

OUTLINE — December 4, 2019

- Evaluations – thank you!
- 2007-2009 Great Recession, continued
 - Subprime Mortgages, Credit Default Swaps, and AIG
- Challenges Facing the Fed
- What's Next for the Economy?
- Closing Reflections

Midterm 3 is Thurs Dec. 5, 7-8:30 pm

Comprehensive Essay due [via bCourses](#), Wed Dec. 11, 8 am

Economics online evaluations

1. Please take out your electronic device; phone, laptop, or tablet, etc.
2. Open up a web browser; Chrome/Firefox work best.
3. You can access the evaluation at:

<https://course-evaluations.berkeley.edu>

Or, **BETTER**, click on the invitation link provided in the email sent by:

course-evaluations@berkeley.edu

(Problems? Check 'spam' and 'all mail' folders for the email)

4. Click on "submit" once you have completed your evaluation. (You will be taken to a confirmation page verifying the evaluation has been submitted)
5. Click the "save" button if you are not finished. You can return to the evaluation to complete it by the deadline **Sunday, December 15**.

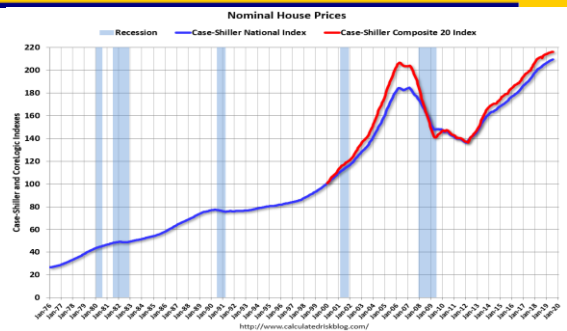
Taylor Rule Subprime & More Challenges What's Next?

Subprime Lending

- Crazy loan offers in the subprime market
- "2/28 at teaser rate"
 - Borrow \$400,000 for 30 years, \$0 down, interest only for 2 years, at 4% teaser rate
 - Reset after 2 years to market rate of 8%
 - Monthly payment rises from \$1,333 to \$2,987
- What does a borrower do when payment rises?
 - If house price has risen 25%, refinance at lower rate: Win!!
 - If house price didn't rise fast enough, can't refinance: Must pay the new higher monthly amount.

Subprime & More Challenges What's Next?

Housing Prices Peaked 2006-07



Source: <http://www.calculatedriskblog.com> (accessed 12/1/2019)

Subprime & More Challenges What's Next?

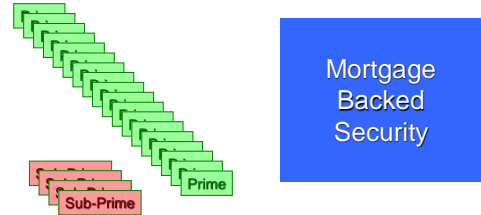
But Then Prices Stopped Rising

- Prices stopped rising, started falling
 - Supply up due to foreclosures
 - Supply up due to need to sell to avoid default
 - Demand down because less credit available
- Unable to refinance?
 - Into default. Possible foreclosure.
- Then Alt-A and Prime mortgages went bad too

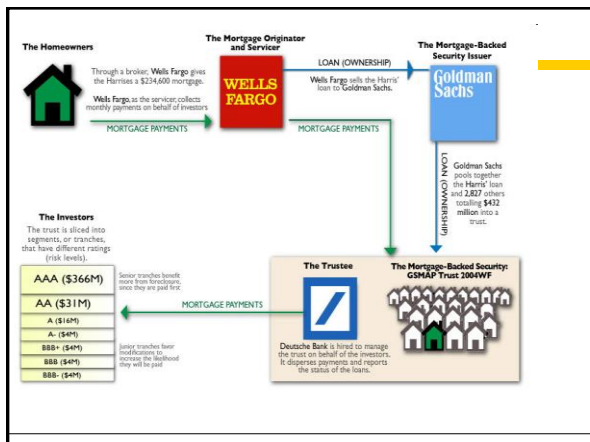
Subprime & More Challenges What's Next?

Problem: Mortgage Backed Securities

- Bundle together mortgages; sell shares



Subprime & More Challenges What's Next?



Subprime & More Challenges What's Next?

Who Bought MBS?

- Everyone . . . In every country
 - Banks
 - Central Banks
 - Hedge Funds
 - Any Financial institution you can name
 - Insurance Companies
 - Pension funds

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Banks & Insurance

- Banks insure themselves against losses
 - Bank buys insurance policy
 - Insurance company bears risk of default
 - If borrower defaults, bank is paid by insurance company
- Insurance is called “credit default swap”
- Largest insurance company: AIG
 - American International Group
 - Issued trillions of dollars in credit default swaps

Subprime & More Challenges What's Next?

Credit Default Swap (CDS)

- Insurance against someone else defaulting
 - You buy a CDS on Joe's home mortgage
 - You pay \$2 / year for this CDS (price reflects perceived default risk)
 - If Joe defaults on his debt, you get \$100
 - You are betting that Joe will default
 - Insurance company is betting that Joe won't default
- Key problem: anyone could buy a credit default swap
- What if lots of borrowers default at once?
 - Insurer may be unable to pay
 - Debt-holders who bought CDS have big losses
 - Debt-holders may themselves go bankrupt
 - **Result: Big reduction in credit availability**

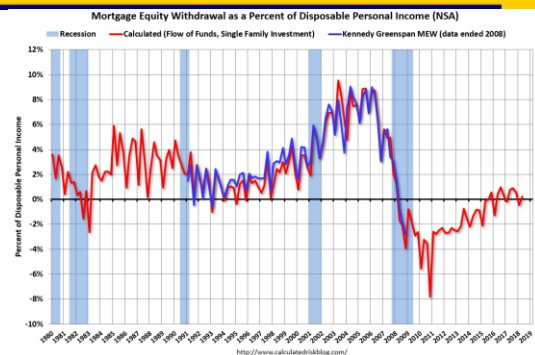
Subprime & More Challenges What's Next?

AIG (American International Group)

- AIG suddenly had to cover hundreds of billions of dollars worth of CDS
 - . . . And it couldn't
- US federal government bailed out AIG
- So why not let AIG fail?
 - AIG insured all major financial institutions
 - Without insurance, no lending

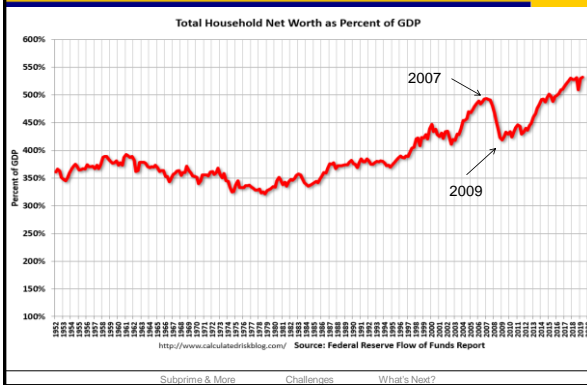
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C is no longer funded by home equity



Subprime & More Challenges What's Next?

Household Wealth Fell



What has made monetary policy challenging?

During the 2007-09 crisis, multiple challenges

1. At least initially, Fed's target & actual FFR differed
2. FFR & short-term government rate were at the Zero Lower Bound by December 2008
3. Long-term interest rates didn't fall as far as short-term rates

And so Fed undertook Quantitative Easing to lower long-term rates

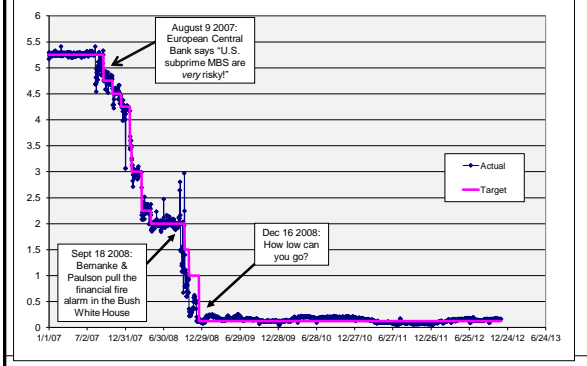
4. Lenders were not lending

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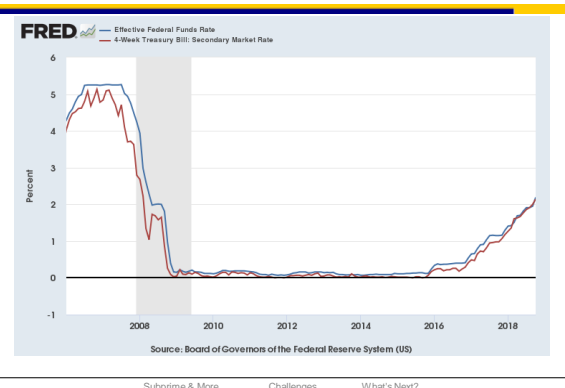
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Federal Funds Rate 2007-2012

What changes first:
The Target Rate or The Actual Rate?

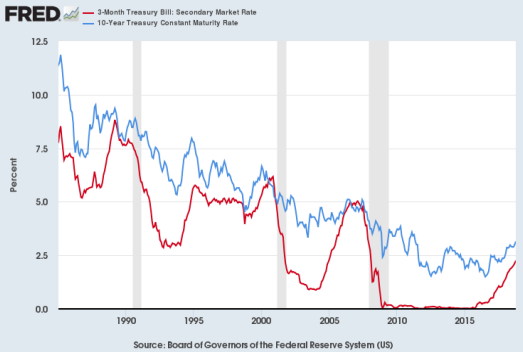


FFR & Short-Term Government Rate



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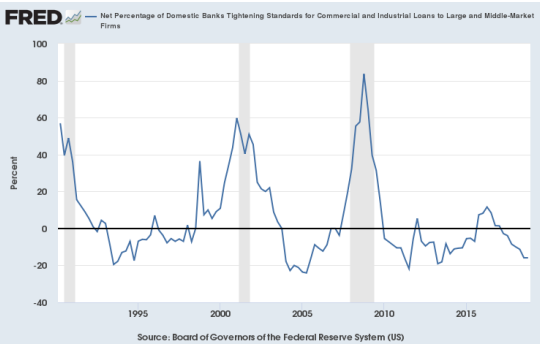
Short-Term & Long-Term Rates



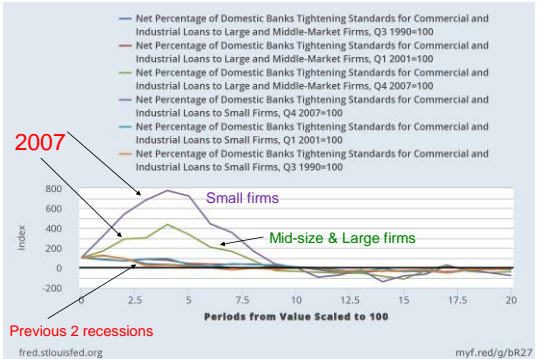
Banks Tightened Lending Standards



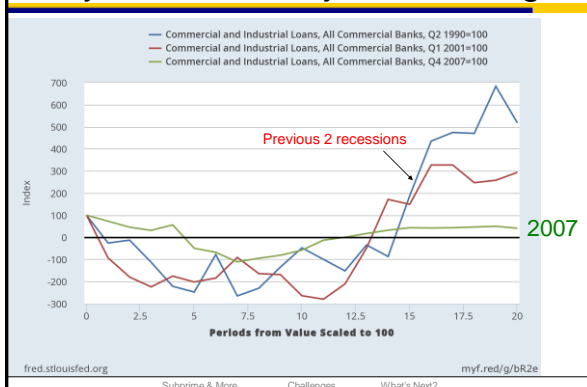
For Midsize & Large Firms, too



And this recession was unusual



By 2012, still very little lending



Challenges today

- Source: Former Fed Chair Janet Yellen speech, Oct. 2016

<https://www.federalreserve.gov/newsevents/speech/yellen20161014a.htm>

- Should we disaggregate "C" (or "I")?
Does a tax cut for high Y have same effect as one for low Y households? Are there systematic differences between firms?
- What's role of finance in determining AD?
Most macro models had no role for finance pre-2009. Many still don't.

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What determines inflation?

3. What determines inflation?

Do wages really respond to labor market conditions? Do firms really pass labor costs (or savings) on to customers? Which inflationary expectations (near term, far term) matter? And whose inflationary expectations matter (consumers, businesses, wealth-holders)? And how are those expectations formed anyway?

4. How are different economies connected?

What's effect of Fed policy on other countries? Is effect on advanced and emerging countries the same? Does QE have same effect as traditional FOMO? What's effect of monetary policy in other countries on US economy?

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So what's next?

- Indicators: economy looks strong
 - Unemployment at 3.6 percent
 - Core Inflation (CPI less food & energy) at 2.3 percent
 - At Oct 2019 meeting, Fed lowered IOER & FFR to 1.5% from Dec 2018 high of 2.5%
- But what's on the horizon?
 - Ongoing concern re labor force participation rate
 - Investment has been weak for over a year
 - Trade war and tariffs: direct & uncertainty effects
 - Agriculture feeling pain
 - Recent General Motors announcement re factory closures

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