Overview

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• Monetary Policy
How is the Fed Structured?
Fed’s Mission and Functions

**Mission:** To foster a stable banking system and a healthy, growing economy.

**Core Functions**
- Monetary Policy
- Bank Supervision and Regulation
- Payment Services

**The Fed and You**
- The money you save and borrow
- The prices you pay
- The payments you make
- The bank you use
- The community you live in
The Fed’s Dual Mandate
The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.
What is the relationship between changes in output and employment (and productivity)?

- Real Output (Y) = Number of Employed $\times$ Worker Productivity

- Therefore, any change in the number of workers and/or productivity will change real output:

  \[ \%\Delta \text{ Output} = \%\Delta \text{ Employed} + \%\Delta \text{ Productivity} \]

  \[ \%\Delta \text{ Output} = 1.2\% + 1.0\% \]

- Thus, in this example, the real economy’s long-run growth potential is 2.2%. 
Maximum Employment

What factors determine how fast employment can increase? (the “Maximum Employment” mandate)

• Population – it only increases so fast
• Labor force participation – not everyone is willing, or able to participate
  – Retirees, homemakers, infirm, unskilled, etc.
• Economists generally think that long-run labor force growth changes very slowly and cannot be influenced by monetary policy.
• Thus, setting an explicit “Maximum Employment” goal is not feasible, nor desirable
Productivity

How much “stuff” can a worker produce?

• Worker productivity is output per worker.
• Factors that influence worker productivity include:
  • Technological innovations (e.g. computing, communications)
  • Industrial organization (e.g. structure of firms and markets)
  • Level of education of the workforce
  • Regulations

• Economists generally think that long-run (average) productivity changes very slowly and cannot be influenced by monetary policy
Decomposition of Real GDP

10-year annual growth rate

GDP
Productivity
Household Employment

Note: Productivity is calculated as real GDP per employee, from the Household Survey.

Source: Bureau of Economic Analysis via Haver Analytics
Monetary Policy Goals

• Price Stability

Starting in January 2012, the Fed set an explicit inflation goal of **two percent growth** over the long run – this goal has been reinstated every January.

• Maximum Employment

No explicit goal set:

“The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable.”

Factors include population growth, labor force participation, and productivity.
The “Real Economy”
Information received since the Federal Open Market Committee met in September indicates that the labor market has continued to strengthen and growth of economic activity has picked up from the modest pace seen in the first half of this year. Although the unemployment rate is little changed in recent months, job gains have been solid. Household spending has been rising moderately but business fixed investment has remained soft. Inflation has increased somewhat since earlier this year but is still below the Committee's 2 percent longer-run objective, partly reflecting earlier declines in energy prices and in prices of non-energy imports. Market-based measures of inflation compensation have moved up but remain low; most survey-based measures of longer-term inflation expectations are little changed, on balance, in recent months.
Real Gross Domestic Product

% Change, SAAR

Note: Projection is the range from the September 2016 Summary of Economic Projections. Projections of change in real gross domestic product (GDP) are from the fourth quarter of the previous year to the fourth quarter of the year indicated.

Source: Bureau of Economic Analysis via Haver Analytics & Federal Reserve Board
Disposable Personal Income & Expenditures

Source: Bureau of Economic Analysis via Haver Analytics

Real Personal Consumption Expenditures
Real Personal Income

September 2016
RPCE: 2.4%
RPI: 2.0%

Source: Bureau of Economic Analysis via Haver Analytics
Private Single-Family Housing Starts & Permits

September 2016
Permits: 0.739 million
Starts: 0.783 million

Source: Census Bureau via Haver Analytics
Private Multi-Family Housing Starts & Permits

September 2016
Permits: .483 million
Starts: .380 million

90's Average Permits: 0.313
90's Average Starts: 0.298

Source: Census Bureau via Haver Analytics
Real Investment in Nonresidential Structures

% Change, SAAR

3Q: 2016
5.4%

Source: Bureau of Economic Analysis via Haver Analytics
Real Investment in Equipment

% Change, SAAR

Source: Bureau of Economic Analysis via Haver Analytics
Industrial Production

Source: Board of Governors via Haver Analytics

Index, 2012=100

Total
Manufacturing
Mining

Source: Board of Governors via Haver Analytics
Core Capital Goods

Notes: Core capital goods are nondefense capital goods excluding aircraft.

Source: Census Bureau via Haver Analytics
Nonfarm Payroll Employment

Average Monthly Change, Thous.

Monthly Change
August: 176
September: 191
October: 161

Source: Bureau of Labor Statistics via Haver Analytics
Unemployment Rate

Notes: FOMC projection is the range for the Q4 levels, from the September 2016 meeting.

Source: Bureau of Labor Statistics & Board of Governors via Haver Analytics

October 2016
US: 4.9%
Measures of Labor Utilization

Source: Bureau of Labor Statistics via Haver Analytics

October 2016
- U3: 4.9
- U4: 5.2
- U5: 5.9
- U6: 9.5

Percent

0 2 4 6 8 10 12 14 16 18


Source: Bureau of Labor Statistics via Haver Analytics
Labor Force Participation

Source: Bureau of Labor Statistics via Haver Analytics
Average Hourly Earnings

Source: Bureau of Labor Statistics via Haver Analytics

October: 2.8%
Labor Productivity, Nonfarm Business

Source: Bureau of Labor Statistics via Haver Analytics

September 2016: 0.0%

Post-War Average
Inflation
Notes: FOMC projection is the range for Q4/Q4 percent changes, from the September 2016 meeting.

Source: Bureau of Economic Analysis & Board of Governors via Haver Analytics
Core Personal Consumption Expenditure Price Index

Notes: FOMC projection is the range for Q4/Q4 percent changes, from the September 2016 meeting. Core PCE Price Index excludes expenditures on gasoline and food services.

Source: Bureau of Economic Analysis & Board of Governors via Haver Analytics
Consumer Price Indexes

Source: Bureau of Labor Statistics via Haver Analytics

September 2016
All Items: 1.5
Core CPI: 2.2
Crude Oil Prices

Notes: Spot and Futures Prices are for Brent Crude Oil.

Monetary Policy
Federal Reserve System Assets

- November 6, 2013:
  - Treasury Securities: 2,121
  - Agency Securities: 1,394
  - Agency Debt: 59
  - Miscellaneous: 315

- November 2, 2016:
  - Treasury Securities: 2,464
  - Agency Securities: 1,736
  - Agency Debt: 18
  - Miscellaneous: 280

Source: Board of Governors via Haver Analytics
Federal Reserve System Assets

Source: Board of Governors via Haver Analytics

Billsions $
The Committee currently expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will strengthen somewhat further. Inflation is expected to rise to 2 percent over the medium term as the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

Against this backdrop, the Committee decided to maintain the target range for the federal funds rate at 1/4 to 1/2 percent. The stance of monetary policy remains accommodative, thereby supporting further improvement in labor market conditions and a return to 2 percent inflation.
Note: Each dot in the chart represents the value of an FOMC participant’s judgment of the midpoint of the appropriate target range (or the appropriate target level) for the federal funds rate at the end of the calendar year. Projections made for the September 2016 meeting.

Source: Board of Governors
The views expressed here are those of the author, and do not necessarily represent those of the Federal Reserve Bank of Richmond or the Federal Reserve System.