Economics

Monetary Policy, Fiscal Policy, International Trade and Economic Cycle Indicators

Session 4

National Association of Credit Management
Graduate School of Credit and Financial Management
American University
Washington, DC
June 27, 2017

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

What you will learn in this session

- Definition of money
- Federal Reserve System
- Monetary policy
- Federal fiscal policy
- International transactions
- Leading Economic Indicators
- Activity Index

Chapters from the text
"Economic Indicators for Dummies"
related to this session: 3, 8, 16, 17, 18, 19 and 20

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Definition of Money

- Money is the set of assets in an economy that people regularly use to buy goods and services from other people

- Money has three functions in the economy:
  1. Medium of exchange
     - A medium of exchange is an item that buyers give to sellers when they want to purchase goods and services
     - A medium of exchange is anything that is readily acceptable as payment
  2. Unit of account
     - A unit of account is the yardstick people use to post prices and record debts
  3. Store of value
     - A store of value is an item that people can use to transfer purchasing power from the present to the future

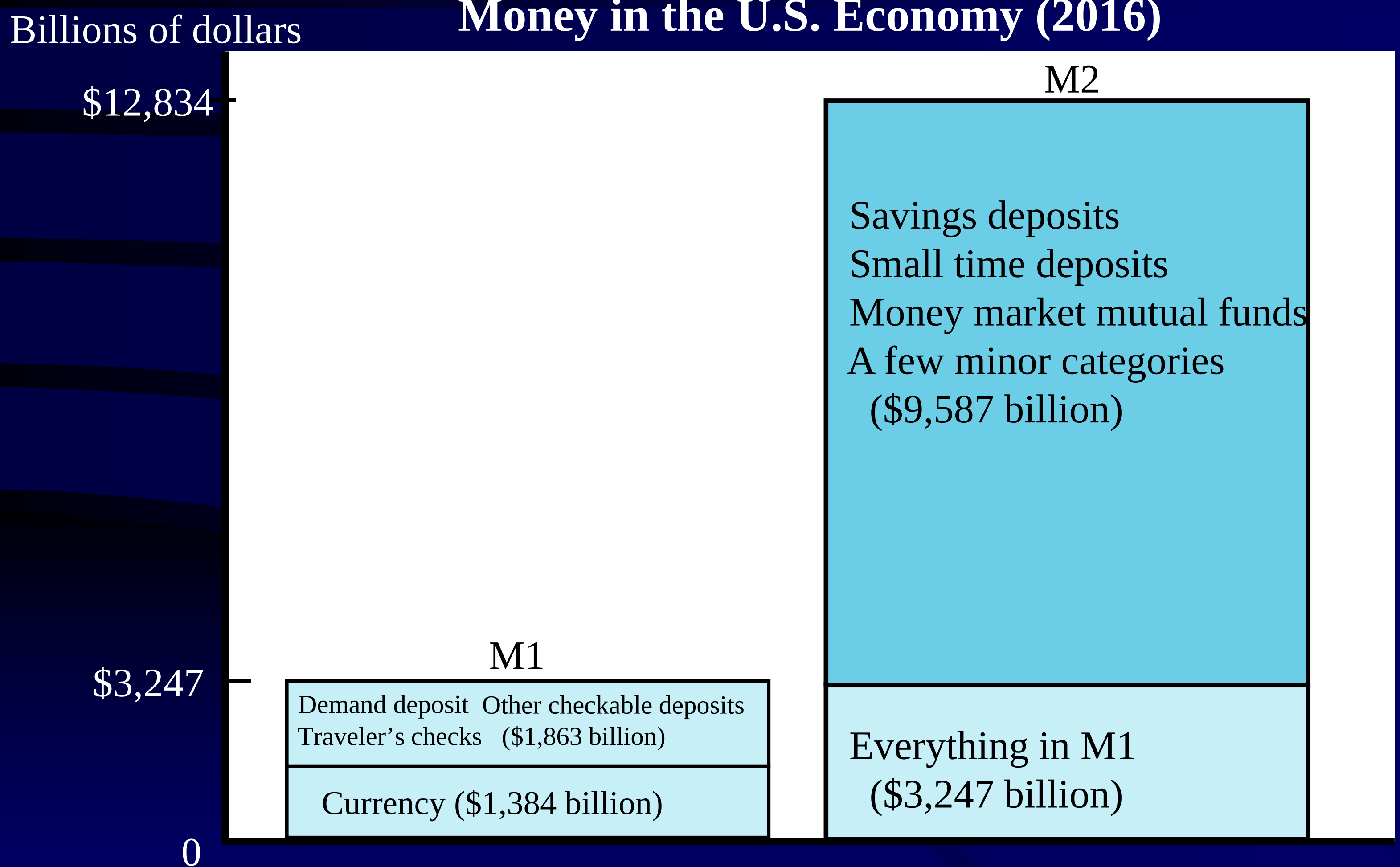
Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Definition of Money

- Liquidity
  - Liquidity is the ease with which an asset can be converted into the economy's medium of exchange
- Types of Money: Commodity versus Fiat
  - Commodity money takes the form of a commodity with intrinsic value
    - Examples: Gold, silver, wampum, cigarettes
  - Fiat money is used as money because of government decree
    - It does not have intrinsic value
    - Examples: Coins, currency, check deposits
- Money in the United States economy
  - Currency is the paper bills and coins in the hands of the public
  - Demand deposits are balances in bank accounts that depositors can access on demand by writing a check

Definition of Money

Money in the U.S. Economy (2016)



The Federal Reserve System

- The Federal Reserve (Fed) serves as the nation's central bank
  - It is designed to oversee the banking system
  - It regulates the quantity of money in the economy
- The Fed was created in 1914 after a series of bank failures convinced Congress that the United States needed a central bank to ensure the health of the nation's banking system
- The primary elements in the Federal Reserve System are:
  1. The Board of Governors
  2. The Regional Federal Reserve Banks
  3. The Federal Open Market Committee

The Federal Reserve System

- The Fed is run by a Board of Governors, which has seven members appointed by the President of the U.S. and confirmed by the Senate
- The governors serve staggered 14-year terms so that one comes vacant every two years
- Among the seven members the President of the U.S. chooses one to be Chair
  - The Chair serves a 4-year term and requires Senate confirmation
  - The Chair:
    - Directs the Fed staff;
    - Presides over board meetings;
    - Testifies about Fed policy in front of Congressional Committees

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

The Federal Reserve System

Janet L. Yellen
Chair

Stanley Fischer
Vice Chair

Daniel K. Tarullo

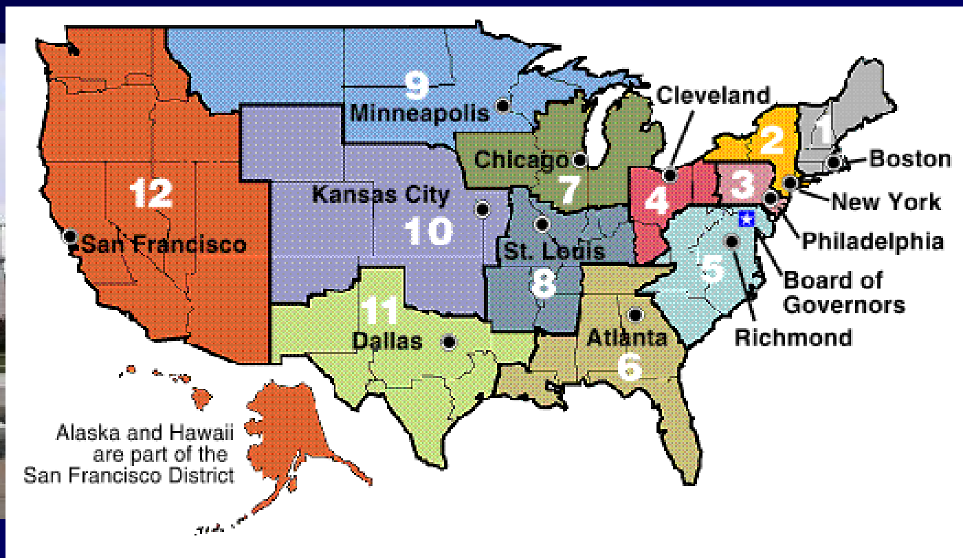
Jerome Powell

Lael Brainard

Vacant

Vacant

- The Federal Reserve System is made up of the Federal Reserve Board in Washington, D.C., and twelve regional Federal Reserve Banks



The Federal Reserve System

- The Federal Reserve District Banks
  - Twelve district banks
  - Each district bank has a board with nine directors
    - Three appointed by the Board of Governors
    - Six are elected by the commercial banks in the district
  - One of the roles of the district bank board of directors is to appoint the district bank president, who needs to be approved by the Board of Governors


Eric S. Rosengren
Boston


William C. Dudley
New York


Patrick T. Harker
Philadelphia


Loretta J. Mester
Cleveland


Jeffrey M. Lacker
Richmond


Dennis P. Lockhart
Atlanta


Charles L. Evans
Chicago


James B. Bullard
St. Louis


Neel Kashkari
Minneapolis


Esther George
Kansas City


Robert S. Kaplan
Dallas


John C. Williams
San Francisco

The Federal Reserve System

- Three primary functions of the Fed
  1. Regulates banks to ensure they follow federal laws intended to promote safe and sound banking practices
  2. Acts as a banker’s bank, making loans to banks and acting as a lender of last resort and attempting to ensure that the financial system is operating efficiently
  3. Conducts monetary policy by controlling the money supply (targeting interest rates)

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- Federal Open Market Committee (FOMC) is the monetary policy deliberating committee for the Fed
  – The Chair and the other six members of the Board of Governors and the 12 Presidents of the regional Federal Reserve banks
- The FOMC meets eight times a year
- While everyone participates at each FOMC meeting only 12 of the 19 vote
  – The voting members of the FOMC:
    - The Chair and the other six members of the Board of Governors.
    - The president of the Federal Reserve Bank of New York
    - The presidents of the remaining 11 regional Federal Reserve banks (four vote on a yearly rotating basis)

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

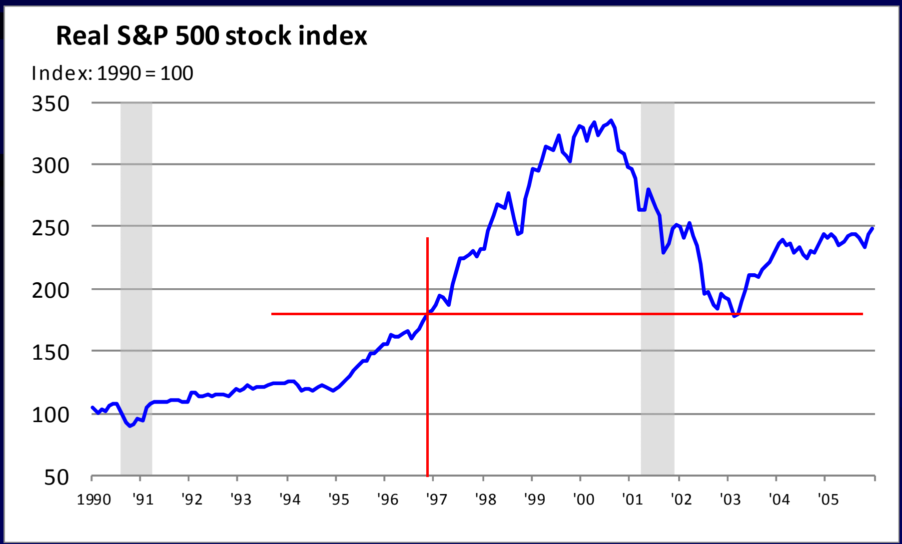
Monetary Policy

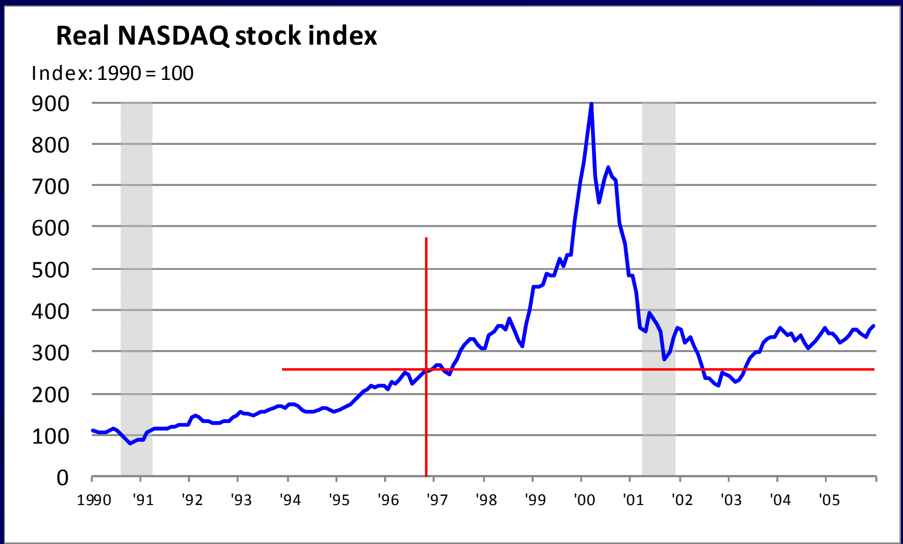
- The money supply refers to the quantity of money available in the economy
- Over time with a money supply that does not grow at the same pace as the economy will cause deflation in the economy
- Monetary policy is the setting of the money supply by policymakers in the central bank
- The economy is a complex system and given lags in monetary policy it is ill-advised to try an influence short-term fluctuations in the economy
  – Whether an impact is short-lived or not is sometimes very difficult to discern
  – Bubbles are hard to determine whether they exist and there is uncertainty if policy can "pop" the bubble and whether the "medicine" would be worse than the disease

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

"We can see that in the inverse relationship exhibited by price/earnings ratios and the rate of inflation in the past. But how do we know when irrational exuberance has unduly escalated asset values, which then become subject to unexpected and prolonged contractions as they have in Japan over the past decade?"
Federal Reserve Chair Alan Greenspan – speech at the American Enterprise Institute for Public Policy Research on December 5, 1996





Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- How monetary policy works
  - During period of weakness, the Fed lowers interest rates which will generally increase activity in the interest sensitive sectors of the economy (durable goods, housing, investment)
  - When you pay for something over time the actual price is not the purchase price but the down payment plus all the monthly payments (discounted value)
  - So when interest rates go lower this leads to a reduction in the monthly payment amount
  - The Fed lowers the interest rate by increasing the money supply
    - So increasing money is synonymous with lowering interest rates and decreasing money is synonymous with raising interest rates

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- How money is created in an economy
  - The Fed creates "High-Powered Money", but the majority of the money supply is created by the financial sector
    - Each dollar that gets loaned by the financial sector creates another dollar in the money supply
  - The primary way in which the Fed changes the money supply is through open-market operations
    - The Fed purchases and sells U.S. government securities

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

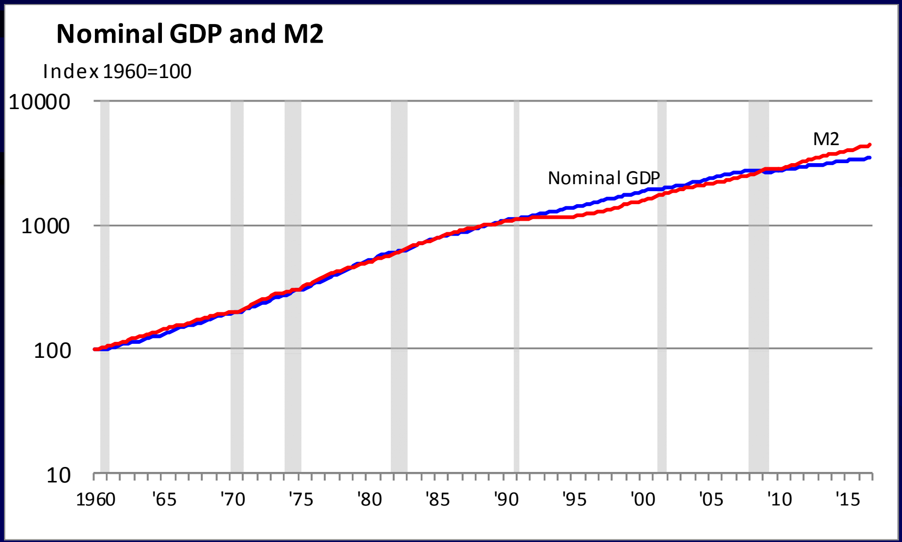
Monetary Policy

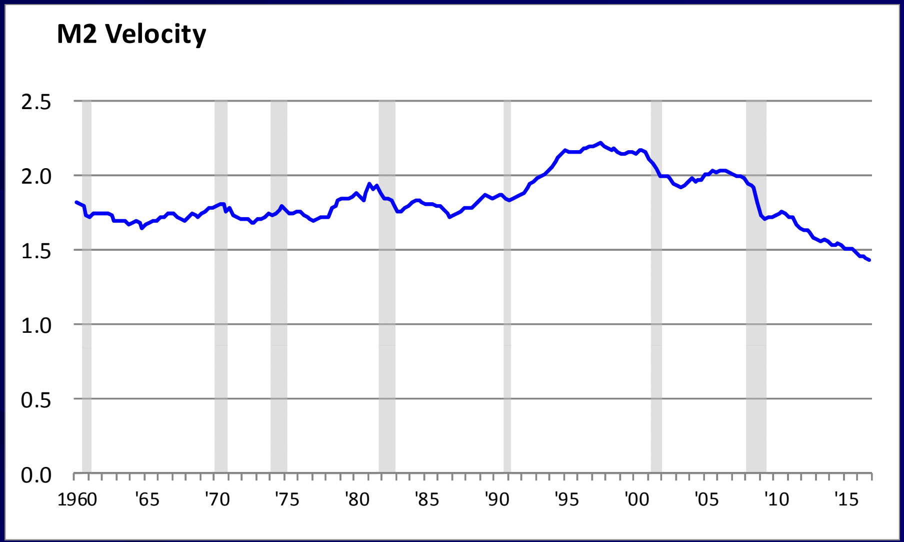
- Expansionary monetary policy
  - In order to increase the money supply, the Fed buys government securities from the public, paying with money
  - This increases banks reserves – which lowers the interest rate
  - The lower interest rate increases demand for bank borrowing by the interest sensitive sectors (increasing aggregate demand)
  - Which leads to further increases in the money supply, hence lower interest rates and further increases in aggregate demand
- Contractionary monetary policy
  - In order to decrease the money supply, the Fed sells government securities to the public, taking money out of the hands of the public
  - This decreases banks reserves – which raises the interest rate
  - The higher interest rate decreases demand for bank borrowing by the interest sensitive sectors (decreasing aggregate demand)

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- Velocity of money is determined based upon how fast money passes from one holder to the next
  - It is the number of times a typical dollar must be exchanged to purchase all the goods produced in an economy

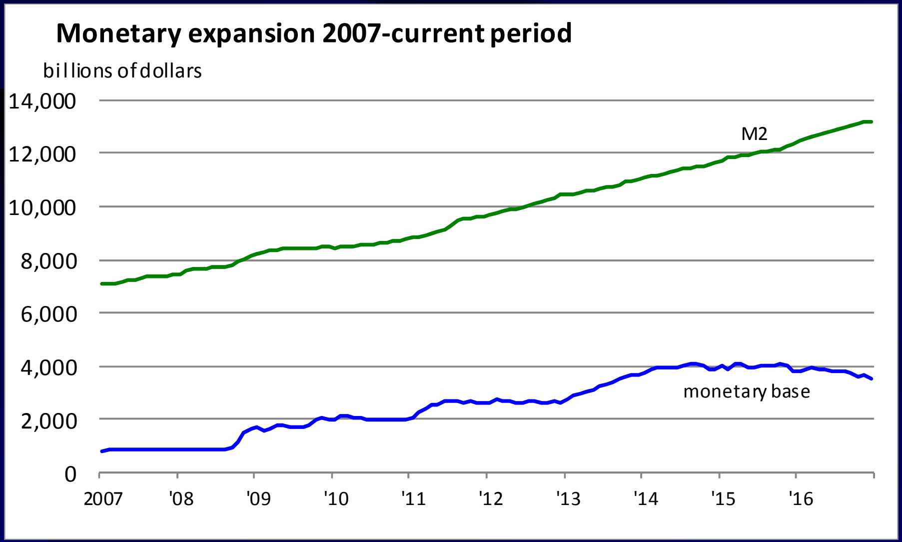


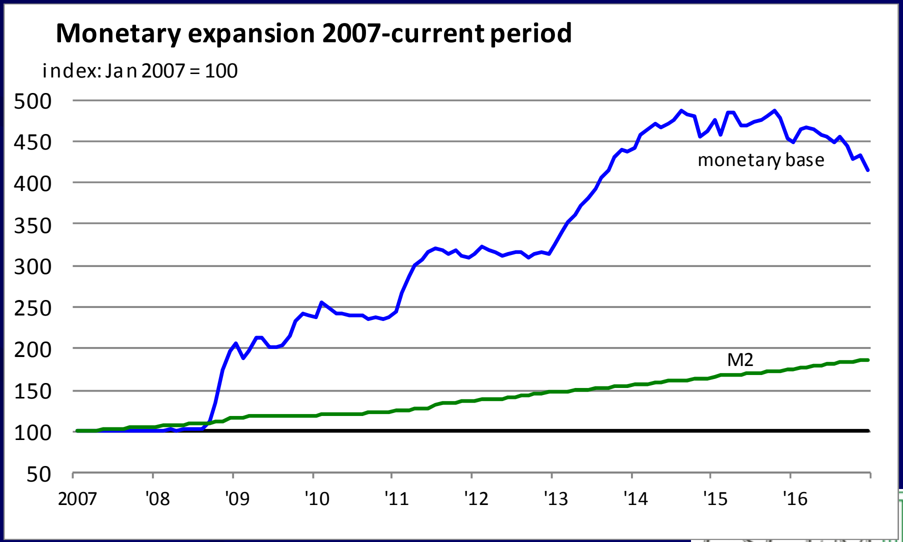


Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- Problems in controlling the money supply
  - The Fed's control of the money supply is not precise
    - The Fed does not control the amount of money that households choose to hold as deposits in banks
    - The Fed does not control the amount of money that bankers choose to lend or the amount that business/households choose to borrow





Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- Other traditional monetary policy tools of the Fed
  - Changing the Discount Rate
    - The discount rate is the interest rate the Fed charges banks for loans
      - Increasing the discount rate decreases the money supply
      - Decreasing the discount rate increases the money supply
  - Changing the Reserve Requirements
    - Reserve requirements are regulations on the minimum amount of reserves that banks must hold against deposits
      - Increasing the reserve requirement decreases the money supply
      - Decreasing the reserve requirement increases the money supply

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

- New monetary policy tools added since the 2008 financial crisis
  - Interest on required reserve balance and excess reserve balances
    - The interest rate paid on balances maintained to satisfy reserve balance requirements is determined by the Board and is intended to eliminate effectively the implicit tax that reserve requirements used to impose on depository institutions
    - The interest rate paid on excess balances is determined by the Board and gives the Federal Reserve an additional tool for the conduct of monetary policy
  - Term Asset-Backed Securities Loan Facility (TALF)
    - The TALF is a funding facility that will help market participants meet the credit needs of households and small businesses by supporting the issuance of asset-backed securities collateralized by loans of various types to consumers and businesses of all sizes

Monetary Policy

- New monetary policy tools added since the 2008 financial crisis
  - Term Deposit Facility (TDF)
    - Term deposits will facilitate the implementation of monetary policy by providing a new tool by which the Federal Reserve can manage the aggregate quantity of reserve balances held by depository institutions
    - Funds placed in term deposits are removed from the accounts of participating institutions for the life of the term deposit and thereby drain reserve balances from the banking system

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Monetary Policy

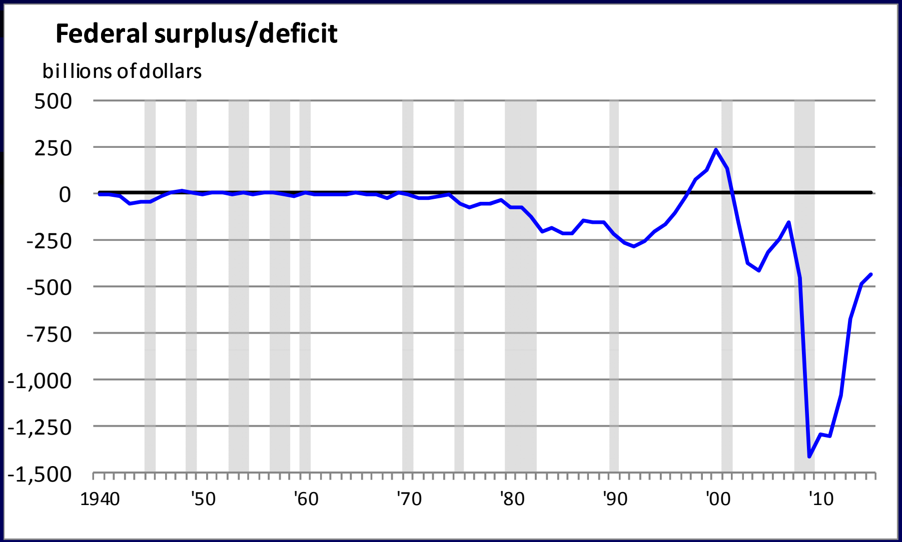
- Monetary neutrality
  - Nominal variables are measured in monetary units
  - Real variables are measured in physical units
  - Changes in the money supply affect nominal variables but not real variables
    - Real economic variables do not change with changes in the money supply – real variables change by factors that affect physical units
  - The irrelevance of monetary changes for real variables is called monetary neutrality

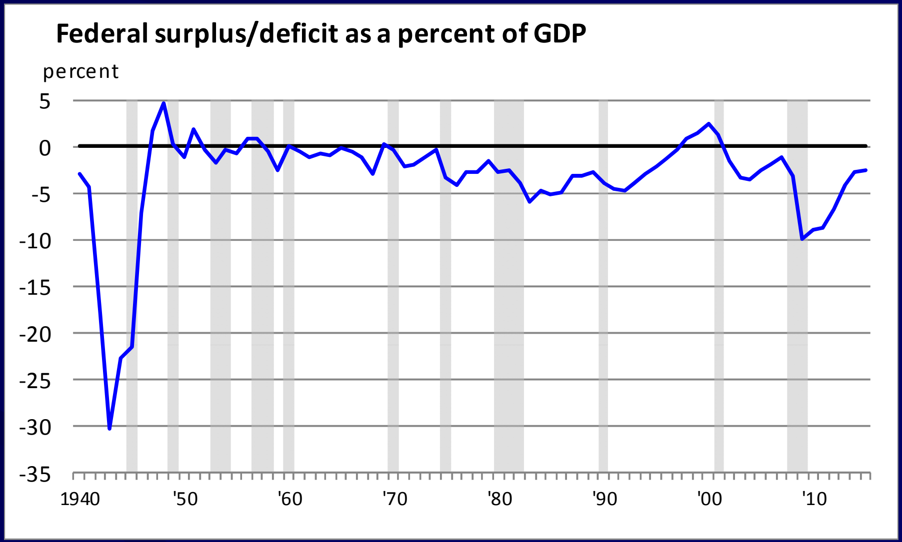
Monetary Policy

- Federal Reserve resources
  - Beige Book
  - FOMC Statement
  - FOMC Forecasts
  - FOMC Minutes
  - Policy makers speeches

Federal Fiscal Policy

- Federal fiscal policy is the means by which a government adjusts its spending levels and tax rates to monitor and influence a nation's economy
- When a government spends more than its' revenue (taxes) it runs a deficit
- When a government spends less than its' revenue it runs a surplus

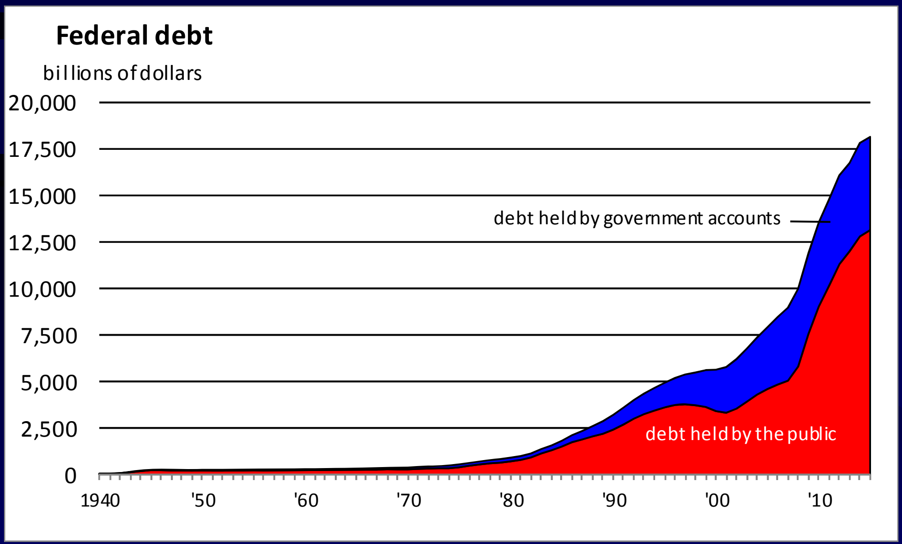


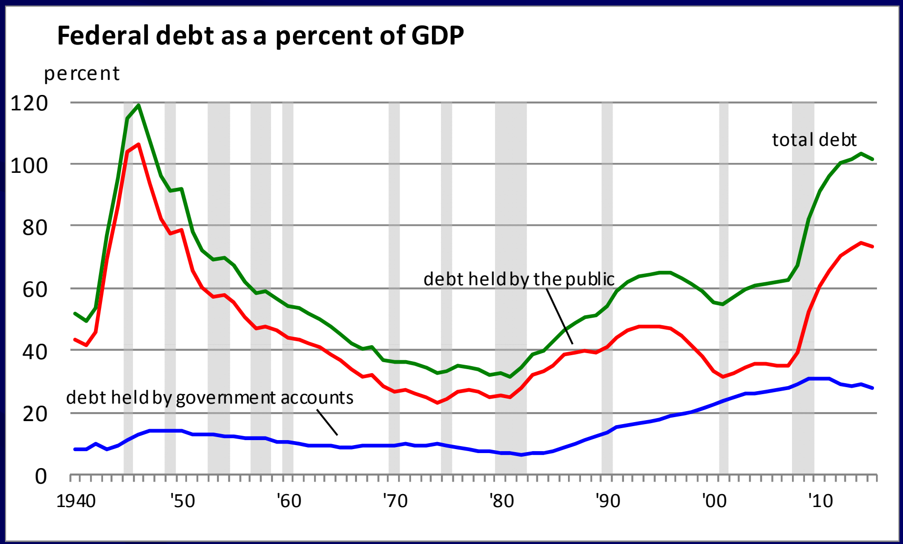


Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Federal Fiscal Policy

- Federal debt is the sum of all past federal budget deficits and surpluses
- The debt held by the public is a more accurate way to measure how much debt the U.S. government has to repay
- Real vs. nominal debt

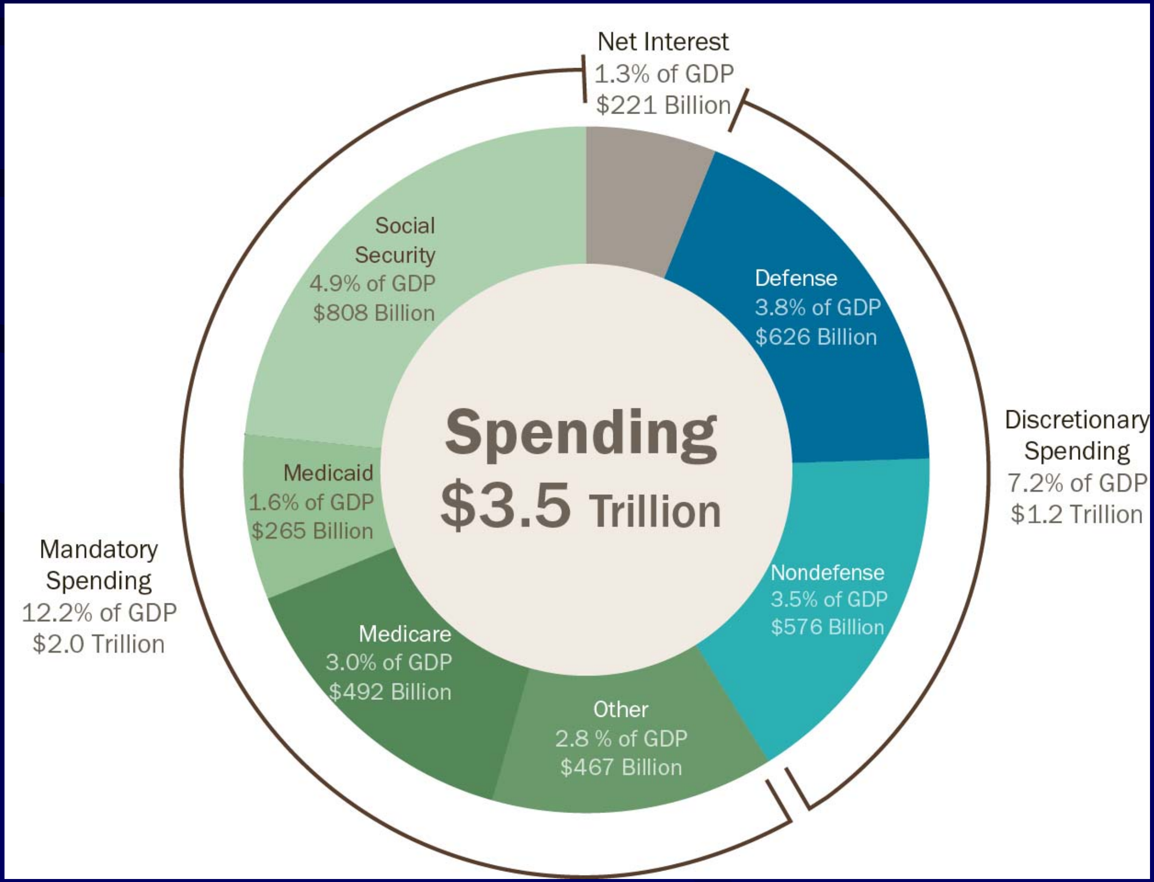




 Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Federal Fiscal Policy

- About 45% of federal spending in 2013 went for Social Security, Medicare, and Medicaid



 Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Federal Fiscal Policy

- Approaches to federal fiscal policy
  - Classical Economics
    - Say's Law – "supply creates its own demand" – economic downturns were self-correcting as prices and wages adjusted to rebalance the economy
      - Laissez-faire
  - Keynesian economics
    - Aggregate demand could remain low and the economy could be stuck with excess capacity and high unemployment
    - "In the long run we are all dead"
    - Government spending and tax cuts can boost the economy
    - Multiplier effect is key
    - Leads to increased federal deficits
      - Concerns about the "crowding out" effect

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

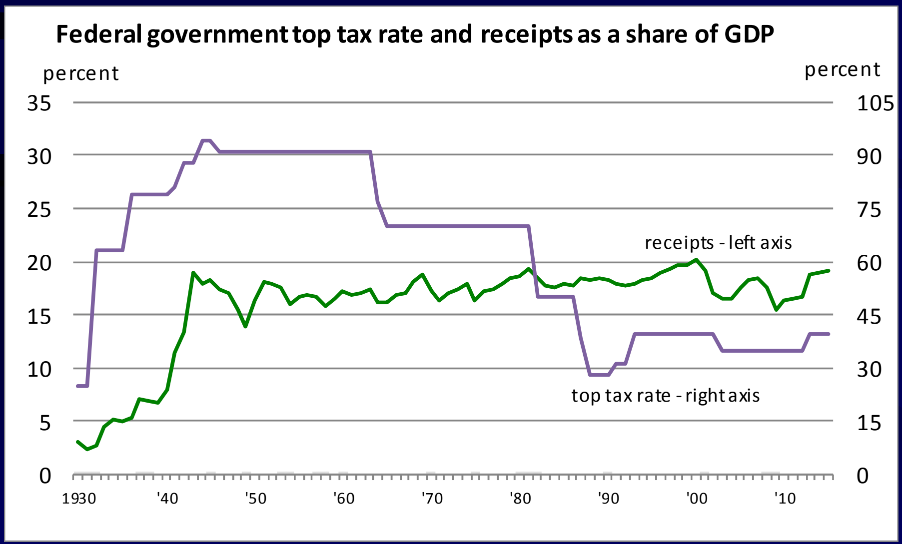
Federal Fiscal Policy

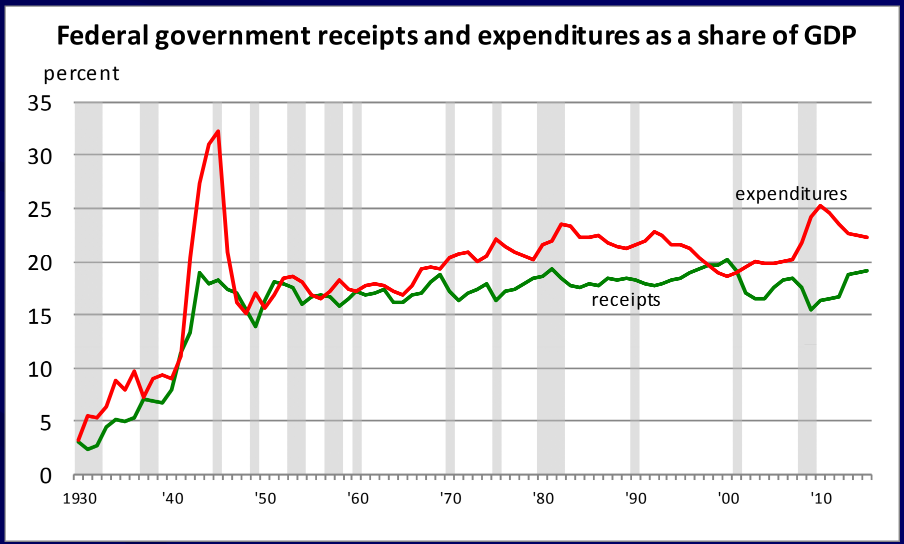
- Approaches to federal fiscal policy
  - Supply side economics
    - It is more important to support policies that produce more goods than to support demand
    - Advocated for lower regulations and lower tax rates
      - Lower tax rates would provide incentives to work more
      - More output would keep inflation low
      - Increased income would add to savings, providing more funds for investment
  - Balanced budget approach
    - Opposes deficit spending approach to assisting the economy
    - Returns the approach back to the Classical Economics

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Federal Fiscal Policy

- Even with major changes in tax policy over the decades tax revenue as a share of income that the government collects has remained very steady
- Government spending has typically exceeded tax revenue



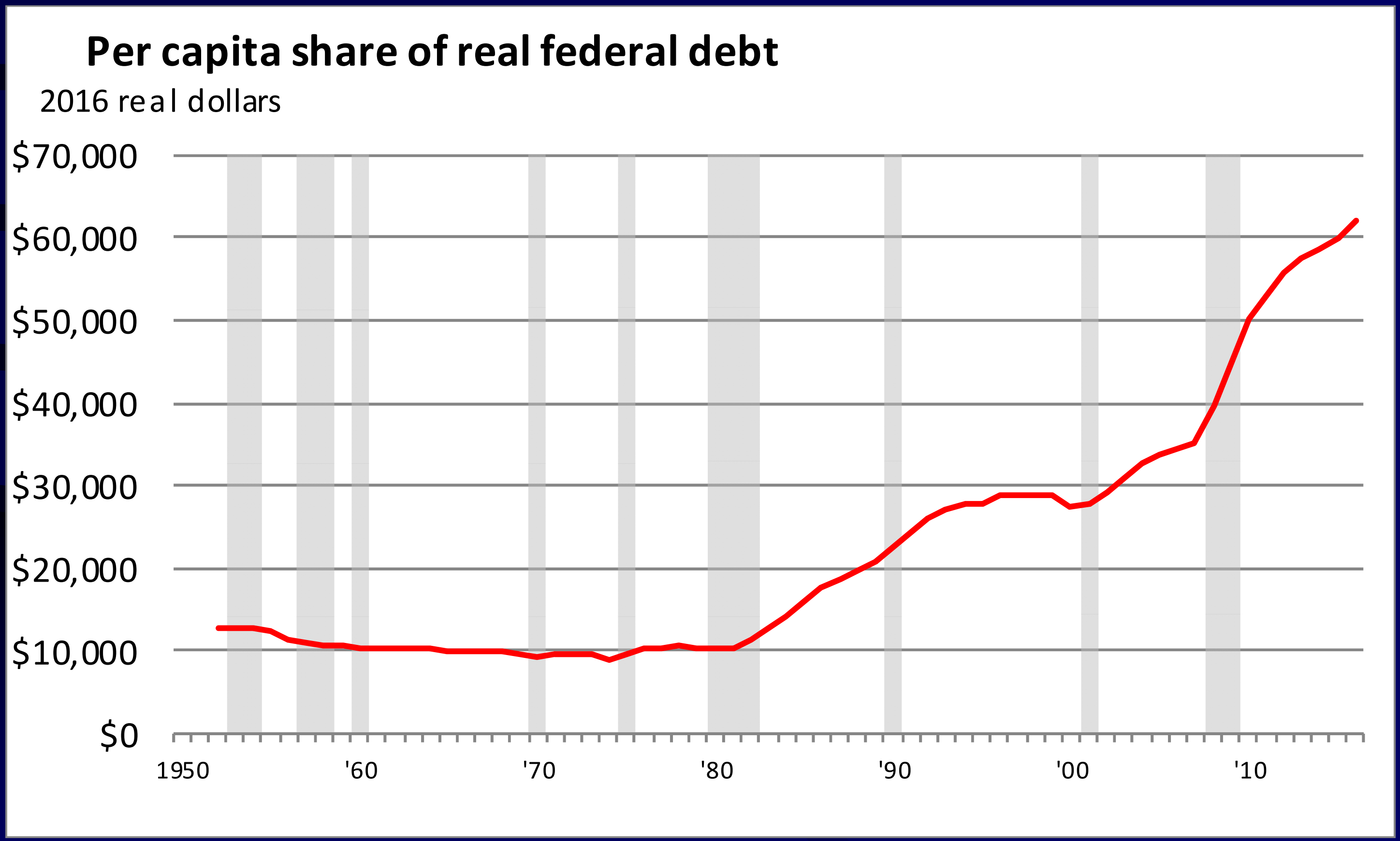


Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

GSCFM
GRADUATE SCHOOL OF CREDIT & FINANCIAL MANAGEMENT

Federal Fiscal Policy

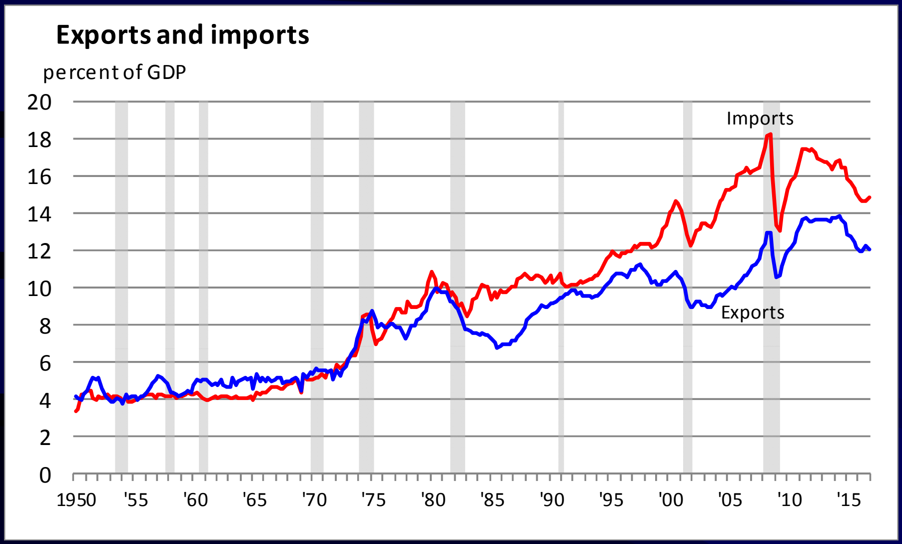
- The per capita share of the federal debt has been rising since 1980

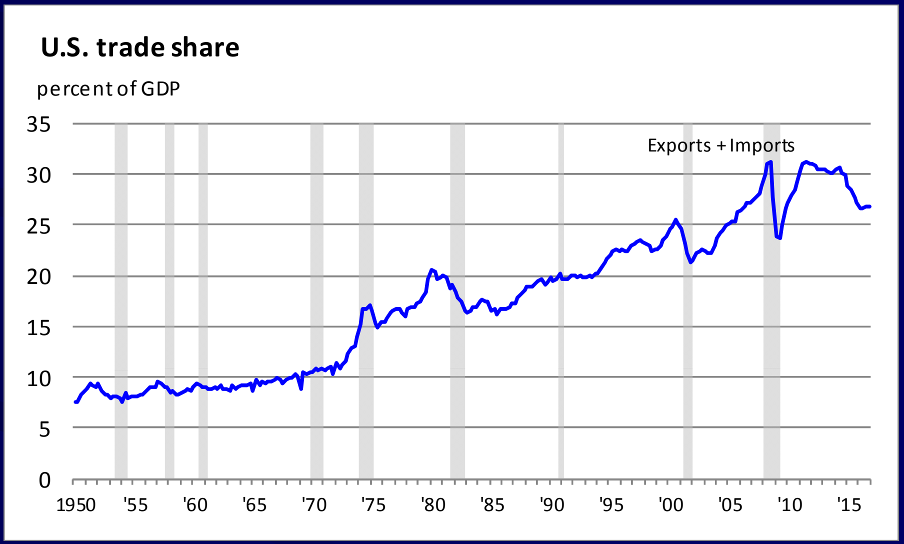


Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

International Transactions

- Over time trade has become a larger part of the U.S. economy

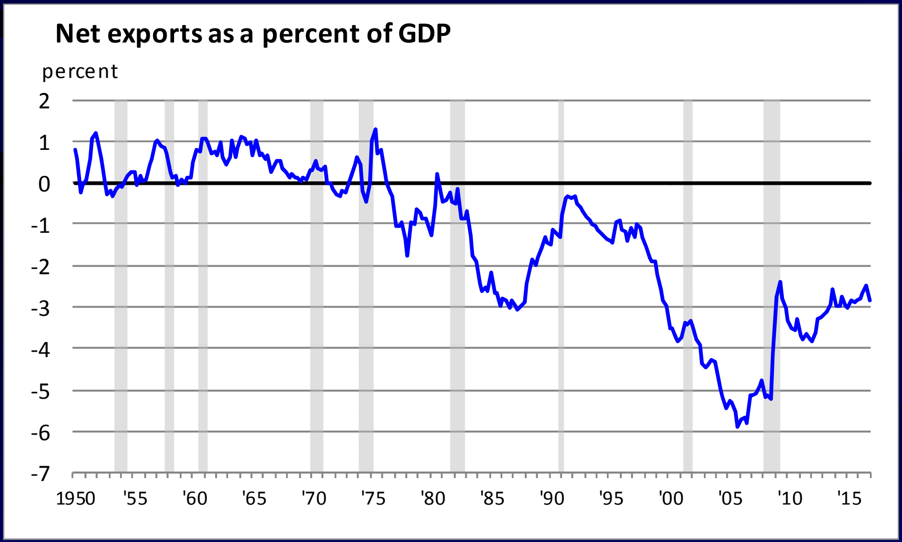


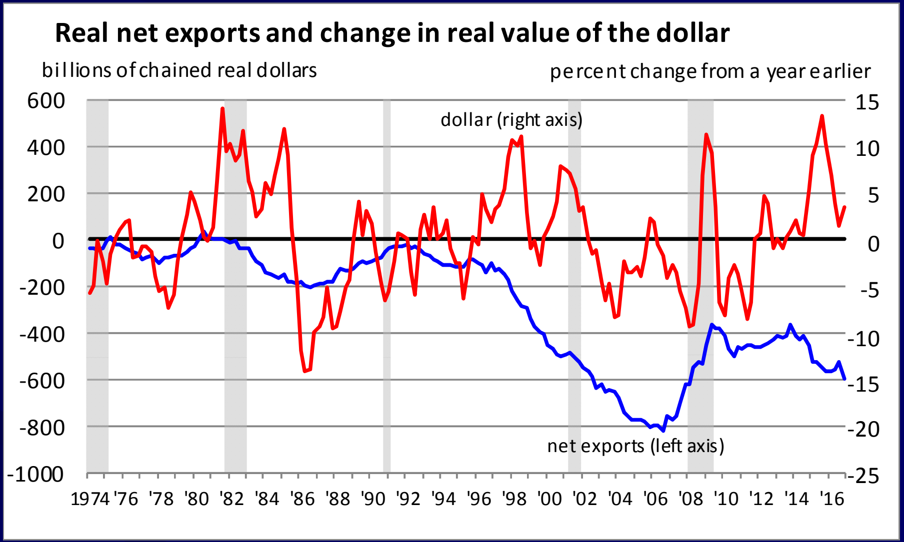


Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

International Transactions

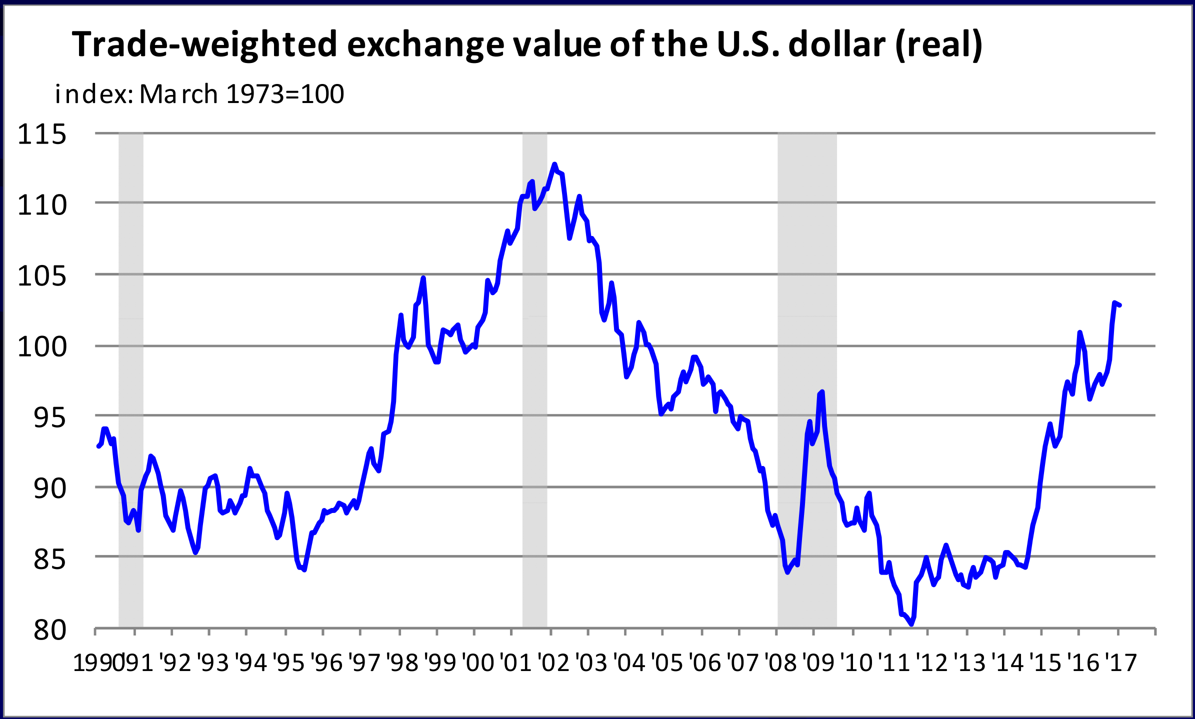
- Since the mid 1970’s imports has exceeded exports leading to trade deficits
- When an economy runs a trade deficit an increasing amount of its currency enters the global market and puts downward pressure on its value – this is a self-correcting feature of the foreign exchange markets





International Transactions

- While the dollar is influenced by the supply of dollars, the demand for dollars also plays a role
- A rising dollar is good ……. and bad
- Reserve currency status



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Blue Chip International Consensus Forecasts

	Real GDP % change Annual			Inflation % change Annual Consumer Prices			Exchange Rate Against US Dollar End of Year		Interest Rates 3-Month End of Year	
	2016	2017	2018	2016	2017	2018	2017	2018	2017	2018
United States	**1.6**	**2.3**	**2.4**	**1.3**	**2.5**	**2.3**	**-**	**-**	**1.10**	**1.90**
Canada	**1.2**	**1.9**	**1.9**	**1.5**	**1.9**	**1.9**	**1.33**	**1.28**	**0.84**	**1.18**
Mexico	**2.1**	**1.6**	**2.2**	**2.9**	**4.5**	**3.7**	**20.94**	**20.50**	**6.38**	**6.13**
Japan	**0.7**	**1.1**	**0.9**	**-0.2**	**0.7**	**1.0**	**117.3**	**117.6**	**-0.03**	**-0.02**
South Korea	**2.8**	**2.6**	**2.5**	**1.0**	**1.7**	**1.8**	**1,203**	**1,202**	**1.37**	**1.49**
United Kingdom	**2.0**	**1.4**	**1.2**	**0.7**	**2.5**	**2.5**	**1.20**	**1.25**	**0.41**	**0.52**
Germany	**1.7**	**1.6**	**1.6**	**0.4**	**1.8**	**1.7**	**1.03**	**1.05**	**-0.21**	**0.15**
France	**1.2**	**1.3**	**1.4**	**0.3**	**1.4**	**1.4**	**1.03**	**1.05**	**-0.21**	**0.15**
Euro Zone	**1.6**	**1.6**	**1.6**	**0.2**	**1.5**	**1.5**	**1.03**	**1.05**	**-0.21**	**0.15**
Brazil	**-3.4**	**0.7**	**2.2**	**8.7**	**5.2**	**5.1**	**3.43**	**3.55**	**11.27**	**10.06**
Russia	**-0.6**	**1.0**	**1.6**	**7.2**	**4.8**	**4.4**	**63.0**	**63.7**	**9.60**	**8.33**
China	**6.7**	**6.4**	**6.0**	**2.0**	**2.1**	**2.2**	**7.15**	**7.28**	**3.20**	**3.55**
India	**7.3**	**7.1**	**7.7**	**5.1**	**4.9**	**5.3**	**69.3**	**69.6**	**6.28**	**6.28**

Blue Chip Economic Indicators Forecast February 10, 2017

Leading Economic Indicators

- Directional changes in economic data tend to either lead, lag or coincidently change with movements of the overall economy
- A leading economic indicator is an economic data series that changes direction ahead of a directional change in the overall economy
- When you group several different series together, combining them into an index (weighting by the importance each series offers to explaining changes in the overall economy), you have created an Index of leading economic indicators
- The Conference Board has created the most cited Leading Economic Index
  - They also create a Coincident Economic Index and a Lagging Economic Index

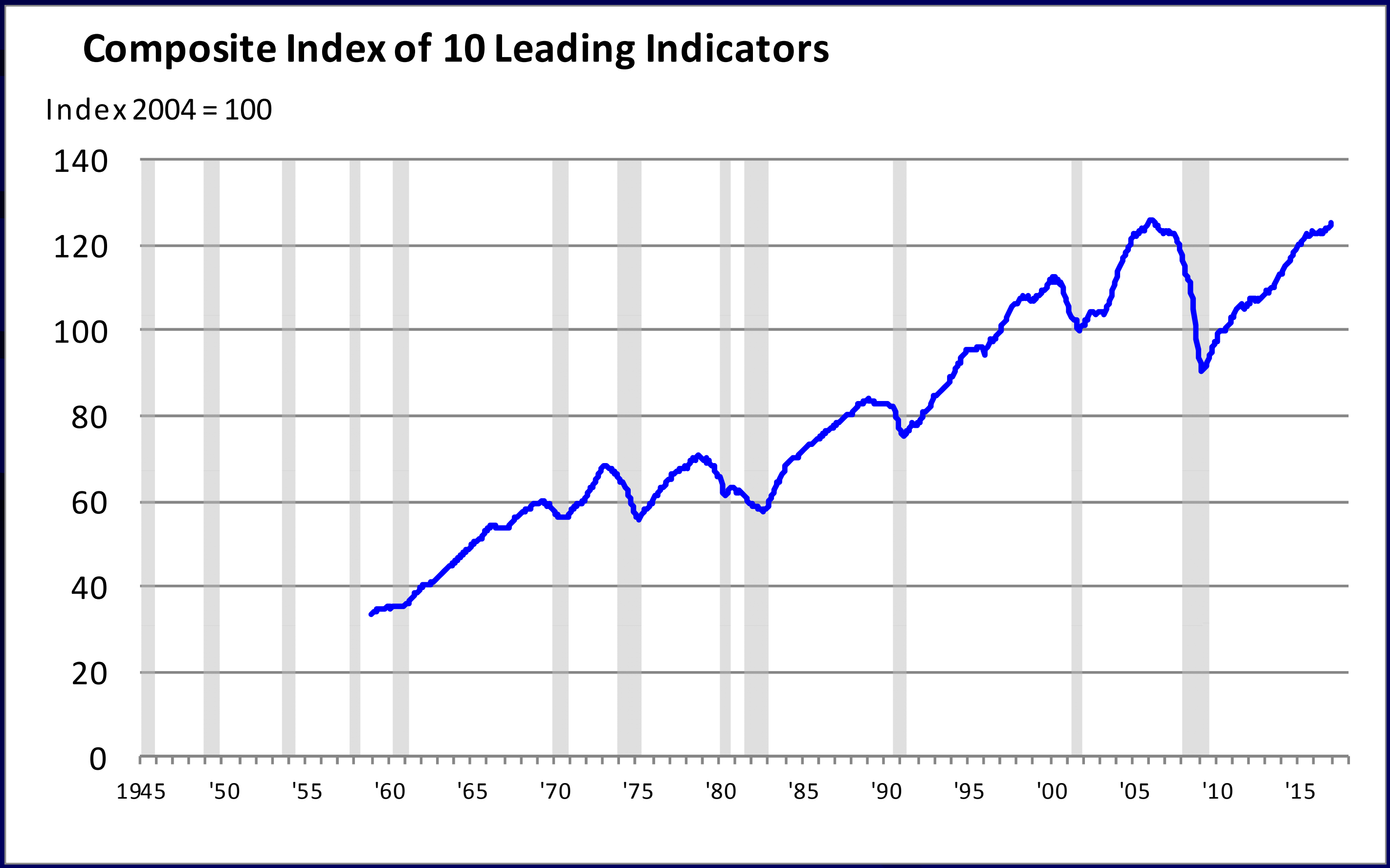
Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

- The ten series that comprise the Leading Economic Index:
  1) Average weekly hours, manufacturing
  2) Average weekly initial claims for unemployment insurance
  3) Manufacturers’ new orders, consumer goods and materials
  4) ISM® Index of New Orders
  5) Manufacturers' new orders, nondefense capital goods excluding aircraft orders
  6) Building permits, new private housing units
  7) Stock prices, 500 common stocks
  8) Leading Credit Index™
  9) Interest rate spread, 10-year Treasury bonds less federal funds
  10) Average consumer expectations for business conditions

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

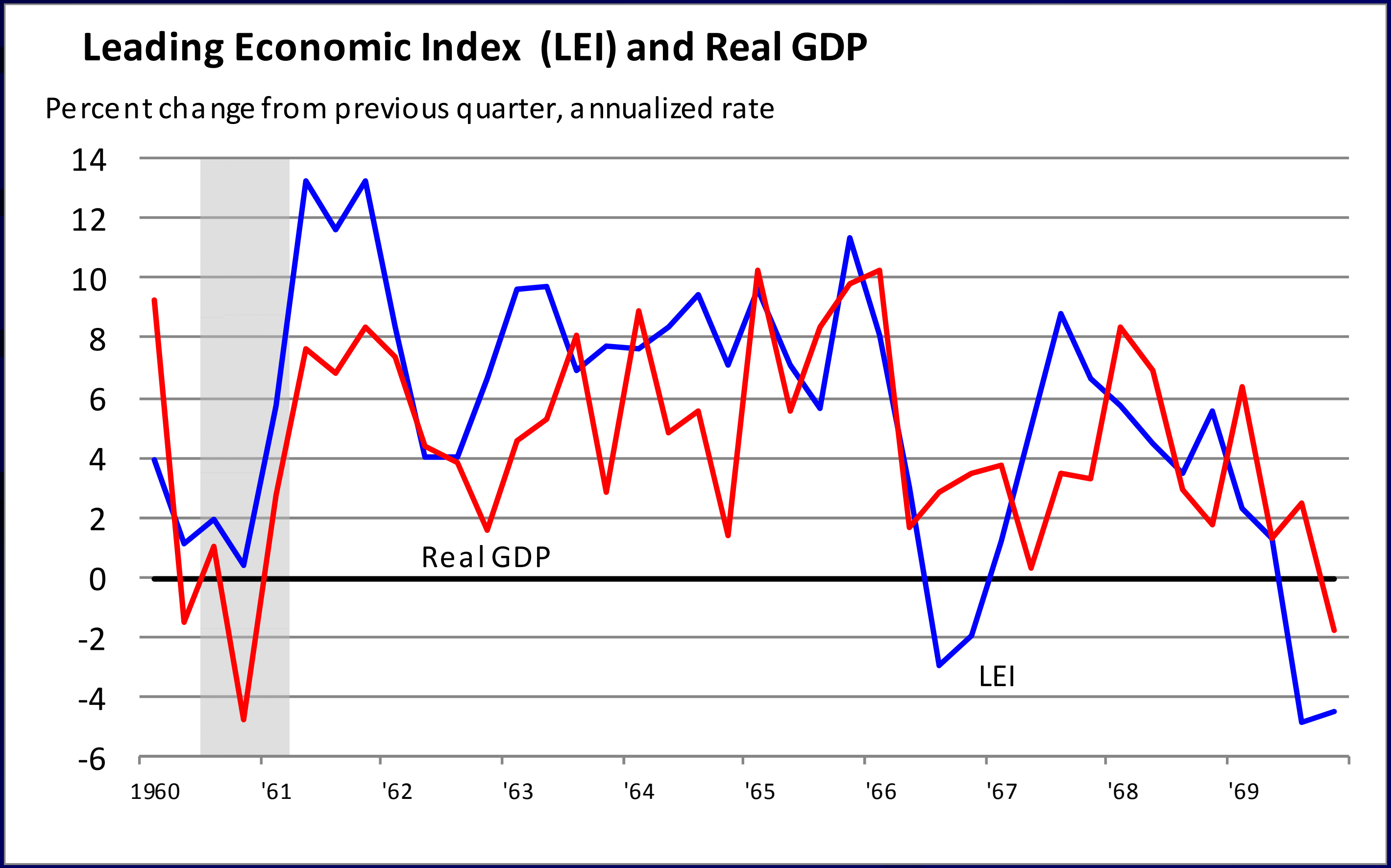
Leading Economic Indicators



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

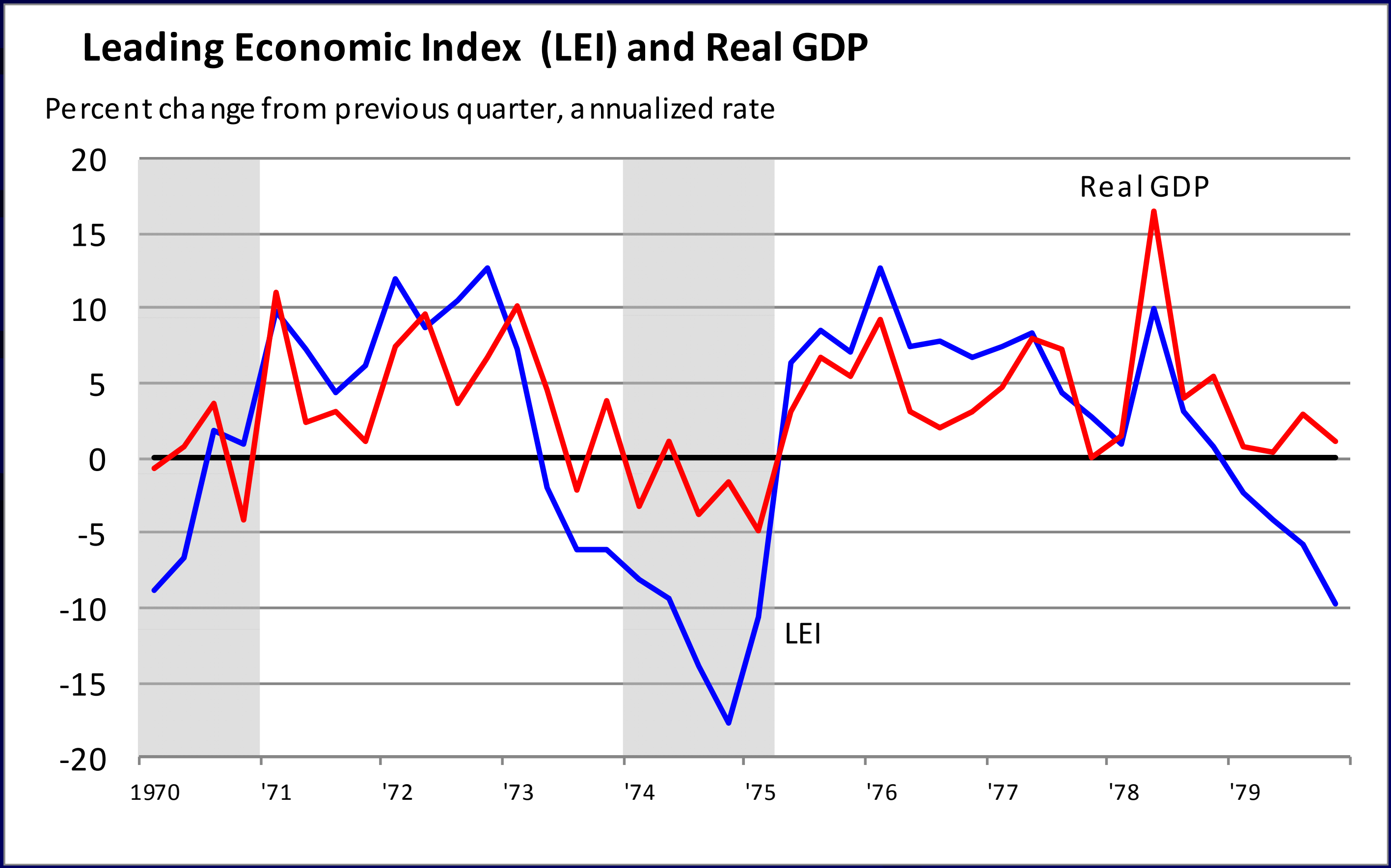
- The LEI and real GDP growth – 1960s



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

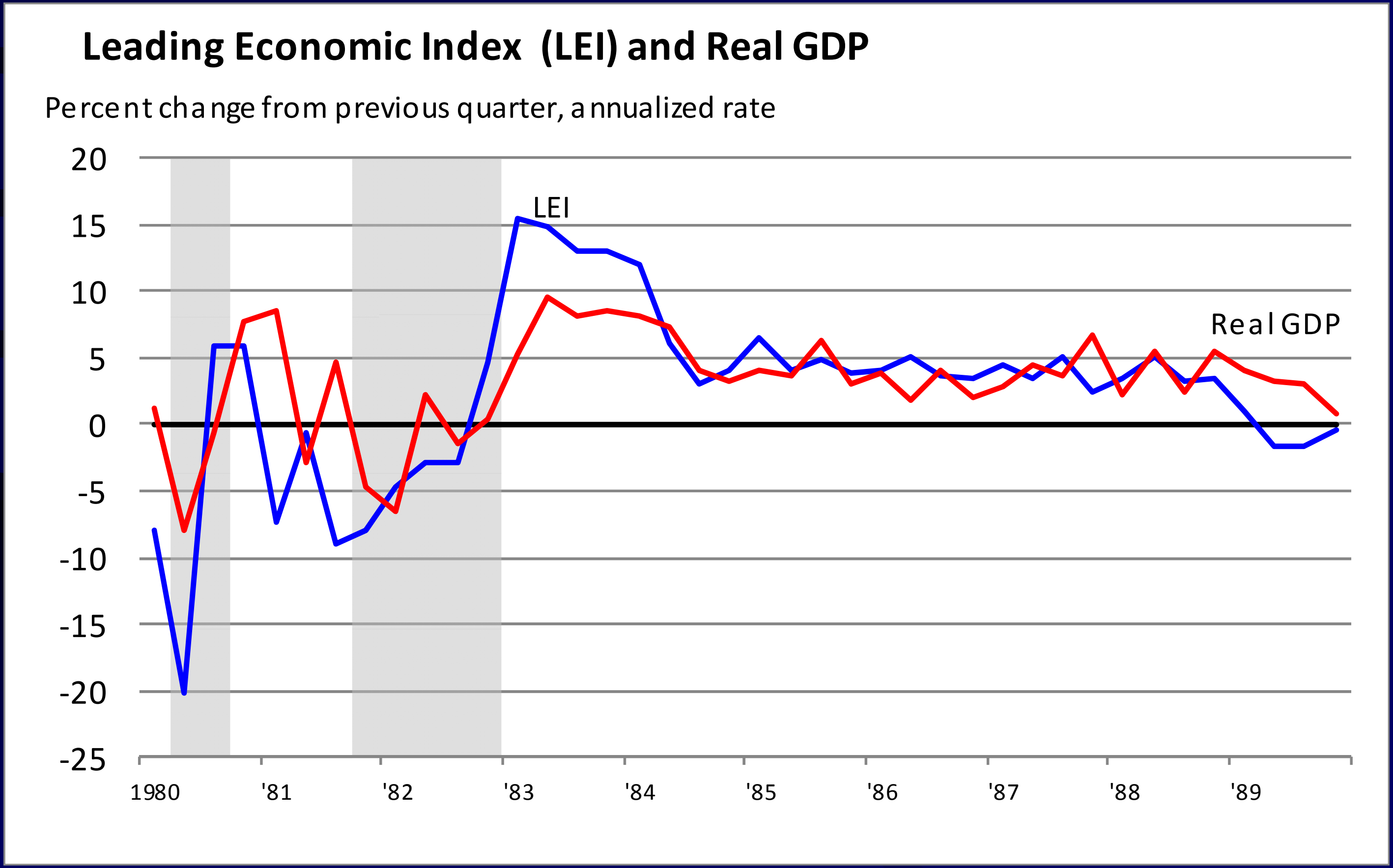
- The LEI and real GDP growth – 1970s



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

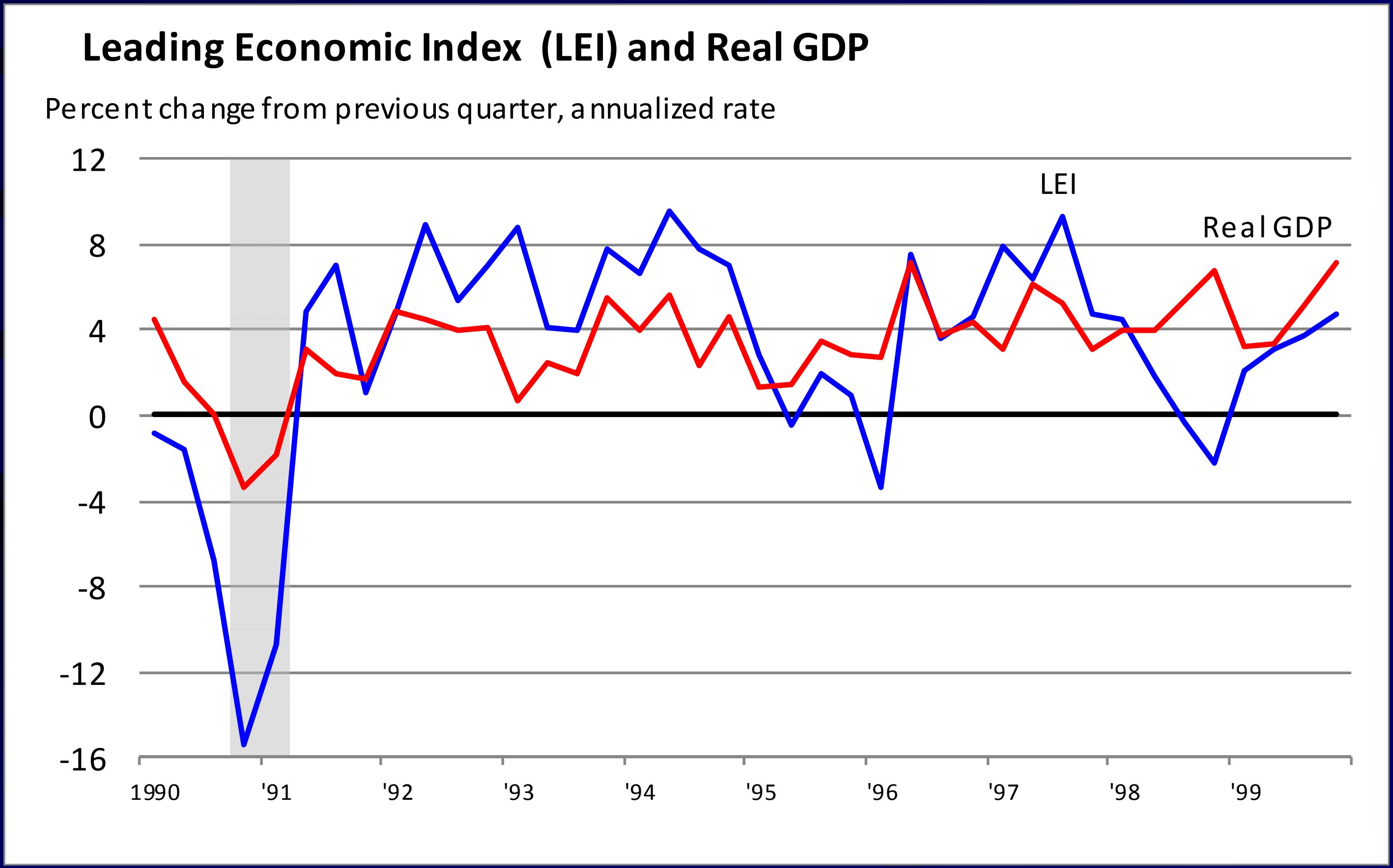
- The LEI and real GDP growth – 1980s



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

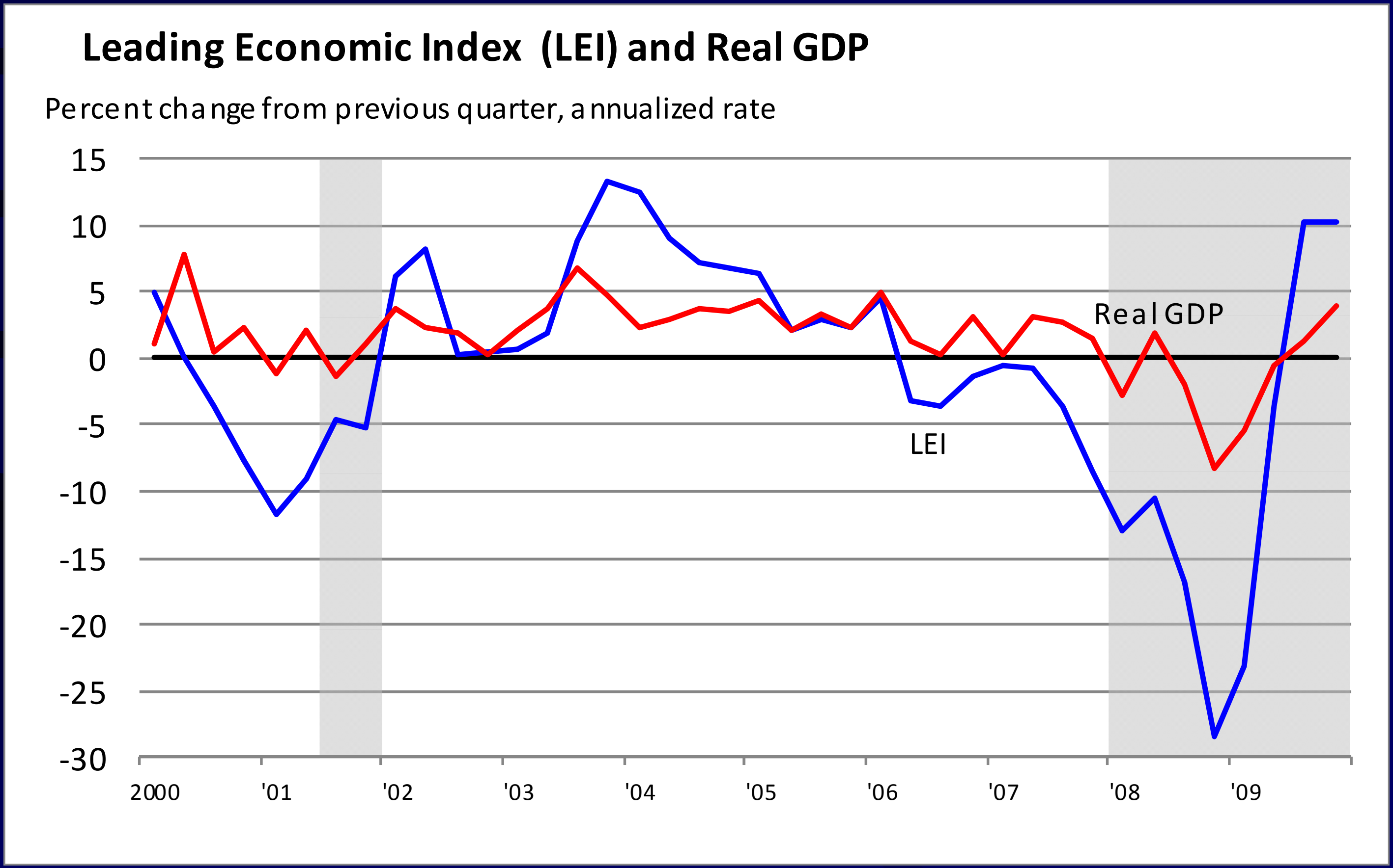
- The LEI and real GDP growth – 1990s



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

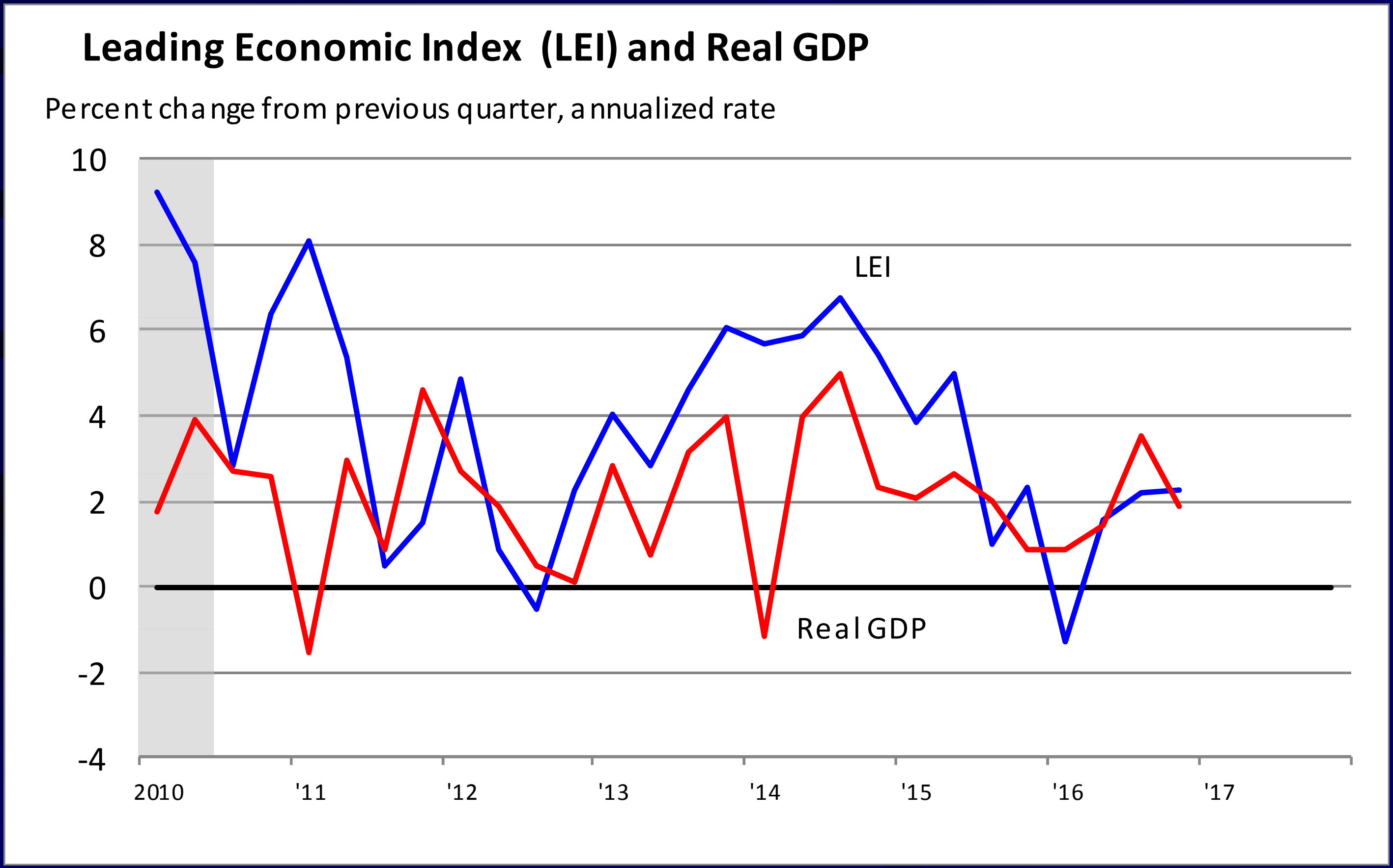
- The LEI and real GDP growth – 2000s



 Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Leading Economic Indicators

- The LEI and real GDP growth – 2010s



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Activity Index

- An activity index is an econometric model (often times based on methodology developed by James Stock of Harvard University and Mark Watson of Princeton University)
    - The idea behind the Stock-Watson approach is that there is some factor common to all of the various inflation indicators, and it is this common factor, or index, that is useful for predicting inflation
- The Chicago Fed National Activity Index (CFNAI) is a weighted average of 85 monthly indicators of national economic activity
- It is constructed to have an average value of zero and a standard deviation of one
    - A positive index reading corresponds to growth above trend and a negative index reading corresponds to growth below trend

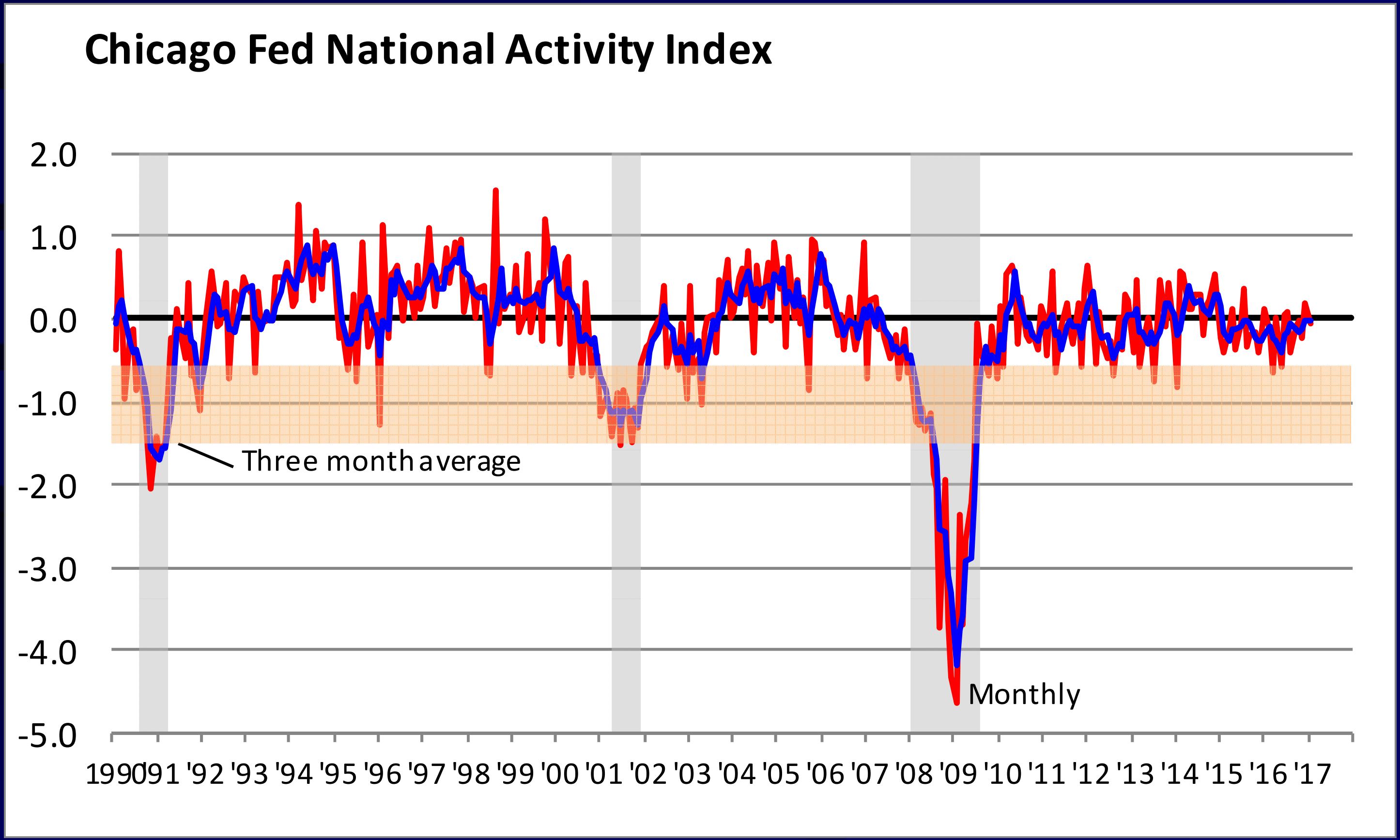
Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Activity Index

- The 85 economic indicators that are included in the CFNAI are drawn from four broad categories of data
  1) Production and income
  2) Employment, unemployment, and hours
  3) Personal consumption and housing
  4) Sales, orders, and inventories.
- Research has found that the CFNAI provides a useful gauge on current and future economic activity and inflation in the United States

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Activity Index



Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151

Summary

- Definition of money
- Federal Reserve System
- Monetary policy
- Federal fiscal policy
- International transactions
- Leading Economic Indicators
- Activity Index

Instructor: William Strauss, william.strauss@chi.frb.org – 312-322-8151