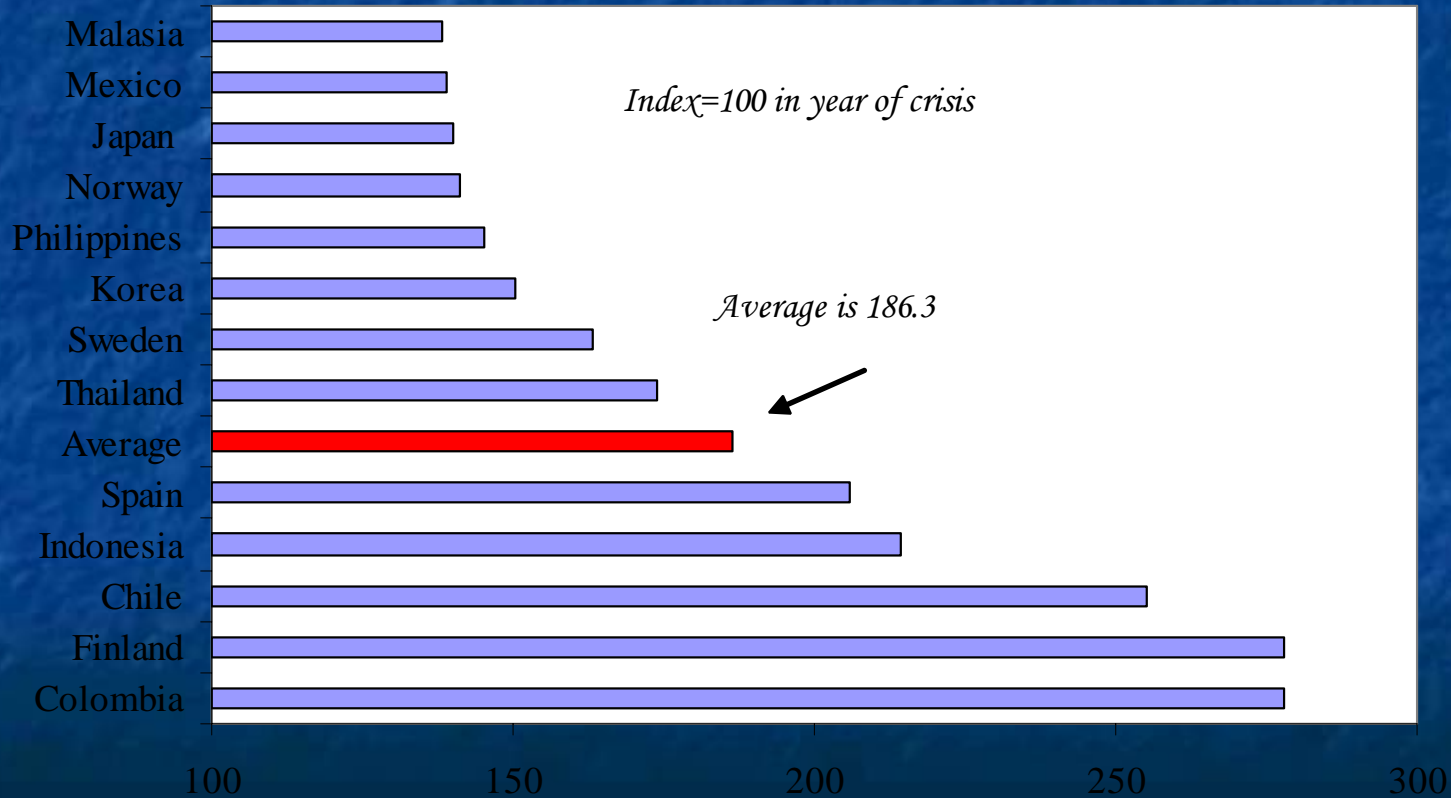
# On the second point, government revenues suffer as the crisis lingers

*Real Government Revenues and Banking Crises  
(annual percent changes)*

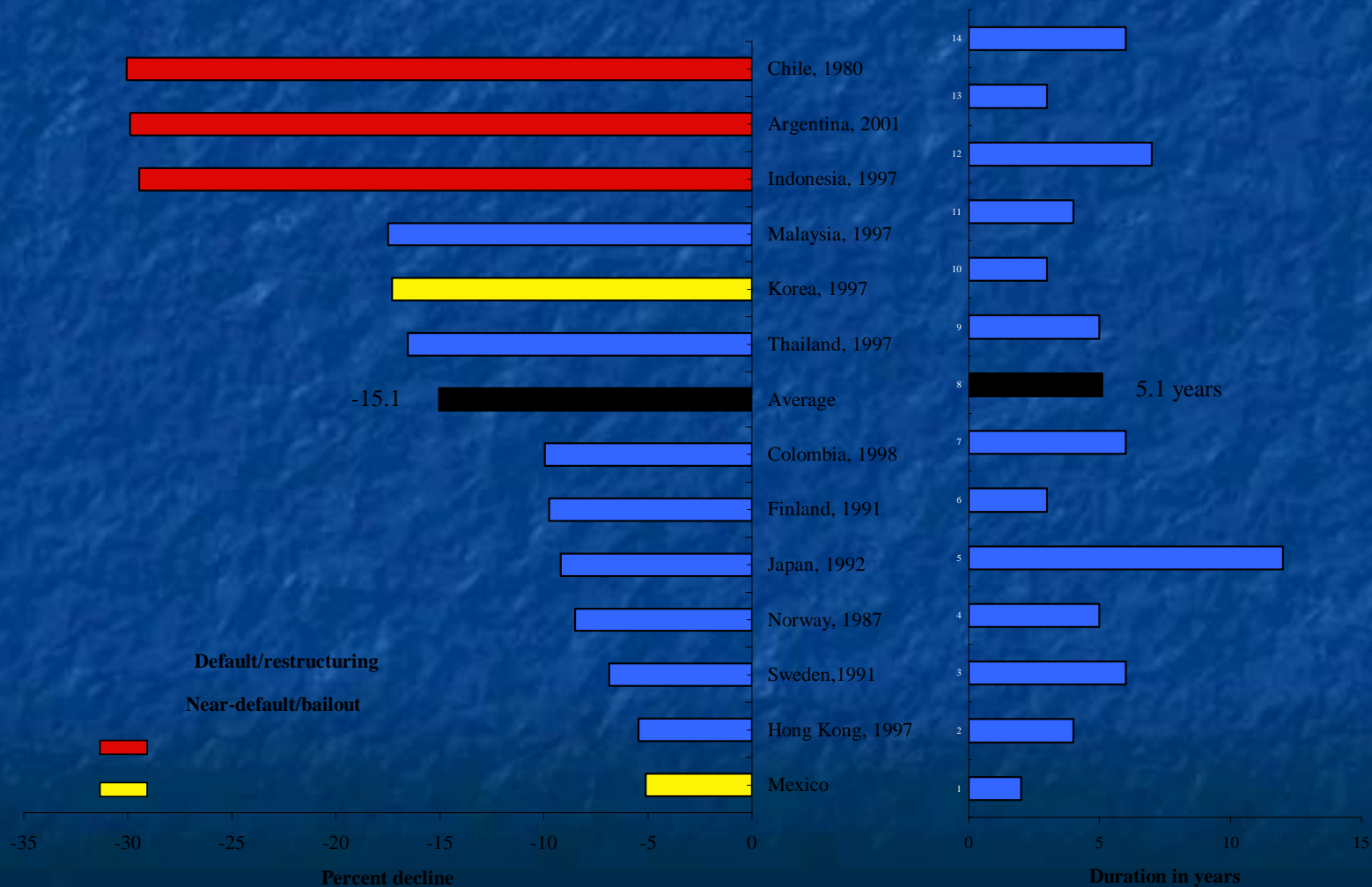


# Thus, the true legacy of financial crises is **more government debt...**

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



Institutional Investor sovereign ratings cycles and banking crises:  
 Peak-to-trough index declines (left panel) and years duration of downturn (right panel)



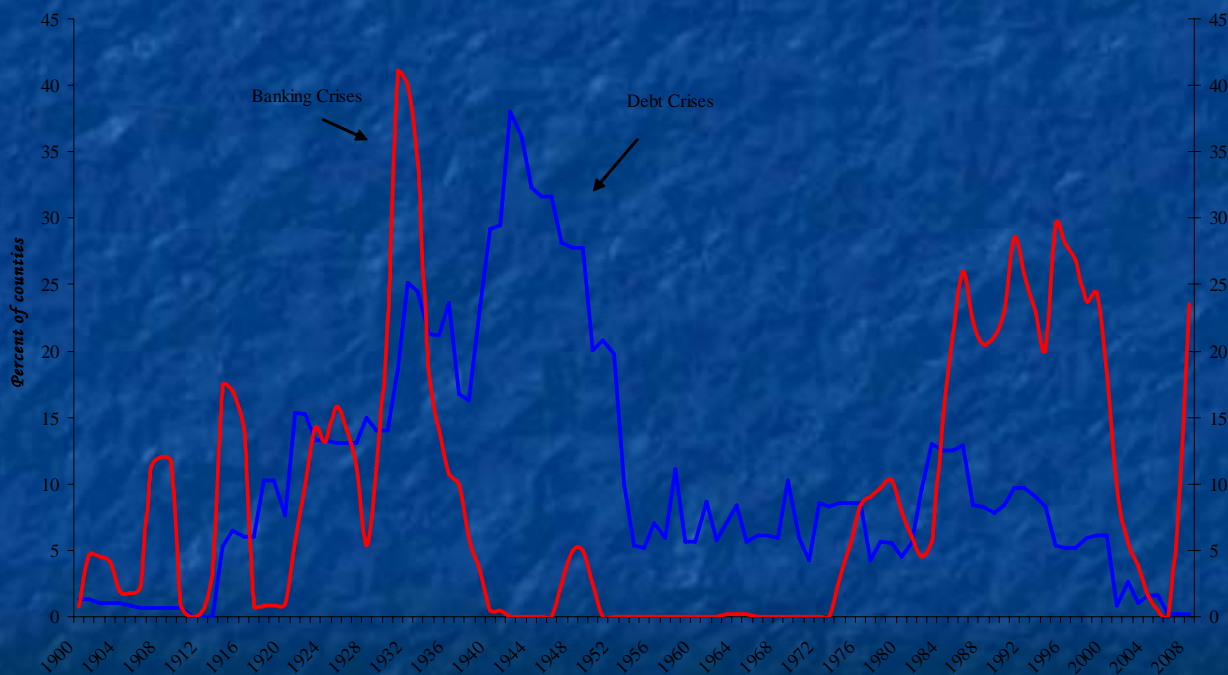
# Banking crises and default cycles on external debt

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- **This lull may also be temporary.**
- **A high incidence of global banking crises (such as at present) has historically been associated with a high incidence of sovereign defaults on external debt...**

# Defaults in emerging markets are more likely...

*Proportion of Countries with Banking and Debt Crises  
Weighted by Their Share of World Income*



# Policy issues going forward

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- **Swift** implementation is critical—delays are terribly **costly** in both terms of the economy and of the **cost** of the crisis (**speed** should take precedence over polish)
- **Soaring debt**: Policy makers should be concerned about the debt levels (explicit and implicit) that it is likely to take on as it works its way out of the crisis.
- Financial crises are “hardy perennials”-- **regulation** needs to be constantly revised and revisited to “keep up” with market innovation.