

OUTLINE — November 1, 2017

- Overview of Policy
 - Contractionary and Expansionary Policy
 - Fiscal and Monetary Policy
- The Financial Crisis of 2007-09 Great Recession

*Midterm tonight
(if that's news, we should talk...)*

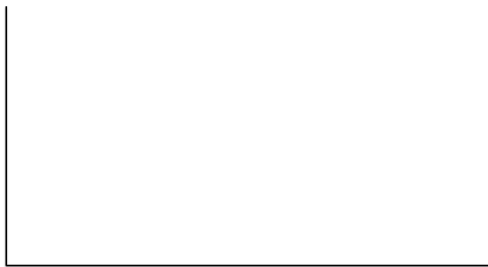
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Review: PPF & AD

- Productivity & supply of inputs ("supply side")
 - Determine location of PPF
- Aggregate demand ("demand side")
 - Determines whether economy is on its PPF
 - $Y_E = Y_{FE}$?
 - Economy is on its PPF
 - $Y_E < Y_{FE}$?
 - Economy is inside its PPF

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Output Gap & Multiplier



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How close an output gap?

- Any initial increase in AD will help close an output gap
 - C
 - I
 - G
 - EX
 - IM

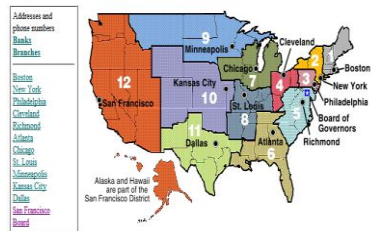
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Monetary Policy Overview

Conducted by the Federal Reserve

- U.S. central bank established in 1913
- Headquarters in Washington DC
- Board of Governors
- 12 regional Federal Reserve Banks

The Twelve Federal Reserve Districts



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The Fed

- Federal Reserve Board (7 people)
 - Chairman UCB Prof. Janet Yellen
 - ... At least for now. . .
- Federal Open Market Committee
 - Board plus 5 Federal Reserve Bank Presidents
- Fed's Mission – a “dual mandate”
 - Maximum **employment**,
 - Stable **prices**, and
 - Moderate long-term interest rates



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Monetary Policy

- Who: Federal Open Market Committee (FOMC)
- What: Changes in interest rates & money supply
- How: Majority decision of the members of the FOMC (7 members of the Federal Reserve Board, President of the Federal Reserve Bank of New York, and 4 other Federal Reserve Bank presidents)

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Direct, Indirect, Expansionary, Contractionary.

- Direct Policy**
 - Directly changes some component of AD
- Indirect Policy**
 - Changes some other economic variable, which eventually changes AD
- Expansionary Policy**
 - Increases (expands) GDP
- Contractionary Policy**
 - Decreases (contracts) GDP

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Monetary Policy

	Contractionary Policy	Expansionary Policy
Indirect Policy		
Direct Policy		

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Fiscal Policy

- **Who:** Congress with the approval of the President
- **What:** Changes in G, TR, and TA
- **How:** Bills approved in committee, passed by both houses of Congress, (perhaps then a compromise bill to reconcile differences between the Senate & House versions), then signed into law by the President



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Fiscal Policy

	Contractionary Policy	Expansionary Policy
Indirect Policy		
Direct Policy		

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Government Spending

- **Fiscal Policy Tools**
 - G: Government spending
 - TR: Transfer payments
 - TA: Taxes
- **Direct Fiscal Policy:** ΔG
- **Indirect Fiscal Policy:** $\Delta TR, \Delta TA$

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Deficits and Debt

Budget Deficit or Budget Surplus

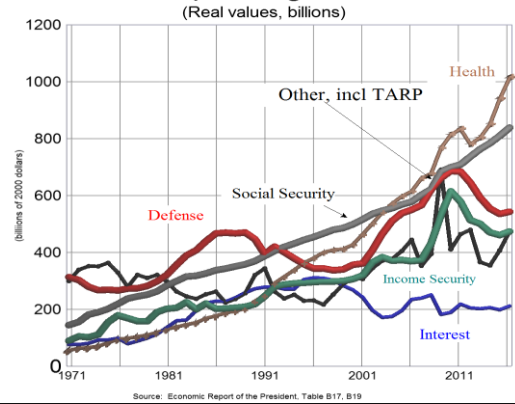
- If, in one year, $G + TR > TA$: **budget deficit**
- If, in one year, $TA > G + TR$: **budget surplus**
 - $G + TR$ = Government outlays
 - TA = Government receipts

Government debt

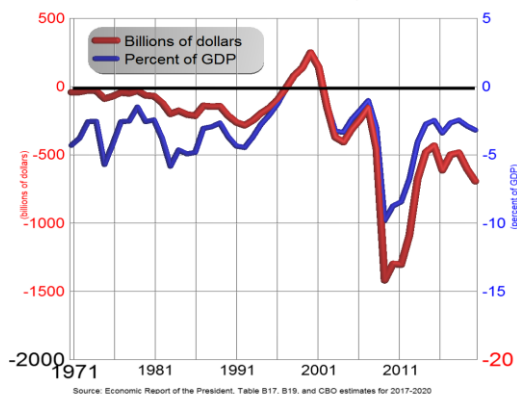
- Cumulative total, since 1790, of annual budget deficits minus annual budget surpluses
- Government borrows by issuing IOUs: government bonds

Review Output Gap Policy Overview Fiscal Policy: Effect on GDP **Deficits & Debt** Concepts

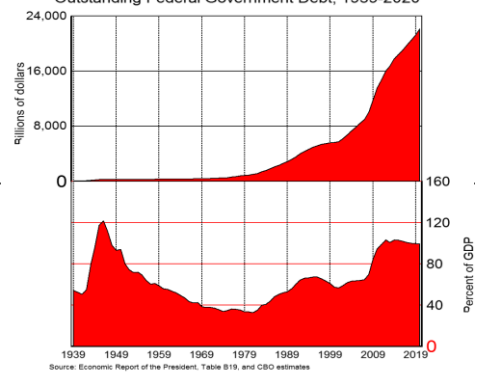
Federal Spending, 1971-2016



Federal Government Deficits, 1971-2020



Outstanding Federal Government Debt, 1939-2020



Three types of policy

Fiscal Policy	Monetary Policy	Credit Policy
Congress & President G, TR, and TA	Federal Reserve (Fed) Interest rates & money supply	Combination of Fed & Congress Policies & laws relating to mortgage and consumer credit: <i>Availability, marketing, consequences of default</i>

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2007-09 downturn

- Most post-WWII downturns triggered by Fed raising interest rates
 - Not 2007-2009!
- 2007-09 characterized by a financial crisis
 - What is the crisis?
 - At its most essential: unwillingness to lend
 - What caused the crisis?
 - Asymmetric information, greed, dumb decisions, and more . . .

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U.S. Interest Rates, 1965-2017



Source: FederalReserve.gov, series H.15

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Subprime Mortgages

- Technological development: FICO score, 1989
 - Allows risk-based pricing
- Types of mortgages
 - Prime
 - Subprime
 - Alt-A
- New products in early 2000s: 2/28, 3/27, teaser rate
 - And no-doc, "stated income" loans

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Start with Subprime Lending

- Mortgage: loan to buy house
- Home Loans
 - Prime Alt-A Sub-prime
- Sub-prime mortgage:
 - borrower has bad credit
 - FICO score
 - Or, low down payment (< 20 percent)
- Adjustable rate mortgage
 - Interest rate & monthly payment change

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Subprime Crisis

- Began with subprime, spread to all mortgages
- 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
- Then what?
 - If house price has risen 25%, refinance at lower rate: Win!!
 - If house price didn't rise fast enough, can't refinance: Lose.
- Can't refinance, can't afford re-set
 - Default
 - Foreclosure
- Financial institutions fail

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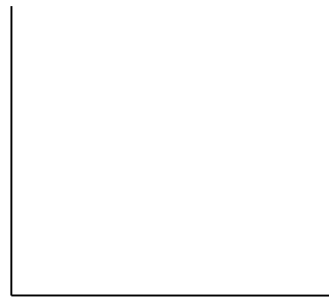
Housing "Bubble"

- Bubble: Rapid & temporary rise of prices
- Speculation?
 - Flip this house
- Buy for \$400,000
 - Appreciate 12% per year
 - In 2 years, worth \$502,000
 - Speculators sell
 - Others refinance
 - But . . . But . . . But !!!

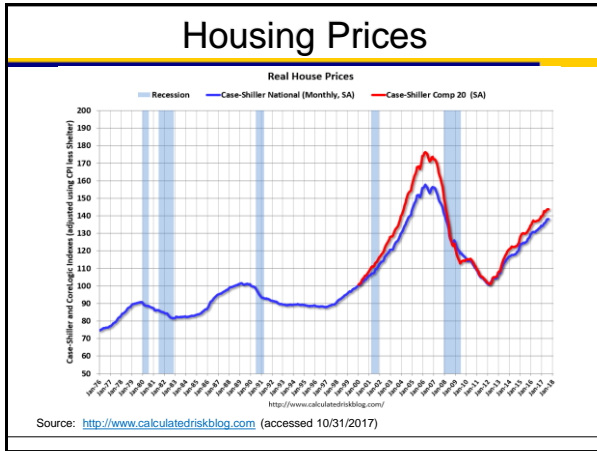


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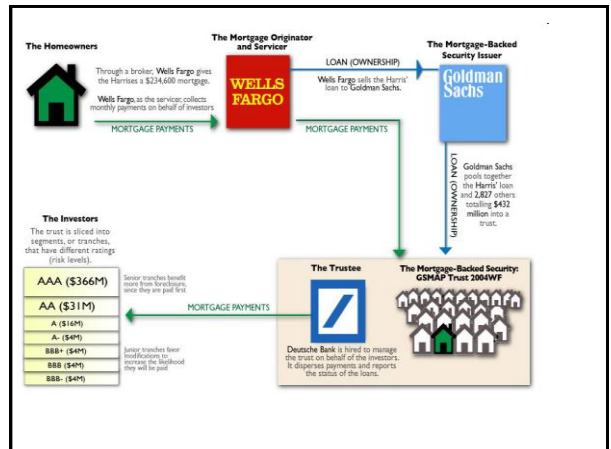
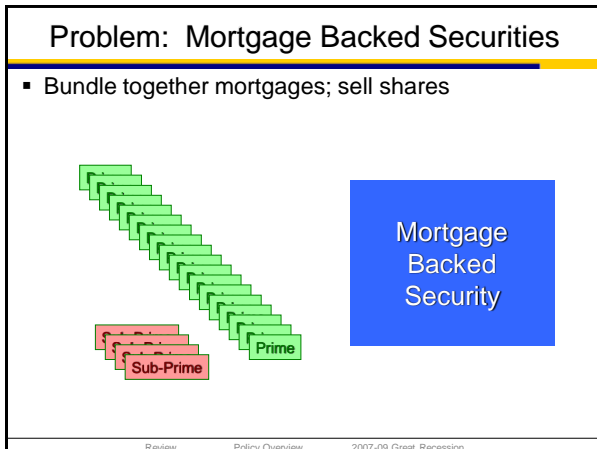
Housing prices soar with easy credit



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- ## But Then Prices Stopped Rising
- Unable to refinance?
 - Into default. Possible foreclosure.
 - Prices stopped rising, started falling
 - Supply of houses up due to foreclosures
 - Supply up due to need to sell to avoid default
 - Demand down because less credit available
 - Then Alt-A and Prime mortgages went bad too
- Review Policy Overview 2007-09 Great Recession



Who Bought MBS?

- Good question
 - Banks
 - Central Banks
 - Hedge Funds
 - Any Financial institution you can name
 - Insurance Companies
 - Pension funds
- Everywhere!

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Credit Default Swap (CDS)

- Insurance against someone else defaulting
 - You buy a CDS on Joe's Diner
 - If Joe's defaults on its debt, you get \$100
 - You pay \$2 per year for this CDS
 - You are betting that Joe will default
 - Insurance company is betting that Joe won't default
- What if **lots** of companies default at once?
 - Insurer may be unable to pay
 - Debt-holders who bought CDS have big losses
 - Debt-holders may themselves go bankrupt

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AIG (American International Group)

- An insurance company
 - Issued trillions of dollars in credit default swaps
- 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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