The Economist Who Loved Me

On Behalf of

The Mid-Atlantic CIO Forum

By: Anirban Basu
Sage Policy Group, Inc.

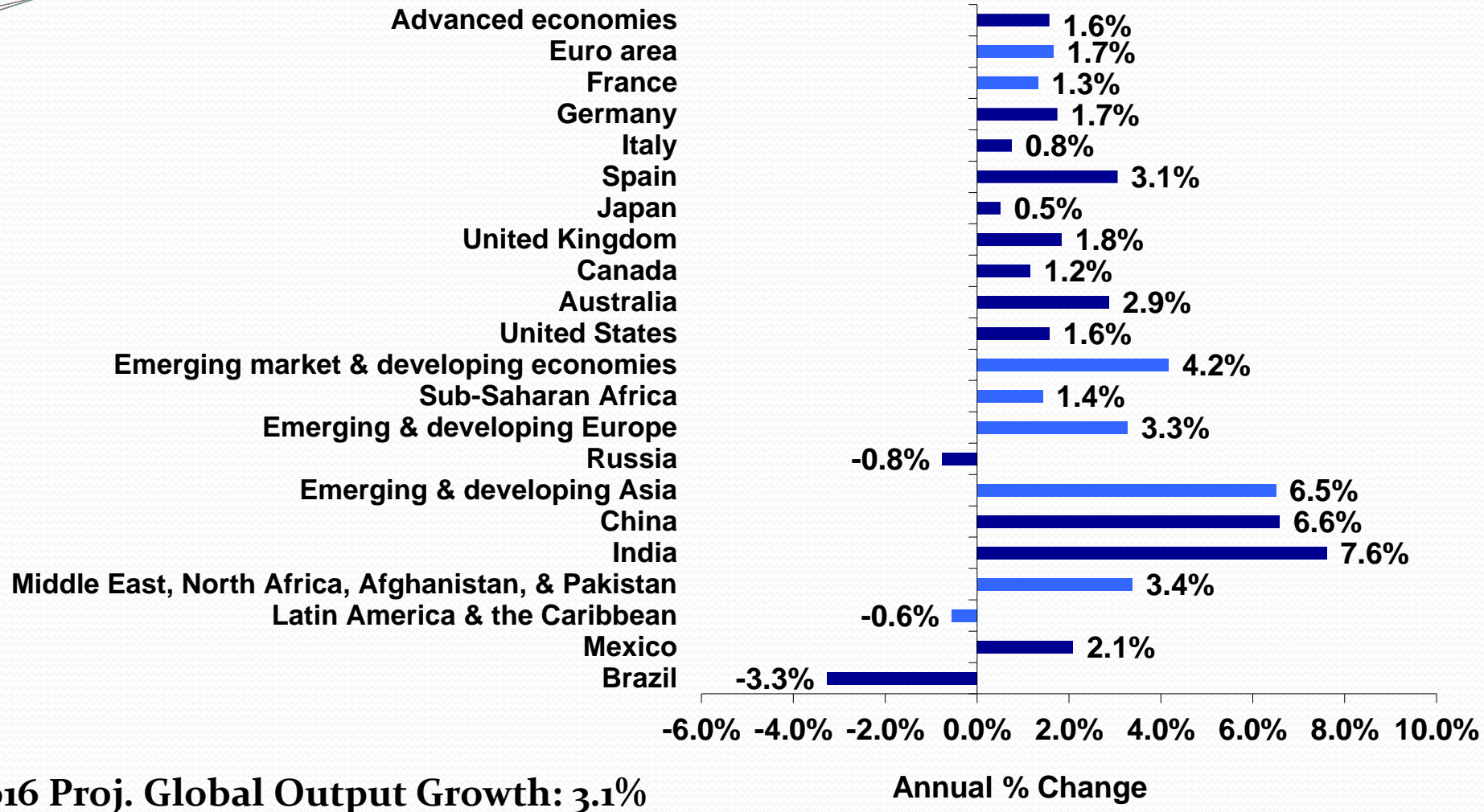*December 15th, 2016*

The World is Not (Growing) Enough

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Estimated Growth in Output by Select Global Areas
2016 Projected

Region	Annual % Change
Advanced economies	1.6%
Euro area	1.7%
France	1.3%
Germany	1.7%
Italy	0.8%
Spain	3.1%
Japan	0.5%
United Kingdom	1.8%
Canada	1.2%
Australia	2.9%
United States	1.6%
Emerging market & developing economies	4.2%
Sub-Saharan Africa	1.4%
Emerging & developing Europe	3.3%
Russia	-0.8%
Emerging & developing Asia	6.5%
China	6.6%
India	7.6%
Middle East, North Africa, Afghanistan, & Pakistan	3.4%
Latin America & the Caribbean	-0.6%
Mexico	2.1%
Brazil	-3.3%

Annual % Change

(Axis: -6.0%, -4.0%, -2.0%, 0.0%, 2.0%, 4.0%, 6.0%, 8.0%, 10.0%)

2016 Proj. Global Output Growth: 3.1%

Notes: 1. For World Output, the quarterly estimates and projections account for approximately 90 percent of annual world output at purchasing-power-parity weights. For Emerging Market and Developing Economies, the quarterly estimates and projections account for approximately 80 percent of annual emerging market and developing economies' output at purchasing-power-parity weights.. 2. For India, data and forecasts are presented on a fiscal year basis and GDP from 2011 onward is based on GDP at market prices with FY2011/12 as a base year.

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NYMEX Crude Oil Future Prices in U.S. Dollars
November 2001 through November 2016
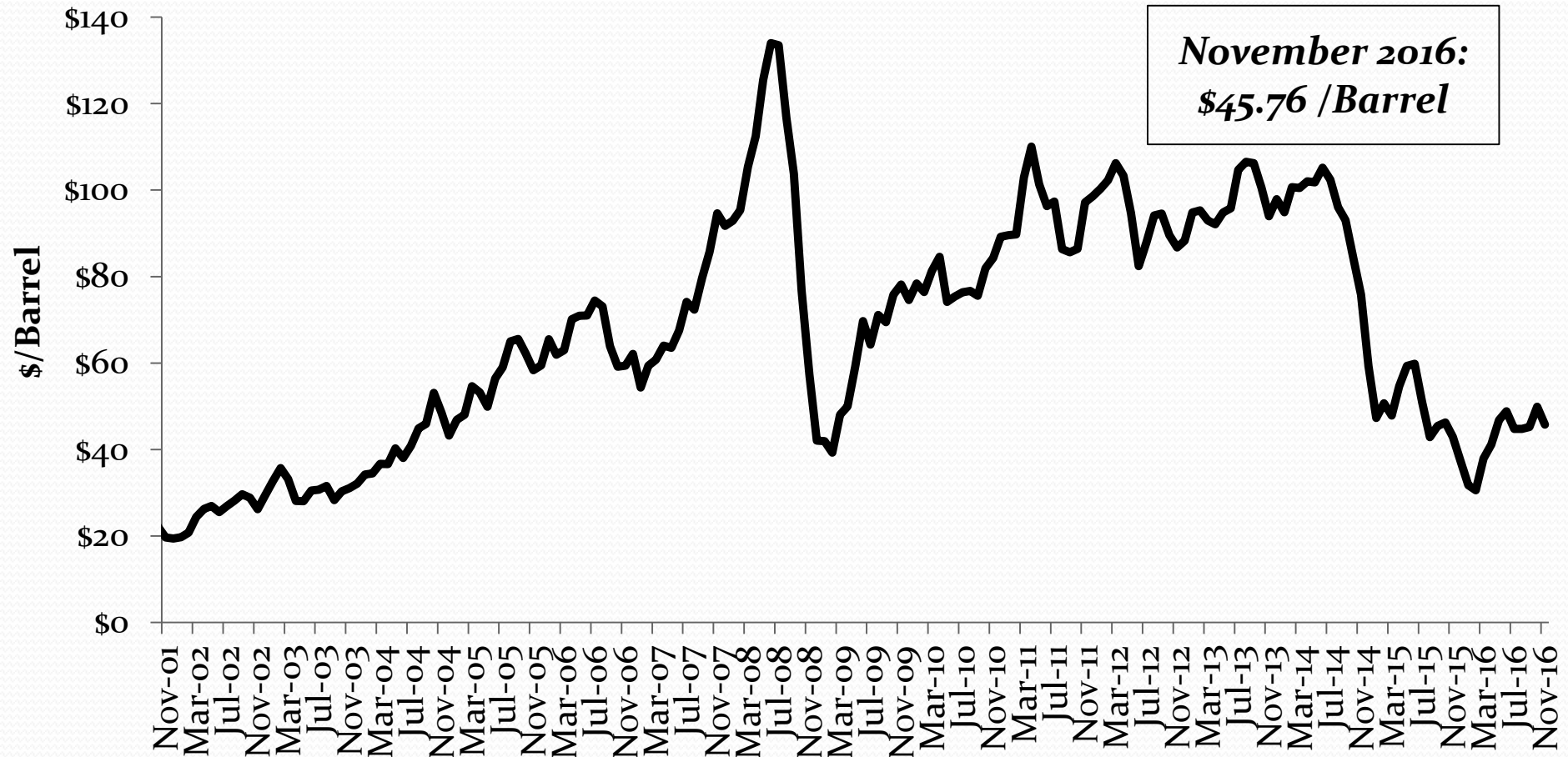
November 2016:
$45.76 /Barrel

*Month of November = average of daily prices from 11/1-11/30

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World Oil Demand Growth
2007Q1 through 2016Q3

Legend:
- Other Non-OECD (orange)
- OECD (navy)
- China (red)

y-axis: mb/d, growth year over year
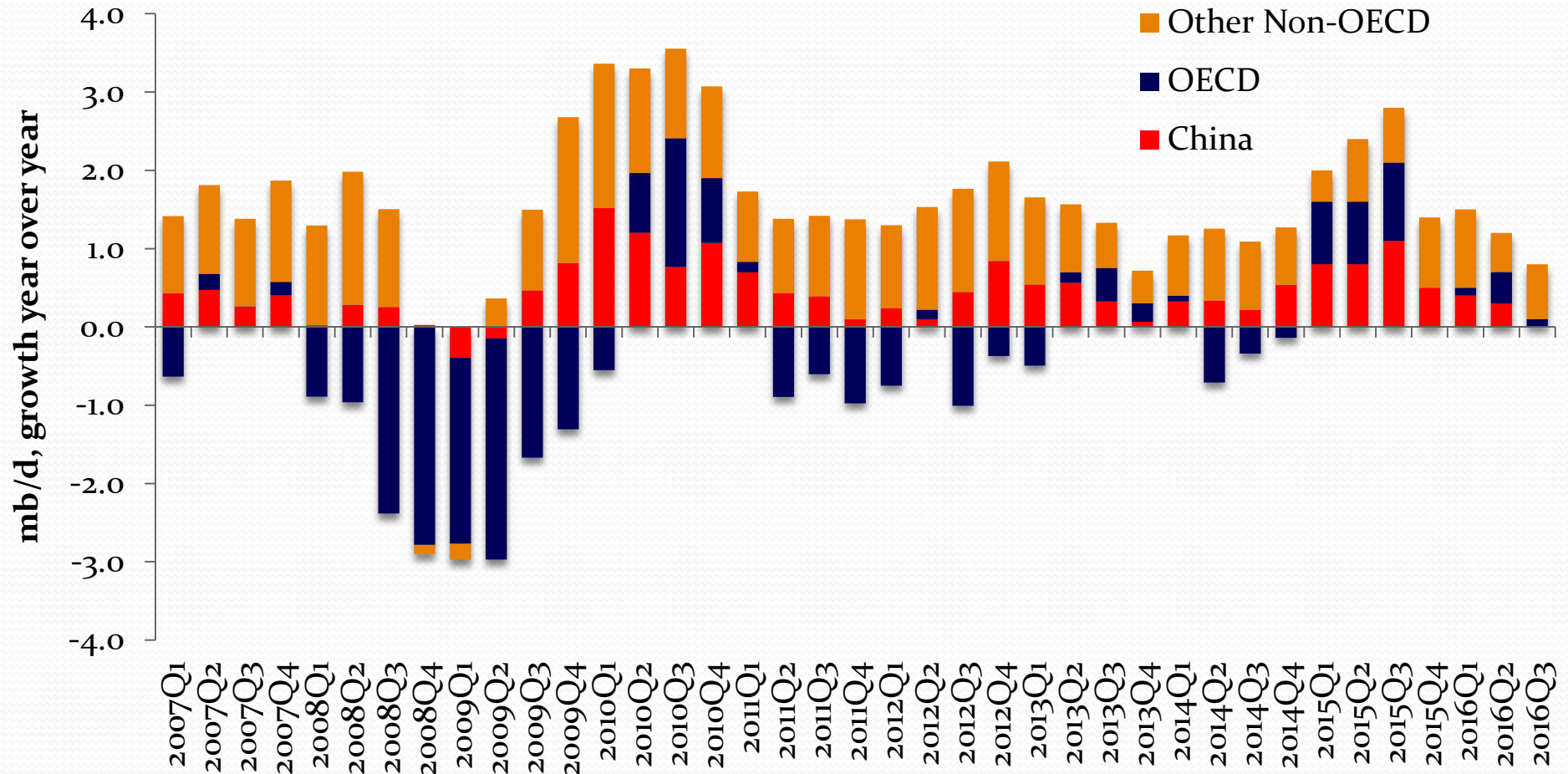
Note: Demand measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.

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Moneypenny—Metal Price Indices
November 2007 through November 2016
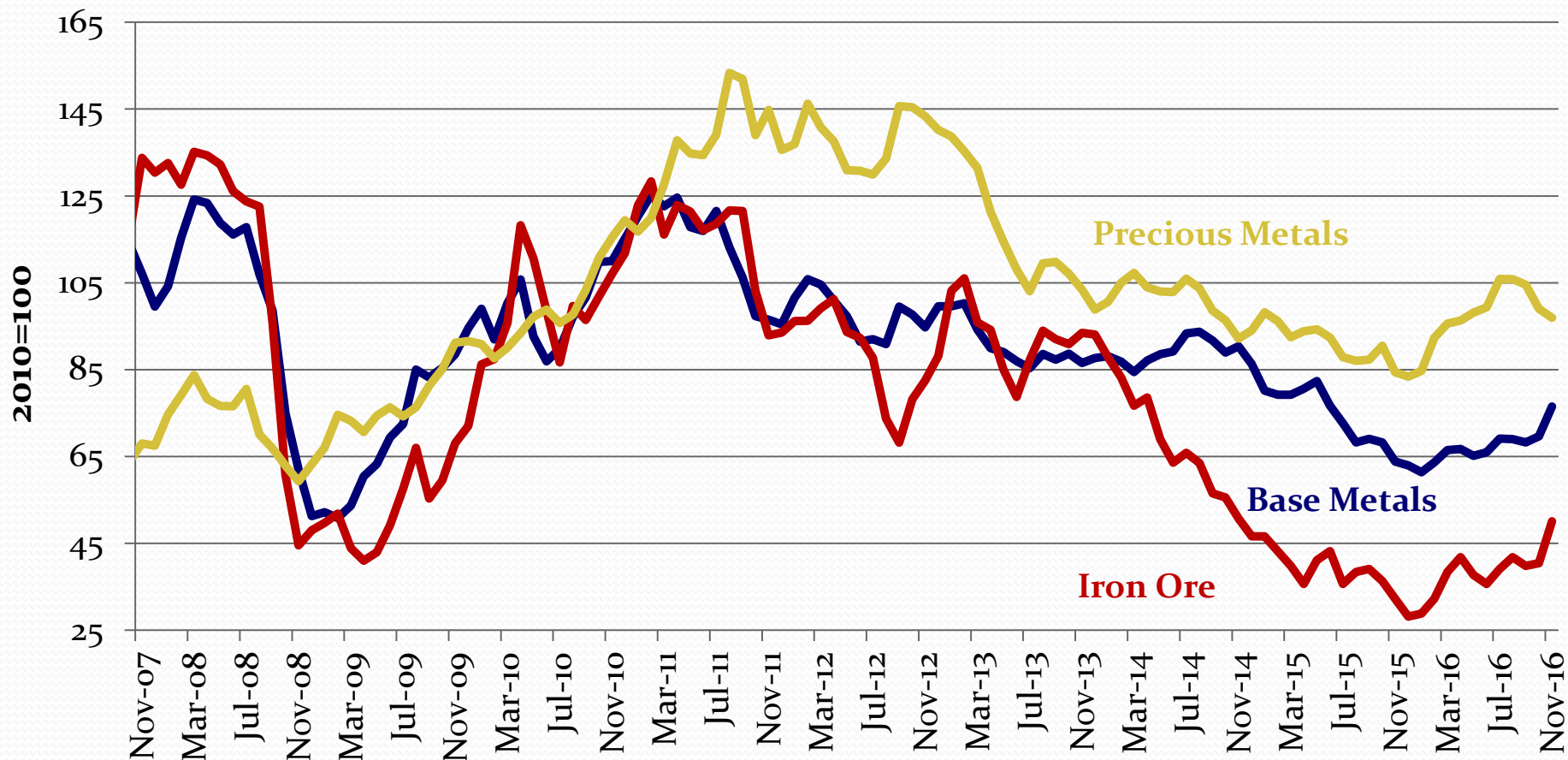
US$ Nominal
Base metals include aluminum, copper, lead, nickel, tin and zinc.
Precious metals include gold, platinum, and silver.

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Baltic Dry Index
December 2009 through December 2016

December 9th
1,090

Jan. 4, 1985: 1,000
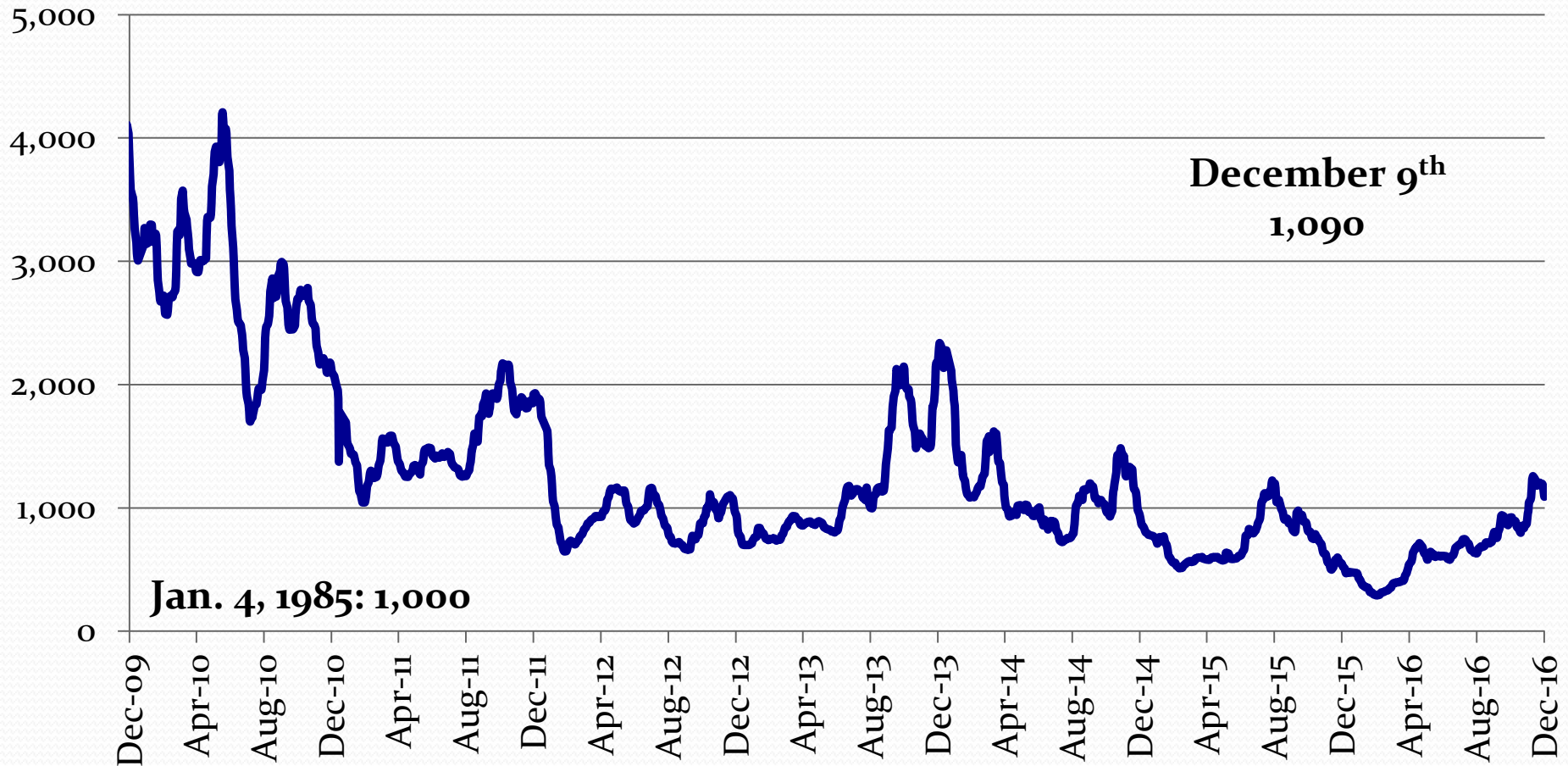
The Baltic Dry Index (BDI) is a measure of the price of shipping major raw materials such as metals, grains, and fossil fuels by sea.
The BDI is a composite of 3 sub-indices, each covering a different carrier size: Capesize, Panamax, and Supramax.

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Quantum of Solace

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Gross Domestic Product
*1990Q1 through 2016Q3**

2016Q3: +3.2%

Percent Change from Preceding Period (SAAR)

*2nd Estimate

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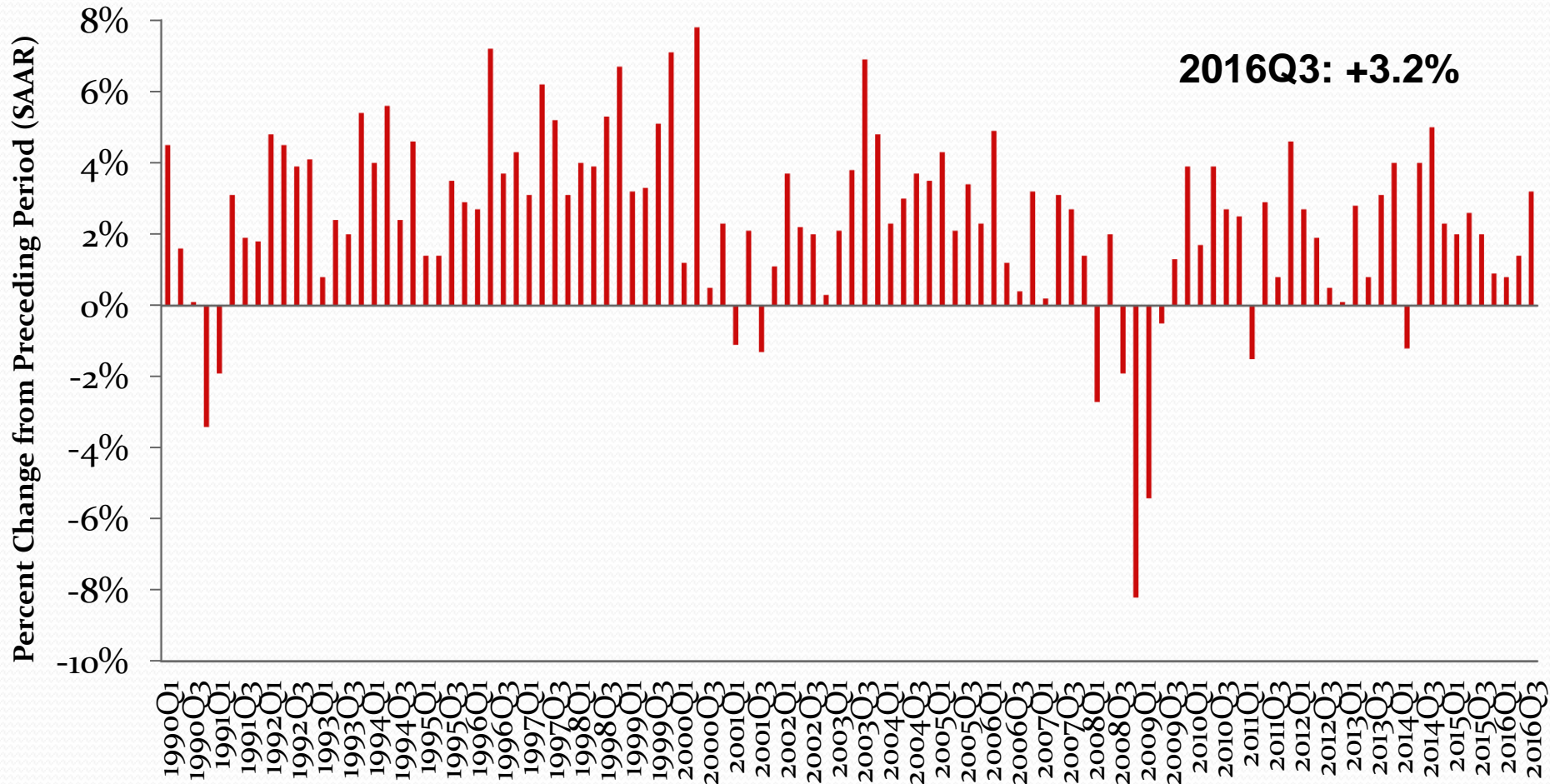
Contributions to GDP Growth by Component
2015Q4 – 2016Q3*
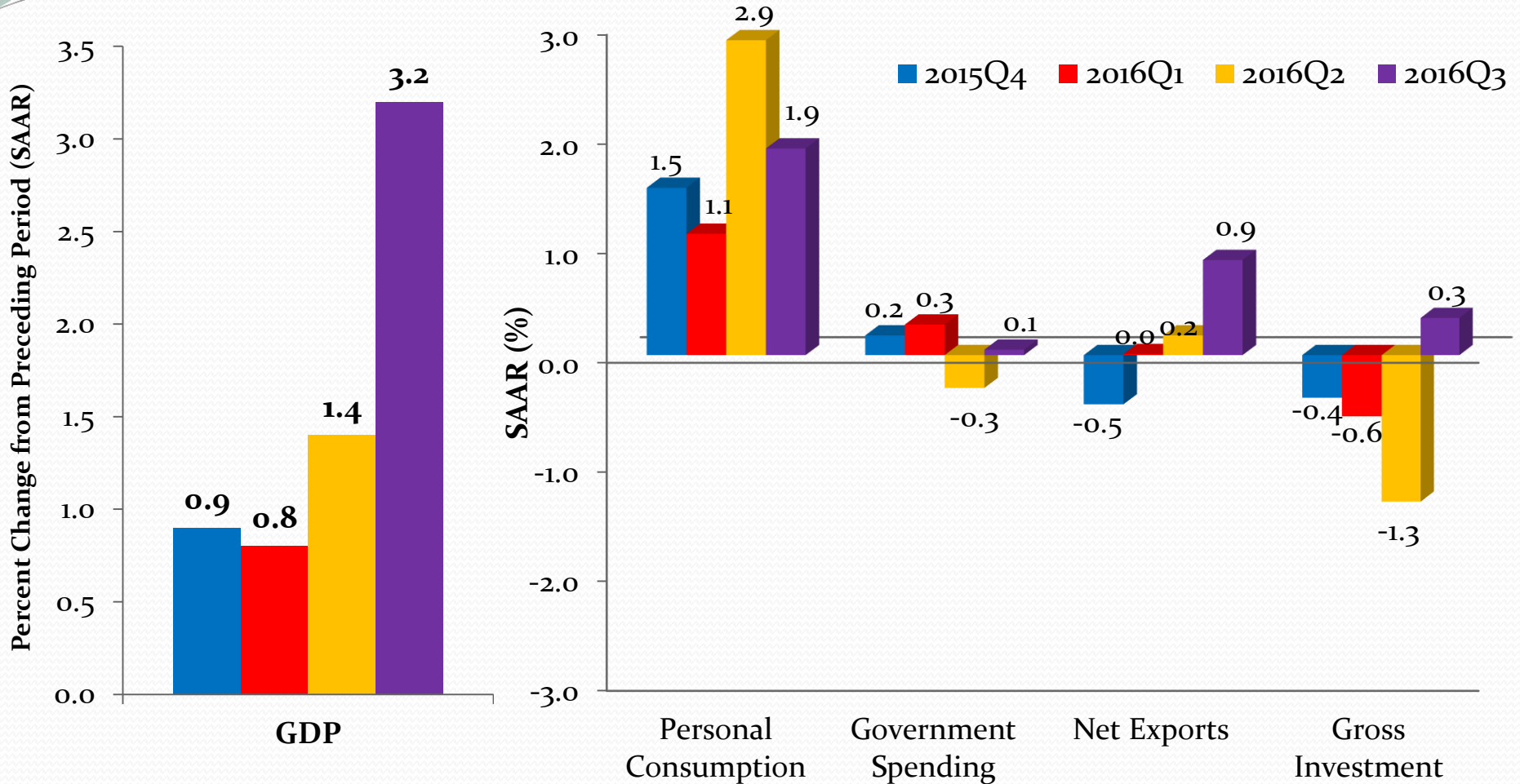
2nd Estimate

2016Q3: +3.2%

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Net Change in U.S. Jobs, BLS
November 2002 through November 2016
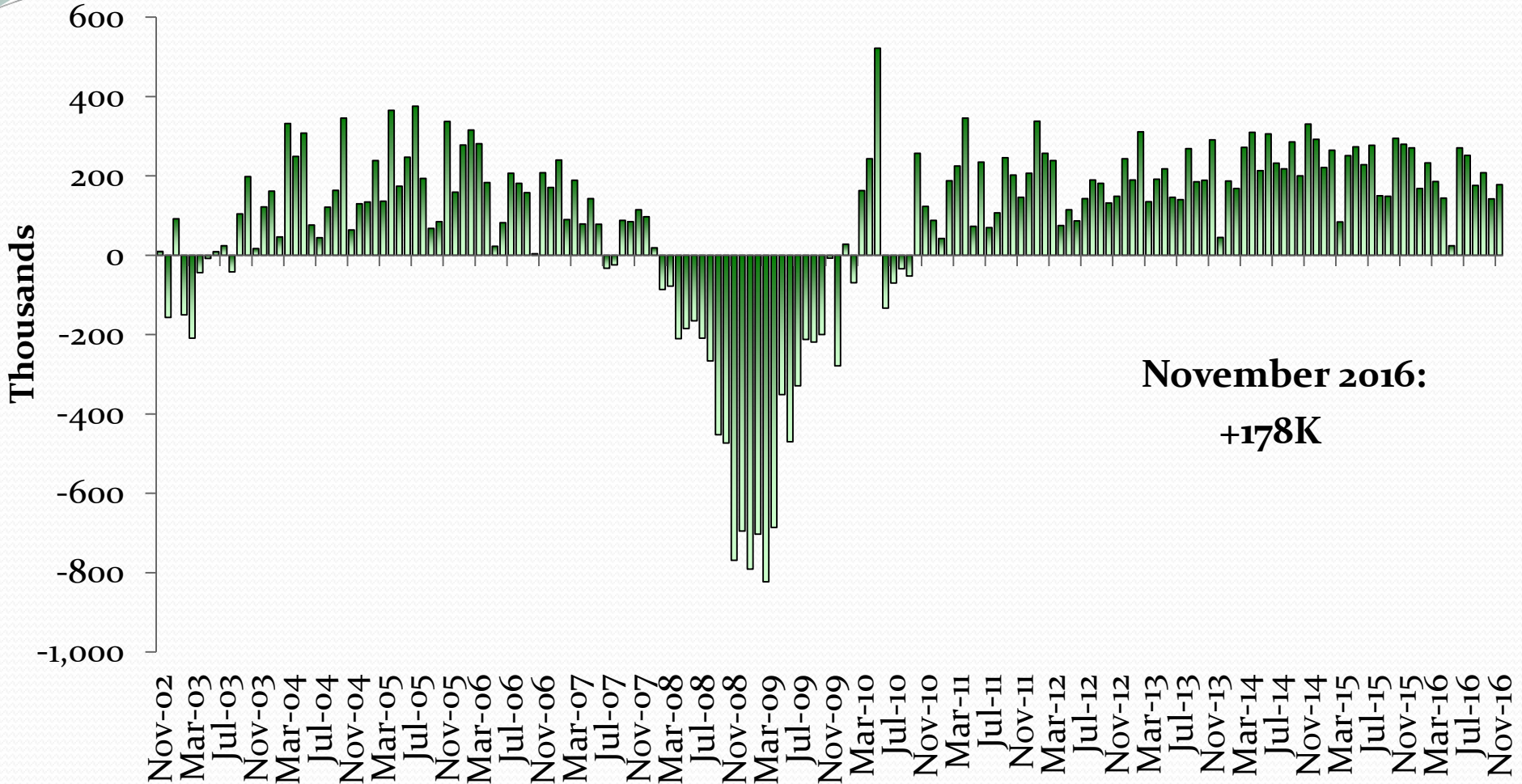
November 2016:

+178K

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National Nonfarm Employment
by Industry Sector
November 2015 v. November 2016

Industry Sector	Thousands, SA
Education and Health Services	581
Professional and Business Services	571
Trade, Transportation, and Utilities	337
Leisure and Hospitality	293
Government	217
Construction	155
Financial Activities	153
Other Services	74
Information	15
Manufacturing	-54
Mining and Logging	-89

All told 2,253K jobs gained

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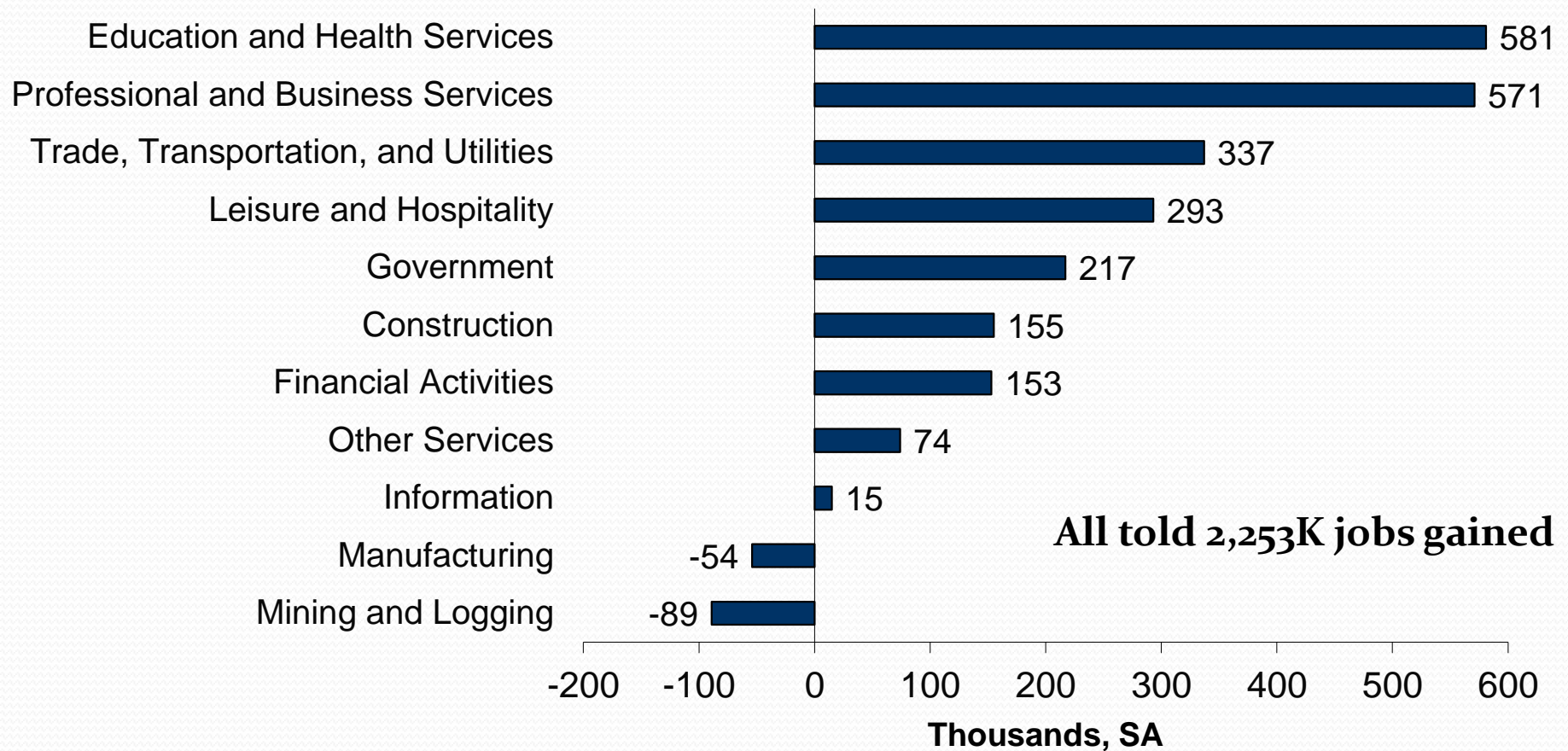
Fastest Growing Industries, Projected 2014-2024

Industry Description	Sector	Thousands of Jobs		Annual % Change
		2014	2024	2014-24
Home health care services	Health care & social assist.	1,262.2	2,022.6	4.8%
Outpatient care centers	Health care & social assist.	711.1	1,059.2	4.1%
Offices of other health practitioners	Health care & social assist.	784.2	1,136.5	3.8%
Other ambulatory health care services	Health care & social assist.	278.6	389.0	3.4%
Medical and diagnostic laboratories	Health care & social assist.	247.4	327.1	2.8%
Management/scientific/technical consulting services	Prof. & business services	1,244.4	1,573.7	2.4%
Software publishers	Information	312.5	393.2	2.3%
Facilities support services	Prof. & business services	131.4	163.2	2.2%
Computer systems design and related services	Prof. & business services	1,777.7	2,186.6	2.1%
Nursing and residential care facilities	Health care & social assist.	3,261.0	3,996.7	2.1%
Securities, commodity contracts, & other investments	Financial activities	877.6	1,074.2	2.0%
Offices of physicians	Health care & social assist.	2,470.2	2,992.9	1.9%
Offices of dentists	Health care & social assist.	891.1	1,050.9	1.7%
Funds, trusts, and other financial vehicles	Financial activities	3.7	4.4	1.7%
Local government passenger transit	State & local government	277.6	322.0	1.5%

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Most Rapidly Declining Industries, Projected 2014-2024

Industry Description	Sector	THOUSANDS OF JOBS		ANNUAL % CHANGE
		2014	2024	2014-24
Apparel, leather, and allied manufacturing	Manufacturing	168.5	91.7	-5.9%
Tobacco manufacturing	Manufacturing	13.6	9.2	-3.9%
Postal Service	Federal govt.	593	427.9	-3.2%
Federal enterprises (except the Postal Service & electric utilities)	Federal govt.	81.1	58.9	-3.1%
Manufacturing and reproducing magnetic and optical media	Manufacturing	18.9	14.0	-2.9%
Communications equipment manufacturing	Manufacturing	93.5	69.5	-2.9%
Newspaper, periodical, book, and directory publishers	Information	412.3	309	-2.8%
Textile mills and textile product mills	Manufacturing	232.1	174.2	-2.8%
Audio and video equipment manufacturing	Manufacturing	18.9	14.6	-2.6%
Glass and glass product manufacturing	Manufacturing	85.8	67.3	-2.4%
Pulp, paper, and paperboard mills	Manufacturing	104.2	83.0	-2.2%
Other miscellaneous manufacturing	Manufacturing	275.2	219.3	-2.2%
Hardware manufacturing	Manufacturing	24.3	19.6	-2.1%
Federal electric utilities	Federal govt.	17.9	14.5	-2.1%
Printing and related support activities	Manufacturing	452.7	371.3	-2.0%

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Delaware Nonfarm Employment
by Industry Sector Groups (SA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Absolute Change
Professional and business services	4,800
Leisure and hospitality	2,900
Education and health services	1,700
Other services	600
Financial activities	500
Information (NSA)	200
Government	-200
Manufacturing	-200
Trade, transportation, and utilities	-500
Mining, logging, and construction	-1,300

DE Total:
+8.5K +1.9%

US Total (SA):
+2,355K; +1.7%
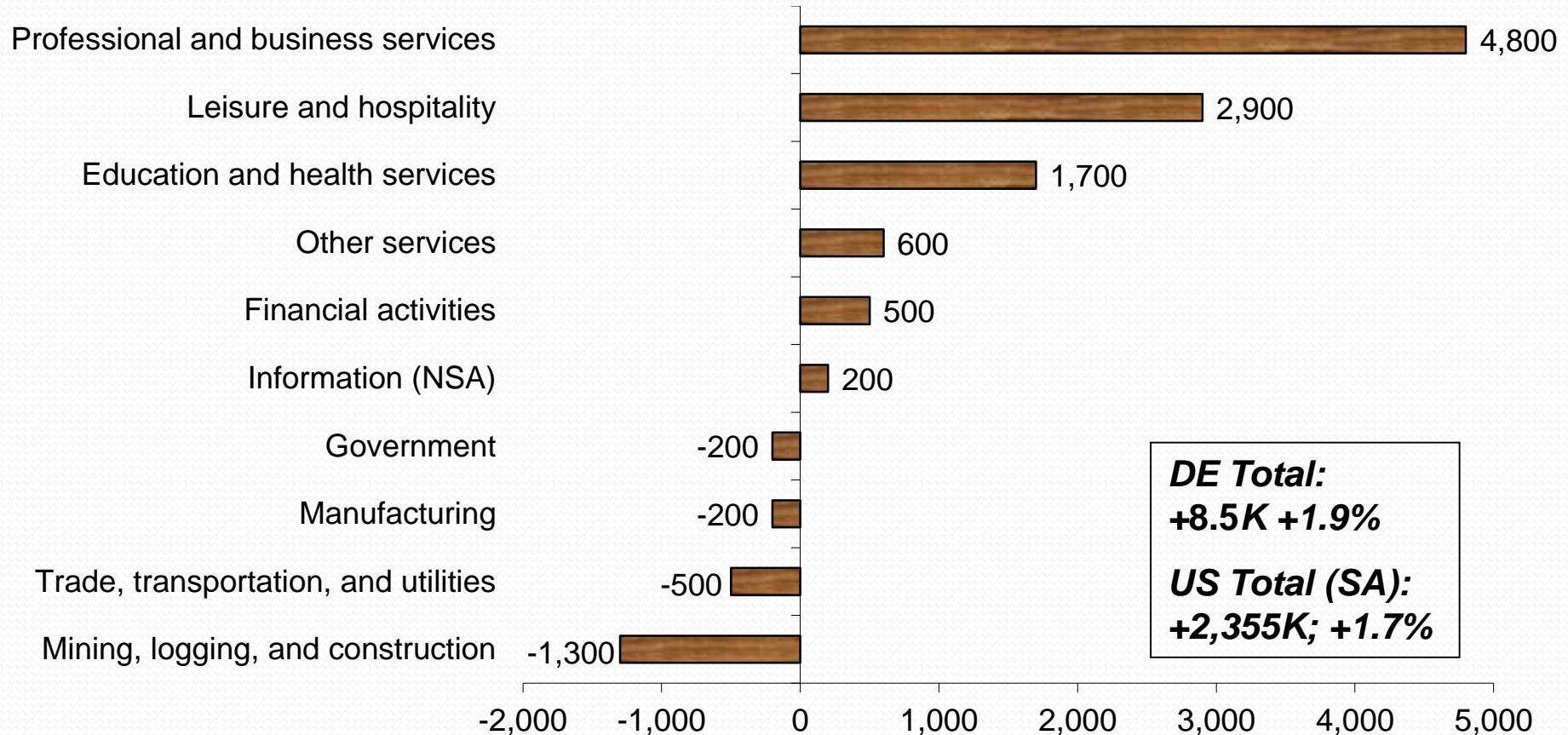
Source: U.S. Bureau of Labor Statistics

*According to the Local Area Unemployment Statistics (LAUS) series DE added 6,433 jobs between October 2015 and October 2016.

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Maryland Nonfarm Employment
by Industry Sector Groups (SA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Change
Professional and Business Services	9,200
Education and Health Services	8,500
Government	5,100
Trade, Transportation, and Utilities	4,300
Other Services	3,200
Leisure and Hospitality	2,100
Manufacturing	1,800
Financial Activities	400
Mining, Logging, and Construction	100
Information	0

MD Total:
+34.7K; +1.3%

US Total (SA):
+2,355K; +1.7%

Source: U.S. Bureau of Labor Statistics

*According to the Local Area Unemployment Statistics (LAUS) series MD added 48,425 jobs between October 2015 and October 2016.

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Washington, DC-Arlington-Alexandria MSA Nonfarm Employment
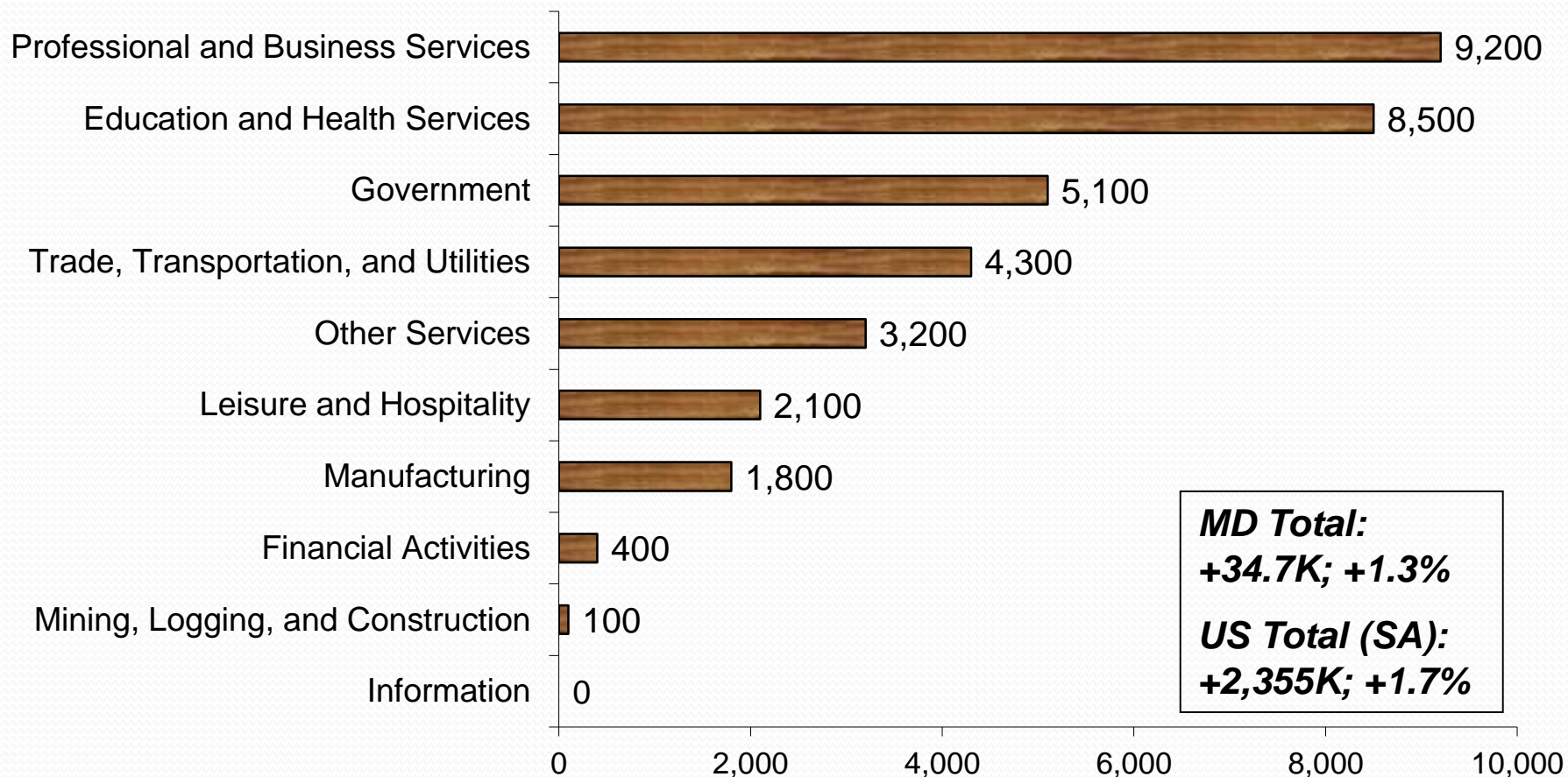## by Industry Sector Groups (NSA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Absolute Change
Professional and Business Services	22,000
Education and Health Services	14,900
Trade, Transportation, and Utilities	11,900
Government	10,900
Leisure and Hospitality	5,600
Mining, Logging, and Construction	4,000
Other Services	3,000
Manufacturing	1,100
Information	-1,100
Financial Activities	-2,100

DC MSA Total:
+70.2K; +2.2%

US Total (SA):
+2,355K; +1.7%

Source: U.S. Bureau of Labor Statistics

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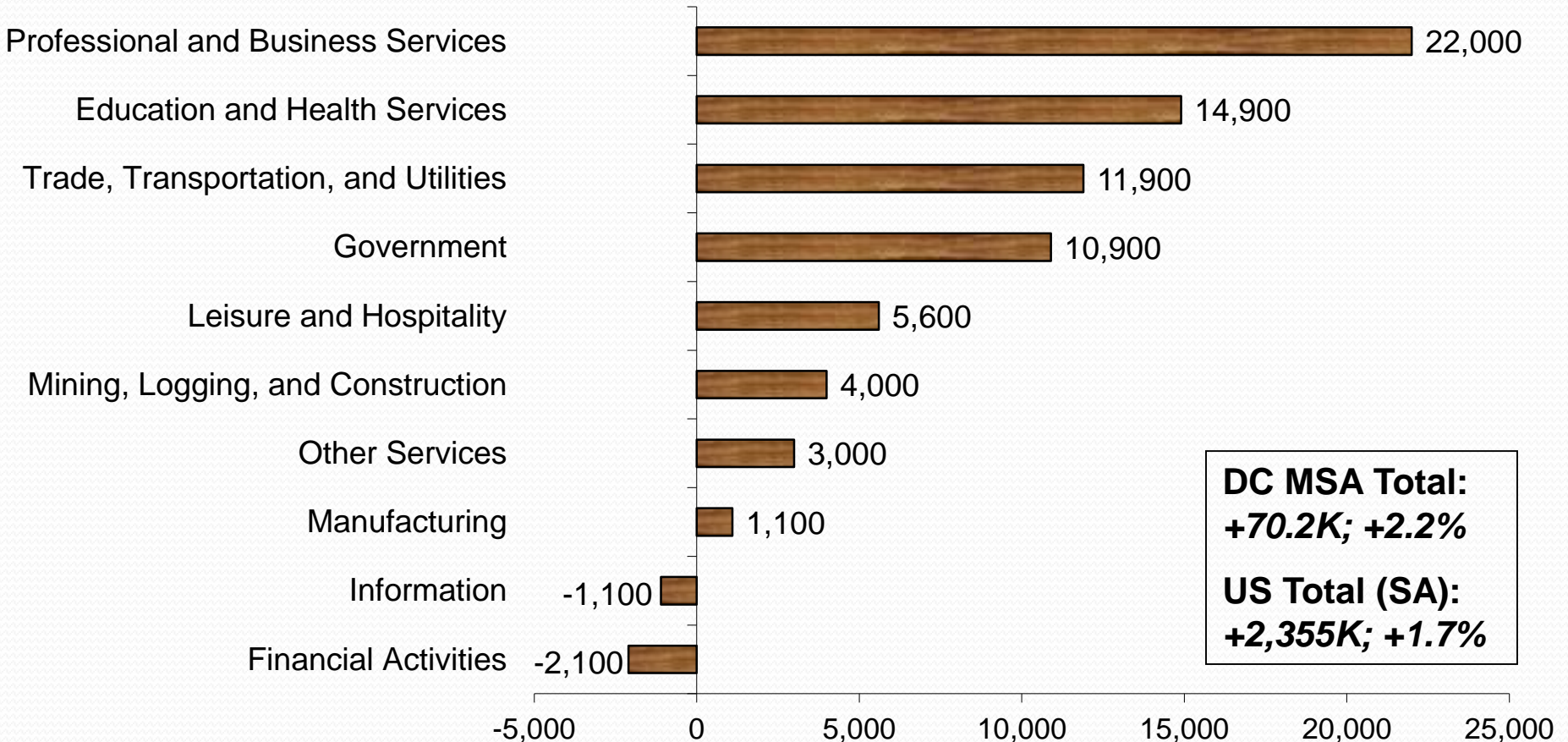
Baltimore-Columbia-Towson MSA Nonfarm Employment
by Industry Sector Groups (NSA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Absolute Change
Professional and Business Services	10,500
Education and Health Services	7,500
Leisure and Hospitality	2,800
Other Services	2,600
Government	2,000
Trade, Transportation, and Utilities	1,100
Manufacturing	500
Information	0
Financial Activities	-500
Mining, Logging, and Construction	-2,400

Baltimore MSA Total:
+24.1K; +1.7%

MD Total (SA):
+34.7K; +1.3%

US Total (SA):
+2,355K; +1.7%

Source: U.S. Bureau of Labor Statistics

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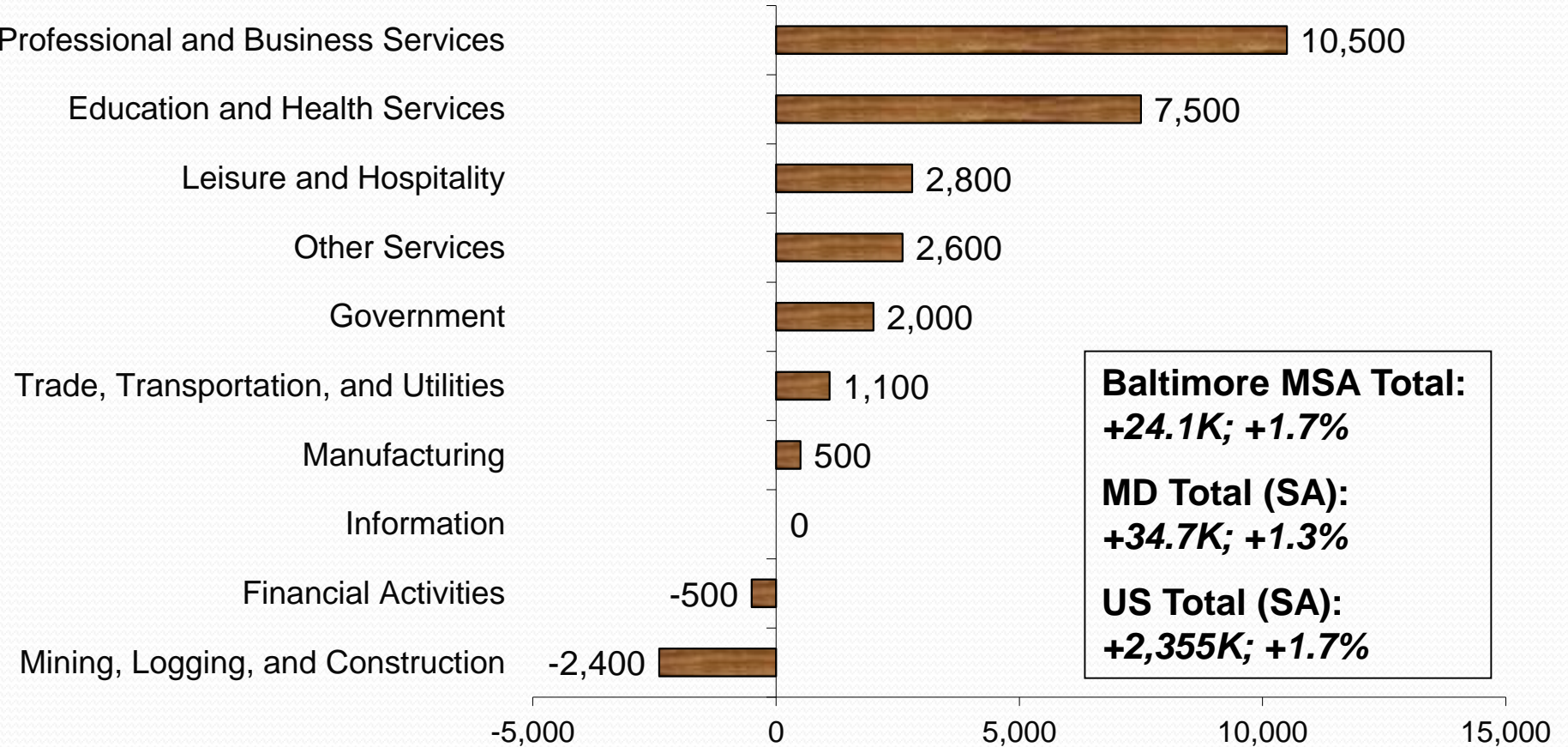
Pennsylvania Nonfarm Employment
by Industry Sector Groups (SA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Change
Education & Health Services	17,700
Professional & Business Services	12,100
Leisure & Hospitality	6,800
Trade, Transportation & Utilities	6,800
Government	3,100
Financial Activities	1,500
Other Services	900
Information	200
Manufacturing	-900
Construction	-3,000
Mining and Logging	-6,800

PA Total:
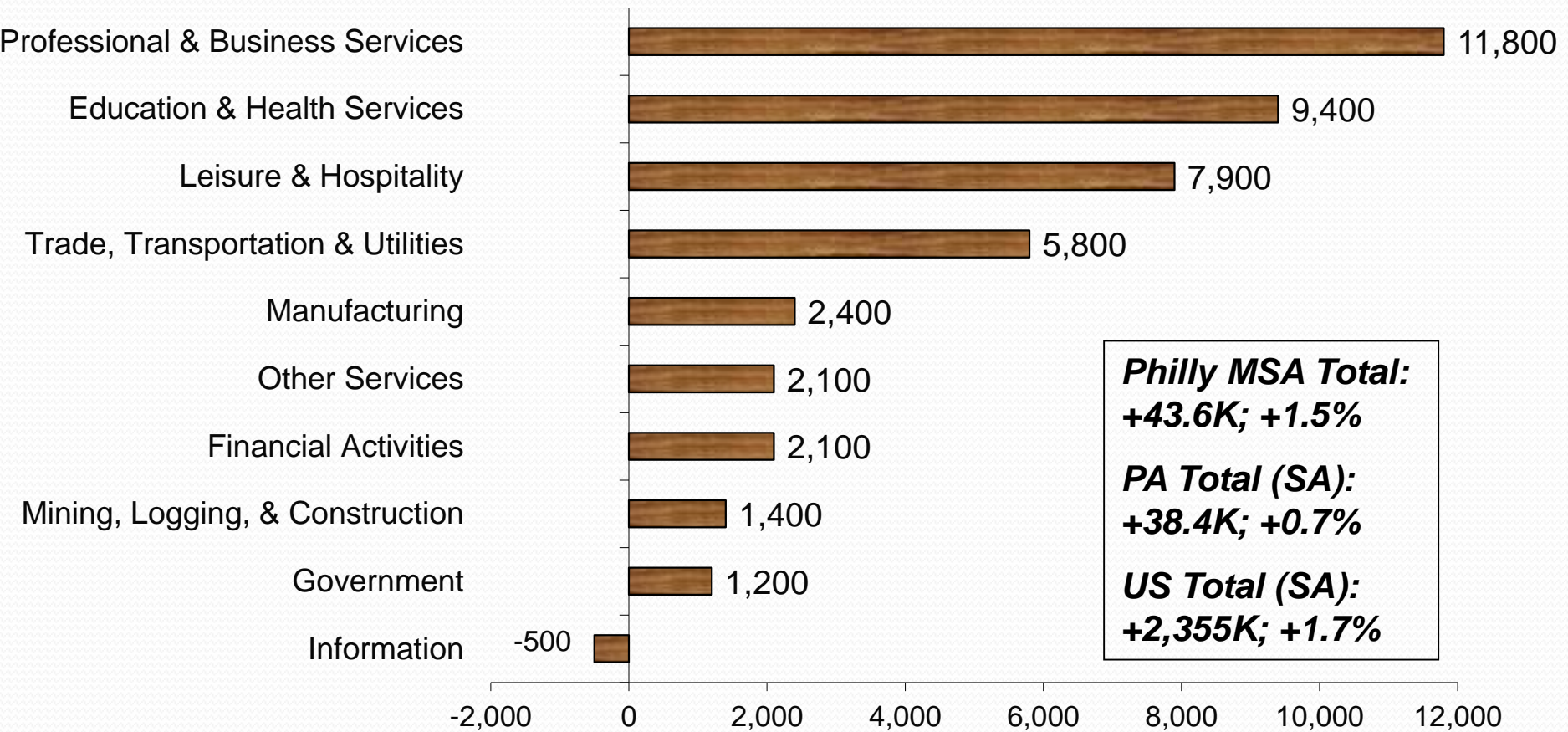**+38.4K; +0.7%**

US Total (SA):
+2,355K; +1.7%
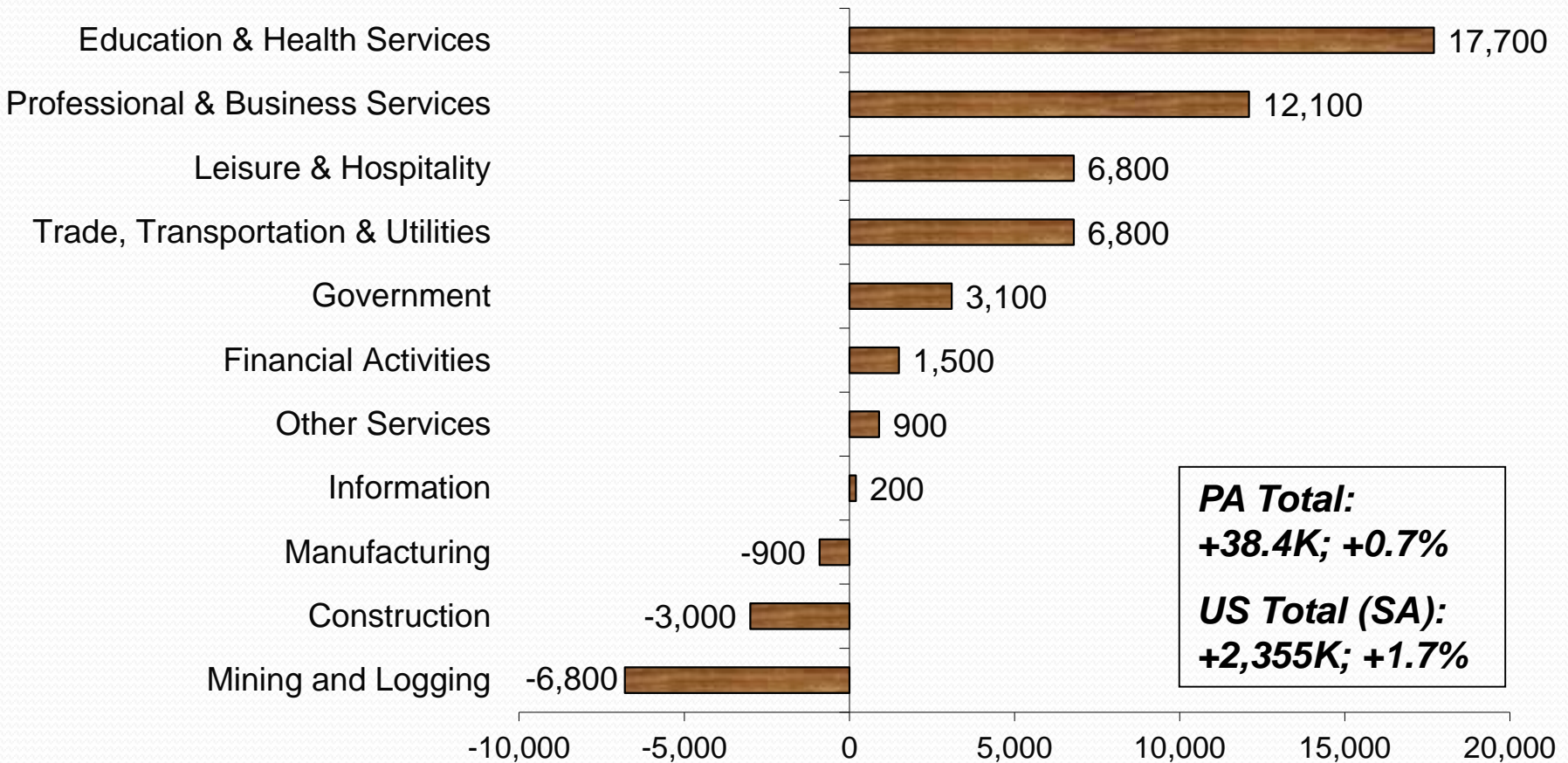
Source: U.S. Bureau of Labor Statistics

*According to the Local Area Unemployment Statistics (LAUS) series PA added 30,427 jobs between October 2015 and October 2016.

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Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA Nonfarm Employment by Industry Sector Groups (NSA)
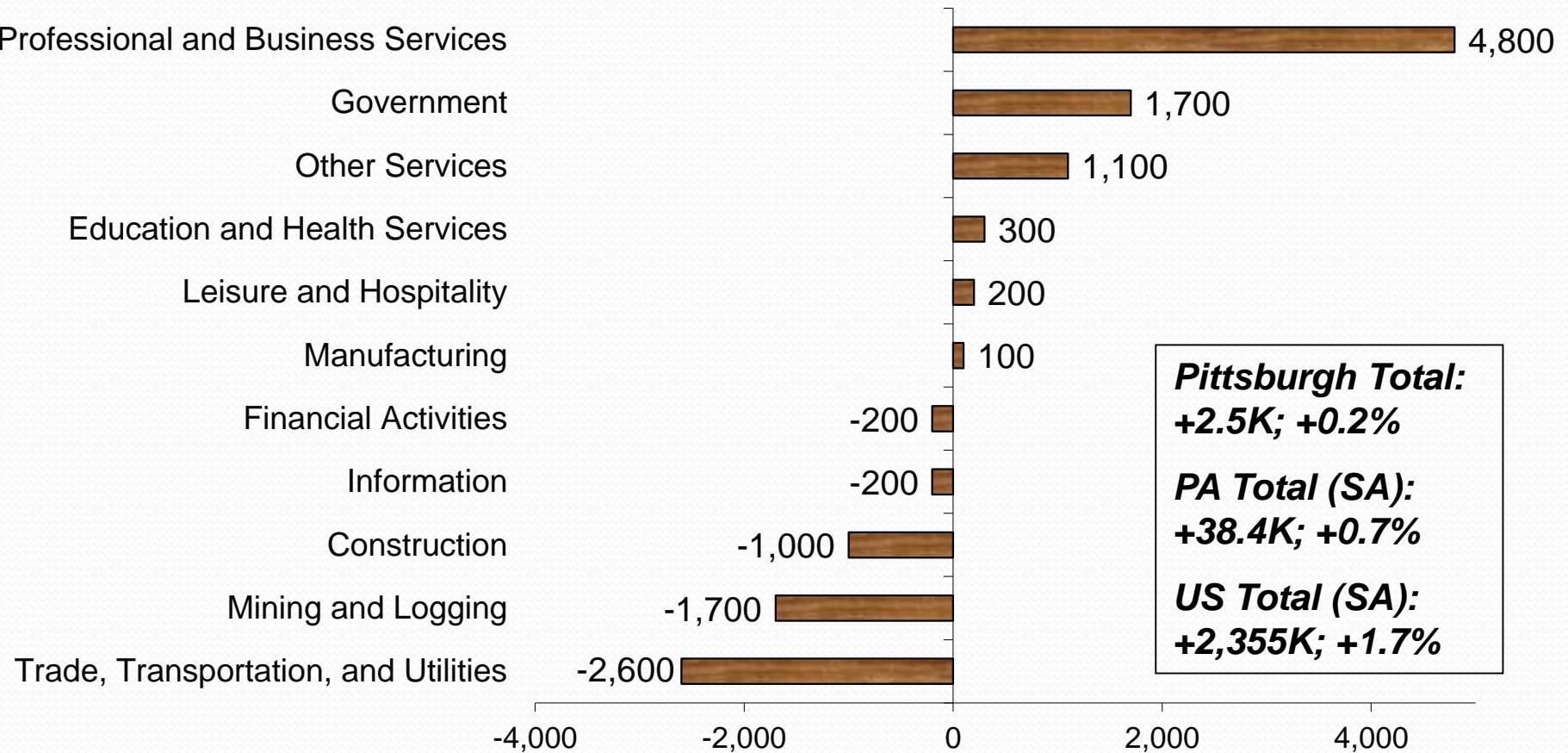October 2015 v. October 2016
Absolute Change

Industry Sector	Absolute Change
Professional & Business Services	11,800
Education & Health Services	9,400
Leisure & Hospitality	7,900
Trade, Transportation & Utilities	5,800
Manufacturing	2,400
Other Services	2,100
Financial Activities	2,100
Mining, Logging, & Construction	1,400
Government	1,200
Information	-500

Philly MSA Total:
+43.6K; +1.5%

PA Total (SA):
+38.4K; +0.7%

US Total (SA):
+2,355K; +1.7%

Source: U.S. Bureau of Labor Statistics

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Pittsburgh, PA Nonfarm Employment
by Industry Sector Groups (NSA)
October 2015 v. October 2016
Absolute Change

Industry Sector	Absolute Change
Professional and Business Services	4,800
Government	1,700
Other Services	1,100
Education and Health Services	300
Leisure and Hospitality	200
Manufacturing	100
Financial Activities	-200
Information	-200
Construction	-1,000
Mining and Logging	-1,700
Trade, Transportation, and Utilities	-2,600

Pittsburgh Total: +2.5K; +0.2%

PA Total (SA): +38.4K; +0.7%

US Total (SA): +2,355K; +1.7%

Source: U.S. Bureau of Labor Statistics

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Employment Growth, U.S. States (SA)
October 2015 v. October 2016 Percent Change

RANK	STATE	%	RANK	STATE	%	RANK	STATE	%
1	WASHINGTON	3.5	15	SOUTH CAROLINA	2.0	35	MONTANA	0.8
2	OREGON	3.3	19	**DELAWARE**	**1.9**	36	NEW JERSEY	0.7
3	FLORIDA	3.1	20	DISTRICT OF COLUMBIA	1.8	**36**	**PENNSYLVANIA**	**0.7**
4	UTAH	3.0	20	MISSOURI	1.8	38	VERMONT	0.6
5	COLORADO	2.5	22	TEXAS	1.7	39	ILLINOIS	0.5
5	SOUTH DAKOTA	2.5	22	VIRGINIA	1.7	40	NEBRASKA	0.4
7	CALIFORNIA	2.4	24	RHODE ISLAND	1.4	41	CONNECTICUT	0.2
7	TENNESSEE	2.4	**25**	**MARYLAND**	**1.3**	42	MAINE	0.0
9	GEORGIA	2.3	26	ALABAMA	1.2	42	WEST VIRGINIA	0.0
9	NEVADA	2.3	27	IOWA	1.1	44	ALASKA	-0.1
11	HAWAII	2.2	27	MINNESOTA	1.1	44	MISSISSIPPI	-0.1
11	IDAHO	2.2	27	NEW YORK	1.1	46	LOUISIANA	-0.3
11	MICHIGAN	2.2	30	INDIANA	1.0	47	KANSAS	-0.4
14	NEW HAMPSHIRE	2.1	30	KENTUCKY	1.0	47	NEW MEXICO	-0.4
15	ARIZONA	2.0	30	WISCONSIN	1.0	49	OKLAHOMA	-0.7
15	MASSACHUSETTS	2.0	33	ARKANSAS	0.9	50	NORTH DAKOTA	-1.8
15	NORTH CAROLINA	2.0	33	OHIO	0.9	51	WYOMING	-3.5

U.S. Year-over-year Percent Change
October: +1.7%
November: +1.6%

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Recession Watch
as of September 2016

Legend: In Recession (red) · At Risk (orange) · Recovering (light blue) · Expanding (green)
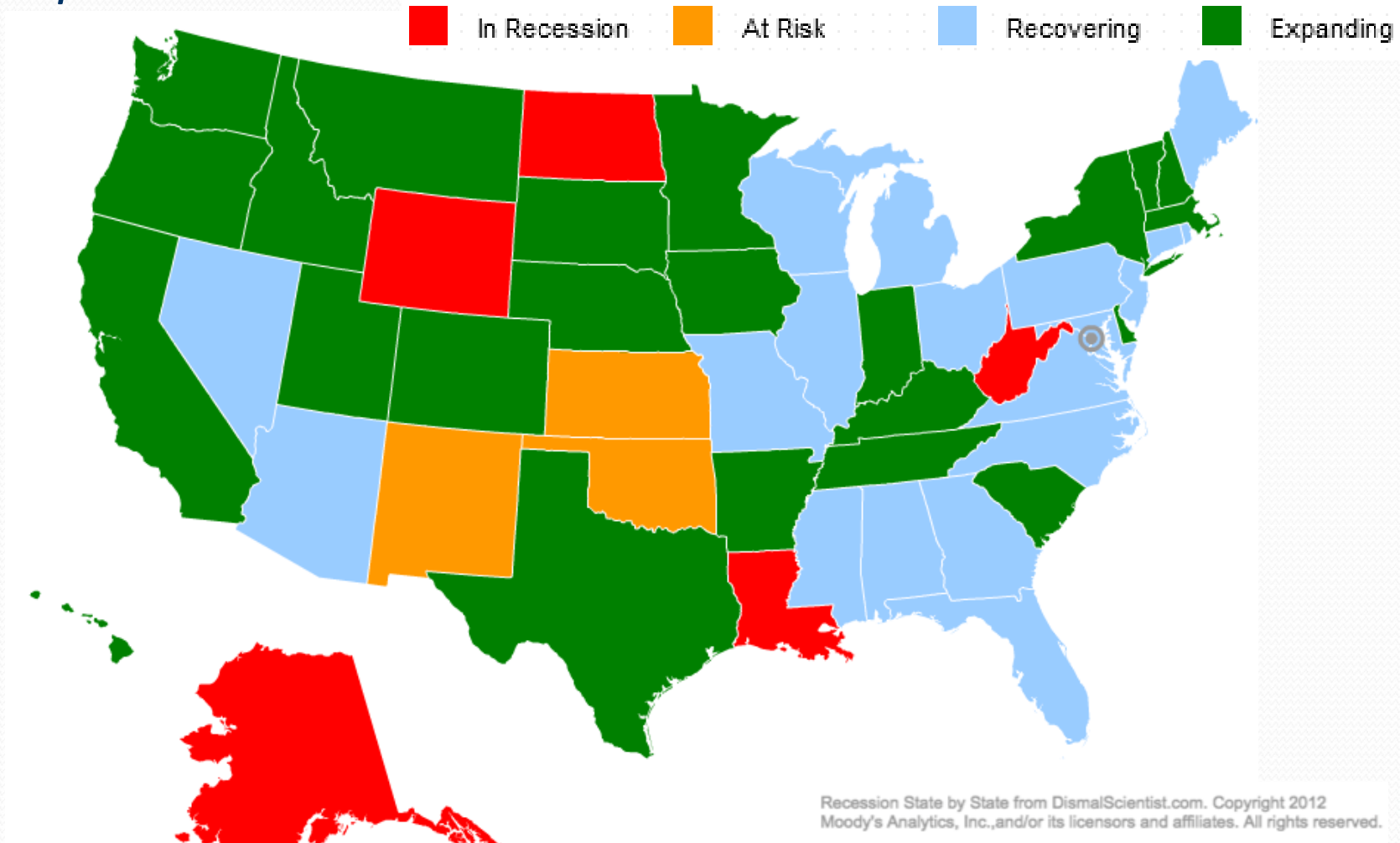
Recession State by State from DismalScientist.com. Copyright 2012
Moody's Analytics, Inc.,and/or its licensors and affiliates. All rights reserved.

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State Technology and Science Index Rankings, 2016

RANK	STATE	SCORE	RANK	STATE	SCORE	RANK	STATE	SCORE
1	MASSACHUSETTS	83.7	18	NEW JERSEY	59.4	35	MONTANA	43.7
2	COLORADO	80.4	19	NEW YORK	57.5	36	IOWA	43.5
3	**MARYLAND**	80.3	20	TEXAS	58.7	37	ALABAMA	42.7
4	CALIFORNIA	75.9	21	NEW MEXICO	55.2	38	HAWAII	40.3
5	WASHINGTON	71.8	22	WISCONSIN	55.1	39	SOUTH DAKOTA	41.6
6	CONNECTICUT	71.0	23	ARIZONA	54.9	40	TENNESSEE	40.2
7	MINNESOTA	69.6	24	NEBRASKA	53.5	41	MAINE	38.4
8	UTAH	69.1	25	GEORGIA	53.5	42	FLORIDA	38.8
9	VIRGINIA	65.9	26	OHIO	52.3	43	SOUTH CAROLINA	35.8
10	**DELAWARE**	65.4	27	VERMONT	52.6	44	OKLAHOMA	34.6
11	NEW HAMPSHIRE	65.3	28	MISSOURI	50.6	45	NEVADA	32.8
12	NORTH CAROLINA	62.6	29	NORTH DAKOTA	49.7	46	MISSISSIPPI	29.8
13	OREGON	62.3	30	INDIANA	49.2	47	LOUISIANA	31.4
14	**PENNSYLVANIA**	61.5	31	KANSAS	48.4	48	KENTUCKY	30.5
15	RHODE ISLAND	59.8	32	IDAHO	46.3	49	ARKANSAS	28.0
16	MICHIGAN	58.8	33	ALASKA	44.9	50	WEST VIRGINIA	25.8
17	ILLINOIS	59.5	34	WYOMING	43.0			

Note: District of Columbia is not included in the Milken Institute's report

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Unemployment Rates, 20 Largest Metros (NSA)
October 2016

| Rank	MSA	UR	Rank	MSA	UR
1	Boston-Cambridge-Nashua, MA-NH Metropolitan NECTA	2.6	11	Los Angeles-Long Beach-Anaheim, CA Metropolitan Statistical Area	4.8
2	Minneapolis-St. Paul-Bloomington, MN-WI Metropolitan Statistical Area	3.1	11	San Diego-Carlsbad, CA Metropolitan Statistical Area	4.8
3	Dallas-Fort Worth-Arlington, TX Metropolitan Statistical Area	3.6	13	Atlanta-Sandy Springs-Roswell, GA Metropolitan Statistical Area	4.9
4	**Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area**	**3.9**	14	New York-Newark-Jersey City, NY-NJ-PA Metropolitan Statistical Area	5.0
4	San Francisco-Oakland-Hayward, CA Metropolitan Statistical Area	3.9	15	Houston-The Woodlands-Sugar Land, TX Metropolitan Statistical Area	5.1
6	Seattle-Tacoma-Bellevue, WA Metropolitan Statistical Area	4.2	15	Miami-Fort Lauderdale-West Palm Beach, FL Metropolitan Statistical Area	5.1
7	St. Louis, MO-IL Metropolitan Statistical Area (1)	4.3	**15**	**Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area**	**5.1**
8	**Baltimore-Columbia-Towson, MD Metropolitan Statistical Area**	**4.4**	18	Detroit-Warren-Dearborn, MI Metropolitan Statistical Area	5.4
9	Phoenix-Mesa-Scottsdale, AZ Metropolitan Statistical Area	4.5	19	Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area	5.5
10	Tampa-St. Petersburg-Clearwater, FL Metropolitan Statistical Area	4.7	20	Riverside-San Bernardino-Ontario, CA Metropolitan Statistical Area	6.1

Source: U.S. Bureau of Labor Statistics

1. Area boundaries do not reflect official OMB definitions.

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15-Year & 30-Year Fixed Mortgage Rates
*December 1995 through December 2016**
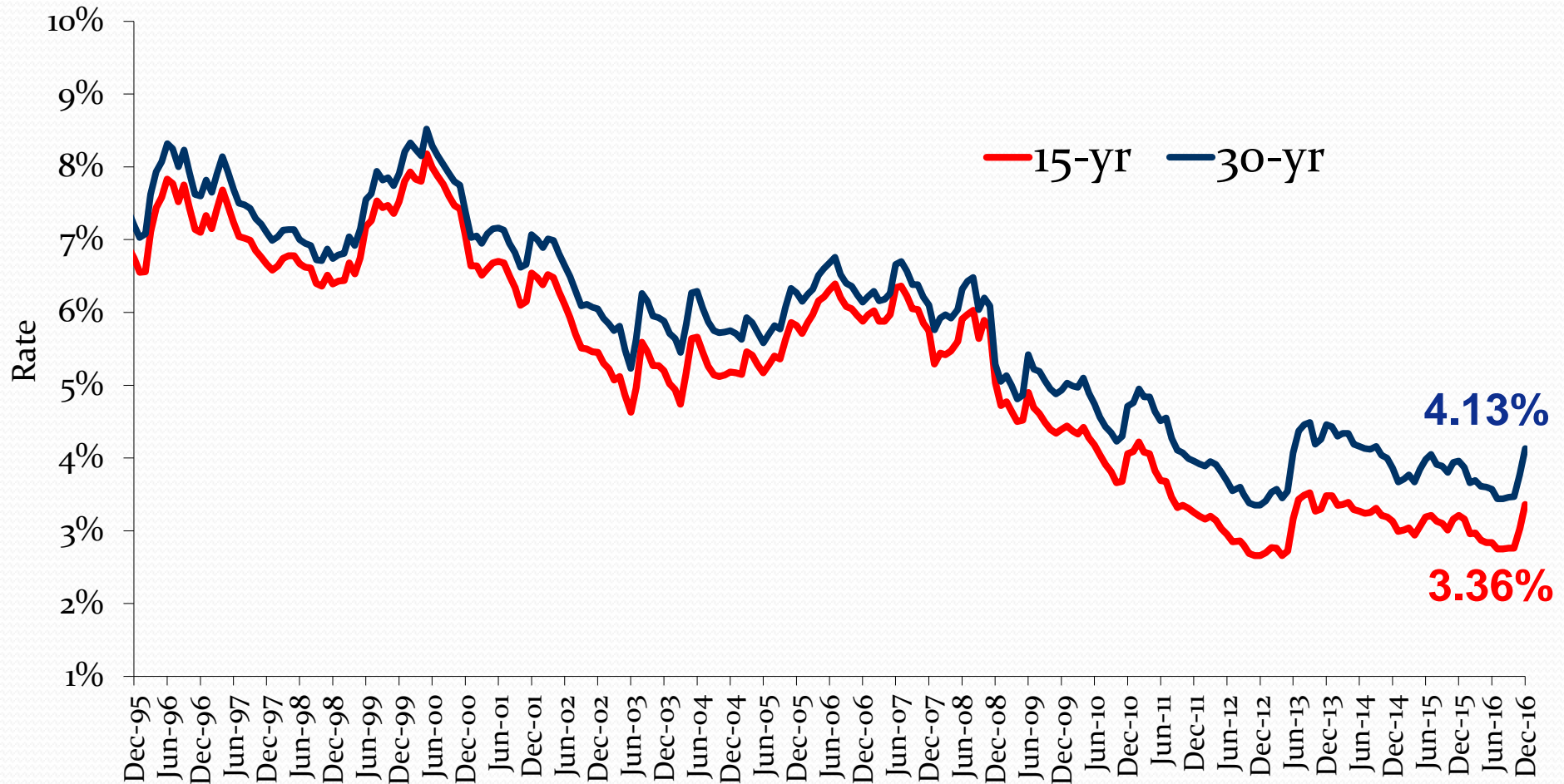
Source: Freddie Mac

Week ending 12/8/2016

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U.S. Homeownership (SA)

1980Q3-2016Q3
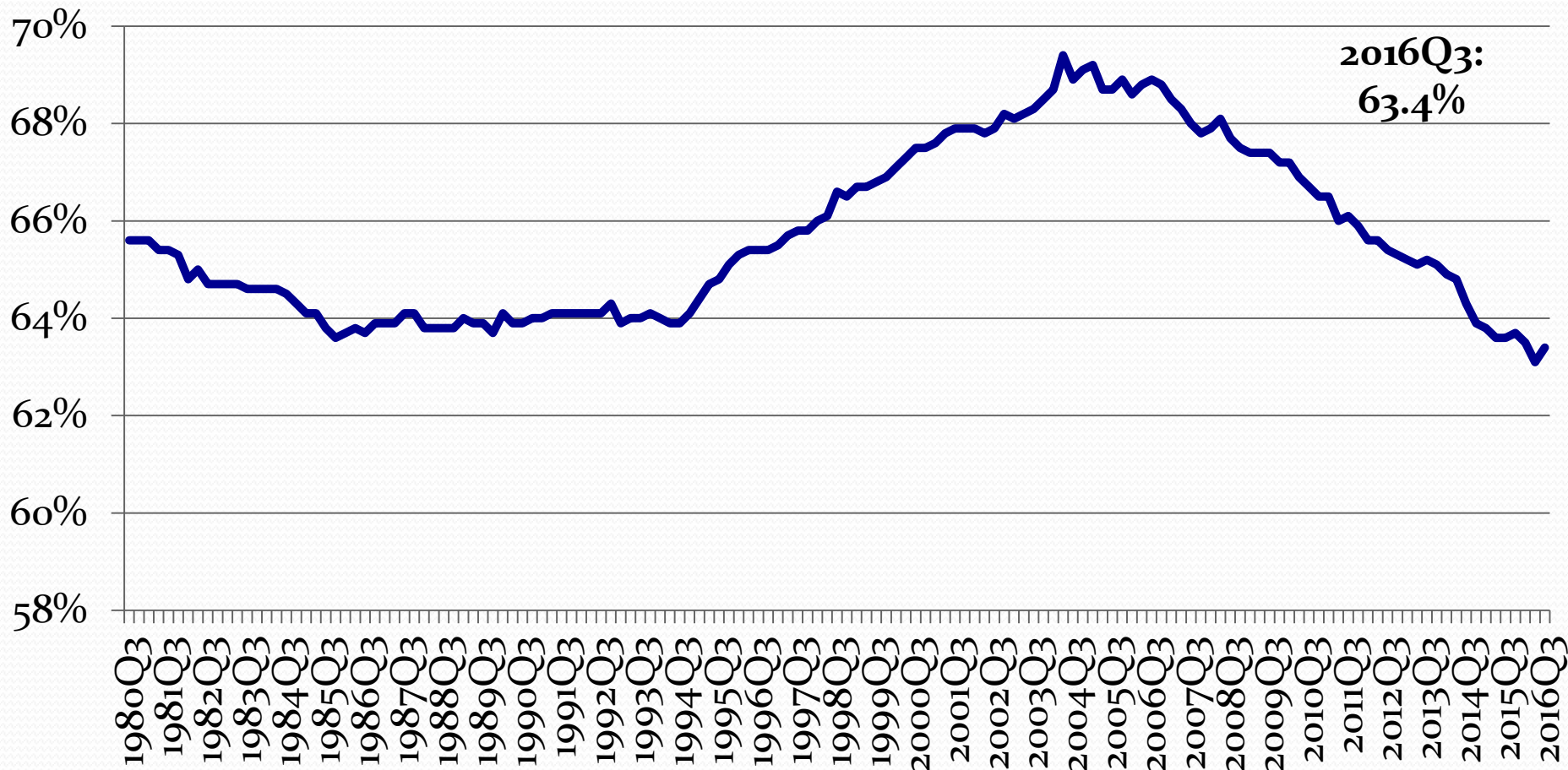
**2016Q3:
63.4%**

*SA: seasonally adjusted

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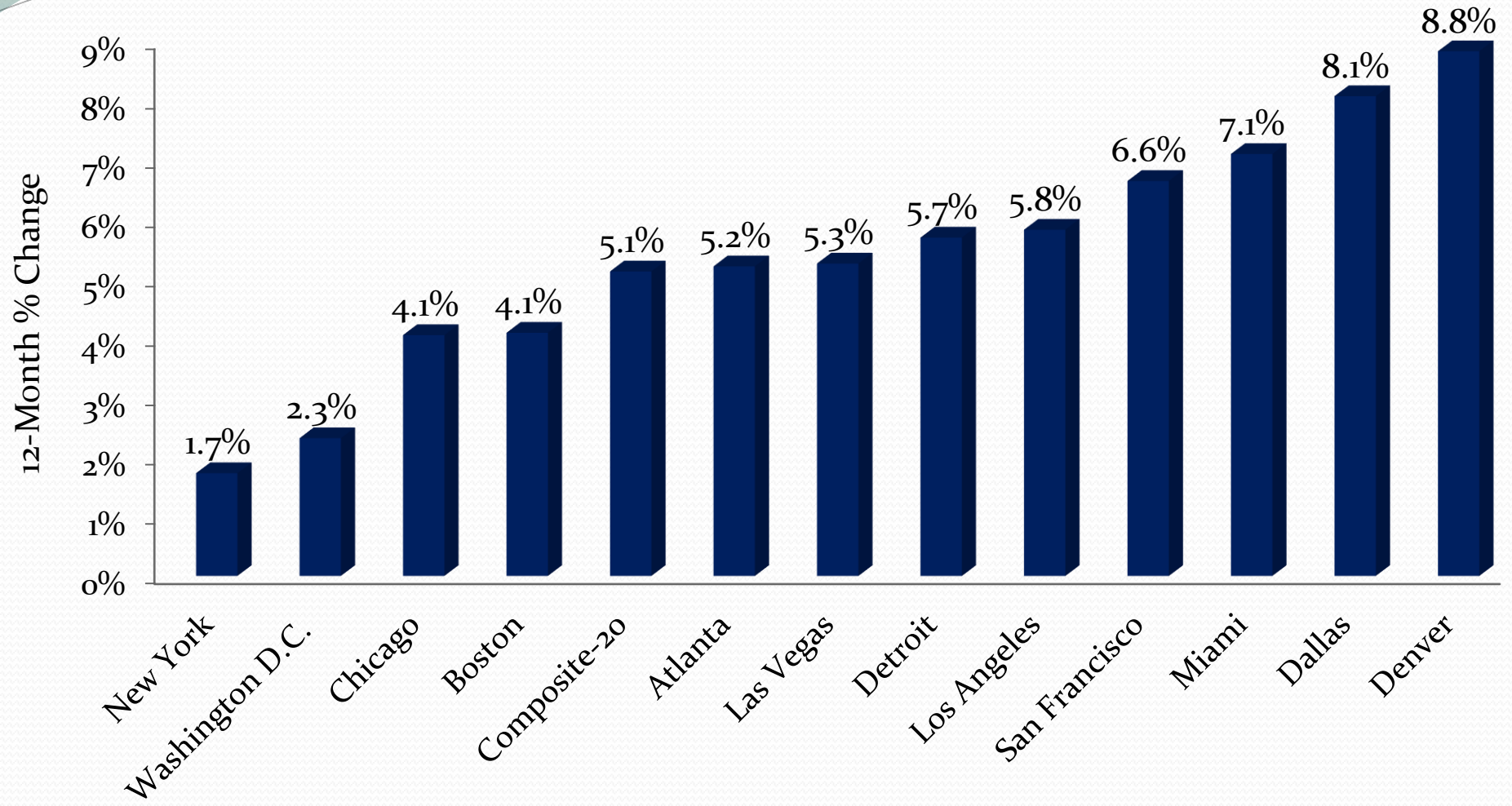# U.S. Private New Multifamily Construction
October 1993 through October 2016

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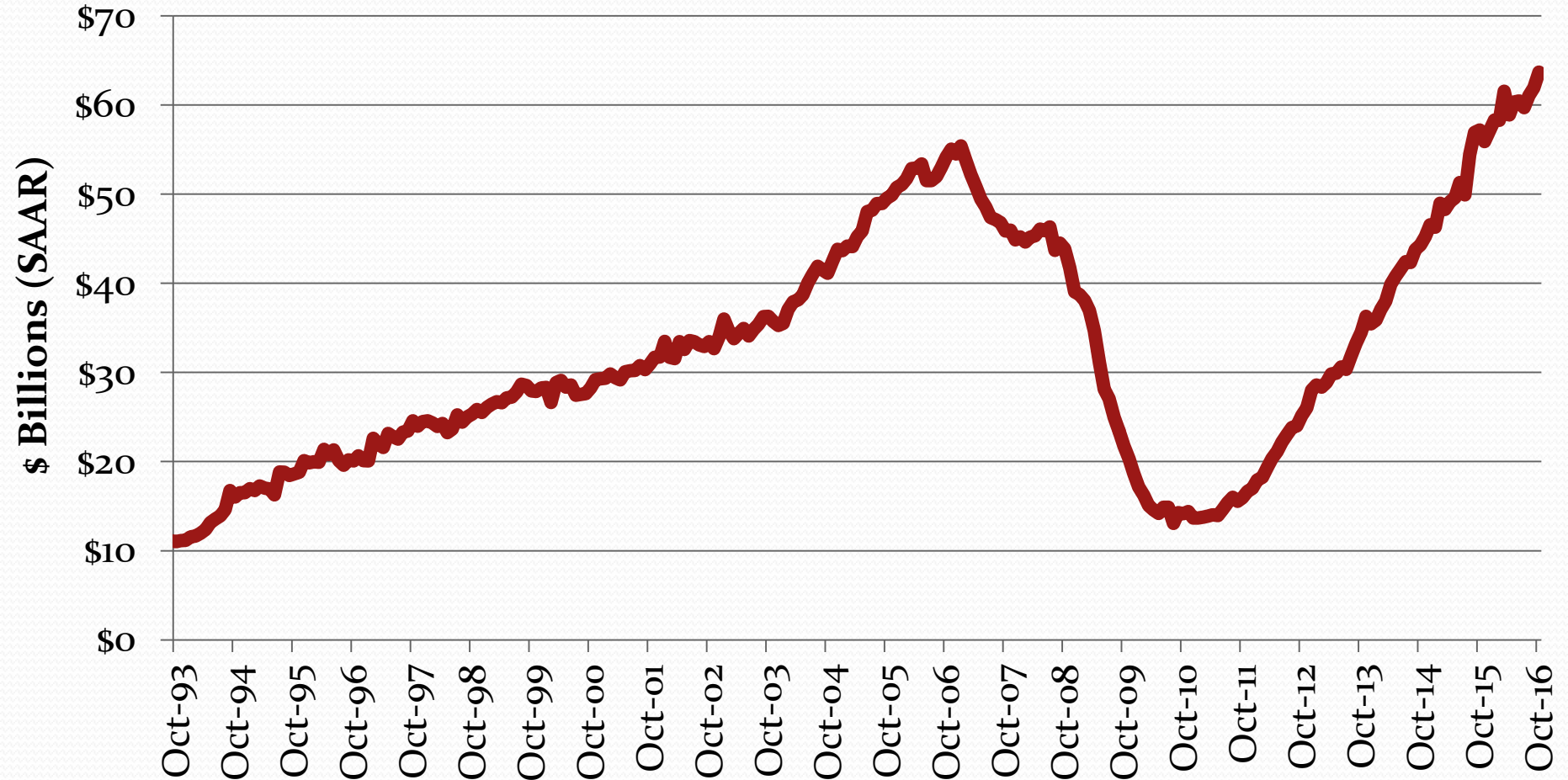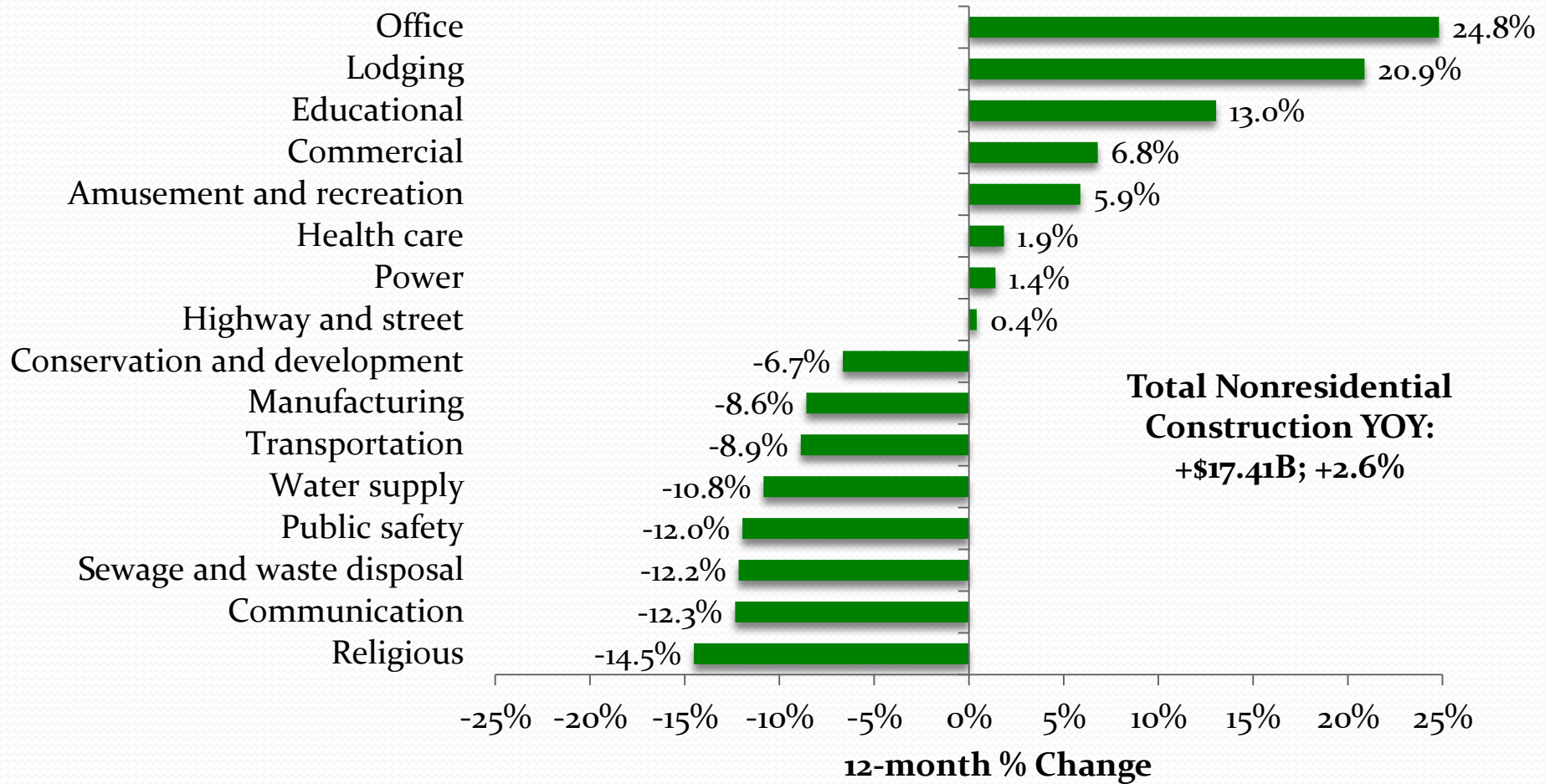
S&P/Case-Shiller Home Price Indices for Select Metros
September 2016, 12-Month Percentage Change

Source: Standard & Poor's

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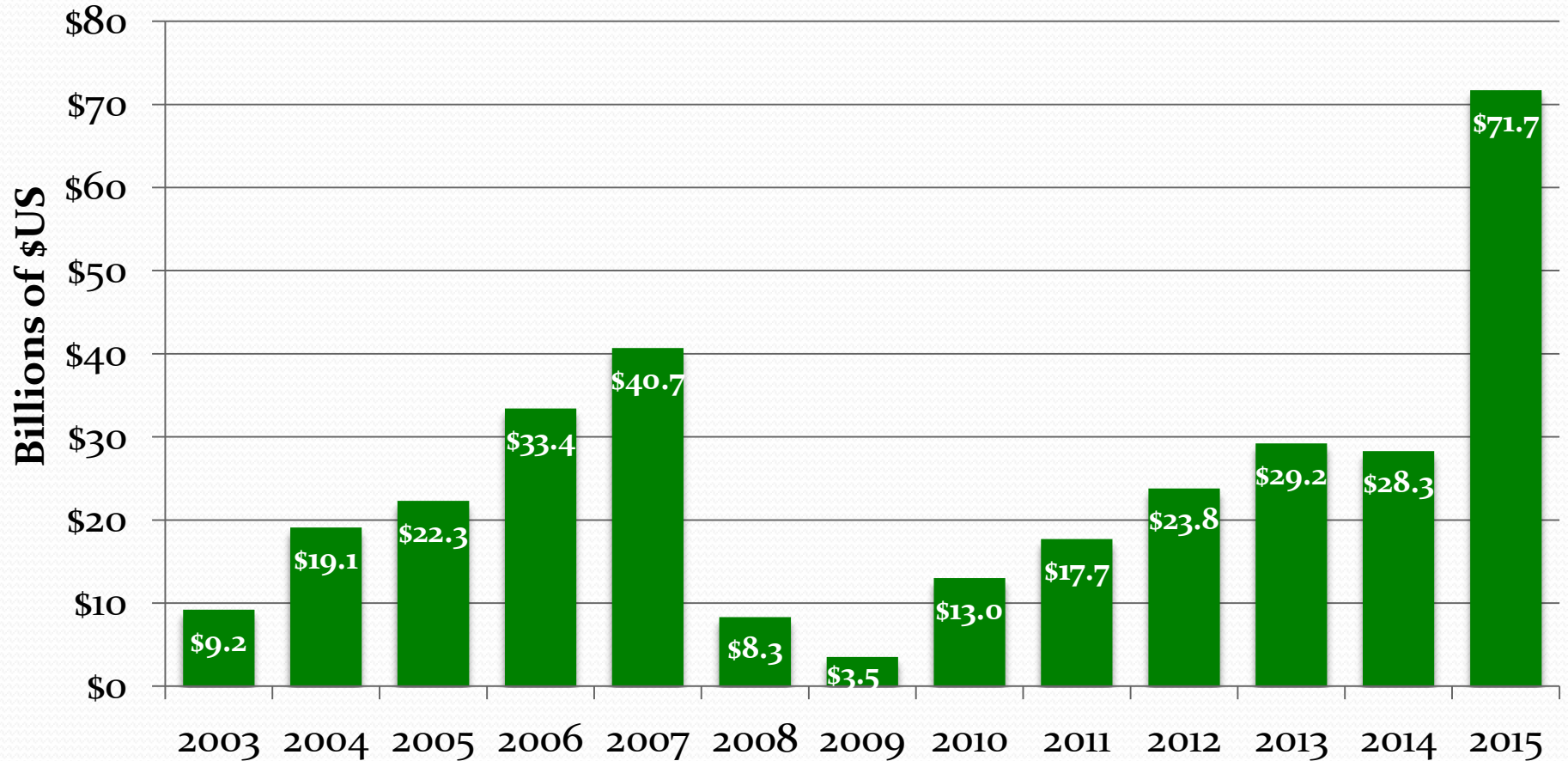
National Nonresidential Construction Spending by Subsector
October 2015 v. October 2016

Subsector	12-month % Change
Office	24.8%
Lodging	20.9%
Educational	13.0%
Commercial	6.8%
Amusement and recreation	5.9%
Health care	1.9%
Power	1.4%
Highway and street	0.4%
Conservation and development	-6.7%
Manufacturing	-8.6%
Transportation	-8.9%
Water supply	-10.8%
Public safety	-12.0%
Sewage and waste disposal	-12.2%
Communication	-12.3%
Religious	-14.5%

Total Nonresidential Construction YOY: +$17.41B; +2.6%

12-month % Change

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Commercial/Multifamily Offshore Investment Sales Volumes Reach New Heights in 2015

Billions of $US

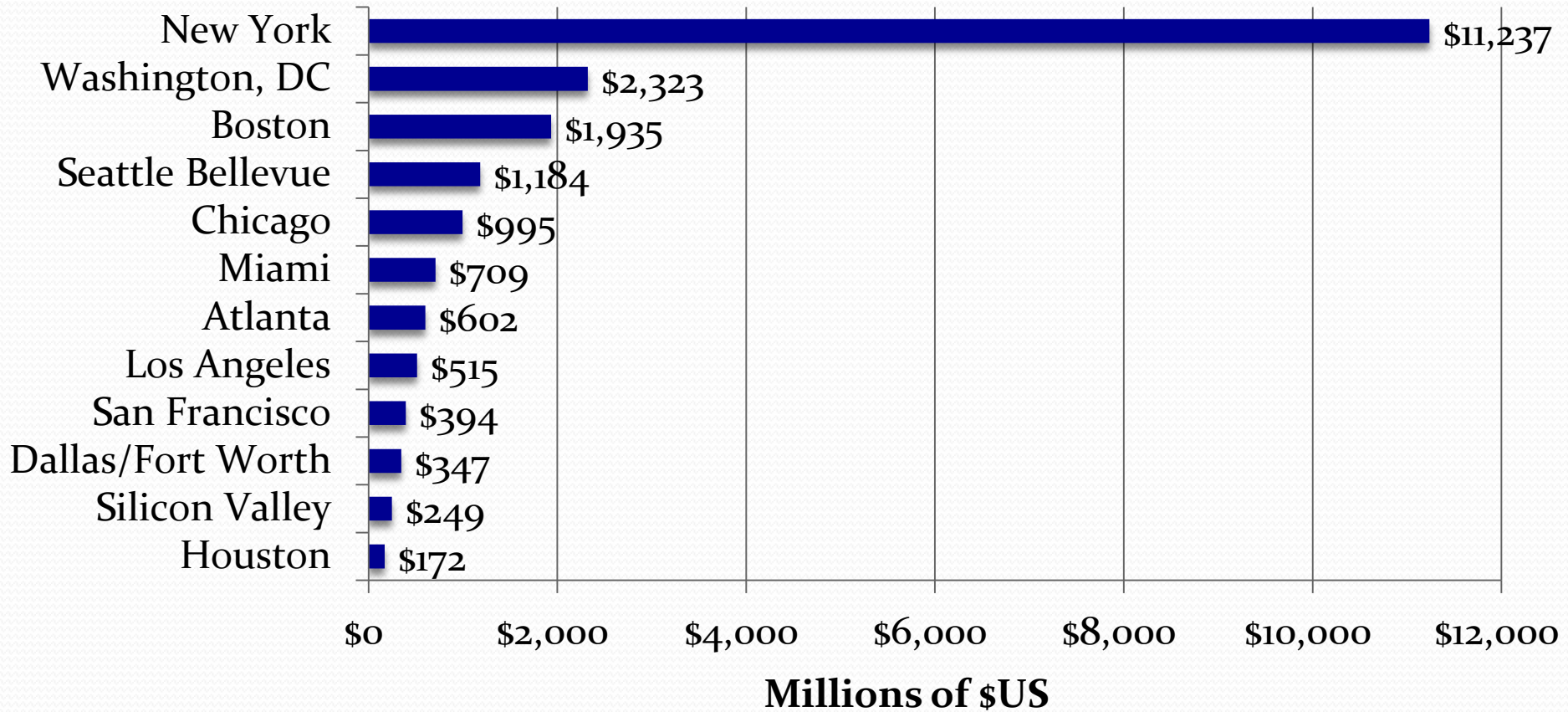| Year	Value
2003	$9.2
2004	$19.1
2005	$22.3
2006	$33.4
2007	$40.7
2008	$8.3
2009	$3.5
2010	$13.0
2011	$17.7
2012	$23.8
2013	$29.2
2014	$28.3
2015	$71.7

Note: Among transactions larger than $5.0 million

Foreign Investment Increases 153.4 Percent in 2015 to $71.7b

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Top Markets for Foreign Office Investment, 2015

Annual Foreign Office Investment Volume

Market	Investment (Millions of $US)
New York	$11,237
Washington, DC	$2,323
Boston	$1,935
Seattle Bellevue	$1,184
Chicago	$995
Miami	$709
Atlanta	$602
Los Angeles	$515
San Francisco	$394
Dallas/Fort Worth	$347
Silicon Valley	$249
Houston	$172

Millions of $US

Sage Policy Group, Inc.

Tomorrow Never Dies

*1997: Pierce Brosnan; Michelle Yeoh; Teri Hatcher

# Sales Growth by Type of Business
*November 2015 v. November 2016**

Type of Business	12-month % change
Internet, etc. Retailers	11.9%
Health & Personal Care Stores	6.2%
Miscellaneous Store Retailers	5.8%
Food Services & Drinking Places	4.9%
Building Material & Garden Supplies Dealers	4.3%
Furniture & Home Furn. Stores	4.1%
Gasoline Stations	4.0%
Motor Vehicle & Parts Dealers	3.3%
Food & Beverage Stores	3.1%
Clothing & Clothing Accessories Stores	0.9%
General Merchandise Stores	-1.3%
Sporting Goods, Hobby, Book & Music Stores	-1.4%
Electronics & Appliance Stores	-3.8%
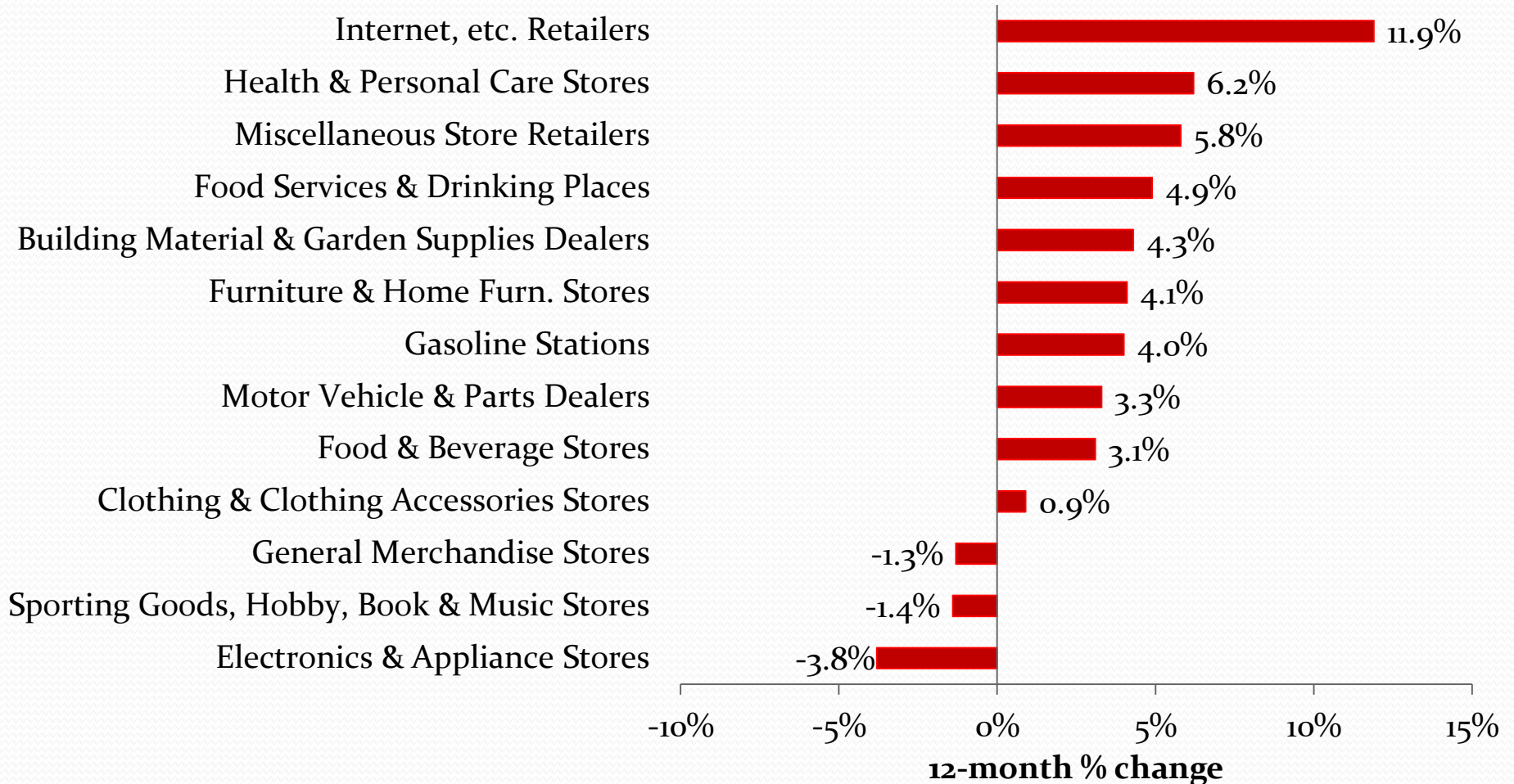
12-month % change

Total Retail Sales: +3.8% YOY

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Conference Board Leading Economic Indicators Index
August 2007 through October 2016

October 2016: 124.5
where 2010: 100

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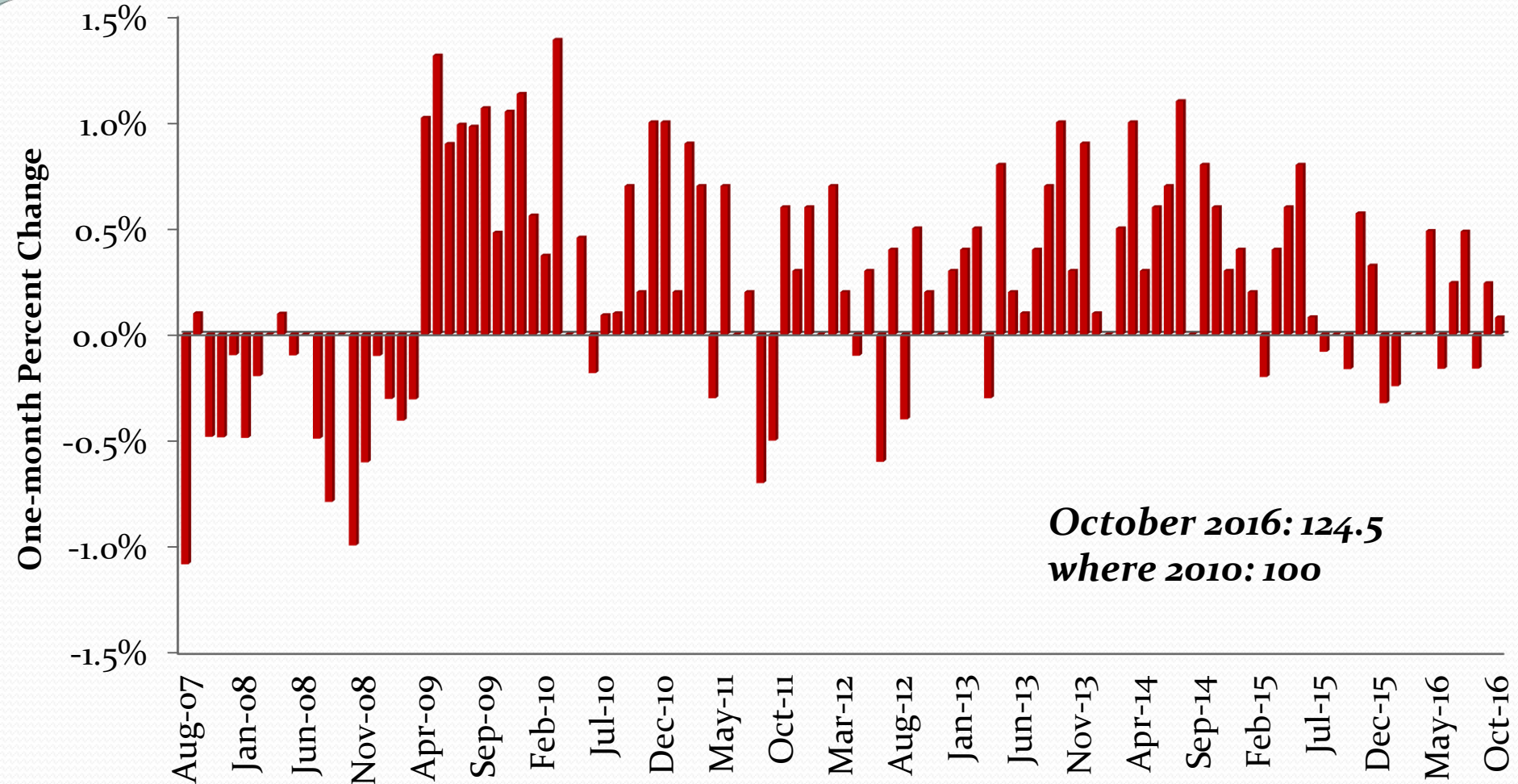
Dr. Know

- Turned out to be a disappointing year for the world. Everyone knows about China, Brexit and N. Korea, but we have had problems right here;

- Corporate profit margins had been slipping and inflationary pressures have been building – did not sound like a great recipe for stock prices or for corporate investment going forward;

- Only the consumer is really contributing significantly to growth;

- Job growth has been predictably decent, however – we ended 2015 with a near-record in total job openings and demand for human capital remains elevated;

- Wait, did that just happen? – did we elect, um, him?

- PREVIOUSLY: We may be transitioning very quickly from the mid-cycle stage of the recovery to the late-stage: 2017-18 outlook is murky, particularly 2018.

- NOW: Tax cuts and anticipated stimulus could keep economic weakness at bay until 2019-20.

*1962: Sean Connery; Ursula Andress

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Thank You

- Follow us on Twitter @SagePolicyGroup
- You can always reach me at abasu@sagepolicy.com
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- Please contact us when you require economic research & policy analysis.

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