A financial crisis led to a deep recession in the U.S. and around the world. A few unemployment rates:
Elements of Financial Crises

- Large decline in some asset prices
  - 2008–2009: Housing prices fell 30%.

- Insolvencies at financial institutions
  - 2008–2009: Banks and other institutions failed when many homeowners stopped paying their mortgages.

- Decline in confidence in financial institutions
  - 2008–2009: Customers with uninsured deposits began pulling their funds out of financial institutions.
Elements of Financial Crises

- Credit crunch
  - 2008–2009: Borrowers unable to get loans because troubled lenders not confident in borrowers’ credit-worthiness.

- Economic downturn
  - 2008–2009: Failing financial institutions and a fall in investment caused GDP to fall and unemployment to rise.

- Vicious circle
  - 2008–2009: The downturn reduced profits and asset values, which worsened the crisis.
Financial Crisis


http://www.imdb.com/title/tt1645089/?ref_=fn_al_tt_1

A quick youtube video on the credit crisis:

https://www.youtube.com/watch?v=bx_LWm6_6tA
Financial Crisis

- Banks, the stock market, the bonds market and a great many other institutions which we collectively refer to as the financial system, coordinate the economy’s saving and investment.

- But sometimes this leads to too much borrowing.

- This in turn leads to financial and economic crisis.

- In some sense the financial sector is so much more important than any other sector in the economy.

- A banking crisis can bring the national economy to complete stop.

- A banking crisis in one country can create huge problems for other countries.
Financial Crisis

This Time Is Different: Eight Centuries of Financial Folly

66 countries across 5 continents, a comprehensive story of eight centuries of financial crises, government defaults, and banking panics.

Authors:
Carmen Reinhart
Kenneth Rogoff
Financial Crisis

- The basic idea is very simple:
  - Too much debt accumulation, by the government, banks, firms, or consumers, creates great systemic risks.
  - These risks are overlooked during a boom. (boom: economic expansion)
  - But most of these debt-fueled booms end badly: in economic recession, and even depression.
Financial Crisis

During the debt fueled economic expansion ...

- Infusions of cash makes a government look like it is providing greater growth to its economy than it really is.

- Aggressive borrowing by the private sector inflates housing and stock prices far beyond their long-run sustainable levels, and make banks seem more stable and profitable than they really are.

- But large-scale debt buildups create risks because they make the economy vulnerable to crises of confidence, particularly when debt is short term and needs to be constantly refinanced.
Financial Crisis

Each time this happens (that is when debt levels rise etc)

- But the experts say: "this time is different"
- They claim that the old rules of valuation no longer apply and that the new situation has little similarity to past disasters.
- Financial professionals, and government leaders explain that we are doing things better than before, we are smarter, and we have learned from past mistakes.
- Each time, society convinces itself that the current boom, unlike the many booms that preceded catastrophic collapses in the past, is built on sound fundamentals, structural reforms, technological innovation, and good policy.

But then almost invariably the economy crashes!
Financial Crisis

This time it’s different:

In the run-up to the 2008 financial crisis, standard indicators for the United States, such as

1. asset price inflation, (housing prices, stock market)
2. rising leverage, (debt levels)
3. large sustained current account deficits, (Imports >> Exports)
4. a slowing economic growth,

showed all the signs of a country on the verge of a severe financial crisis.
During an Economic Crisis

Austerity measures:

Government policies during a period of bad economic conditions that reduce budget deficit using a combination of spending cuts or tax rises.
During an Economic Crisis

How to revive a depressed economy?

- In the debate, debt (mostly public debt) has become the key issue.

  - The conservatives (Ken Rogoff and Carmen Reinhart) say:
    
    The economy’s capacity for recovery is limited by too much government borrowing.

  - The liberals (Paul Krugman and Joseph Stiglitz) say:
    
    Only faster growth rates and higher GDP will reduce the relative weight of past debts.

    Austerity will shrink demand and slow growth, making the debt burden heavier.
Carmen Reinhart and Ken Rogoff have written a research paper on the relationship between national debt levels and economic growth:

"Growth in a Time of Debt"

Published in 2010 in AER – one of the most prestigious academic journals! Among top5!

Abstract: The authors investigate the effects of government debt levels on growth and inflation rates. They find that growth rates fall in advanced and emerging market economies when the public debt-to-GDP ratio exceeds 90 percent and that high debt levels are correlated with higher inflation only in emerging markets.
During an Economic Crisis

- The main result was:

  Countries with ratios of public debt to GDP above 90% have their GDP decrease by about 0.1% annually.

- Reinhart and Rogoff heavily used this finding to defend/promote **austerity policies** used by governments to reduce debt levels.
During an Economic Crisis

How do countries reduce debt levels?

- They reduce government spending, and increase tax revenue.
- Governments reduce spending also by cutting welfare benefits to the low income households.
  1. child benefit programs,
  2. income support programs,
  3. health benefits,
  4. public education, etc.,
- They also reduce salaries of government employees, and payments to the pensioners
Example: Greece

In 2010,

- GDP: €227.3 billion
- National debt: €329.4 billion (144.9% of GDP)
- Gov’t Budget: €113.9 billion (49.5% of GDP)
- Annual deficit: €24.1 billion (10.6% of GDP)
- Unemployment rate: 21.7%
Example: Greece

Greece has received two bailout packages from the EU and IMF.

The first package (May 2010) was worth €110 billion while the second package (February 2012) amounted to an additional €130 billion.

The terms of these bailouts include measures for the liberalization of protected economic sectors.

In addition, the second bailout requires Greece's private creditors to accept a 53 percent write-down on the face value of their €200 billion in holdings.

The aim was to bring Greece’s national debt to around 120 percent of GDP by 2020 from the 145 percent.
Example: Greece

The bailouts mandated for austerity measures:

- Reduction in the government’s operational spending by €200 million
- Reduction of supplementary pensions between 10 to 20 percent
- Removal of allowances for families with annual incomes above €45,000, unless they have five or more children
- Reduction of wages for local political staff of 10 percent
- Reduction in the minimum wage by 22 percent
- Reduction of tax exemptions for a number of categories
- Reduction of health spending of over one billion
Example: Greece

The bailouts mandated for austerity measures:

- Domestic public investment cuts of €400 million
- Defense cuts of €300 million
- Retirement age raised from 61 to 65 predicted to save €1.28 billion in 2012 alone
- Reduction of 150,000 public-sector jobs through hiring freeze and elimination of temporary contracts
- Reduction in public-sector salaries by 15 percent

Example: Greece

- On 1 May 2010, the Greek government announced a series of austerity measures, which were met with great anger by the Greek public, leading to massive protests, riots and social unrest throughout Greece.
- On 5 May 2010, a national strike was held in opposition to the planned spending cuts and tax increases.
- Nevertheless, extra austerity measures was approved on 29 June 2011, with 155 out of 300 members of parliament voting in favor.
Another Example: UK

- A 24% cut to the Department of Culture (includes BBC)
- Raise the retirement age from 65 to 66 by 2020
- Eliminate 490,000 public sector jobs over the next 4 years
- University funding cuts
- Lower long-term unemployment benefits
- Eliminate benefits to those who do not seek jobs
- Reduce child benefits
- Other funding cuts to the public health services
- The VAT tax rises from 17.5 to 20%
Debt, Growth and Austerity Measures

- Back to Reinhart & Rogoff paper. The main result was: **Countries with ratios of public debt to GDP above 90% have their GDP decrease by about 0.1% annually.** They used this finding to defend/promote **austerity policies** used by governments to reduce debt levels.

- THEN…
Debt, Growth and Austerity Measures

THEN…

- In April 2013, something funny happened.
- In an econometrics course taught by Professors Michael Ash and Robert Pollin at the University of Massachusetts Amherst, Thomas Herndon, a graduate student in economics, was required to replicate the calculations in a significant work in economic literature, to demonstrate his knowledge of and proficiency in empirical economics.
- Thomas chose the Reinhart-Rogoff paper.

BUT …

He couldn’t replicate the results.

No matter how many times he repeated his calculations, he kept getting different results!
Debt, Growth and Austerity Measures

- ‘…We find that selective exclusion of available data, coding errors and inappropriate weighting of summary statistics lead to serious miscalculations that inaccurately represent the relationship between public debt and GDP growth among 20 advanced economies. Over 1946–2009, countries with public debt/GDP ratios above 90% averaged 2.2% real annual GDP growth, not −0.1% as published.’
Debt, Growth and Austerity Measures

Does high public debt consistently stifle economic growth? A critique of Reinhart and Rogoff

Thomas Herndon, Michael Ash and Robert Pollin*

We replicate Reinhart and Rogoff (2010A and 2010B) and find that selective exclusion of available data, coding errors and inappropriate weighting of summary statistics lead to serious miscalculations that inaccurately represent the relationship between public debt and GDP growth among 20 advanced economies. Over 1946–2009, countries with public debt/GDP ratios above 90% averaged 2.2% real annual GDP growth, not −0.1% as published. The published results for (i) median GDP growth rates for the 1946–2009 period and (ii) mean and median GDP growth figures over 1790–2009 are all distorted by similar methodological errors, although the magnitudes of the distortions are somewhat smaller than with the mean figures for 1946–2009. Contrary to Reinhart and Rogoff’s broader contentions, both mean and median GDP growth when public debt levels exceed 90% of GDP are not dramatically different from when the public debt/GDP ratios are lower. The relationship between public debt and GDP growth varies significantly by period and country. Our overall evidence refutes RR’s claim that public debt/GDP ratios above 90% consistently reduce a country’s GDP growth.
Debt, Growth and Austerity Measures

From BBC:

- This week, economists have been astonished to find that a famous academic paper often used to make the case for austerity cuts contains major errors.
- Another surprise is that the mistakes, by two eminent Harvard professors, were spotted by a student doing his homework.
Debt, Growth and Austerity Measures

Corrected Graph:
Debt, Growth and Austerity Measures

Paul Krugman (Nobel Prize winner in 2008) wrote in his NY Times column/blog

The Conscience of a Liberal

PAUL KRUGMAN

‘..So there’s a clear negative correlation between debt and growth, although no cliff at 90 percent or actually anywhere. The absence of a cliff is crucial: whereas R-R like to say that debt going above 90 percent cuts your growth rate by 1 percentage point, what we actually find is that raising the debt ratio by 45 points cuts growth by 1 point, which is a very different implication.’
Debt, Growth and Austerity Measures

Krugman continues,

- OK, Reinhart and Rogoff have said their piece. They deny asserting that the debt-growth relationship is causal.
- But …
  - They keep making statements that suggest that it is.
  - They deny having been strong austerity advocates.
- But …
  They were happy to enjoy the celebrity that came with their adoption as austerian mascots, and never said anything against the “90 percent!” rhetoric that was used to justify sharp austerity.

From: