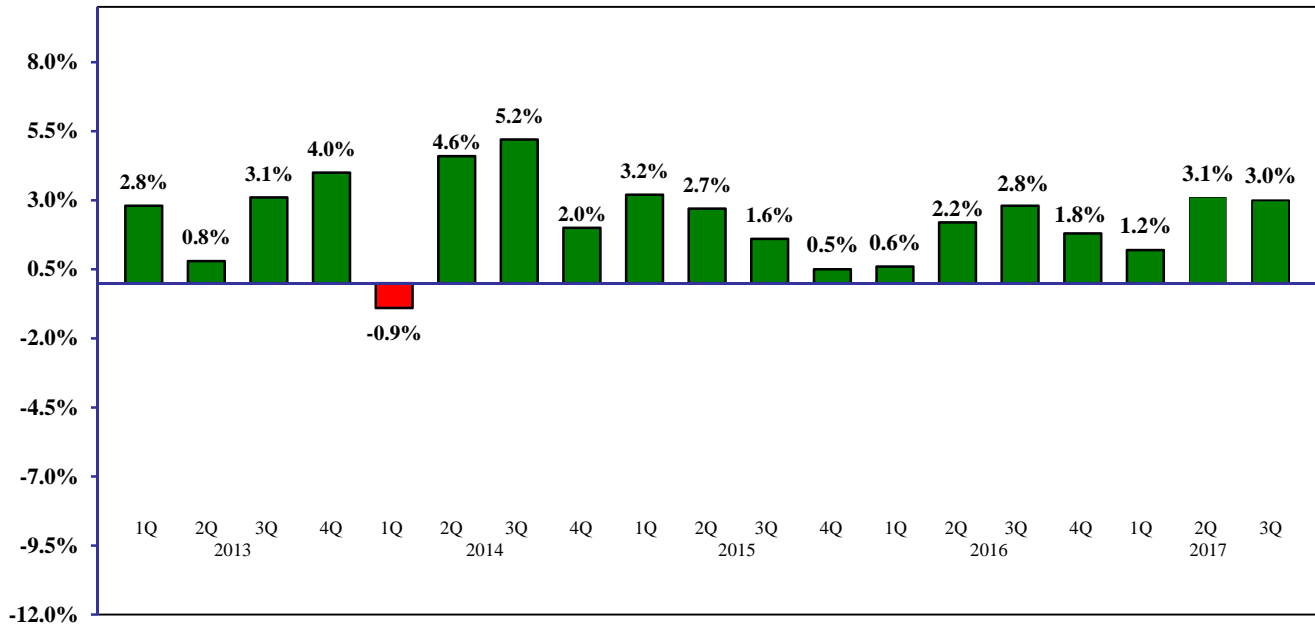


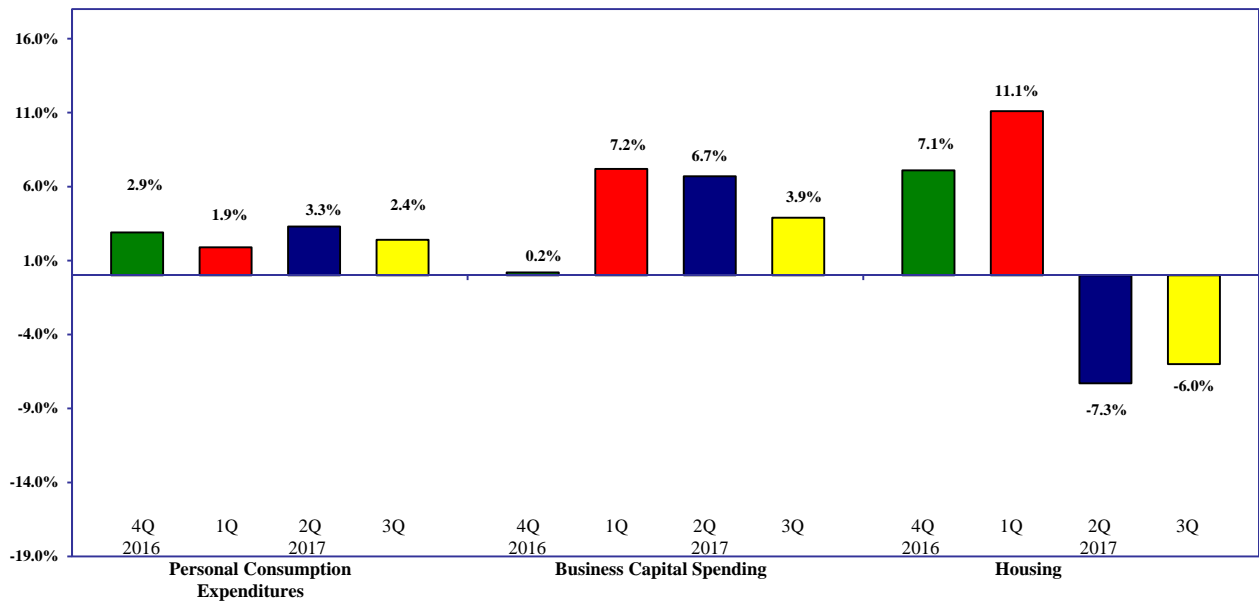
Real Gross Domestic Product*



*annualized rate

Source: Department of Commerce

Real Economic Activity*



*annualized rate

Source: Department of Commerce

Joseph T. Keating
 Chief Investment Officer
 November 14, 2017

Real GDP Growth Rates*

1Q 1947 to
3Q 2017
3.2%

1Q 1947 to
4Q1999
3.5 %

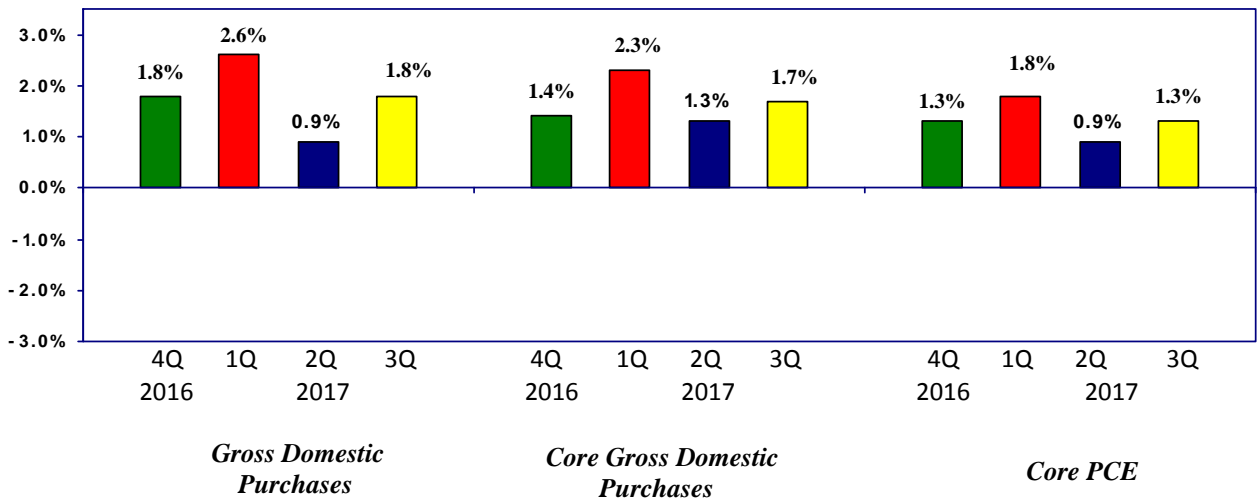
1Q 2000 to
3Q 2017
2.0%

2Q 2009 to
3Q 2017
2.2%

**annualized rate*

Source: Department of Commerce

Inflation Measures*



**annualized rate*

Source: Department of Commerce

Federal Budget Deficits

FY 2009	\$1.4 trillion
FY 2010	\$1.3 trillion
FY 2011	\$1.3 trillion
FY 2012	\$1.1 trillion
FY 2013	\$679 billion
FY 2014	\$485 billion
FY 2015	\$438 billion
FY 2016	\$585 billion
FY 2017	\$666 billion
FY 2018	\$454 billion*
FY 2019	\$549 billion*

*CBO estimate

National Debt Facts

\$20 trillion

\$250 billion interest cost

\$50 billion increase in interest cost for 25bp rise in yields

25% of Nominal GDP 1981

31% of Nominal GDP 2001

77% of Nominal GDP today

Yield on Ten-Year Treasury Note 12/31/12 - 10/31/17



Source: Bloomberg

Treasury Market Talks To Federal Reserve

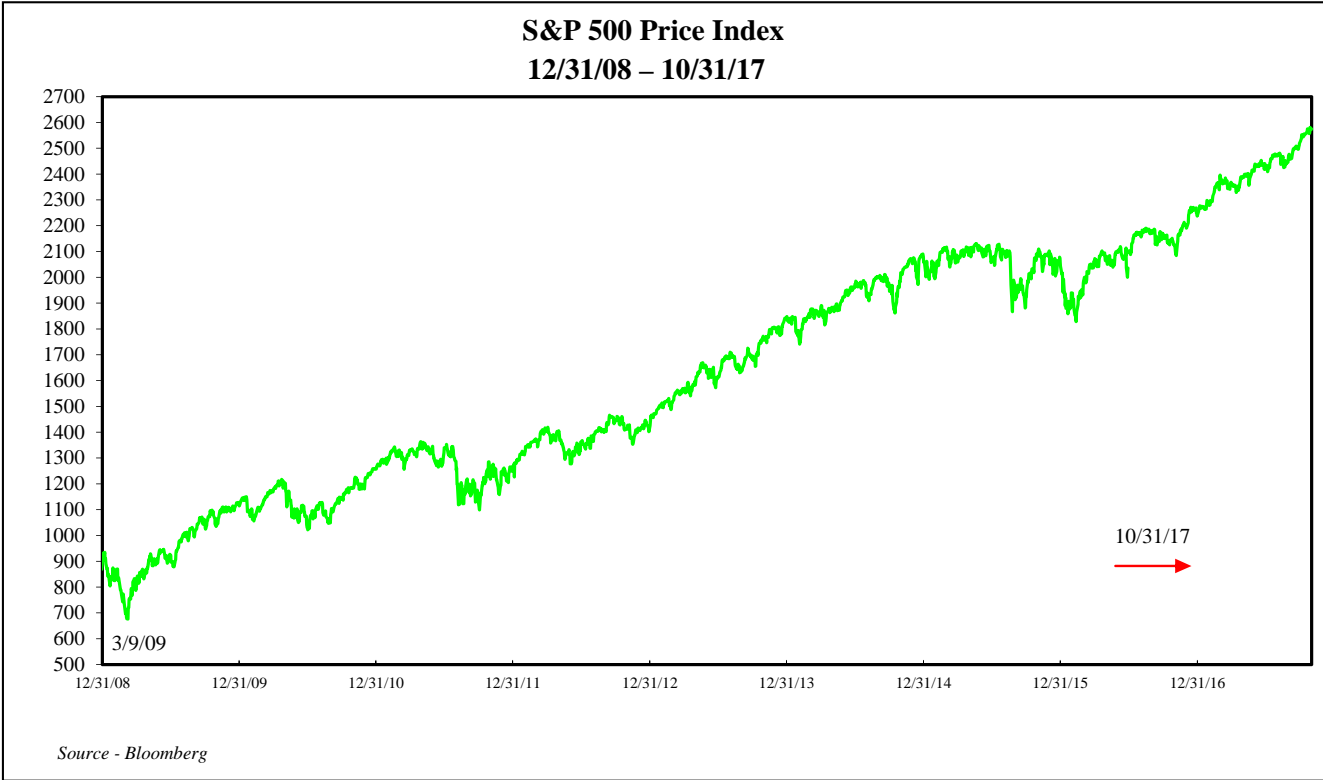
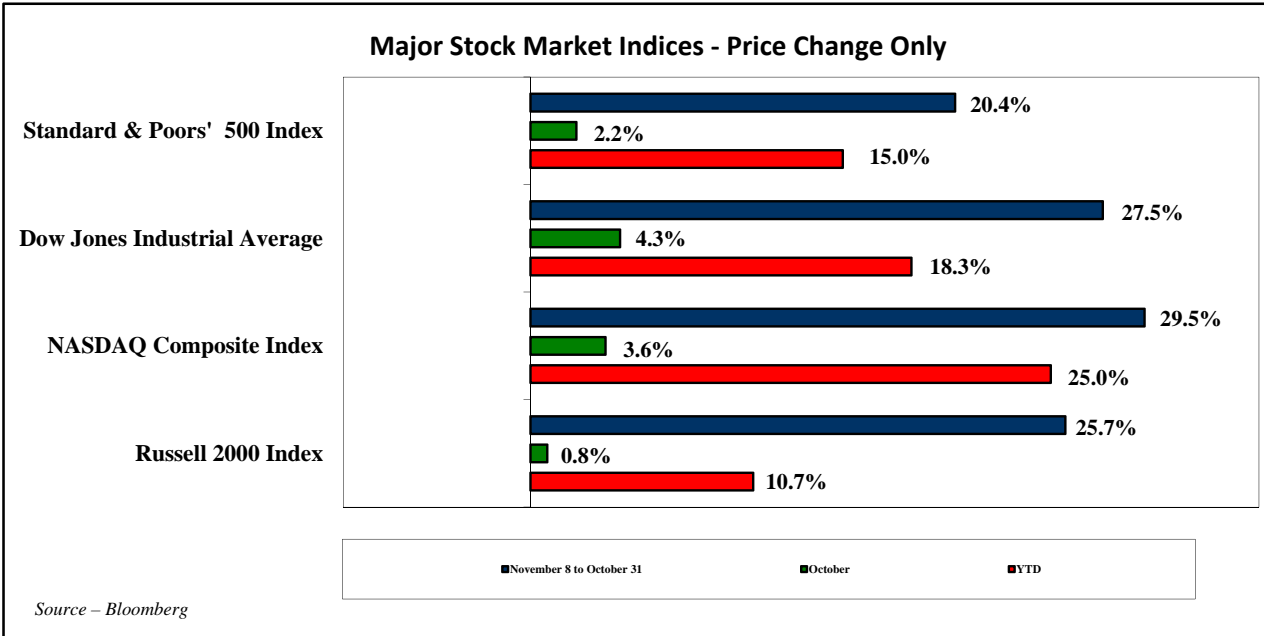
	Ten-Year Treasury Yield	(minus)	Two-Year Treasury Yield	(equals)	Yield Spread
12/31/14	2.17%		0.67%		150bp
6/26/15	2.48%		0.71%		177bp
12/31/15	2.27%		1.05%		122bp
7/8/16	1.36%		0.61%		75bp
11/8/16	1.86%		0.85%		101bp
12/30/16	2.44%		1.19%		125bp
6/14/17	2.13%		1.35%		78bp
10/31/17	2.38%		1.60%		78bp

Source: Bloomberg

Market Inflation Expectations

	Nominal Ten-Year Treasury Yield	(minus)	Inflation-Index Ten-Year Treasury Yield (TIP)	(equals)	Implied Inflation Expectation
12/31/2014	2.17%		0.47%		1.70%
12/31/2015	2.27%		0.71%		1.56%
7/8/2016	1.36%		- 0.09%		1.45%
11/8/2016	1.86%		0.12%		1.74%
12/30/2016	2.44%		0.48%		1.96%
8/31/2017	2.12%		0.35%		1.77%
9/29/2017	2.33%		0.48%		1.85%
10/31/2017	2.38%		0.50%		1.88%

Source: Bloomberg



**S&P 500 Operating Earnings
Year-Over-Year**

		<u>Operating Earnings</u>	<u>Operating Earnings Ex-Energy</u>
2014	1Q	6.0%	6.5%
	2Q	11.3%	12.4%
	3Q	10.0%	8.4%
	4Q	-5.3%	11.0%
2015	1Q	-5.5%	7.7%
	2Q	-10.9%	0.8%
	3Q	-14.1%	2.3%
	4Q	-13.8%	1.8%
2016	1Q	-7.1%	-5.9%
	2Q	-1.7%	-1.7%
	3Q	12.8%	4.2%
	4Q	21.0%	7.1%
2017	1Q	20.2%	9.8%
	2Q	18.7%	11.4%
	3Qe	10.7%	6.6%
	4Qe	23.3%	18.8%

**S&P 500 Price Index to
Trailing Operating Earnings**

12/31/11	13.3x
12/31/12	14.6x
12/31/13	18.1x
12/31/14	18.0x
12/31/15	19.6x
11/8/16	21.1x
12/31/16	22.1x
10/31/17	21.6x