The views expressed are those of the author and do not necessarily reflect the opinions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.
Formation of the Federal Reserve

- By 1913, the U.S. faced several problems:
  - No national currency
  - No intermediary for processing checks
  - No lender of last resort
  - No coordination of money supply
- Who do you turn to when things go wrong?
The Challenge: Governments Inflate the Economy

- Low interest rates reduce debt service costs
- Low interest rates spur the job gains and inflation
- With higher inflation, governments can avoid tax increases or spending cuts needed to manage debt levels
The Federal Reserve is the Central Bank of the U.S. (formed in 1913)

**Functions**

- Conduct monetary policy
- Supervise and regulate banks
- Maintain stability of financial system
- Operate the nation’s payment system
Federal Reserve: A System of Checks and Balances

- Board of Governors (BOG) in Washington DC (Political Appointees and Government Employees)
- 12 Regional Reserve Banks (Non-profit Corporations and Private Employees)

Public Control
- Congressional Oversight
- BOG Oversight of Banks
- Government Remittances
Two Kinds of Economic Policy

- **Monetary Policy**
  - Changes in the level of money and credit in the economy
  - Implemented by the Federal Reserve

- **Fiscal Policy**
  - Changes in government spending and tax programs
  - Implemented by the Executive and Legislative branches
Federal Open Market Committee

- Monetary policy making body
- 7 Governors,
- NY Fed President,
- 4 other Bank Presidents
- Remaining Bank Presidents participate in discussions
Discussion Question

What is the best way to structure the Federal Reserve and make it accountable to the public, but not controlled by politics?
The Fed’s Toolbox: Monetary Policy Tools

- Primary Credit Rate (Discount Rate)
- Open Market Operations (Fed Funds Rate)
- Reserve Requirements
- Balance Sheet
Primary Credit Rate
(aka the Discount Rate)

- Rate of interest the Fed charges on loans to banks and other financial institutions
- Originally, the primary monetary policy tool.
- Today, a posturing signal for regional Reserve Banks
- A lower discount rate signals easier, expansionary, or accommodative policy
- A higher discount rate signals tighter, contractionary or less accommodative policy
Open Market Operations & the Fed Funds Rate

Slow the Economy: Take Money Out of the Economy

The Fed

- Sell Securities
- Raises Fed Funds Rate
- Receives Money

Treasury Market

Economy
Open Market Operations & the Fed Funds Rate

Stimulate the Economy: Place Money in the Economy

The Fed

Buy Securities

Lowers Fed Funds Rate

Gives Money

Treasury Market

Economy

www.kansascityfed.org/omaha
The Balancing Act of Monetary Policy

Foundation based on the Phillips Curve

Sustainable Economic Growth

Price Stability
The Taylor Rule

Fed Funds Rate = Equilibrium Real Interest Rate + Inflation Rate + Deviation of Inflation from Target + Output Gap

\[ i_t = r r^* + p_t + \beta (p_t - p^*) + \gamma (y_t - y_t^*) \]

What Can Economists Debate in the Taylor Rule?

- Equilibrium real interest rate
- Inflation rate measure
- Inflation target
- Potential GDP
- Weights on inflation and output gap

http://www.kansascityfed.org/Publicat/EconRev/PDF/10q2Kahn.pdf
Assumptions Matter

Taylor Rule Outcomes (2011:Q2)

- **Original Taylor Rule**
  - $\beta=0.5, \gamma=0.5, p_t=2$

- **Larger Weight on Output Gap**
  - $\beta=0.5, \gamma=1.0, p_t=2$

- **Inflation Target = 4%**
  - $\beta=0.5, \gamma=0.5, p_t=4$
Viewpoints depend on your perspective.
Discussion Question

What part of the dual mandate (inflation or employment) should drive monetary policy?
Is the Phillips Curve Dead or Alive?

![Graph showing Consumer Price Inflation and Unemployment Rate over time. The graph indicates fluctuations in these measures from 1960 to 2010.](graph.png)
Has the Fed followed the Taylor Rule?

Effective Fed Funds Rate and Taylor Rule

\[
\beta = 0.5, \gamma = 0.5, p_t = 2
\]

Taylor Rule - \( \beta = 0.5, \gamma = 0.5, p_t = 2 \)

Fed Funds Rate
Monetary Policy Transmission Mechanisms

Central Bank

1. Short-term interest rates

2. Bank Reserves

3. Long-term Interest rates

Bank Credit

Excess Reserves

Economic activity

A Larger Balance Sheet Boosts the Monetary Base

Federal Reserve Balance Sheet: Assets

Billion Dollars

- Fed Agency Debt MBS Purchases
- Liquidity to Key Credit Markets
- Lending to Financial Institutions
- Long Term Treasury Purchases
- Traditional Security Holdings

Source: Federal Reserve Bank of Cleveland
Discussion Question

What are the costs and benefits of Quantitative Easing?
Inflation is based on money and velocity.

**Quantity Theory of Money**

\[ \text{Price} = \frac{\text{Money} \times \text{Velocity}}{\text{Quantity}} \]

**Definition of Inflation:**

Too much money \( M \uparrow \) chasing \( V \uparrow \) too few goods \( Q \downarrow \)
The Monetary Base is not Money Supply

Growth in Monetary Aggregates

Index (Jan 2000=100)

M2

Monetary Base

Source: Federal Reserve Board of Governors
When will inflation start?

- Banks start lending
- Consumers start spending
- Businesses start investing

In short, if excess reserves fall before the Fed balance sheet

Source: Federal Reserve Board of Governors
What’s the exit strategy?

**Federal Reserve Balance Sheet: Assets**

- **Fed Agency Debt MBS Purchases**
- **Liquidity to Key Credit Markets**
- **Lending to Financial Institutions**
- **Long Term Treasury Purchases**
- **Traditional Security Holdings**

**Billion Dollars**

Source: Federal Reserve Bank of Cleveland
Where are We Now?
**The Goal:**
Foster Maximum Employment and Stable Prices

**Economic Projections of Federal Open Market Committee Members,**
Central Tendency, June 2011

<table>
<thead>
<tr>
<th></th>
<th>Longer Run</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth</td>
<td>2.5 to 2.8</td>
<td>2.7 to 2.9</td>
<td>3.3 to 3.7</td>
</tr>
<tr>
<td>January 2011 proj.</td>
<td></td>
<td>3.4 to 3.9</td>
<td>3.5 to 4.4</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>5.2 to 5.6</td>
<td>8.6 to 8.9</td>
<td>7.8 to 8.2</td>
</tr>
<tr>
<td>January 2011 proj.</td>
<td></td>
<td>8.8 to 9.0</td>
<td>7.6 to 8.1</td>
</tr>
<tr>
<td>PCE Inflation</td>
<td>1.7 to 2.0</td>
<td>2.3 to 2.5</td>
<td>1.5 to 2.0</td>
</tr>
<tr>
<td>January 2011 proj.</td>
<td></td>
<td>1.3 to 1.7</td>
<td>1.0 to 1.9</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Board of Governors
The Panic

Dow Jones Industrial Average

Index

13000
12500
12000
11500
11000
10500
10000

7/5/11 7/19/11 8/2/11 8/16/11 8/30/11

FOMC statement extending Exceptionally low rates to 2013

Federal Reserve Bank of Kansas City – Omaha Branch
Regional, Public, Community Affairs Division
www.kansascityfed.org/omaha
Will the federal government be able to control U.S. debt accumulation?

Federal Government Debt as a Percent of GDP

Percent of GDP


Actual
Extended Baseline
Alternative Scenarios

CBO Projection
June 2011

Source: Congressional Budget Office
Economic forecasts dropped sharply in August.

### U.S. Real GDP Growth

**Annual percent change**

- **2012**
- **2011**

**Forecast Ranges**

<table>
<thead>
<tr>
<th></th>
<th>2011:Q4</th>
<th>2012:Q4</th>
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</thead>
<tbody>
<tr>
<td>Top 10 Avg.</td>
<td>3.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Bottom 10 Avg.</td>
<td>1.8</td>
<td>2.3</td>
</tr>
</tbody>
</table>

**Date of Forecast**

- Jan-10
- Apr-10
- Jul-10
- Oct-10
- Jan-11
- Apr-11
- Jul-11

Source: Blue Chip Economic Indicators, August 2011
Sluggish government and consumer spending.

Contribution to U.S. Real GDP Growth

Source: Bureau of Economic Analysis
What caused the private sector slump?

- Bad weather disrupts U.S. construction
- Supply chain disruptions in Japan
- High input costs - crude oil
- High food and gas prices for consumers
- Mideast turmoil (Arab Spring)
- European Debt Crisis: Greece
- U.S. debt concerns

**Structural Versus Cyclical Factors**
The housing slump continues.

U.S. Residential Activity

Index (Jan. 2006 = 100)

Source: Census Bureau and National Association of Realtors
The U.S. consumer is deleveraging.

- Deleveraging means ...
  - Savings are up.
  - Housing is sluggish.
  - Spending is limited.
- Why?
  - Jobs prospects look bleak.
  - Income gains are modest.
  - Especially for the less-skilled
- Consumers are down, but not out.
  - Rising auto prices indicate consumers are buying.

Source: Bureau of Economic Analysis
In 2010, profits rebounded sharply.

Businesses responded by upgrading equipment and software.

Firms began to expand labor hours –
  - First by extending hours
  - Then by hiring temp workers

New building activity stabilized.

In 2011, corporate profits softened.
  - Business investment slowed.
  - Hiring weakened.

---

Business Investment

Percent change from year ago

Source: Bureau of Economic Analysis
Global economic growth is mixed.

- A summer slowdown in global economic growth.
- Commodity based economies continue to expand.
- Europe is dealing with their debt issues.
- Emerging markets are dealing with inflation.

Foreign GDP Growth

Annual Percent Change

Source: Blue Chip Economic Indicators
Will a weaker dollar cut our trade deficit?

U.S. Real Net Exports of Goods and Services and Value of the Dollar

Billion dollars (2005 constant dollars)

Source: Bureau of Economic Analysis, Federal Reserve Board of Governors, Blue Chip Economic Indicators
What are the inflation risks?

Personal Consumption Expenditures Price Index

Percent change from previous year

Source: Bureau of Economic Analysis
What is the Goal of QE3 or “Operation Twist”?

U.S. Treasury Yields

S&P Debt Down Grade

August FOMC meeting

Jan-11  Mar-11  May-11  Jul-11  Sep-11

Percent

1 year Treasury
20 year Treasury
10 year Treasury
Discussion Questions

- What factors are driving your household spending decisions?
- What factors are driving your business investment decisions?
- How would your business/household respond to lower long-term interest rates?
- Who are the winners/losers and why?
- What will trigger the spark in velocity?
For More Information on The Nebraska Economy and Rural America

www.kansascityfed.org/omaha
What is your recommendation to the FOMC?

1) Statement on Economic Conditions
2) Statement on Monetary Policy Stance
3) How would your policy stance help?