

# THE PERFECT (FINANCIAL) STORM



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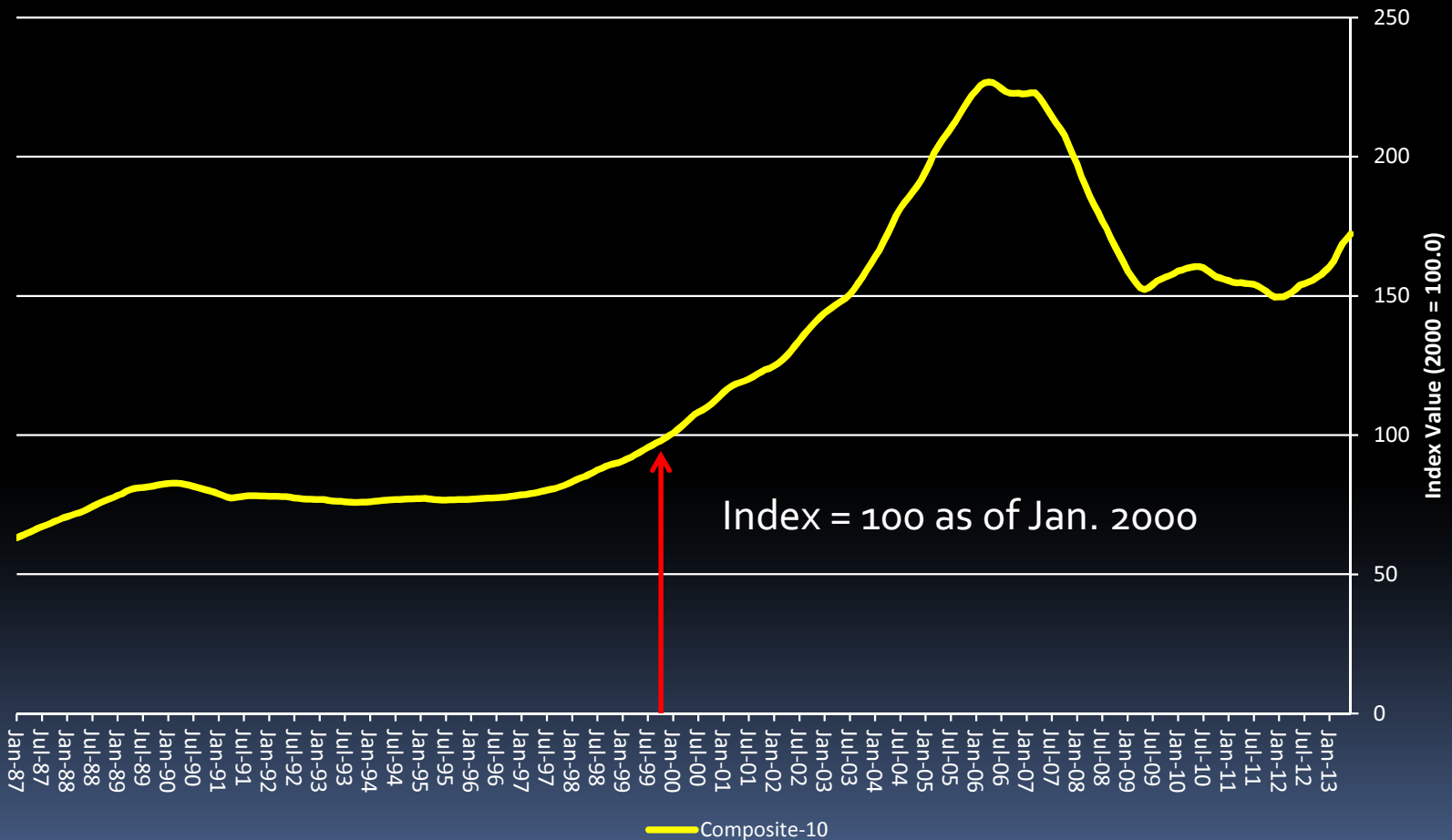
# Components of the Storm

- **U.S. Housing Crisis:**
  - 5 million homes foreclosed
  - \$7 Trillion in lost home equity
- **U.S. Banking Crisis:**
  - 400 (and counting) failed banks
- **U.S. Employment Crisis:**
  - 15 million out of work
  - Millions of new “McJobs”

# The U.S. Housing Crisis

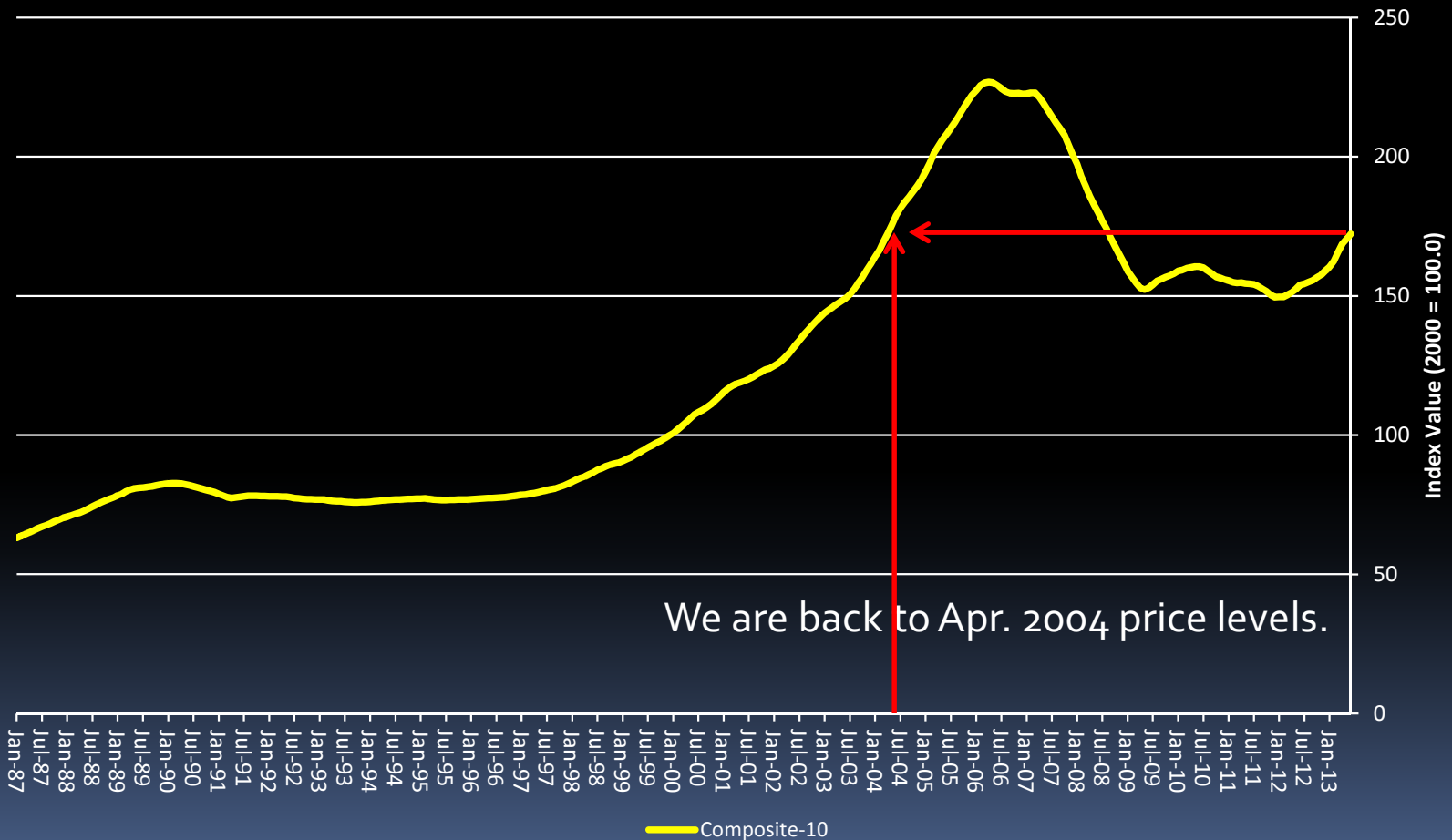
- Since 2008, about 5 million families have lost their homes to foreclosure.
- Another 3 million are likely to lose their homes in the next four years.
- Another 4 million are “underwater,” owing more than the value of their home.
- More than \$7 trillion in home equity has been destroyed. Home equity is the financial lifeblood of entrepreneurs, who create most U.S. jobs.

# The U.S. Housing Crisis: Home Prices Jan. 1987 – Jun. 2013



Source: Case-Shiller Composite 10-City Index (Jun. 2013)

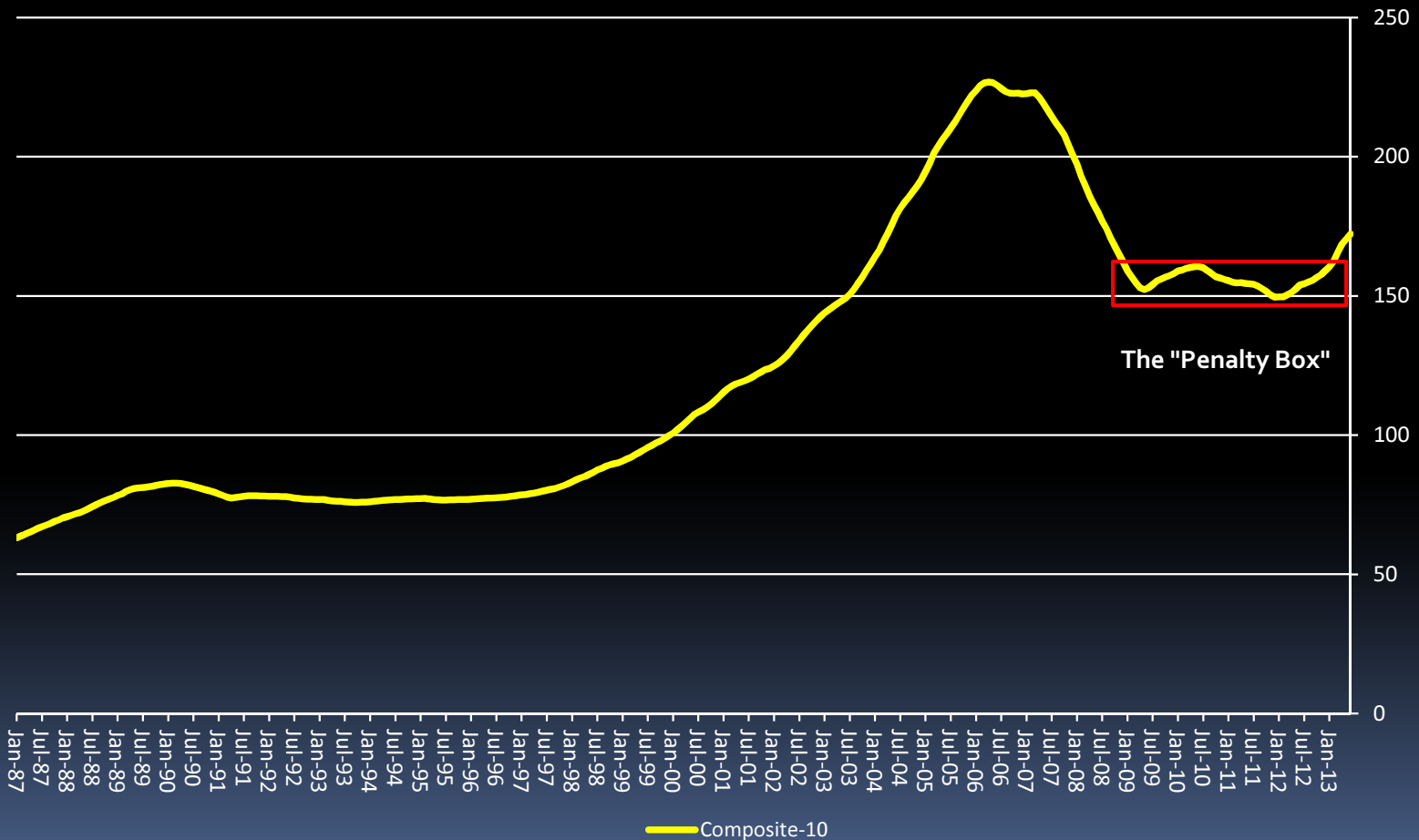
# The U.S. Housing Crisis: Home Prices Jan. 1987 – Jun. 2013



We are back to Apr. 2004 price levels.

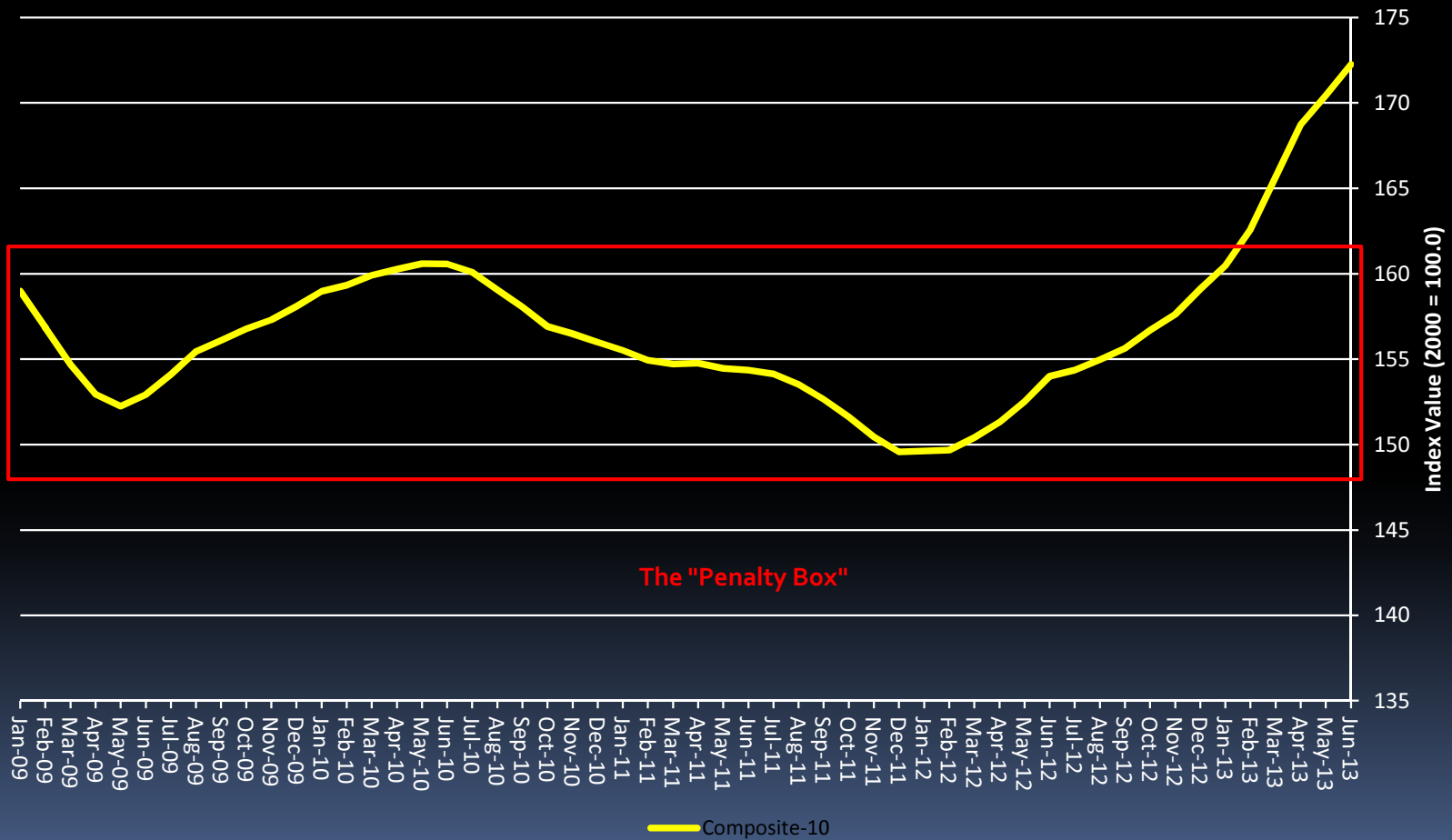
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# The U.S. Housing Crisis: Home Prices Jan. 1987 – Jun. 2013



Source: Case-Shiller Composite 10-City Index (Jun. 2013)

# The U.S. Housing Crisis: Home Prices Jan. 2009 – Jun. 2013



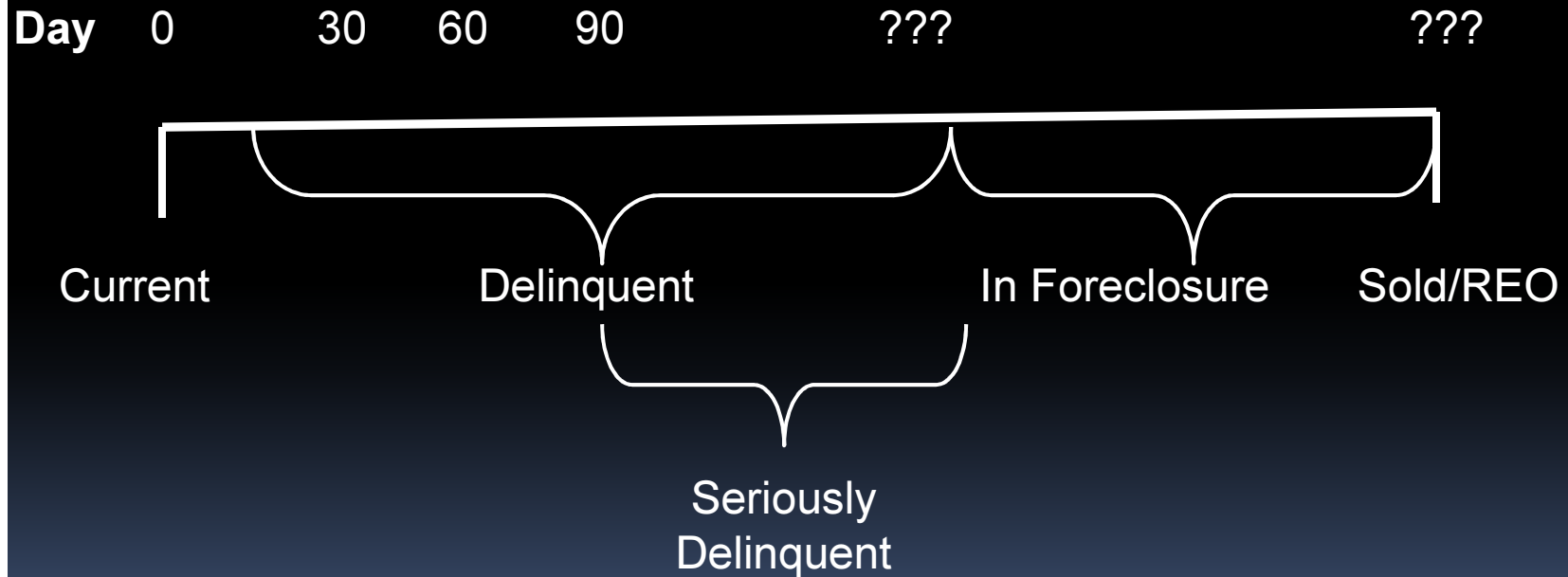
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# Residential Foreclosure Overview: Terminology

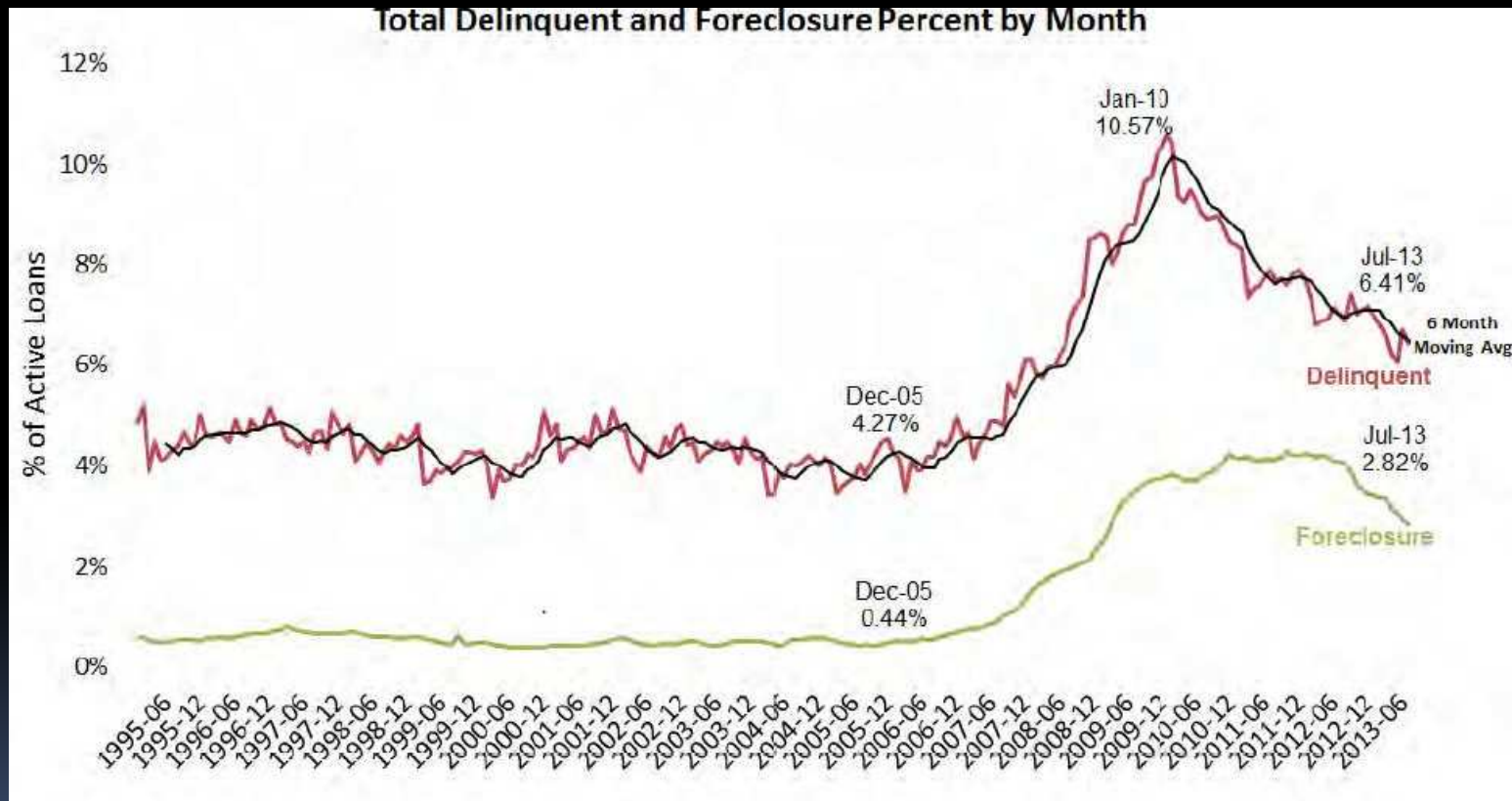
- Foreclosure means many things to many people, so let's define some terminology:
  - **Current:** borrower is current on mortgage payments.
  - **Past Due:** borrower has missed at least one payment and is at least 30 days past due.
  - **Seriously Delinquent:** borrower is more than 90 days past due.
  - **In-Foreclosure:** borrower has missed several payments and lender has begun foreclosure legal proceedings, which can take weeks in some states, years in others.
  - **Sold/Real-Estate-Owned:** Foreclosed property has exited the foreclosure process by sale to the lender or to a third party.

# Residential Foreclosure Timeline

## Foreclosure Timeline



# The U.S. Housing Crisis: Non-Current Mortgages Jun.1995 - Jul.2013



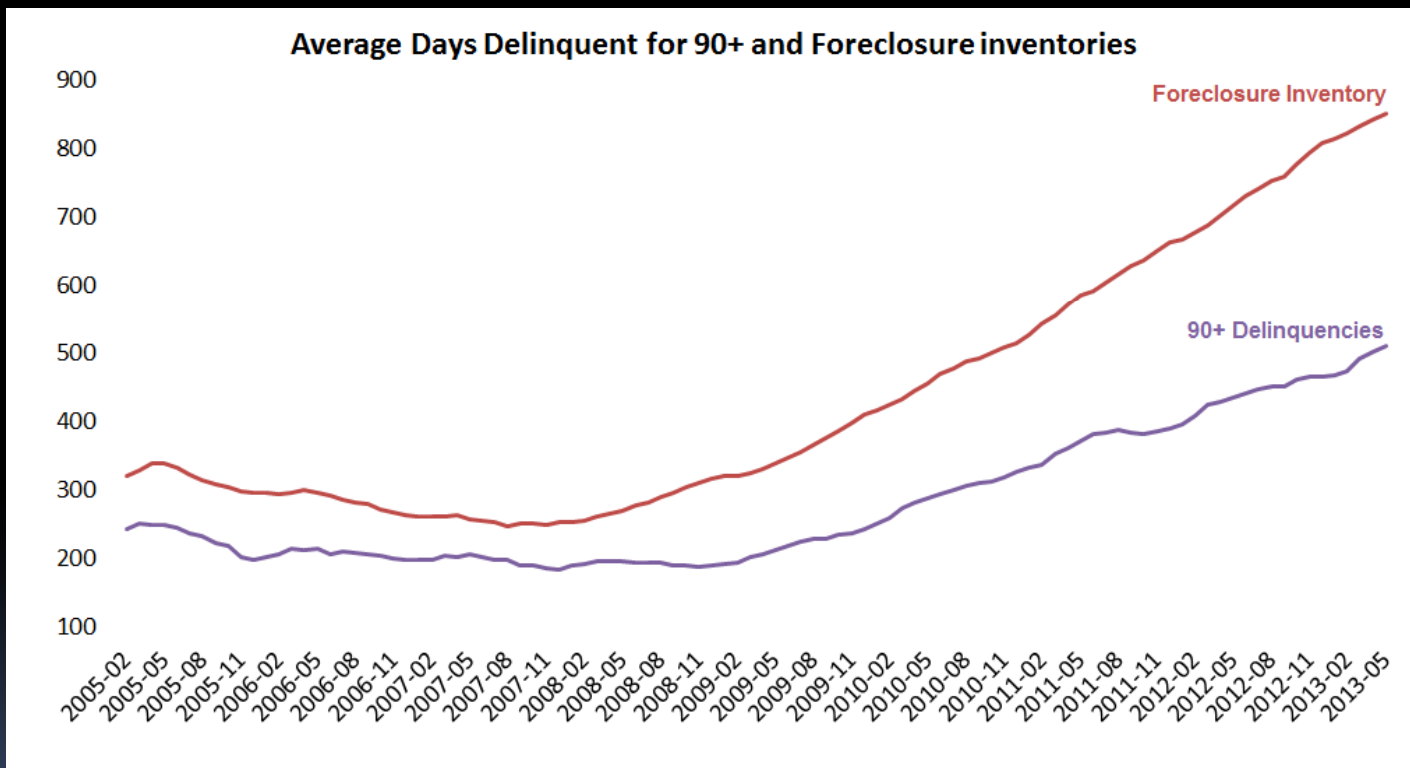
Source: Lender Processing Services (Jul. 2013). Excludes completed foreclosures.

# The U.S. Housing Crisis: Non-Current Mortgages Jan.2008 - Jul.2013

| Month      | TOTAL ACTIVE COUNT | 30 DAYS   | 60 DAYS | 90+ DAYS  | FC        | Total Non-Current | FC Starts | Average Days Delinquent for 90+ | Average Days Delinquent for FC |
|------------|--------------------|-----------|---------|-----------|-----------|-------------------|-----------|---------------------------------|--------------------------------|
| 1/31/2008  | 54,094,282         | 1,701,163 | 664,956 | 940,832   | 817,948   | 4,124,899         | 197,210   | 189                             | 255                            |
| 1/31/2009  | 54,267,187         | 1,945,997 | 909,744 | 1,817,809 | 1,318,840 | 5,992,391         | 249,655   | 191                             | 321                            |
| 1/31/2010  | 53,476,523         | 1,897,603 | 882,089 | 2,870,204 | 2,031,020 | 7,680,916         | 282,601   | 252                             | 417                            |
| 1/31/2011  | 52,138,710         | 1,682,266 | 715,350 | 1,988,781 | 2,162,601 | 6,548,999         | 261,272   | 332                             | 528                            |
| 1/31/2012  | 51,111,780         | 1,531,458 | 627,874 | 1,758,894 | 2,163,659 | 6,081,884         | 219,750   | 397                             | 668                            |
| 2/29/2012  | 50,992,550         | 1,441,378 | 560,901 | 1,708,908 | 2,142,675 | 5,853,862         | 182,184   | 408                             | 678                            |
| 3/31/2012  | 50,894,038         | 1,322,231 | 512,511 | 1,624,223 | 2,130,388 | 5,589,352         | 195,128   | 425                             | 688                            |
| 4/30/2012  | 50,751,364         | 1,371,185 | 518,345 | 1,596,030 | 2,131,478 | 5,617,039         | 183,489   | 430                             | 702                            |
| 5/31/2012  | 50,602,018         | 1,390,010 | 533,183 | 1,571,354 | 2,110,279 | 5,604,827         | 218,909   | 436                             | 717                            |
| 6/30/2012  | 50,427,221         | 1,464,660 | 547,533 | 1,589,729 | 2,060,619 | 5,662,541         | 173,556   | 441                             | 731                            |
| 7/31/2012  | 50,064,842         | 1,410,175 | 552,881 | 1,556,632 | 2,042,142 | 5,561,830         | 185,811   | 448                             | 743                            |
| 8/31/2012  | 49,986,240         | 1,370,660 | 544,506 | 1,518,036 | 2,018,584 | 5,451,786         | 201,173   | 451                             | 753                            |
| 9/30/2012  | 50,044,415         | 1,590,658 | 578,216 | 1,533,569 | 1,939,159 | 5,641,601         | 159,078   | 452                             | 760                            |
| 10/31/2012 | 49,852,808         | 1,403,340 | 560,996 | 1,542,703 | 1,801,047 | 5,308,085         | 124,292   | 461                             | 778                            |
| 11/30/2012 | 50,337,897         | 1,438,015 | 561,158 | 1,584,112 | 1,767,002 | 5,350,287         | 130,053   | 465                             | 795                            |
| 12/31/2012 | 49,865,000         | 1,454,875 | 575,845 | 1,545,186 | 1,715,648 | 5,291,554         | 136,289   | 465                             | 808                            |
| 1/31/2013  | 49,896,142         | 1,407,343 | 567,022 | 1,531,216 | 1,702,715 | 5,208,297         | 147,593   | 468                             | 814                            |
| 2/28/2013  | 50,123,564         | 1,400,311 | 526,649 | 1,483,423 | 1,693,699 | 5,104,081         | 131,826   | 473                             | 824                            |
| 3/31/2013  | 50,186,364         | 1,346,310 | 495,352 | 1,465,953 | 1,688,809 | 4,996,424         | 121,012   | 492                             | 834                            |
| 4/30/2013  | 50,117,188         | 1,252,302 | 464,676 | 1,394,132 | 1,588,138 | 4,699,249         | 127,496   | 503                             | 843                            |
| 5/31/2013  | 50,076,535         | 1,243,193 | 465,129 | 1,334,699 | 1,524,837 | 4,567,859         | 116,812   | 511                             | 852                            |
| 6/30/2013  | 49,823,992         | 1,471,134 | 511,731 | 1,344,818 | 1,457,699 | 4,785,382         | 109,042   | 512                             | 860                            |
| 7/31/2013  | 49,784,184         | 1,335,498 | 510,585 | 1,347,161 | 1,406,121 | 4,599,365         | 112,849   | 517                             | 876                            |

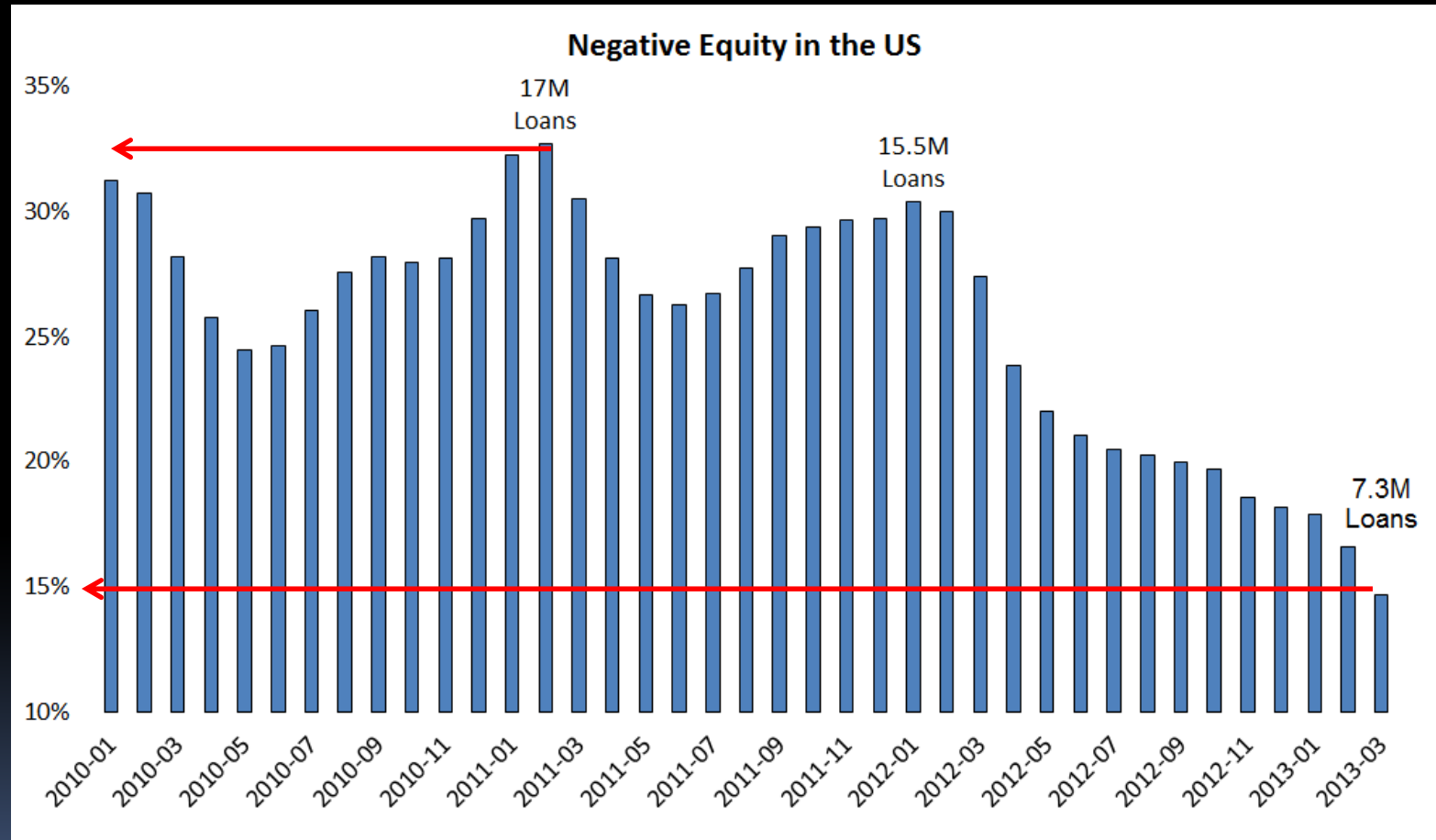
Source: Lender Processing Services (Jul. 2013). Excludes completed foreclosures.

# The U.S. Housing Crisis: Non-Current Mortgages Jan.2008 - Jul.2013

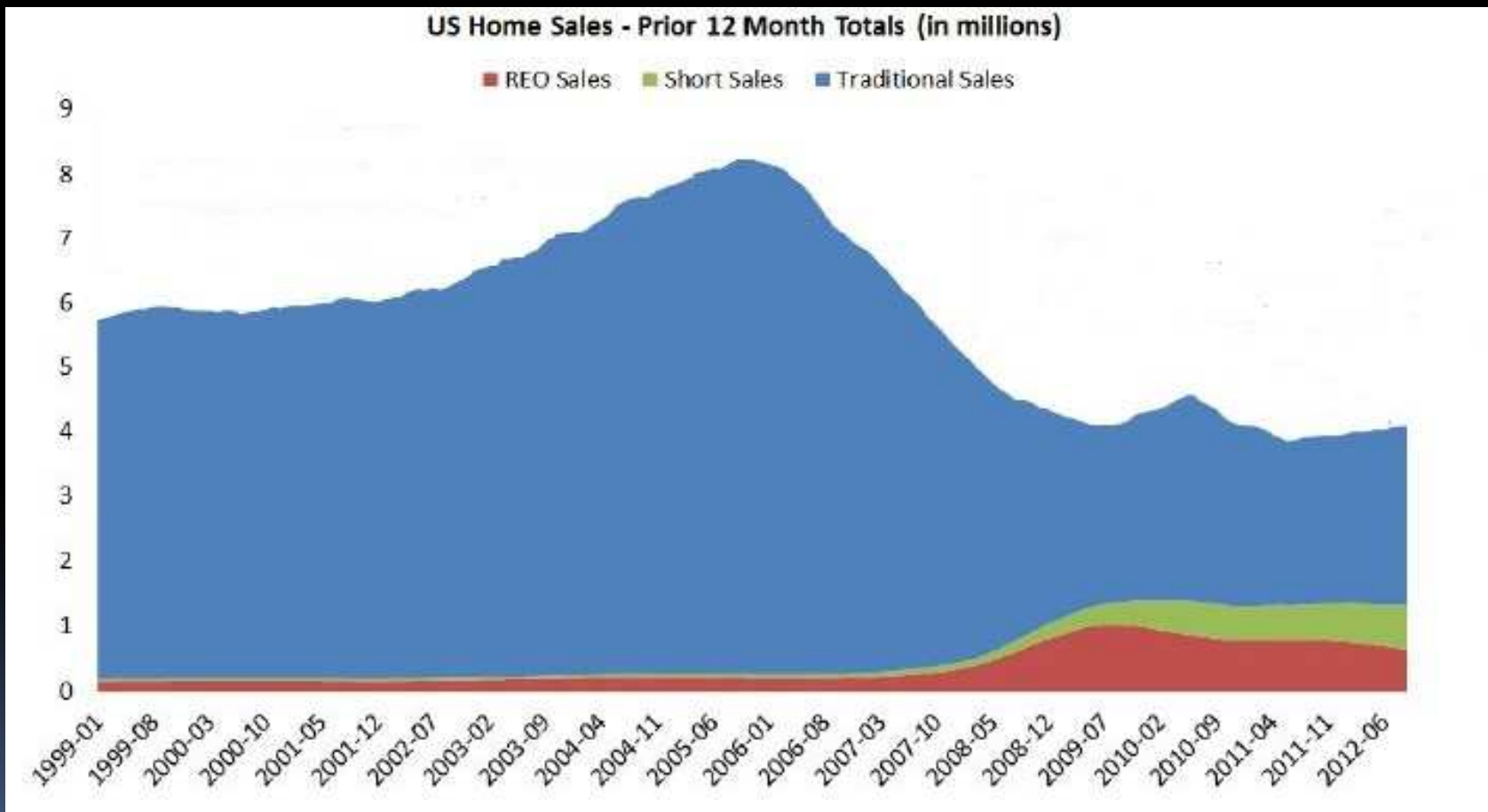


Source: Lender Processing Services (May. 2013). Excludes completed foreclosures.

# The U.S. Housing Crisis: 15% of Mortgages Still Underwater

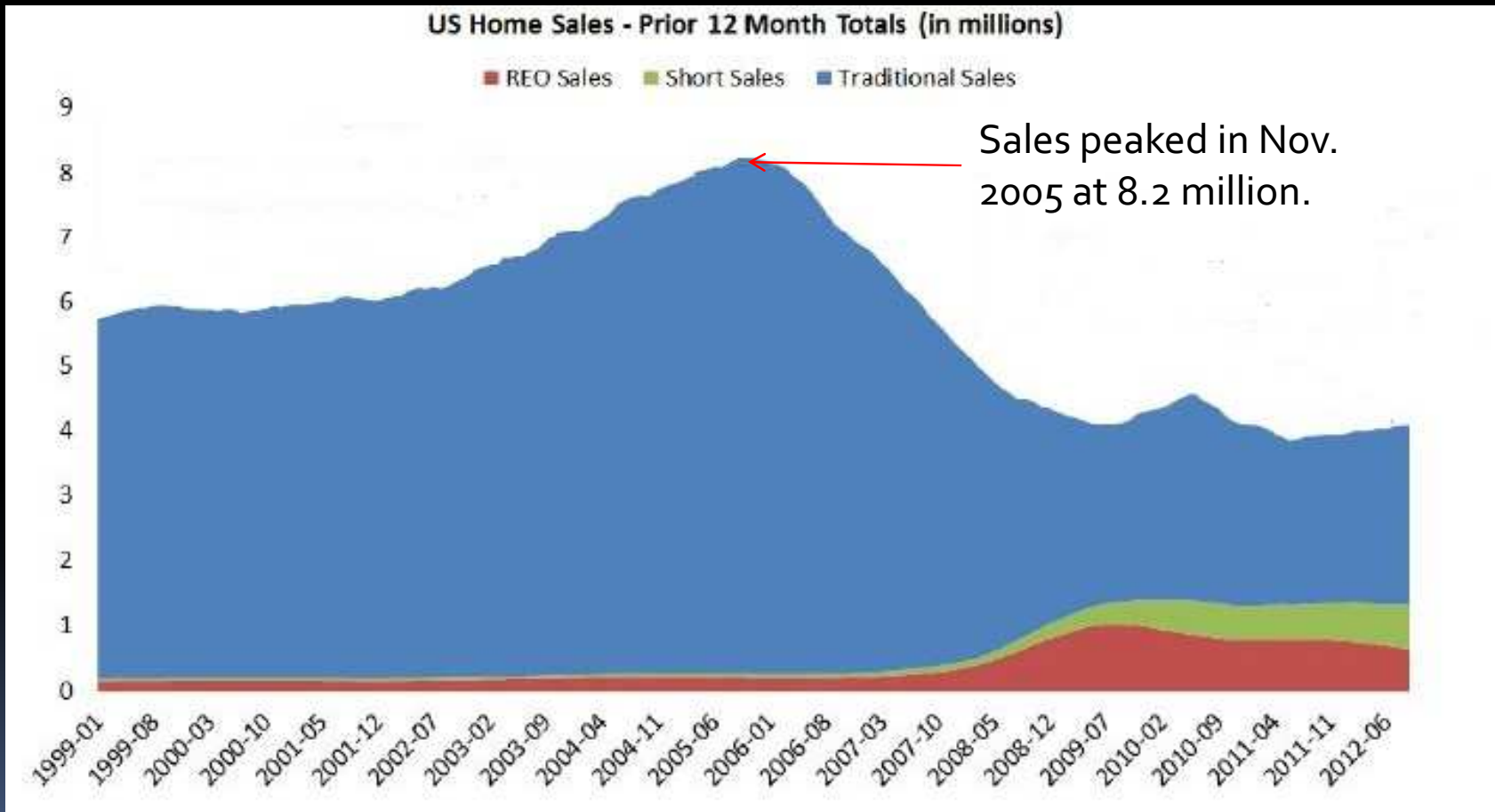


# The U.S. Housing Crisis: “Distressed” Sales



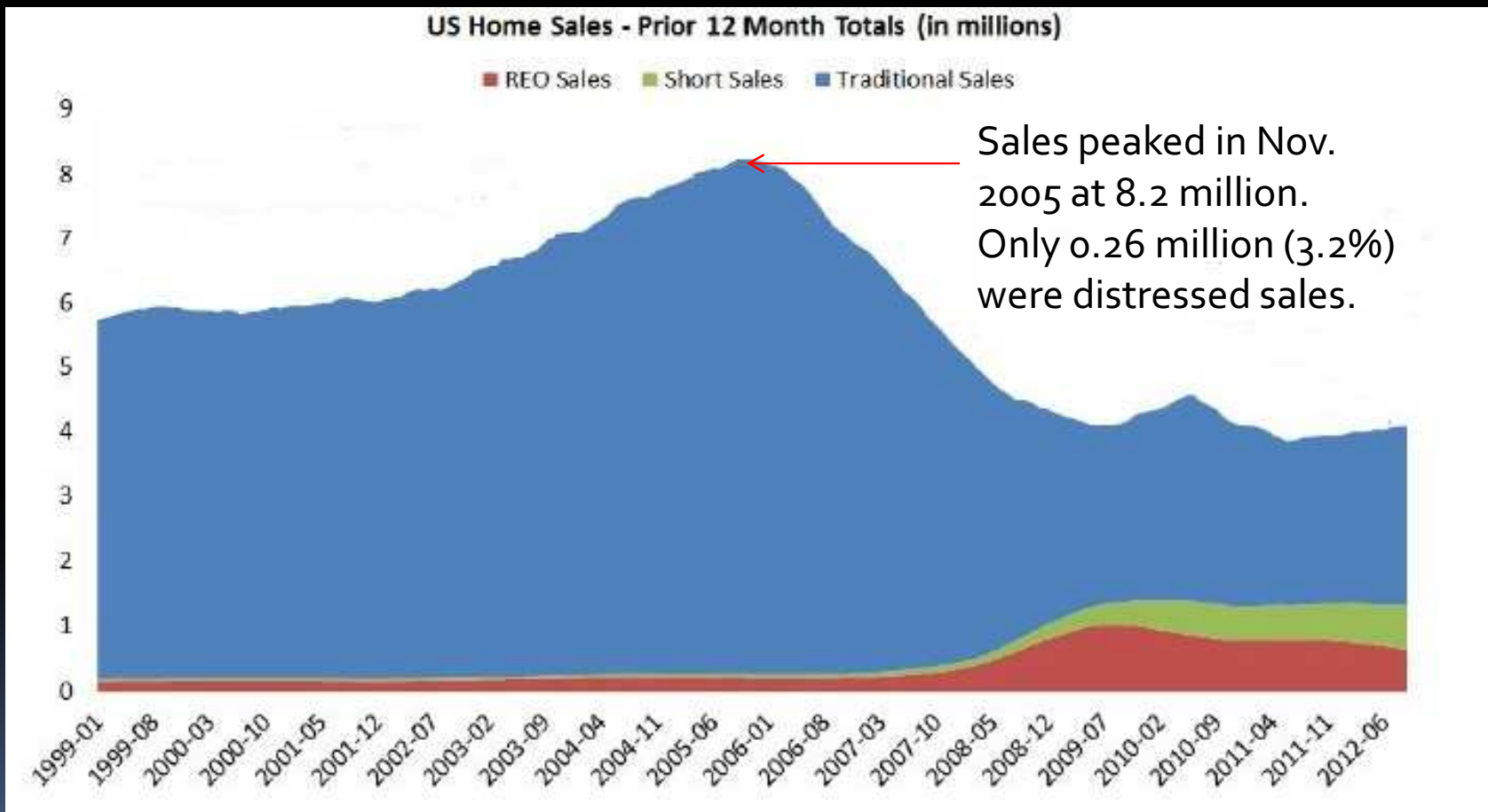
Source: Lender Processing Services (Oct. 2012)

# The U.S. Housing Crisis: “Distressed” Sales



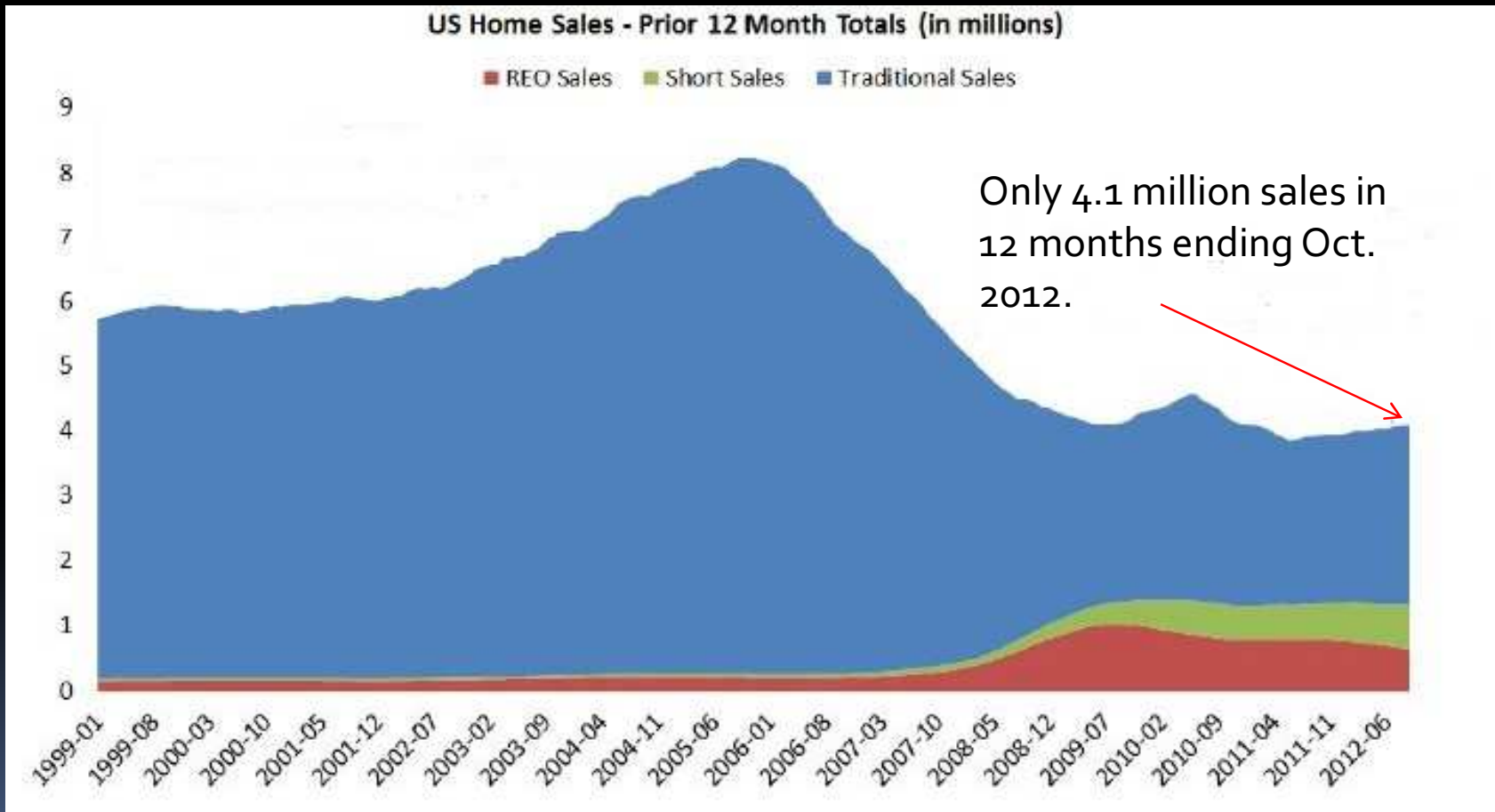
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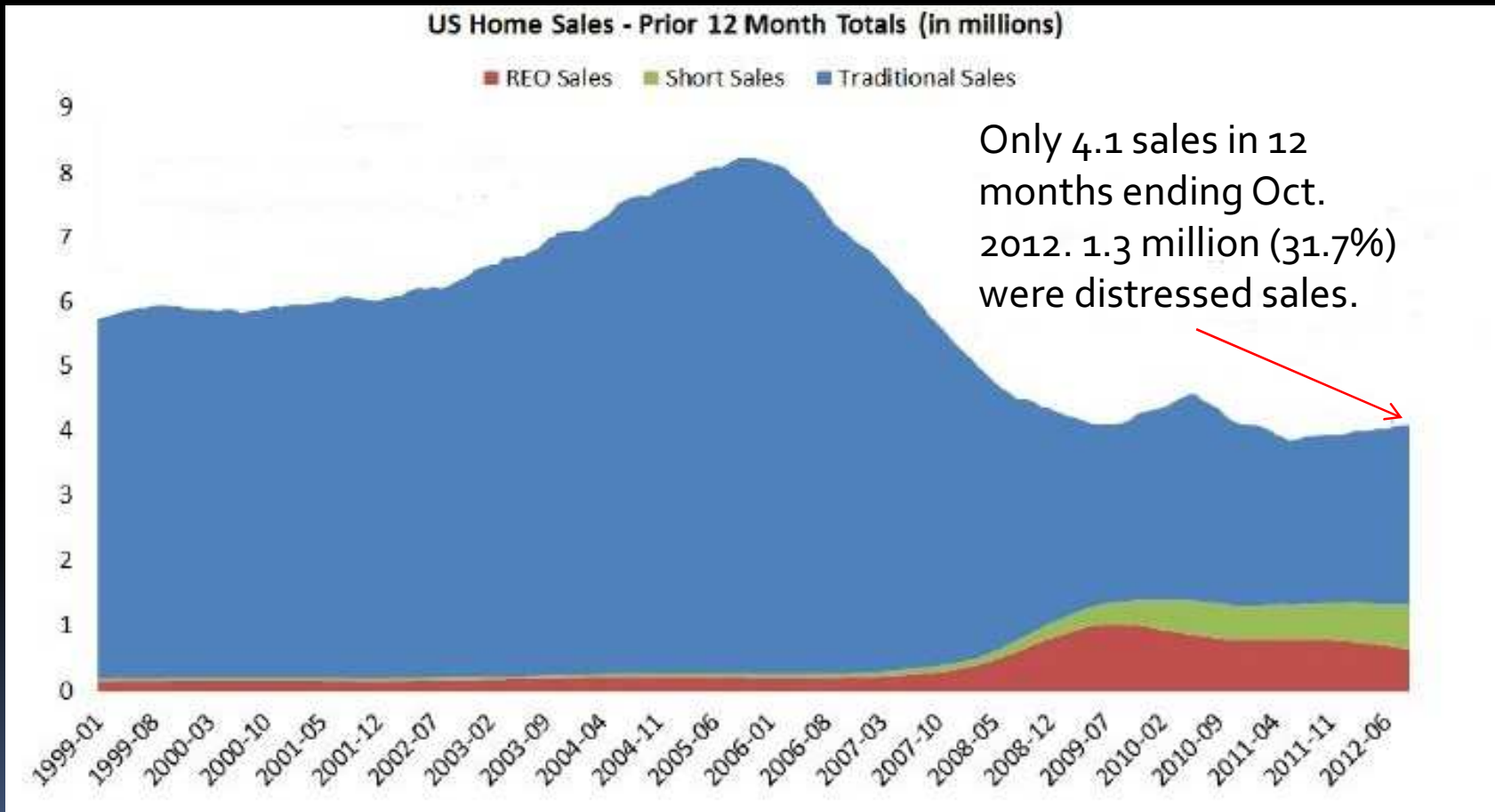
Source: Lender Processing Services (Oct. 2012)

# The U.S. Housing Crisis: “Distressed” Sales



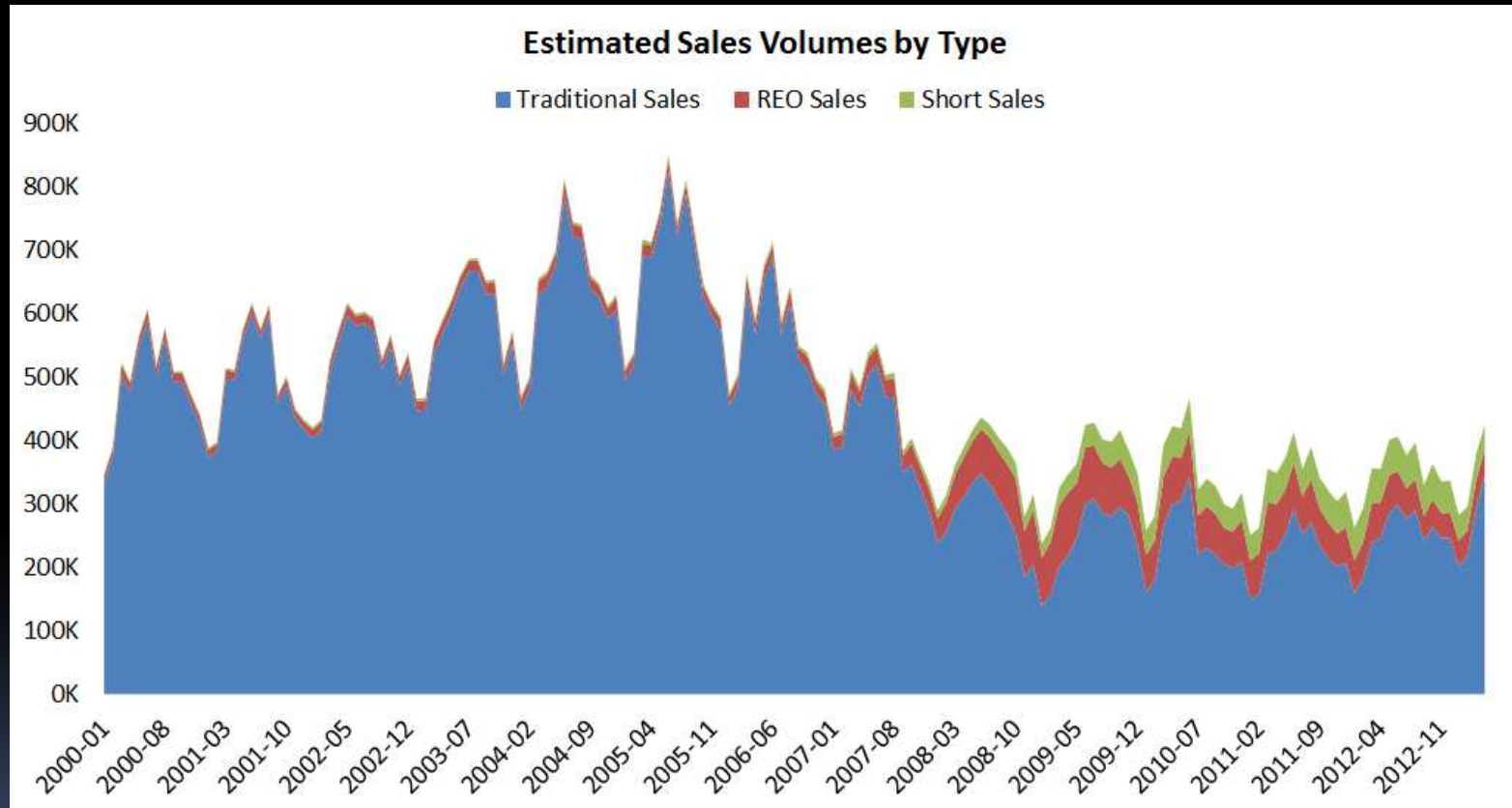
Source: Lender Processing Services (Oct. 2012)

# The U.S. Housing Crisis: “Distressed” Sales



Source: Lender Processing Services (Oct. 2012)

# The U.S. Housing Crisis: “Distress Sales” now down to 23% of Total

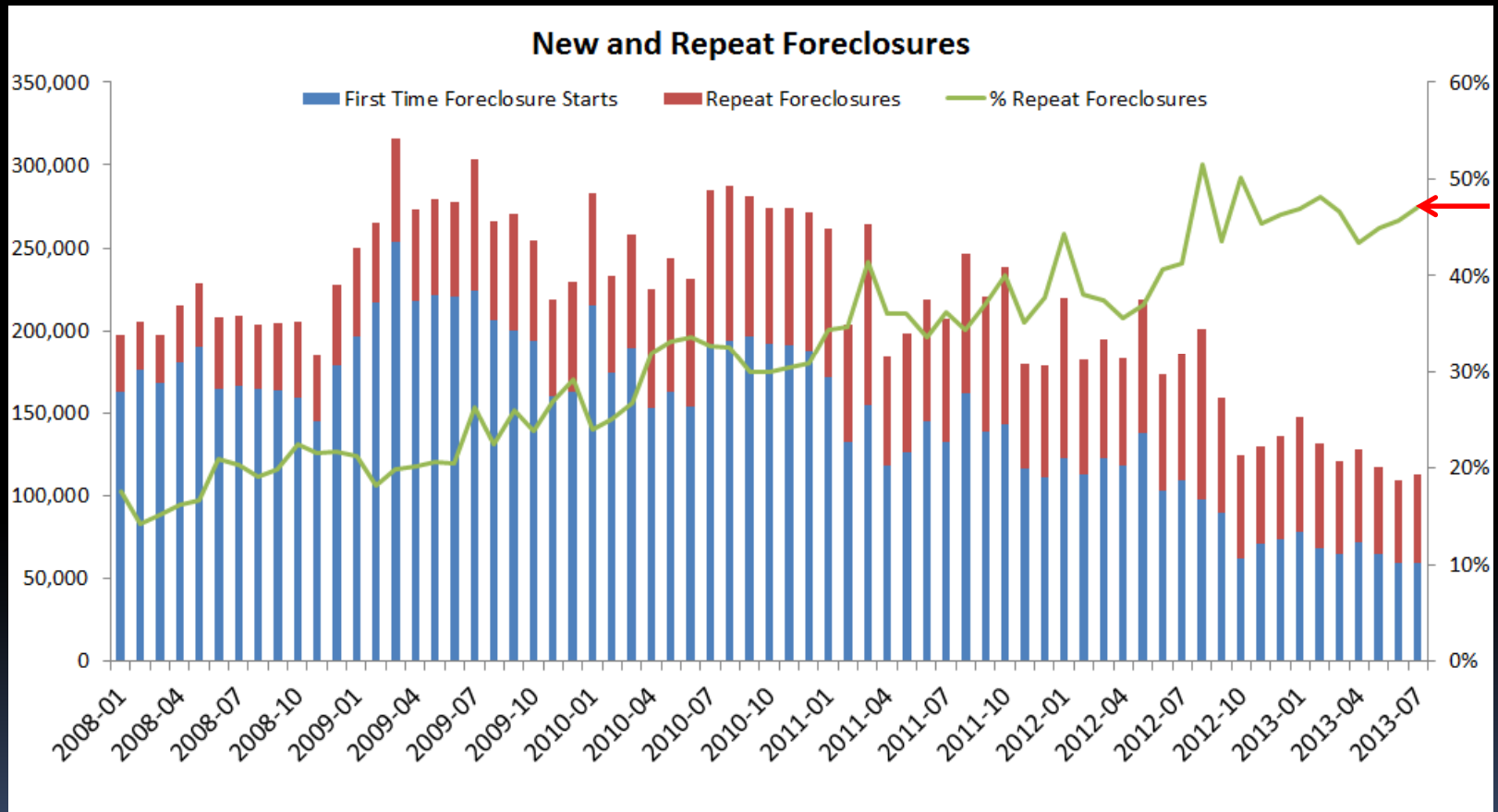


Source: Lender Processing Services (May 2013)

# The U.S. Housing Crisis: “Repeat” Foreclosures

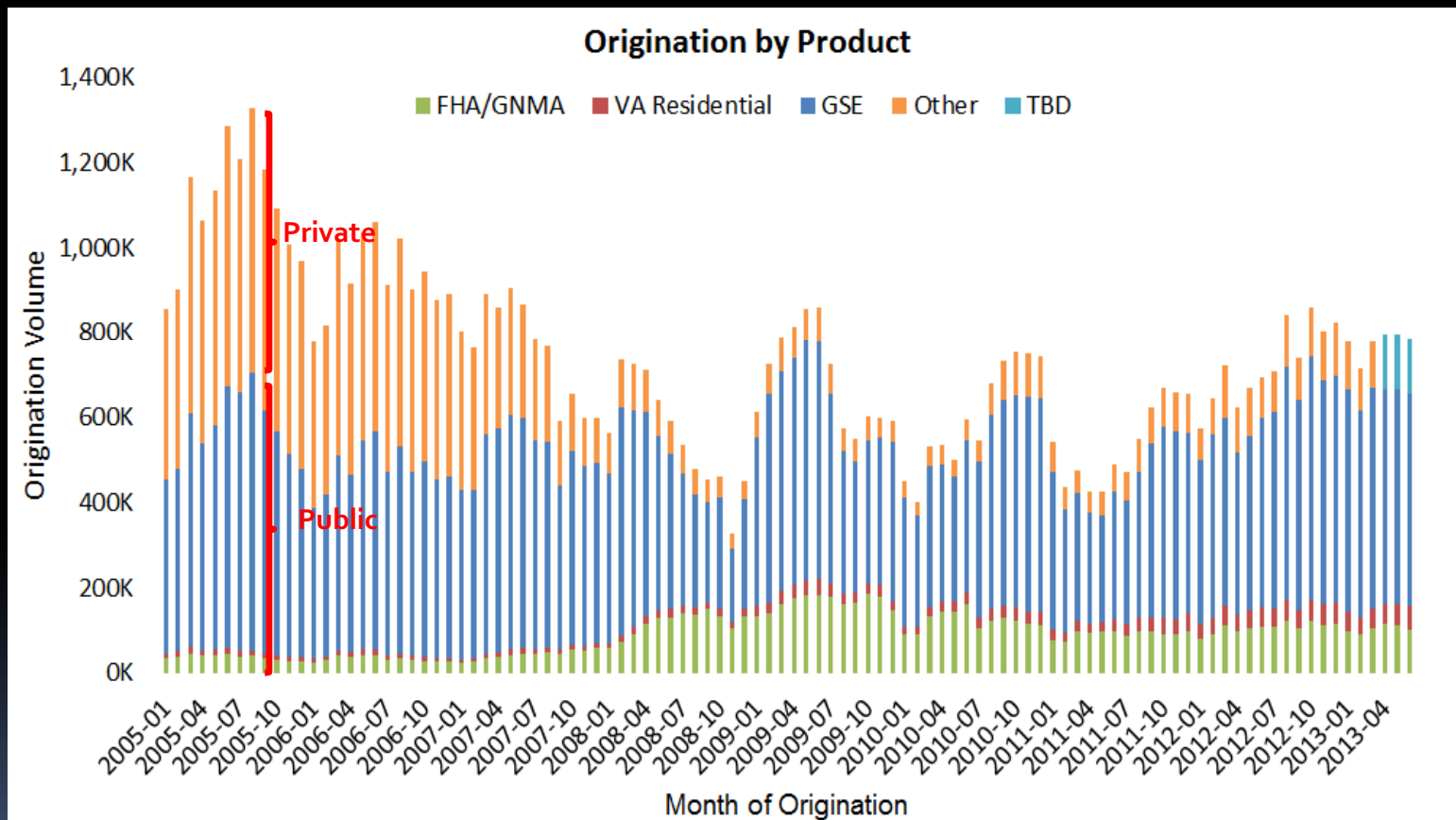
- New phenomenon following “robo-signing” scandal, where banks were caught forging legal documents needed to seize collateral.
- Banks would withdraw foreclosure lawsuits, sending “in-foreclosure” properties back into “seriously delinquent.”
- When the banks had “better” forgeries, they would file a new lawsuit!

# The U.S. Housing Crisis: “Repeat” Foreclosures



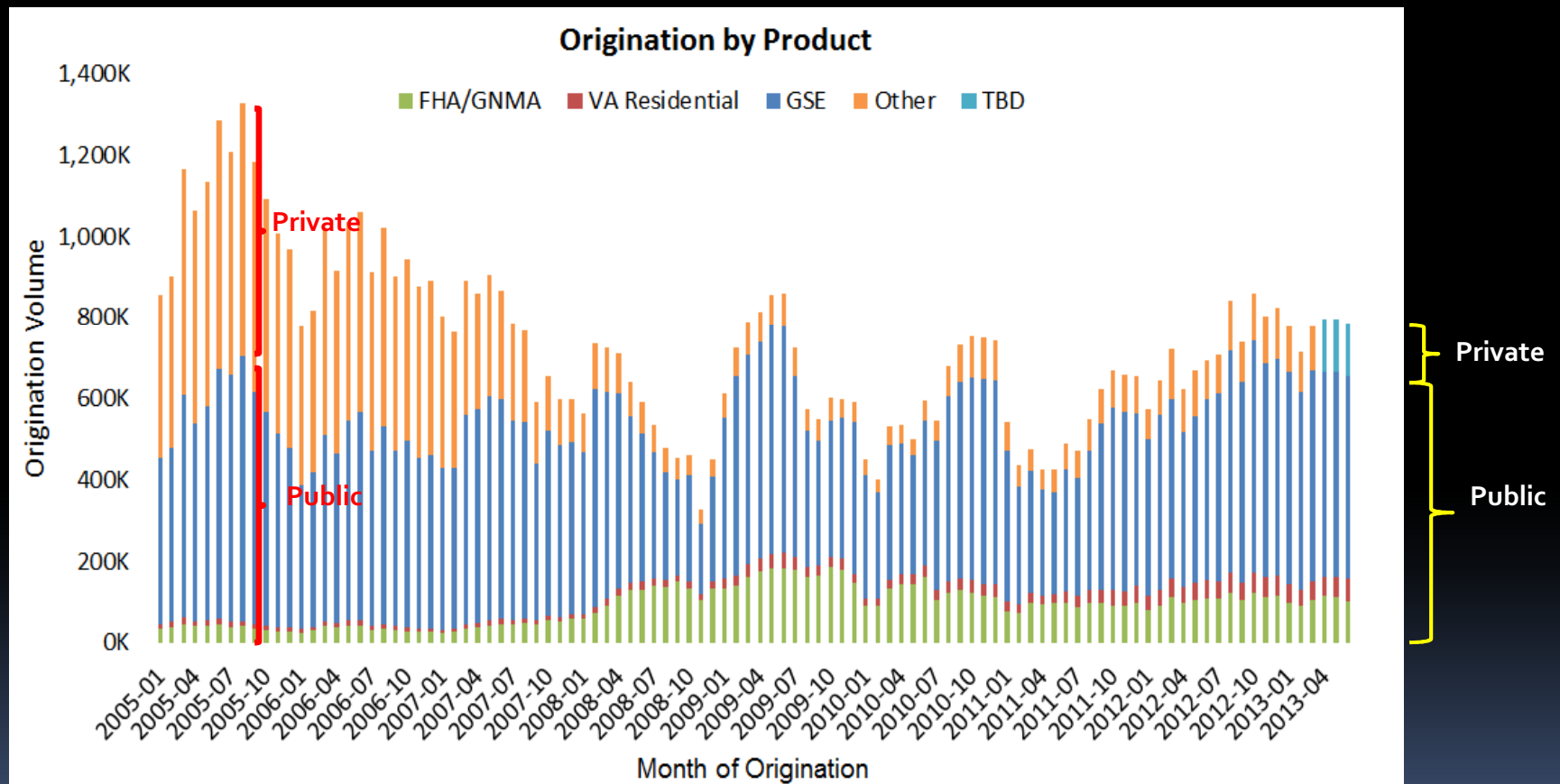
Source: Lender Processing Services (Jun. 2013)

# The U.S. Housing Crisis: Where is the private sector?



Source: Lender Processing Services (Jul. 2013)

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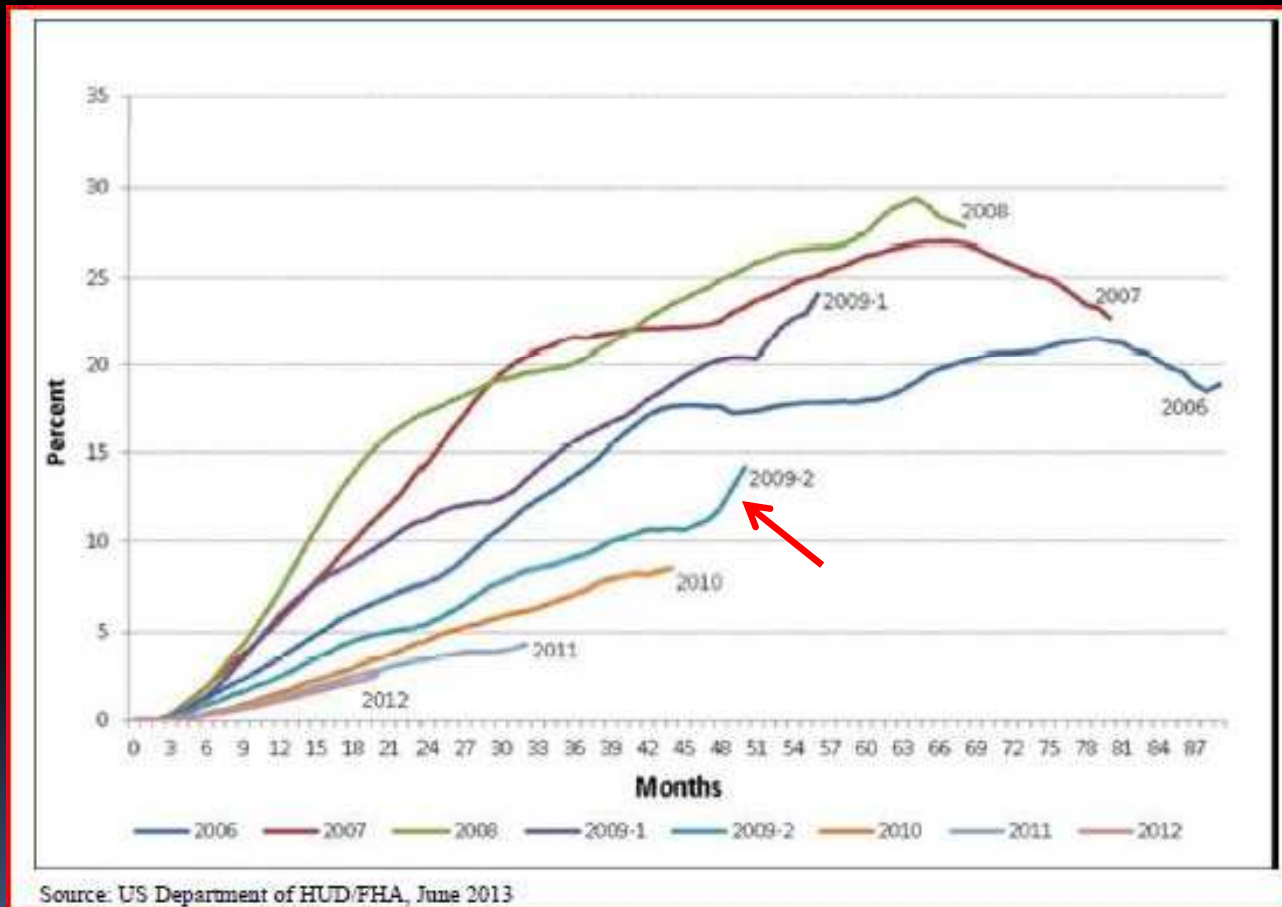
# The U.S. Housing Crisis: Where is the private sector?

- U.S. Government Sponsored Entities (GSEs)
  - Fannie Mae
  - Freddie Mac
- U.S. Govt. Agency
  - Federal Housing Administration (FHA)
  - Veterans Administration (VA)
- 2005: 60% market share
- 2012: 90% market share

# The U.S. Housing Crisis: Where is the private sector?

- FHA mortgage is the “new” subprime mortgage.
  - FHA guarantees payments to investors purchasing GNMA mortgage-backed securities in case an insured homeowner defaults.
  - Borrower make only a 3% Down Payment.
  - Borrower pays an insurance premium equal to about 1% of mortgage amount.
  - New proposal to qualify more borrowers by reducing the time limit since the last default from 3 years to only 1 year.

# The U.S. Housing Crisis: FHA Delinquency Rates by Vintage



Delinquencies spiking among 2009 vintage mortgages, when FHA had 40% market share.

# The U.S. Housing Crisis: FHA Asks for Taxpayer Bail-Out



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**REALTY CHECK** with DIANA OLICK | Home for t

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## Mortgage bailout not over, FHA to draw \$1.7 billion

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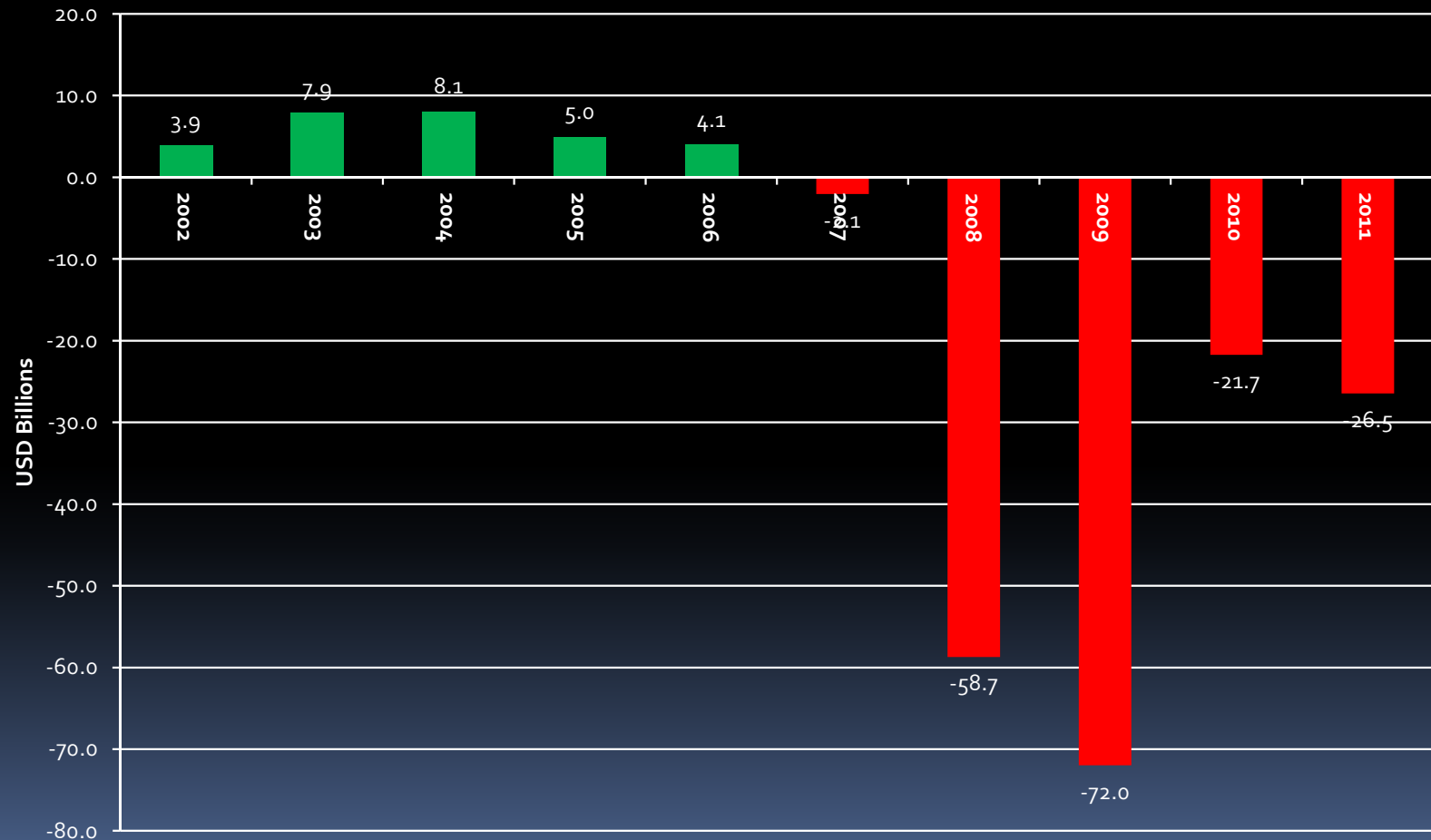
Published: Friday, 27 Sep 2013 | 11:36 AM ET

By: Diana Olick | CNBC Real Estate Reporter

# The U.S. Housing Crisis: Fannie Mae and Freddie Mac

- Fannie and Freddie were created by U.S. Govt. back in 1930s “to support liquidity and stability in the secondary mortgage market . . . and increase the supply of affordable housing.”
- Don’t originate loans or lend directly to consumers.
- Fannie/Freddie guarantee payments to investors in RMBS on guaranteed “qualifying mortgages” that are bundled into Fannie/Freddie MBS.
- In early 2000s, also began to purchase mortgages directly for their own portfolios, esp. subprime.
- The result was . . .

# The U.S. Housing Crisis: Fannie Mae Net Income by Year



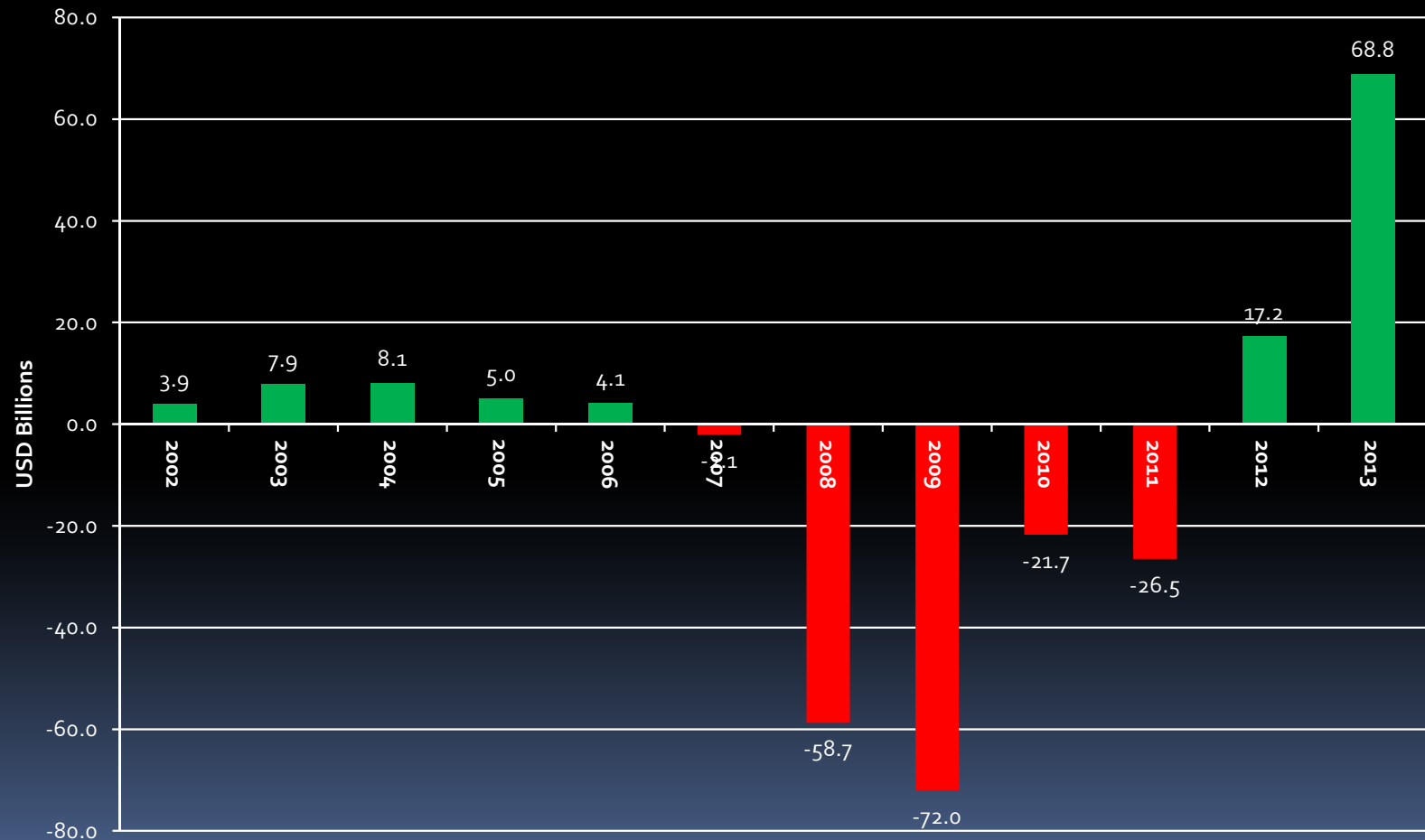
# The U.S. Housing Crisis: Fannie Mae and Freddie Mac

- On Sep. 6, 2008, U.S. Govt. placed Fannie and Freddie into conservatorship following announcement of massive losses, where they remain today.
- In exchange for a bailout, the U.S. Treasury took warrants for purchasing 79.9% ownership stake in common stock, but didn't wipe out shareholders.
- Why? To avoid having to consolidate Fannie/Freddie liabilities on the U.S. balance sheet.
- It also purchased preferred shares that require payment of all net income to Treasury, thus far \$105 billion.

# The U.S. Housing Crisis: Fannie Mae and Freddie Mac

- Both have returned to profitability during the refinancing boom of recent years.
- This year, Fannie was allowed to rebook “tax loss carry-forwards” worth \$48.6 billion, or 2/3rds of its \$68.8 billion in net income.
- Now, talks about downsizing and privatizing Fannie & Freddie have been replaced by talks about keeping them as “cash cows” to fund deficit spending.

# The U.S. Housing Crisis: Fannie Mae Net Income by Year



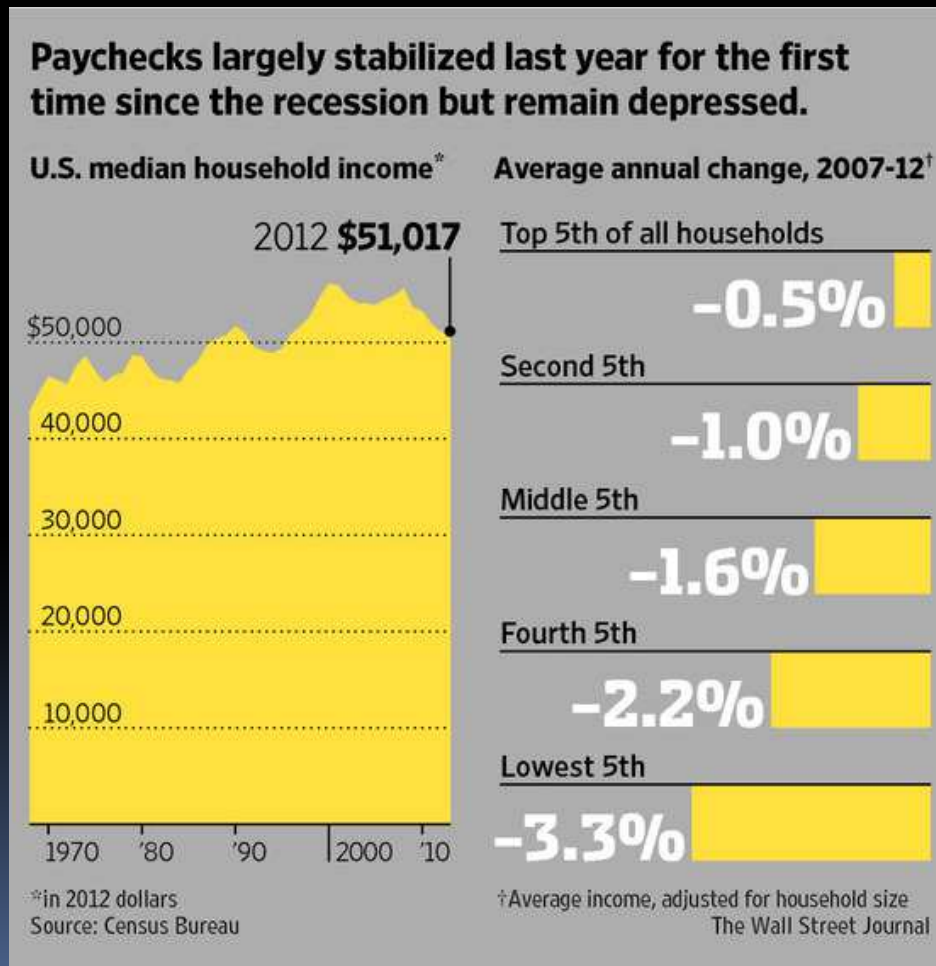
# The U.S. Housing Crisis: Bottom Line

- Housing market will be weak until “shadow” inventory works through the system. (2016?)
- Without a healthy housing sector, the jobs market will remain weak. Also, many workers can’t move to take a new job because of underwater mortgages.
- Foreclosures mean there will be millions of new renters who will not be able to buy until their credit histories heal.
- Bernanke’s Fed will continue ZIRP and QE in attempt to fix housing (and jobs).

# The U.S. Jobs Crisis

- Household income has stagnated for most Americans.
- Millions of Americans lost their jobs following onset of the financial crisis in 2008.
- Many have been unable to find new jobs, and have given up trying.
- Millions have retired early and millions more have gone on long-term disability in order to receive government payments.

# The U.S. Jobs Crisis: Household Income

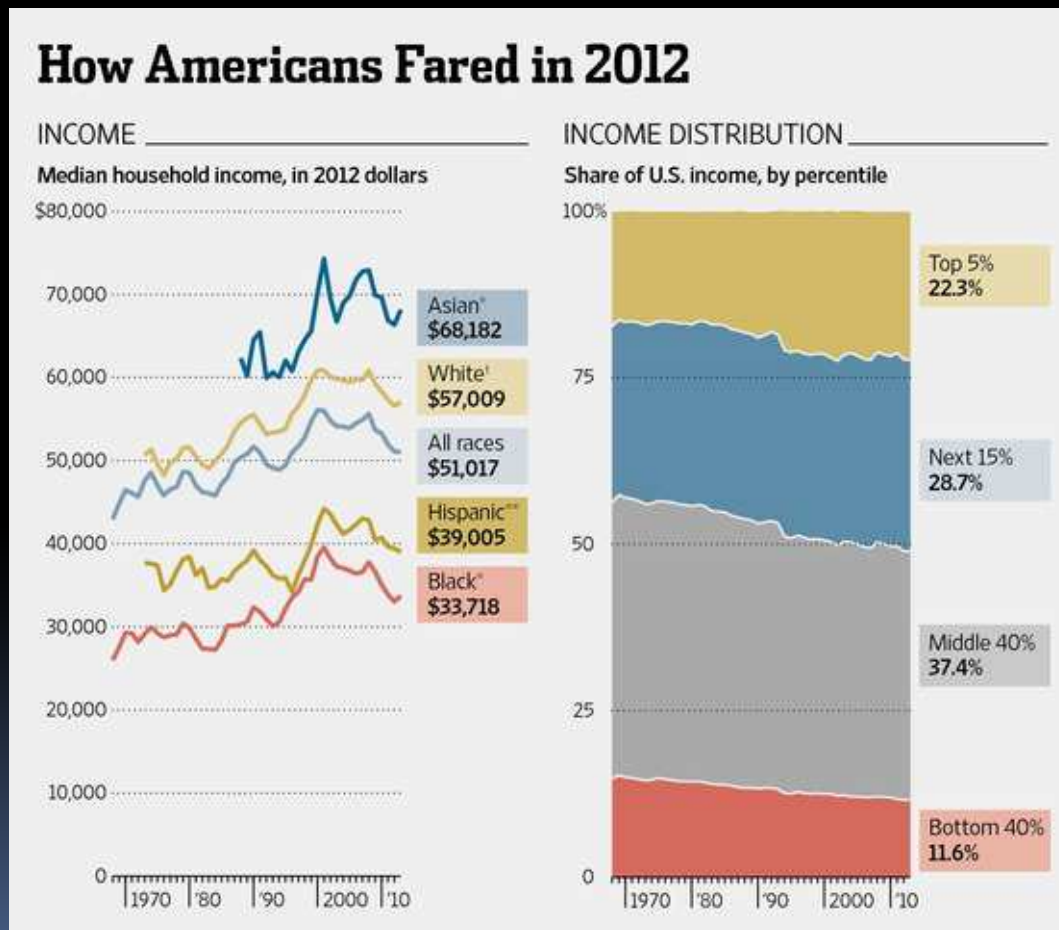


All five income quintiles have lost ground since 2007.

The lower the quintile, the more lost ground.

Median income is back to where it was in late 1990s.

# The U.S. Jobs Crisis: Household Income

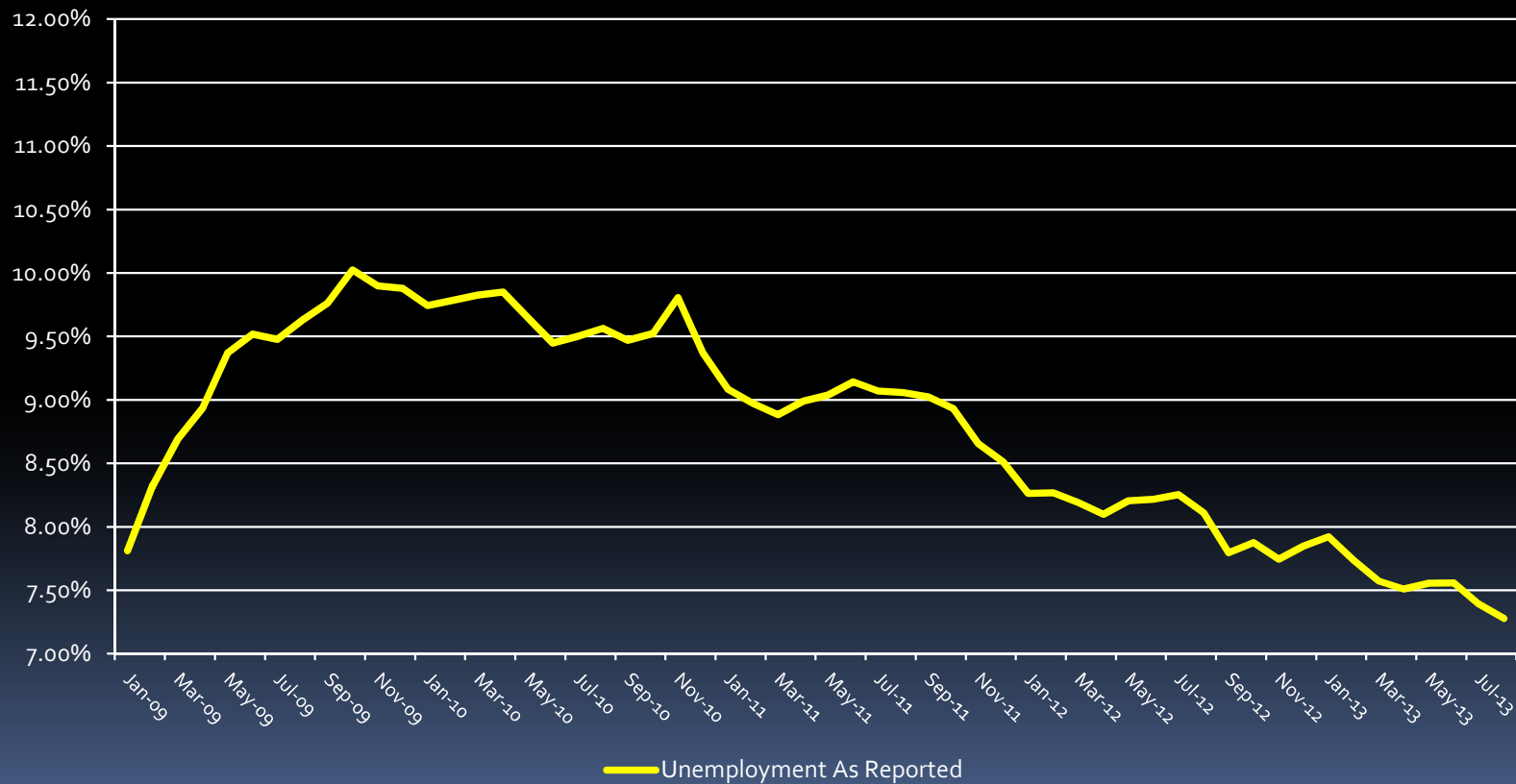


Declines in income have hit all races, but blacks and Hispanics fared worst.

The rich have gotten (relatively) richer, the poor poorer.

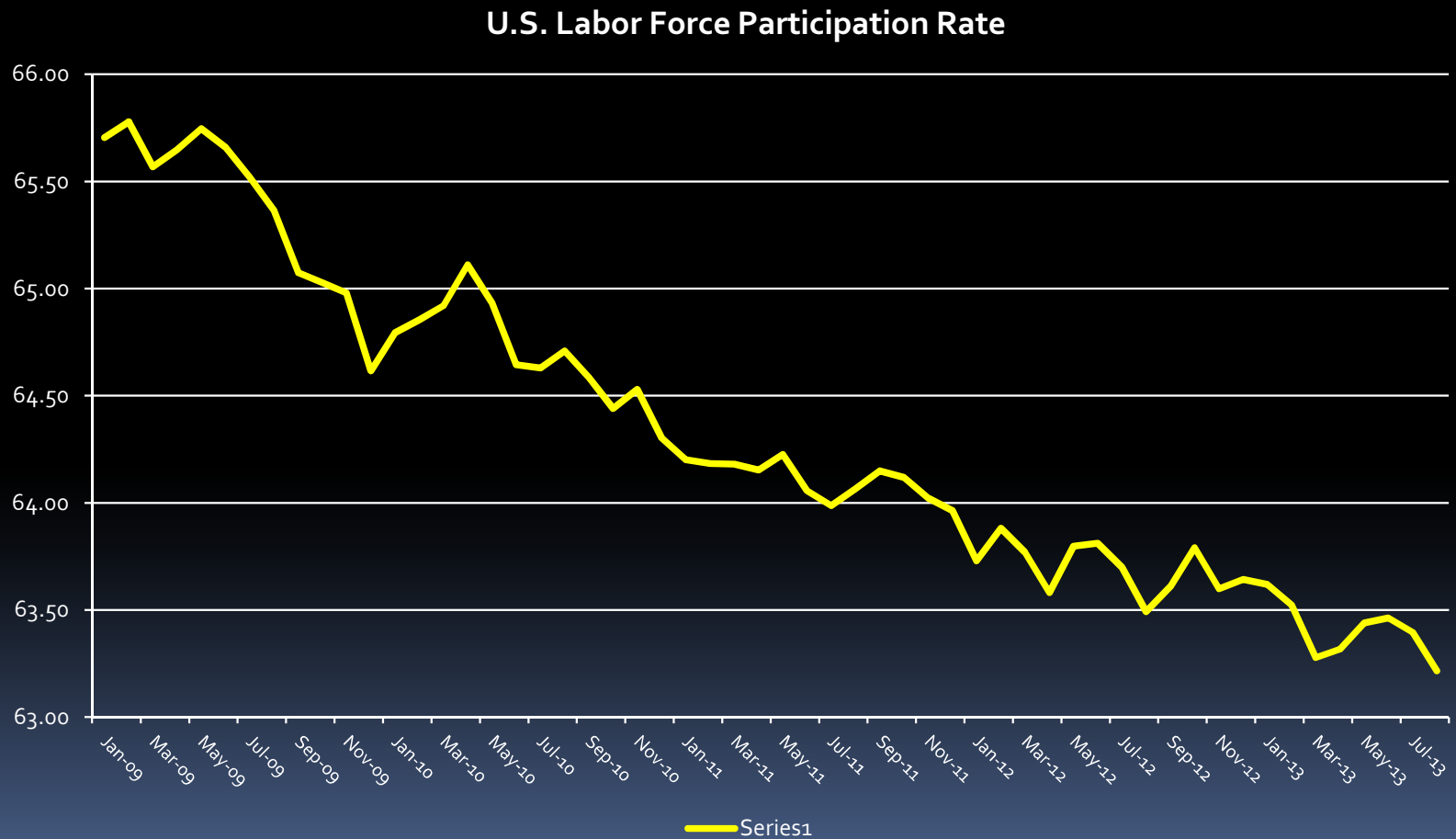
# The U.S. Jobs Crisis: Unemployment Rate

U.S. Unemployment Rate:  
As Reported



Source: Federal Reserve Economic Data (FRED)

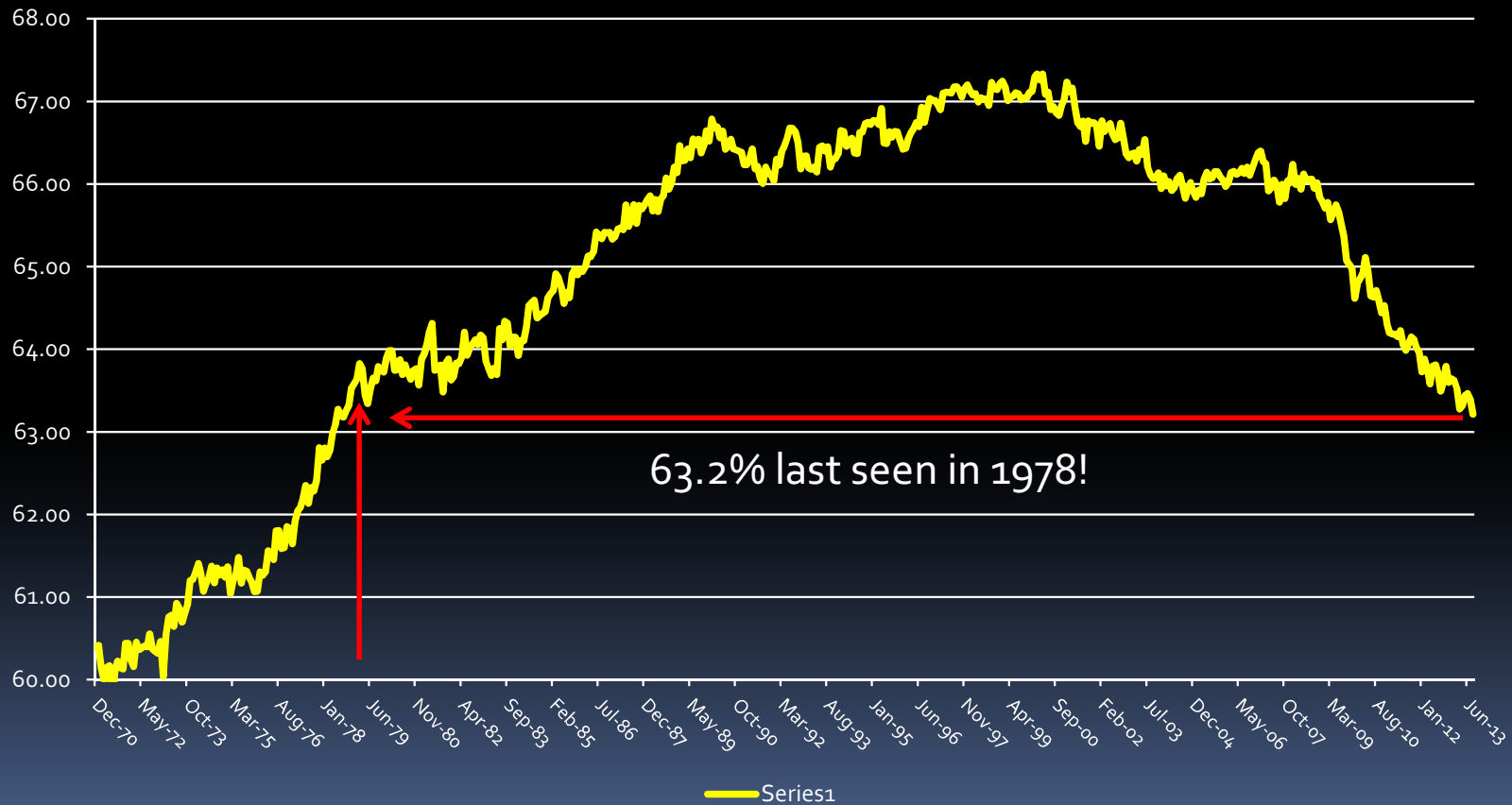
# The U.S. Jobs Crisis: Labor Force Participation Rate



Source: Federal Reserve Economic Data (FRED)

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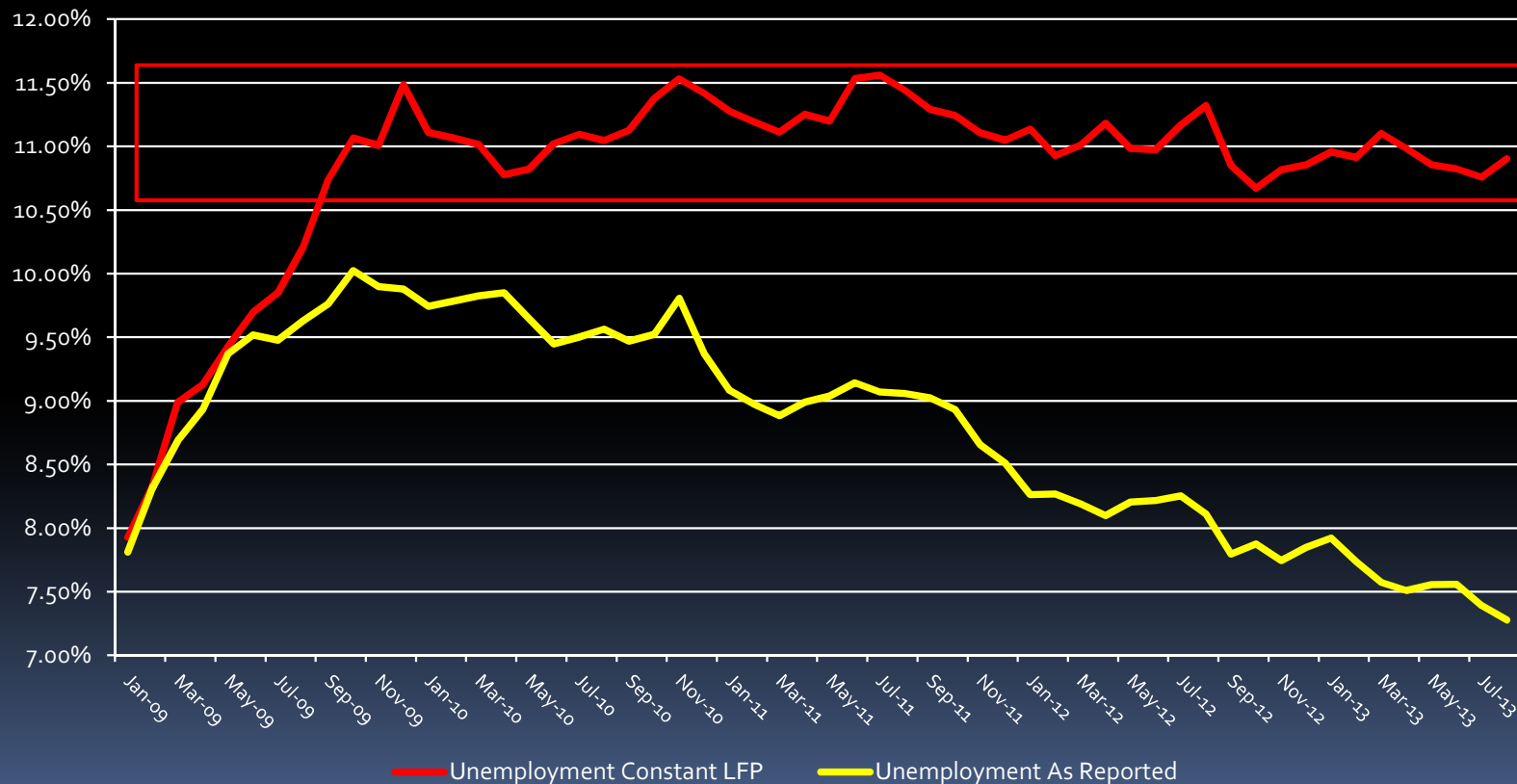
U.S. Labor Force Participation Rate



Source: Federal Reserve Economic Data (FRED)

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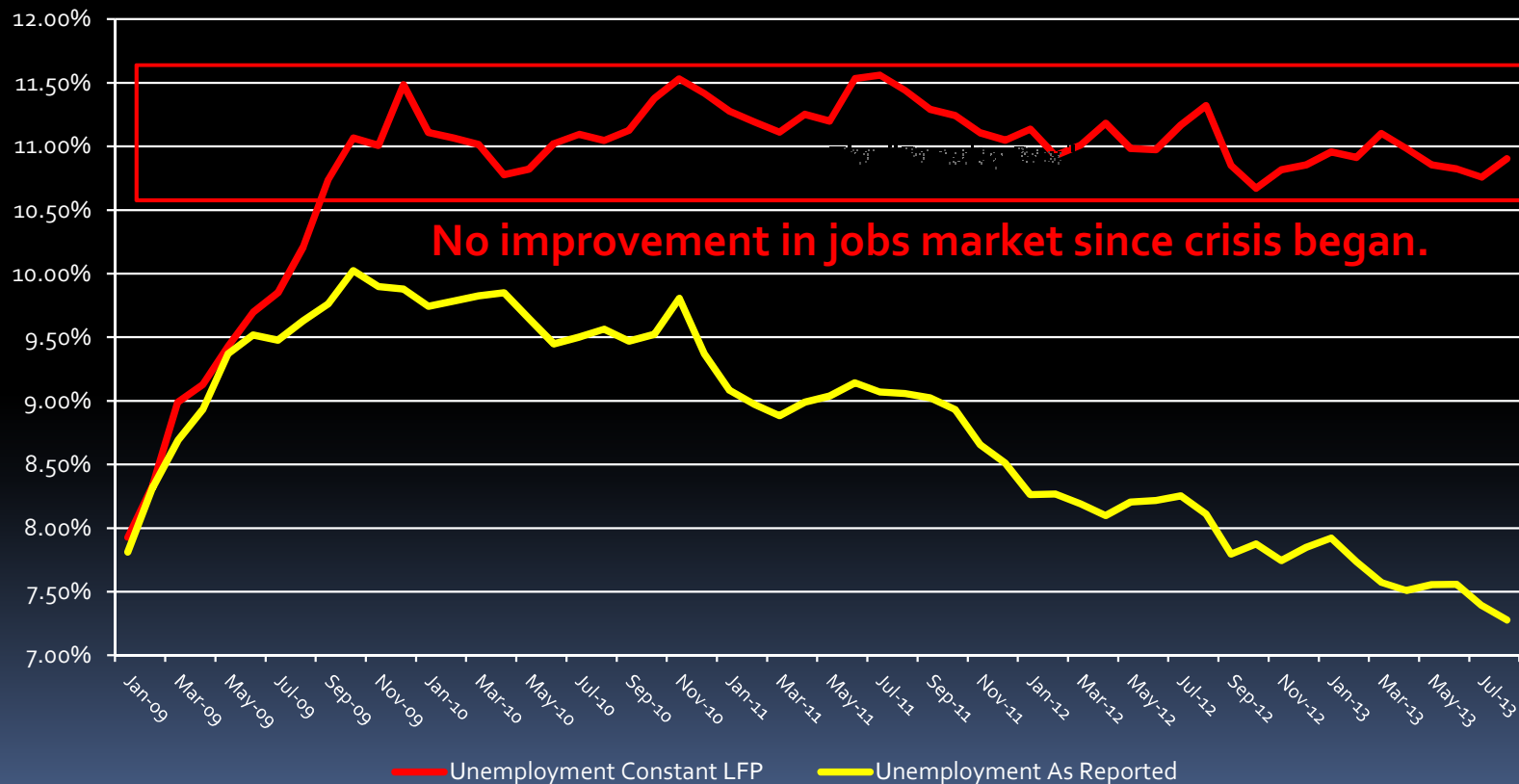
**U.S. Unemployment Rate:**  
7.3% As Reported and 10.9% If LFP Unchanged Since 2009



Source: Federal Reserve Economic Data (FRED)

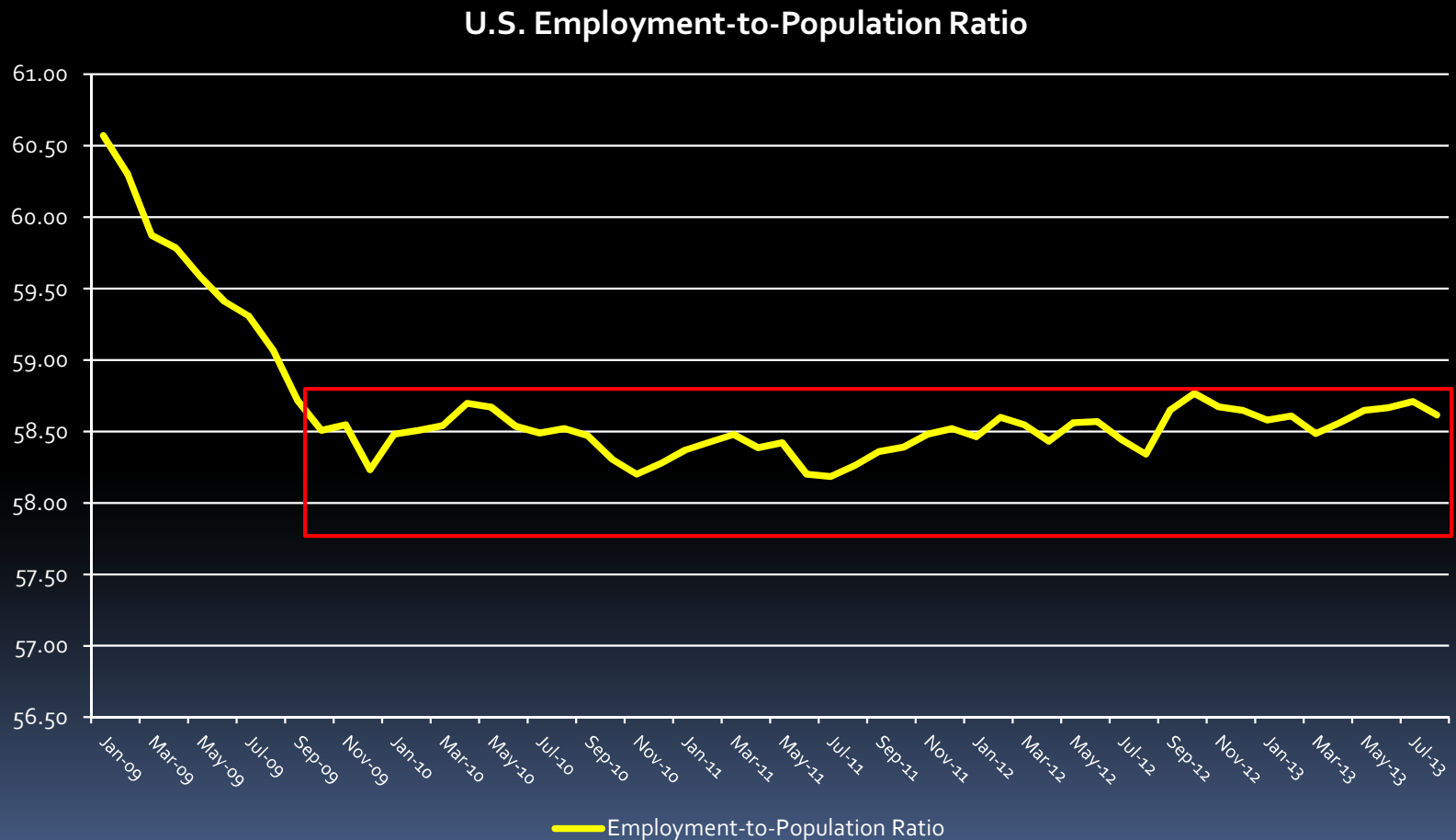
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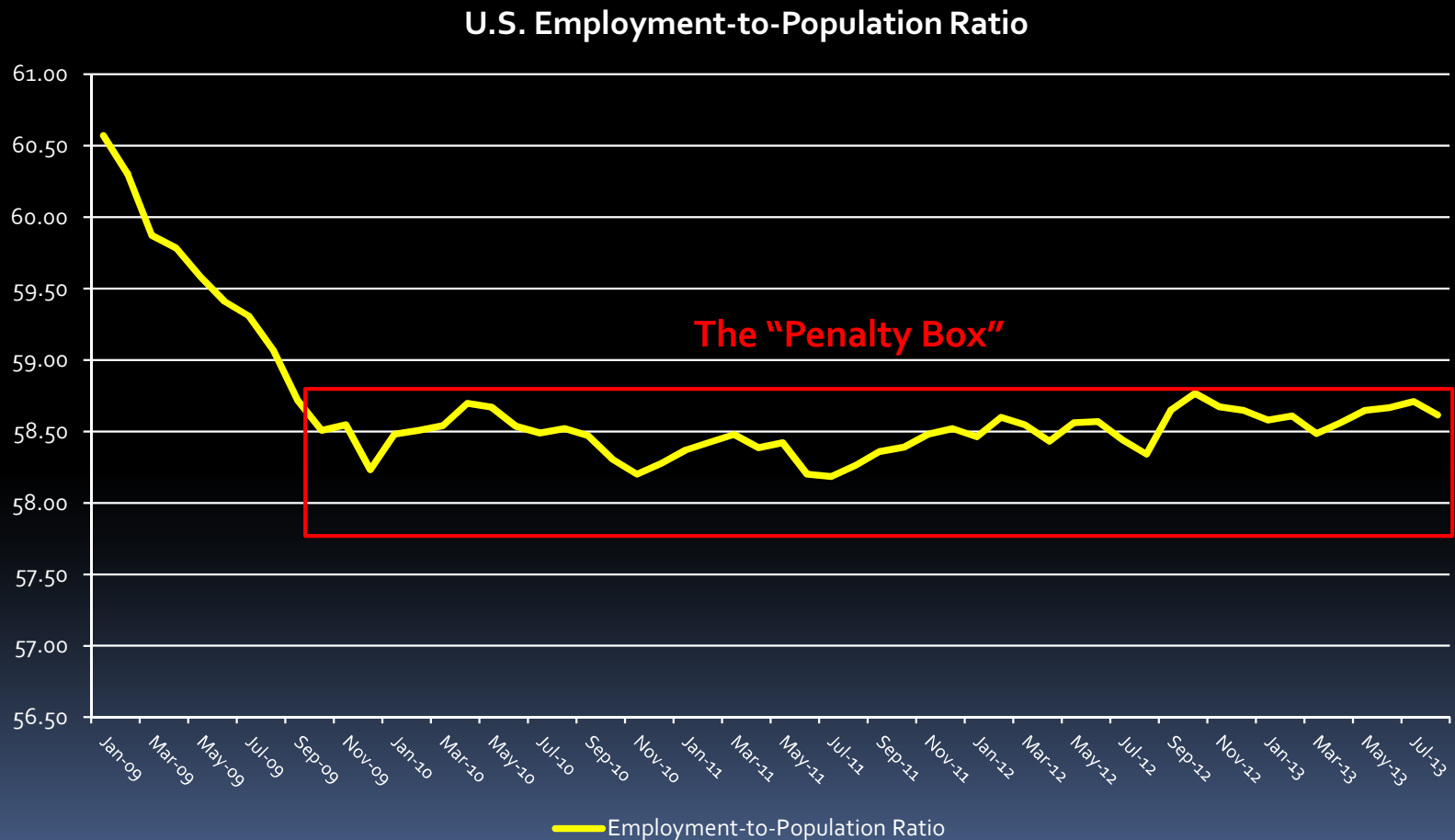
Source: Federal Reserve Economic Data (FRED)

# The U.S. Jobs Crisis: Employment-to-Population Ratio



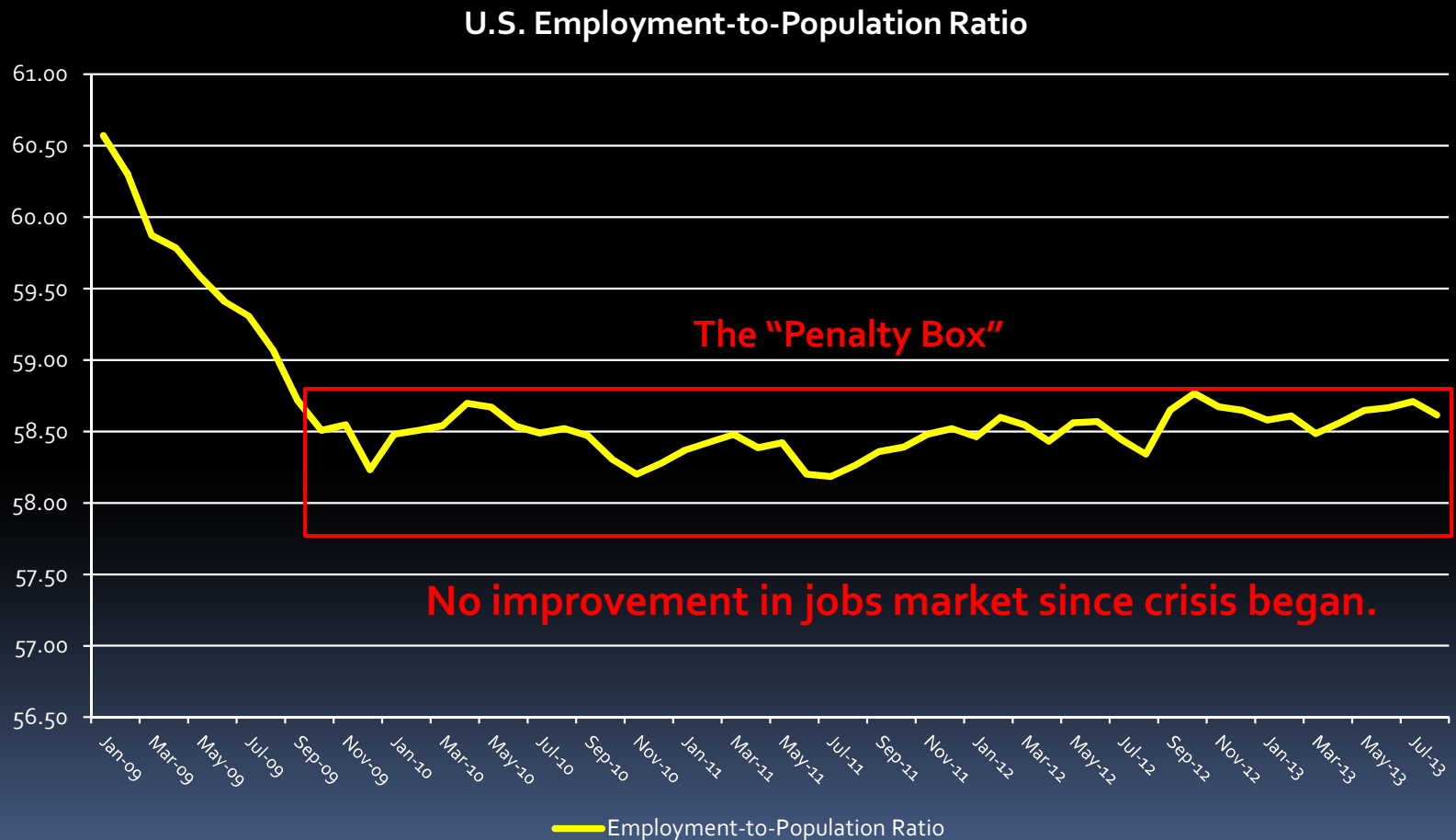
Source: Federal Reserve Economic Data (FRED)

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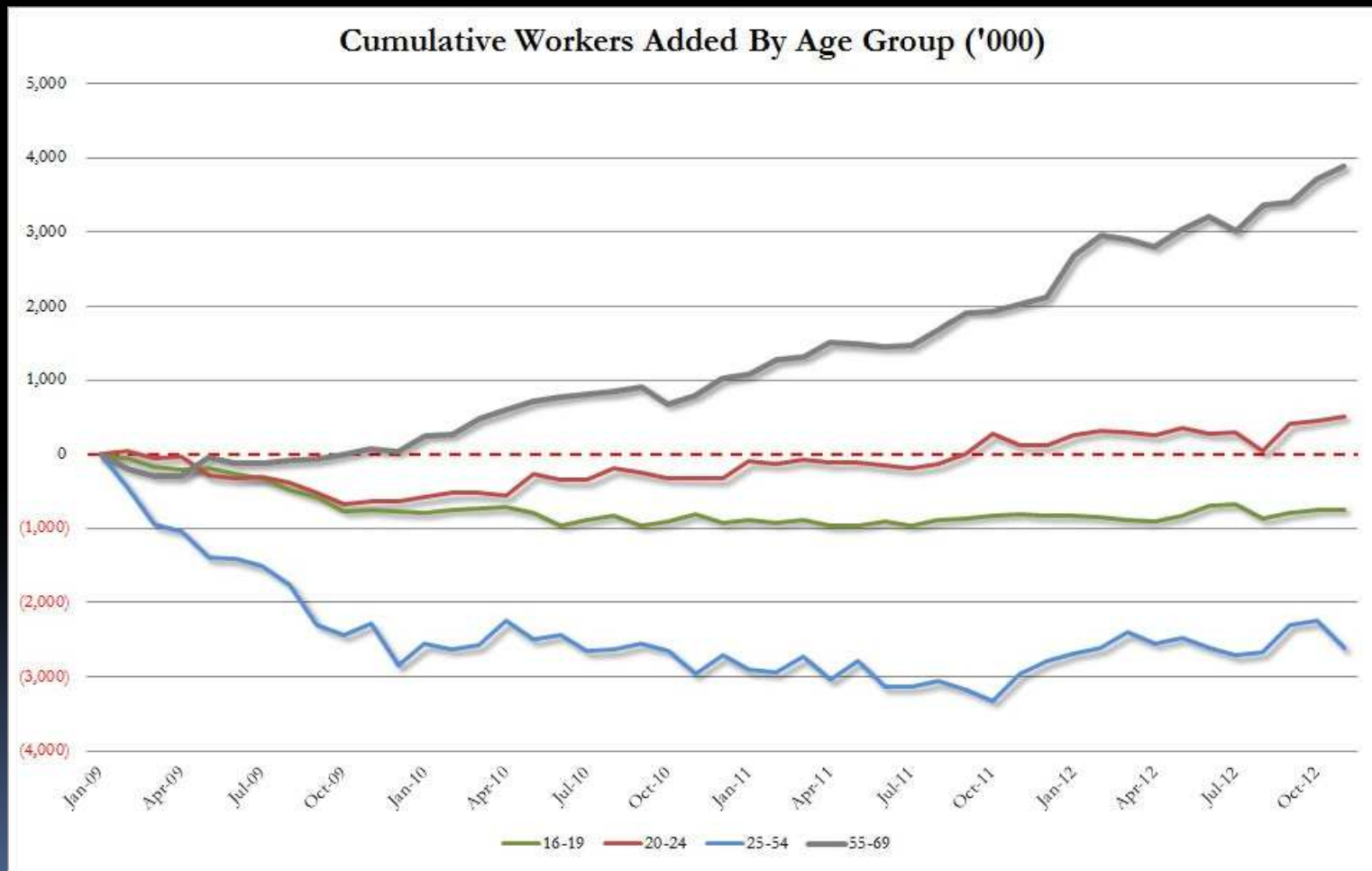
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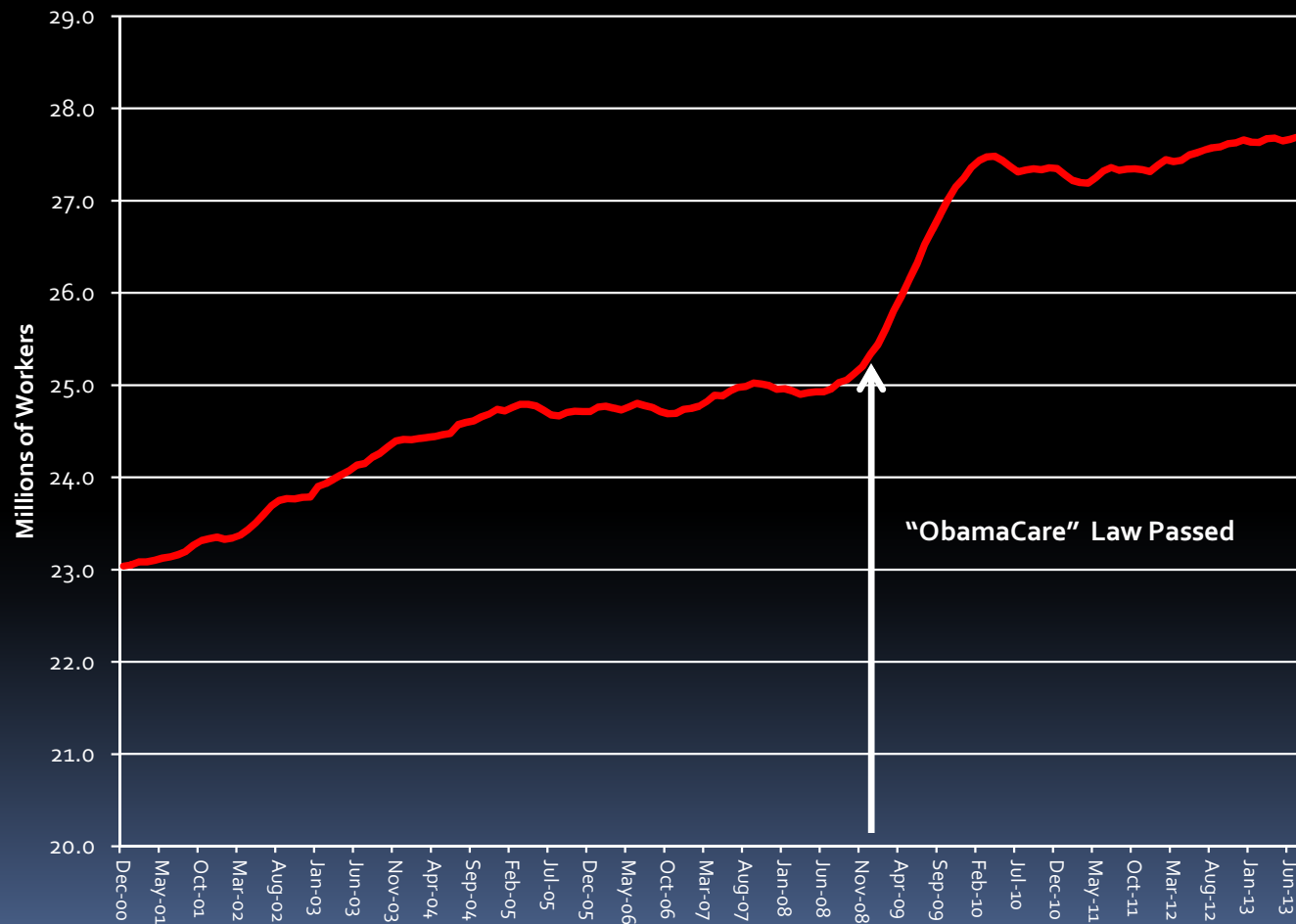
Source: Federal Reserve Economic Data (FRED)

# The U.S. Jobs Crisis: Job Creation by Age Cohorts



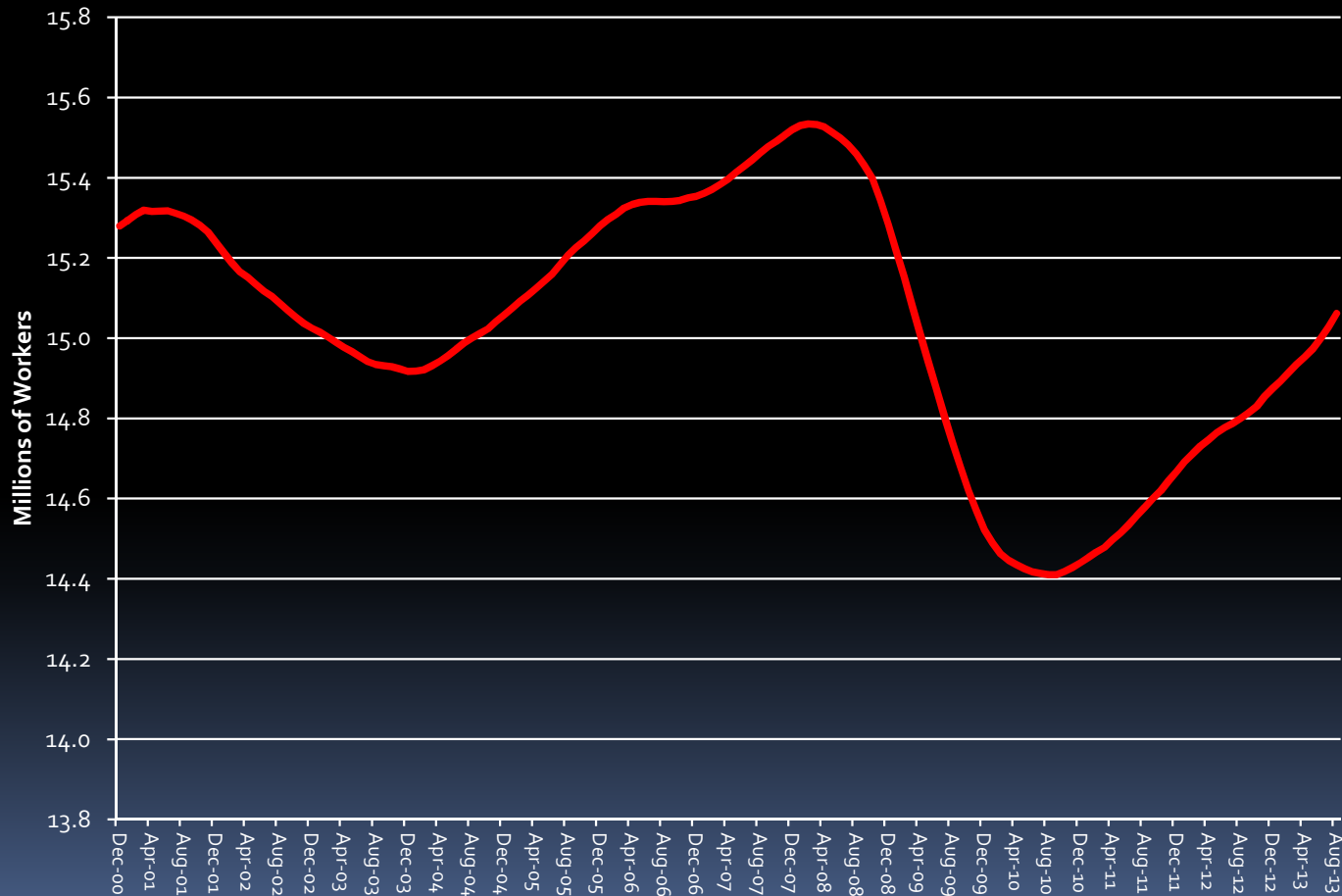
Source: U.S. Bureau of Labor Statistics

# The U.S. Jobs Crisis: McJobs: Part-Time Employment



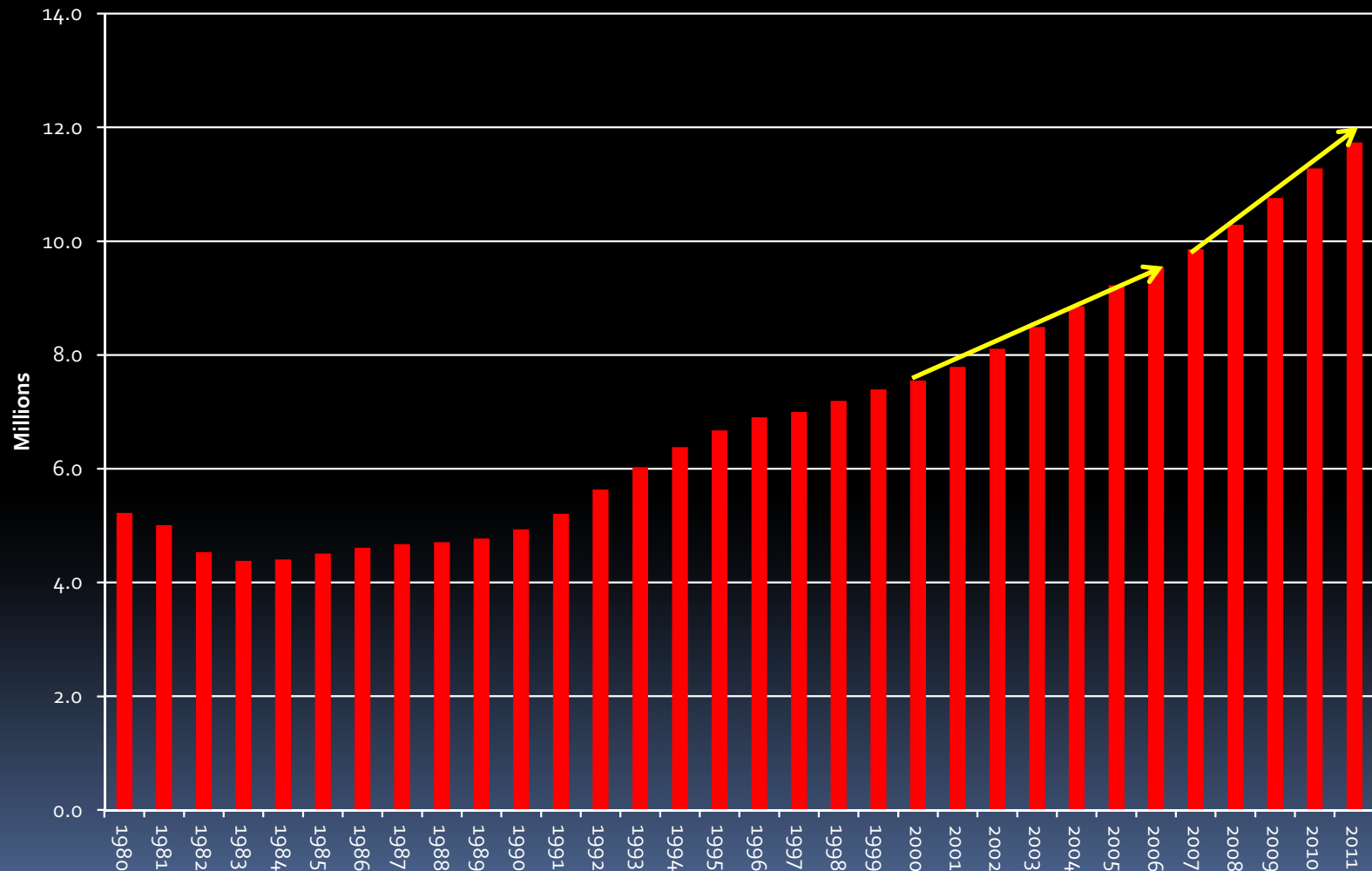
Source: U.S. Bureau of Labor Statistics

# The U.S. Jobs Crisis: McJobs: Retail Employment



Source: U.S. Bureau of Labor Statistics

# The U.S. Jobs Crisis: Persons receiving SS Disability Payments



Source: U.S. Social Security Administration

# The U.S. Jobs Crisis: Bottom Line

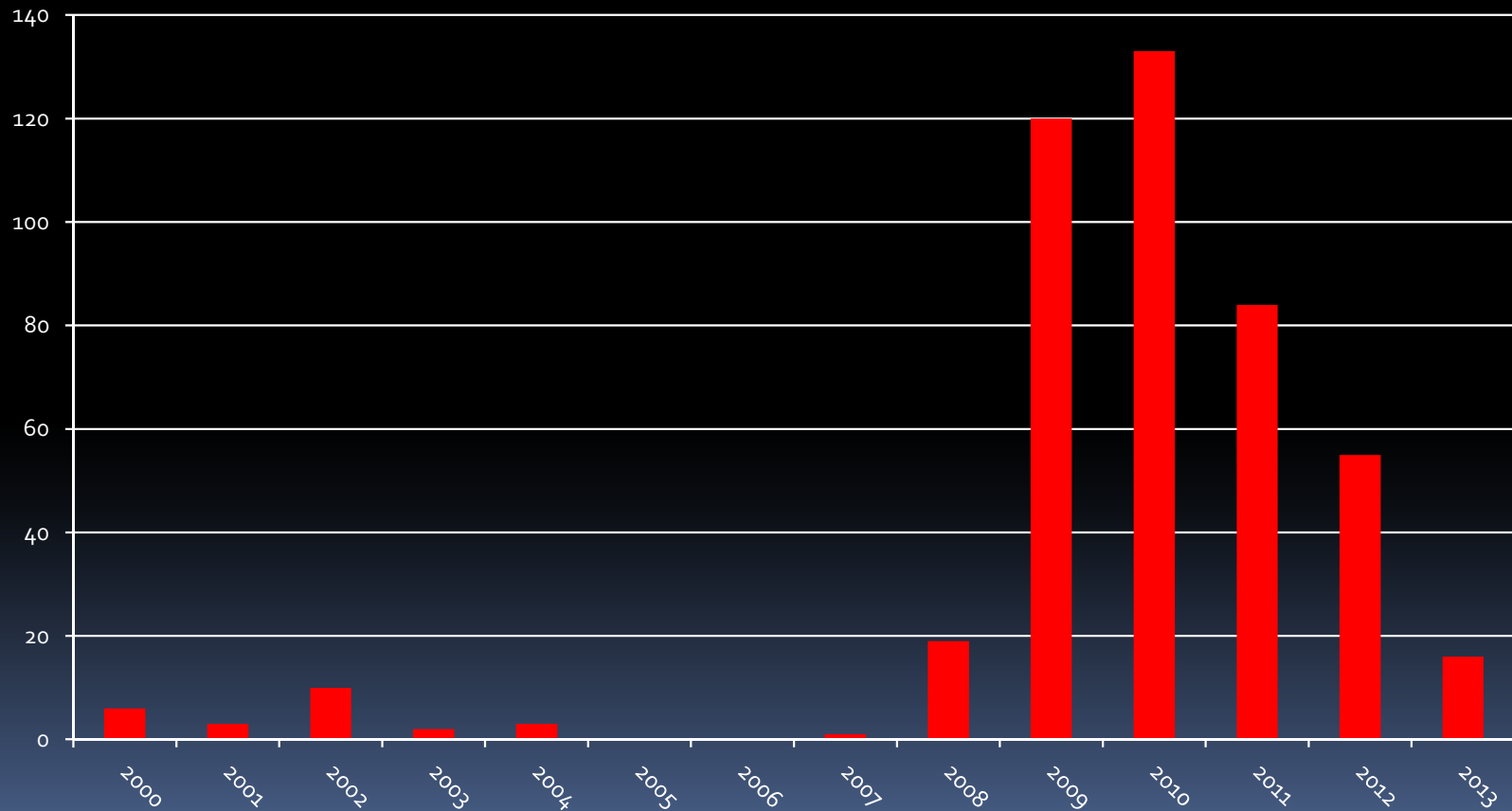
- Improvement in Unemployment Rate is “smoke and mirrors:”
- Attributable to millions of unemployed workers who have given up hope and left the work force for early retirement or long-term disability.
- There has been no “real” measurable improvement in the U.S. labor market since Oct. 2009.
- By this measure, the Great Recession has not ended.
- Bernanke has stated that he will pursue the “full employment” part of the Fed’s “dual mandate,” but will he focus on the UE rate or the E-P ratio?

## The U.S. Banking Crisis:

- In 2008, Feds were forced to rescue most of the largest U.S. bank holding companies.
- \$700 billion TARP (of which only \$200 billion went to banks) was dwarfed by \$7 trillion in secret Fed loans.
- Since 2008, more than 400 (mostly small) banks have failed.
- More than 500 banks remain on FDIC's "Problem Bank" list. ("Normal" is less than 100.)

# The U.S. Banking Crisis: Number of Failures 2000 – 2013(Q2)

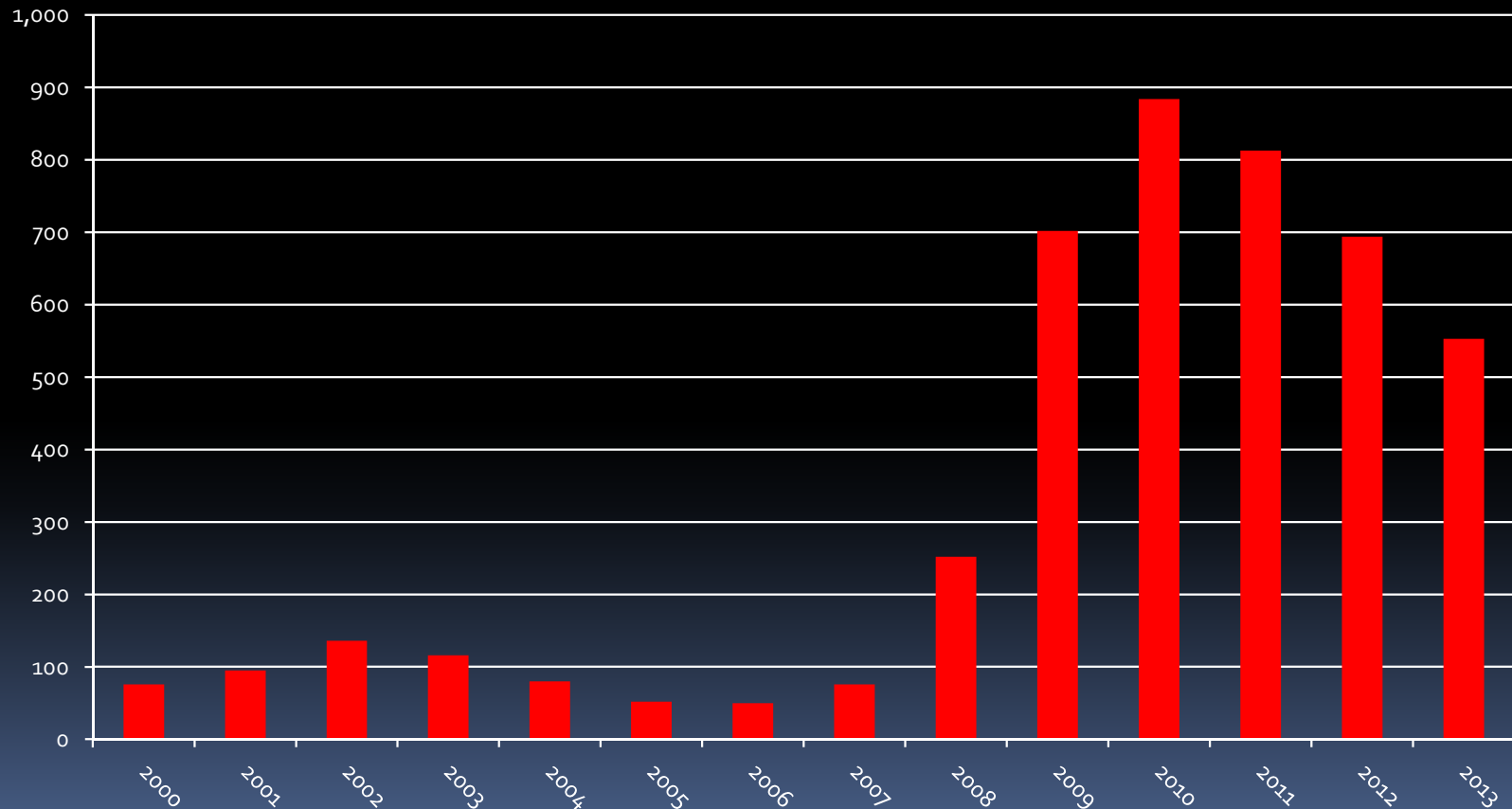
Bank Failures: 2000 – 2013(Q2)



Source: FDIC Historical Statistics on Banking

# The U.S. Banking Crisis: Number of Problem Banks 2000 – 2013(Q2)

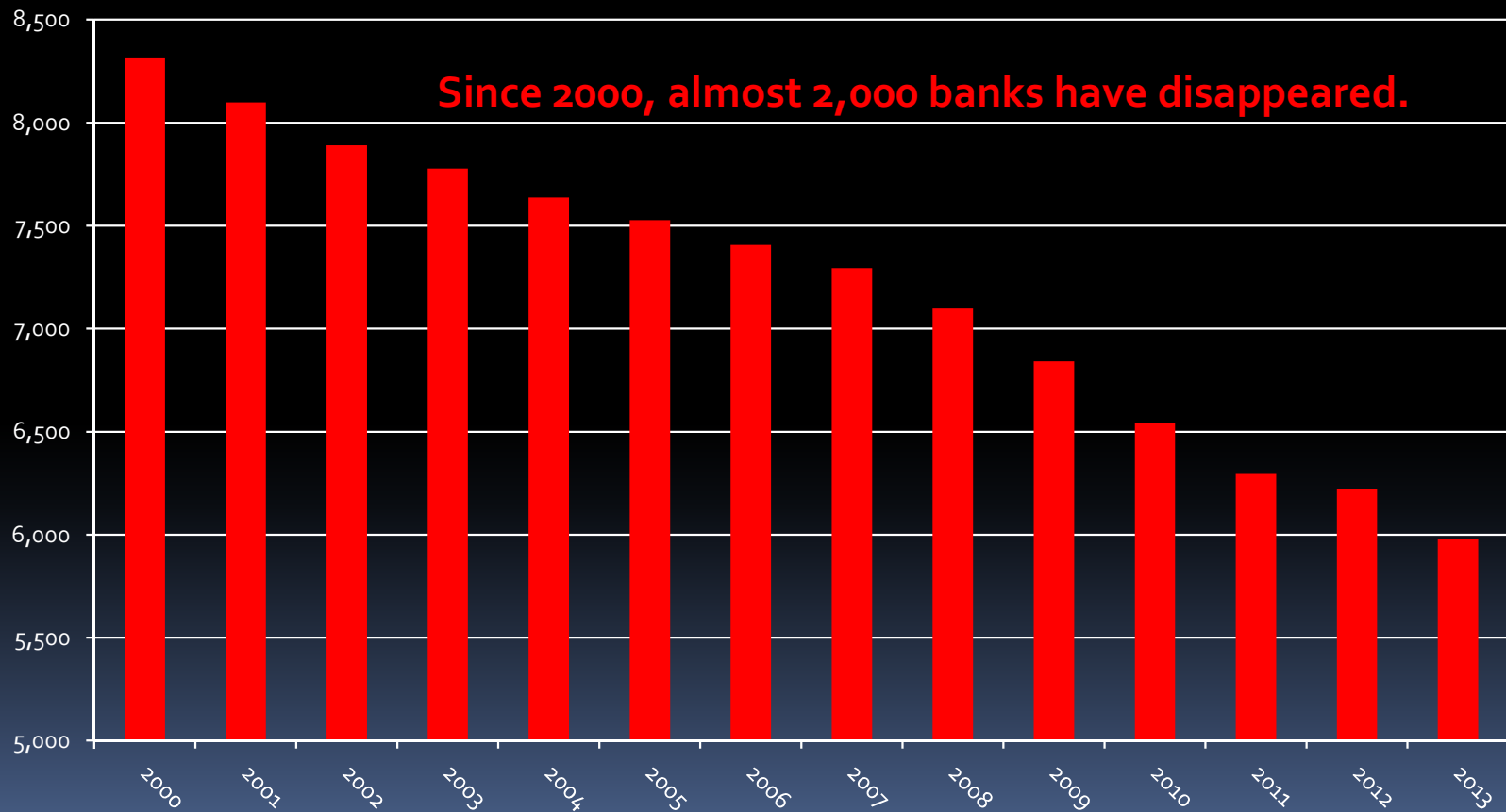
Number of FDIC Problem Banks: 2000 – 2013(Q2)



Source: FDIC Quarterly Bank Profiles

# The U.S. Banking Crisis: Number of Banks 2000 – 2013(Q2)

Number of Banks: 2000 – 2013(Q2)

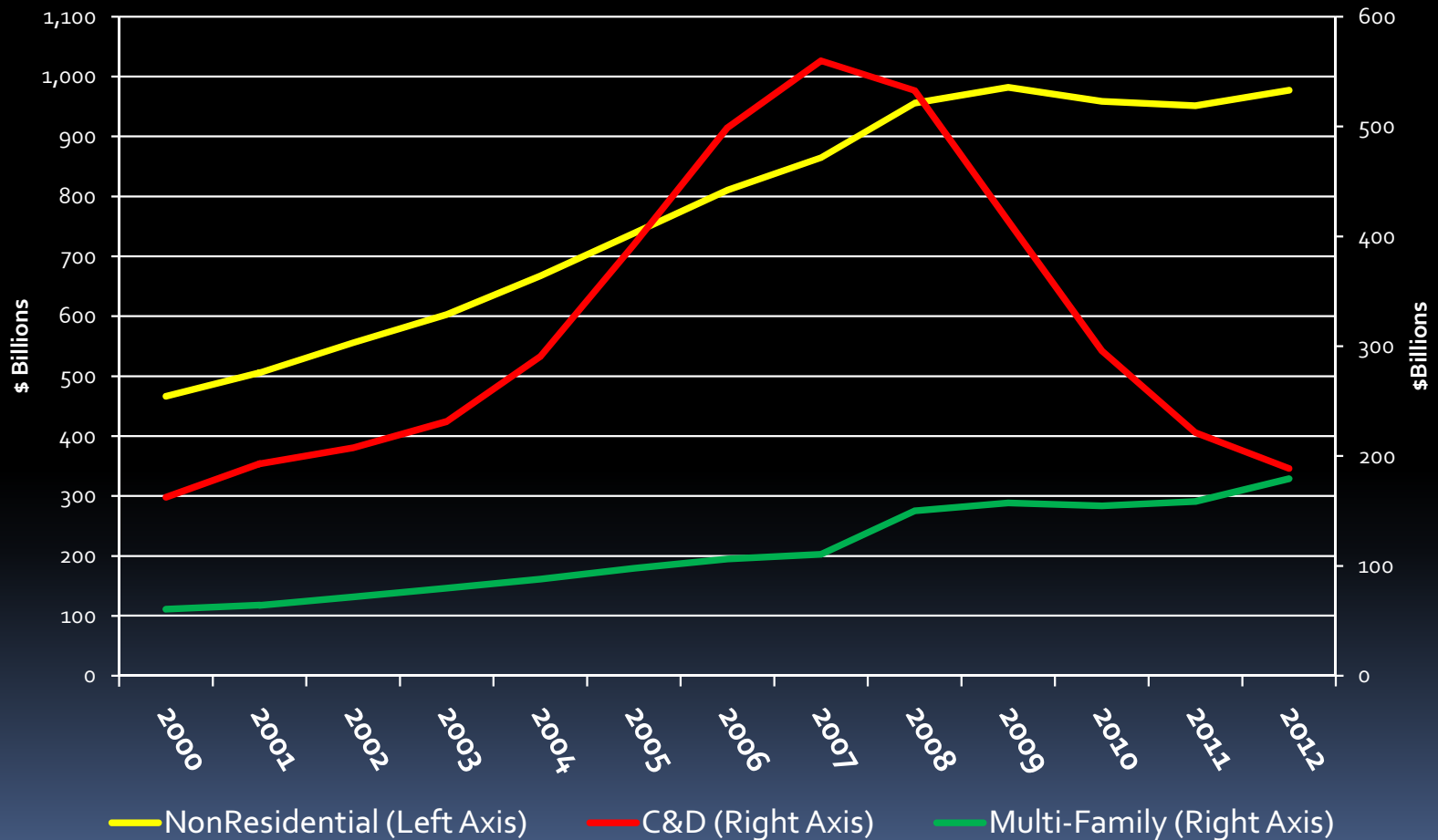


Source: FDIC Historical Statistics on Banking

# The U.S. Banking Crisis: Subprime, CDOs, CDSs and C&D loans

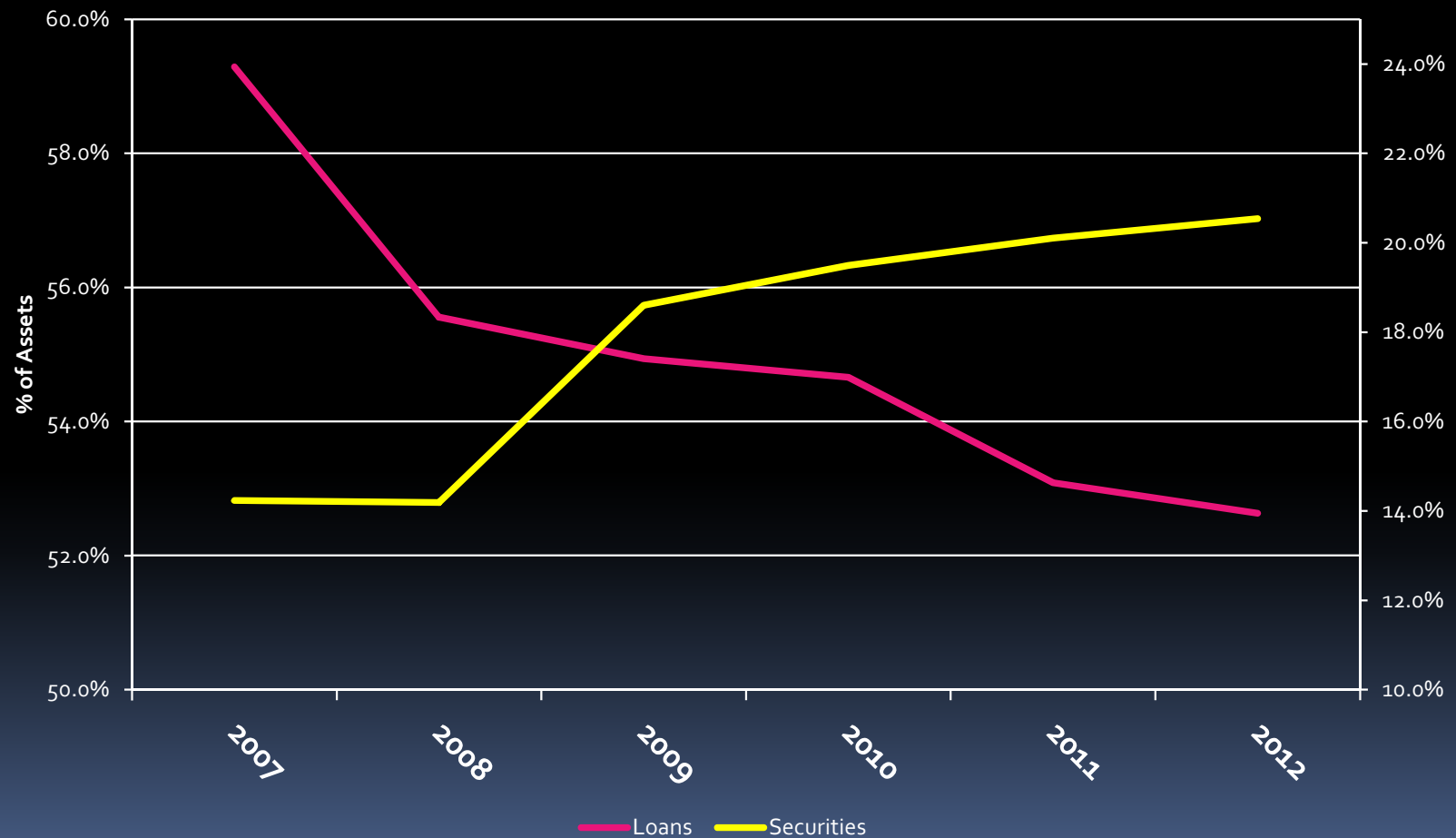
- “Subprime” mortgages are widely blamed for the crisis, but it was Collateralized Debt Obligations (CDOs) and Credit Default Swaps (CDSs) that did the real damage to Wall Street banks.
- \$70 Trillion in opaque OTC CDSs meant that no one knew who was solvent and who was not.
- Main Street banks are another story: they were funding construction loans to developers that went south as the housing market crashed.

# The U.S. Banking Crisis: Commercial Real Estate Lending



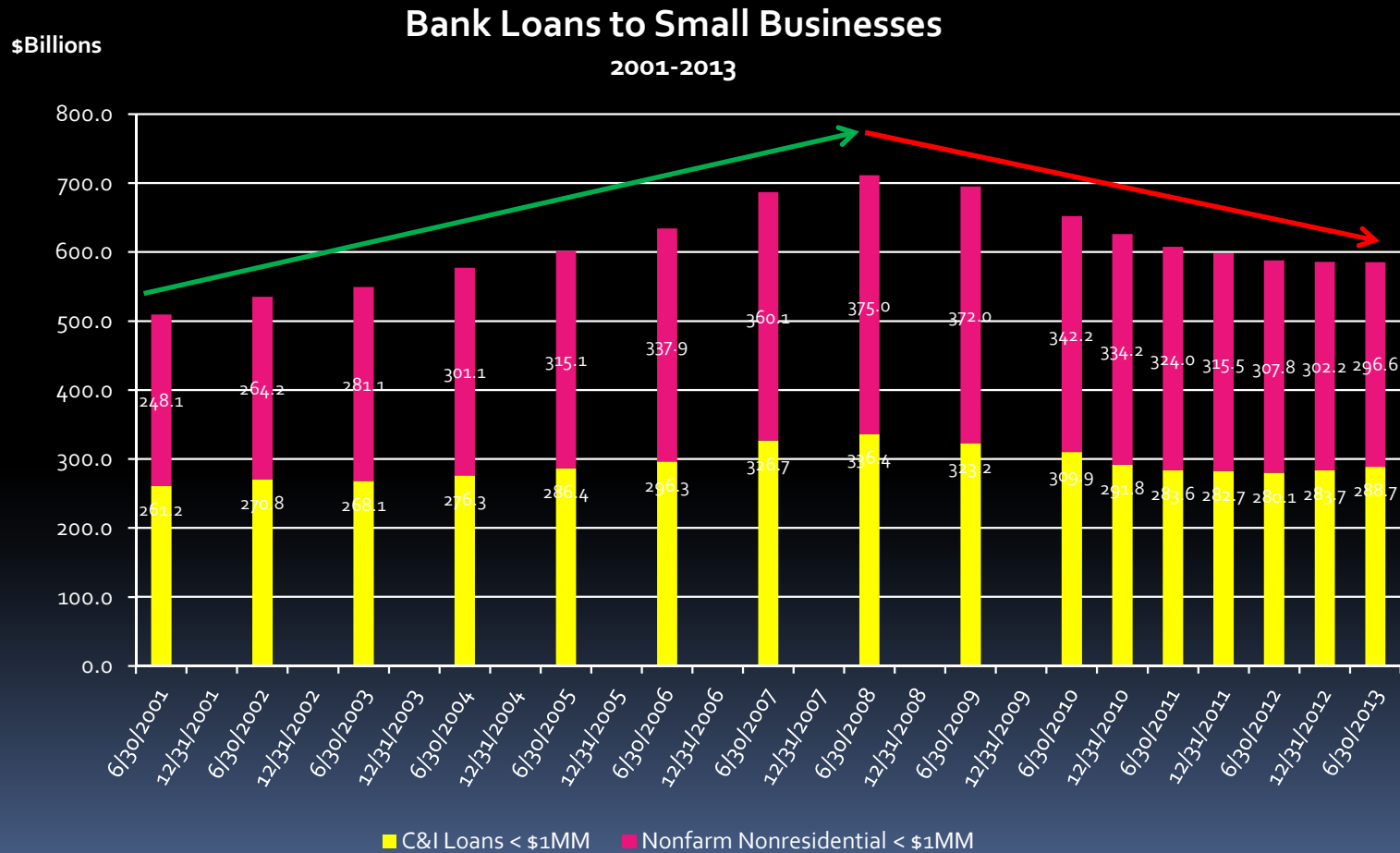
Source: FDIC Historical Statistics on Banking

# The U.S. Banking Crisis: Banks slowed lending, bought securities



Source: FDIC Historical Statistics on Banking

# The U.S. Banking Crisis: Banks slowed lending to small businesses

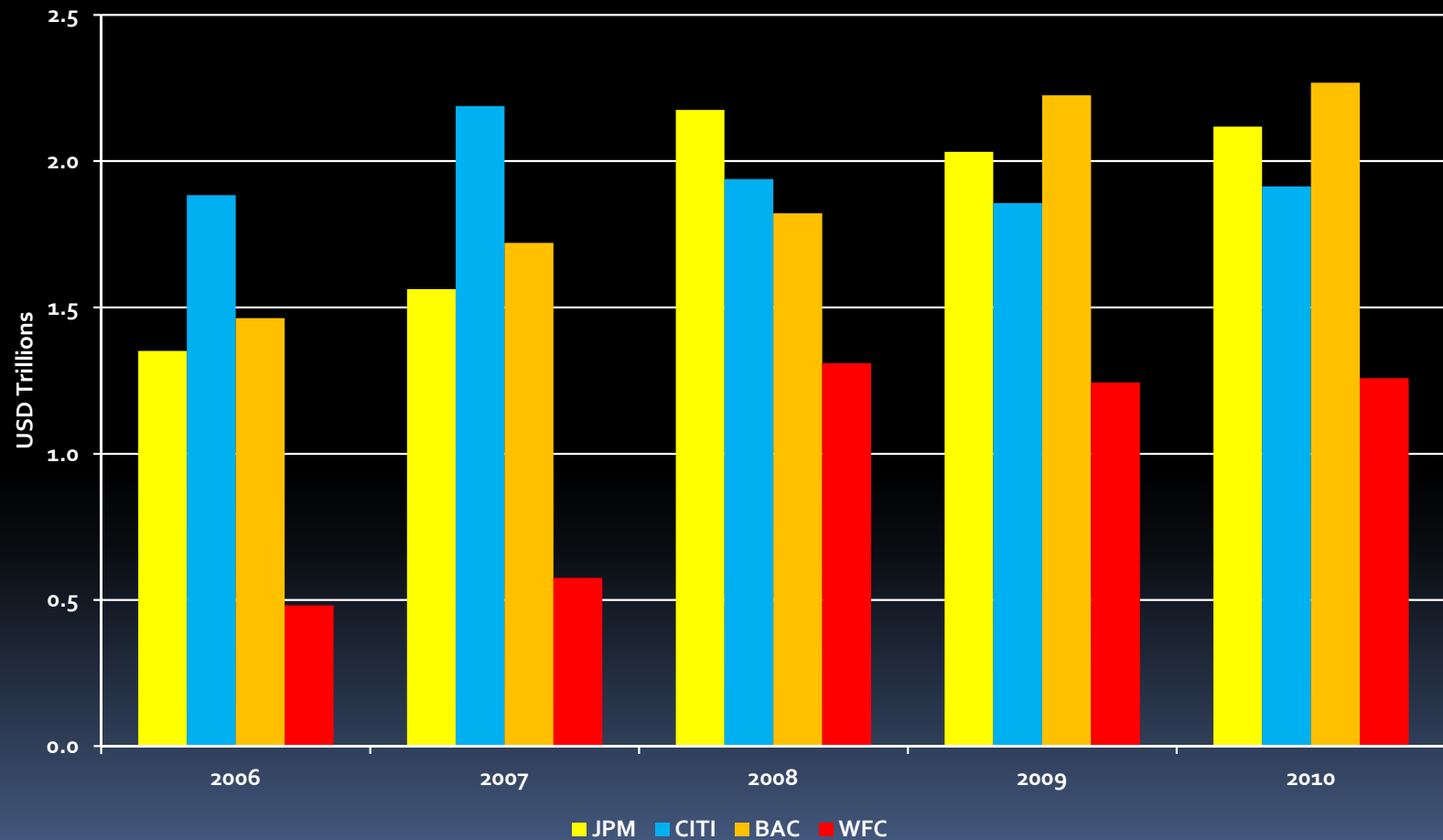


Source: FDIC Historical Statistics on Banking

# The U.S. Banking Crisis: Too-Big-To-Fail

- Dodd-Frank Act of 2010 was supposed to end what is known as “too-big-to-fail.”
- Yet, since 2007, what has happened to the largest U.S. banks?
- They’ve gotten BIGGER, not smaller!

# The U.S. Banking Crisis: Assets of 4 largest U.S. banks

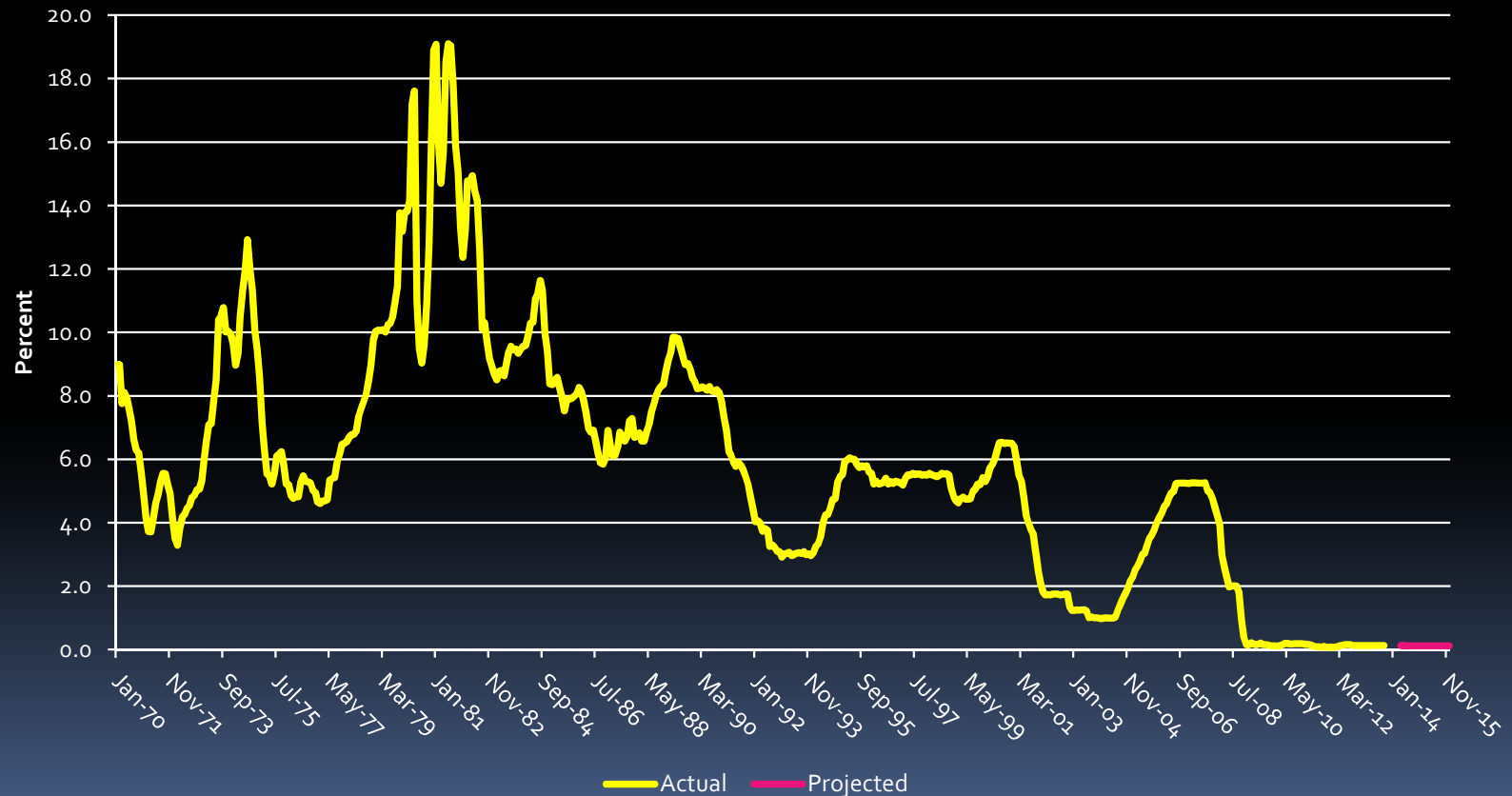


# The U.S. Banking Crisis: The Bottom Line

- The mega-banks are earning their way back to financial health, but still aren't lending.
- Community banks remain in crisis.
- By year-end 2015, look for another 500 community banks to fail or disappear in "shotgun" weddings (mergers arranged by regulators).

# The Fed's Crisis Response: Zero Interest Rate Policy (ZIRP)

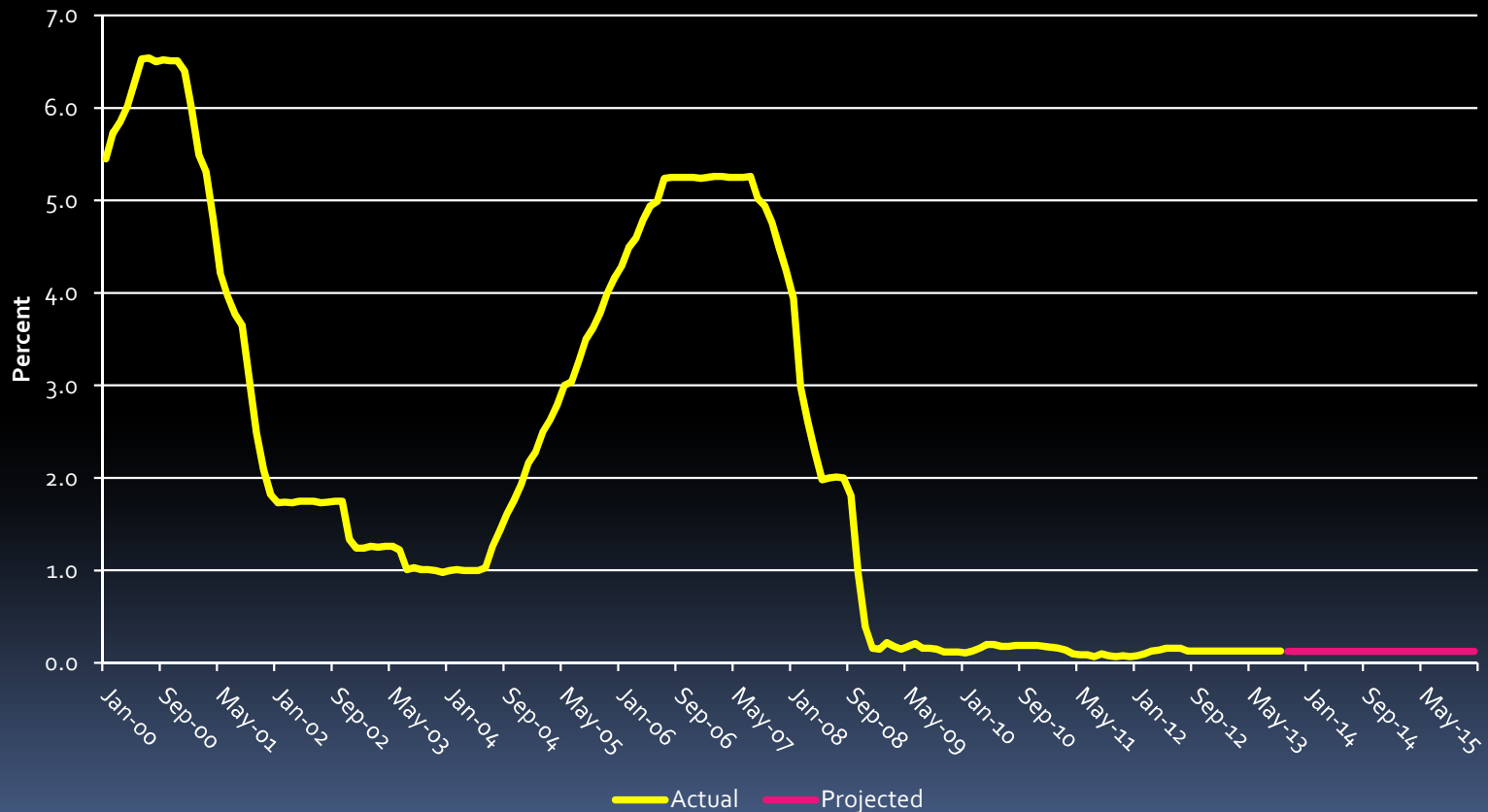
Federal Funds Rate 1970 - 2015



Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: Zero Interest Rate Policy (ZIRP)

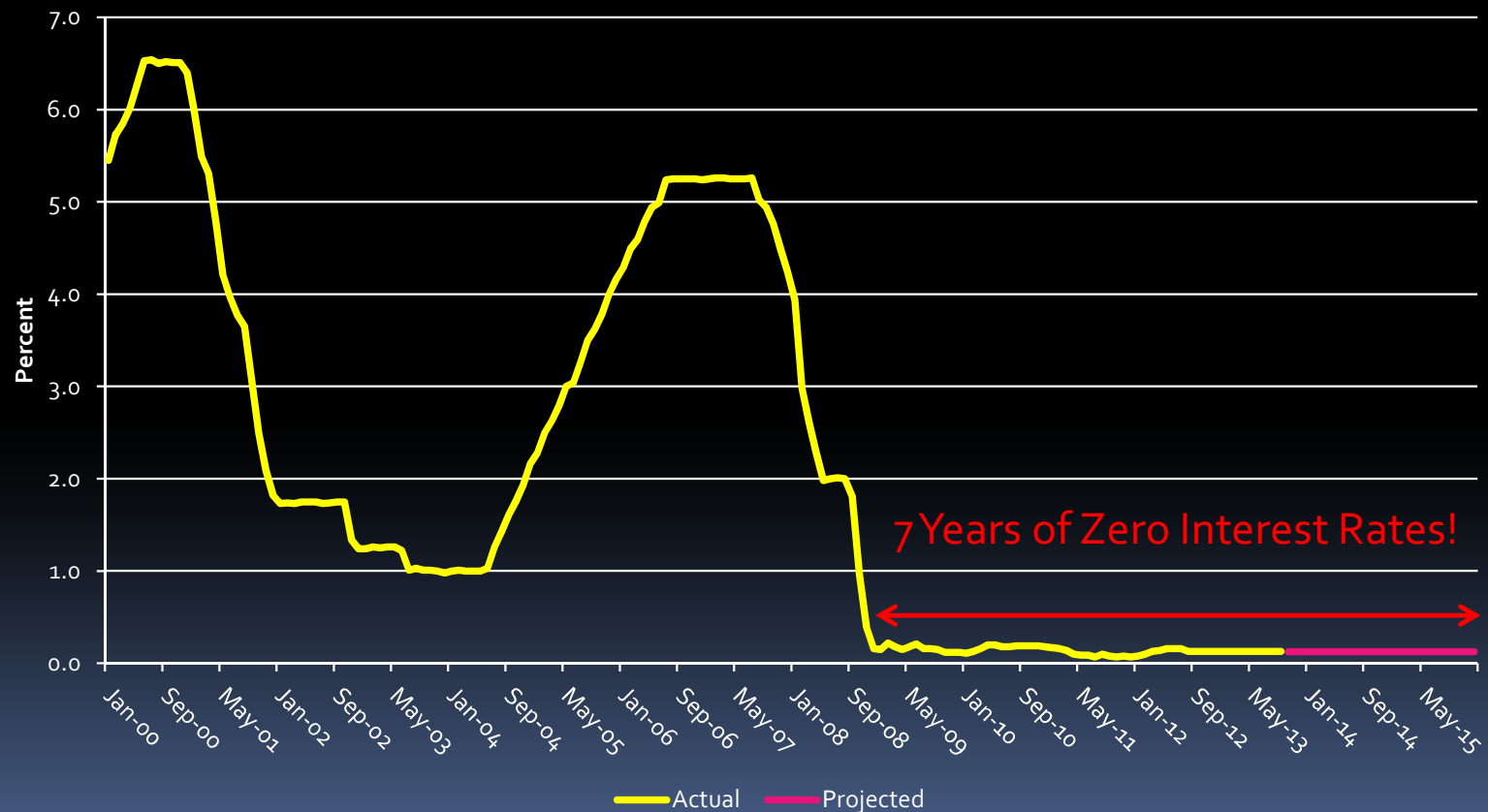
Federal Funds Rate 2000 - 2015



Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: Zero Interest Rate Policy (ZIRP)

## Federal Funds Rate 2000 - 2015

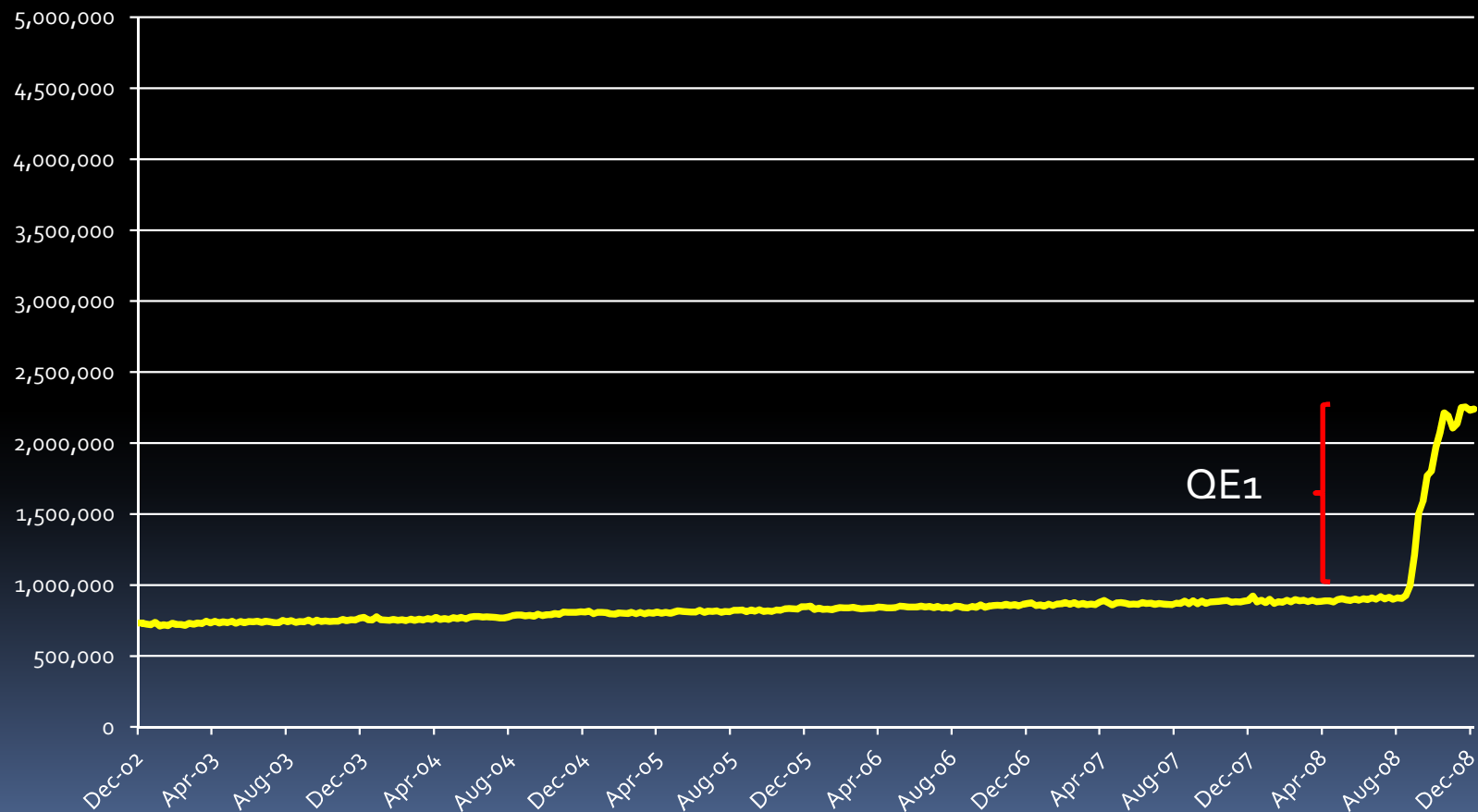


Source: Federal Reserve Economic Data (FRED)

## The Fed's Crisis Response: Asset Purchases (Quantitative Easing)

- ZIRP was not enough for Bernanke's Fed.
- In addition, back in Sep. 2008, the Fed announced that it would purchase hundreds of billions in U.S. Treasury securities—a program known as “Quantitative Easing.”
- The goal was to push longer term interest rates even lower than possible with targeting of the Fed Funds Rate.
- By year-end 2008, QE1 had ballooned the Fed's balance sheet from \$900 Billion to \$2.2 Trillion.

# The Fed's Crisis Response: Size of the Fed's Balance Sheet 2003-2008

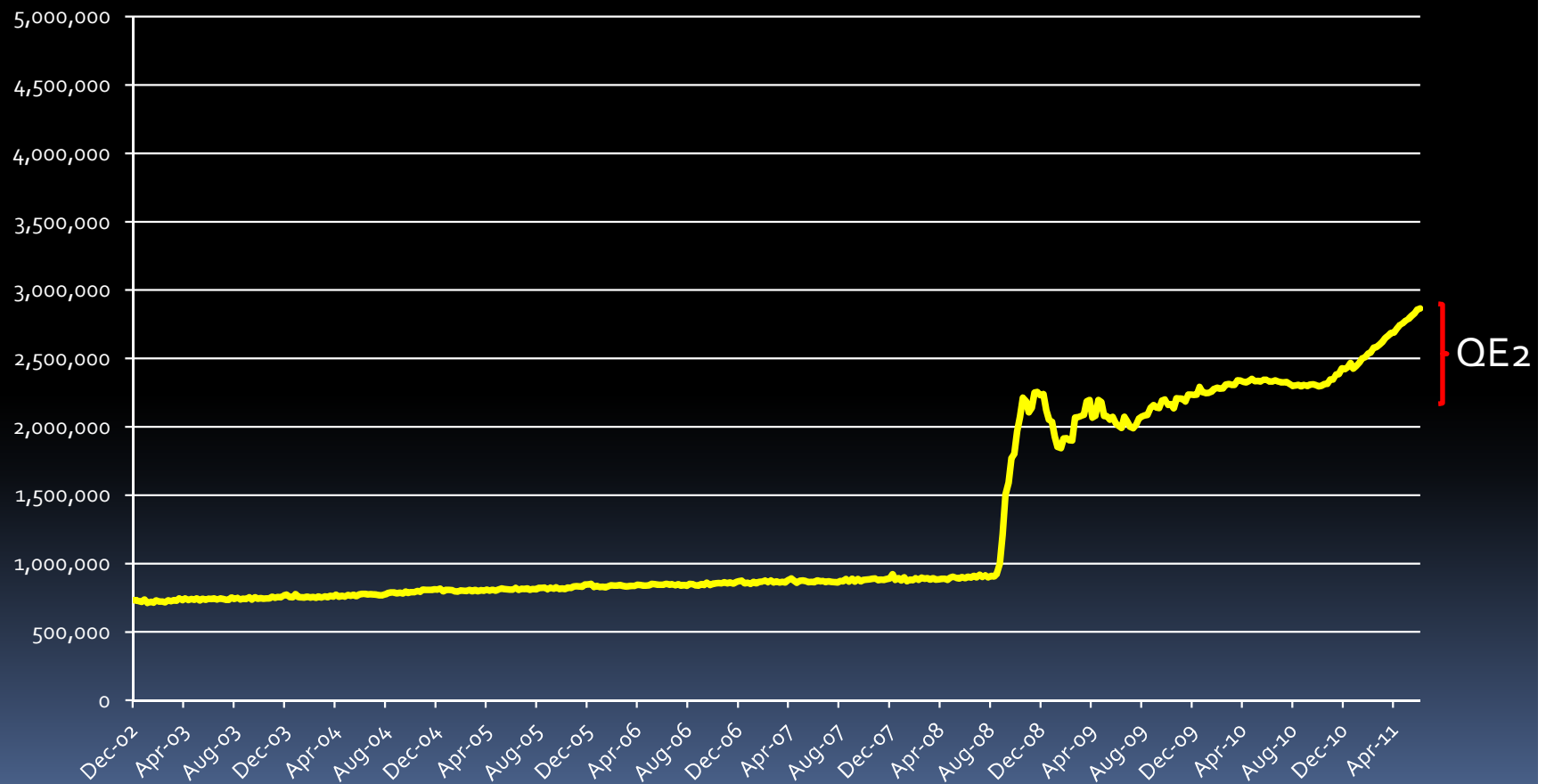


Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: QE2: Nov. 2010 – Jun. 2011

- In Nov. 2010, as the U.S. economy began to deteriorate again.
- In response, the Fed announced a second round of asset purchases (QE2) totalling \$600 Billion by Jun. 2011.
- QE2 ballooned the Fed's balance sheet from \$2.3 Trillion up to \$2.9 Trillion.

# The Fed's Crisis Response: Size of the Fed's Balance Sheet QE2: Nov. 2010 - Jun. 2011



Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: Operation Twist

- In Sep. 2011, the Fed announced a variation on quantitative easing called "operation twist," selling short-term treasuries to sterilize the purchase of long-term treasuries and RMBS.
- This program avoided further bloating of the Fed's balance sheet.
- The goal was to push long-term mortgage rates to help the struggling housing sector.

# The Fed's Crisis Response:

## QE3: Sep. 2012 – Sep. 2013

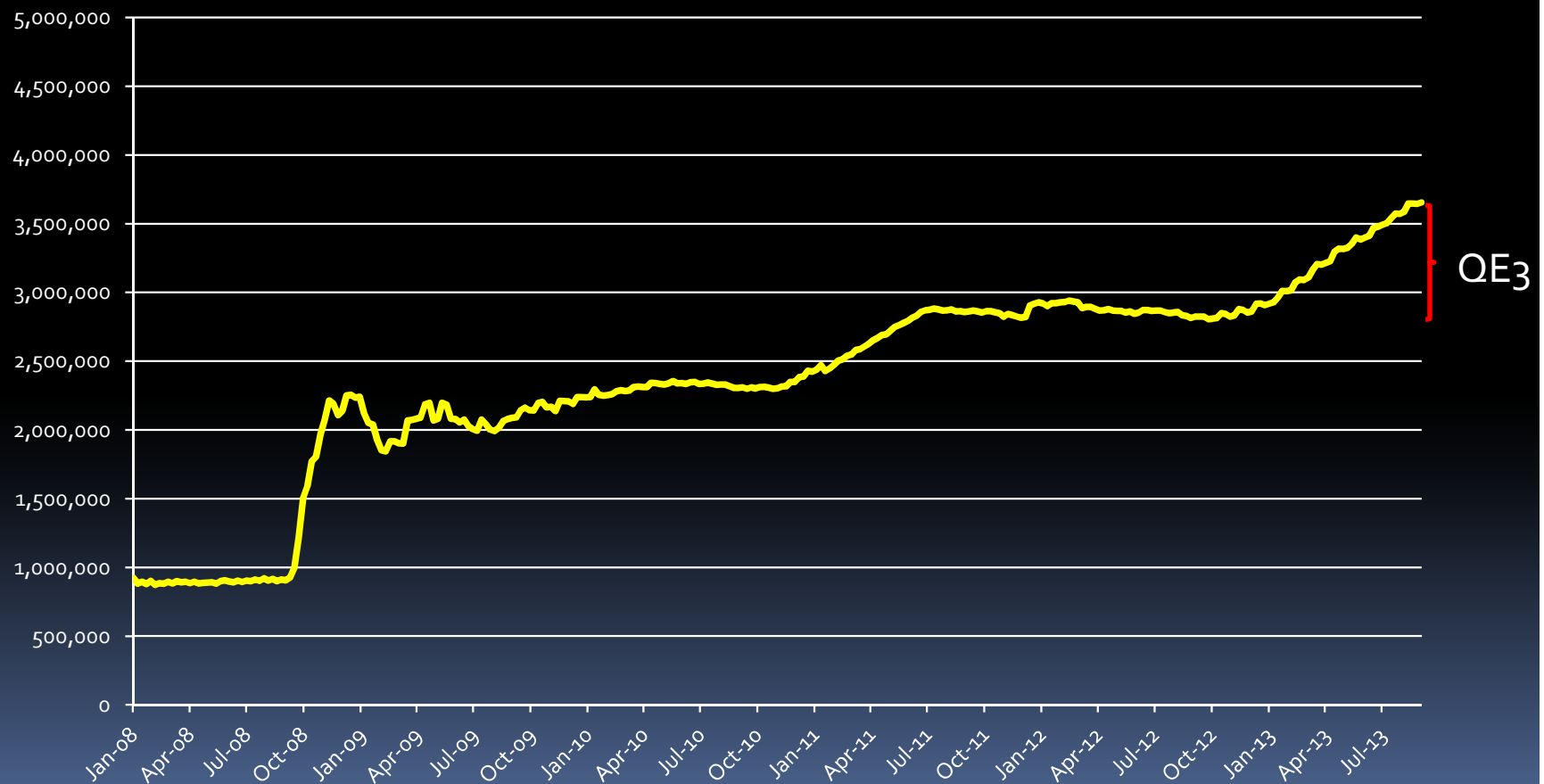
- In Sep. 2012, the Fed announced a third round of quantitative easing—QE3.
- The Fed said it would buy \$45 Billion of RMBS per month without “sterilization,” again ballooning the Fed’s balance sheet.
- Again, the goal was to boost the still moribund housing sector.
- Unlike QE1 and QE2, the Fed said that QE3 would be open-ended.

# The Fed's Crisis Response:

## QE3: Sep. 2012 – Sep. 2013

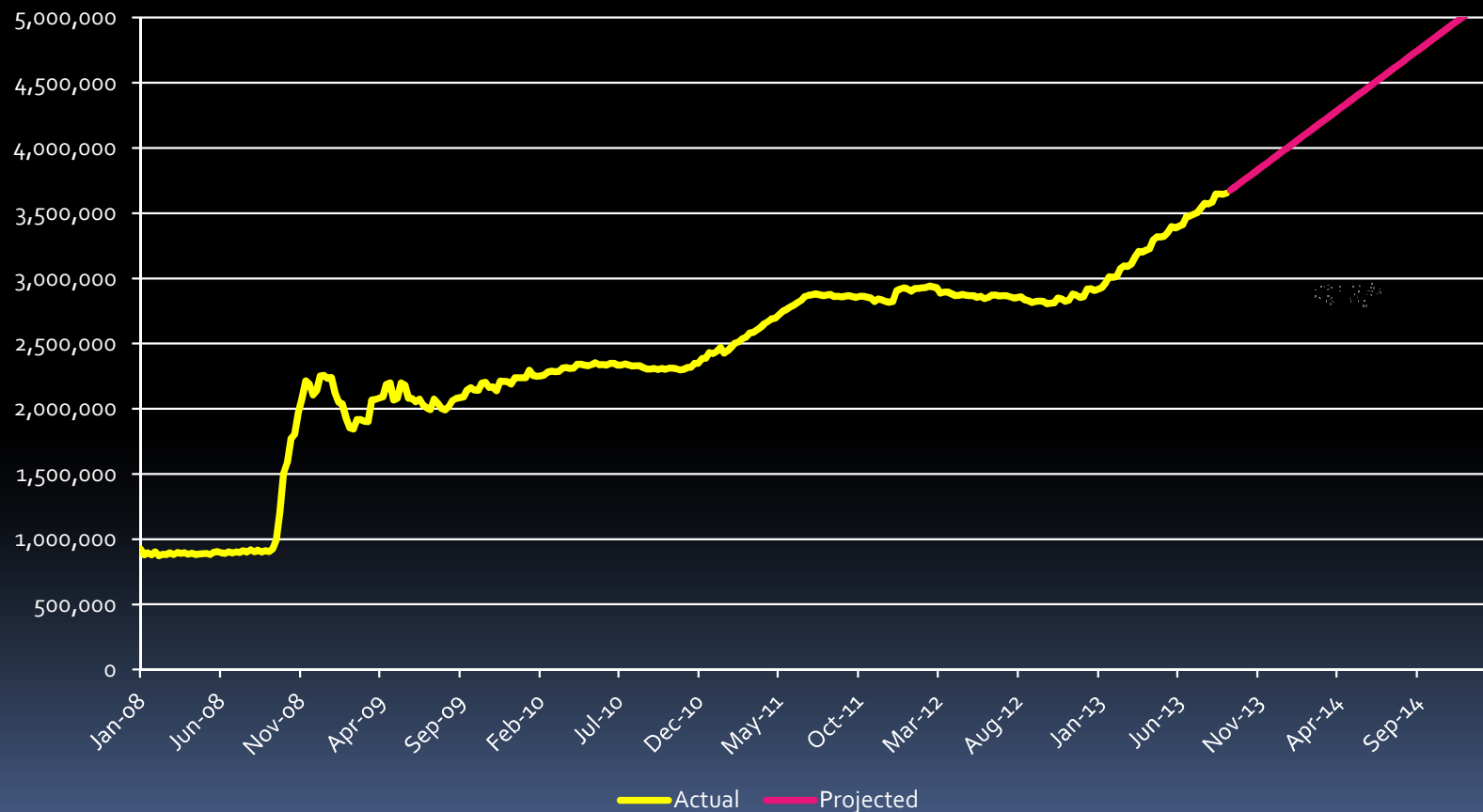
- In Dec., the Fed said that it also would buy \$40 Billion of Treasuries each month in addition to the \$45 Billion of RMBS, for a total of \$85 Billion each month.
- It also said that this would continue until the unemployment rate, which then stood at 7.9%, falls below 6.5%.
- As of Aug. 2013, the unemployment rate had fallen to 7.3%, but for the wrong reasons.
- By Sep. 2013, QE3 had ballooned the Fed's balance sheet to \$3.6 Trillion, up from \$2.8 Trillion in Sep. 2012.

# The Fed's Crisis Response: Size of the Fed's Balance Sheet QE3: Sep. 2012 – Sep. 2013



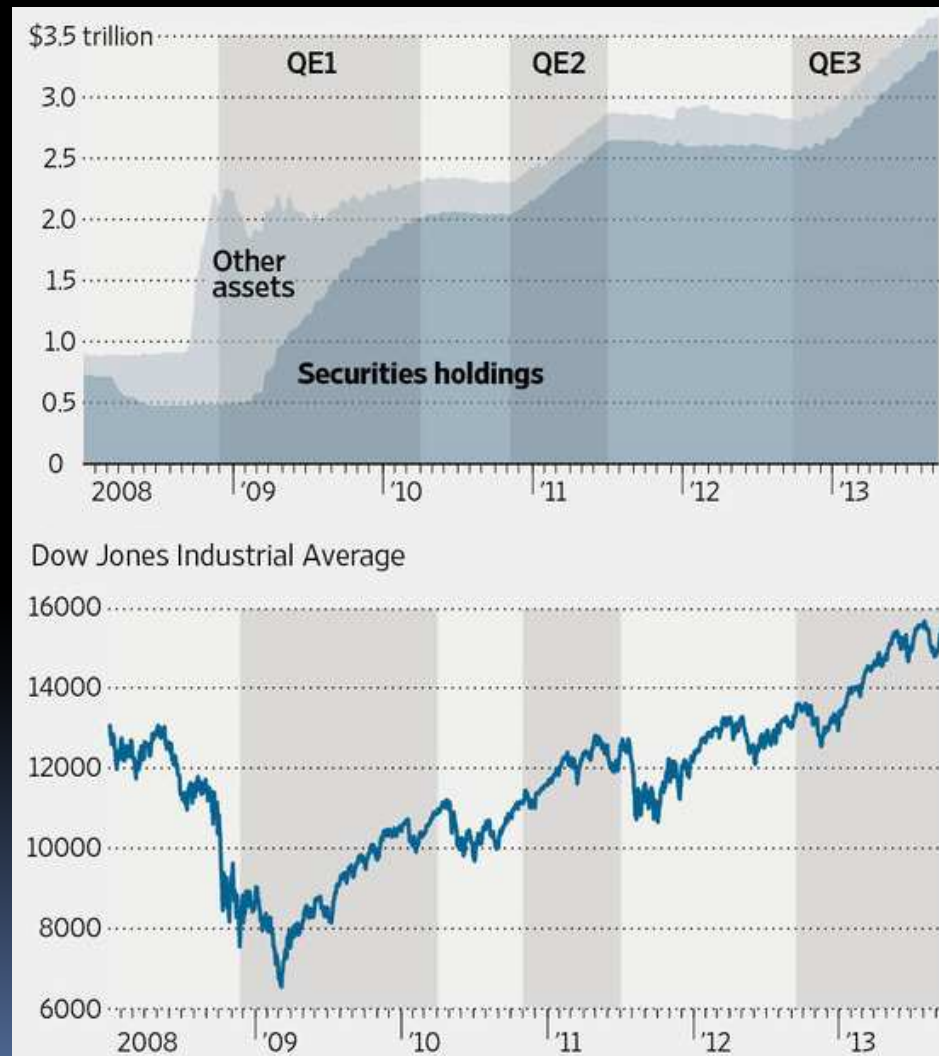
Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: Size of the Fed's Balance Sheet Jan.2008-Sep.2013, Projected through 2014

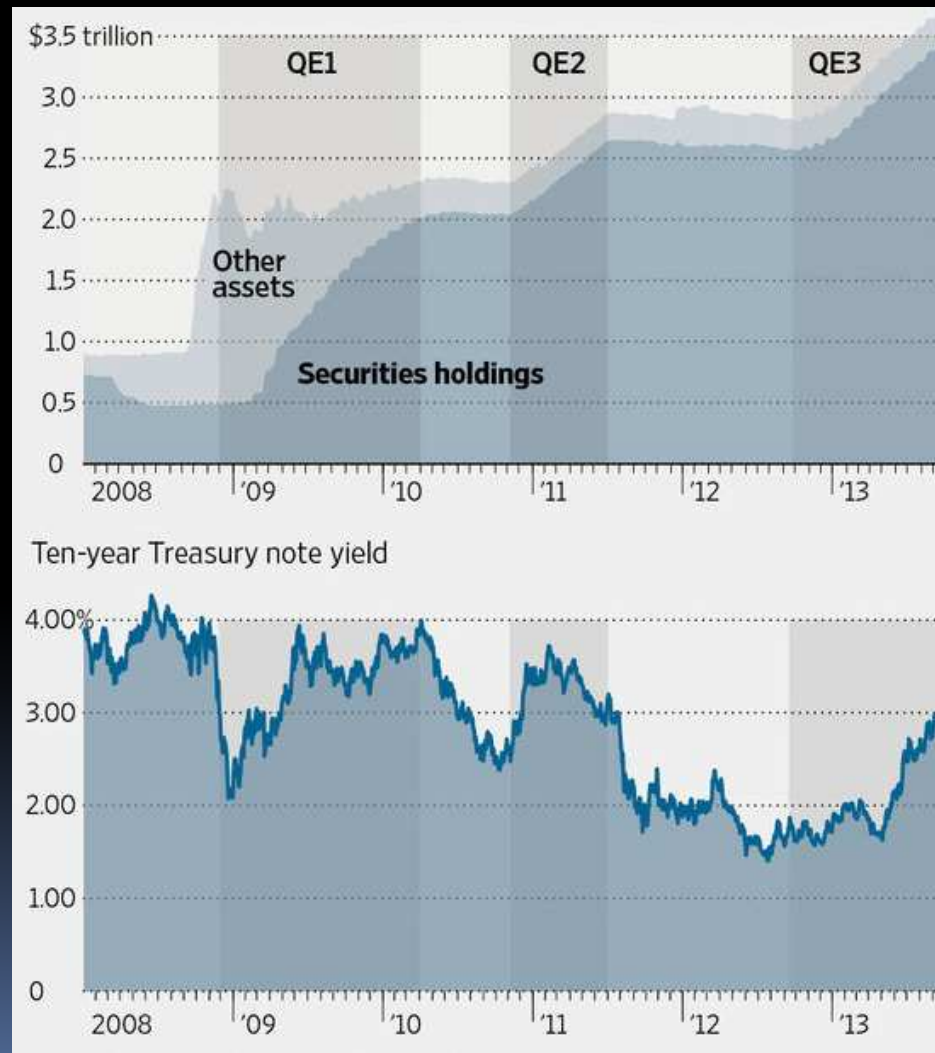


Source: Federal Reserve Economic Data (FRED)

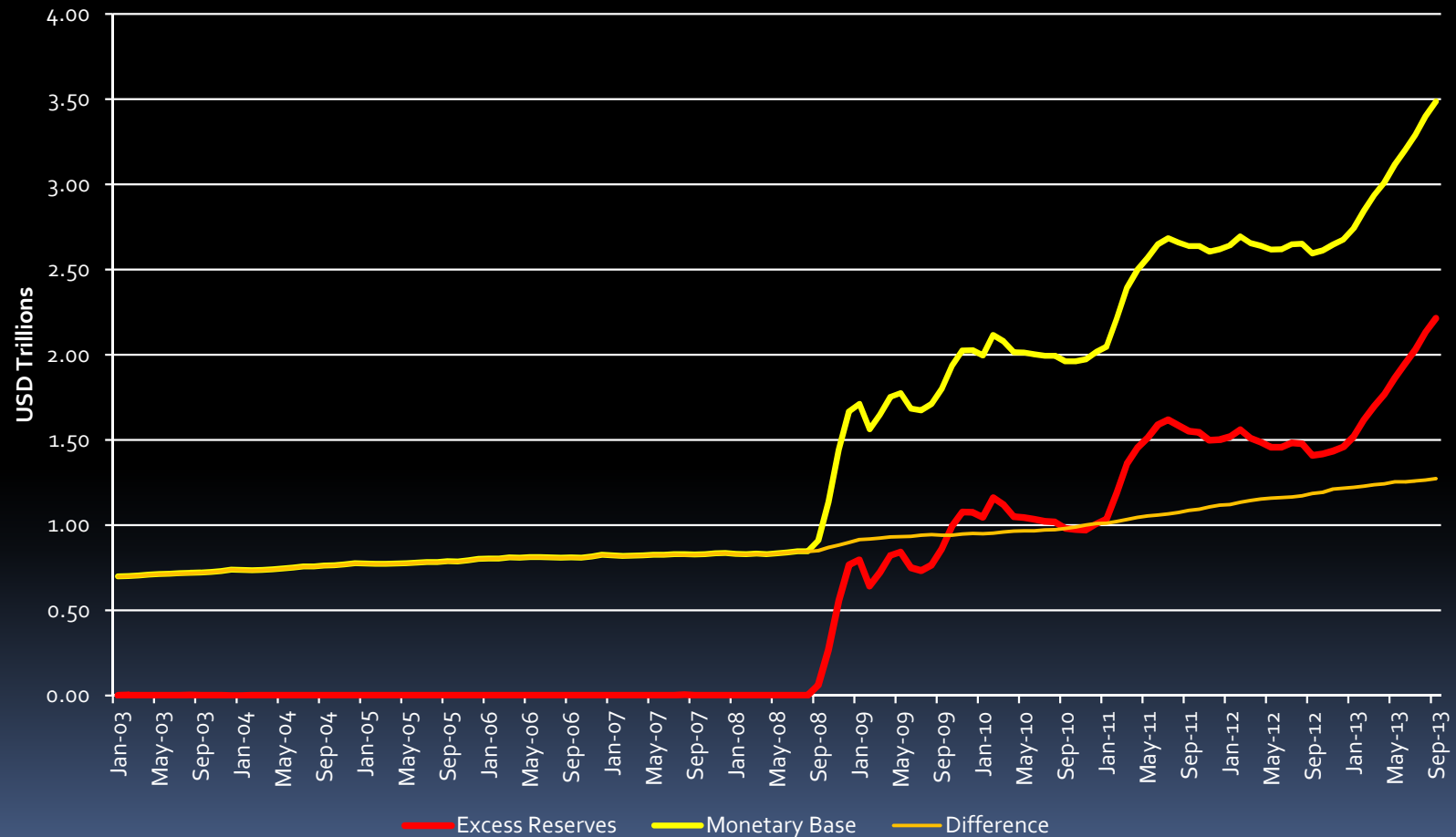
# The Fed's Crisis Response: Fed Asset Purchases and U.S. Stock Prices



# The Fed's Crisis Response: Fed Asset Purchases and U.S. Bond Yields

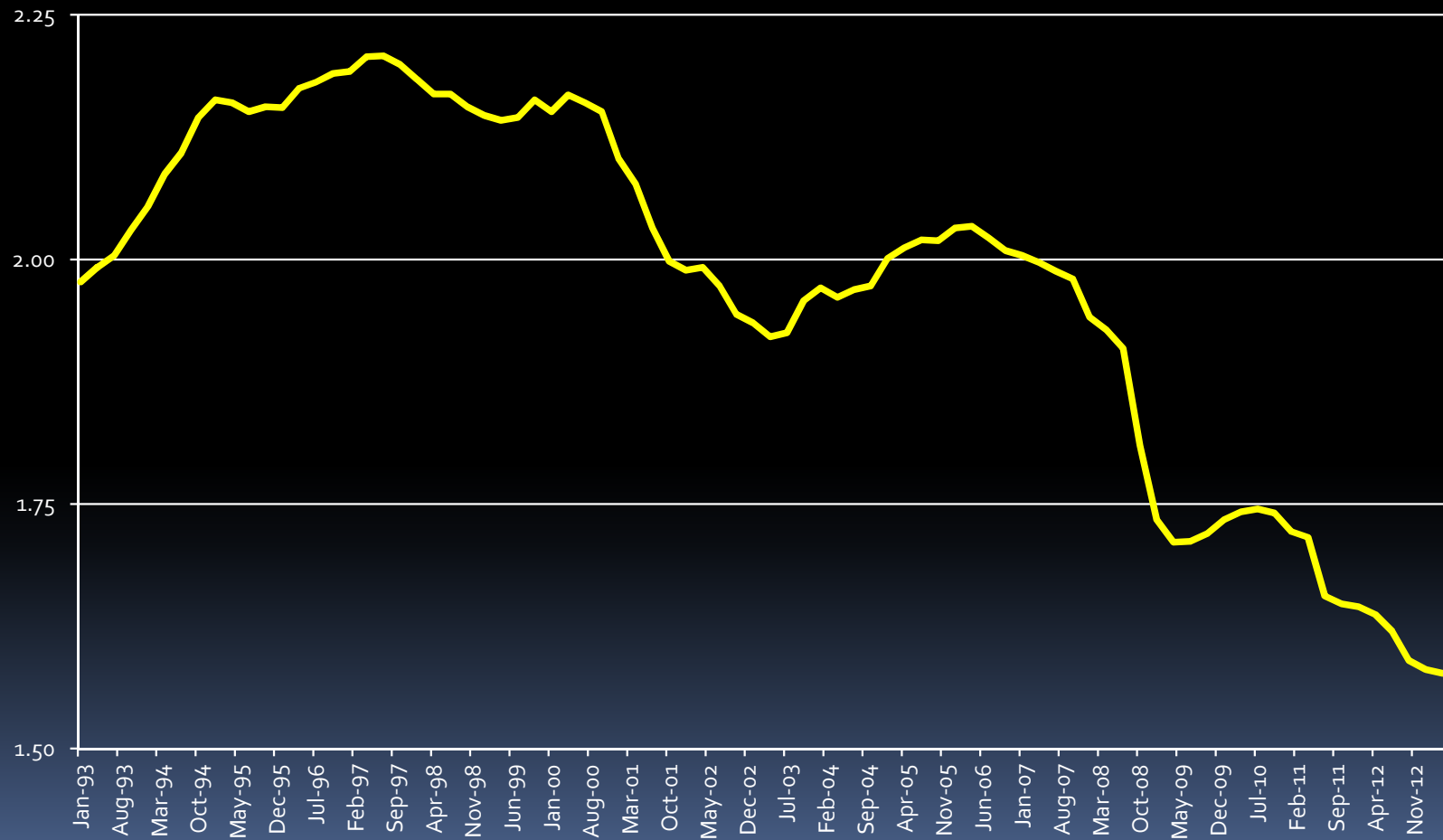


# The Fed's Crisis Response: Fed Balance Sheet vs. Bank Excess Reserves



You can give a banker money but you can't make him lend.

# The Fed's Crisis Response: Velocity of Money (M2)

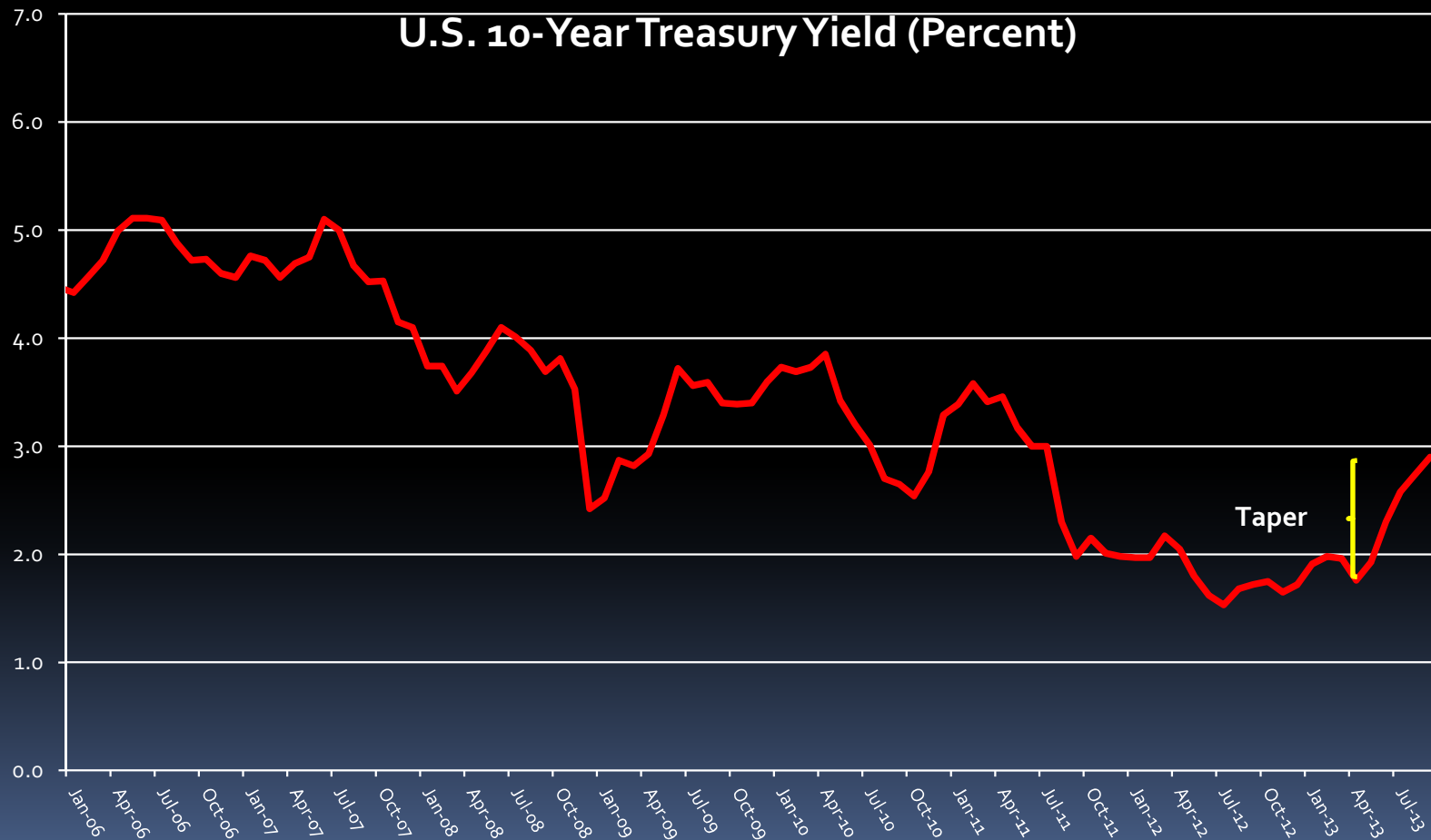


Velocity of money is the number of times one dollar is spent to buy goods and services per unit of time.

# The Fed's Crisis Response: Taper

- With the unemployment rate falling and the economy improving, Bernanke “hinted” on May 22, 2013, that the Fed would soon begin to “taper,” or reduce, its monthly asset purchases.
- In response, the U.S. bond market tanked, with the 10-Year Treasury yield climbing from 2.03% to more than 3.00%.

# The Fed's Crisis Response: "Taper" Comment and U.S. Treasury Yields



Source: Federal Reserve Economic Data (FRED)

# The Fed's Crisis Response: The (Lack of an) Exit Strategy

- What happens when the Fed actually reduces its asset purchases as lets past purchases mature?
- Who will buy the \$1 Trillion per year in new U.S. Treasuries that the Fed has been buying?
- What will happen to interest rates?
- What will happen to the value of the Fed's asset portfolio (duration = 10 years)?
- It is going to be really, really U-G-L-Y.

## The Fed's Crisis Response: The (Lack of an) Exit Strategy

- As soon as Fed announced even “tapering” asset sales, long-term interest rates spiked upwards by almost 100 basis points (b.p.).
- With duration of 10 years, a 100 b.p. rise will reduce the market value of a bond by 10%.
- This implies a market-value loss of about \$350 Billion on the Fed's \$3.5 Trillion portfolio, with more to come.
- But, of course, the Fed doesn't “mark to market.”

# The Fed's Crisis Response: The (Lack of an) Exit Strategy

- What happens to the U.S. budget?
- In 2012, interest payments were only \$360 Billion.
- If long-term rates rise to pre-crisis 6% level, then interest payments on what will soon be \$18 Trillion in federal debt will skyrocket to about \$1.1 trillion per year.
- During FY 2014, the U.S. expects to collect only \$3.0 Trillion in revenues, so interest would account for 1/3 of the U.S. budget. OUCH!!!

# The Fed's Crisis Response: The (Lack of an) Exit Strategy

- What happens to the U.S. economy?
- Interest rates rising, taxes rising, and a lousy labor market.
- This is a prescription for a recession that will make 2008 look tame.

# The Fed's Crisis Response: The (Lack of an) Exit Strategy

- The only alternative: "Turning Japanese."
- Keep interest rates near zero indefinitely.
- This produced 20 years of zero growth in Japan.
- Is this preferable to a massive recession?
- For politicians, the answer is undoubtedly YES.

After Bernanke retires in January 2014, who will lead the Fed?



Larry  
Summers

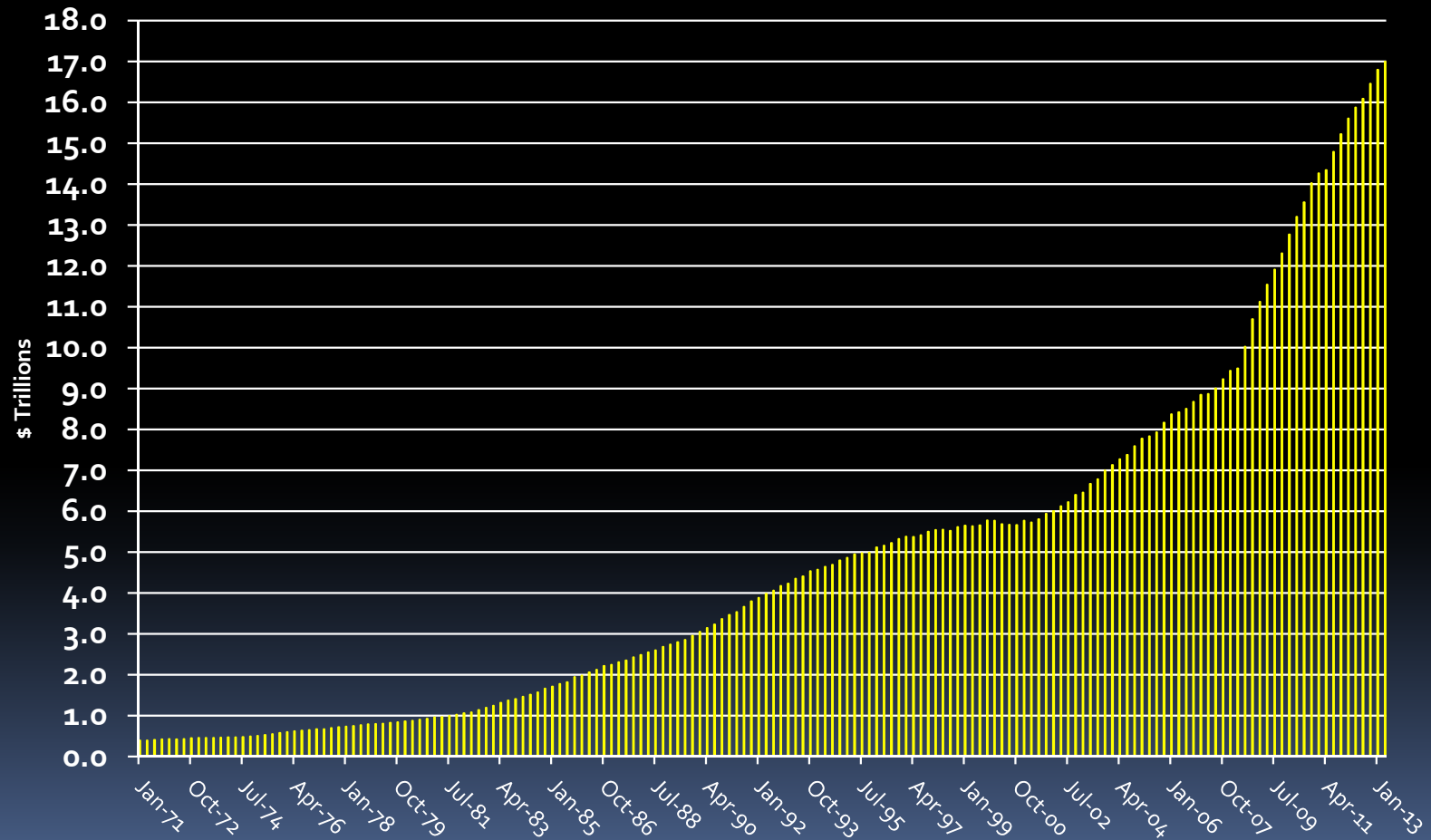


Janet  
Yellen

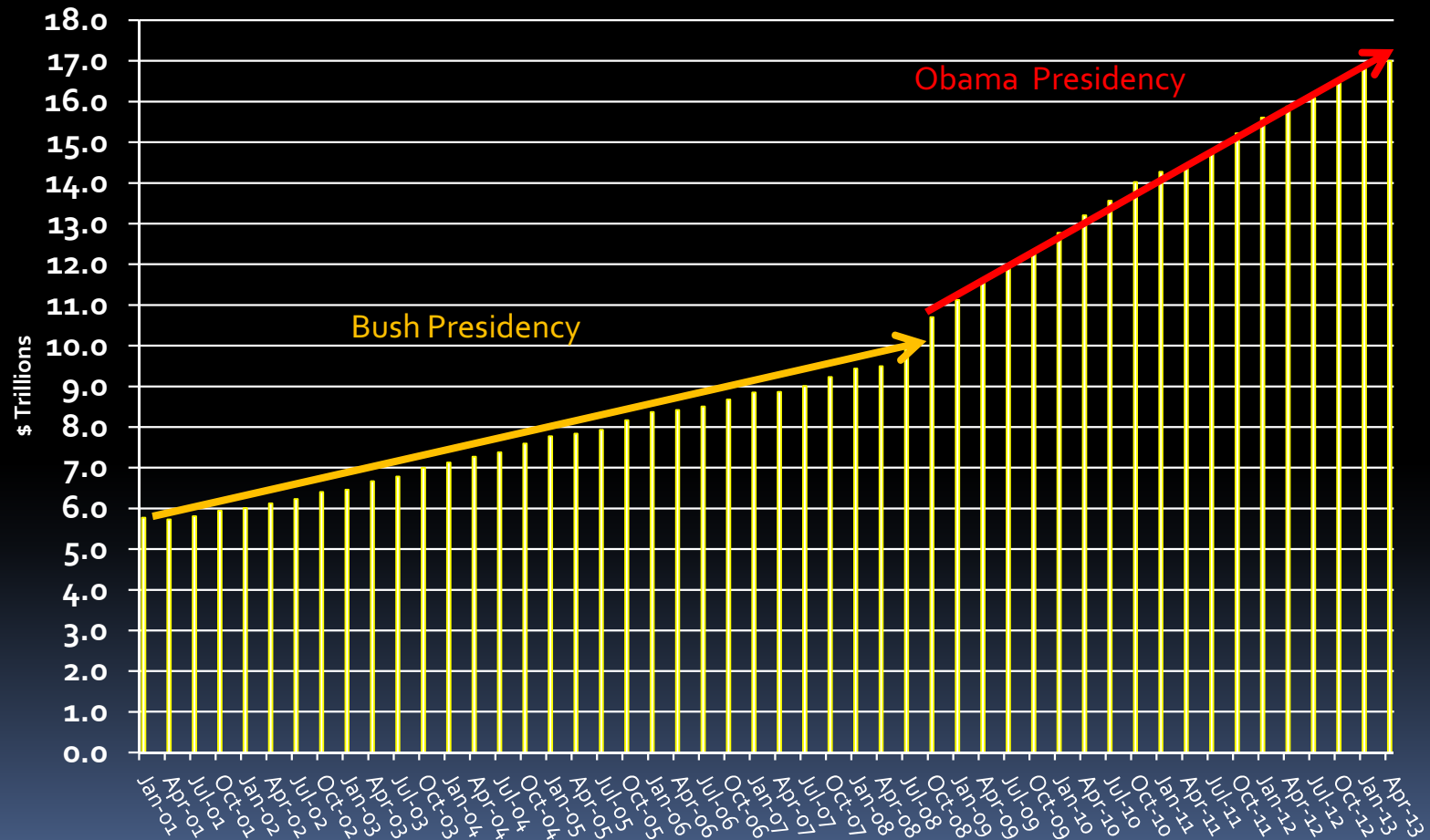
# The U.S. Fiscal Crisis: Summary

- U.S. Federal Government has now amassed almost \$17 Trillion in debt.
- 70% or 100% of GDP, depending upon what the definition of “debt” is.
- Debt is expected to top \$20 Trillion by 2016.
- Annual deficits have averaged > \$1 Trillion since 2009.

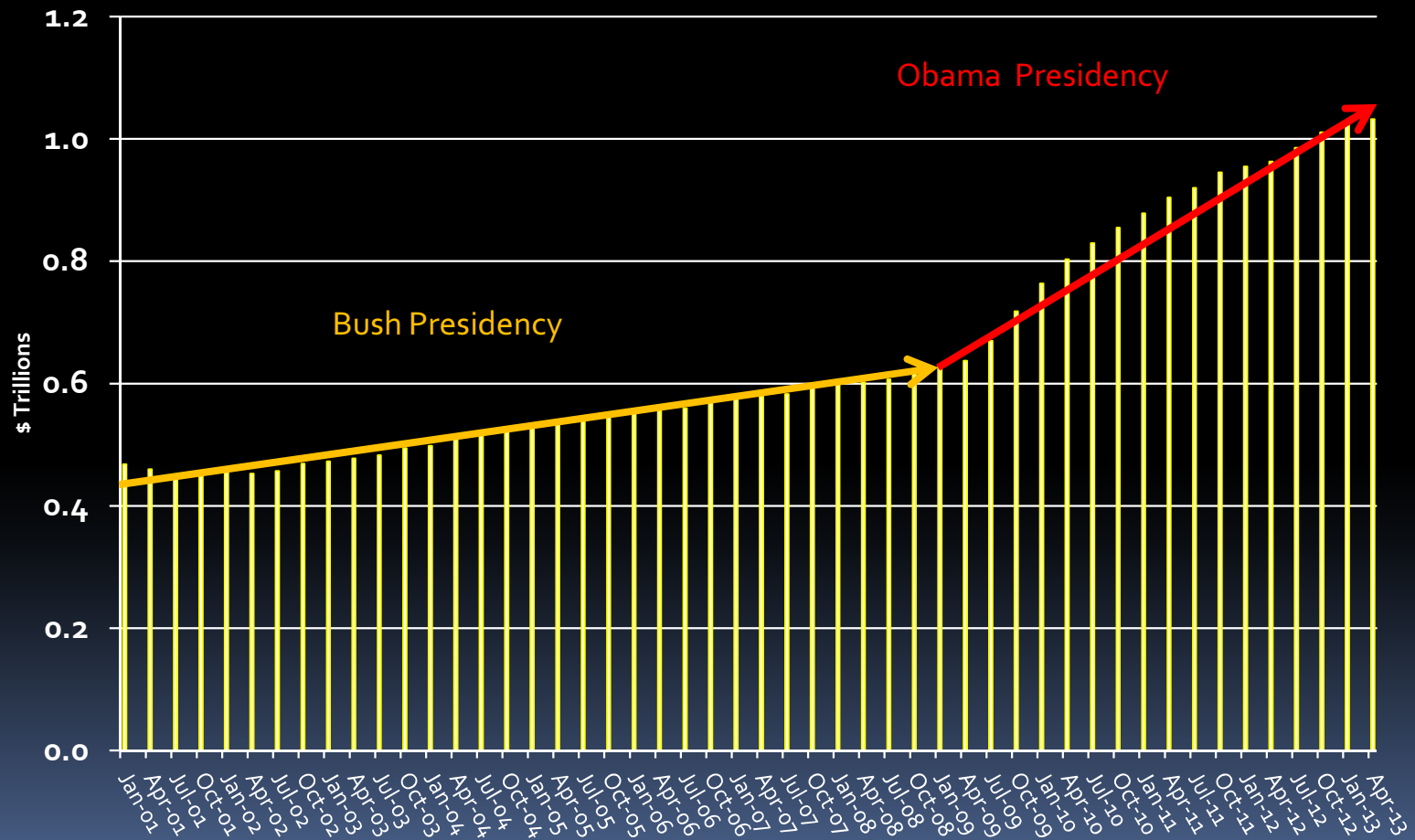
# The U.S. Fiscal Crisis: U.S. Federal Debt 1971 - 2013



# The U.S. Fiscal Crisis: U.S. Federal Debt: 2000 - 2013

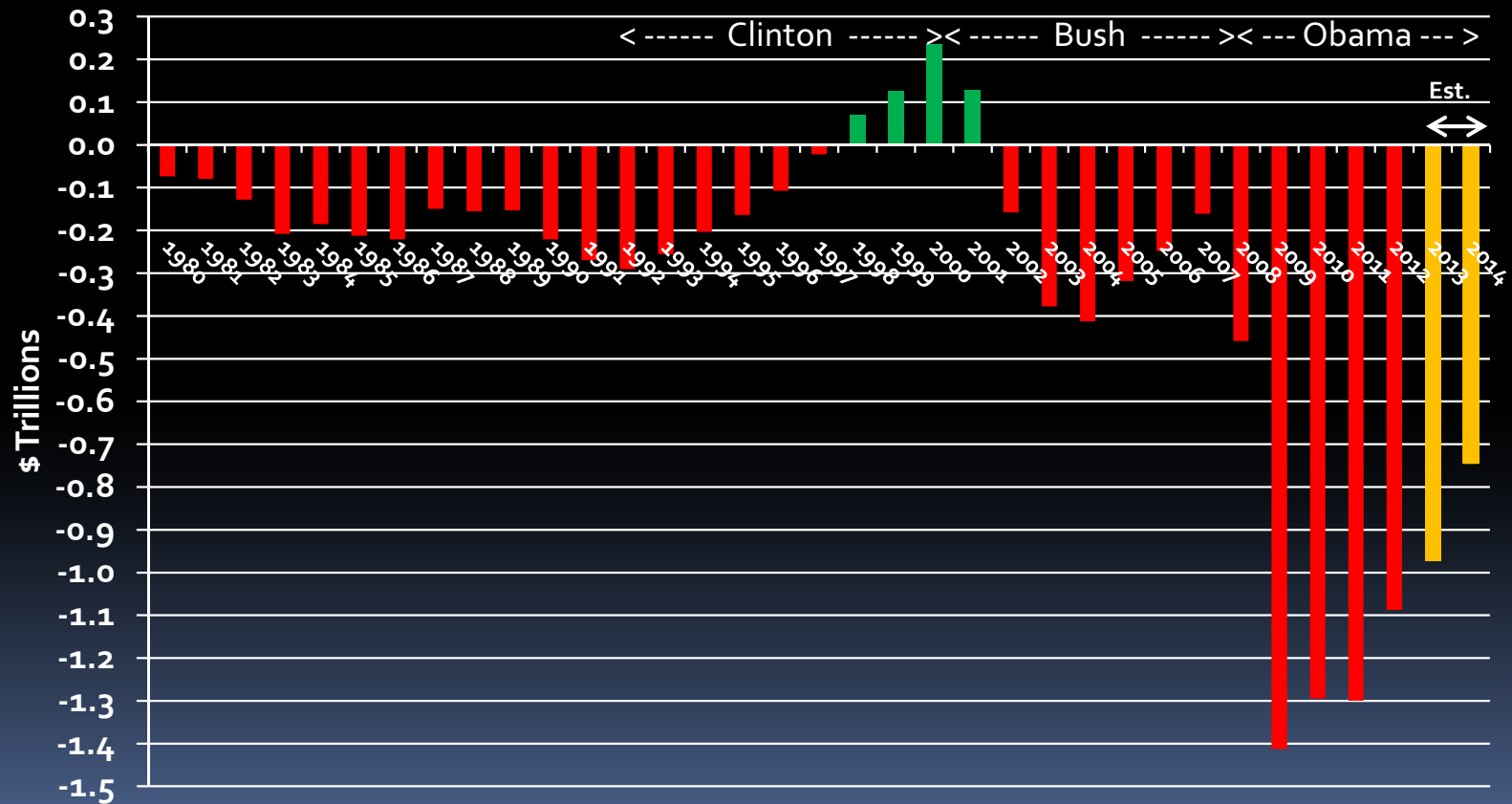


# The U.S. Fiscal Crisis: U.S. Debt to GDP Ratio: 2000 - 2013



# The U.S. Fiscal Crisis: Annual Deficit/Surplus 1980 - 2012

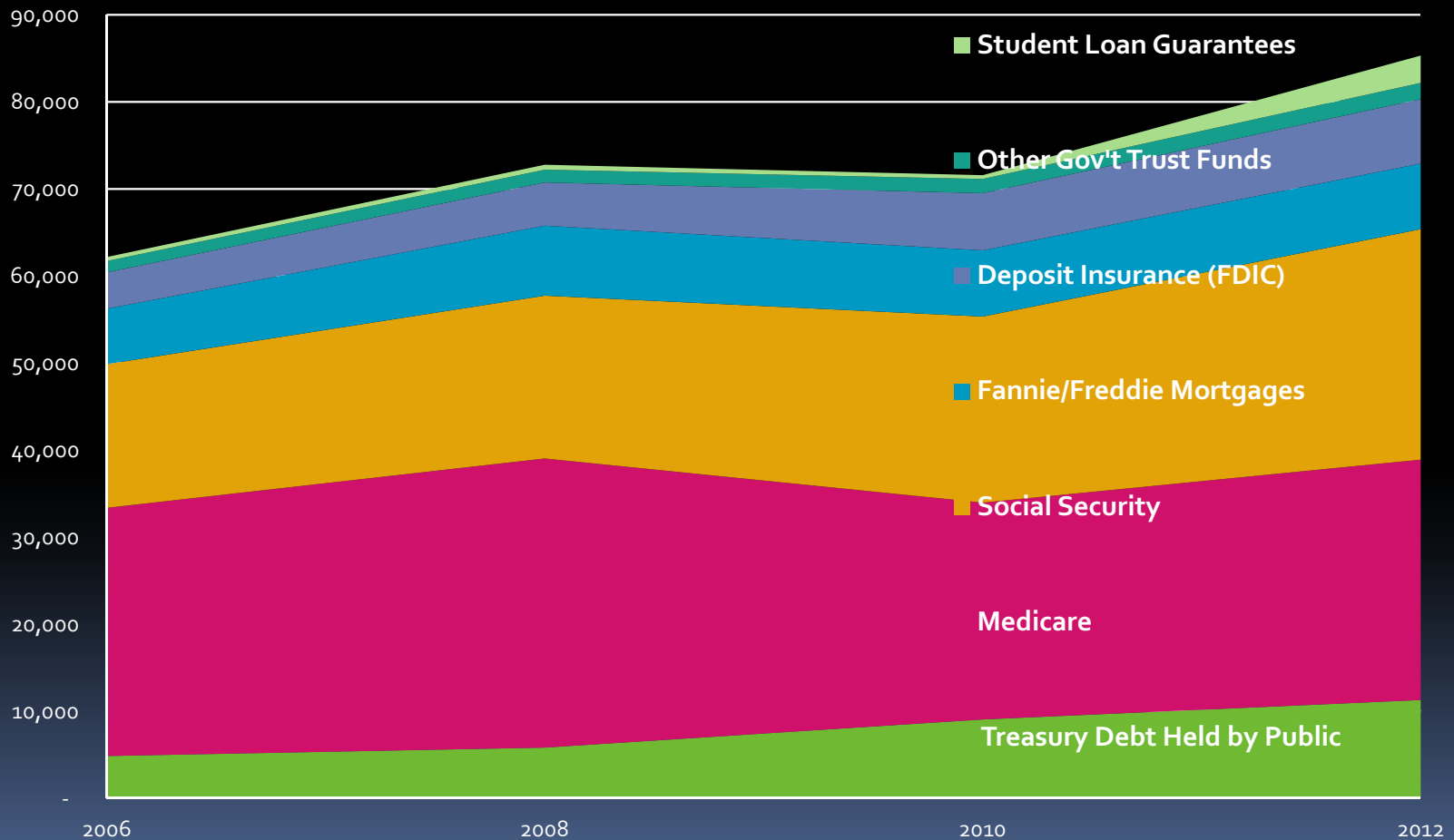
## Annual U.S. Federal Deficit/Surplus



# The U.S. Fiscal Crisis: Unfunded Liabilities

- Unfunded federal liabilities for retirement, social programs dwarf on-balance-sheet federal debt.
- Estimates for 2012 top \$80 Trillion.
- Combined with debt, this puts ratio of liabilities to GDP at more than 500%.
- Unfunded state liabilities are estimated at another \$20 Trillion.
- This puts liabilities above 600% of GDP.
- "We are all Greeks now."

# The U.S. Fiscal Crisis: Unfunded Liabilities

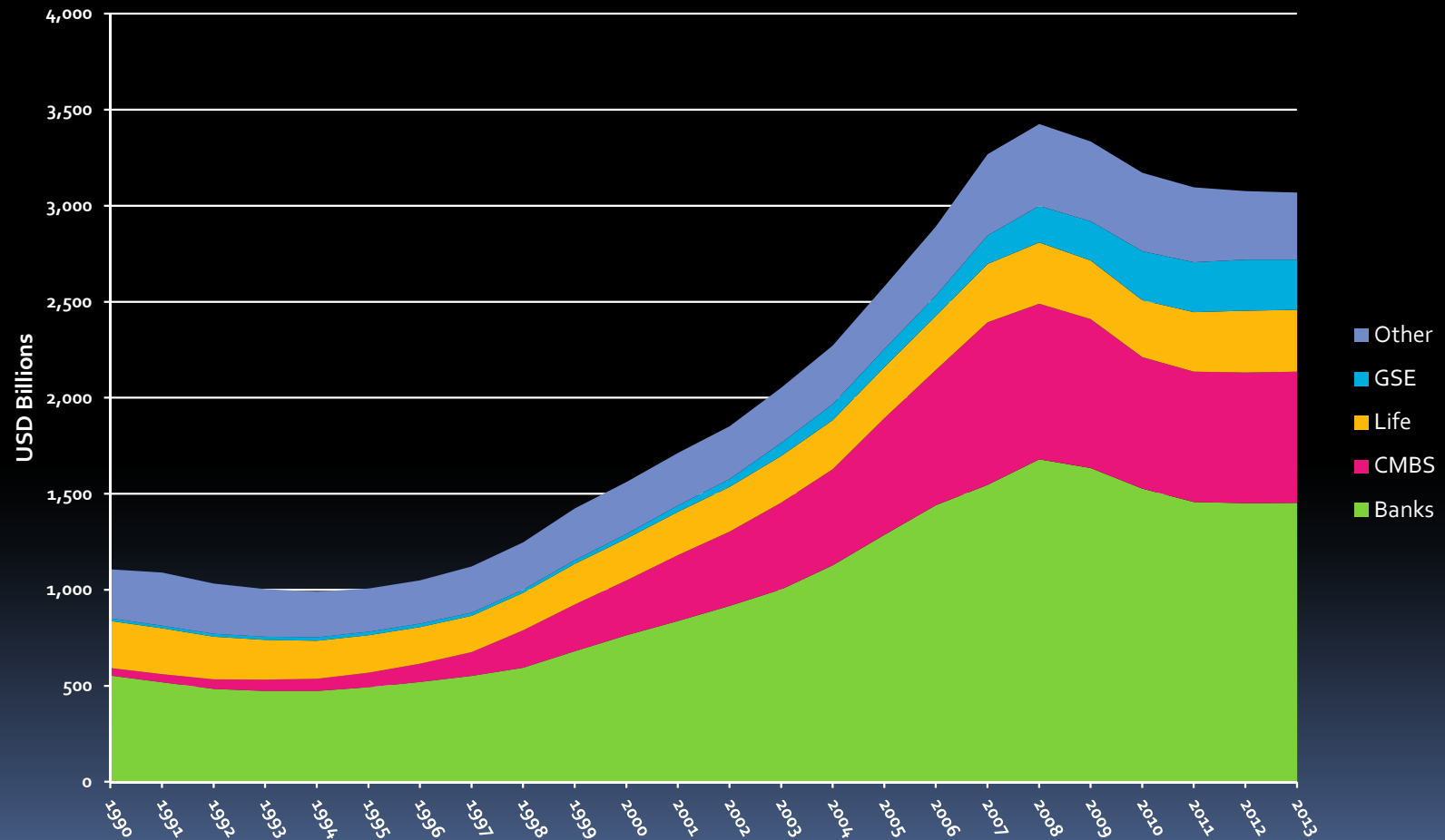


Source: NBER Working Paper at <http://www.nber.org/papers/w19253>

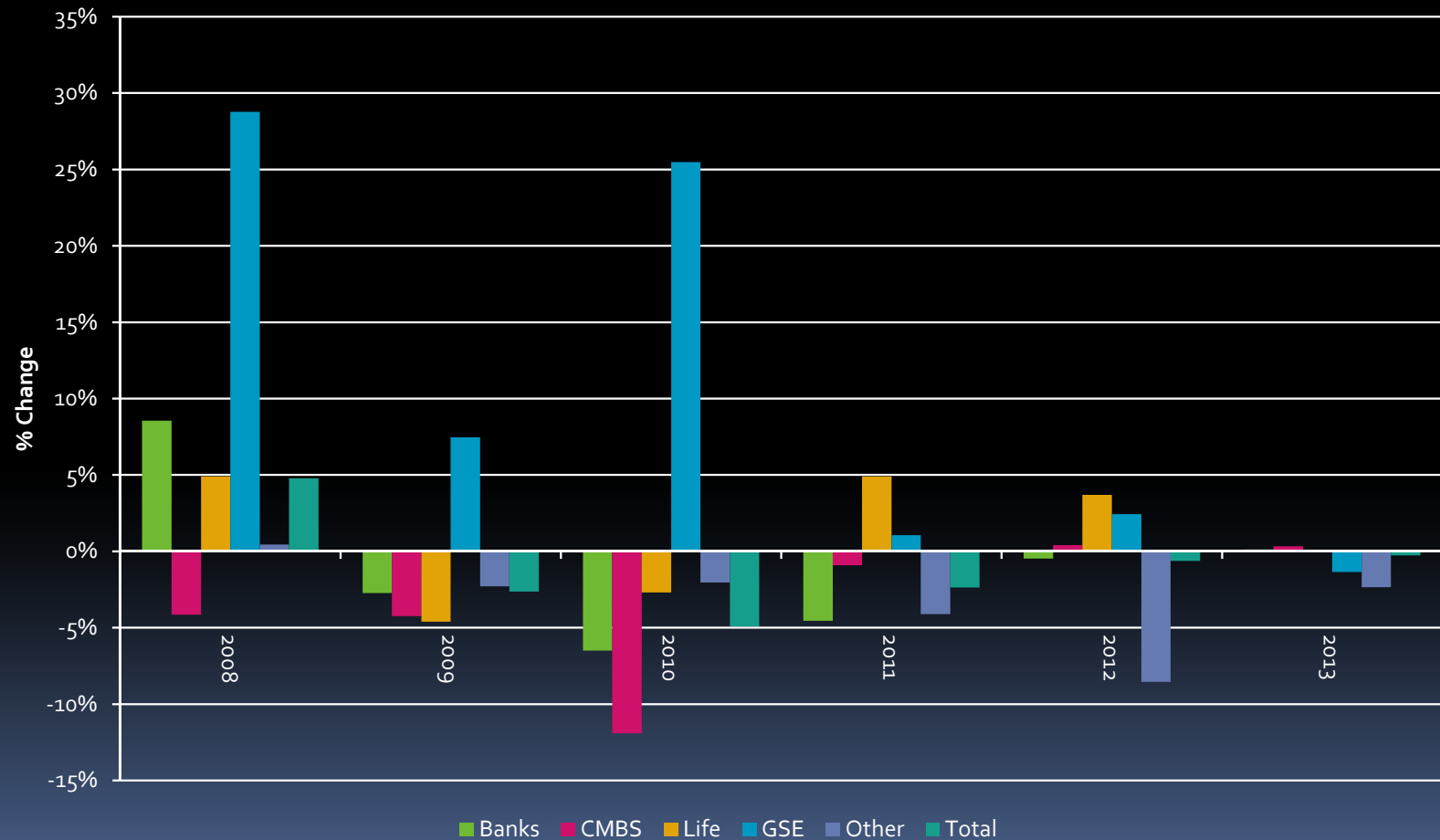
# Impact on Commercial Real Estate

- The “perfect storm” has taken a toll on commercial real estate.
- NCREIF total returns for U.S. properties were negative for 2008 and 2009 before rebounding strongly in 2010 through today.
- U.S. REIT stocks were hammered during 2007-2008 but recovered during 2009-2012.
- U.S. CMBS delinquency rates shot up into double digits during 2012.
- U.S. CMBS issuance essentially shut down in 2008.

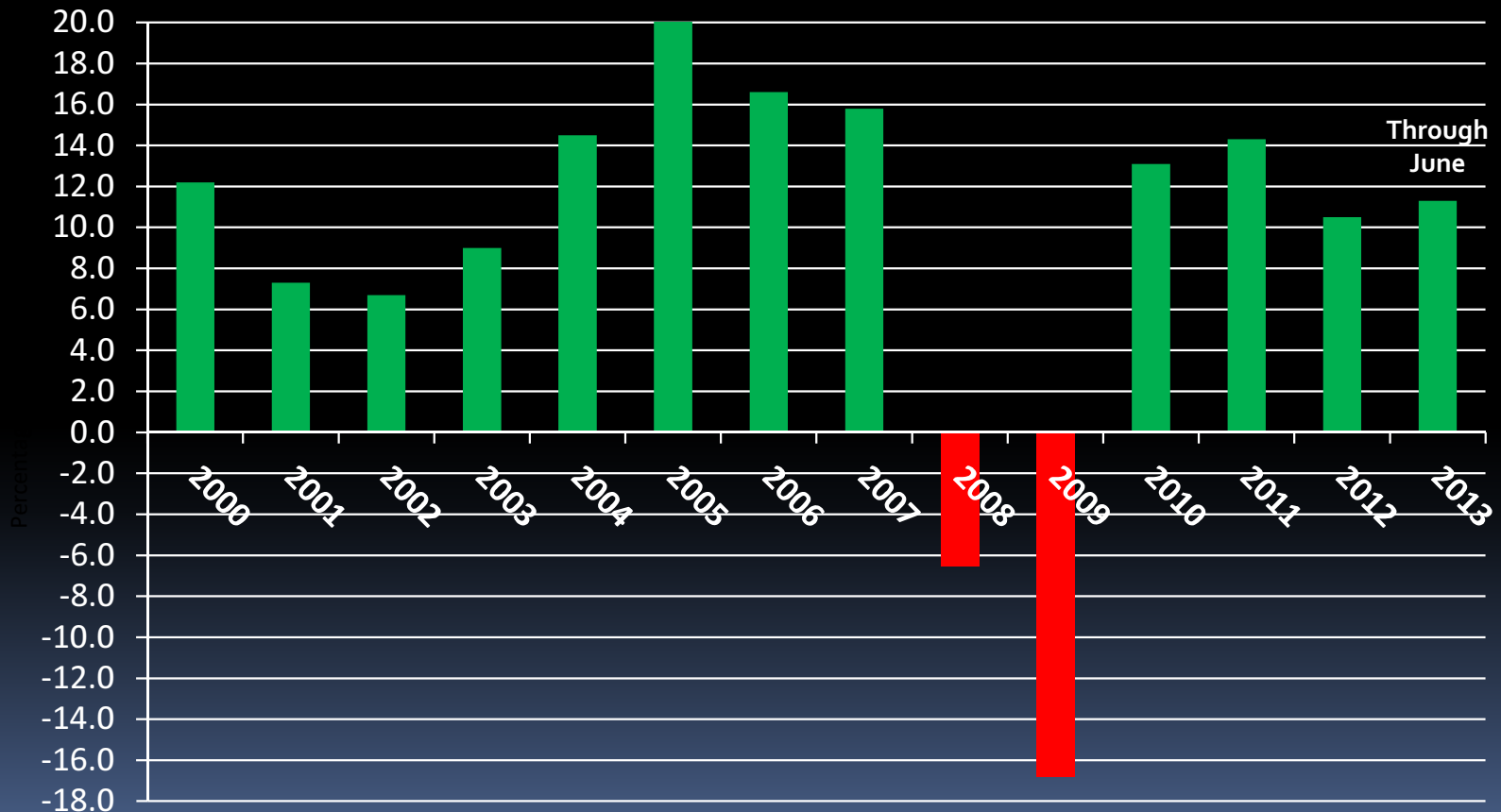
# Impact on Commercial Real Estate: Volume Outstanding 1990 - 2013



# Impact on Commercial Real Estate: Change in Annual Volume 2008 - 2013

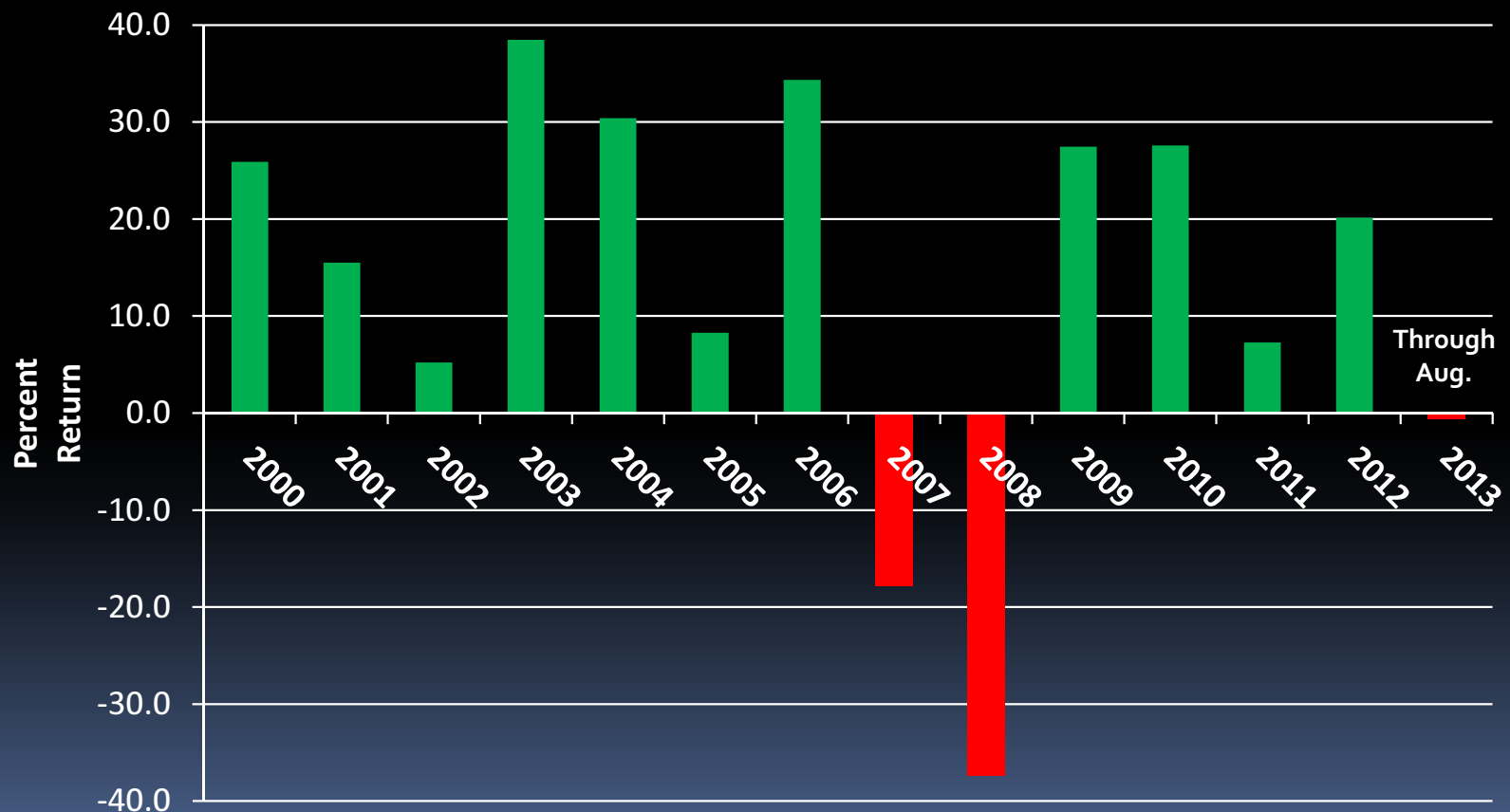


# Impact on Commercial Real Estate: NCREIF Total Returns 2000 - 2013



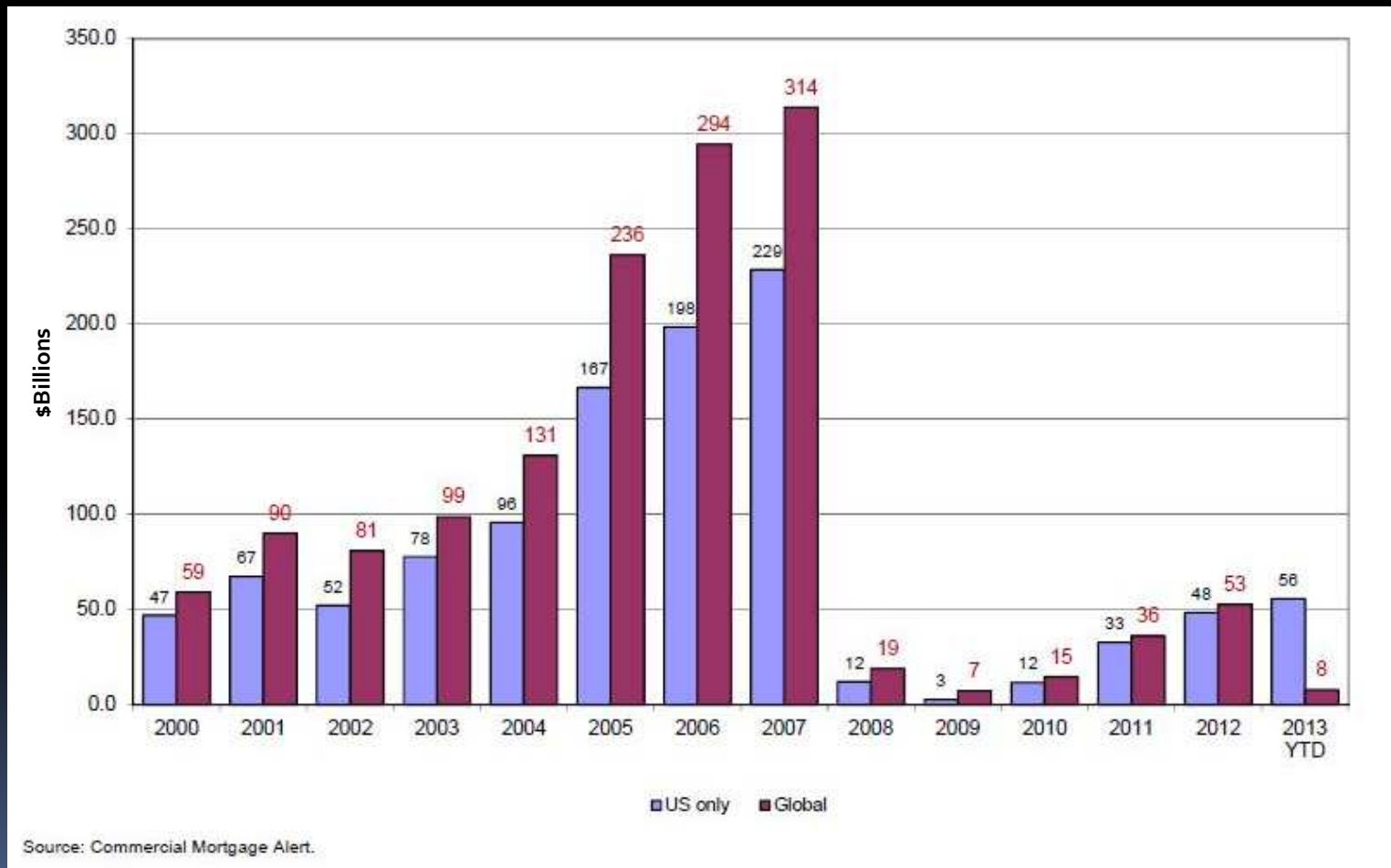
Source: NCREIF Total Return Index

# Impact on Commercial Real Estate: REIT Annual Returns 2000 - 2013



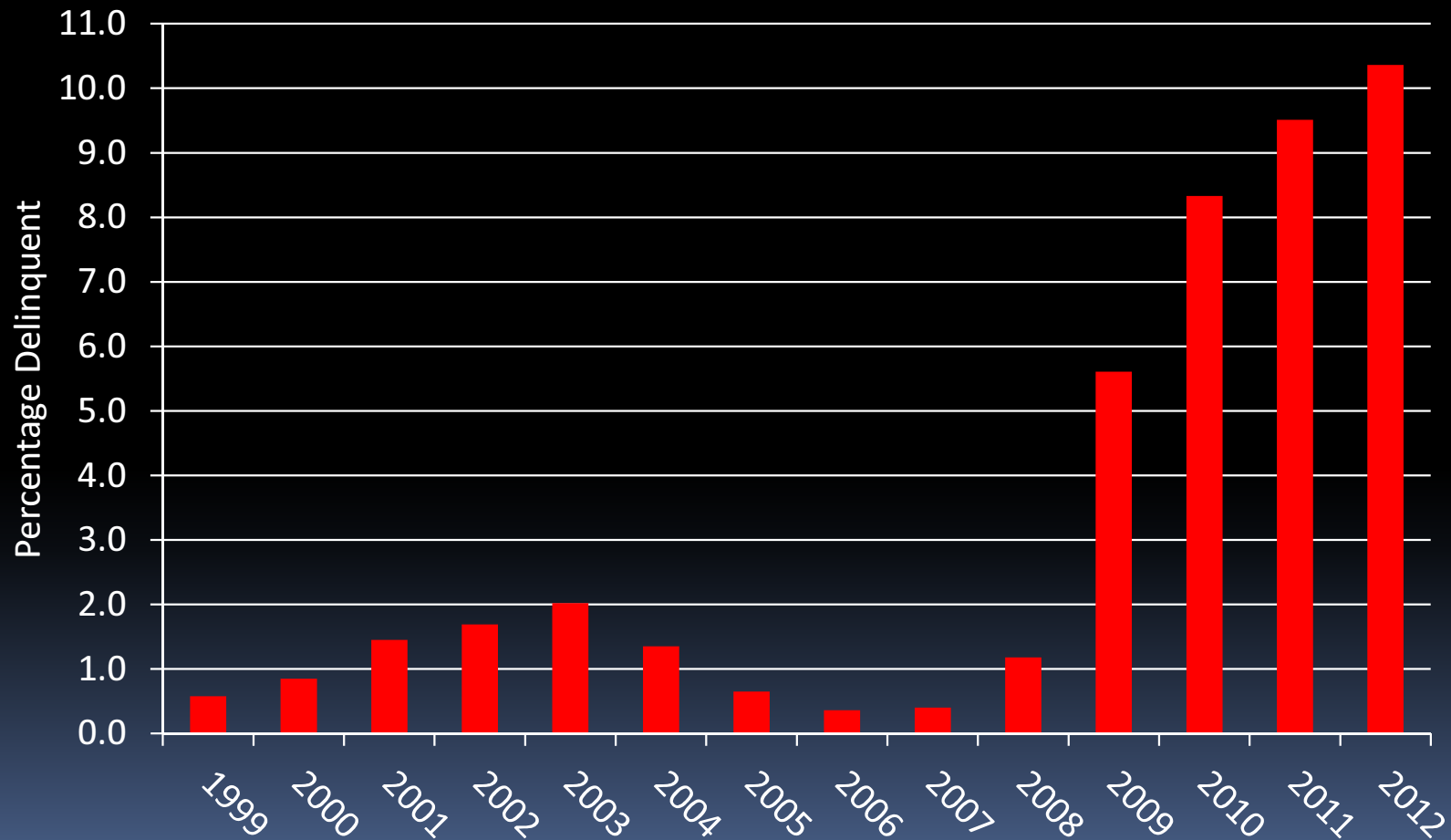
Source: FTSE NAREIT Total Return Index

# Impact on Commercial Real Estate: CMBS Issuance Volume 1990 - 2013



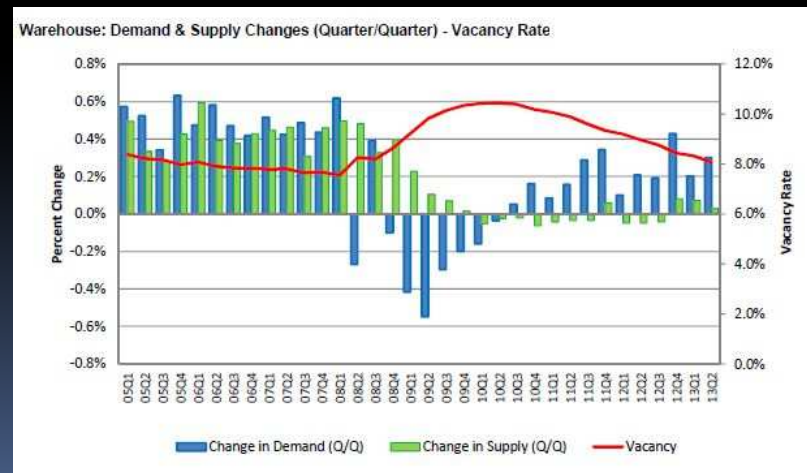
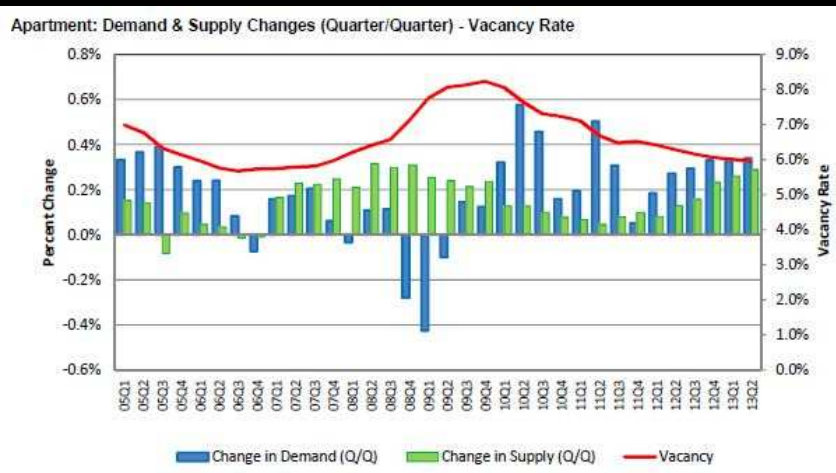
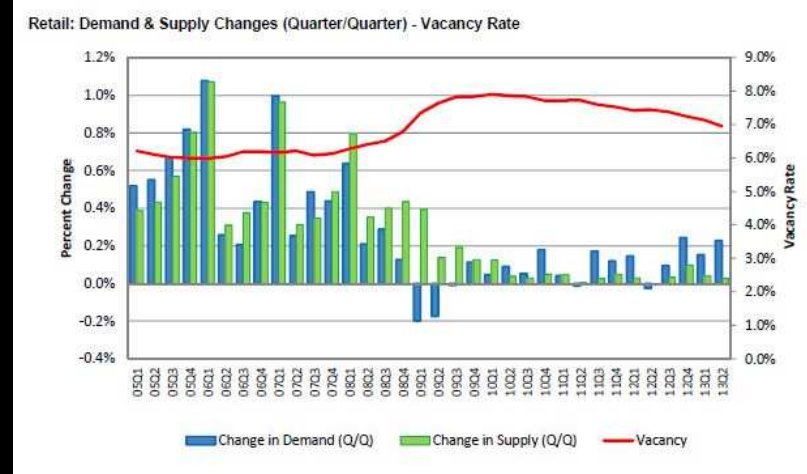
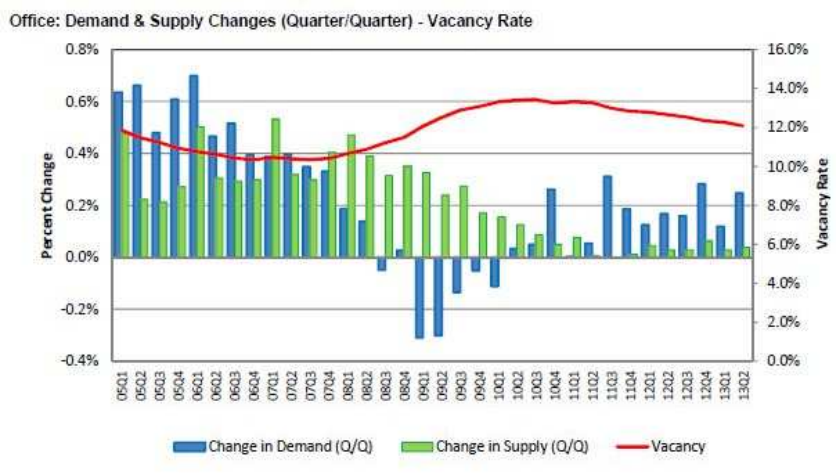
Source: PRIA Compendium of Statistics

# Impact on Commercial Real Estate: CMBS Delinquency Rates 1999 - 2012



Source: Trepp CMBS Analytics

# Impact on Commercial Real Estate: Vacancy Rates: 2005 - 2013



Source: PRIA Compendium of Statistics

## Impact on Commercial Real Estate: Bottom Line

- CRE was hammered during 2009-2010, but is now recovering.
- Returns are up sharply.
- Vacancy rates are down, but not back to normal.
- Delinquency rates are down, but remain elevated.
- Volume remains down, as new issuance of mortgages remains sluggish.



THE  
**PERFECT STORM**