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# **The Aftermath of Financial Crises: A Global Perspective**

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**Based on**

**This Time is Different:  
Eight Centuries of Financial Folly and other work  
with Kenneth Rogoff**

*National Commission on Fiscal  
Responsibility and Reform*

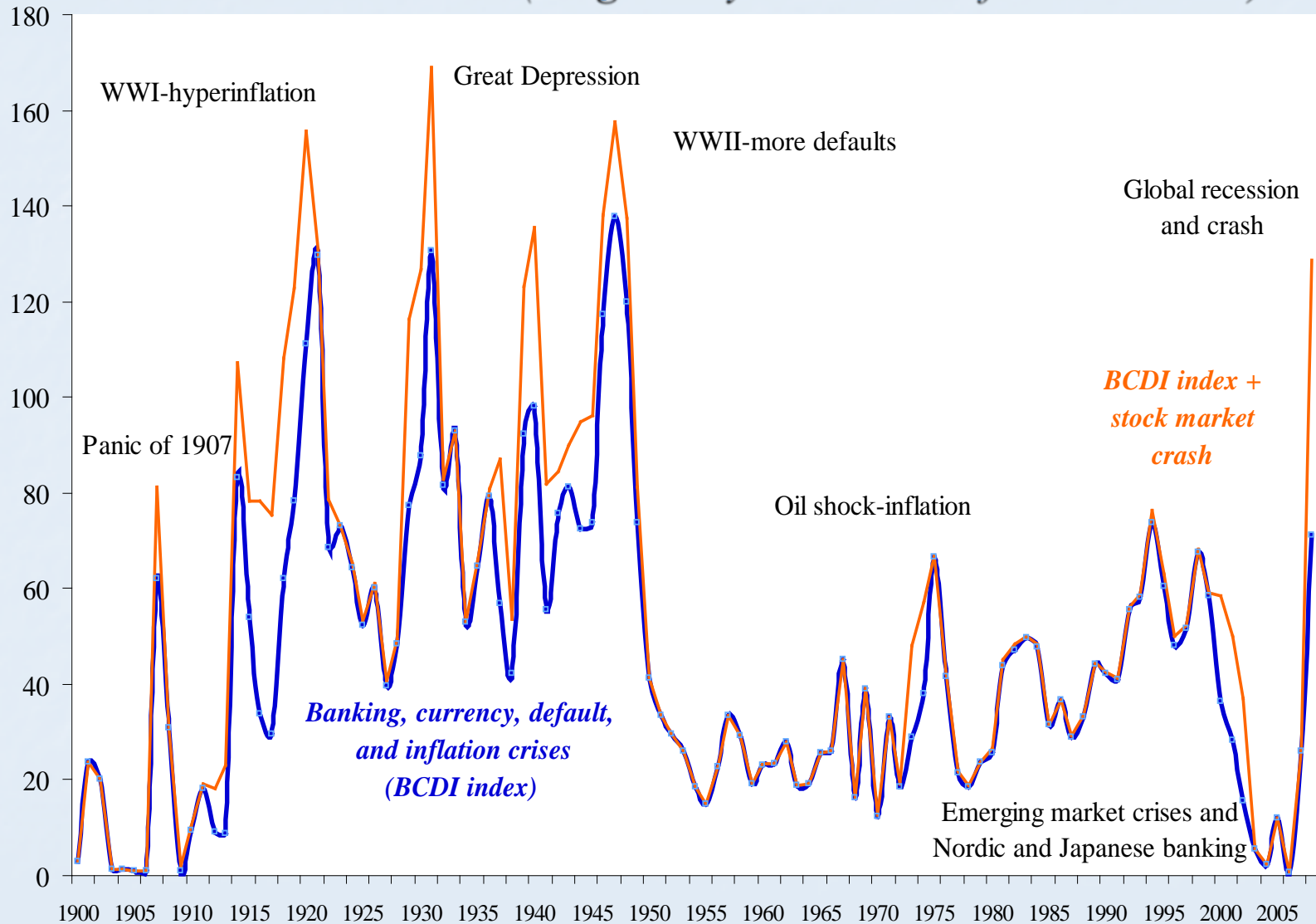
*May 26, 2010*

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

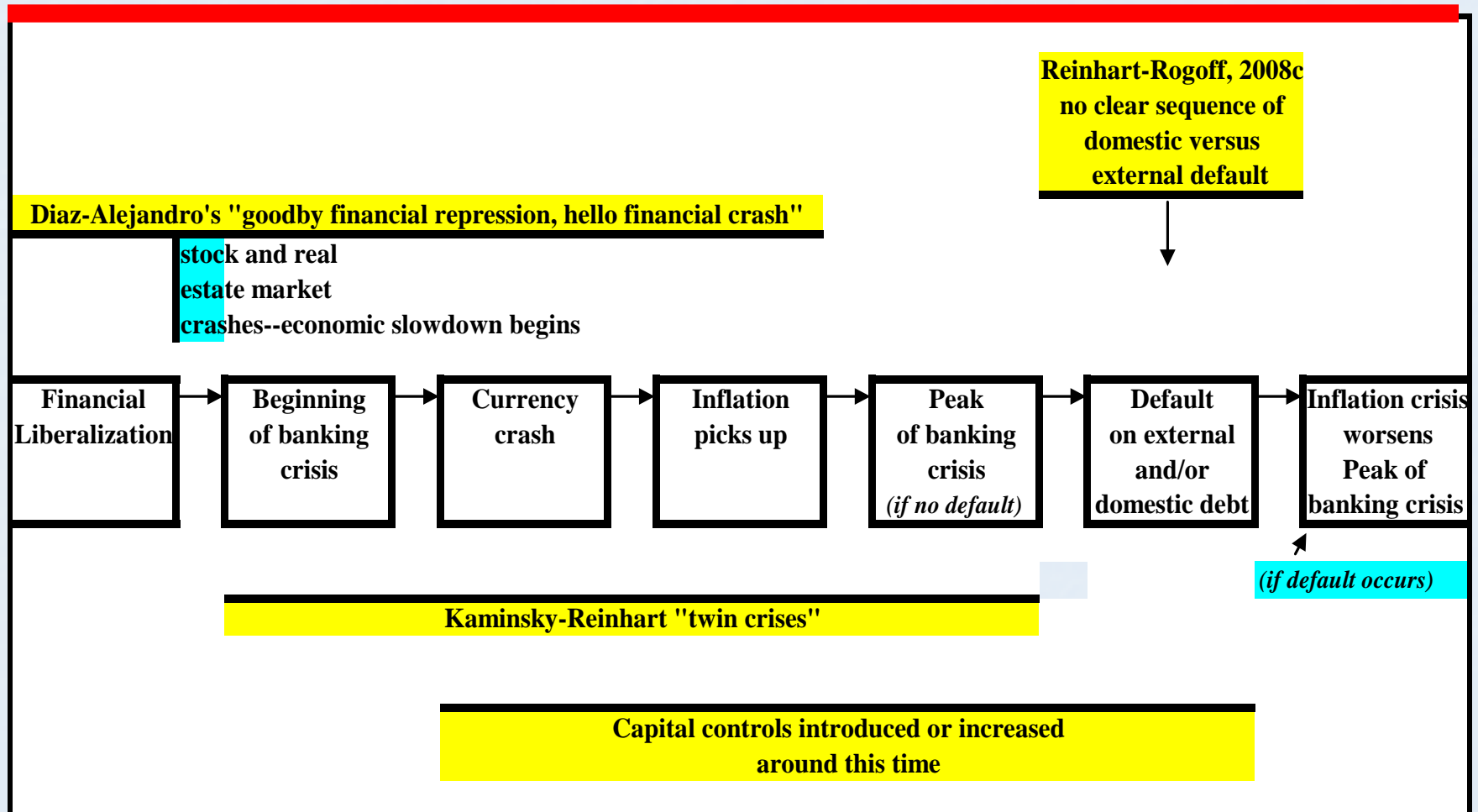
**Taking stock...**

# 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)*



# Financial liberalization and the sequencing of crises



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# The antecedents of financial crises

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# Quantitative parallels to post-war banking crises in industrialized countries

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## Leading indicators:

- Large capital inflows
- Sharp housing and equity price run-ups
- Inverted V-shaped growth trajectory
- Marked rise in **indebtedness**

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# The aftermath of financial crises

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

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





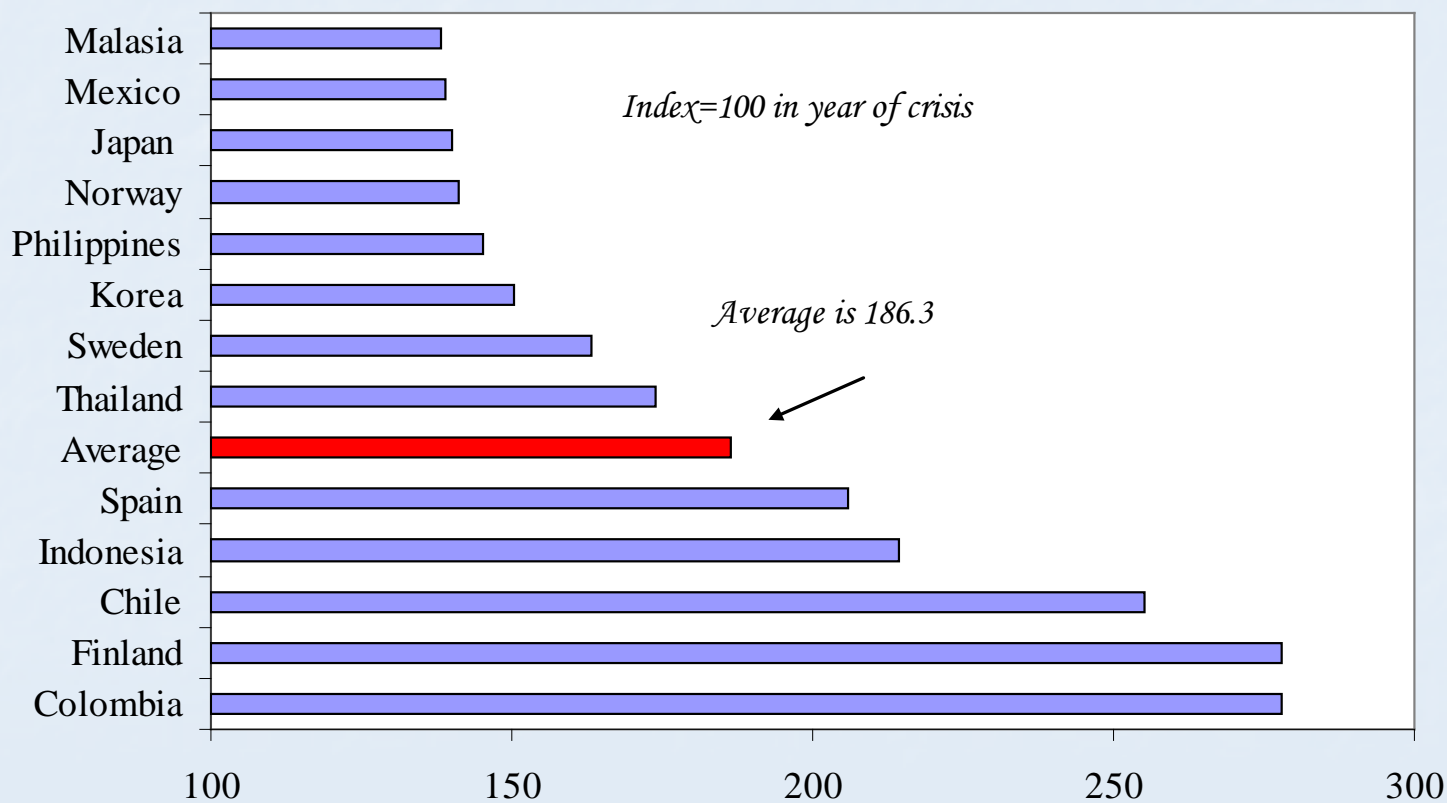
# Past Unemployment Cycles and Banking Crises: Trough-to-peak

Percent Increase in the Unemployment Rate (left panel) and Years Duration of Downturn (right panel)



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

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



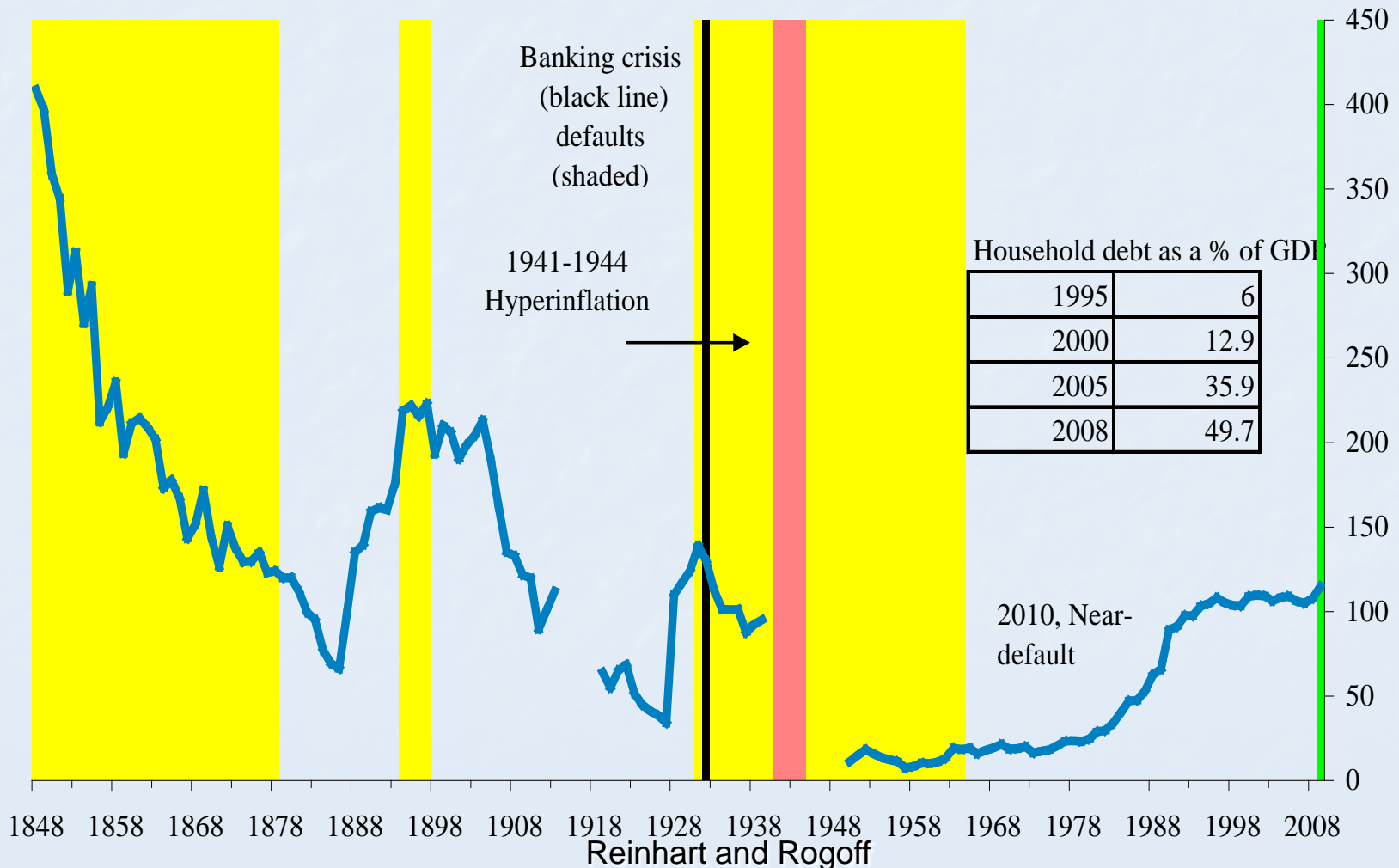
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# From Financial Crash to Debt Crisis

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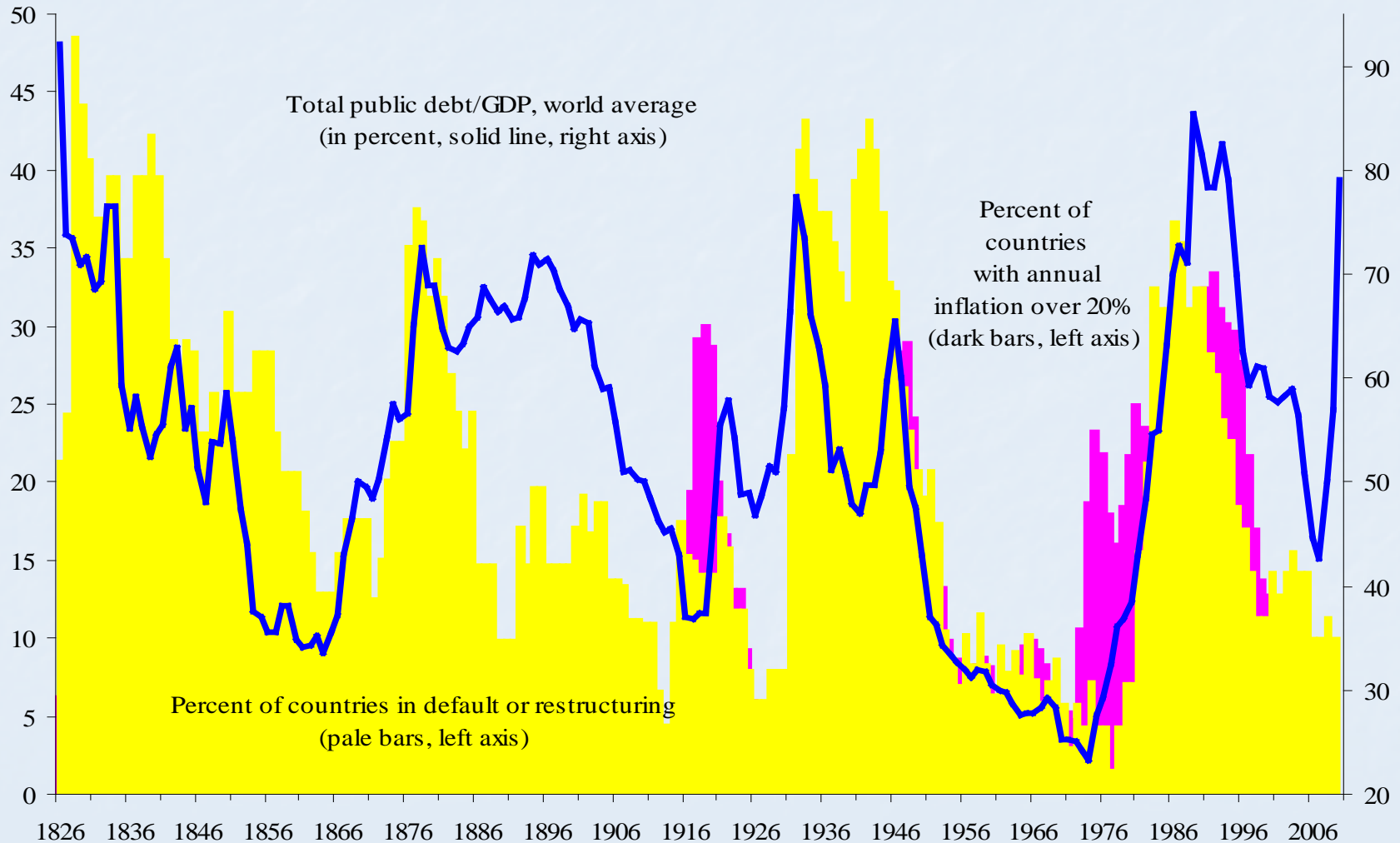
# Greece: Central Government Debt, Default, Hyperinflation, and Banking Crises, 1848-2009

(debt as a percent of GDP)



# Sovereign Default, Total (domestic plus external) Public Debt, and

## Inflation Crises: World Aggregates, 1826-2010 (debt % of GDP)

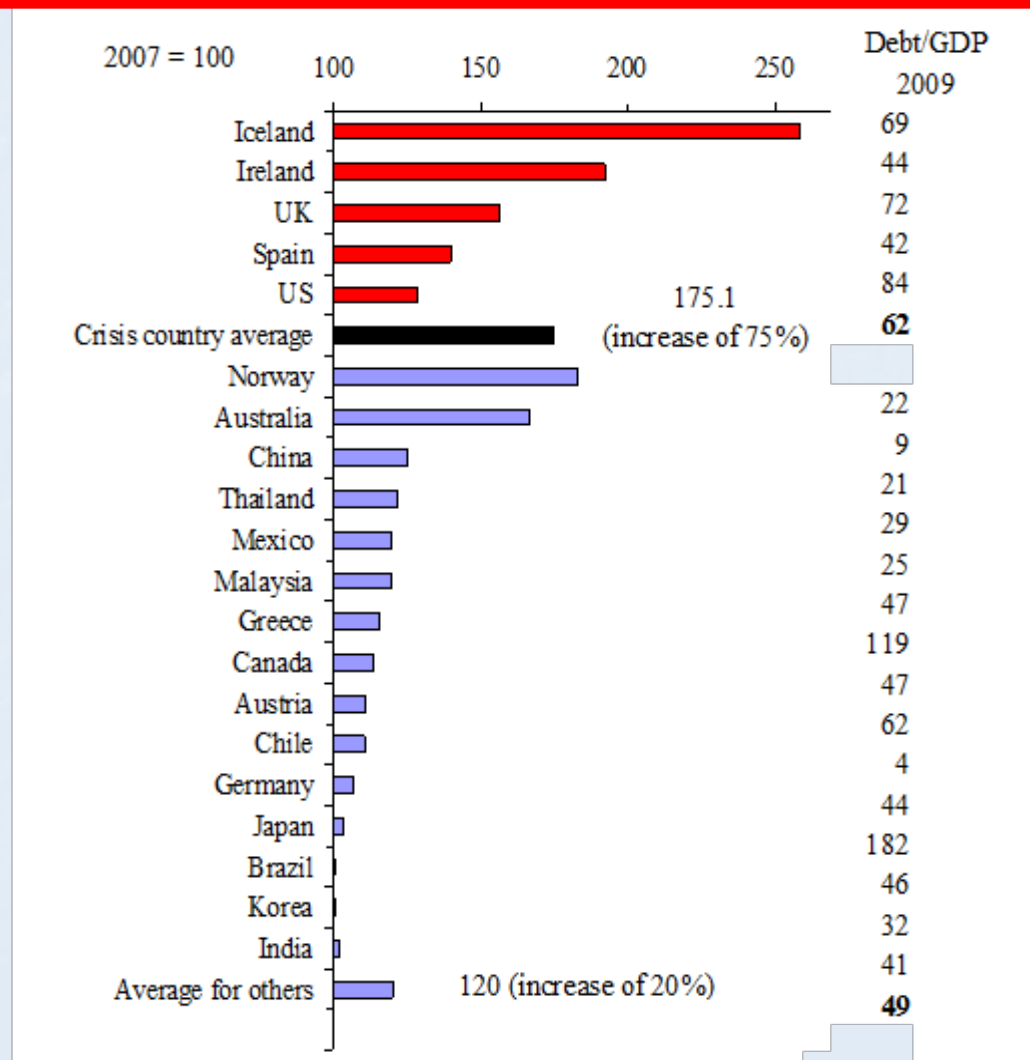


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# Growth in a Time of Debt

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# Cumulative Increase in Real Public Debt Since 2007



# In light of upward march in public debt in the U.S. and elsewhere...

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Using and extending the data developed in our recent book, this paper studies 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.



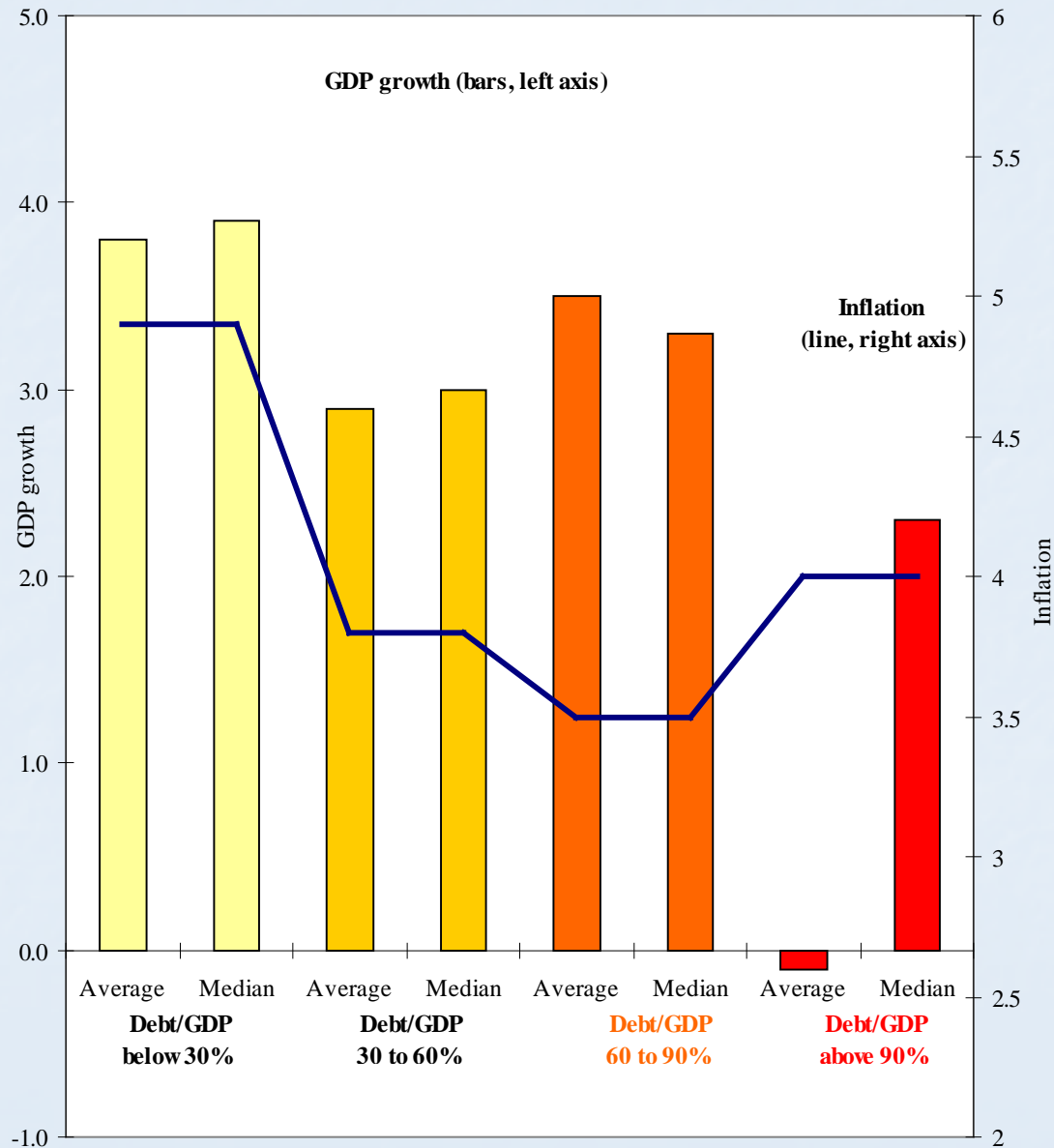
# Our main results are as follows:

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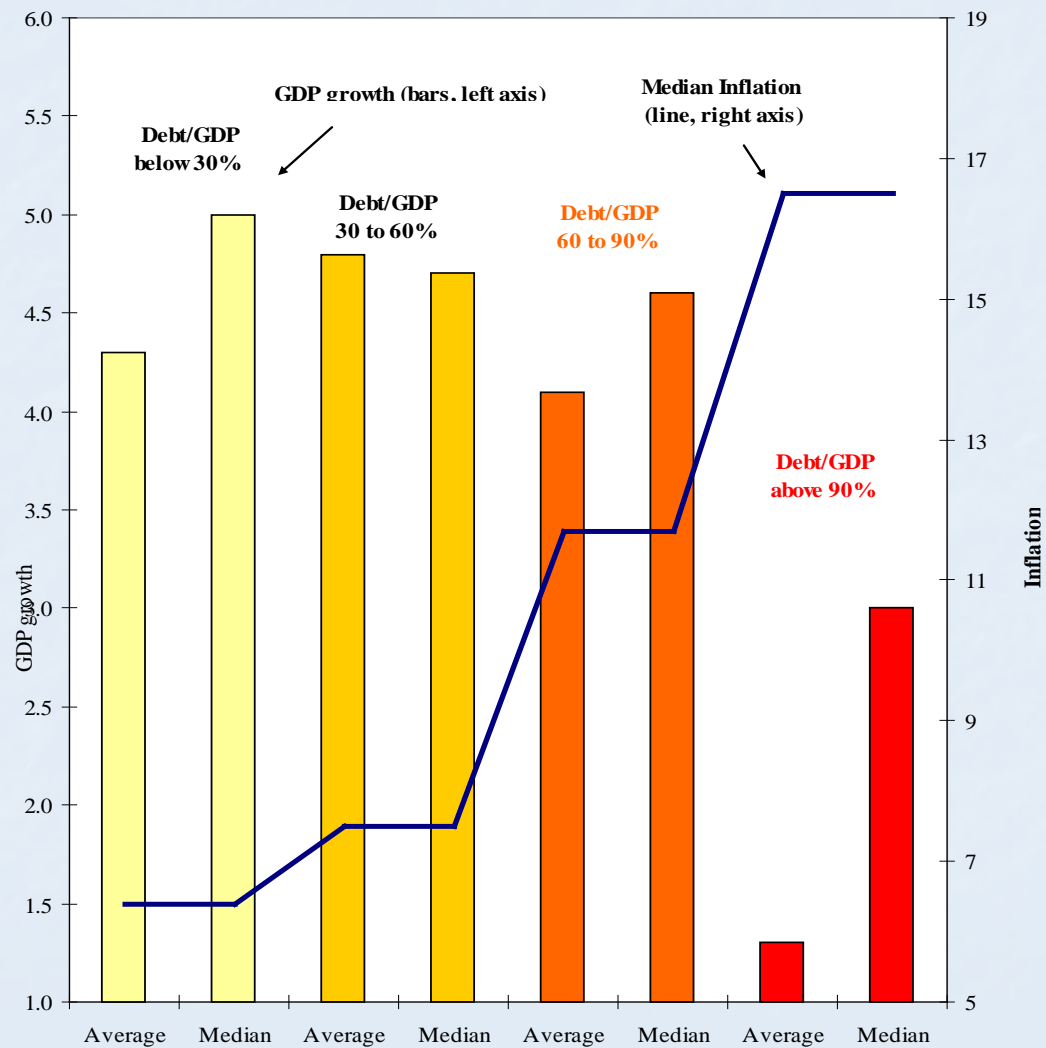
**The** empirical relationship between (gross central) government debt and real GDP growth is fairly weak for debt/GDP ratios below 90 percent of GDP. **At or above 90 percent, growth deteriorates markedly, with median growth rates falling by 1 percent, and average growth rates falling considerably more.**

*Surprisingly, we find that the threshold for public debt is similar in both advanced countries and emerging markets.*

# Central Government Debt, Growth, and Inflation: Selected Advanced Economies, 1946-2009



# Central Government Debt, Growth, and Inflation: Selected Emerging Market Economies, 1946-2009



# Final thoughts

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Countries that rely heavily on short term borrowing to fund growing debt levels are particularly vulnerable to crises of confidence. At the very minimum, this would suggest that traditional **debt management** issues should be at the forefront of public policy concerns.

Aside from high and rising levels of public (government) debt, many advanced countries, particularly in Europe, are saddled with extraordinarily **high levels of total external debt**. Both factors are important vulnerabilities to monitor.

Taken together, these trends raise the odds of **subpar growth** for some of the world's largest economies over the medium term.