The Great Depression

A Brief Background for the Great Recession

How to turn a Recession into a Depression

- Allow *highly leveraged lending by unregulated banks* to fund a stock market bubble
- Burst the stock market bubble by substantially increasing interest rates and decreasing money supply (Kill a mosquito with a sledgehammer)
- Compress economic activity by decreasing government spending and increasing taxes
- Watch half the banks fail and do nothing to stop it
- Destroy international trade by imposing tariffs and starting a worldwide trade war (Smoot Hawley)
- Put “America First” – refuse to cooperate with other countries – setting the stage for Hitler, WWII, and more human misery
- Stand by, do nothing, and watch the misery grow!

Stock Market Performance - 1920's

- 1922: +22%
- 1923: -7%
- 1924: +16%
- 1925: +27%
- 1926: +5%
- 1927: +27%
- 1928: +53%

Stock Market Performance – Late 1920's

- 1929: -20%
- 1930: -30%
- 1931: -54%
- 1932: -23%

Massive Bank Failures in the United States

The Depression Disease that Infected the Entire Economy

- 1929: 659
- 1930: 1,350
- 1931: 2,293
- 1932: 1,453
- 1933: 4,000
- Total 9,755 Approximately ½ of all banks

- Several states with no operating banks
- 25% Mortgages in Default

The Great Recession of 2008

Ten Years Later

88 Years after the Great Depression

Bob Srenaski

~~Love~~ Money Makes the World go round.

“Those who do not remember the past are condemned to repeat it.”

George Santayana, 1863-1952

78 Years After the Great Depression

The Great Recession

A Global Financial Meltdown

(almost)

Financial System Freeze Up

- 2007 – 2008: International Capital Flows down 90%
- 2008 – 2009: Global Stock Markets lose $27 Trillion (-47%)
- 2008 – 2009: 800,000 US Jobs Lost each month

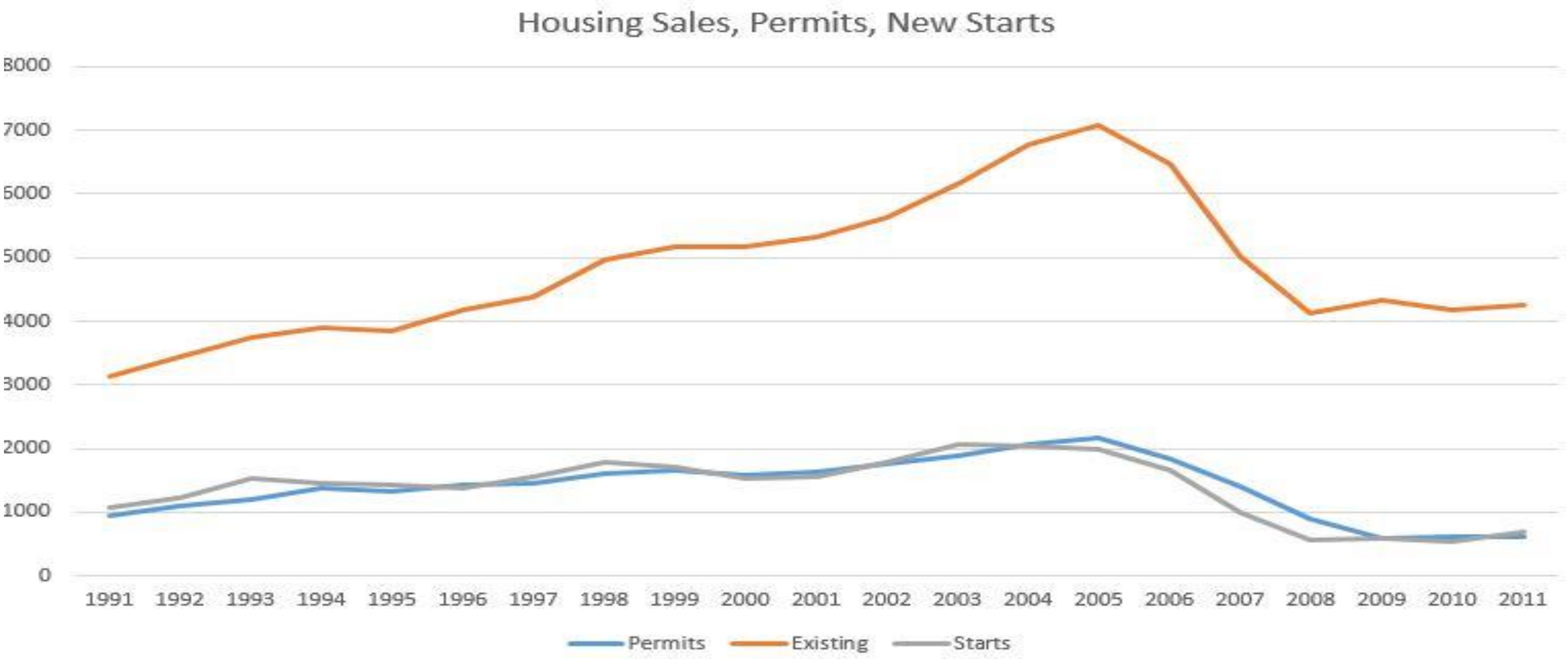
The U.S. Housing BOOM

"Bubble, Bubble, Toil and TROUBLE!"

Housing Bubble Ignited by Fed Stimulus

- 2001 Eight months U.S. recession (dot com & 9/11
- Federal Reserve begins dropping interest rates – 1% by 2003
- Lots of money seeking higher returns

The Housing Bubble



Government Home Ownership Promoters

- Fannie Mae (Federal National Mortgage Corp), est 1938, GSE, purchases mortgages from banks - securitizer

- Freddie Mac (Federal Home Loan Mortgage Corp), est 1970, GSE purchases mortgages from Savings & Loan Associations - securitizer

- Ginnie Mae (Federal National Mortgage Association), est 1968, Fed. Gov owned. Guarantees FHA, VA, HUD, etc. Mortgages

Securitizing? What's that all about?

- Fannie Mae buys mortgages from banks.
- 40 mortgages averaging $250 thousand each.
- The "pool" is $10 million (40 x $250,000)
- Create 1,000 new securities – $1,000 bonds
- The mortgage "pool" is the collateral for the new bonds (MBS's)
- Bonds are rated AAA by ratings agencies (Fitch, Moody's, Standard & Poor's) and sold on the bond markets
- Money from sale of the bonds used to buy more mortgages
- Process continues to fund growth of home ownership

Securitizers – the Old and the New

- Pool huge number of mortgages, which are long-term assets, create new securities , and sell them in smaller denominations. Those can then be resold or traded like stocks, except they are bonds backed by the mortgages. MBS's (Mortgage Backed Securities), or CDO's (Collateralized Debt Obligations).
- Fannie Mae and Freddie Mac (GSE"s)
- Bank Of America, JP Morgan Chase, Goldman Sachs, Deutsche Bank, UBS, Morgan Stanley, Merrill Lynch, Bear Sterns, Lehman Brothers, and more.

Subprime Mortgages

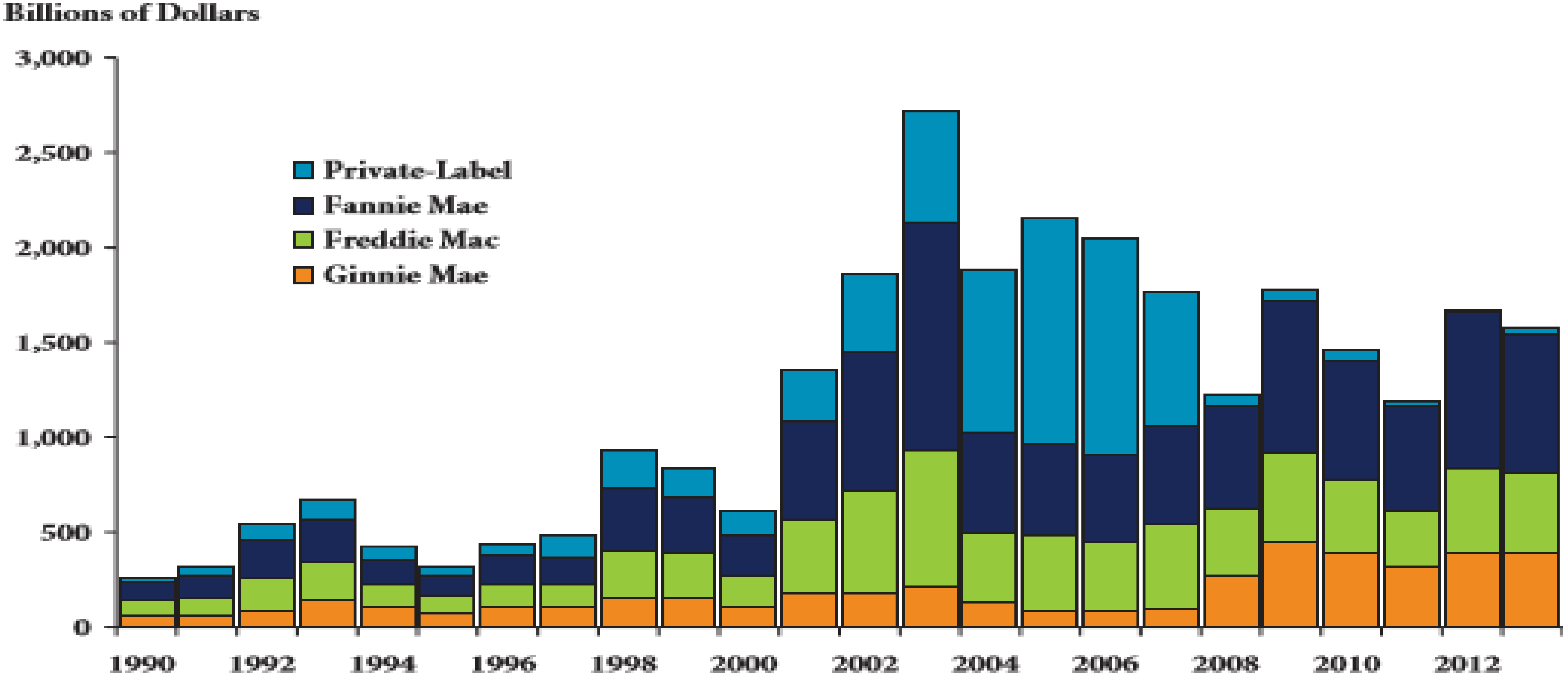
- ~~Traditional 20% 30-yr Mortgage~~
- Alt-A
- Low-Doc
- No-Doc
- 2-28 ARM (30-40% of all total mortgages)
- 3-27 ARM
- Option-ARM
- Int-Only

The Originators

- The subprime originators Ameriquest, Countrywide Financial, Ditech, Alliance Mortgage, plus 16 others (the top 25)

- Originated $105 Billion loans in 2000
- $188 Billion loans in 2002
- $310 Billion loans in 2003
- Thousands more originated $600 billions by 2006
- All to be turned into toxic Mortgage Back Securities (MBS) and CDO’s

Figure 1.5. Issuance of Mortgage-Backed Securities, 1990–2013



Source: Inside MBS & ABS, Inside Mortgage Finance.
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GREED

"Get while the gettin's good"

IBGYBG

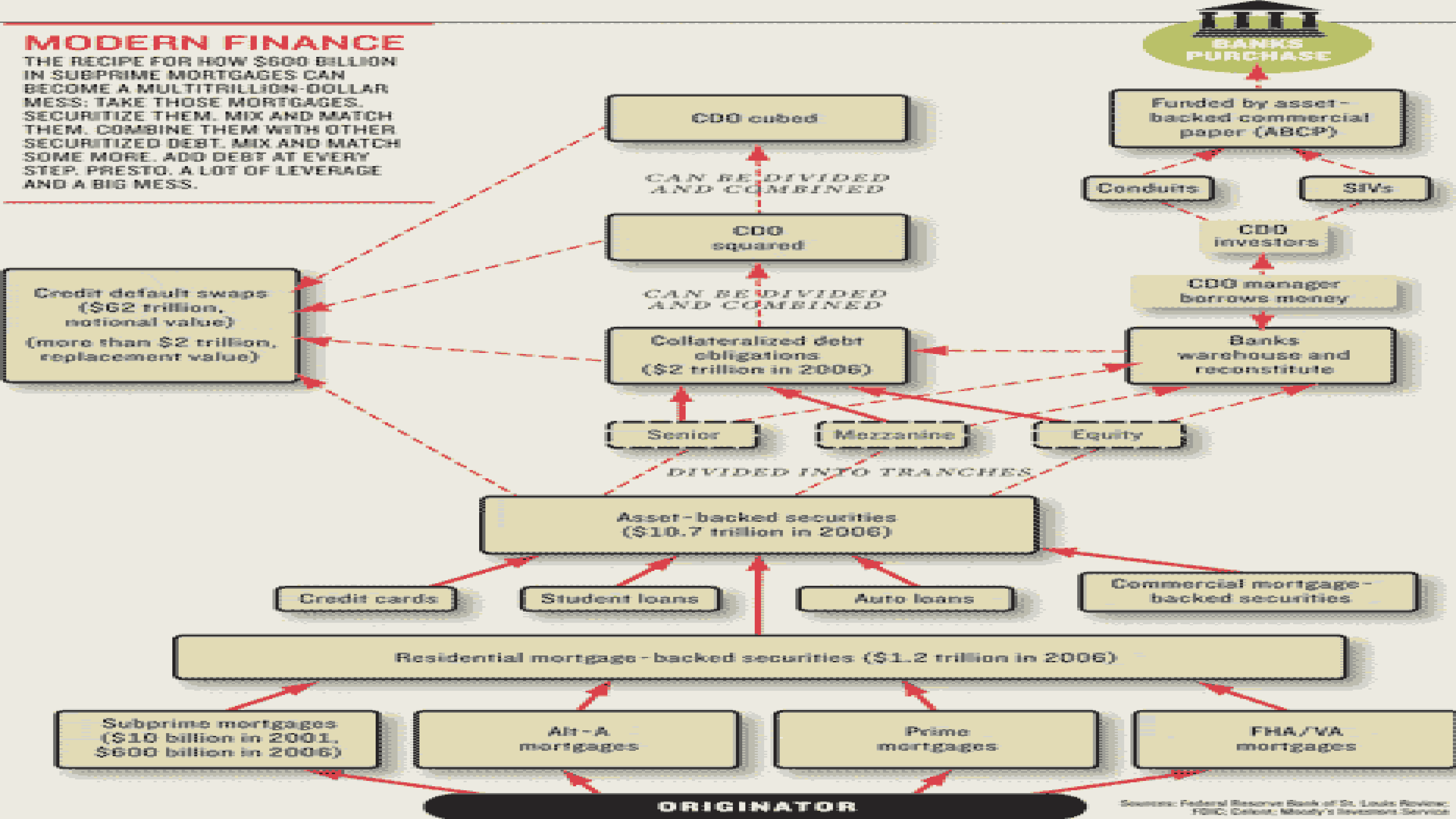
“Modern Finance”

The recipe for how $600 Billion in subprime mortgages can become a $10.7 Trillion mess:

- Take those mortgages, securitize them, mix and match them.
- Combine them with other securitized debt.
- Mix and match some more.
- Add debt at every level.
- Get AAA Rating

MODERN FINANCE

THE RECIPE FOR HOW $600 BILLION IN SUBPRIME MORTGAGES CAN BECOME A MULTITRILLION-DOLLAR MESS: TAKE THOSE MORTGAGES. SECURITIZE THEM. MIX AND MATCH THEM. COMBINE THEM WITH OTHER SECURITIZED DEBT. MIX AND MATCH SOME MORE. ADD DEBT AT EVERY STEP. PRESTO. A LOT OF LEVERAGE AND A BIG MESS.



Sources: Federal Reserve Bank of St. Louis Review; FDIC; Celent; Moody's Investors Service

The Virus Spreads Worldwide

- US and International Banks buy U.S. Mortgage Back Securities because:
- U.S. Home Mortgages were nearly as safe as U.S. Government Bonds: 1991-2001 defaults: 0.15%
- For every million dollars in outstanding mortgage balances, banks actually lost ONLY $1,500
- So, (MBS) Mortgage Backed Securities (bonds) must be just as good.
- AND THEY ARE AAA RATED!!!!

Leverage - Buying CDO’s on Credit

- Short-term money buying long-term assets
- Shadow Banking Industry – broker-dealers, money market mutual funds (MMF), hedge funds, insurance companies, other nondepository institutions provide short-term money
- Repos
- Commercial Paper (CP’s)
- Asset Backed commercial Paper (ABCP’s)
- Buyers were MMF’s

LEVERAGE

- **Ratio of Equity to Purchased Asset Value**
- **Asset to Equity Ratio**

200/40 = 5:1 (20%)   200/20 = 10:1 (10%)

200/5 = 40:1 (2.5%)

("How much skin in the game")

Using Leverage to Refinance & Speculate

- 10% of all 2005 home sales were “investor, speculator, or second homes – LEVERAGE

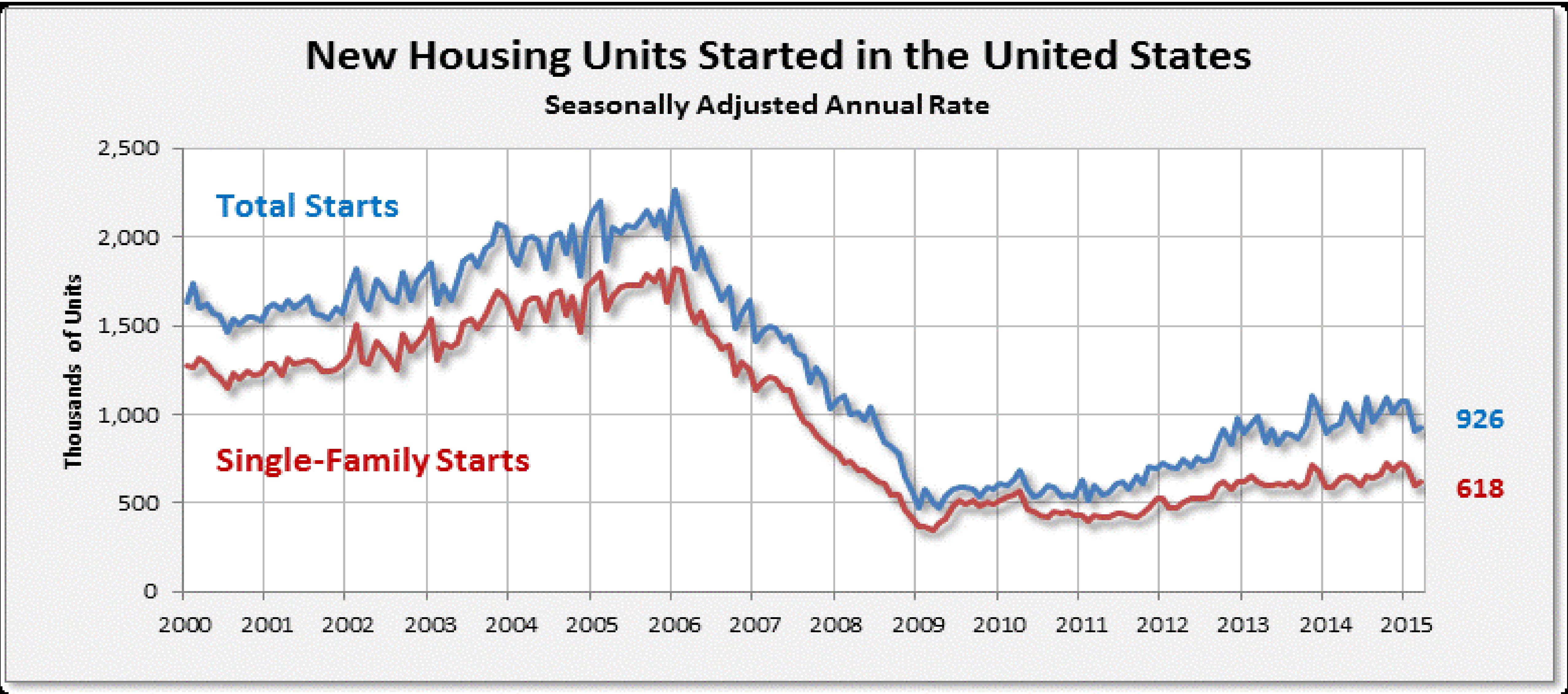
- And houses got bigger – McMansions - LEVERAGE

- By refinancing, owners took out $2.0 Trillion, 2000-2007 – Houses became ATM’s - LEVERAGE

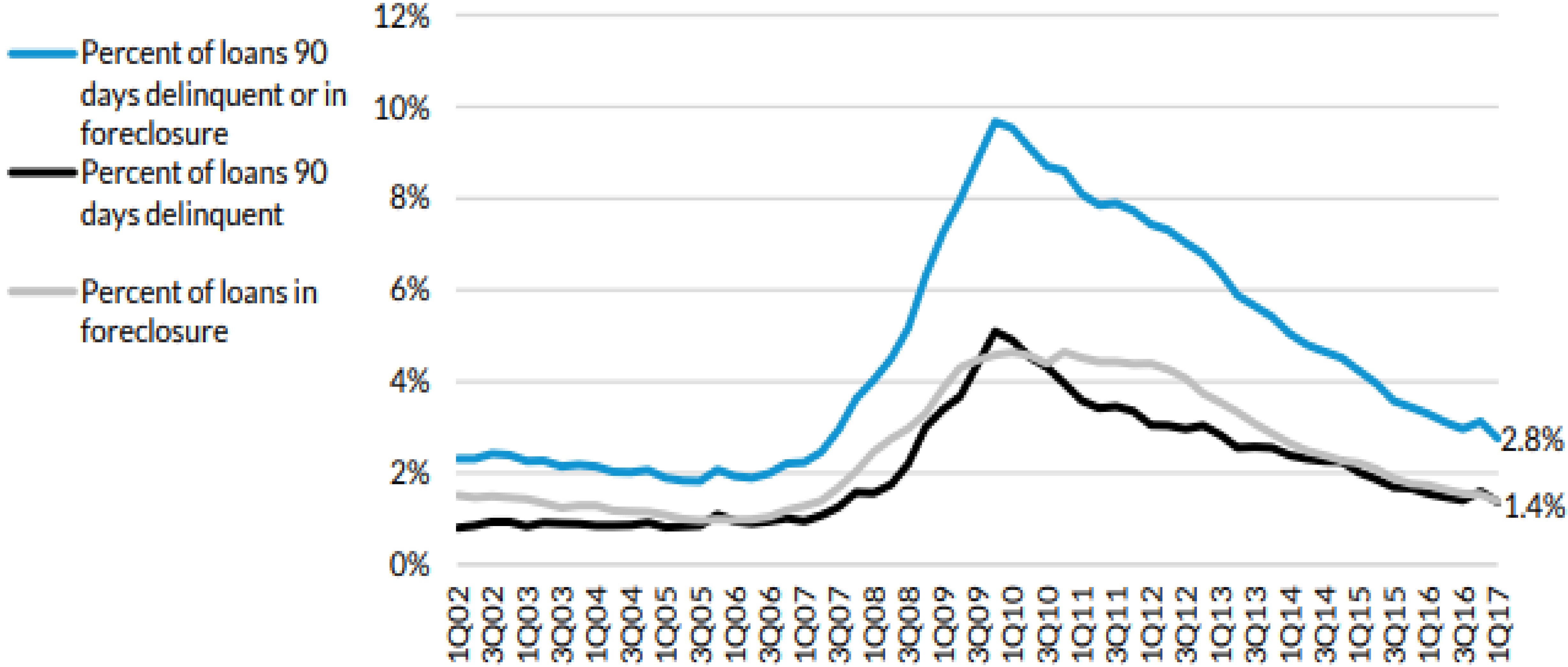
2005 Housing Bubble Bursts

- Mortgage Defaults Accelerate
- Sewer Starts Backing-up

The Housing Bubble



Mortgage Foreclosures Increase



Global Financial Crisis

Suddenly the Music Stopped

The “Financial Accelerator”

- “Bank failures fuel economic weakness which fuels more bank failures which in turn fuels more economic weakness.”

- A reduction in borrowing ability (credit)results in declining asset values which serve as the collateral for borrowing. The decline in the value of collateral results in further declines in borrowing (credit availability), which in turn drives the value of assets down further.

- By Ben Bernanke

Those Two Dirty Words

ILLIQUID

INSOLVENT

LEVERAGE

The Bankers Who Saved the World

- Benjamin S. Bernanke, Chairman of the Federal Reserve System of the United States (The FED)

- Jean-Claude Trichet, President of the European Central Bank (ECB)

- Mervyn King, Governor, Bank of England (shared adjoining office with Bernanke at MIT)

Bagehot’s Rule – How to Save the Banking System

- Lend freely, on good collateral, and charge a penalty interest rate ‘that no one may borrow out of idle precaution without paying well for it.’
    - Walter Bagehot (1826 – 1877)

The Sky Is Falling! The Sky Is Falling

Worldwide

Thursday, 9 August 2007

BNP Paribas

Gigantic French bank BNP Paribas suspends withdrawals from three of its investment funds

Friday, 14 September 2007

Northern Rock

English bank Northern Rock failing due to mortgage market rumors and run on the bank.

Friday, 14 March 2008

Bear Sterns

Sold to J.P. Morgan

Saturday, 6 September 2008

Freddie Mac and Fannie Mae

Placed into U.S. government "Conservatorship"

Monday, 15 September 2008

- **Lehman Brothers Declares Bankruptcy**

The financial explosion that rocked the world

Tuesday 16 September 2008

AIG

American International Group – an Insurance company

$1 Trillion Assets; 116,000 Employees

If it failed, the whole system would go down.

Wednesday 31 December 2008

Wachovia Bank

Merged with Wells Fargo

The Smaller Banks

- The 2008 financial crisis led to the failure of a large number of banks in the United States. The Federal Deposit Insurance Corporation (FDIC) closed 465 failed banks from 2008 to 2012. In contrast, the FDIC closed only 10 banks in the five years prior to 2008.

Stop It! Fix It! Now!

The Fed Swings Into Action

It will take more than interest rates!

Friday 3 October 2008

The TARP

$700 Billion Troubled Asset Relief fund

9 Largest Banks

+

Purchase of GM and Chrysler

Wednesday 26 November 2008

QE1 Quantitative Easing

Fed buys $600 B mortgage-backed securities

Plus $100 B in other securities

Backed by Fannie Mae & Freddie Mac

February 2009

- **American Recovery and Reinvestment Act**
  - “$787 Billion Stimulus Spending Program”

Wednesday 3 November 2010

QE2 Quantitative Easing

November 2010 – June 2011

Fed buys $30 B monthly of Treasury Bonds Two Years Out

CPFF Saves Eighty-Two corporations

- CPFF = Commercial Paper Funding Facility
- October 2007 – Early 2010
- Loaned $738 Billion to 82 Corporations in exchange for their commercial paper (IOU's)
- Harley-Davidson, Ford credit, GMAC, Chrysler Financial Services, General Electric, Verizon, Golden Funding Services (McDonald's franchisees, + 74 more.

Trans-Atlantic Repercussions

- US $ 1.0 – 1.2 Trillion needed by European Banks by end of 2007
- European Banks Need Dollars
- Lending dries up
- European Banks own 29% of all non-performing, high risk, mortgage-backed securities
- What happens if they dump those securities to get dollars?

Medicines – Currency Swaps and TAF

- Bank of Canada, Bank of England, European Central Bank, Swiss National Bank, and US Federal Reserve implement Currency Swaps - end of 2007
- US Fed did $620 Billion swaps in 2007
- Fed’s “Term Auction Facility TAF” Fed would “auction” up to $3.3 Trillion to whatever banks were willing to pay the highest interest rate – more than half went to European Banks – end of 2008
- December 2007 – August 2010, Fed provided $4.5 Trillion swaps liquidity to Asian, European, and Latin American Central Banks

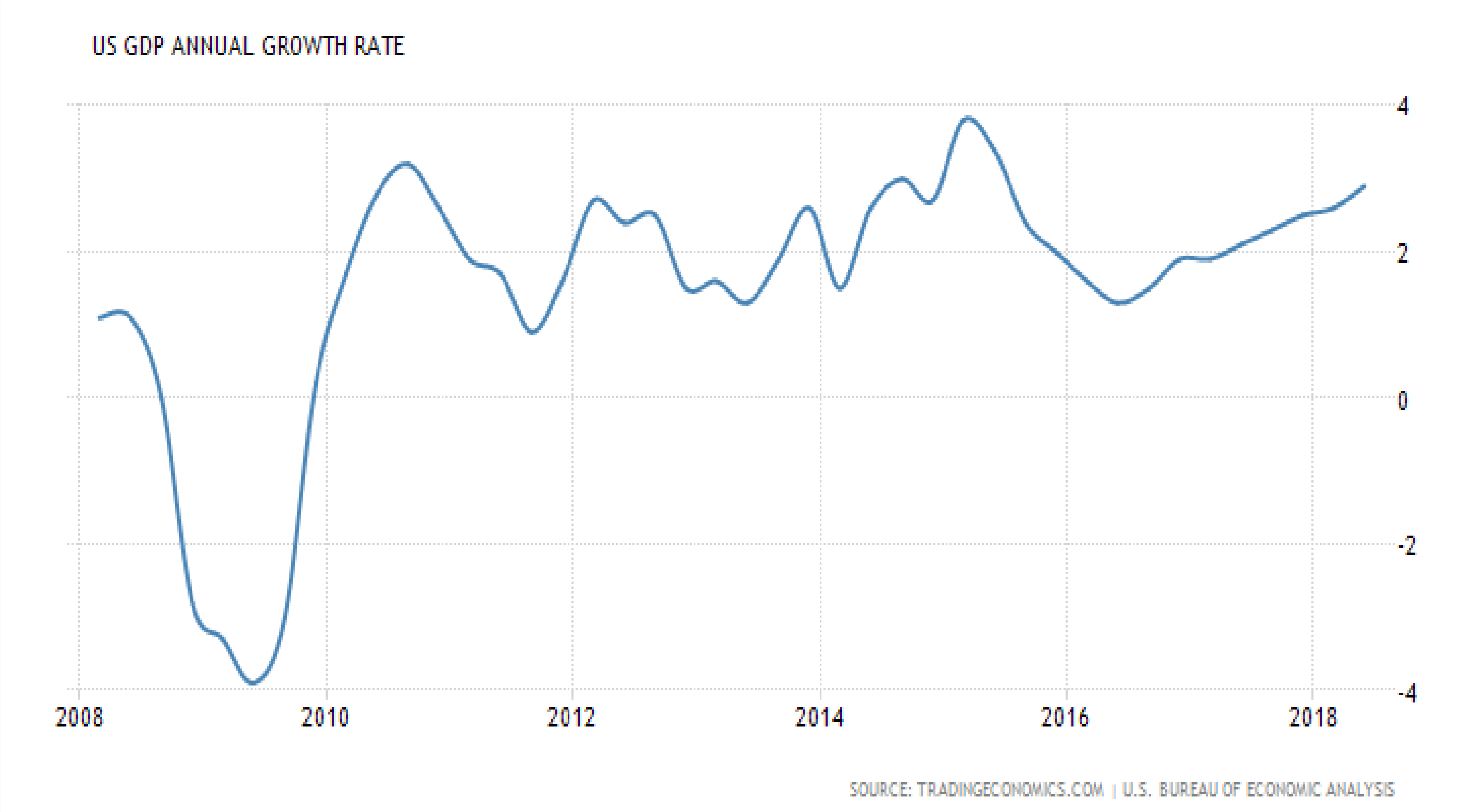
They Did It! They Stopped the Disaster The Bankers Who Saved the World!

- Ben S. Bernanke, Chairman of the U.S. Federal Reserve System (2006-2014)

- Jean Claude Trichet, President of the European Central Bank (ECB) (2003-2011)

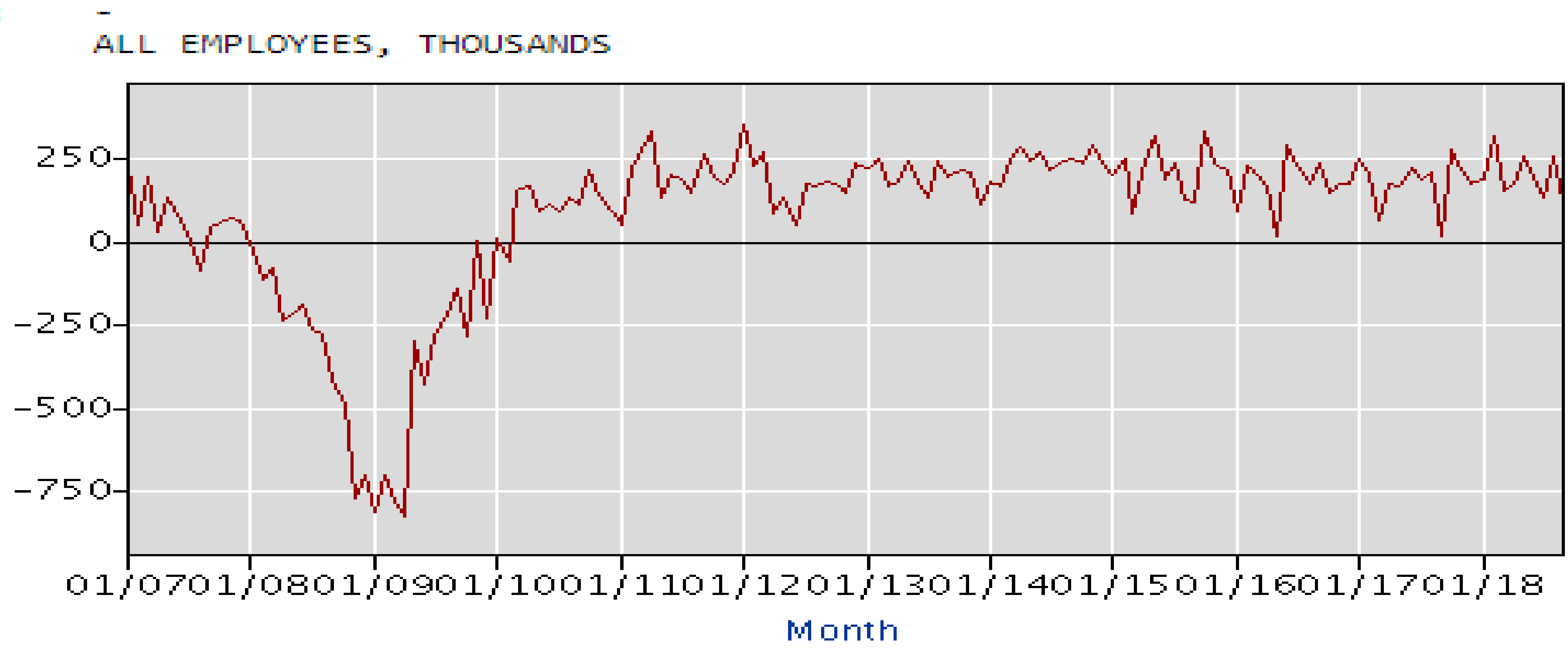
- Mario Draghi, President of the ECB, (2011-present)

- Mervyn King, Governor of the Bank of England (2003-2013)

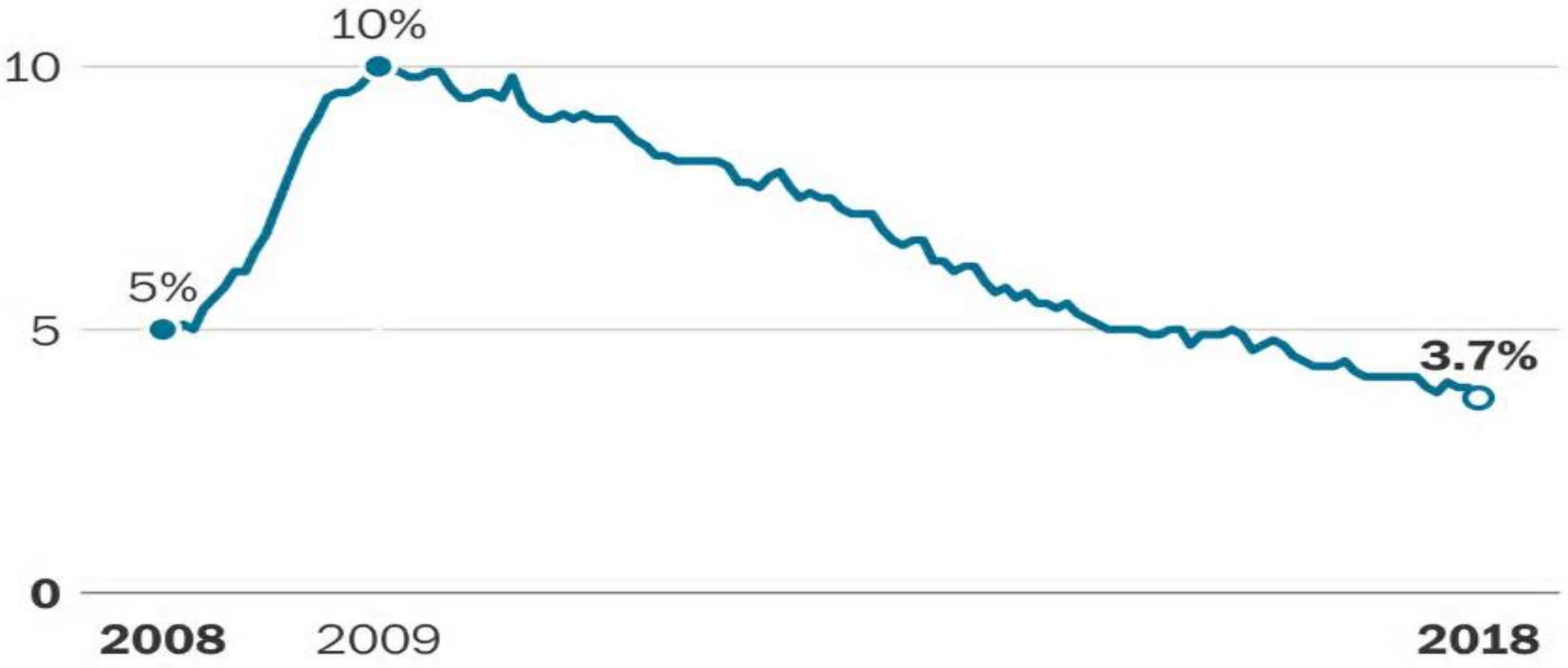

US GDP ANNUAL GROWTH RATE
4
2
0
-2
-4
2008
2010
2012
2014
2016
2018
SOURCE: TRADINGECONOMICS.COM | U.S. BUREAU OF ECONOMIC ANALYSIS

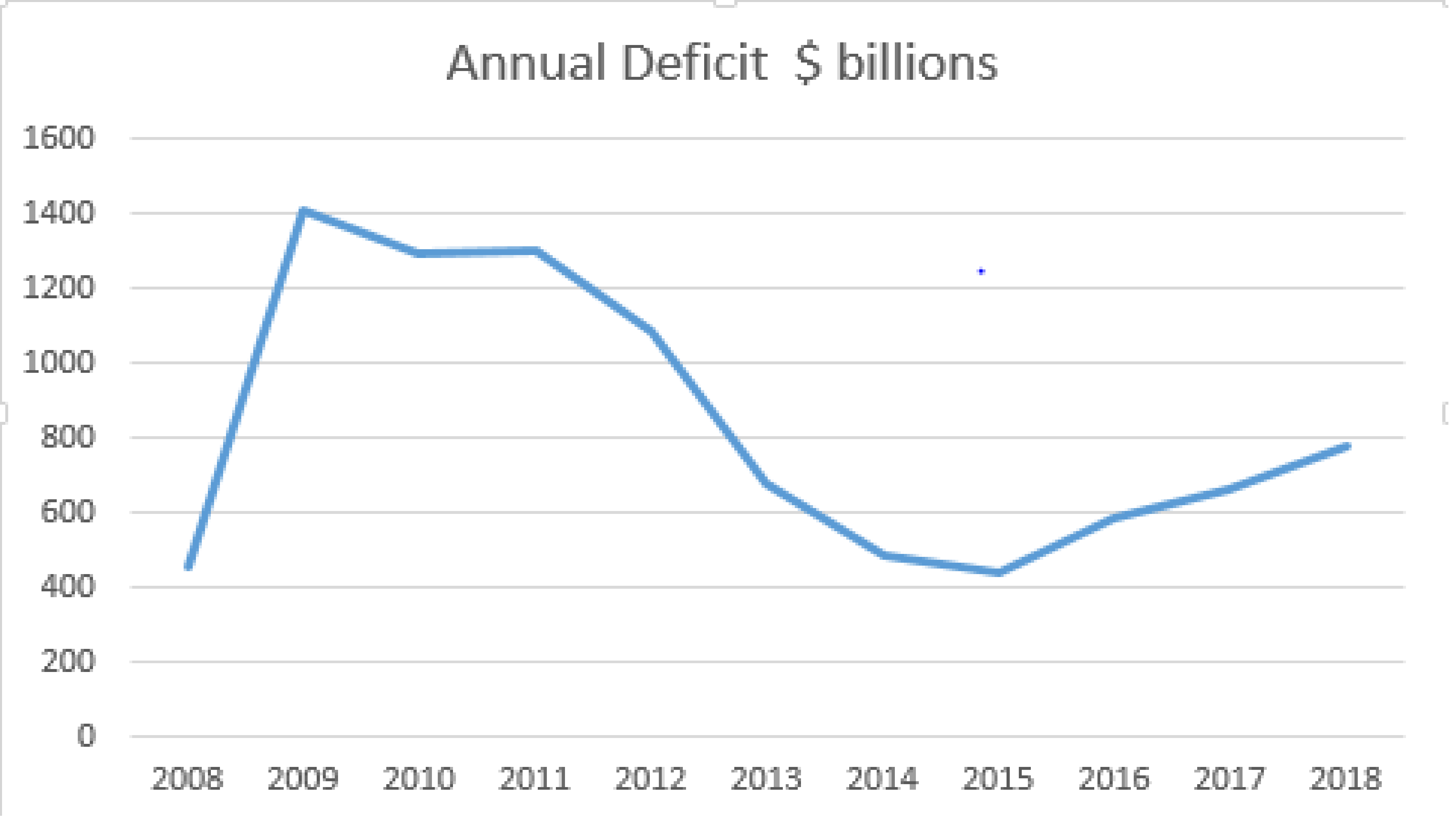
U.S. Historical CPI Inflation

Private Sector Jobs
Ninety-Seven Months of Continuous Growth



U.S. Unemployment Rate – September 2018





Annual Deficit $ billions
1600
1400
1200
1000
800
600
400
200
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

THE DAMAGE

- International Capital Flows plunged 90% 2007 – 2008
- Global Stock Markets lost $27 Trillion in Value (47%)
- Nine million Families lost their homes to foreclosure
- Tens of Thousands of small businesses failed
- IRA’s, 401k’s, and retirement funds hit hard
- Social Security and Medicare funding took a huge hit
- Eight million people lost their jobs
- National debt ballooned
- THIS SHOULD NOT HAVE HAPPENED BUT IT COULD AGAIN

The “Unregulators”

- The Federal Reserve had the power to put an end to much of the irresponsible actions of the banks; it did not.
- To disallow the 40 to 1 high leverage.
- The Securities & Exchange Commission had the power to stop the creation of securities that nobody could understand; it did not.
- The FED and the SEC could have pressured the agencies to issue more realistic bond ratings; it did not.
- The Controller of the Currency could have disallowed the high leverage ratios of the “Investment Banks:, it did not.

BUT, Greenspan at the FED and COX at the SEC were regulators who didn’t believe in regulations – and they didn’t.

Those Job-Killing Regulations

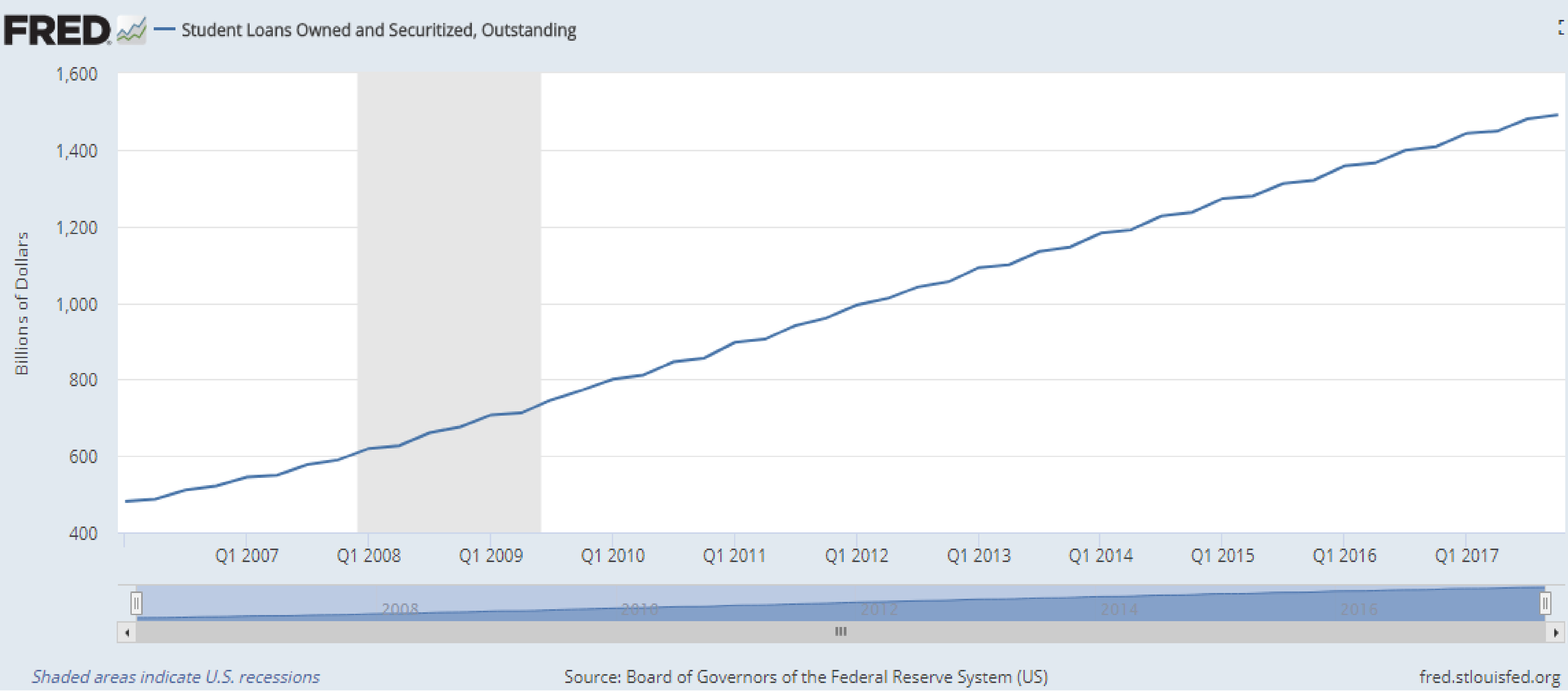
- Salomon Brothers' Henry Kaufmann – an icon of the investment industry, now 91, made the observation that despite deregulation being a major factor in the 2007 - 2008 crisis, it took less than a decade for many to forget.

"A financial market deregulated is like a zoo without bars."

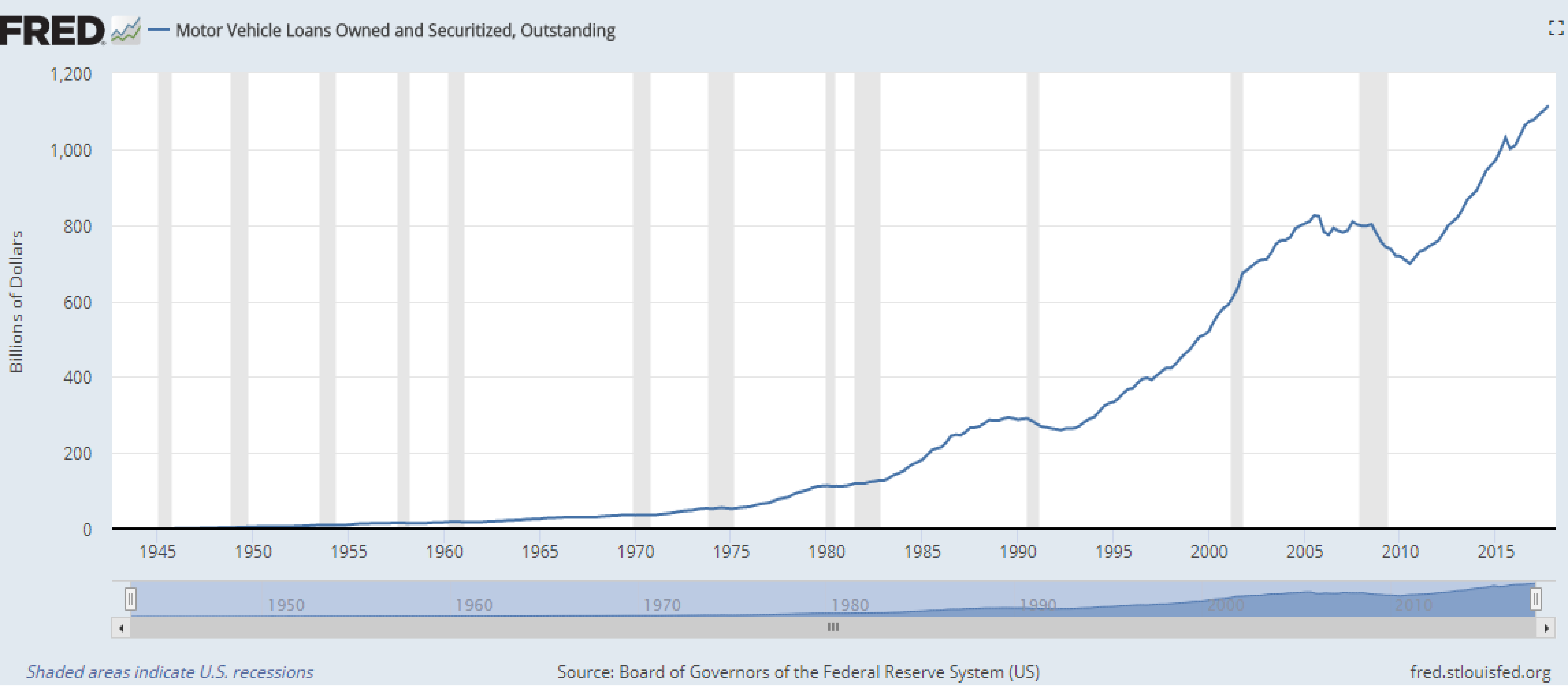
Questions?

The Danger Zone

$1.6 Trillion Student Loans Outstanding



$1.11 Trillion Auto Loans Outstanding



Corporate America – Drunk on Easy Money

- Investment Banks and MMF making Junk bond Loans
- Corporate America has record $6.3 Trillion Debt
- Money used for splashy acquisitions and stock buybacks
- Corporate America has $2.1 Trillion in cash – held by 1% of corps
- 40% of the $2.1 T cash held by 7 companies: Apple, Microsoft, Google, Cisco, Oracle, AT&T, Amgen
- Others highly exposed to rate increases
- Will have to compete with U.S. Gov huge new Debt Borrowing

Developing Countries in Trouble

- Developing countries in steep decline
- Investment Banks and money market funds heavily invested
- High Yield Developing Country bonds are junk
- Higher rates in U.S. will suck money out of DC investments
- Defaults increasing probable
- The sickness could spread

Very Challenging Financial Future

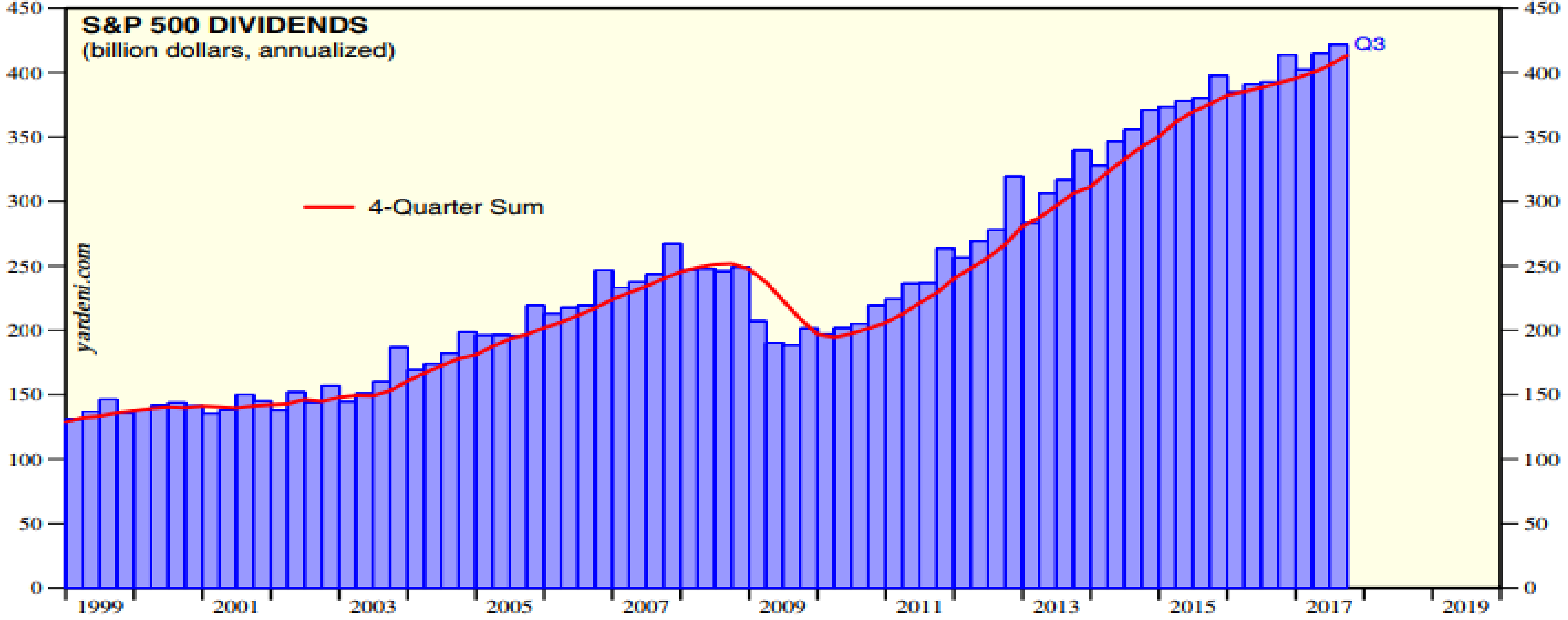
- New National Budget – Huge Spending Increases +$1.7 Trillion
- Upward Inflation Pressure: Based on the score from the Congressional Budget Office (CBO), the budget deal would increase next year's deficits to roughly $1.2 trillion. Annual deficits would remain over $1 trillion indefinitely.
- New Tax Bill (TCJA) – Huge Revenue Decreases: $2.2 Trillion
- Government Deficit Increases Drive up Interest Rates
- Repatriation of Foreign Held Cash could Push Stocks to Unsustainable Level and Cause Crash
- New Trade Wars could drive up prices and inflation

Tax Reform = Investment = Job Growth?

- Corporate Profits at historical record levels
- Corporate tax support of government at historical low
- $4-5 Trillion Corporate Stock Buybacks since 2008
- 2009 – 2012, 449 of S & P 500 corporations spent 54% of profits to buy back $2.4 Trillion of their own stock.
- March 2016 – March 2017, corporations spent $508 billion buying their own stock

Source: Standard & Poor's Corporation.

Figure 2.



Source: Standard & Poor's Corporation.

Dow Jones Stock Index 10 Year Performance

Deregulation & “Unregulation”

- 1994: Riegle-Neal Interstate Banking and Branching Efficiency Act
    - Allowed interstate branch banking exempt from state banking regs

- 1996: Economic Growth and Regulatory Paperwork Reduction Act

  Mandatory periodic review of finc’l regs and removal of as many as possible

- 1999: Grahamm-Leach-Bliley Financial Services Modernization Act
    - Eliminates Glass-Steagall, allows commercial banks to acquire investment banks and other financial services entities

- 2000: Commodity Modernization Trading Act (Graham-Lugar-Ewing)
    - Exempted derivatives, credit default swaps, and energy derivatives (Enron Loophole) from any regulations.

Financial Industry Fights Regulation with MONEY

- Jan 2015 – Dec 2016 Spent $2 billion on political activity
- $1.2 Billion Campaign Contributions (not counting “Dark Money to PACS)
- More than twice the amount of any other business sector
- $3.7 Million per member of Congress

Financial Industry Dominates the Economy

- $3 Trillion Private Debt Held in 1978
- $36 Trillion in 2007

- 4% of U.S. economy in 1978
- Over 10% today

- 15% of all corporate profits in 1980
- Approximately 50% today

The New Deregulators Have Arrived

- By the end of this year (2017), 19 of 22 key President-appointed regulators will be replaced by the current administration
- 5 on the FDIC Board of Directors
- 5 at the Securities and Exchange Commission
- 4 at the Commodities Futures Trading Commission
- 5 on the Federal Reserve’s Board of Governors
- A new Chairman of the Fed
- President is attacking the Fed