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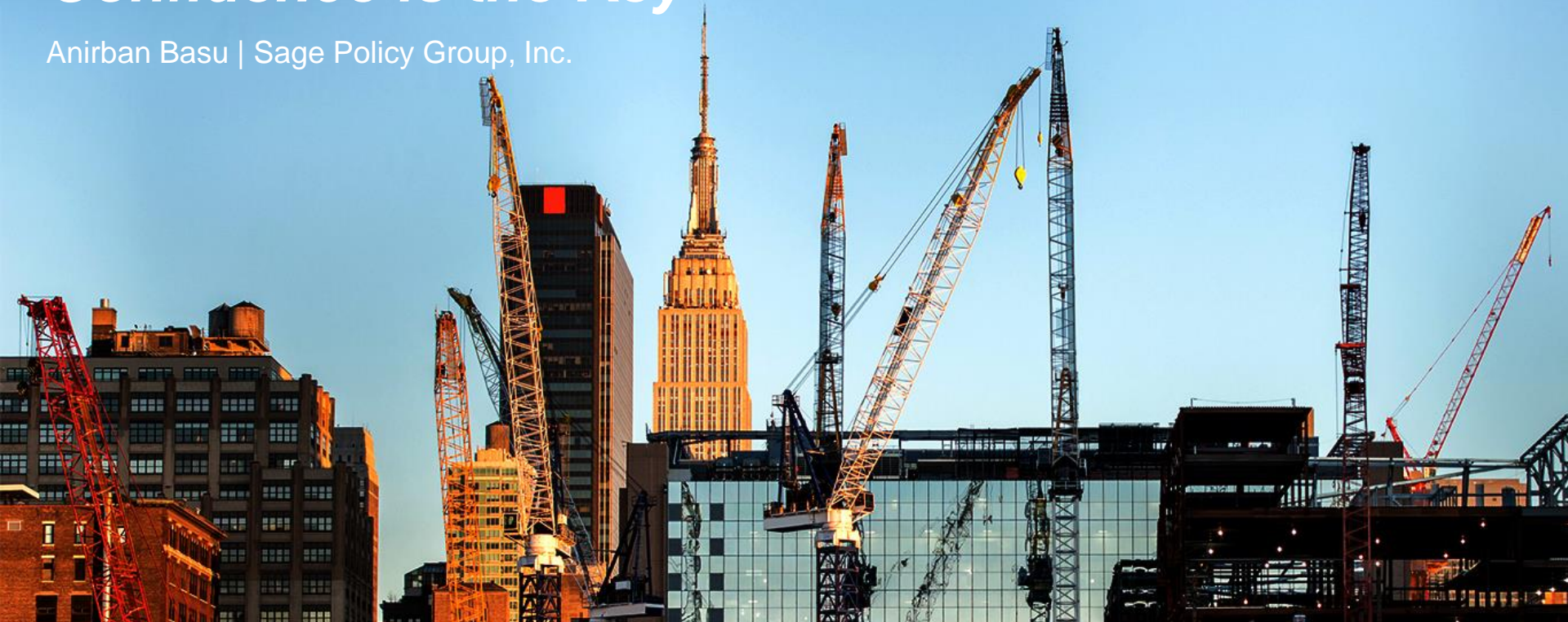


ConstructionOS

Construction Executive's 2018 Economic Forecast

Confidence is the Key

Anirban Basu | Sage Policy Group, Inc.





Construction Executive, a publication of Associated Builders and Contractors, reaches more than 50,000 contractors and construction-related business owners and has won more than 15 editorial awards. The magazine serves as a leading source for news, market developments and business issues impacting the construction industry. Each issue includes articles designed to help owners and top managers run a more profitable and productive construction business.

Presenter

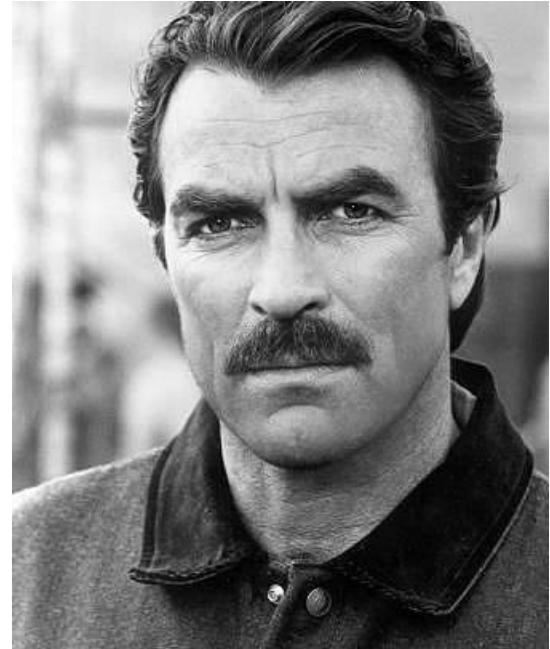


Anirban Basu

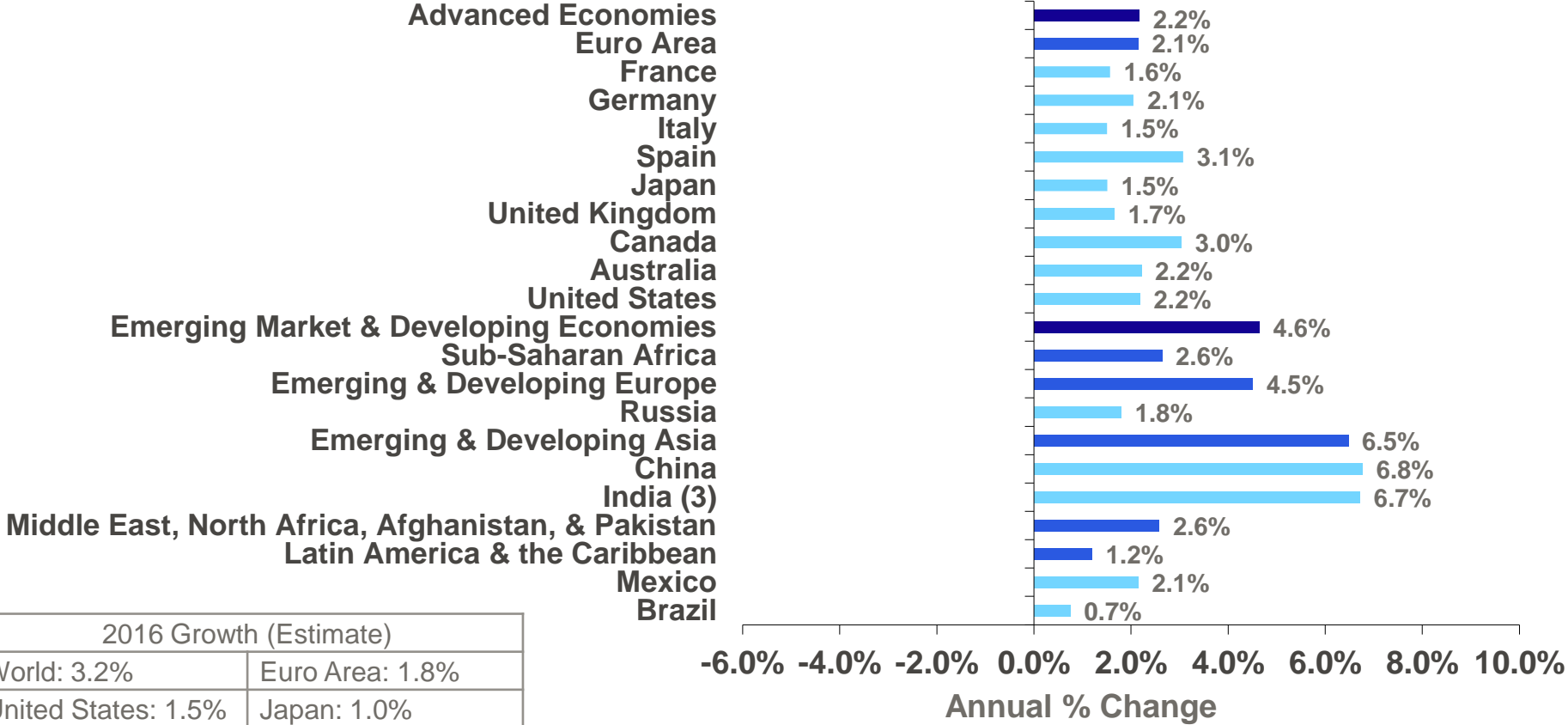
*Associated Builders and Contractors (ABC)'s Chief Economist
Chairman & CEO, Sage Policy Group, Inc.*

Macro P.I.

(Just How Hairy is the
Global Situation?)



Estimated Growth in Output by Select Global Areas, 2017 Projected



2016 Growth (Estimate)	
World: 3.2%	Euro Area: 1.8%
United States: 1.5%	Japan: 1.0%

Source: International Monetary Fund: World Economic Outlook Update, October 2017

2017 Proj. Global Output Growth: 3.6%

International Population Dynamics, 16 Largest Nations

Nation	Population (Millions)			% Change
	2017	2050	Net Change	
Nigeria	190.9	410.6	219.8	115.1%
Ethiopia	105.0	190.9	85.9	81.9%
Egypt	97.6	153.4	55.9	57.3%
Pakistan	197.0	306.9	109.9	55.8%
Philippines	104.9	151.3	46.4	44.2%
Mexico	129.2	164.3	35.1	27.2%
India	1,339.2	1,659.0	319.8	23.9%
Bangladesh	164.7	201.9	37.3	22.6%
Indonesia	264.0	321.6	57.6	21.8%
United States	324.5	389.6	65.1	20.1%
Vietnam	95.5	114.6	19.1	20.0%
Brazil	209.3	232.7	23.4	11.2%
China	1,409.5	1,364.5	-45.1	-3.2%
Germany	82.1	79.2	-2.9	-3.5%
Russian Federation	144.0	132.7	-11.3	-7.8%
Japan	127.5	108.8	-18.7	-14.7%
World	7.6 billion	9.8 billion	2.2 billion	29.4%

Niamey Vice

(Fertility Rates by Country, 2015)

Top 15		
Rank*	Country	Fertility Rate
1	Niger	7.29
2	Somalia	6.37
3	Dem. Rep. of the Congo	6.20
4	Mali	6.15
5	Chad	6.05
6	Burundi	5.78
7	Angola	5.77
8	Uganda	5.68
9	Timor-Leste	5.62
10	Nigeria	5.59
11	Gambia, The	5.49
12	Burkina Faso	5.44
13	Mozambique	5.31
14	Tanzania	5.08
15	Benin	5.05

Bottom 15		
Rank*	Country	Fertility Rate
187	Malta	1.42
188	Italy	1.37
188	Slovak Republic	1.37
190	Mauritius	1.36
191	Cyprus	1.35
192	Bosnia and Herzegovina	1.35
193	Poland	1.32
193	Spain	1.32
195	Greece	1.30
196	Macao SAR, China	1.28
197	Moldova	1.25
198	Singapore	1.24
199	Korea, Rep.	1.24
200	Portugal	1.23
201	Hong Kong SAR, China	1.20

*Rank among 200 countries for which data are available for the most recent year (2015)

**Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

Global Debt to Exacerbate Slow Growth?

- According to the IMF, global debt reached an **all-time high** in 2015;
- At **\$152 trillion**, global gross debt of the nonfinancial sector now represents **225% of global GDP**;
- About **2/3** of this debt is in the **private sector**;
- Current low nominal-growth environment is making adjustment difficult, setting the stage for a “**vicious feedback loop**” in which lower growth hampers deleveraging and the debt overhang exacerbates the slowdown.²

Note: The nonfinancial sector comprises the general government, nonfinancial firms, and households. Gross debt represents the unconsolidated liabilities of the three.

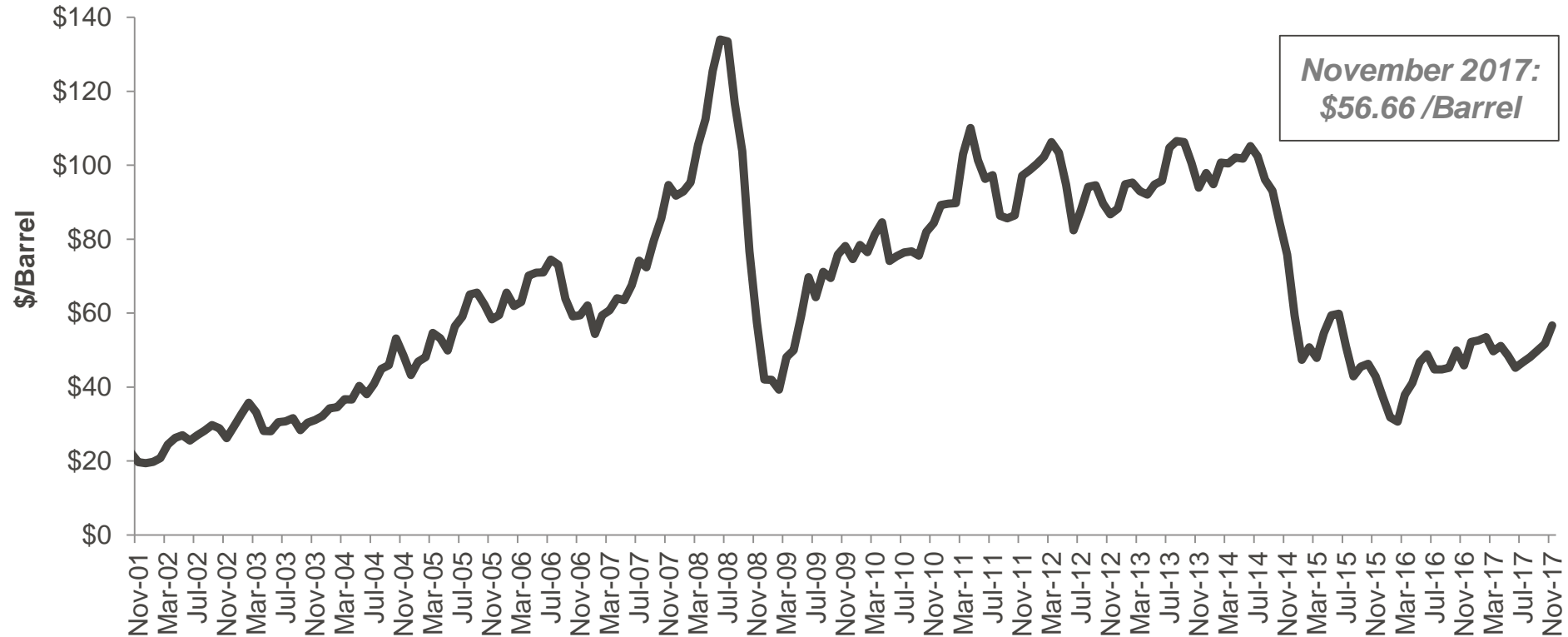
Sources: 1. International Monetary Fund. October 2016. “World Economic Outlook: Subdued Demand: Symptoms and Remedies.” 2. International Monetary Fund (IMF). October 2016. “Fiscal Monitor: Debt—Use It Wisely.”

Global Debt Reaches All Time Highs (IIF)

- According to the International Institute of Finance (IIF), global debt has reached an all-time high in 2016;
- At **\$215 trillion**, global debt—including household, government, and corporate—now represents **325% of global GDP**;
- Last year the IMF warned of risks to the global economy:
 - *“sheer size of debt could set the stage for an unprecedented private deleveraging process that could thwart the fragile economic recovery”*

NYMEX Crude Oil Future Prices in U.S. Dollars

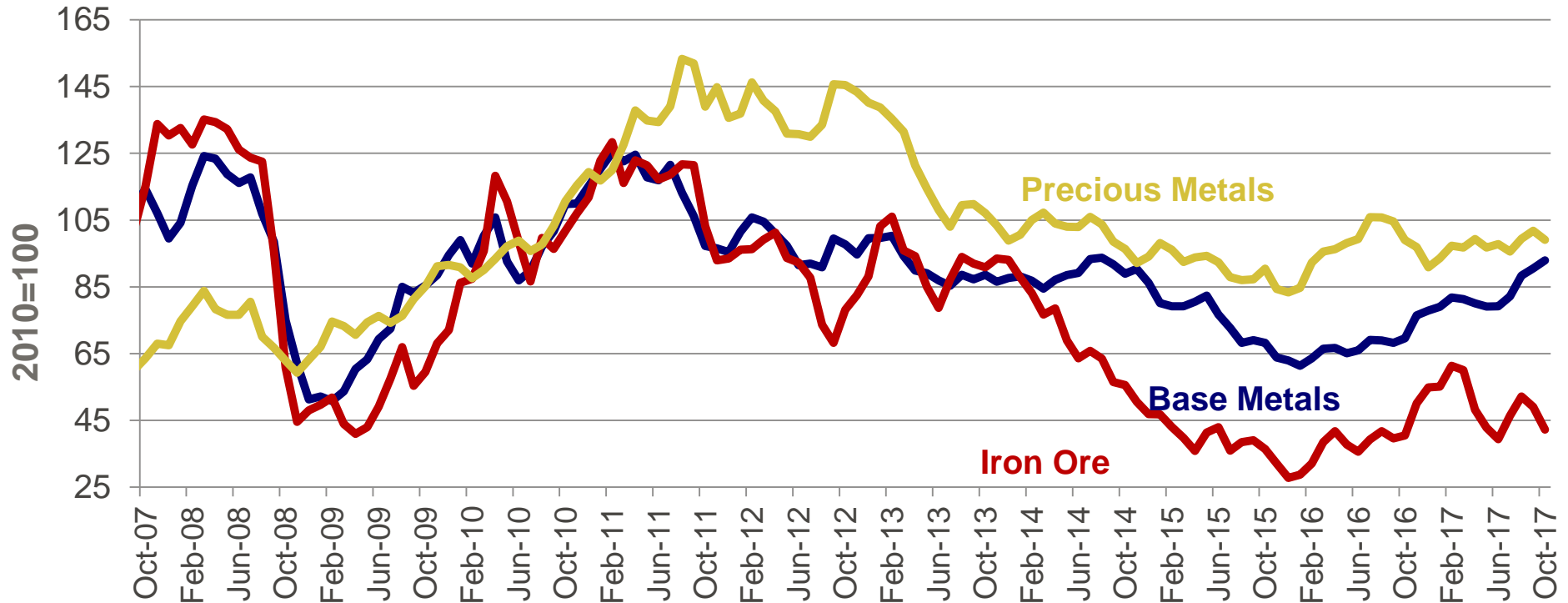
November 2001 through November 2017



November 2017:
\$56.66 /Barrel

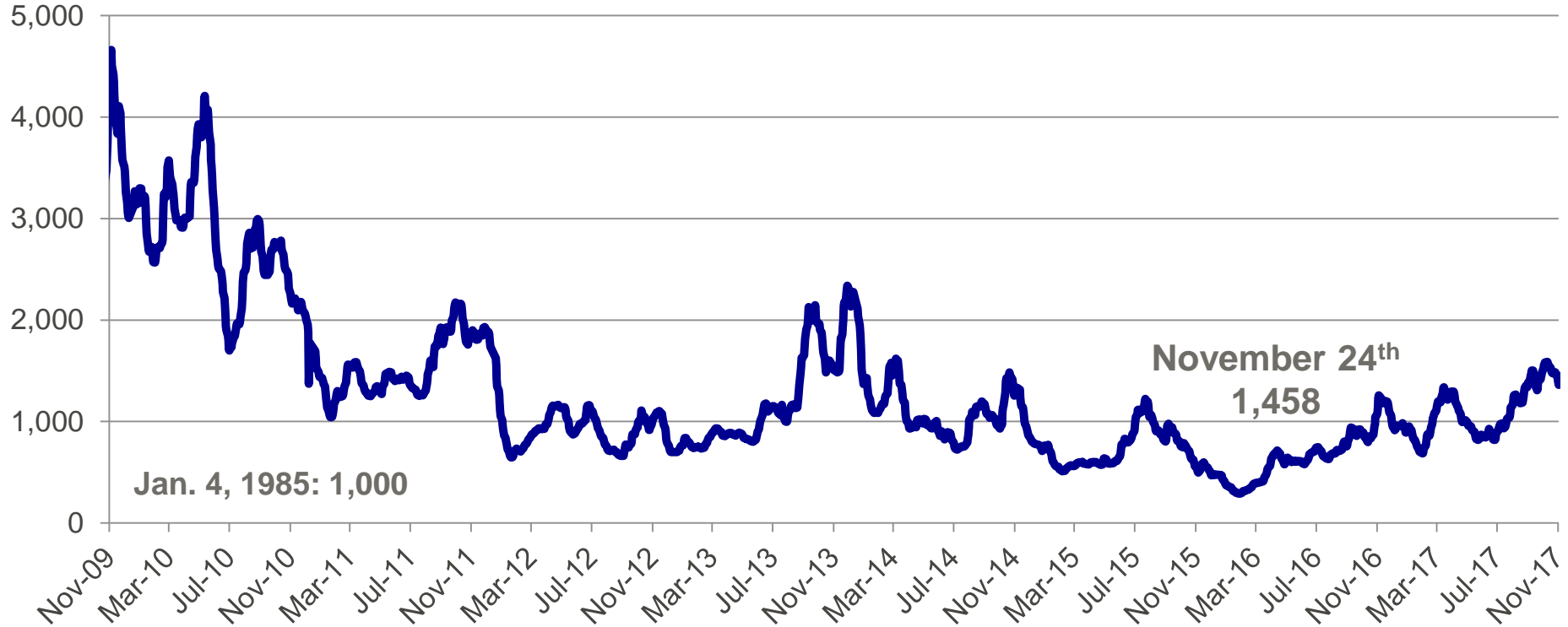
Metal Price Indices

October 2007 through October 2017



Baltic Dry Index

November 2009 through November 2017



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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.

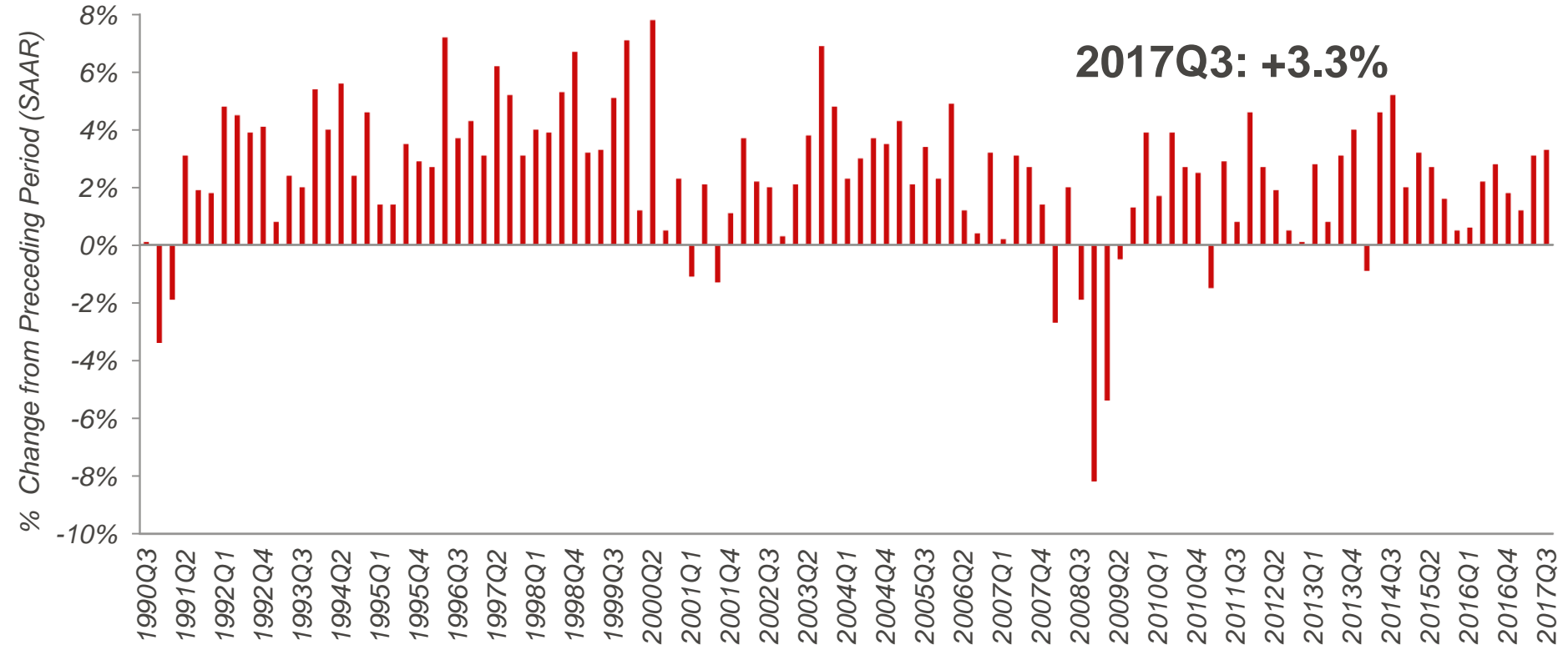
USA CSI



(Commercial Situation Investigation)

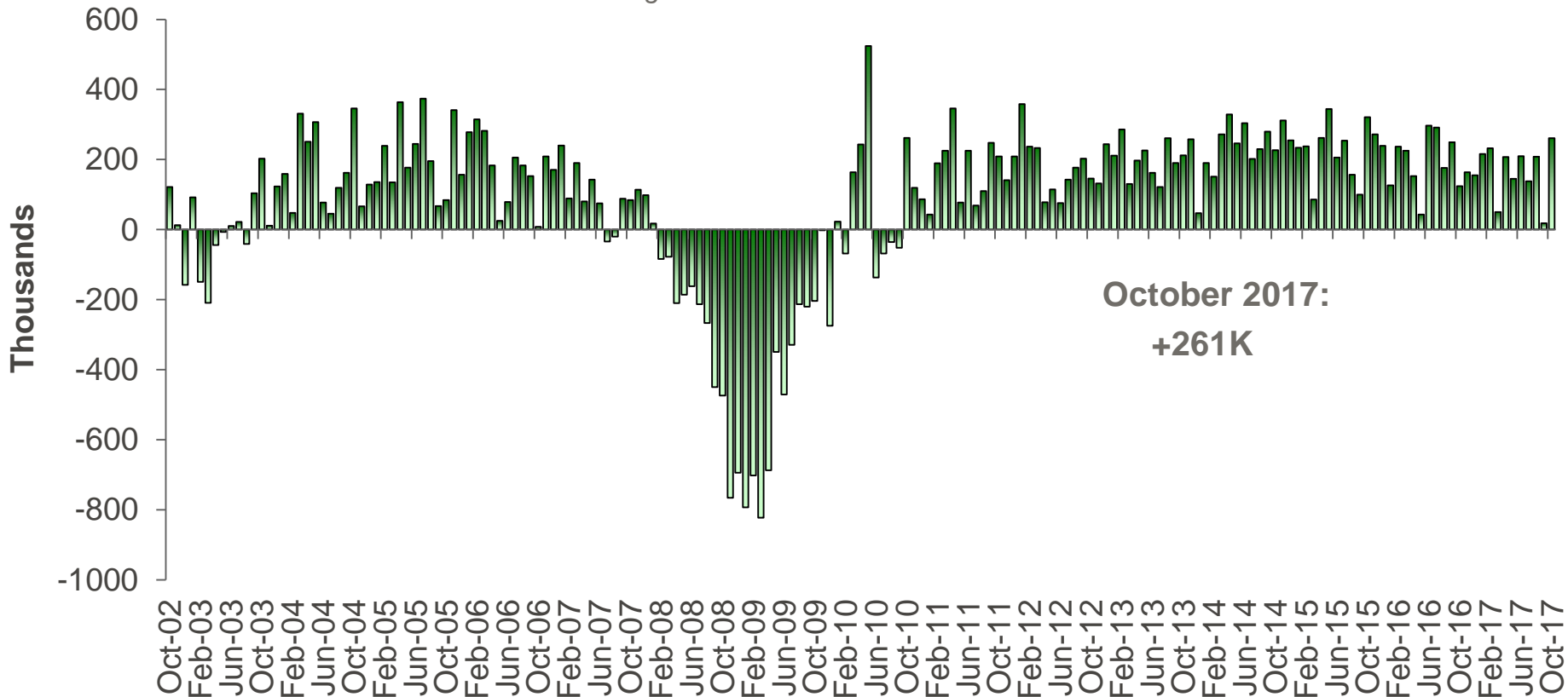
Gross Domestic Product

1990Q3 through 2017Q3*



Net Change in U.S. Jobs, BLS

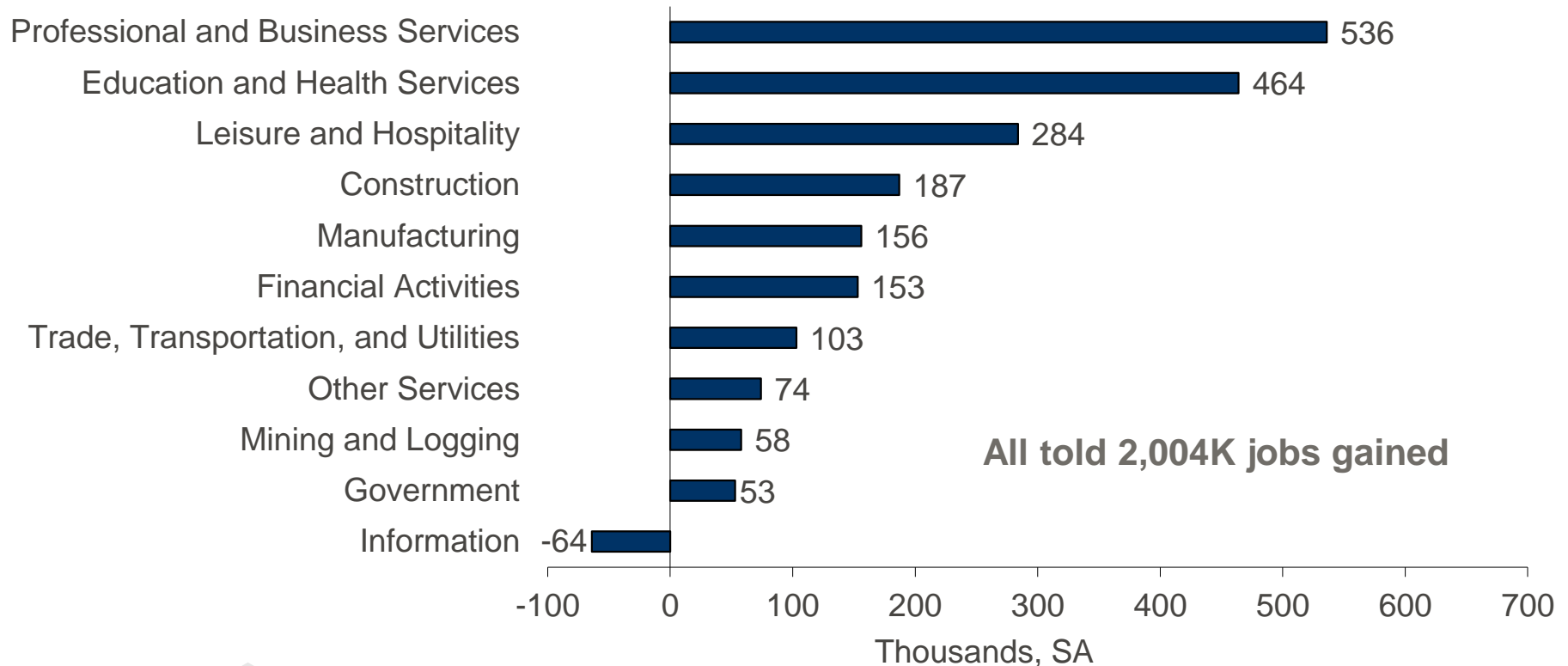
October 2002 through October 2017



October 2017:
+261K

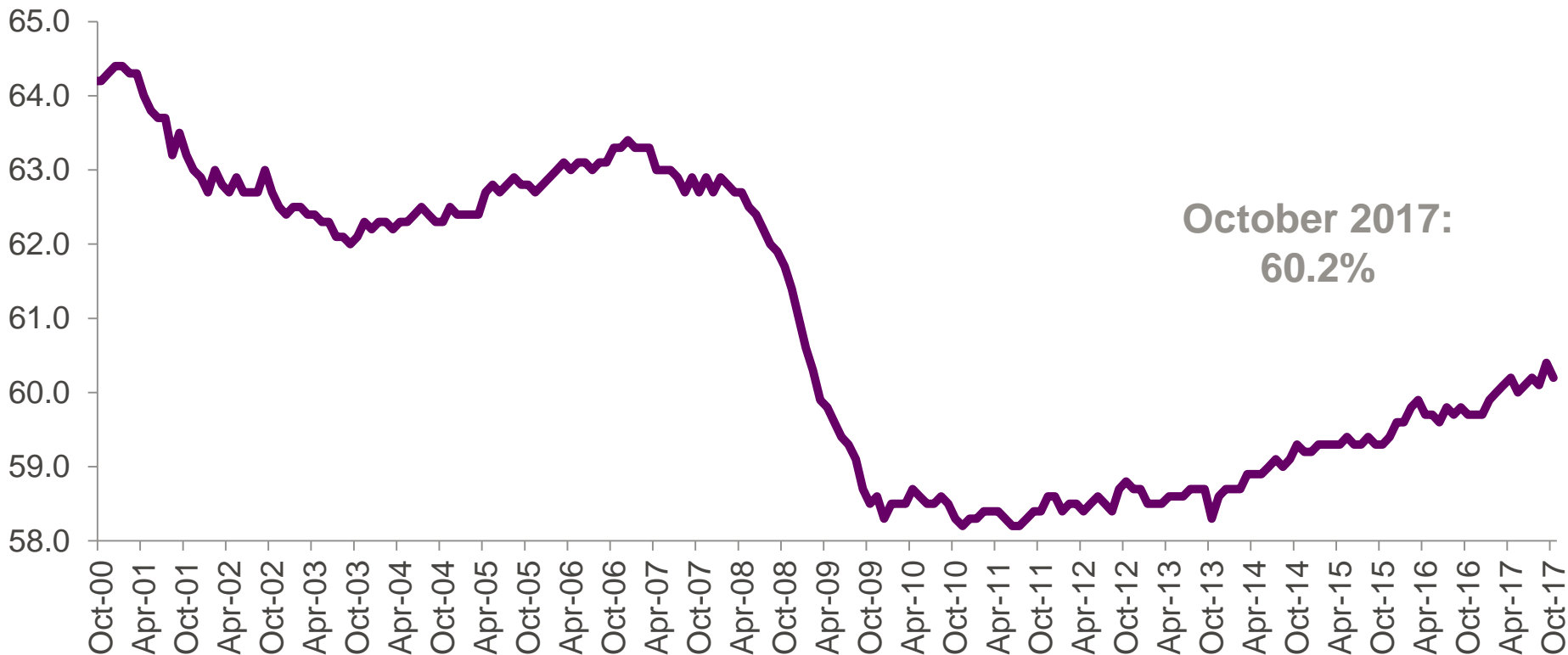
National Nonfarm Employment

by Industry Sector, *October 2016 v. October 2017*



U.S. Employment to Population Ratio

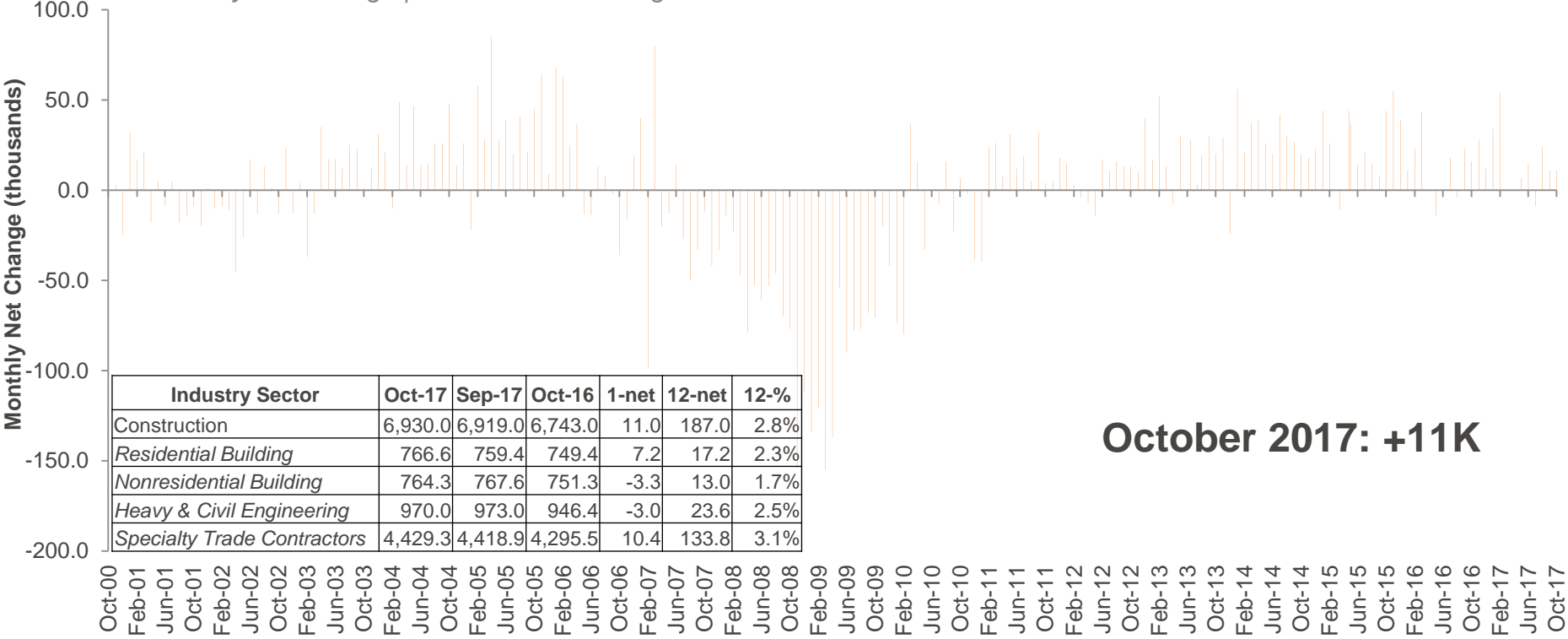
October 2000 – October 2017



October 2017:
60.2%

National Construction Employment

Monthly Net Change | October 2000 through October 2017



October 2017: +11K

Industry Sector	Oct-17	Sep-17	Oct-16	1-net	12-net	12-%
Construction	6,930.0	6,919.0	6,743.0	11.0	187.0	2.8%
Residential Building	766.6	759.4	749.4	7.2	17.2	2.3%
Nonresidential Building	764.3	767.6	751.3	-3.3	13.0	1.7%
Heavy & Civil Engineering	970.0	973.0	946.4	-3.0	23.6	2.5%
Specialty Trade Contractors	4,429.3	4,418.9	4,295.5	10.4	133.8	3.1%



Source: U.S. Bureau of Labor Statistics

Wait, There's More

- **Hurricane Harvey**

- + Damages estimated in excess of \$100 billion
- + \$40-55 billion in damage to homes and vehicles
- + \$10-20 billion in damage to businesses
- + \$5-15 billion in damage to infrastructure
- + 70% of damage occurred in areas where flood insurance is not required – so the degree of rebuilding is unclear.

- **Hurricane Irma**

- + Turn west significantly limited damages
- + Estimates place the total cost between \$60-90 billion
- + FL's Nonresidential building starts expanded 32% year-over year through first seven months of 2017
- + Storm damage and ensuing reconstruction will likely shift starts to categories like water and sewer, infrastructure, and healthcare.

State-by-State Growth in Construction Jobs

October 2016 v. October 2017

STATE	YoY Ch. ('000)	STATE	YoY Ch. ('000)	STATE	YoY Ch. ('000)
CALIFORNIA	44.4	ALABAMA	4.5	GEORGIA	0.8
FLORIDA	35.6	UTAH	4.1	HAWAII*	0.6
TEXAS	17.2	COLORADO	3.5	VERMONT	0.3
OREGON	10.7	MICHIGAN	3.3	WYOMING	0.3
NEVADA	10.6	ARIZONA	3.0	DELAWARE*	0.3
WASHINGTON	10.5	INDIANA	3.0	CONNECTICUT	0.1
OHIO	9.6	NEW HAMPSHIRE	2.5	MISSISSIPPI	0.1
MARYLAND*	8.4	WEST VIRGINIA	2.4	ALASKA	-0.1
PENNSYLVANIA	8.3	VIRGINIA	2.3	DISTRICT OF COLUMBIA*	-0.1
NEW YORK	8.1	RHODE ISLAND	2.2	SOUTH CAROLINA	-0.2
LOUISIANA	7.1	KANSAS	2.1	SOUTH DAKOTA*	-0.3
MASSACHUSETTS	6.9	NEW MEXICO	2.0	NEBRASKA*	-1.1
OKLAHOMA	5.8	ARKANSAS	1.9	NORTH DAKOTA	-1.3
NEW JERSEY	5.7	IDAHO	1.9	NORTH CAROLINA	-3.3
KENTUCKY	5.6	WISCONSIN	1.8	ILLINOIS	-3.5
MINNESOTA	5.1	MONTANA	1.5	IOWA	-5.3
TENNESSEE*	5.1	MAINE	1.0	MISSOURI	-5.8

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**U.S. Year-over-year Net
Change: +187K**

Source: U.S. Bureau of Labor Statistics
*Construction, Mining, and Logging are included in one industry.

State-by-State Employment Growth

October 2016 v. October 2017 Percent Change

STATE	%	STATE	%	STATE	%
NEVADA	2.8	MINNESOTA	1.5	IOWA	0.9
UTAH	2.7	COLORADO	1.4	NEW HAMPSHIRE	0.9
TEXAS	2.6	WISCONSIN	1.4	RHODE ISLAND	0.9
OREGON	2.5	ARIZONA	1.2	VIRGINIA	0.9
IDAHO	2.4	MONTANA	1.2	MAINE	0.8
FLORIDA	2.3	OKLAHOMA	1.2	DELAWARE	0.7
SOUTH CAROLINA	2.1	TENNESSEE	1.2	NEW JERSEY	0.7
WASHINGTON	2.1	HAWAII	1.1	MISSISSIPPI	0.6
MARYLAND	2.0	MISSOURI	1.1	NORTH DAKOTA	0.6
GEORGIA	2.0	NEW YORK	1.1	LOUISIANA	0.4
ARKANSAS	1.9	OHIO	1.1	WEST VIRGINIA	0.4
MASSACHUSETTS	1.9	PENNSYLVANIA	1.1	ILLINOIS	0.3
NORTH CAROLINA	1.7	MICHIGAN	1.0	ALASKA	0.1
NEW MEXICO	1.6	NEBRASKA	1.0	CONNECTICUT	0.1
ALABAMA	1.5	VERMONT	1.0	SOUTH DAKOTA	0.1
CALIFORNIA	1.5	DISTRICT OF COLUMBIA	0.9	KANSAS	-0.4
KENTUCKY	1.5	INDIANA	0.9	WYOMING	-0.5

Unemployment Rates, 24 Largest Metros (NSA)

October 2017

Rank	MSA	UR	Rank	MSA	UR
1	Minneapolis-St. Paul-Bloomington, MN-WI MSA	2.3	12	Charlotte-Concord-Gastonia, NC-SC MSA	3.9
2	Denver-Aurora-Lakewood, CO MSA	2.6	12	Miami-Fort Lauderdale-West Palm Beach, FL MSA	3.9
3	St. Louis, MO-IL MSA (1)	2.7	12	Portland-Vancouver-Hillsboro, OR-WA MSA	3.9
4	Dallas-Fort Worth-Arlington, TX MSA	3.0	16	Seattle-Tacoma-Bellevue, WA MSA	4.0
4	San Francisco-Oakland-Hayward, CA MSA	3.0	17	Atlanta-Sandy Springs-Roswell, GA MSA	4.1
6	Boston-Cambridge-Nashua, MA-NH Metro NECTA	3.1	17	Houston-The Woodlands-Sugar Land, TX MSA	4.1
7	Orlando-Kissimmee-Sanford, FL MSA	3.2	17	Los Angeles-Long Beach-Anaheim, CA MSA	4.1
8	Tampa-St. Petersburg-Clearwater, FL MSA	3.3	20	Detroit-Warren-Dearborn, MI MSA	4.2
9	Washington-Arlington-Alexandria, DC-VA-MD-WV MSA	3.6	21	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA	4.4
10	Phoenix-Mesa-Scottsdale, AZ MSA	3.7	22	New York-Newark-Jersey City, NY-NJ-PA MSA	4.6
10	San Diego-Carlsbad, CA MSA	3.7	23	Chicago-Naperville-Elgin, IL-IN-WI MSA	4.7
12	Baltimore-Columbia-Towson, MD MSA	3.9	24	Riverside-San Bernardino-Ontario, CA MSA	4.8

U.S. Unemployment Rate: 4.1%

21 Jump Street

(And Other Addresses of Interest)

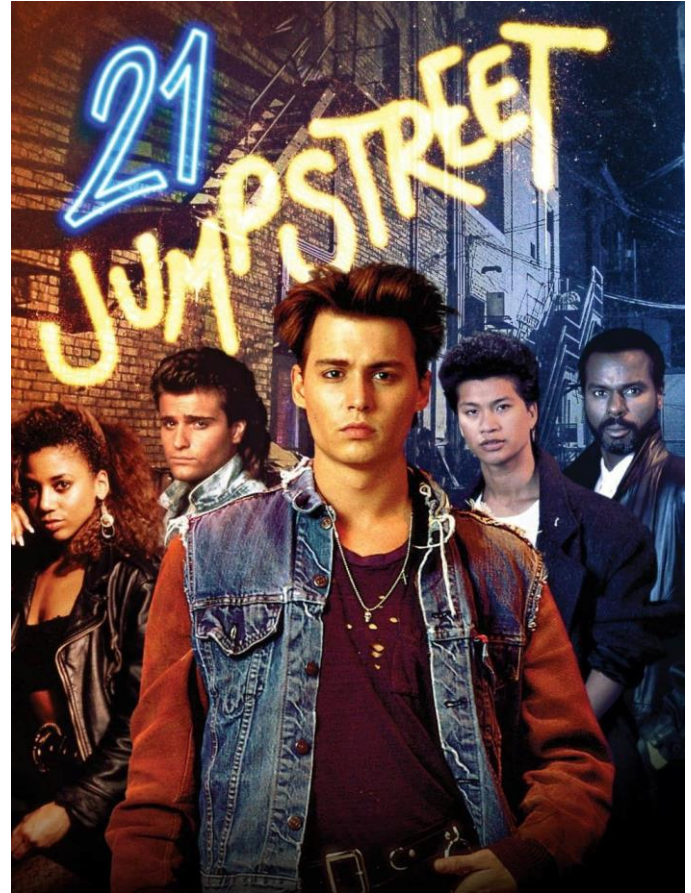
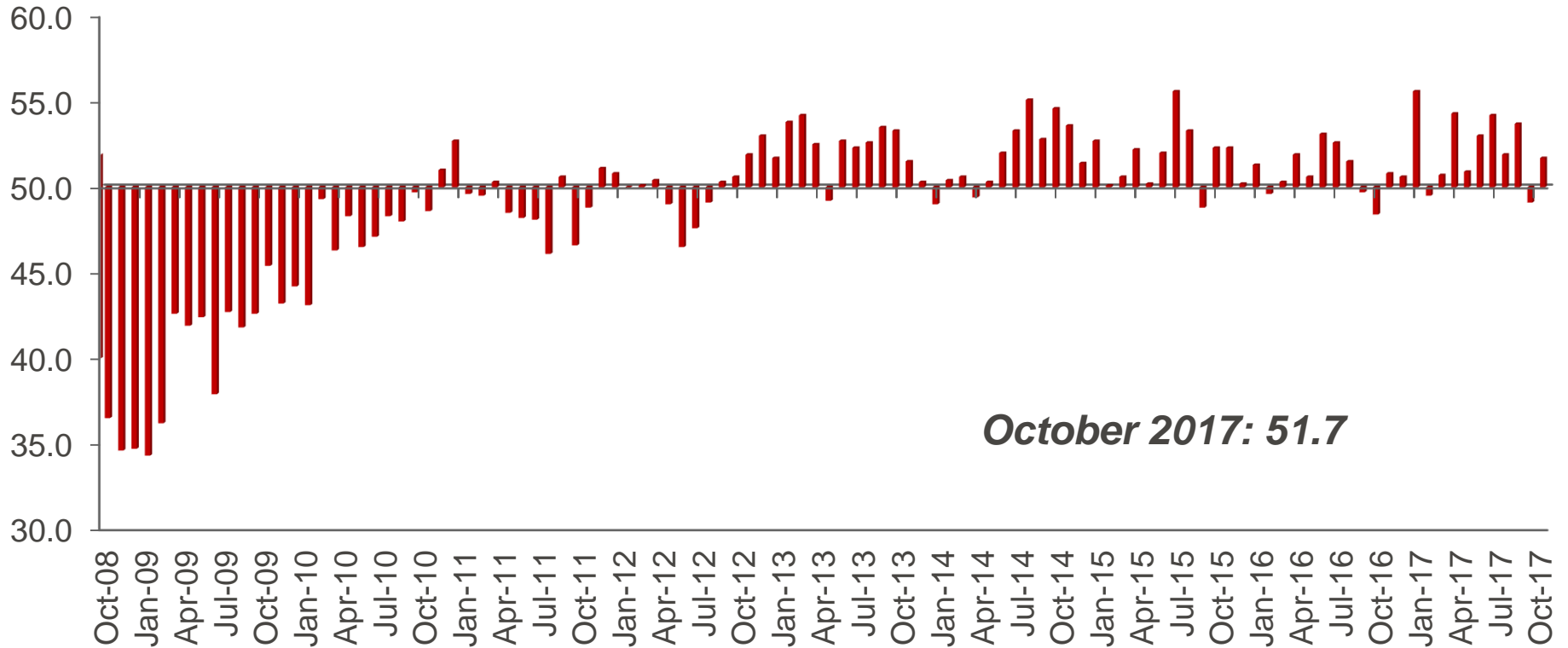


Photo: TheMoveDatabase.org

Architecture Billings Index

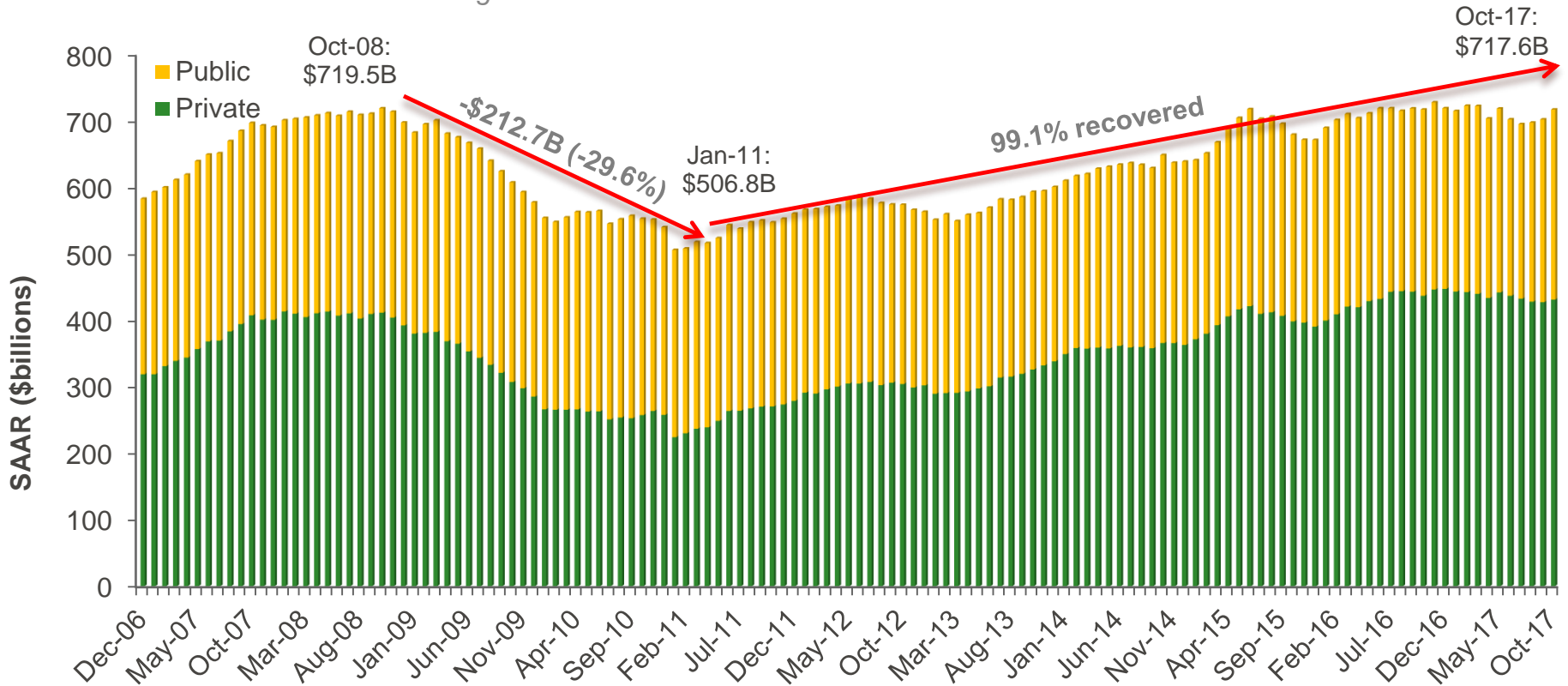
October 2008 through October 2017



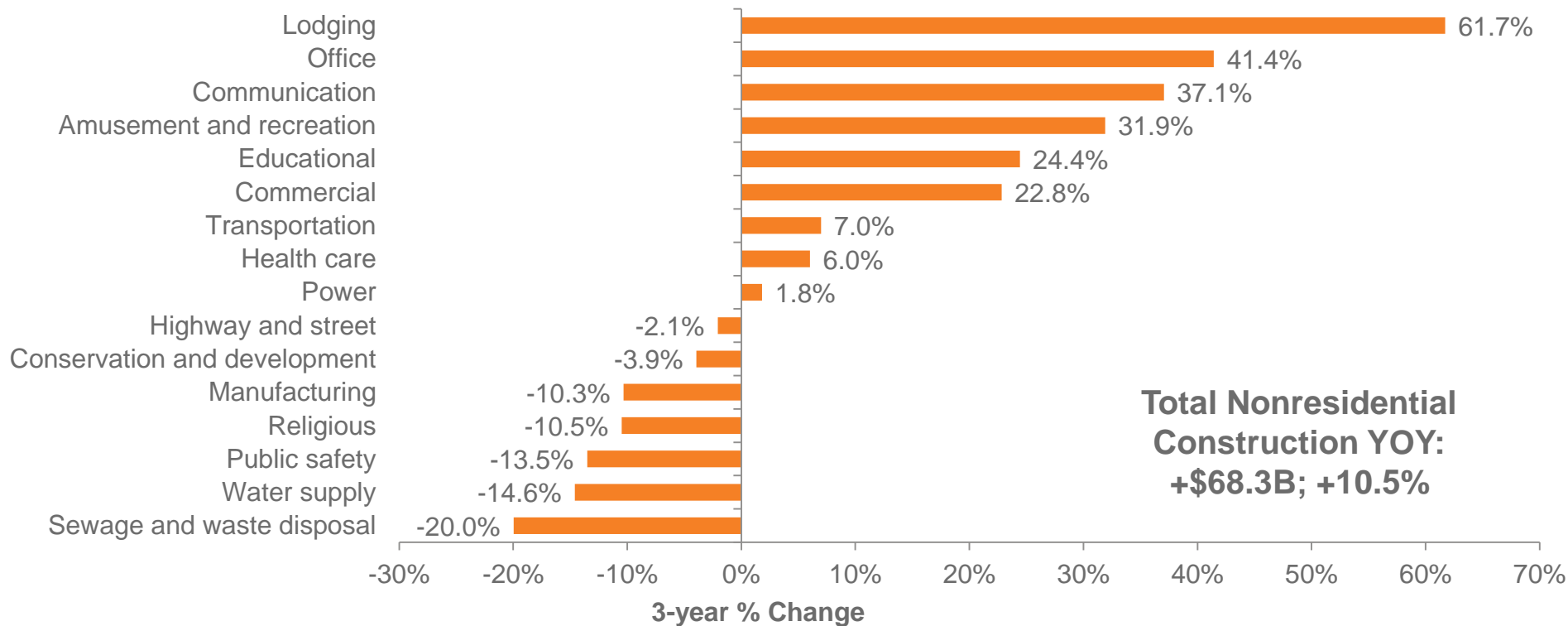
October 2017: 51.7

Nonresidential Construction Put-in-Place

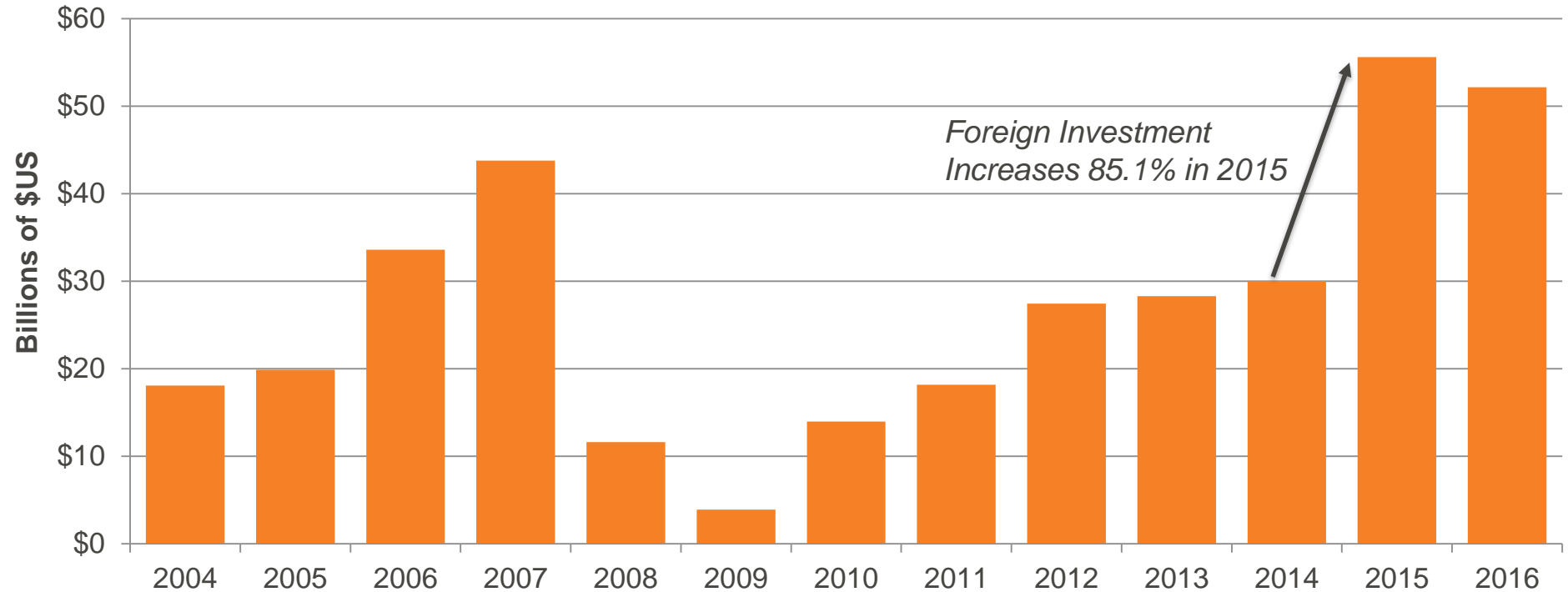
December 2006 through October 2017



National Nonresidential Construction Spending by Subsector: October 2014 v. October 2017



Commercial/Multifamily Offshore Investment Sale Volumes Reach New Heights in 2015/16



Cross-border investment remained elevated in 2016: Although down relative to a record 2015, offshore investment levels still exceeded the pre-2015 high in 2007.

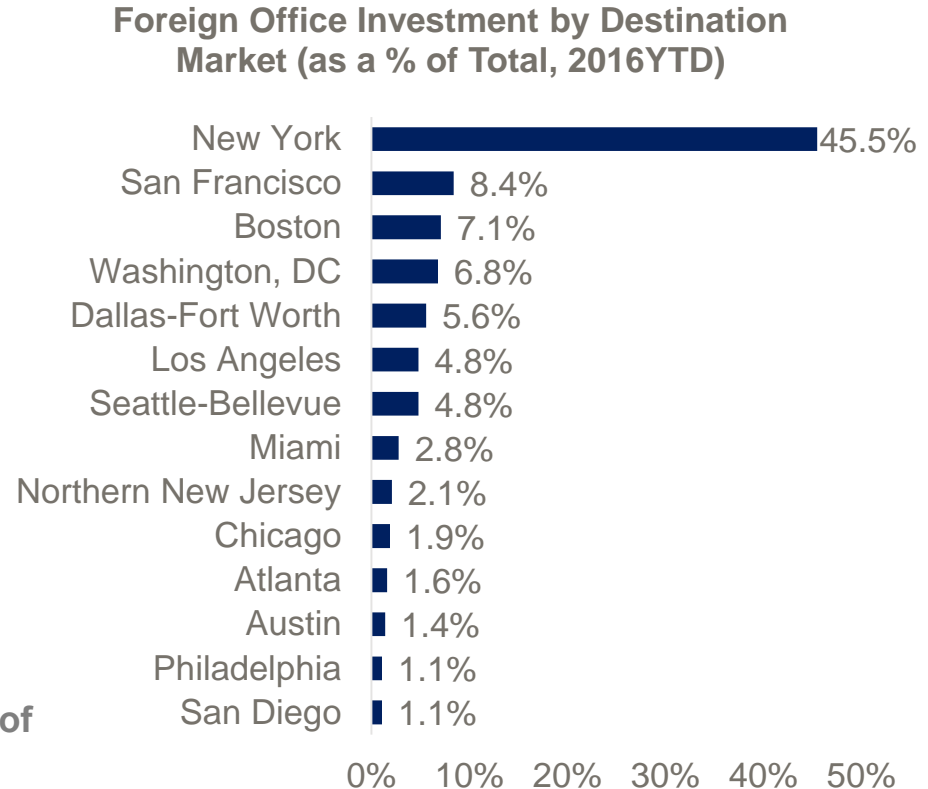
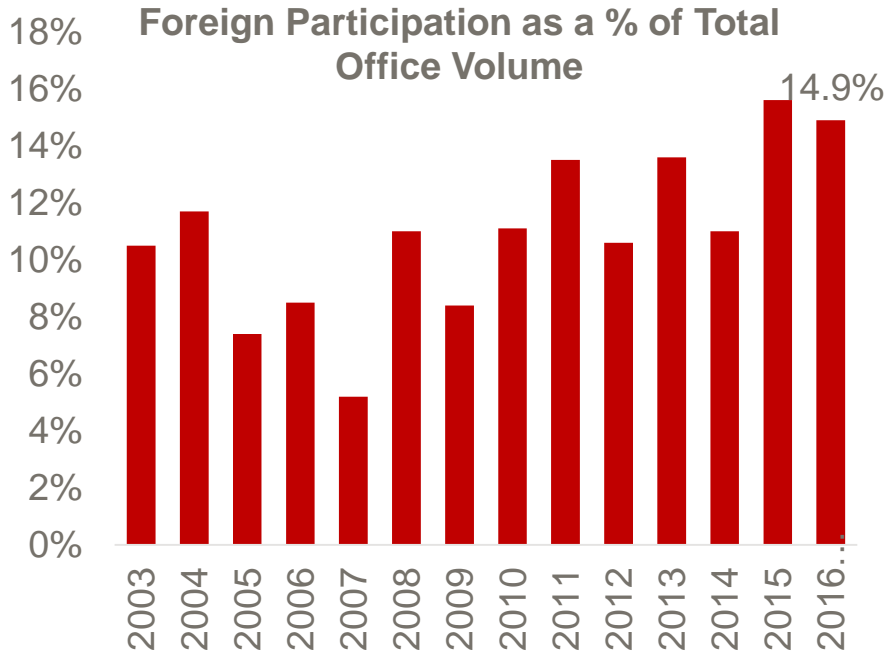
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Source: Jones Lang LaSalle; Real Capital Analytics | Note: Among transactions larger than \$5.0 million

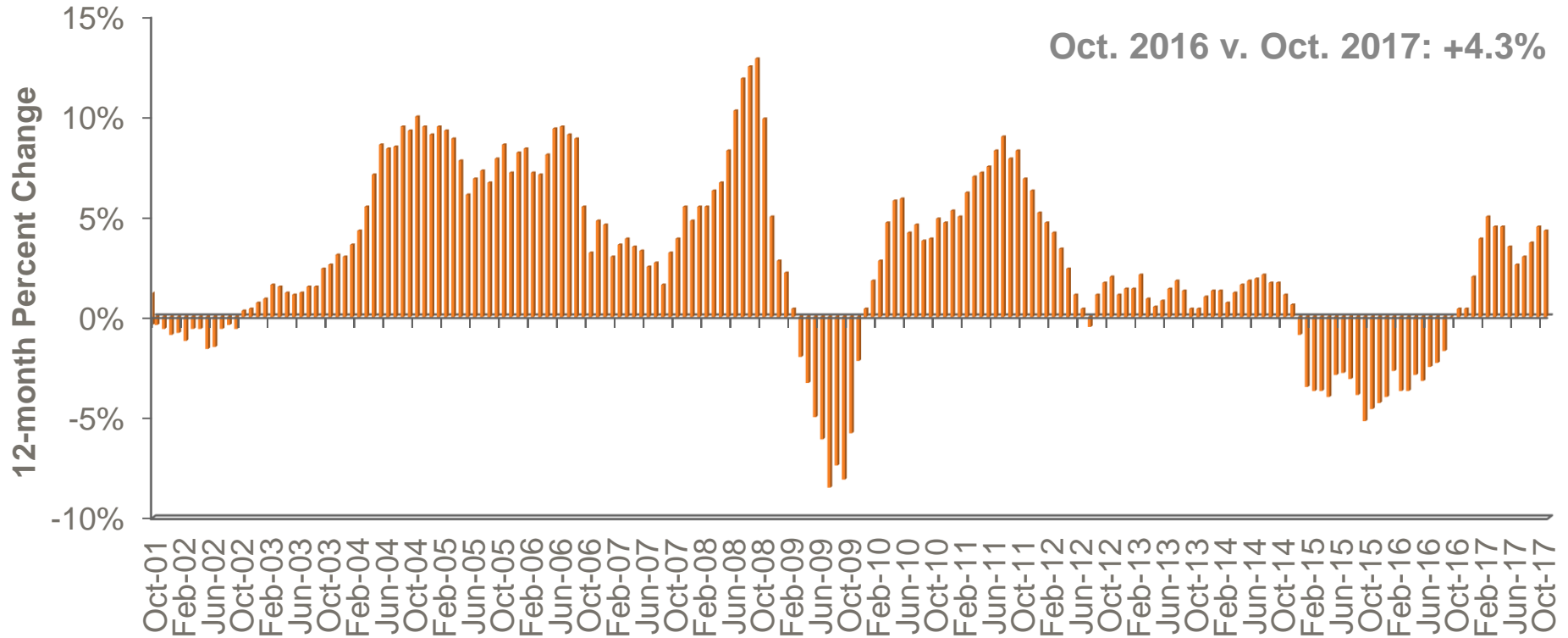
Foreign Office Investment Activity, as of 2016Q3



Primary markets continue to capture the lion's share of inbound capital, receiving 78.2% of this capital YTD.

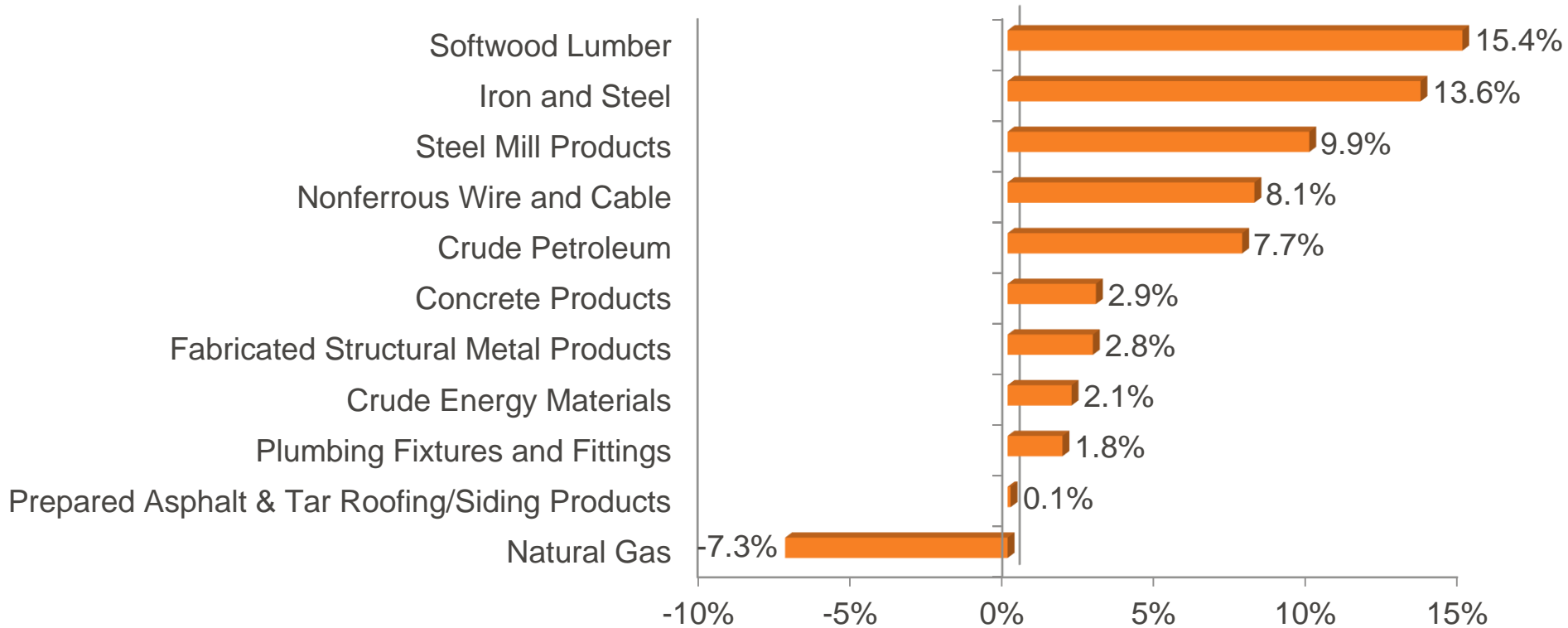
Inputs to Construction PPI (NSA)

October 2001 through October 2017



Construction Materials PPI (NSA)

12-month % change as of October 2017



Down to “The Wire”

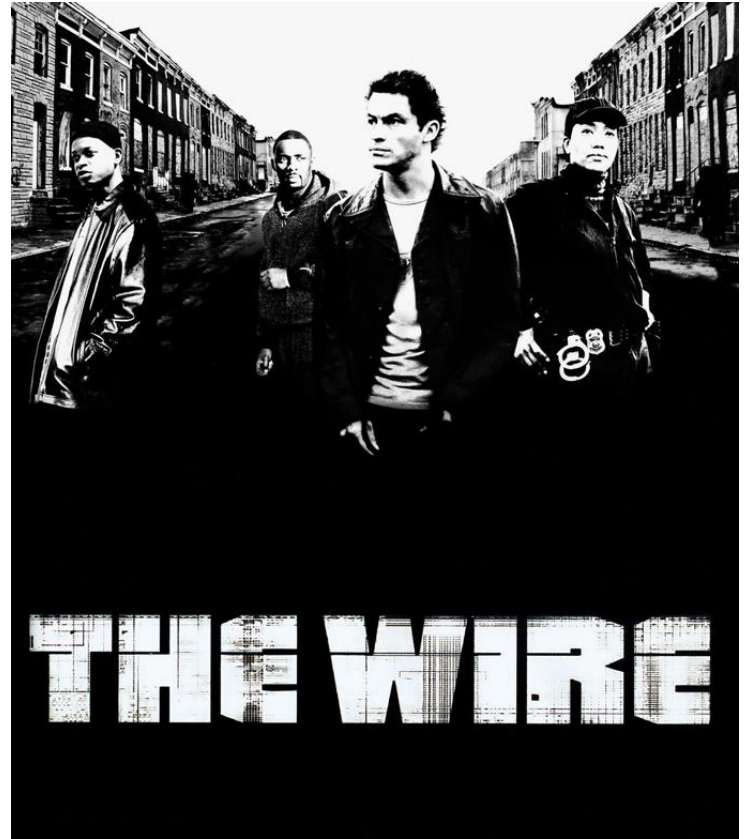


Photo: RecapGuide.com

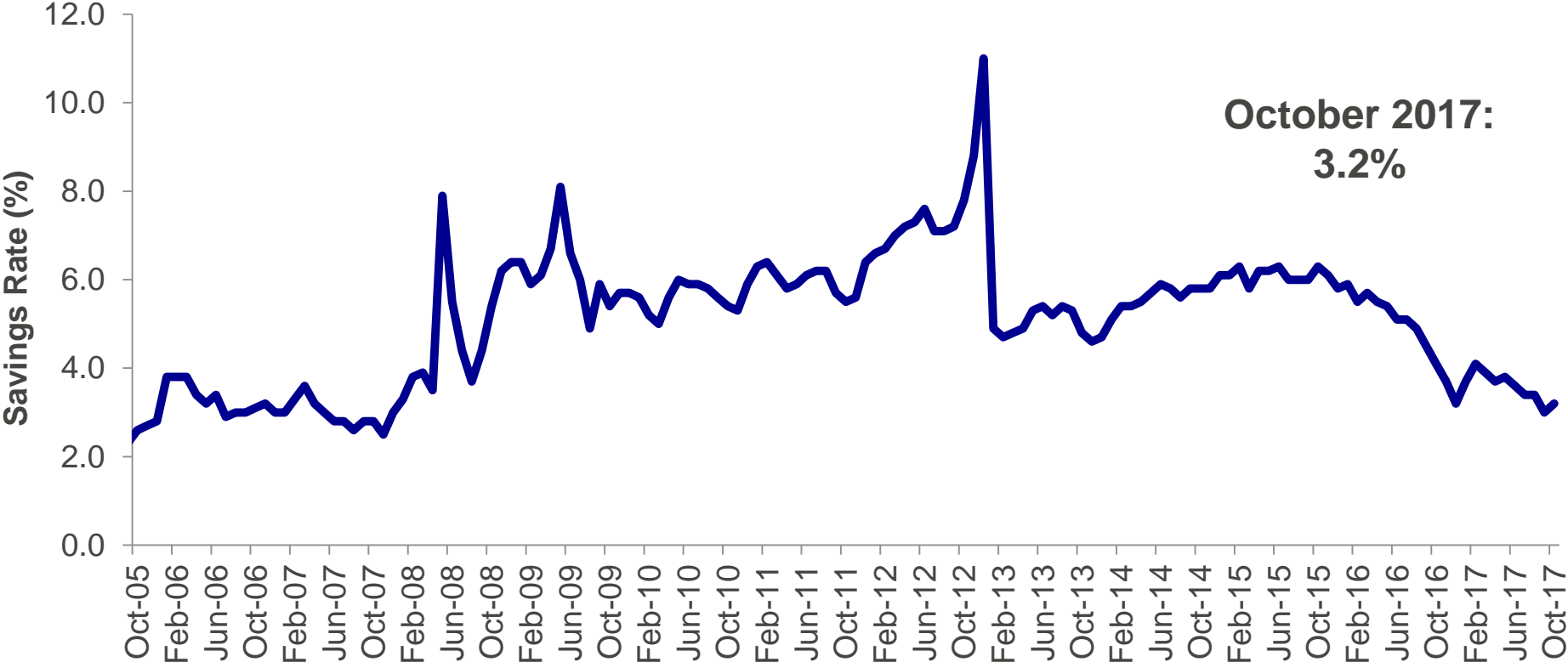
Sales Growth by Type of Business

October 2016 v. October 2017*



U.S. Saving Rate, October 2005 – October 2017

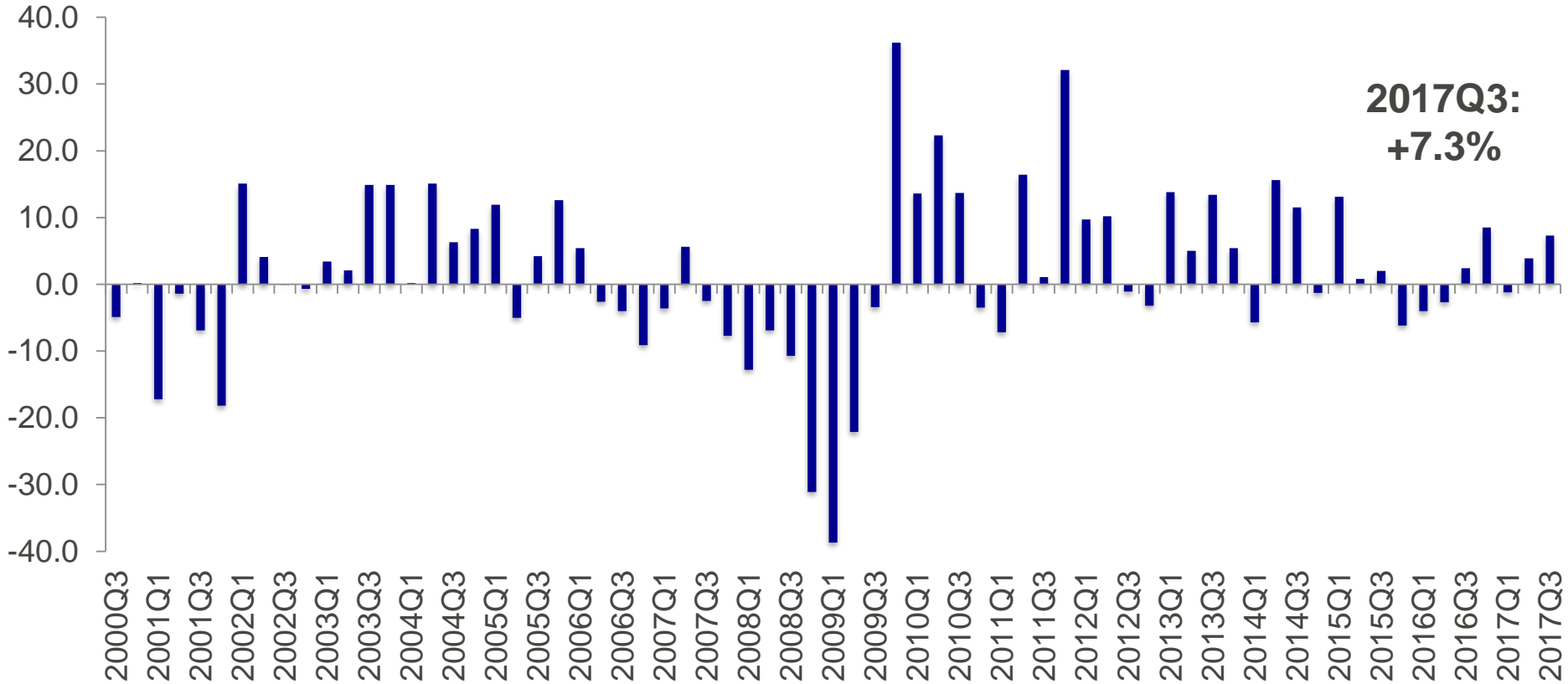
(Savings as Percentage of Personal Disposable Income)



**October 2017:
3.2%**

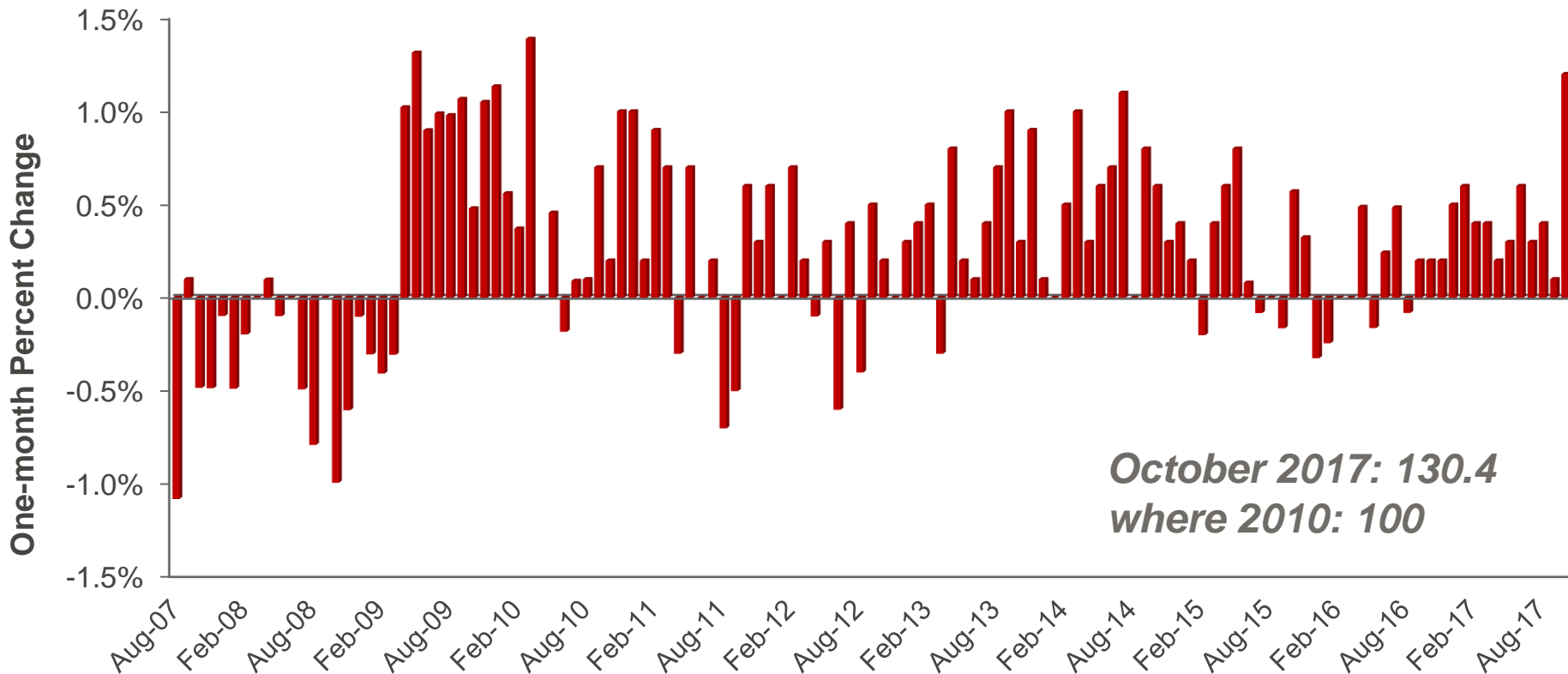
U.S. Gross Private Domestic Investment (SAAR)

% Change from Previous Quarter, 2000Q3 – 2017Q3*



Conference Board Leading Economic Indicators Index

August 2007 through October 2017



The Closer

- Global economy remains fragile, and correspondingly . . . ;
- Global money has continued to pour into America in search of yield and safety, including into commercial real estate – that was particularly true in 2015, only a bit less true in 2016;
- Inflationary pressures are on the rise – so, too, are interest rates – eventually -- that could begin to squeeze asset prices in 2018, triggering negative wealth effects and sentiment in the process;
- There are indications of mini-bubbles forming in commercial real estate, particularly in office, lodging and multifamily segments;
- There are also longer-term structural considerations, including the national debt and pending insolvencies of Medicare and Social Security – the longer-term outlook may be deteriorating even as the short-run improves;
- Momentum should see us through 2018 from an economic perspective, but tighter monetary policy combined with a heavy dose of political intrigue could render 2018 different from an asset price perspective. By this time in 2019/20, the economy could be in a far different place and likely will be.



Looking Ahead



Enjoy it While it Lasts

- **Sources of optimism**

- + Momentum
- + Dovish Federal Reserve sentiment
- + Commodity prices could remain low on average
- + Growing CEO/developer confidence
- + Consumer spending & job creation
- + Technology and policy shifts (e.g. data centers, investment in water systems, highway bill)

- **Sources of concern**

- + Inflation pressures building
- + Evidence of overbuilding in certain segments
- + Regulatory risks
- + New President / New Congress
- + Corporate defaults
- + Stock market looks expensive
- + Geopolitical risk
- + Fragile financiers
- + Labor, labor, labor—labor costs on the rise
- + Materials prices can't fall forever

Construction Executive's December 2017 Issue

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