

---

# **What Lessons Have We Learnt from the Global Financial Crisis?**

**Robert E. Marks  
Economics, University of New South Wales  
and University of Melbourne, Australia.**

**presented at the Royal Society of New South Wales**

**4 June 2014**

**based on the paper in  
*The Journal and Proceedings of the Royal Society of New South Wales,*  
146 (447 & 448), June 2013, pp. 3–16, and A1–A43.**

[http://royalsoc.org.au/generator/assets/journal/J\\_Proc\\_RSNSW\\_Vol\\_146\\_1\\_Nos\\_447\\_448\\_Marks.pdf](http://royalsoc.org.au/generator/assets/journal/J_Proc_RSNSW_Vol_146_1_Nos_447_448_Marks.pdf)

---

## **“The Equivalent of Cardiac Arrest”**

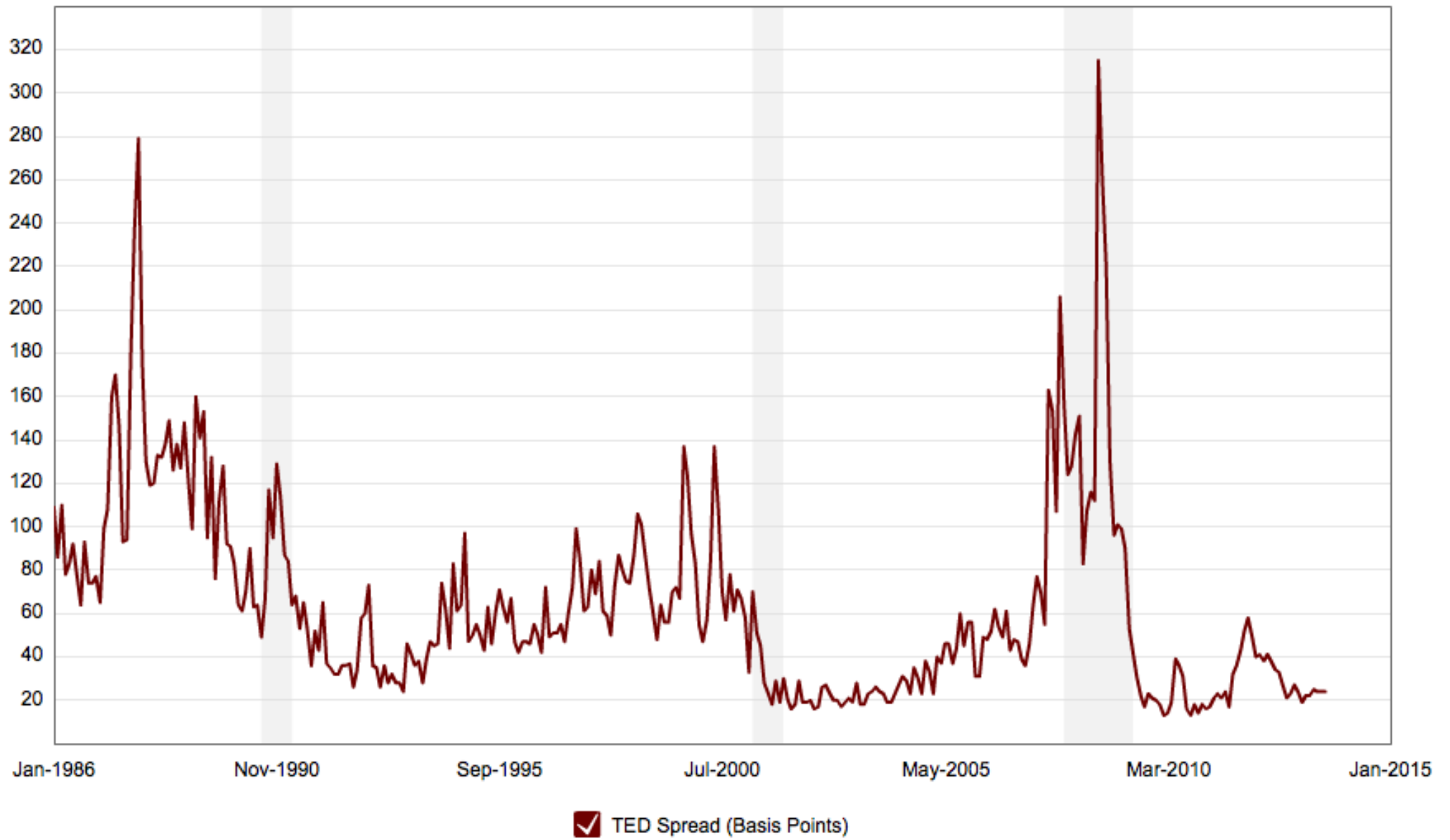
**October 13, 2008, the *Financial Times* characterised the western world’s banking system as having a coronary.**

**“It is now virtually impossible for any institution to finance itself [borrow] in the markets longer than overnight.”**

**– The freezing of the interbank credit market, less than a month after Lehman Brothers collapsed.**

**Counterparty risk was seen as prohibitive to prospective lenders, at any price.**

**See the spike in the TED spread = Libor – US bond yield.  
(The London Interbank Borrowing Rate minus the risk-free = a measure of risk.)**



---

## Some Relevant Definitions

***A financial asset:*** an intangible asset, valuable because of a contractual claim, e.g. bank deposits, bonds, shares.

***A security:*** a tradeable financial asset, including derivatives

***An Asset-Backed Security (ABS):*** backed by a pool of assets

***A Mortgaged-Backed Security (MBS):*** and ***A Collateralized Mortgage Obligation (CMO):*** backed by a pool of mortgages

***A Credit Default Swap (CDS):*** the seller will pay the buyer if e.g. a loan defaults; like insurance, but the buyer may profit, and the buyer may not own the asset (a “naked” swap): really a bet. ***A credit derivative.***

---

**1. What caused the GFC? *and***

**2. How can we attempt to avoid other such crises in future?**

**To try to answer these two related questions, we must see what happened, when.**

**Six years ago I started a timeline of the crisis, for my own purposes: things were happening too fast.**

**Go to the link on the cover page to see the Timeline (from June 1720 to March 2014) and to read a discursive version of this talk, at**

<http://www.agsm.edu.au/bobm/papers/marksfinal.pdf>

---

## **Necessity and Sufficiency**

**Ideally, want to identify the *necessary* conditions for the GFC  
– factors without which the GFC would not have occurred.**

**But instead we identify a number of plausible *sufficient*  
conditions**

**– those factors that preceded, accompanied, and followed  
the GFC.**

**From these, which are the most important?**

**To avoid future crises, this is vital.**

---

**I focus on:**

- 1. six changes to U.S. legislation from 1977 to 2008;**
- 2. changes in financial institutions' ownership;**
- 3. several new financial technologies;**
- 4. a couple of market and extra-market events;**
- 5. three regulatory changes that might have contributed to the financial crisis of 2008, and one change in response to events in 2008;**
- 6. and at least six changes in corporate behaviour.**

---

## **I. Six Changes to U.S. Legislation from 1977 to 2008:**

**1977: *The Community Reinvestment Act***, offered U.S. lending institutions incentives to issue loans to low-income borrowers.

**1980: *The Depository Institutions Deregulation and Monetary Control Act***, eliminated all usury controls on U.S. mortgage rates

**1988 September 13: *The Fair Housing Act***, prohibited discrimination in the U.S. housing market.

**1999 November 12: *The Gramm-Leach-Bliley Financial Services Modernization Act***, repealed the Glass-Steagall Act of 1933.

**2000 December 21: *The Commodities Futures Modernization Act***, allowed U.S. banks to continue to self-regulate OTC derivatives

**2008 July 30: *The Federal Housing Finance Regulatory Reform Act***, created the Federal Housing Finance Agency

---



---

## **2. Changes to Corporate Ownership:**

**1981 August 1: Investment bank Salomon Brothers, a private partnership since its founding in 1910, sells itself to Phibro Corporation, a commodities firm. (Before, the partners' own money; now, other people's money.)**

**1999: the last Wall Street investment bank to do so is Goldman Sachs.**

**1997 October 1: Northern Rock floats as a demutualised building society.**

**In 2007, it suffers the first bank run in the UK since 1866.**

---

### **3. Several New Financial Technologies;**

**1977: With the Bank of America, Salomon Brothers issues the first privately backed Mortgage-Backed Securities (MBSs).**

**1988: Citibank invents the Structured Investment Vehicle (SIV). (Until 2008, kept off parent banks' balance sheets.)**

**1997 December: A team at JP Morgan develop many of the credit derivatives that are intended to remove risk from companies' balance sheets, including the Credit Default Swap (CDS).**

**1983 June: Larry Fink (now of BlackRock) is the co-inventor, for Freddie Mac, of the Collateralized Mortgage Obligation (CMO).**

---

---

## **An example of a CMO from Goldman Sachs**

**In August 2006 the best tranche in the residential mortgage pool (known as GSAMP 2006-S5) was rated (twice) at AAA. (The pool holds \$338 million of second mortgages to sub-prime (SP) borrowers.)**

**A year later Moody's downgrades this to Baa, the lowest investment-grade level.**

**Four months later it is downgraded to "below investment level."**

**In April 2008 it is downgraded to "junk" rating.**

**By December 2008, it is no longer traded.**

---

## **4. Market and Extra-market Events:**

**2001 September 11: The destruction of the World Trade Center, following soon after the bursting of the tech bubble.**

**2001: U.S. monetary policy (the “Taylor gap” with prolonged low interest rates) and fiscal policy (going into massive deficit as a consequence of the costly invasions of Iraq and Afghanistan and the Bush tax cuts) after the Al Qaeda attacks will exacerbate global financial imbalances.**

**The U.S. borrows (& sells bonds) while China & Asia save.**

---

## **5. Some Regulatory Changes:**

**2004 July 21: The SEC launches the “Consolidated Supervised Entities” program, which finesses European regulation, and relaxes capital requirements → higher gearing.**

**2007 July 6: After 73 years, the U.S. Securities Exchange Commission (SEC) eliminates the “uptick rule.”**

**2008 July 21: The SEC bans “naked” short selling of the stocks of Fannie Mae and Freddie Mac and 17 large finance companies.**

**2008 October 7: Before the congressional Committee on Oversight and Government Reform, the former chief accountant at the SEC reveals that the SEC’s Office of Risk Management was cut back to a single employee.**

---

## **6. Changes in Corporate Behaviour:**

**In the 1970s: credit ratings firm Moody's began to charge the firms whose products they were rating, rather than the potential buyers of these products.**

**1986 June: American pension funds hold about \$30 bn of CMOs; three years earlier? — none. 1987: The London office of Salomon Brothers sells \$2 bn of the first tranche of CMOs to international (European) banks.**

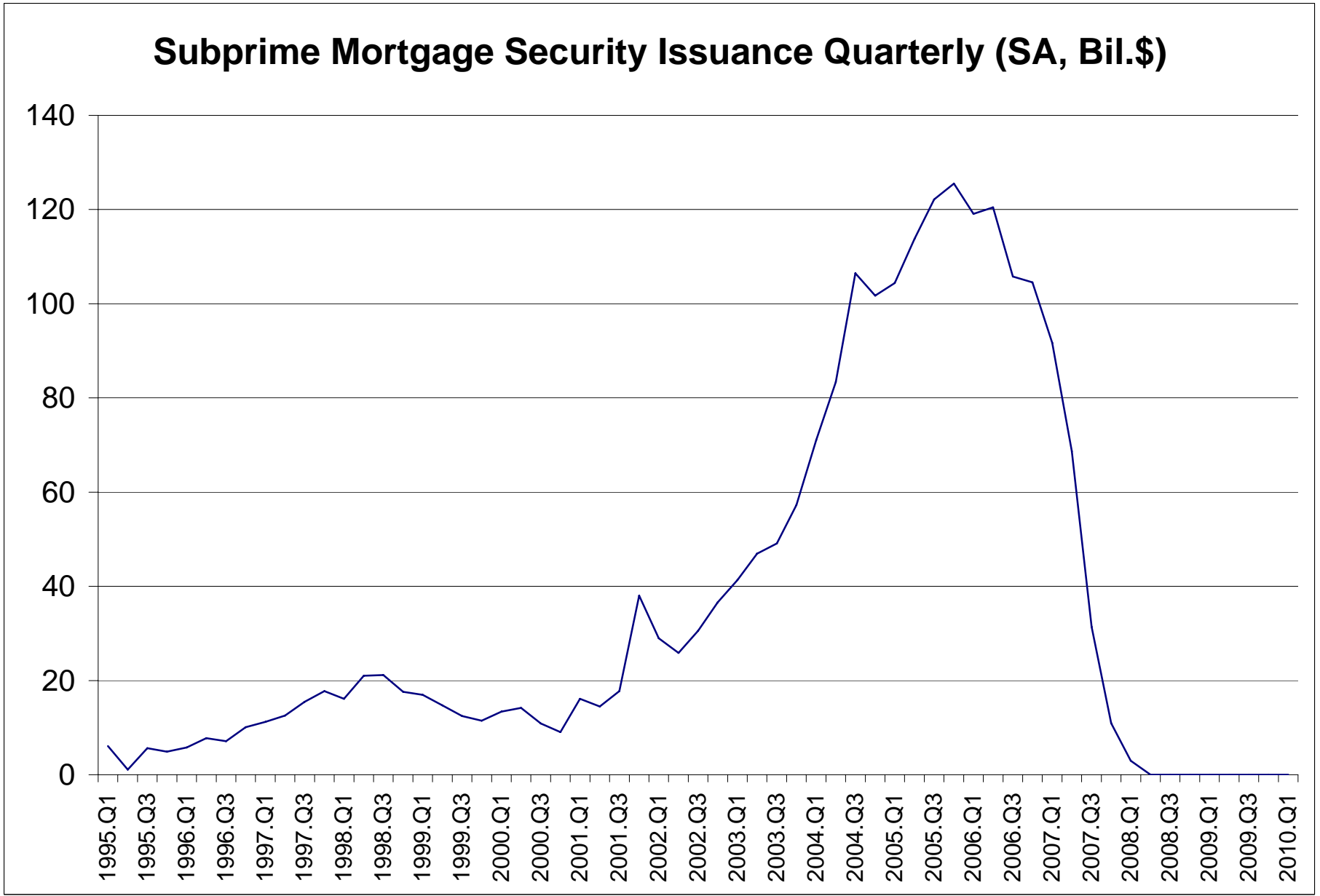
**1998: Insurer AIG FP begins to write Credit Default Swaps (CDSs), at first with JP Morgan.**

**1999 September: U.S. govt entity Fannie Mae eases credit requirements on mortgage loans it will buy from banks and other lenders.**

**2004 July 21: Before the “Consolidated Supervised Entities” program, gearing of 12:1 is typical; after, more like 33:1 (and up to 40:1 in the case of Merrill Lynch).**

**2006: In Q4 2005 the issuance of SP mortgages peaked at \$125 bn.**

# Exhibit 4



---

## Incentives

**Firms respond to incentives.**

**Managers respond to incentives.**

**Intelligent managers might attempt to change the incentives they face, or that their company faces.**

**More intelligent managers might see that behaviour that is *individually rational*, given the incentives all face, is *collectively irrational*: think the Prisoner's Dilemma; think CEO Charles Prince and his “music.”**

**Executives in the U.S. financial sector successfully lobbied to ease the restrictions their firms faced — to change the incentives they operated under: see the successive easing of restrictions above, both legislative and regulatory.**

---



---

## **John Cassidy's "Utopian Economics"**

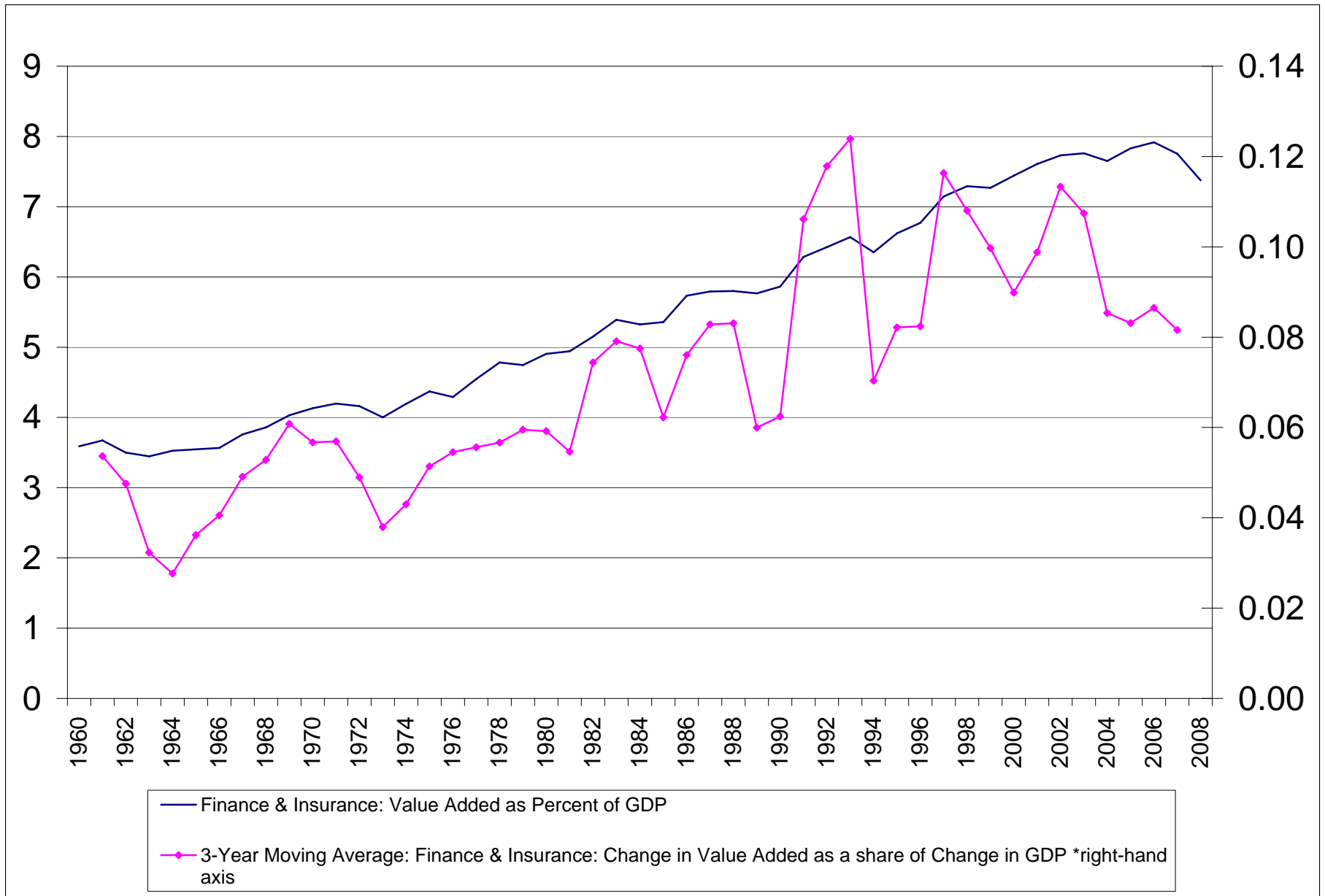
**The U.S. financial sector grew in relative (and absolute) size from 3½% in 1960 to almost 8% of GDP in 2008 (Greenspan 2010, Exhibit 7, following).**

**U.K. — 9%, Australia — 10.5%**

**The market share of the five largest U.S. banks rose from 8% in 1995 to 36.5% in June 2010.**

**Institutions too big to fail?**

# Exhibit 7



---

## **Big is Beautiful?**

**Was there a corresponding increase in the contribution of the U.S. finance sector to the real economy? Paul Volcker (ex-Fed chief) doubts it. Others might too.**

**But a belief in the efficiency of real-world markets and the absence of such market failures as uncertainty, asymmetric information, increasing returns (although not apparently for banking) will allow one to look at Greenspan's Exhibit 7 and say, There you are!**

**But TBTF results in *moral hazard*, which accelerates the disparity in market sharer: lower risk-adjusted cost of capital, greater lobbying power.**

---

## So, the Causes?

### Four, I believe:

- **1999 November 12: repeal of the Glass-Steagall Act**
- **2000 December 21: the explicit decision of Congress not to regulate derivatives; and**
- **2004 July 21: a regulatory change allowing Wall Street banks to expand their gearing threefold or more.**
- **The change in the credit ratings firms' customers changed these firms' incentives for the worse, in a world of asymmetric information.**

**Failures of regulation, not acts of venality. (This raises the question: *how* did these changes occur?)**

**Simple to say, but so what, or what now?**

---

## ***The Economist's Causes***

- 1. The financiers' irrational exuberance: risk was lost track of, not banished.**
- 2. The negligence of the regulators.**
- 3. Complacency from the growth, low volatility and low inflation during "The Great Moderation" (from 1985 to 2007).**
- 4. The "savings glut" in Asia, and global imbalances.**
- 5. The European banks' borrowings of questionable U.S. securities (after 1986).**

**INSIDE THIS WEEK: TECHNOLOGY QUARTERLY**

# The Economist

SEPTEMBER 7TH-13TH 2013

[economist.com](http://economist.com)

Obama's Syrian cliffhanger

Xi's party purge in China

Mobile telecoms' two big deals

Rebellion v reform in Mexico

Farming as rocket science

## Five years on **Where's the next Lehman?**



---

## **Where's the next Lehman? *The Economist's Answer:***

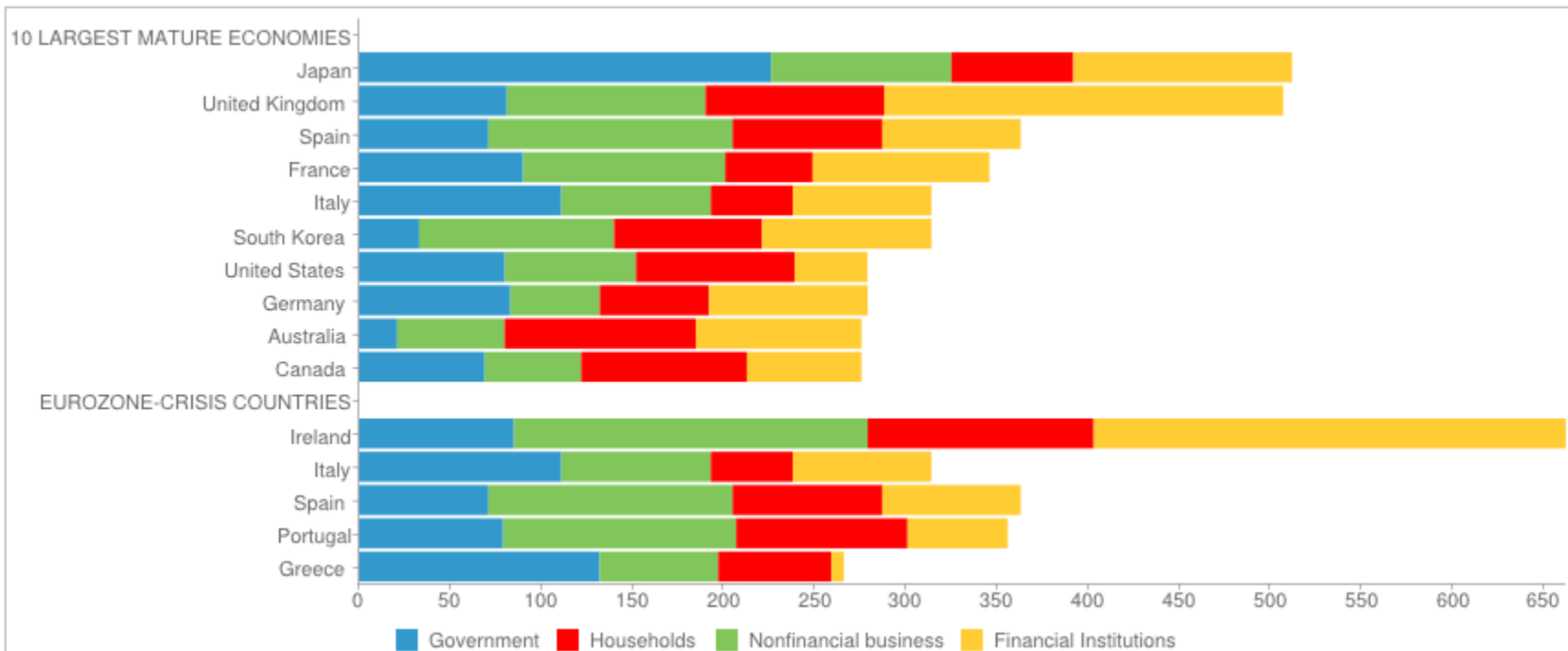
### **Possibly Europe:**

- its debt problems are growing: thinner equity buffers than the U.S. banks**
- the imbalances in the Eurozone between north and south – and the austerity measures (“fiscal consolidation”) – mean it’s harder to reduce debt burdens**
- lack of adequate fiscal and monetary reforms, and untested resolve**

**Remember: post-Lehman, TBTF might result in greater risk-taking, not less, because of moral hazard.**

---

# Debts as % of GDP



Krugman, "The spread of the crisis, " 2010 data



---

## Reflections:

### 1. Structure or Agency?

In 2008 I included Structure (the laws, rules, financial system topology) only, since then have included Agency (names, degrees, institutions, & dates.)

### 2. Greed? or Envy? (At the Agency level.)

Gordon Gekko (1987): “Greed is good.”

→ collusion, me and my \$\$

But Thorstein Veblen (1899): envy, not greed.

→ competition: me against others

George Santayana (1905): “Those who cannot remember the past are condemned to repeat it.”

---

## **The Future**

**Focussing on Australia: we were well served by the “Four Pillars Policy” (I have to admit), and, as ex-RBA chief Ian McFarlane argued in 2009, our savings short-fall.**

**But we too rely on the credit ratings firms. And smaller countries are potentially more vulnerable to poor ratings.**

**In the future, a need to look beyond the nostrums (and mathematical elegance) of the General Equilibrium Model, to a real world in which asymmetric information, incentives to lobby to change incentives, uncertainty (rather than risk) is pervasive mean that there are no simple answers, even ignoring distributional issues, to questions of efficiency in the financial sector.**

---

## **The Governor of the Bank of England (2014)**

**“financial capitalism is not an end in itself, but a means to promote investment, innovation, growth and prosperity.”**

**“Capitalism loses its sense of moderation when the belief in the power of the market enters the realm of faith.”**

**“Market fundamentalism ... contributed directly to the financial crisis ...”**

**“there was widespread rigging of benchmarks for personal gain.”**

**— Mark Carney, 27 May 2014**

**“Inclusive capitalism: creating a sense of the systemic”**

---