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# The Federal Reserve Balance Sheet and Monetary Policy

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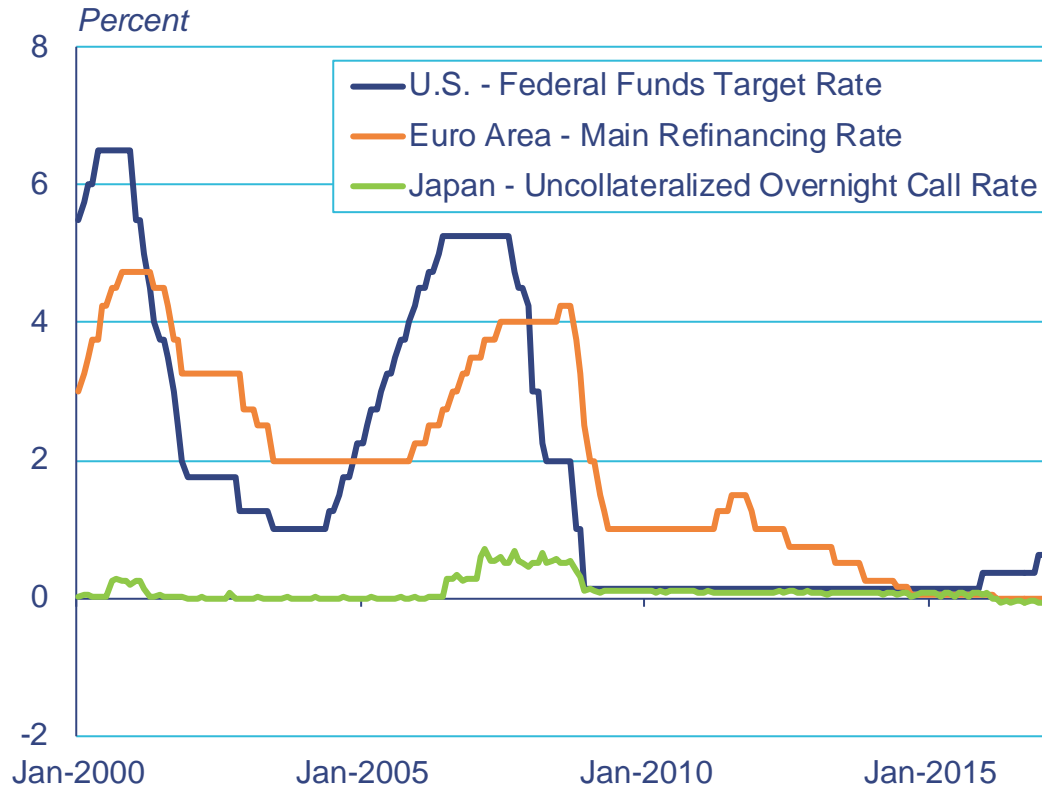
April 19, 2017

26th Annual Hyman P. Minsky Conference  
Levy Economics Institute of Bard College  
Annandale-on-Hudson, New York

[bostonfed.org](http://bostonfed.org)

# Figure 1: Overnight/Policy Rates for the Euro Area, Japan, and the U.S.

January 2000 - March 2017



Note: Rates are as of end of period. U.S. target rate is the midpoint of the target range, beginning in December 2008.

Source: Bank of Japan, European Central Bank, Federal Reserve Board, Haver Analytics



Figure 2: Central Bank Assets  
January 2000 - March 2017

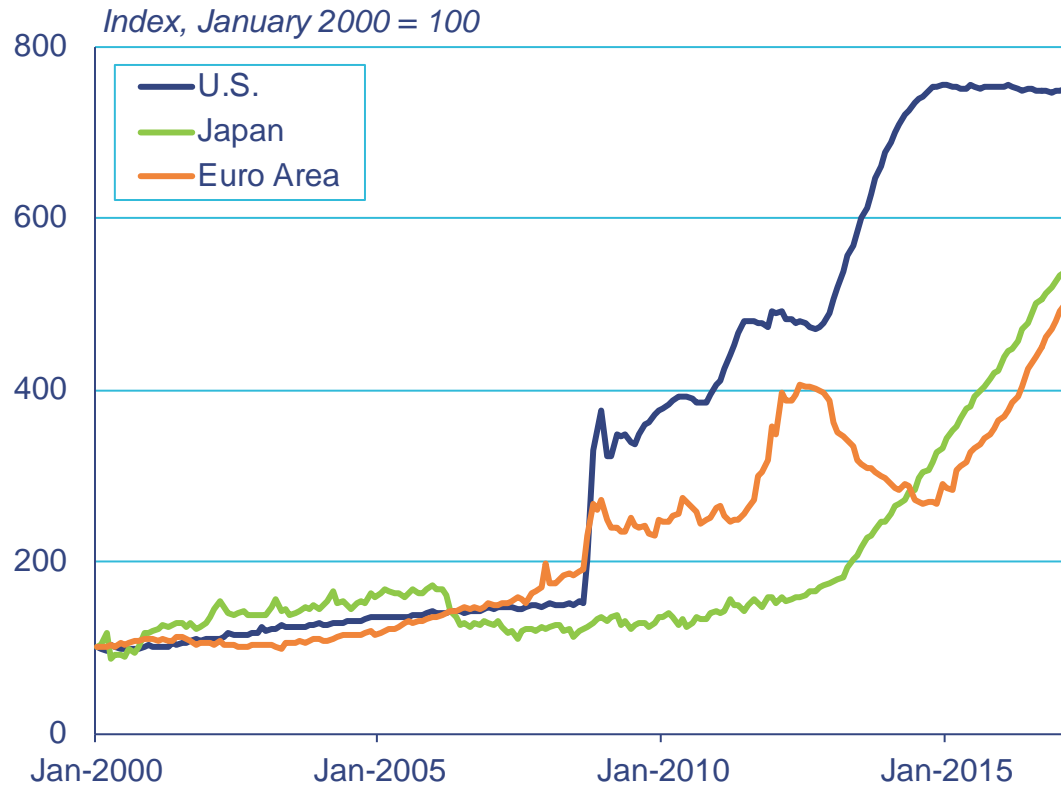


Figure 3: Central Bank Assets as a Share of GDP  
2000:Q1 - 2016:Q4

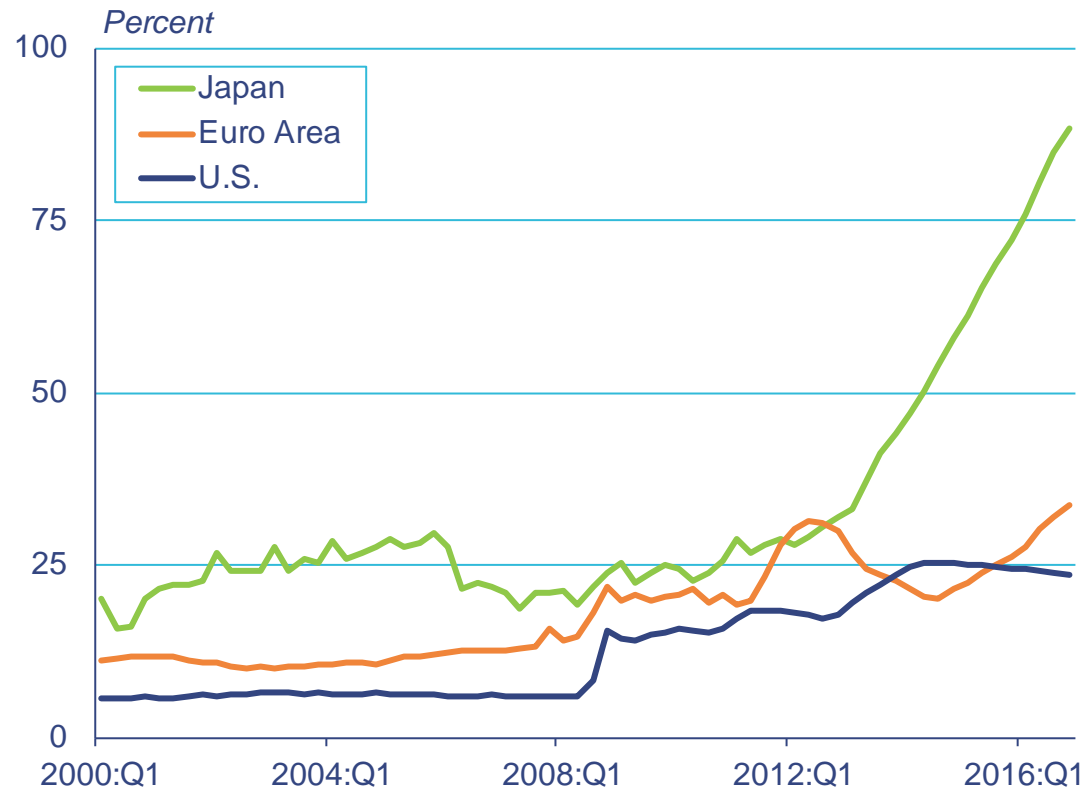
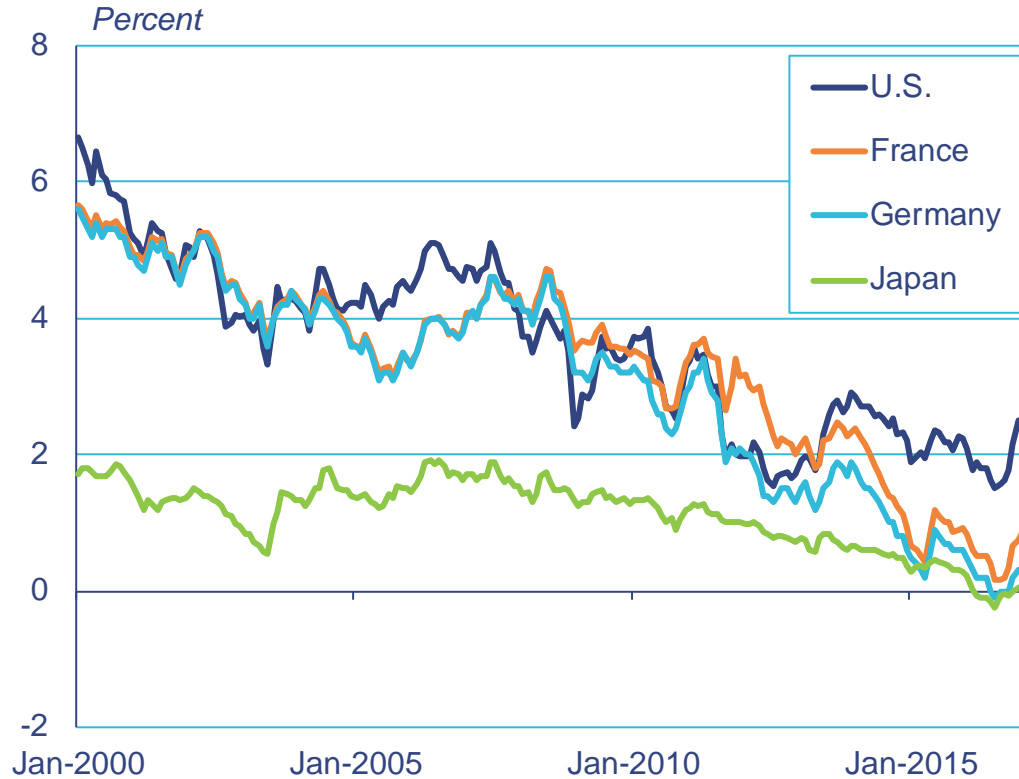
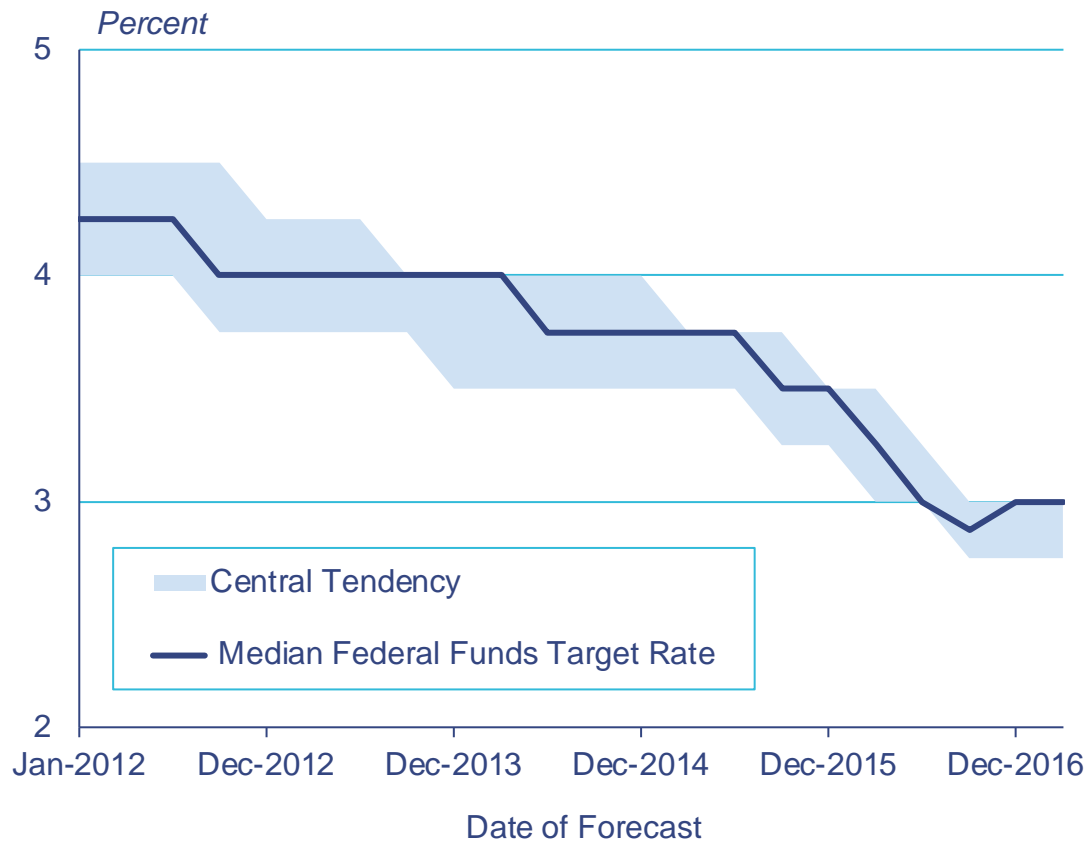


Figure 4: Ten-Year Government Bond Yields  
January 2000 - March 2017





## Figure 5: Forecasts for the Longer-Run Federal Funds Rate from the Summary of Economic Projections January 2012 - March 2017

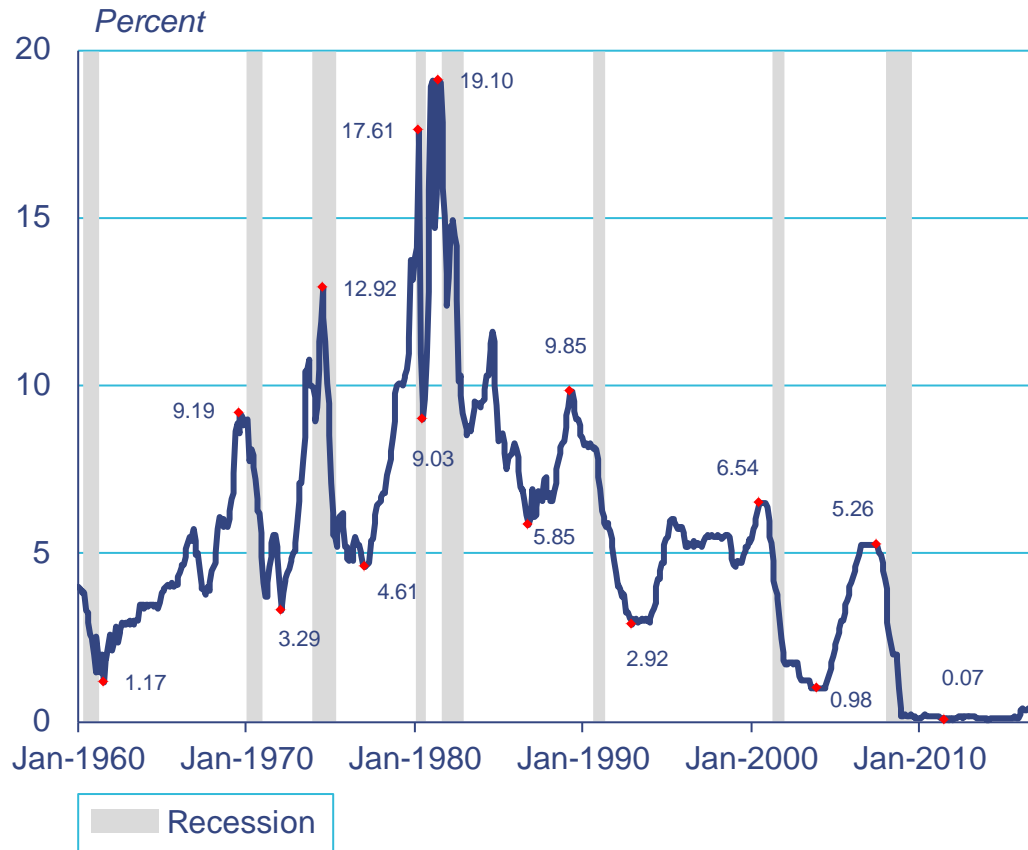


Note: The central tendency excludes the three highest and three lowest observations.

Source: FOMC, Summary of Economic Projections (SEP)



Figure 6: Federal Funds Effective Rate,  
Noting Peaks and Troughs  
January 1960 - March 2017





## Figure 7: Federal Funds Effective Rate: Declines from Peak to Trough

January 1960 - March 2017

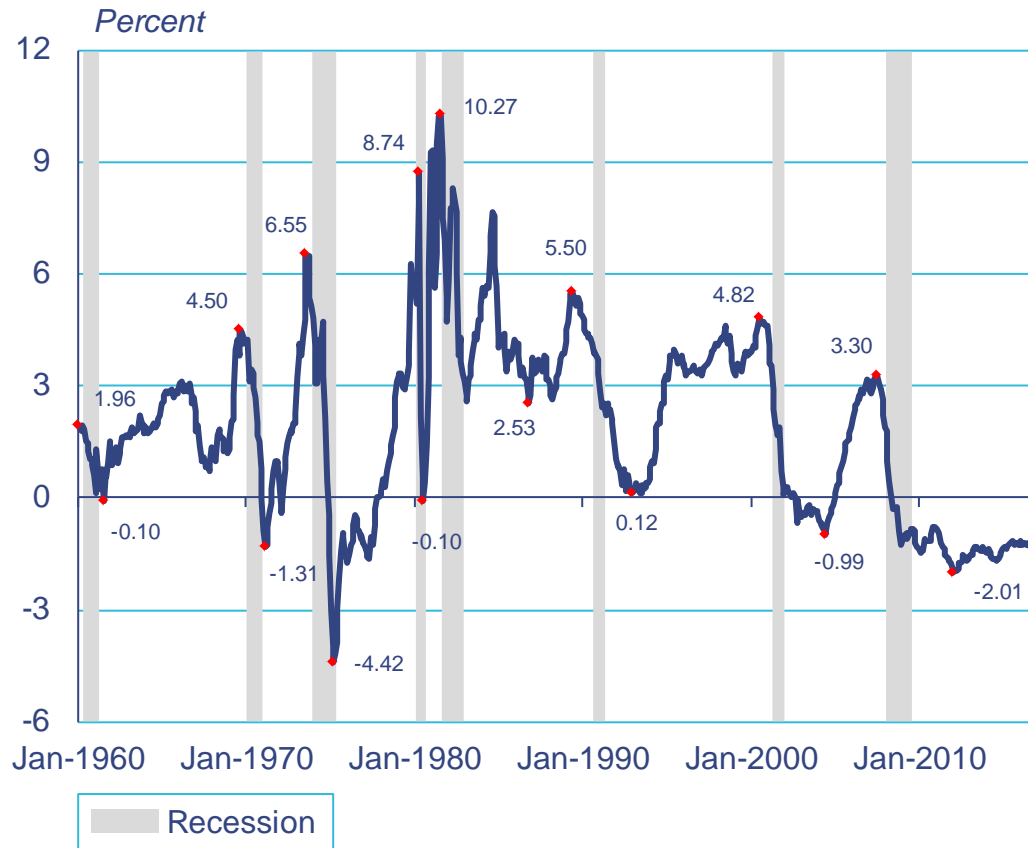
NBER Peak	Decline (Percentage Points)	Dates of Decline	Federal Funds Rate (%)	
			High	Low
Apr 1960	2.83	Nov 1959 - Jul 1961	4.00	1.17
Dec 1969	5.90	Aug 1969 - Feb 1972	9.19	3.29
Nov 1973	8.31	Jul 1974 - Jan 1977	12.92	4.61
Jan 1980	8.58	Apr 1980 - Jul 1980	17.61	9.03
Jul 1981	13.25	Jun 1981 - Oct 1986	19.10	5.85
Jul 1990	6.93	Mar 1989 - Dec 1992	9.85	2.92
Mar 2001	5.56	Jul 2000 - Dec 2003	6.54	0.98
Dec 2007	5.19	Jul 2007 - Jul 2011	5.26	0.07





## Figure 8: Real Federal Funds Effective Rate, Noting Peaks and Troughs

January 1960 - March 2017



Note: The real federal funds effective rate is calculated by subtracting the core PCE inflation rate from the nominal federal funds effective rate. A core PCE inflation rate of 1.8% is assumed for March.

Source: Federal Reserve Board, BEA, NBER, Haver Analytics

## Figure 9: Real Federal Funds Effective Rate: Declines from Peak to Trough

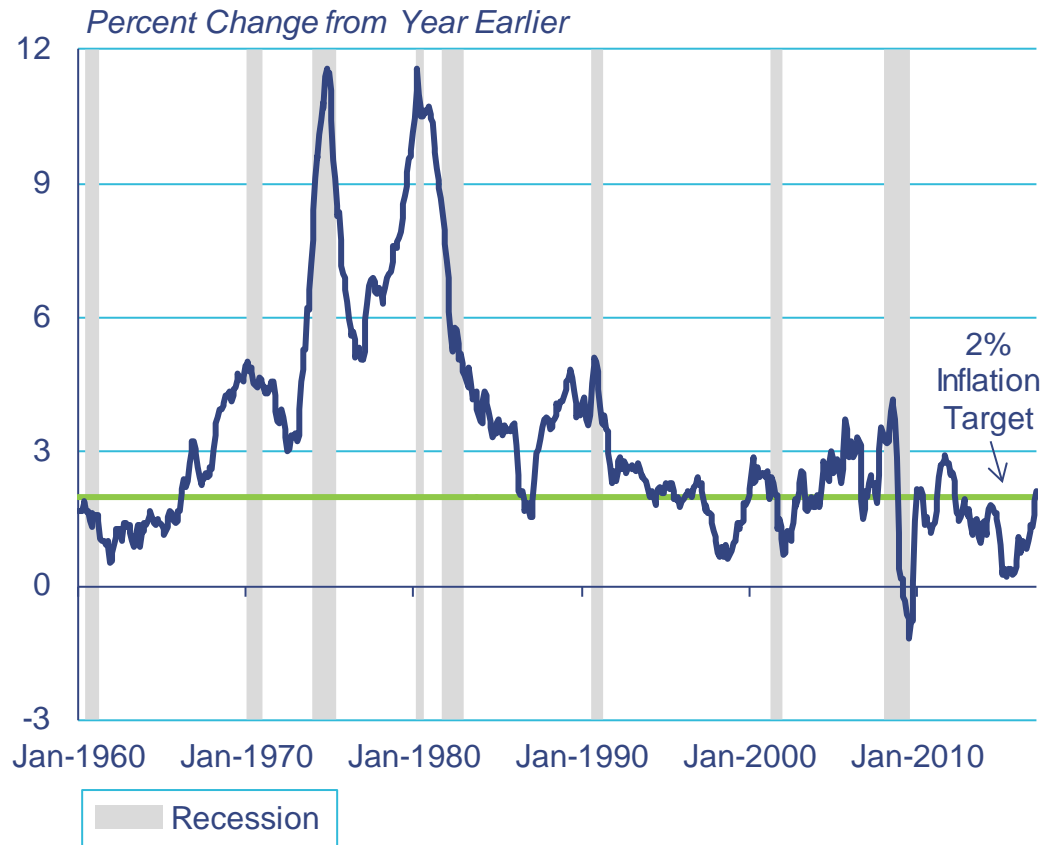
January 1960 - March 2017

NBER Peak	Decline (Percentage Points)	Dates of Decline	Federal Funds Rate (%)	
			High	Low
Apr 1960	2.06	Jan 1960 - Jul 1961	1.96	-0.10
Dec 1969	5.81	Aug 1969 - Feb 1971	4.50	-1.31
Nov 1973	10.97	Jul 1973 - Mar 1975	6.55	-4.42
Jan 1980	8.84	Apr 1980 - Jul 1980	8.74	-0.10
Jul 1981	7.74	Jul 1981 - Oct 1986	10.27	2.53
Jul 1990	5.38	May 1989 - Dec 1992	5.50	0.12
Mar 2001	5.81	Jun 2000 - Jun 2004	4.82	-0.99
Dec 2007	5.31	Jun 2007 - Jan 2012	3.30	-2.01

*Note: The real federal funds effective rate is calculated by subtracting the core PCE inflation rate from the nominal federal funds effective rate. A core PCE inflation rate of 1.8% is assumed for March.*

*Source: Federal Reserve Board, BEA, NBER, Haver Analytics*

Figure 10: Inflation Rate: Change in Personal Consumption Expenditures (PCE) Price Index  
January 1960 - February 2017



# Figure 11: Productivity Growth: Change in Real Output Per Hour, Nonfarm Business Sector, All Persons, 40-Quarter Moving Average

1960:Q1 - 2016:Q4

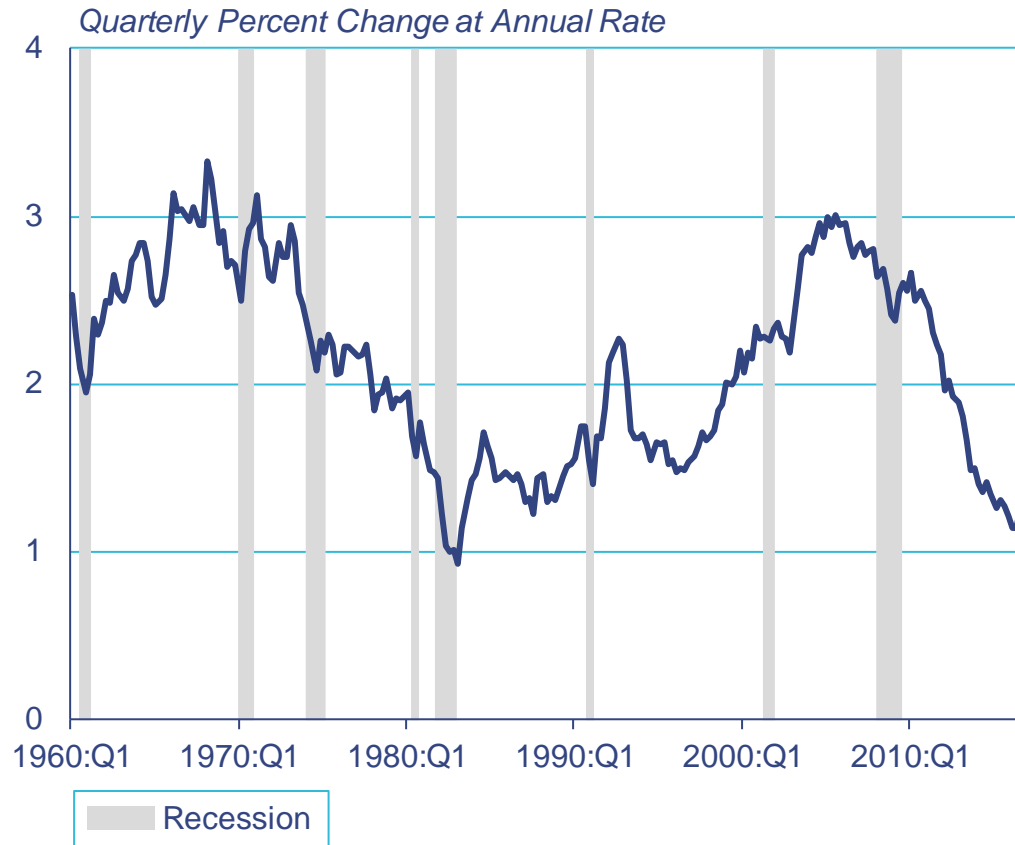




Figure 12: Civilian Labor Force Growth  
1960:Q1 - 2017:Q1

