2018 Midyear Economic Forecast

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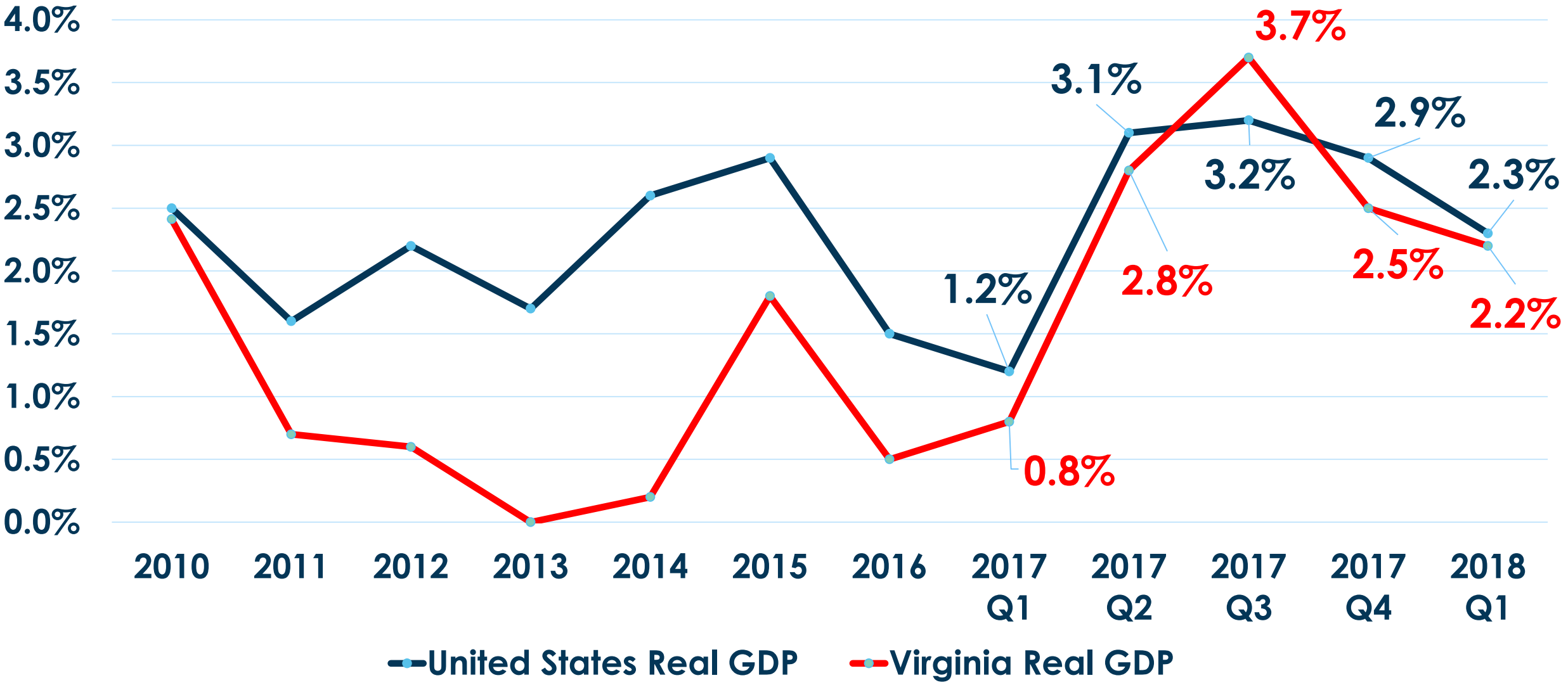
The data in this presentation are subject to revision. To our knowledge, all data in this presentation are accurate at the time of the presentation.

Current and Historical Expansions

Expansion	Duration In months	Annual Employment Growth	Annual Real GDP Growth
October 1949 – July 1953	45	4.35%	6.14%
May 1954 – August 1957	39	2.51%	3.67%
April 1958 – April 1960	24	3.58%	4.86%
February 1961 – December 1969	106	3.23%	4.68%
November 1970 – November 1973	36	3.38%	4.60%
March 1975 – January 1980	58	3.51%	4.01%
December 1982 – July 1990	91	2.81%	3.81%
March 1991 – March 2001	120	2.01%	3.45%
November 2001 – December 2007	73	0.88%	2.66%
June 2009 – Present*	106	1.41%	2.16%

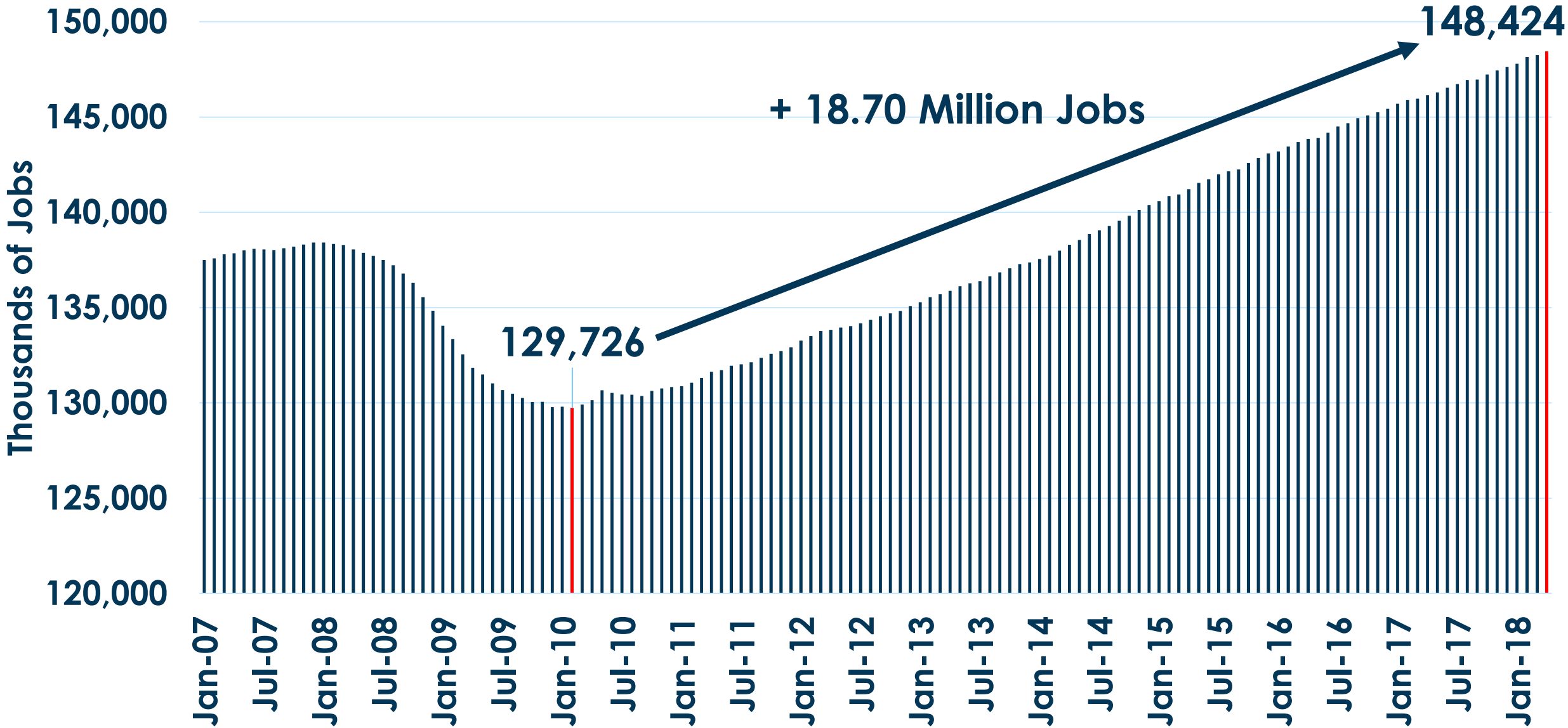
Source: Bureau of Labor Statistics, Bureau of Economic Analysis, National Bureau of Economic Research, and Old Dominion University Economic Forecasting Project. Real GDP in chained 2009 dollars. CAGR = Compound Annual Growth Rate. Annual Real GDP CAGR derived from quarterly series. Annual employment CAGR derived from monthly series. Current expansion data ends in 2018 Q1 for GDP and March 2018 for Employment. Average annual Real GDP CAGR of previous expansions = 4.21% while average annual employment CAGR from previous expansions = 2.92%. Next update is May 30th, 2018.

Growth in Real Gross Domestic Product
United States and Virginia, 2010 - 2018 Q1



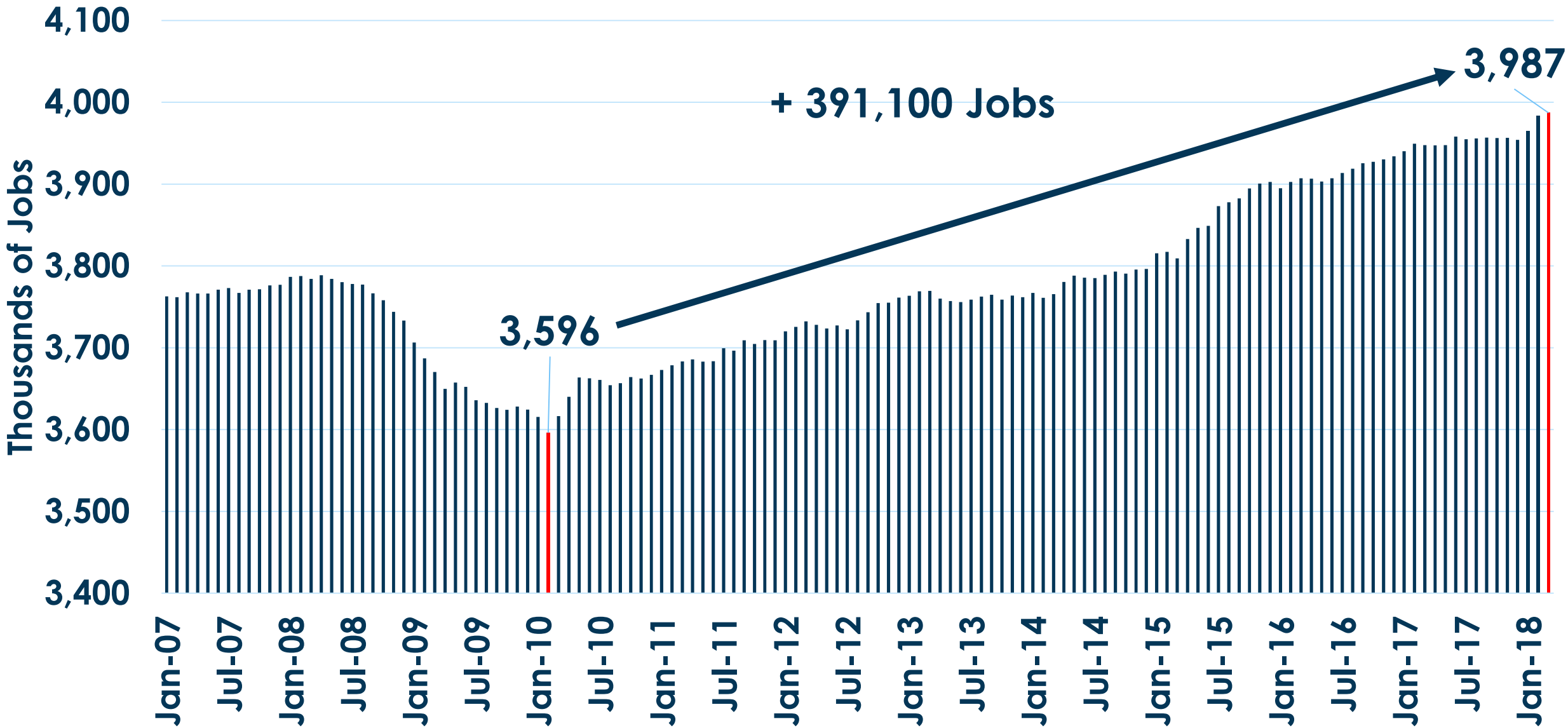
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Real GDP measured in chained 2009 dollars. U.S. 2018 Q1 and Virginia 2017 Q4 are advance estimates. VA 2018 Q1 is our forecast. Quarterly numbers are annualized rates of growth. Next update: US (May 30, 2018) and Virginia (July 24, 2018).

Total Nonfarm Employment
United States, January 2007 – April 2018



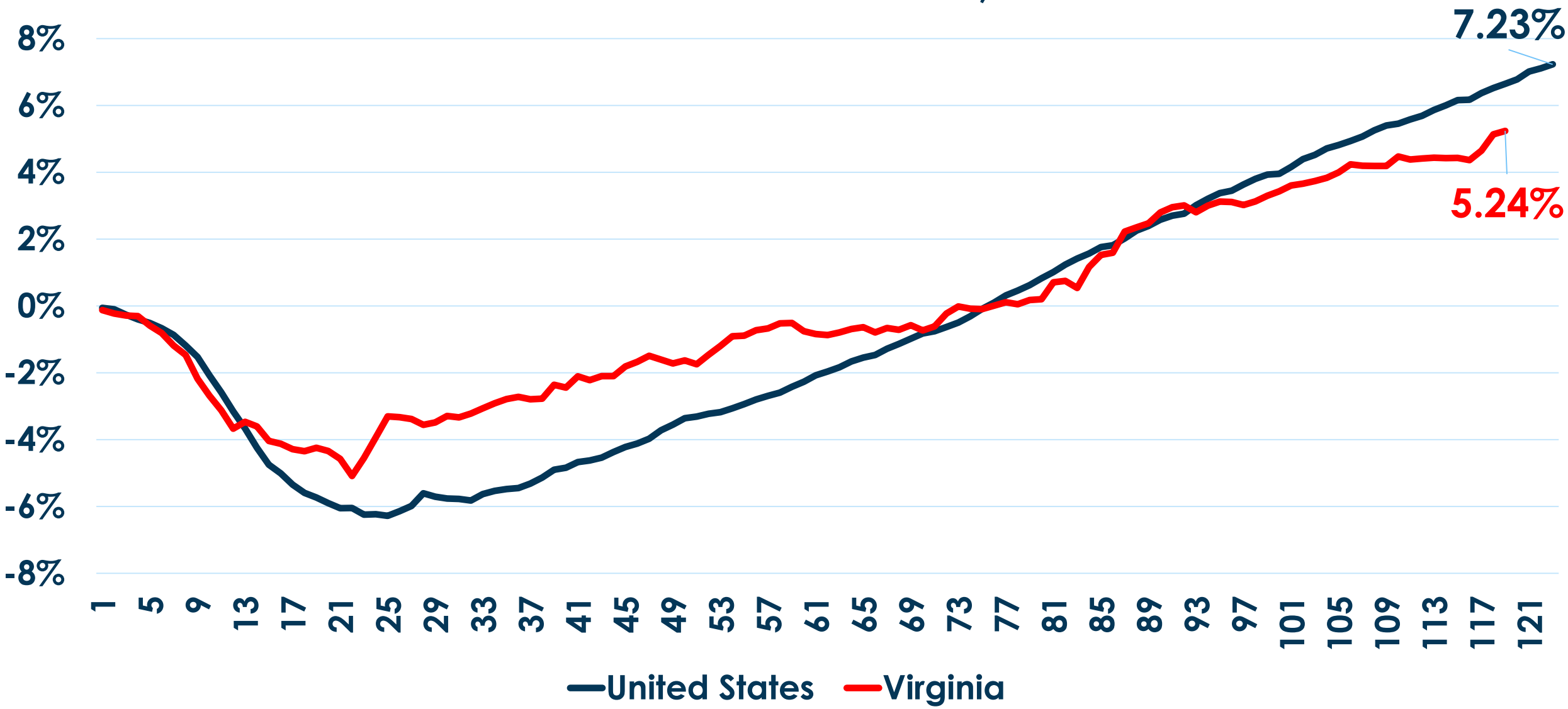
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Data for March and April 2018 are preliminary.
Trough was February 2010. Next update: June 1, 2018

Total Nonfarm Employment
Virginia, January 2007 – March 2018



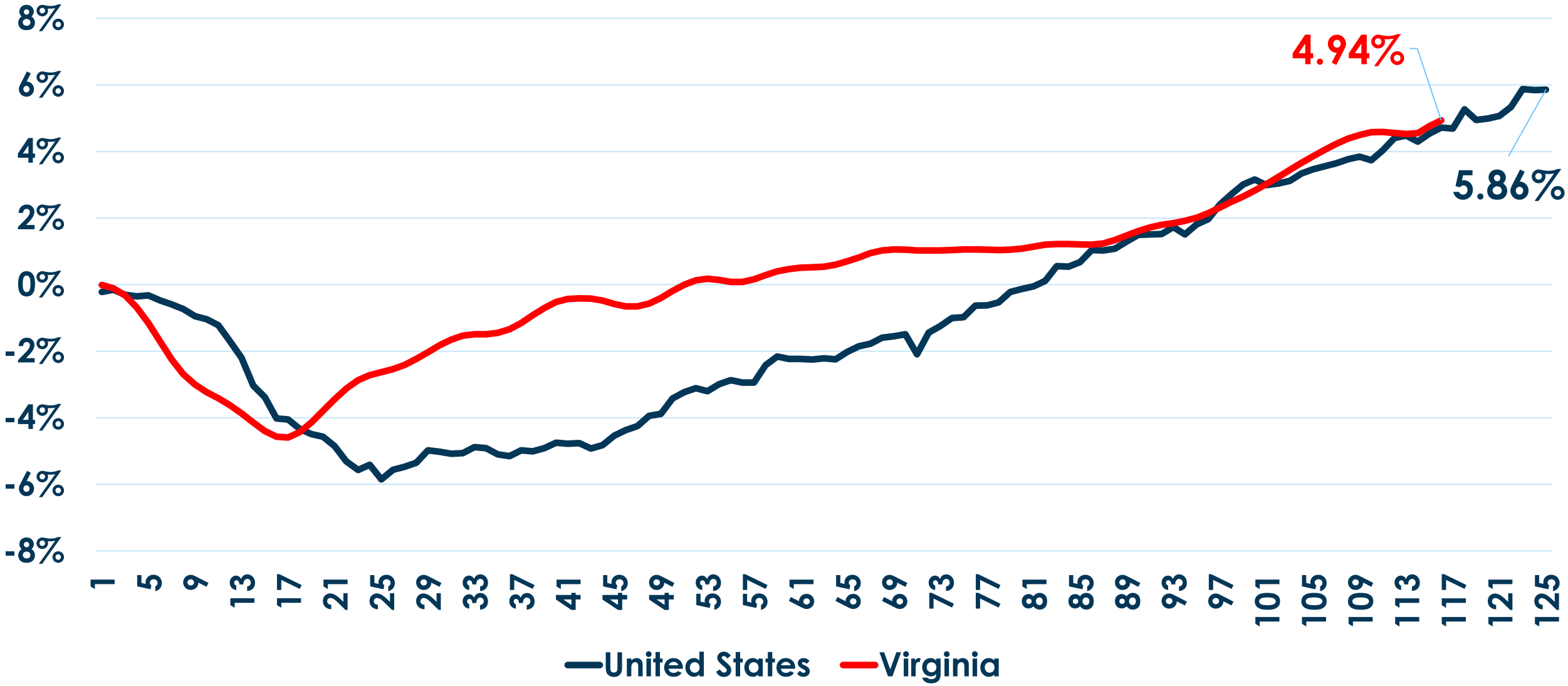
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Data for March 2018 are preliminary. Trough was February 2010.
Next update: May 18, 2018

Recovery from the Great Recession
Measured in Total Jobs Restored, 2008-2018*



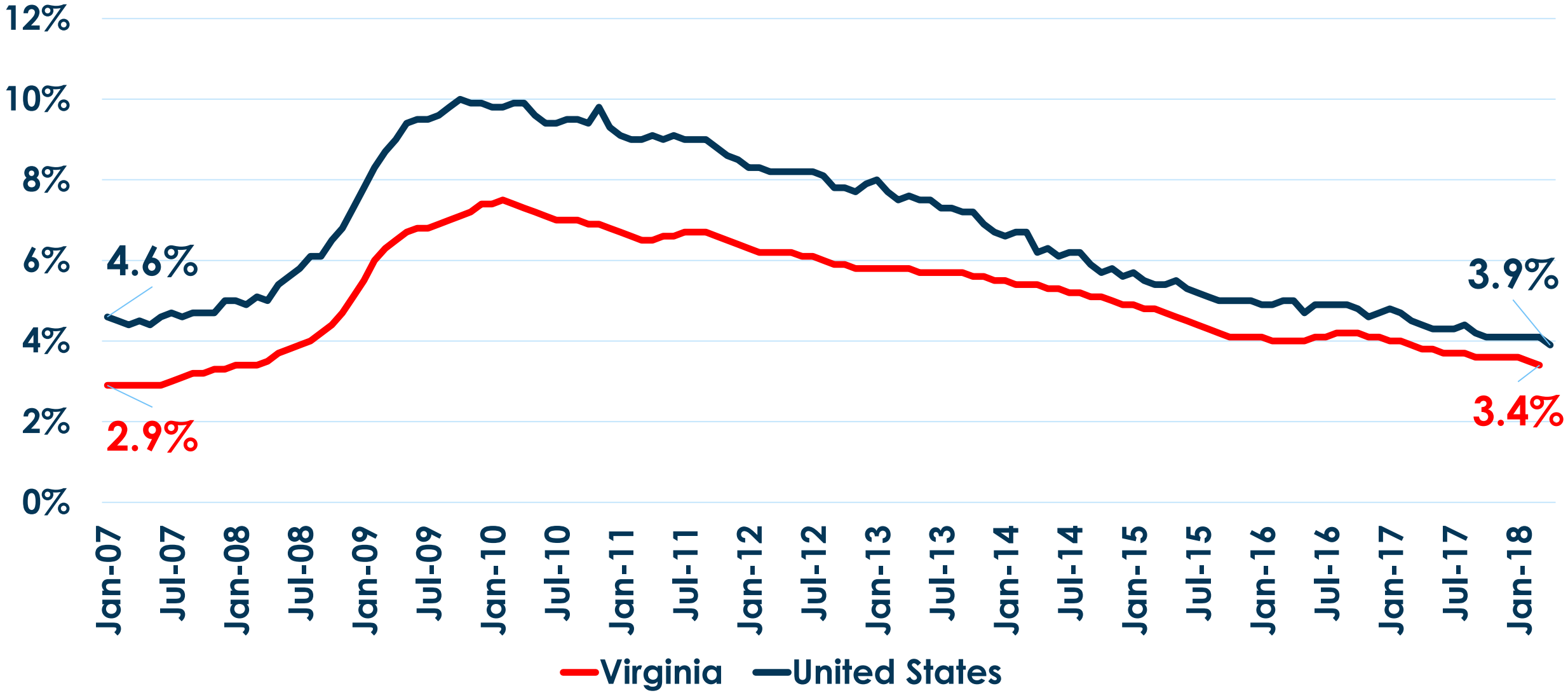
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak Pre-Recession Dates are January 2008 (United States) and April 2008 (Virginia). *Data for USA through April 2018, Virginia through March 2018. US data preliminary for March and April 2018. Virginia data preliminary for March 2018. Data from Current Employment Statistics. Seasonally adjusted data.

Recovery from the Great Recession
Measured in Individual Employment, 2007-2018*



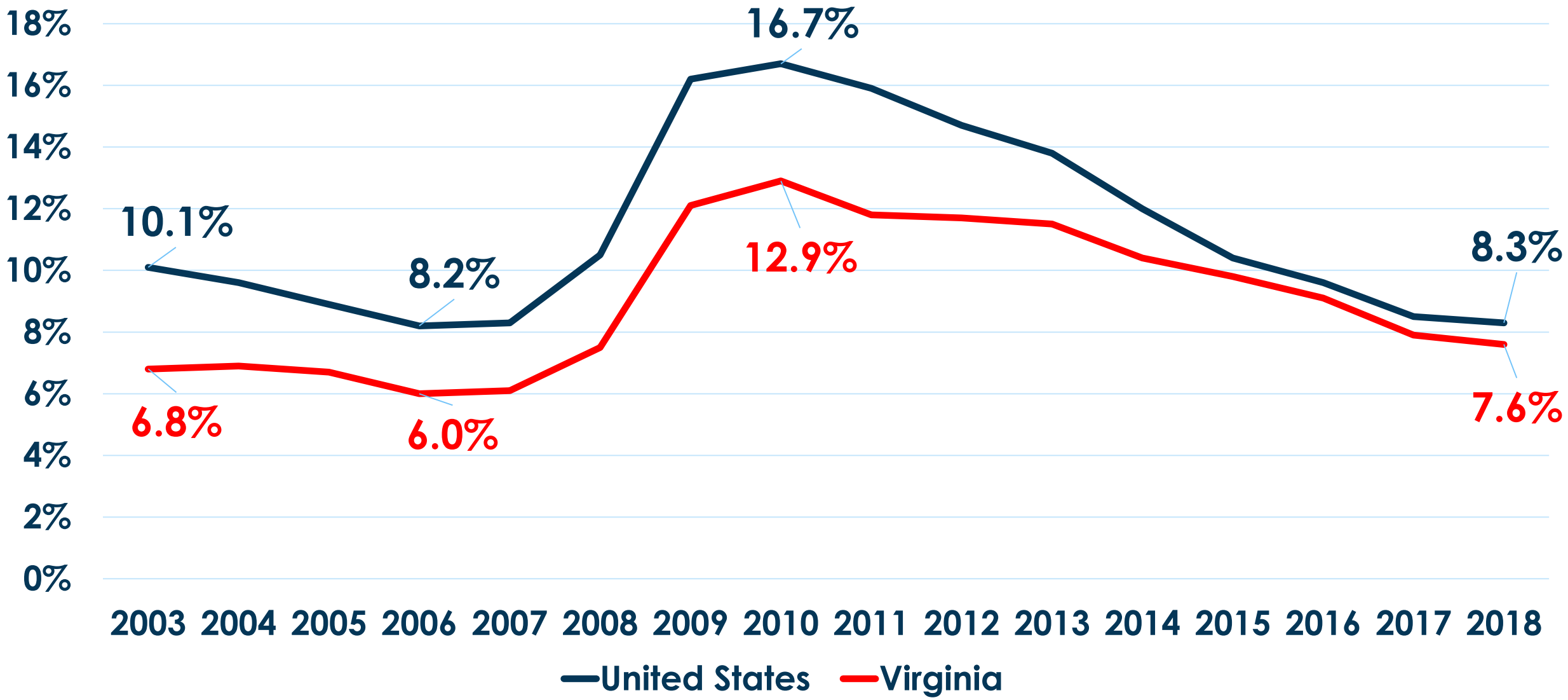
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak Pre-Recession Dates are November 2007 (United States) and July 2008 (Virginia). *Data for USA through April 2018, Virginia through March 2018. US data preliminary for March and April 2018. Virginia data preliminary for March 2018. Current Population Survey data. Seasonally adjusted data.

Headline Unemployment Rate (U3)
Virginia and United States, 2007 – 2018



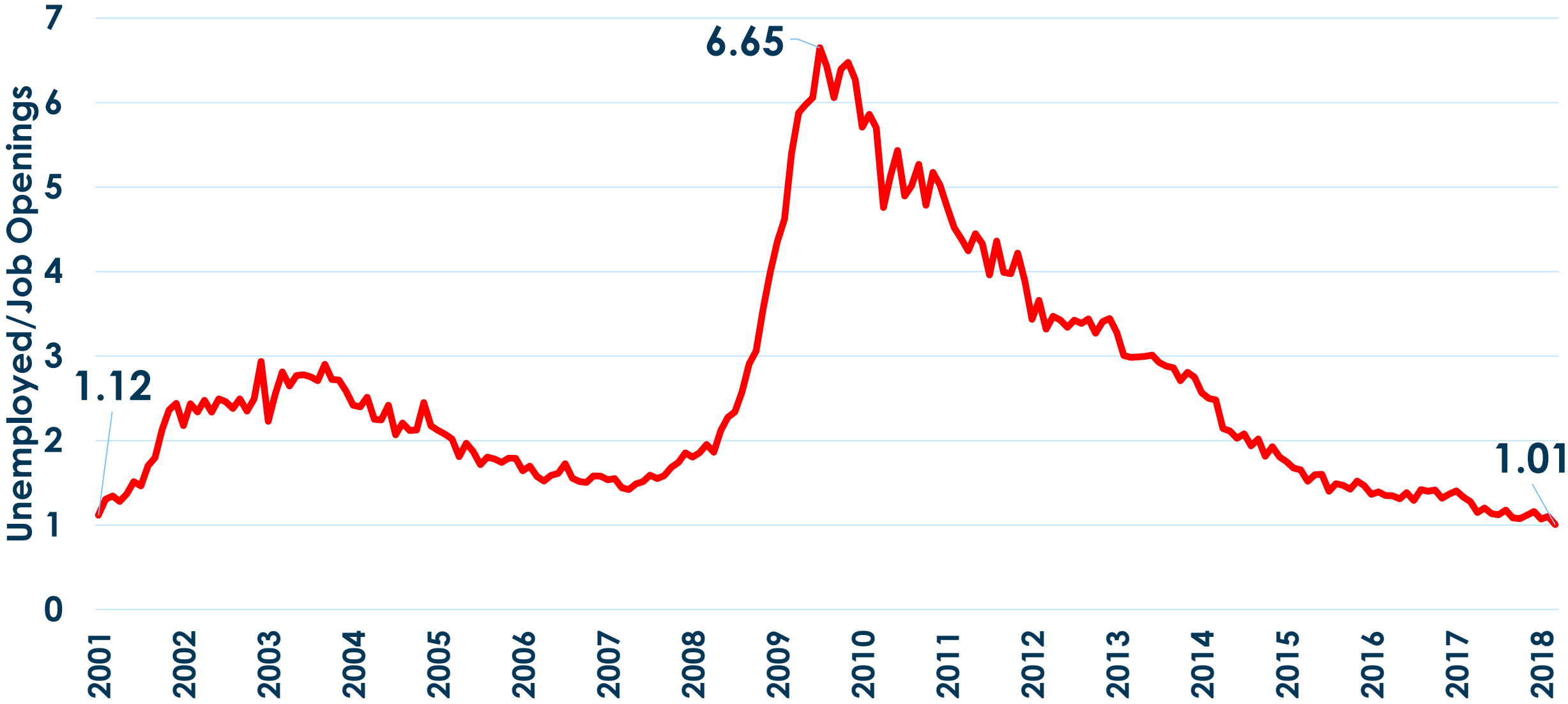
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted unemployment rates. Virginia data through March 2018 while US data through April 2018. Next update: US: June 1, 2018 and Virginia: May 18, 2018

Alternative Measure of the Unemployment Rate (U6)
Virginia and the United States, 2003 – 1st Quarter 2018



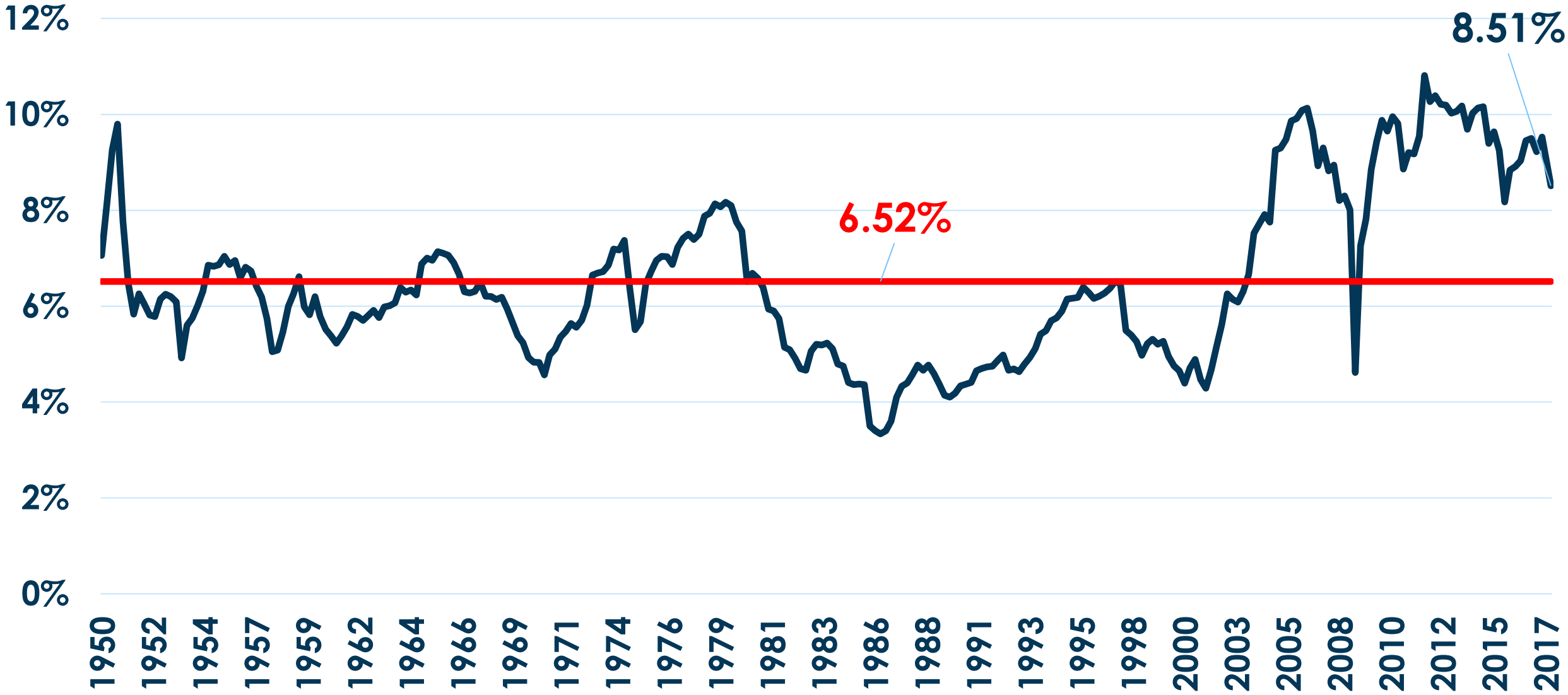
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. U-6 measures total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers. State level data based on 4-quarter moving average. Annual averages are presented. Next update: July 27, 2018.

Number of Unemployed Individuals per Job Opening
United States, January 2001 to March 2018



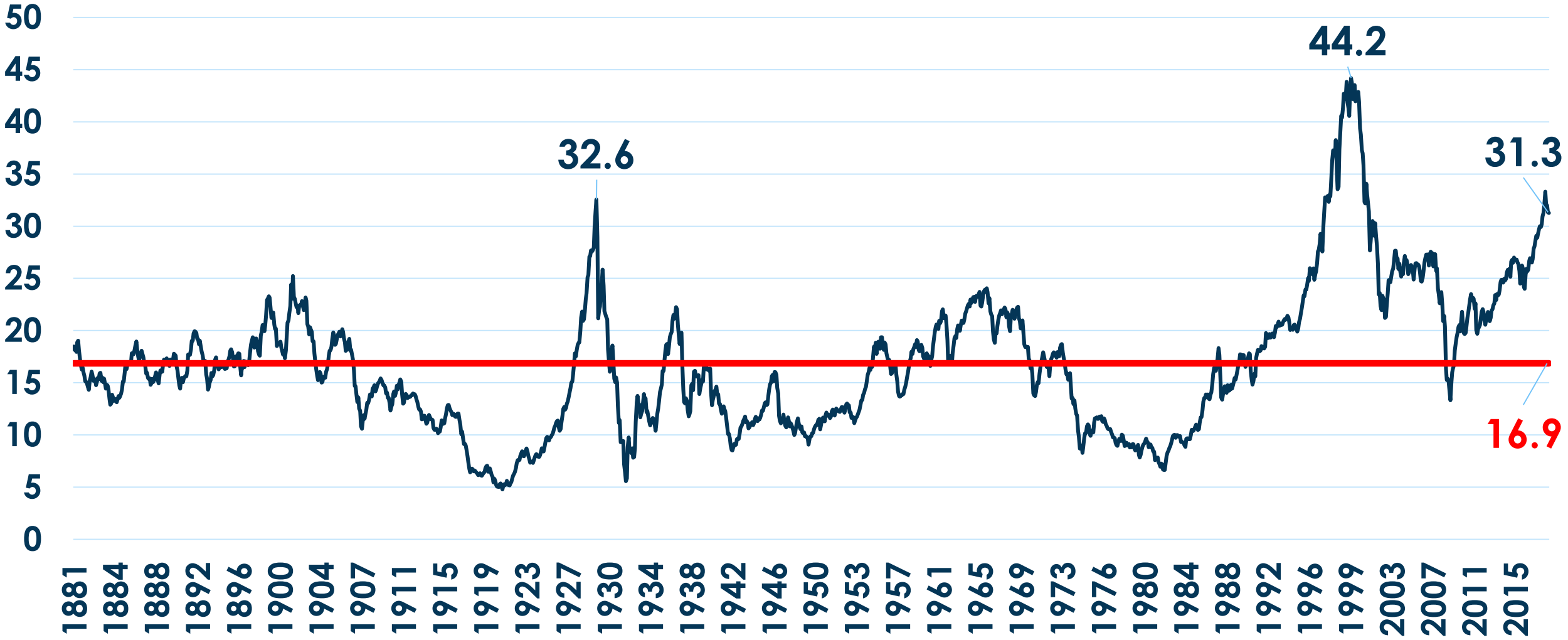
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Next update: June 5, 2018.

Corporate Profits as Percent of GDP
United States, 1st Quarter 1950 – 4th Quarter 2017



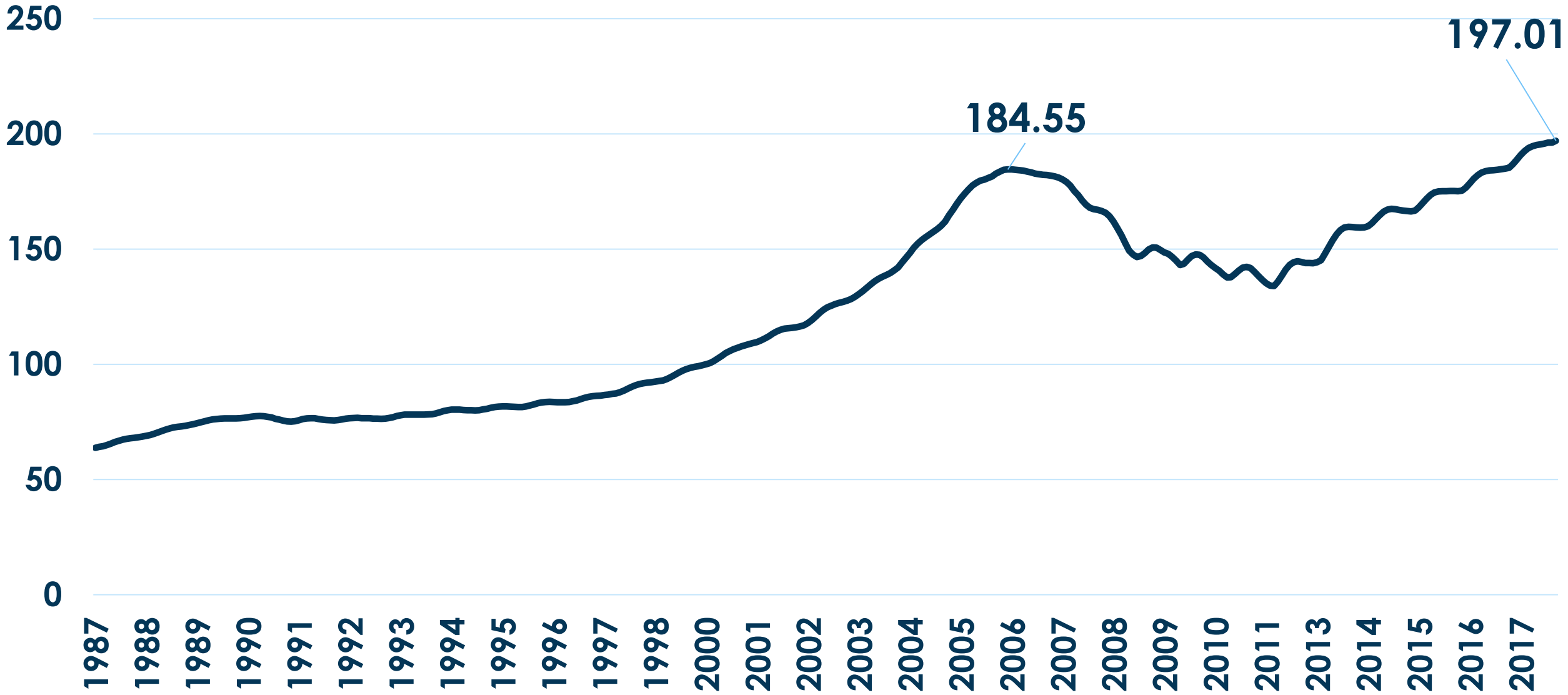
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Corporate Profits After Tax Without Inventory Adjustment

Cyclically Adjusted Price/Earnings Ratio
Standard and Poor's Composite Price Index
January 1881 – May 2018*



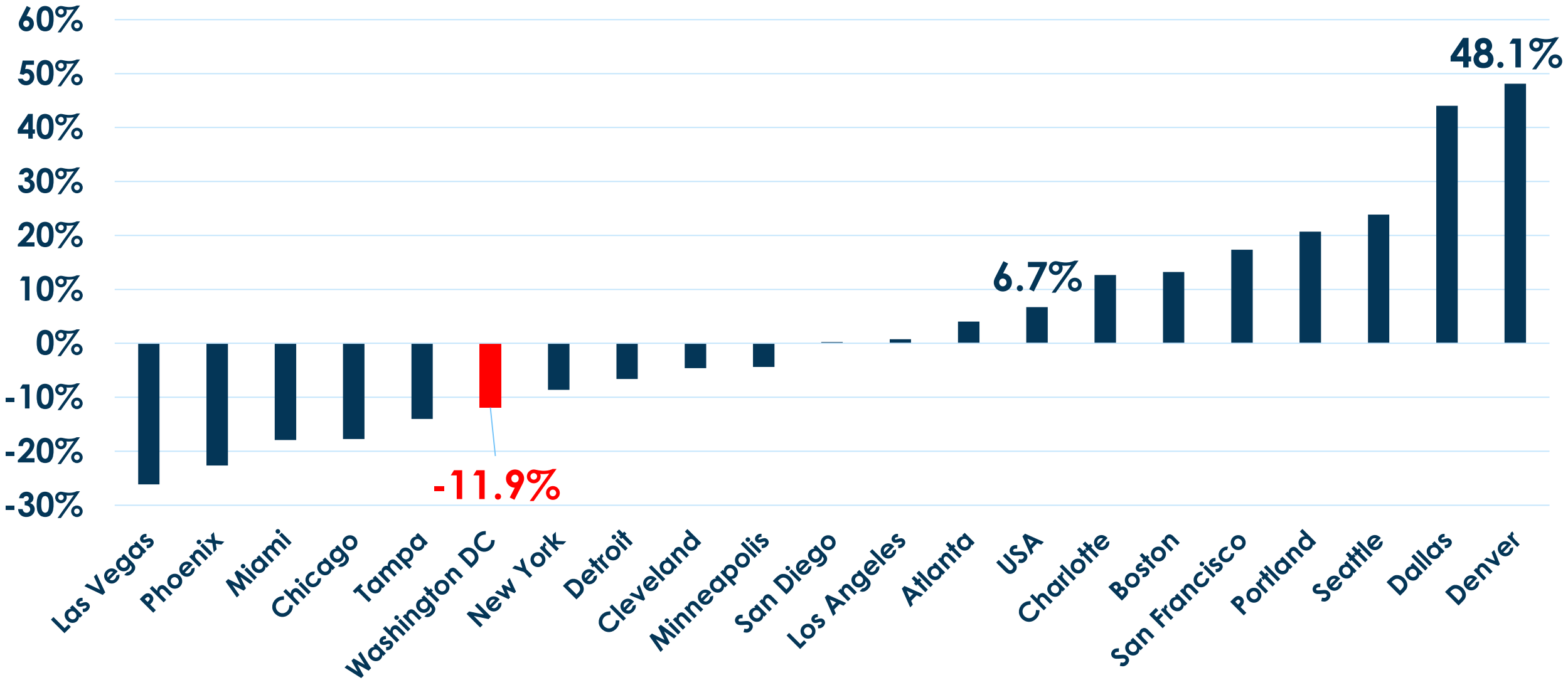
Source: Robert Schiller, *Irrational Exuberance*. Prices and earnings are in January 2000 dollars. Data as May 1, 2018 market close. For further information: http://www.econ.yale.edu/~shiller/data.htm

S&P Case-Shiller Home Price Index
United States, January 1987 – February 2018



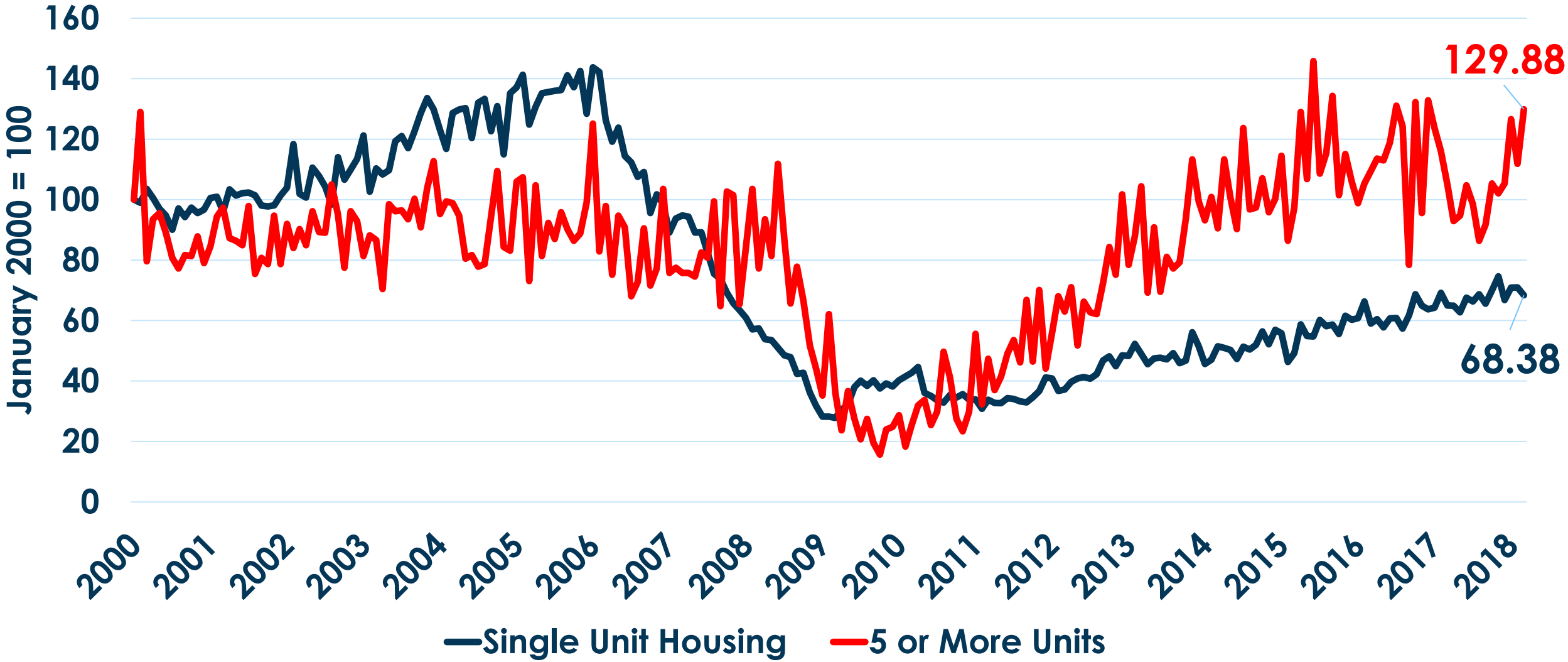
Source: S&P Dow Jones Indices, LLC. Seasonally adjusted series. January 2000 = 100.

Case-Shiller Home Price Index
Change from Pre-Recession Peak to February 2018



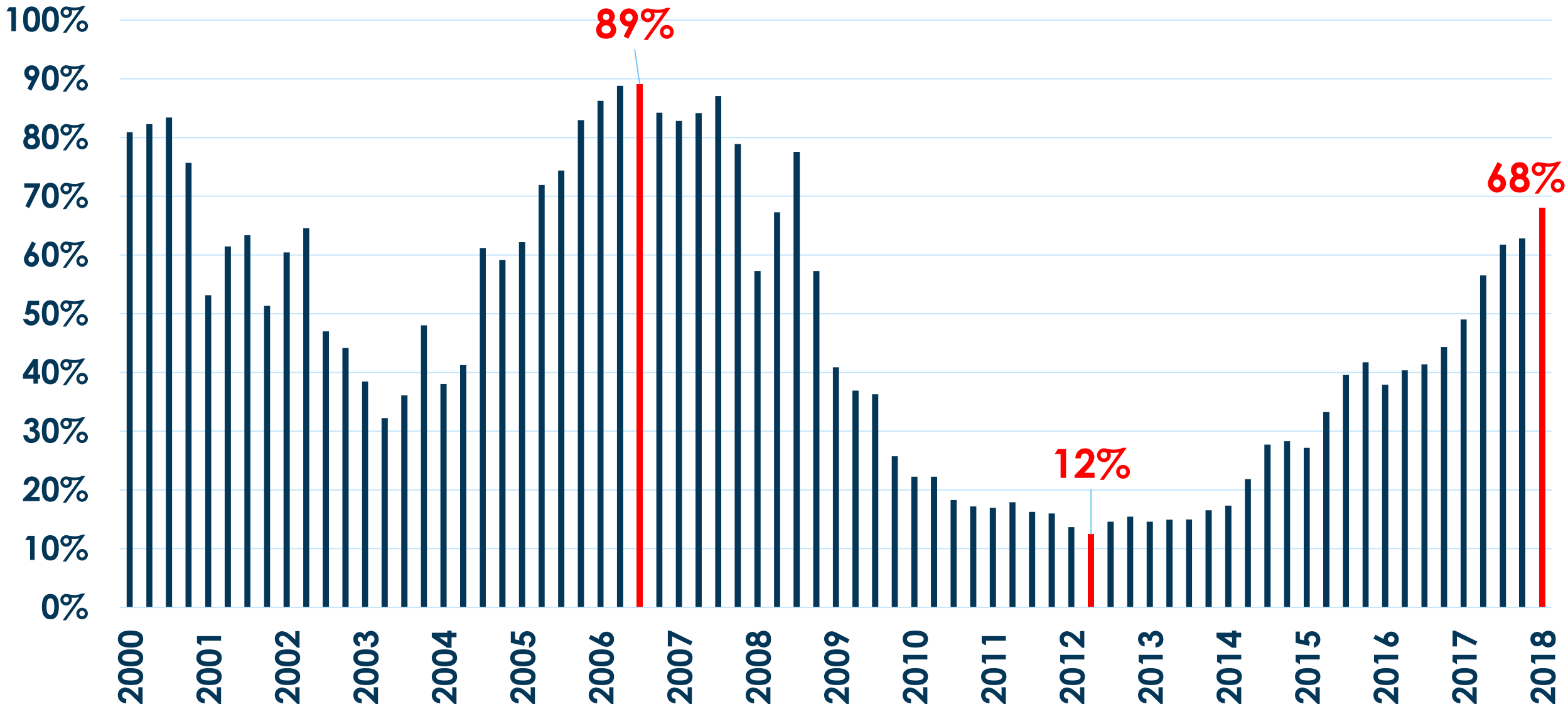
Source: S&P Dow Jones Indices, LLC. Seasonally adjusted series. January 2000 = 100.

New Residential Construction
Single Unit and Units in Buildings with 5 Units or More
United States, January 2000 – March 2018



Source: U.S. Bureau of the Census and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Annual rate. Next update: May 16, 2018. January 2000 = 100.

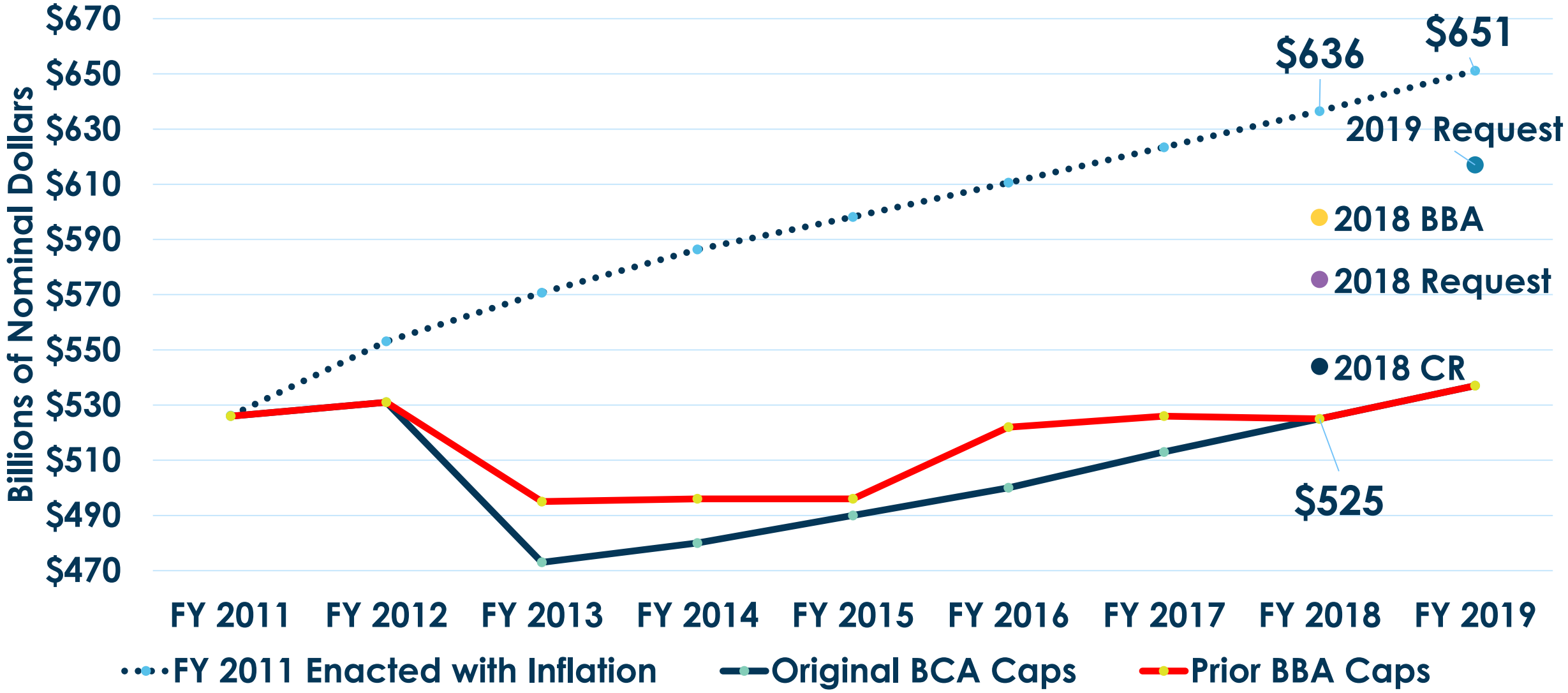
Cash Out Refinance Activity
United States, 1st Quarter 1994 – 1st Quarter 2018



Source: Freddie Mac, Quarterly Refinance Statistics, 1st Quarter 2018. Percentage of refinances refers to loan amounts that were at least 5 percent higher than the amortized unpaid principal balance of the original loan.

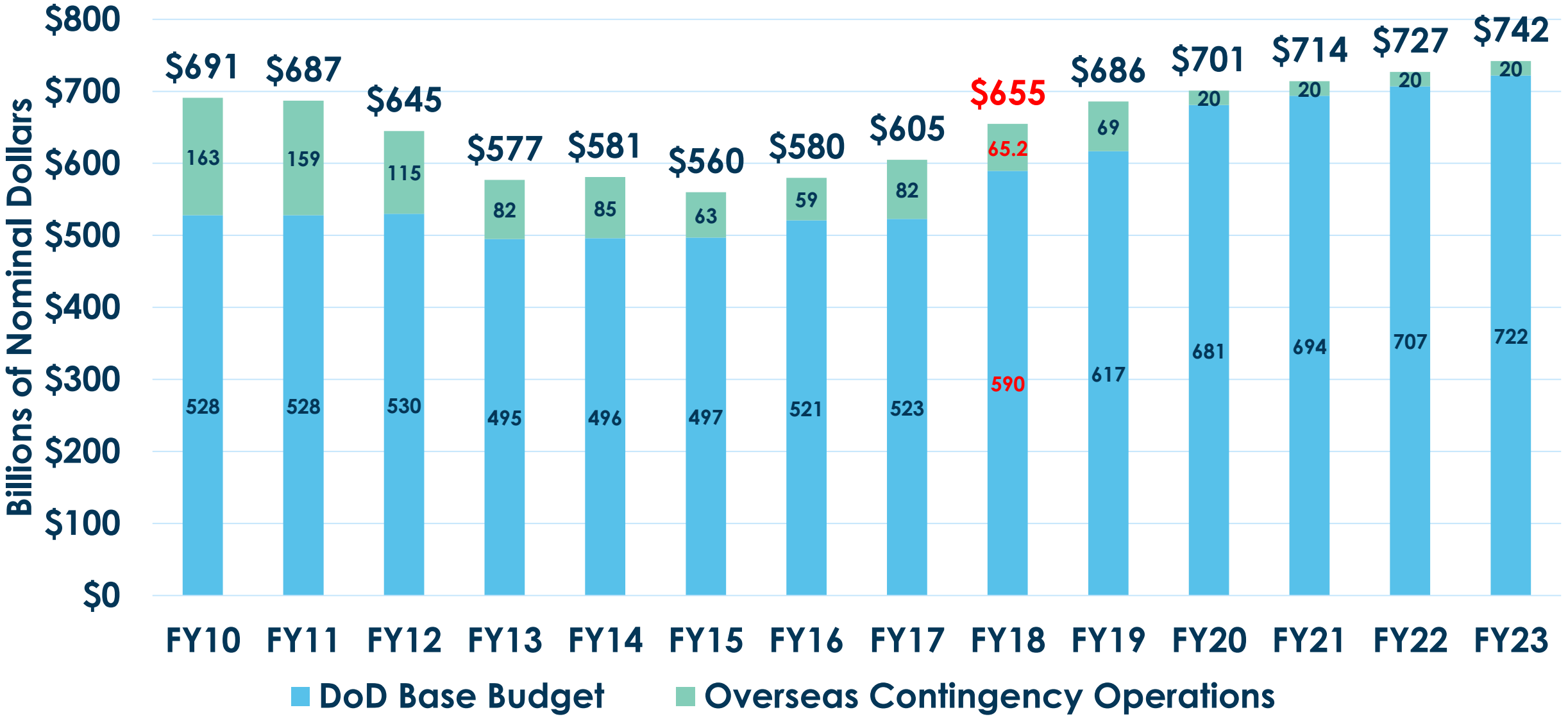
Federal Spending Provides a Short-Term Boost

Department of Defense Base Budget
FY 2011 – FY 2019



Source: BCA2011,Budget Requests for FY 18 and FY 19, CBO Sequestration Update Report, Various Years, and the Old Dominion University Economic Forecasting Project. FY 2011 Actual and FY 2012 Proposed Budget and FYDP. FY 18 and FY 19 are inflated from the FY12 FYDP estimate of FY17.

Department of Defense
Discretionary Budget Authority, FY 2010 – FY 2023



Source: U.S. Department of Defense and the Old Dominion University Economic Forecasting Project. FY 2019 Budget Materials. FY 18 base budget includes $5 billion in missile defense authority. Nominal dollars.

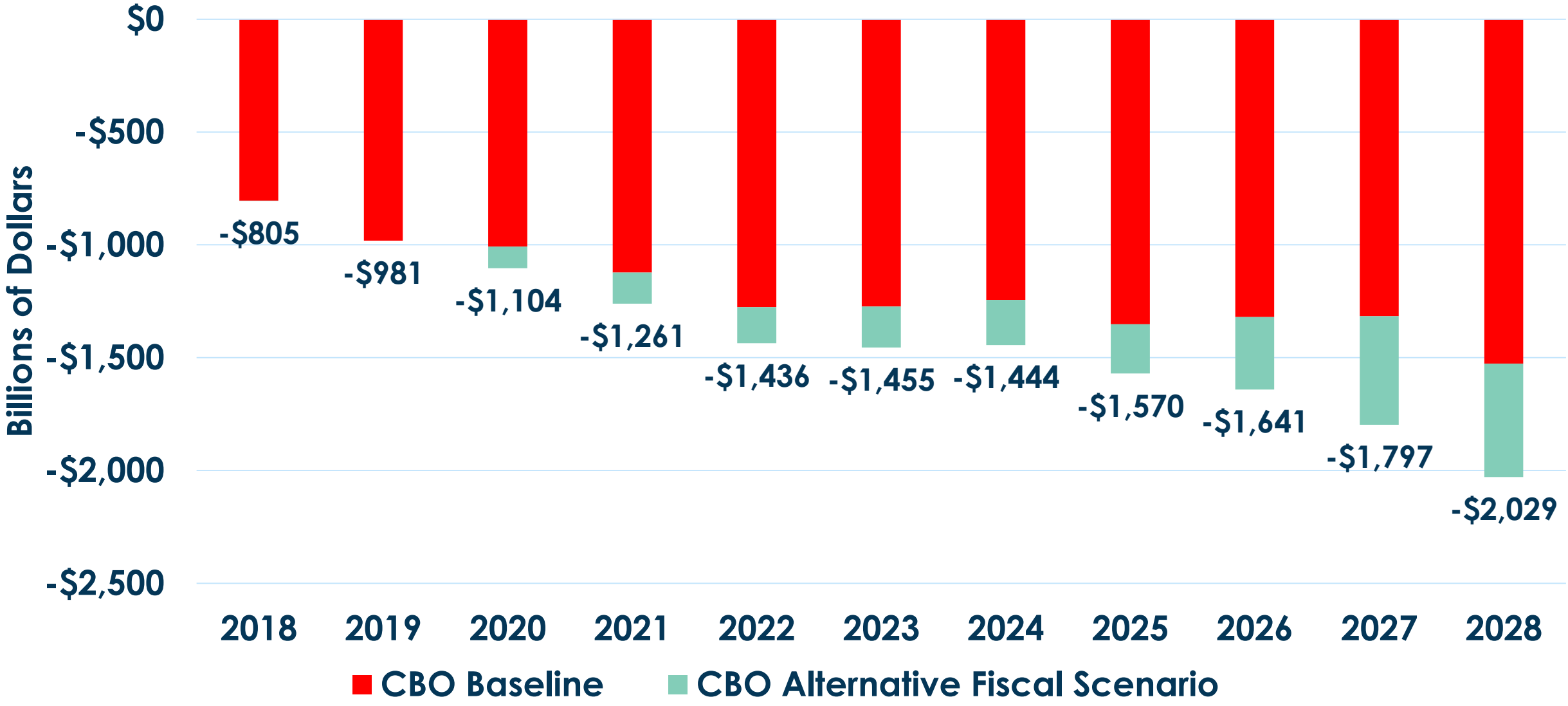
	FY 18 Approved Units	FY 18 Approved $ Billions	FY 19 Request Units	FY 19 Request $ Billions
Aircraft				
F-35 Joint Strike Fighter	90	$11.8	77	$10.7
KC-46 Tanker Replacement	15	$3.1	15	$3.0
F/A-18 Super Hornet	24	$1.8	24	$2.0
AH-64E Apache Attack Helicopter	80	$1.4	60	$1.3
P-8A Poseidon	10	$1.7	10	$2.2
CH-53K King Stallion	4	$1.1	8	$1.6
Shipbuilding				
Virginia Class Submarine	2	$5.5	2	$7.4
DDG-51 Arleigh Burke Class Destroyer	2	$4.0	3	$6.0
Littoral Combat Ship	3	$1.7	1	$1.3
CVN-78 Class Aircraft Carrier	1	$4.6	-	$1.8
Fleet Replenishment Oiler	1	$0.5	2	$1.1
Towing, Salvage, and Rescue Ship	1	$0.1	1	$0.1
Expeditionary Sea Base	-	-	1	$0.7

Source: U.S. Department of Defense. FY 2019 Budget Materials and FY 2018 Appropriations Summaries. Note that the House Appropriations National Defense Authorization Act contains language authorizing a fleet of 12 operational carriers and a two-carrier procurement.

Good News – For Two Years

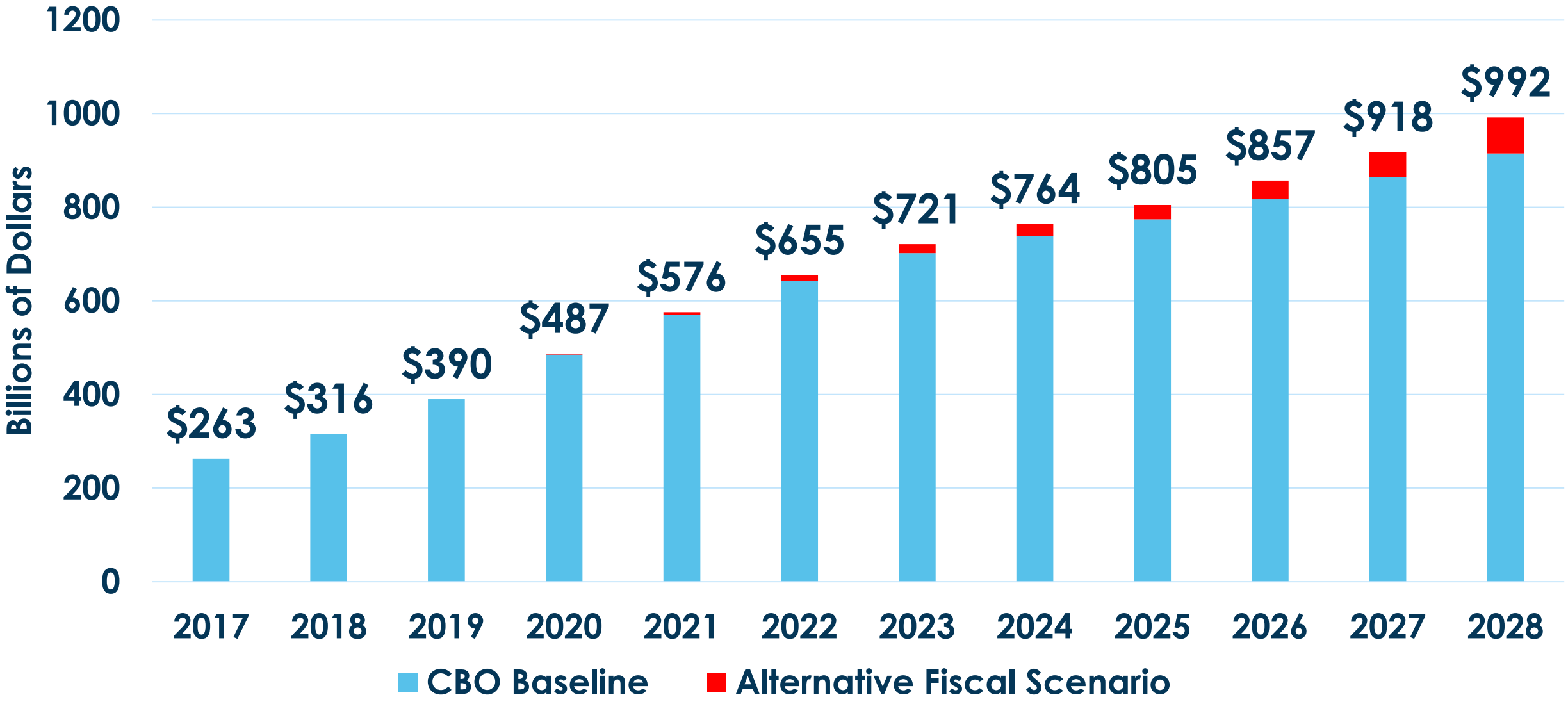
- The passage of the Bipartisan Budget Agreement of 2018 reduces the uncertainty of defense appropriations through FY 2019
- The authorizing committees support a two-carrier buy and other increases in ship building
- Increasing geopolitical tension will likely continue pressure to increase DoD spending in the medium-term
- An opportunity exists to consolidate DoD activities in Hampton Roads

Congressional Budget Office: Projected Federal Deficit FY 2018 - FY 2028



Source: Congressional Budget Office (2018), Budget and Economic Output: 2018 to 2018 and Old Dominion University Economic Forecasting Project. Federal deficits in nominal dollars. The Alternative Fiscal Scenario assumes that many the provisions of the Tax Cuts and Jobs Act of 2017 would be made permanent and many of the Affordable Care Act taxes are repealed, among others.

Projected Net Interest
United States, FY 2017 – FY 2028



Source: Congressional Budget Office (2018), Budget and Economic Output: 2018 to 2028 and Old Dominion University Economic Forecasting Project. Interest expenditures in nominal dollars. The Alternative Fiscal Scenario assumes that many the provisions of the Tax Cuts and Jobs Act of 2017 would be made permanent and many of the Affordable Care Act taxes are repealed, among others.

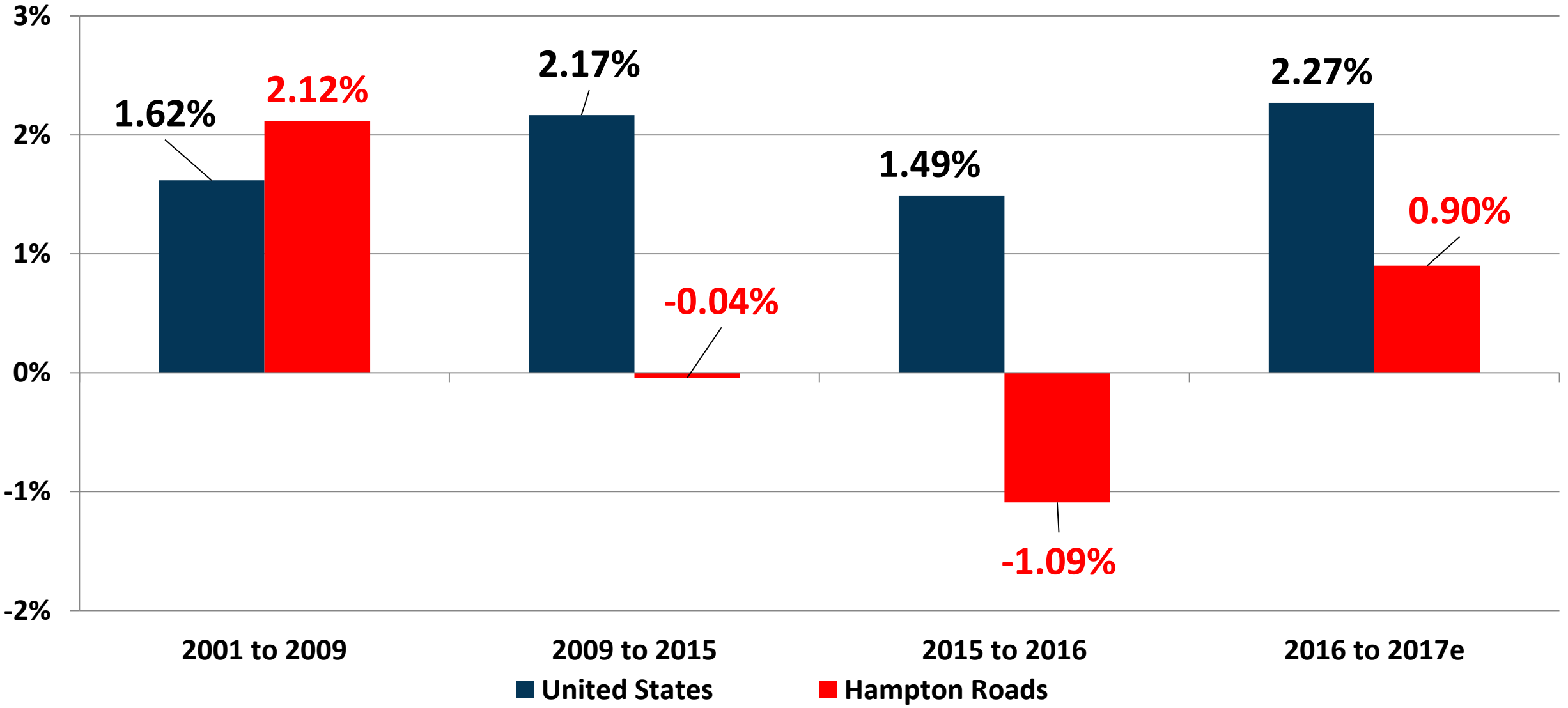
	2017 Forecast	2017 Actual	2018 Forecast (Jan)	2018 Forecast (May)
U.S. Real Gross Domestic Product	2.2%	2.3%	3.0%	3.1%
Civilian Job Growth	1.5%	1.2%	1.1%	1.2%
Unemployment Rate	4.7%	4.1%	3.8%	3.6%
Consumer Price Index	2.8%	2.2%	2.9%	3.0%
Core Consumer Price Index	2.4%	1.7%	2.2%	2.3%
3-month Treasury Bill	1.3%	1.4%	2.0%	2.1%
10-year Treasury Bill	3.2%	2.4%	3.2%	3.3%
30-year Treasury Bill	--	2.8%	3.6%	3.6%
30-year Conventional Mortgage	4.3%	4.0%	5.0%	5.0%
Federal Deficit	---	-$666 Billion	-$850 Billion	-$825 Billion
Virginia Real GDP*	1.5%	2.0%	2.5%	2.7%
Virginia Employment Growth	---	1.4%	1.3%	1.5%

Source: 2017 data reflects the annual rate of growth, last month, or day business day of 2017 where appropriate. Data are rounded to nearest tenth. *The initial forecast for real GDP for Virginia has increased from 2.2% to 2.7% due to increases in federal spending in FY 2018 and 2019 and revisions to quarterly growth in VA during 2017.

2018 Midyear Hampton Roads Economic Forecast

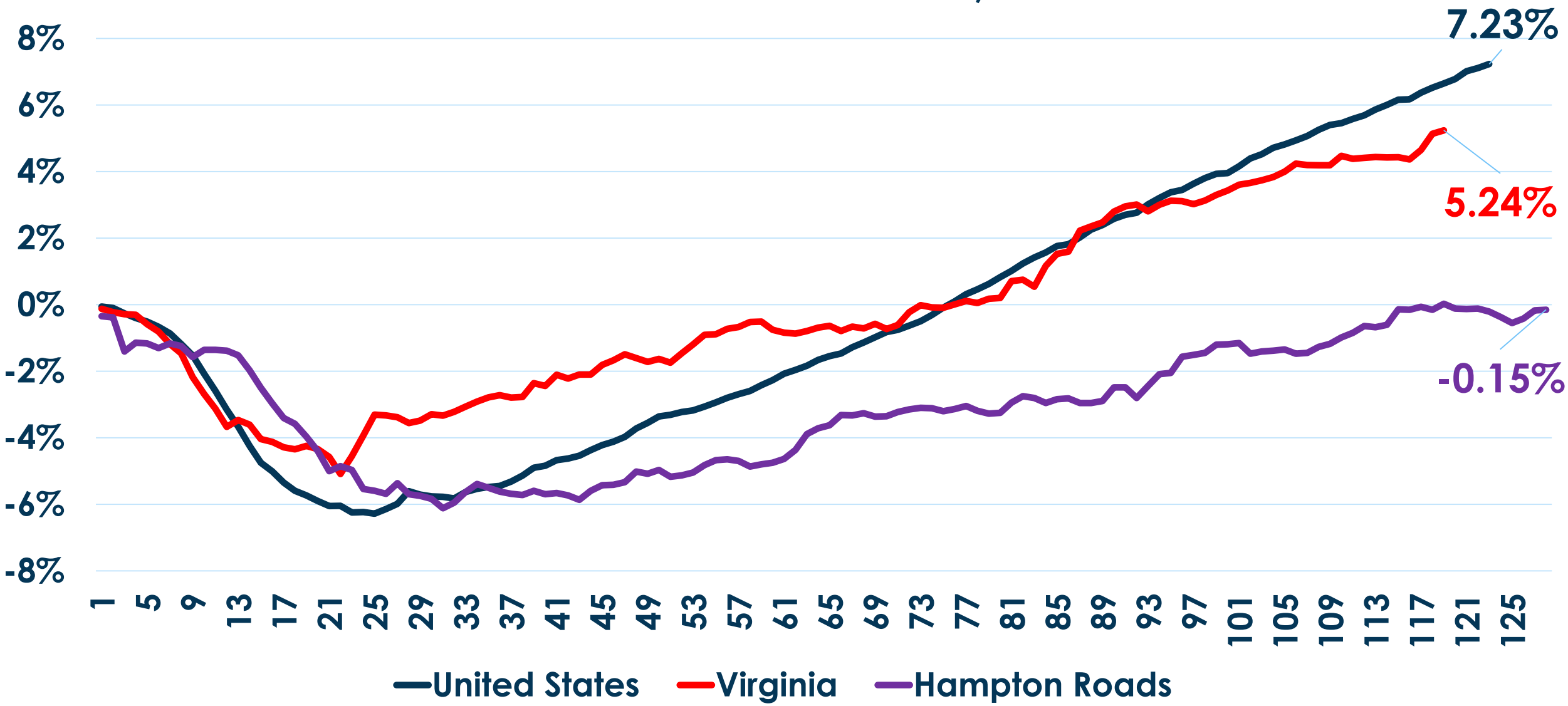
Accelerating Growth, Challenges Remain

Annual Growth Rate in Real GDP
Hampton Roads and the United States



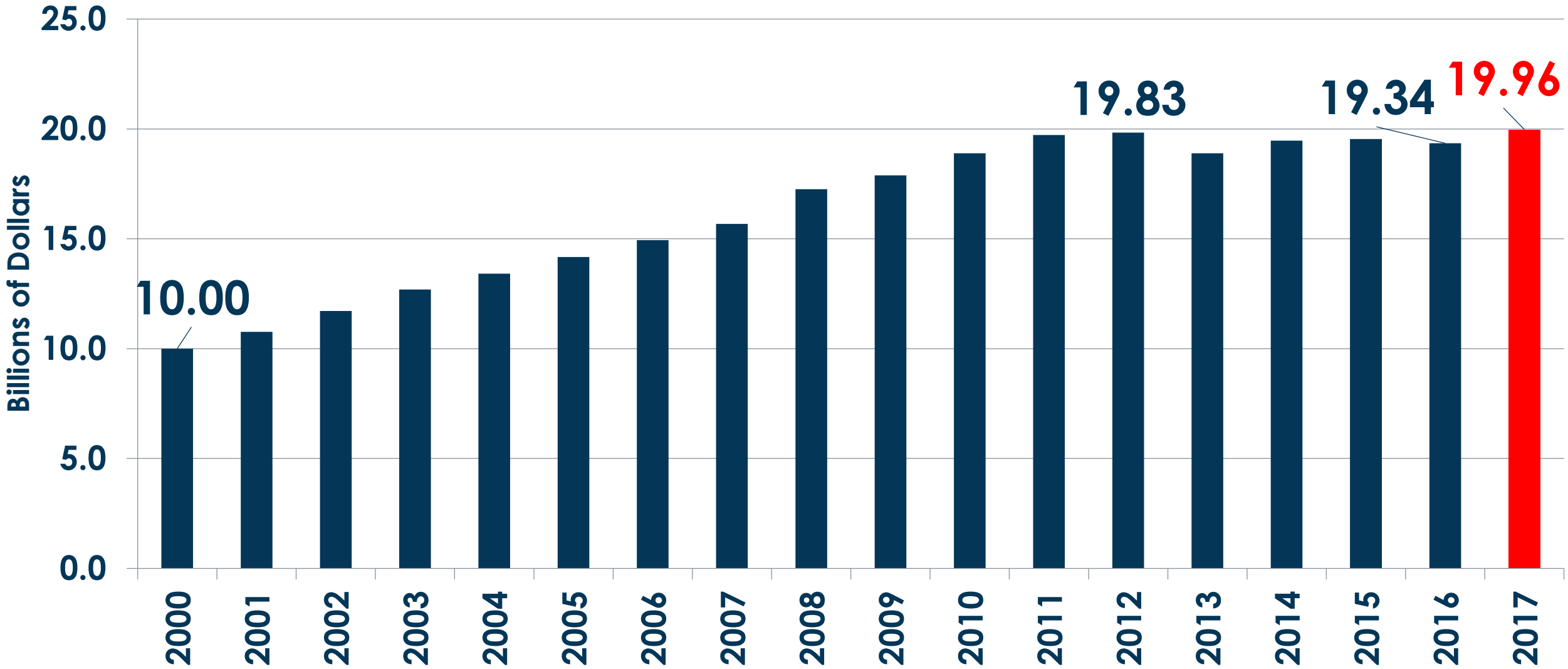
Source: Bureau of Economic Analysis and the Old Dominion University Economic Forecasting Project. Data on GDP incorporates latest BEA revisions in September 2017. Hampton Roads GDP for 2017 is our estimate.

Recovery from the Great Recession
Measured in Total Jobs Restored, 2008-2018*



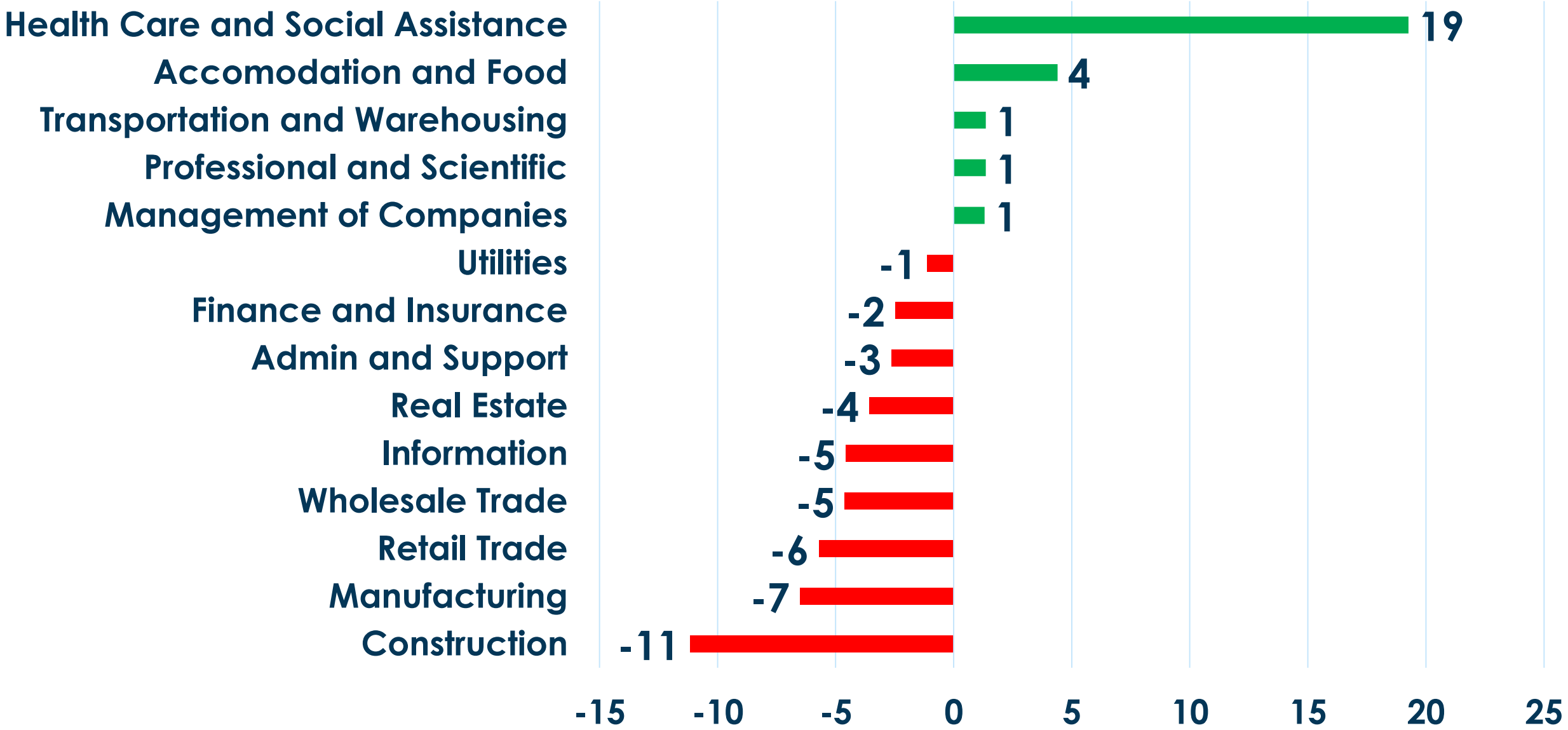
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak Pre-Recession Dates are January 2008 (United States) and April 2008 (Virginia). *Data for USA through April 2018, Virginia and Hampton Roads through March 2018. US data preliminary for March and April 2018. Virginia data and Hampton Roads data are preliminary for March 2018.

Estimated Direct DoD Spending Hampton Roads, 2000 to 2017



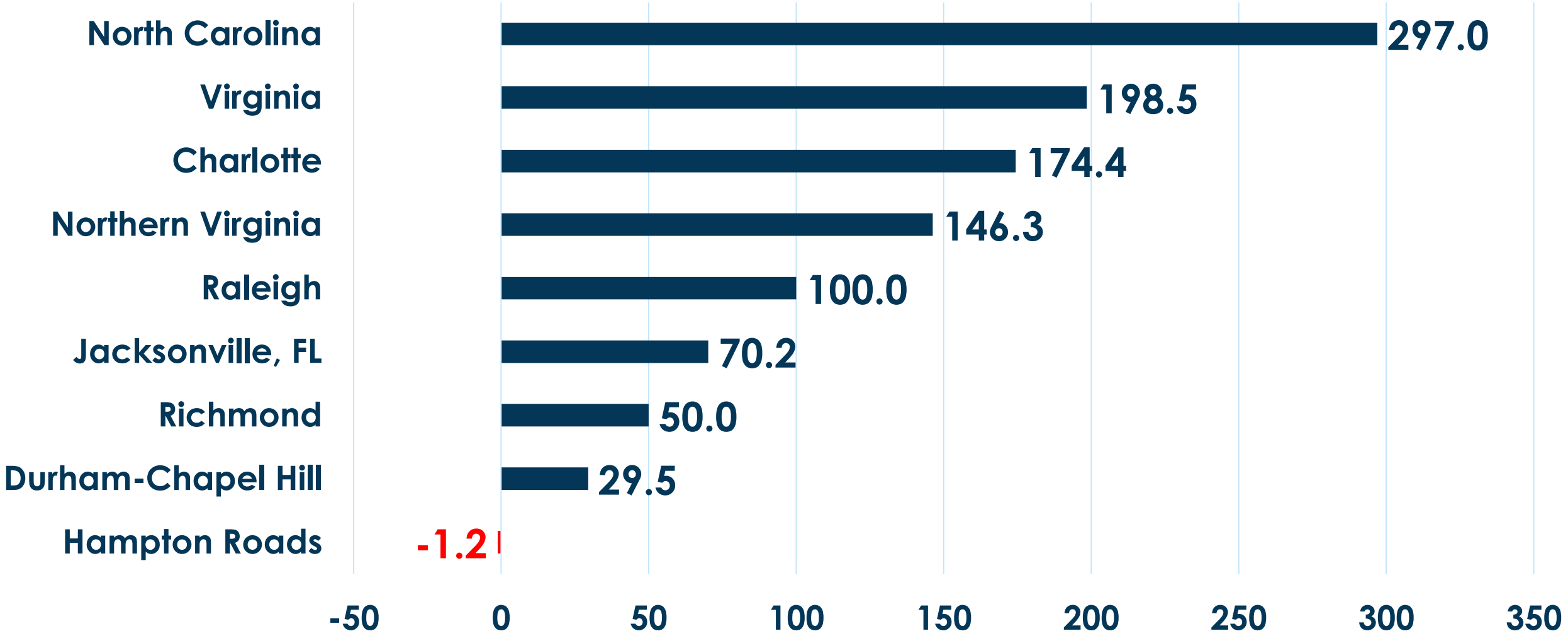
Source: U.S. Department of Defense and the Old Dominion University Economic Forecasting Project. *Includes Federal Civilian and Military Personnel and Procurement. Data for 2017 are estimates.

Change in Private Sector Employment: Selected Industries in Hampton Roads, 2007 Q1 to 2017 Q1 (Thousands)



Source: Virginia Employment Commission: Covered Employment and Wages by Private Ownership and the Old Dominion University Economic Forecasting Project.

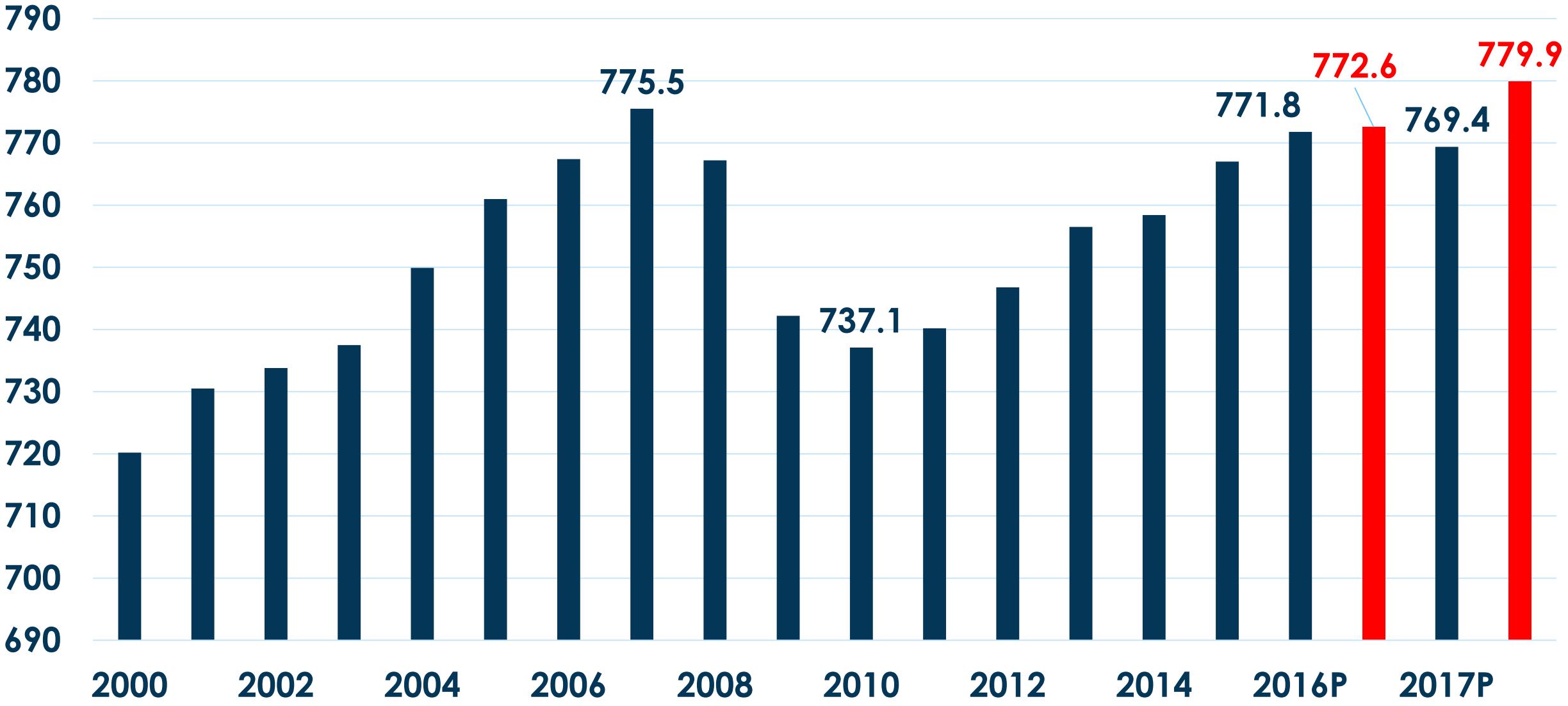
Net New Civilian Jobs Gained or Lost
Selected Metropolitan Areas, Virginia, and North Carolina
Peak Pre-Recession Employment to March 2018 (thousands)



Source: U.S. Department of Labor CES seasonally adjusted data and the Old Dominion University Economic Forecasting Project. Peak pre-recessionary employment occurred in 2008 for all regions except Florida, Hampton Roads, and Richmond which peaked in 2007. Comparison of total nonfarm employment in March 2018 to pre-recessionary peak employment. Data for March 2018 are preliminary.

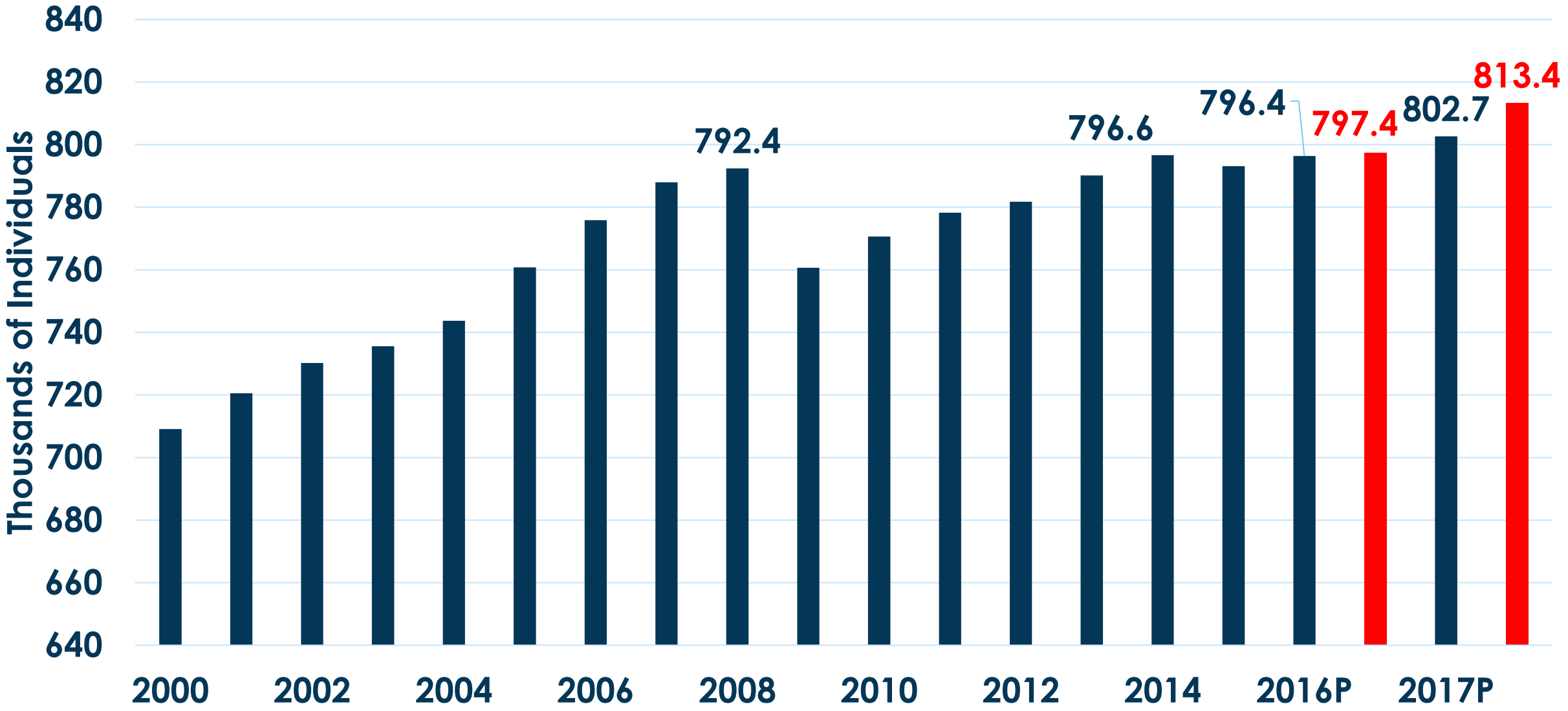
More Jobs (Slowly)

Average Annual Civilian Jobs: Hampton Roads, 2000 – 2017



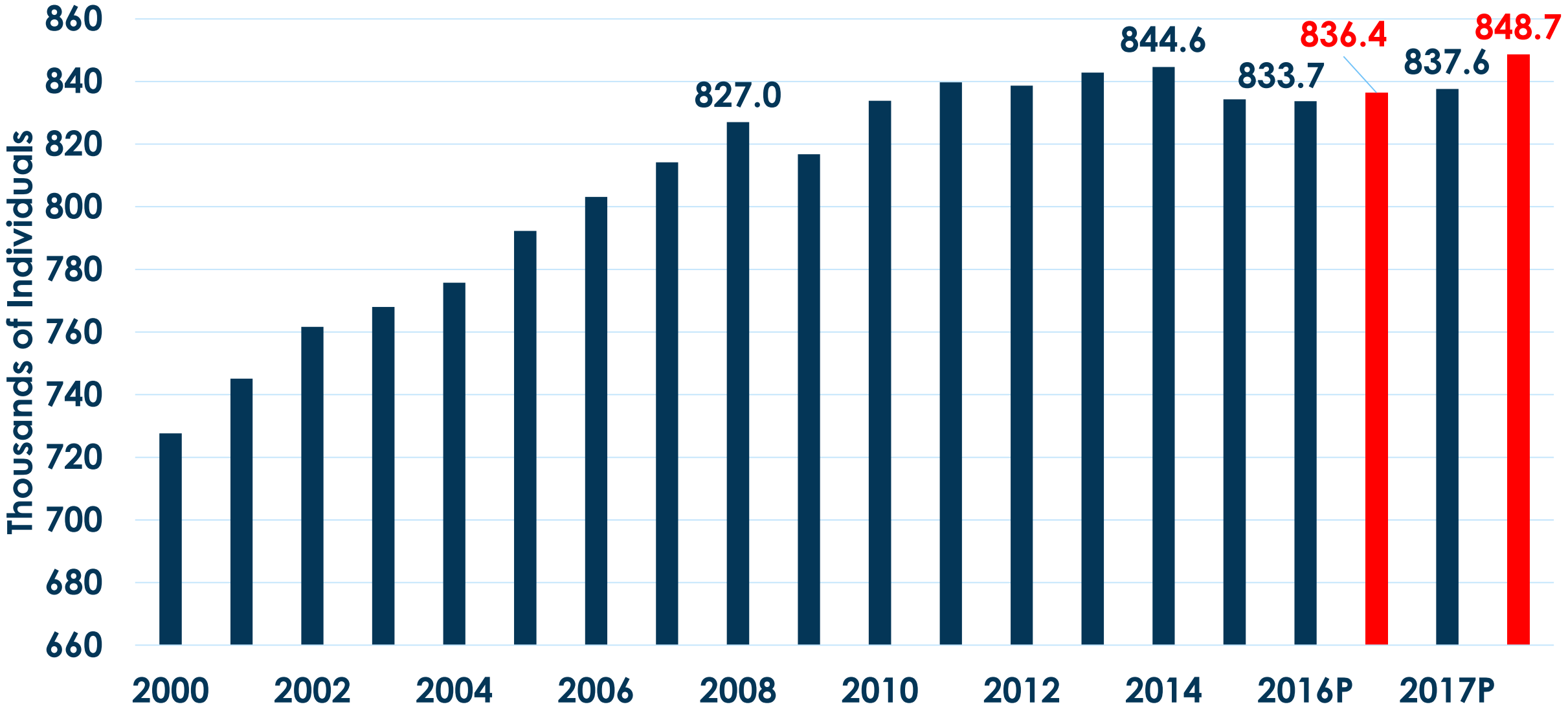
Source: U.S. Department of Labor CES data and the Old Dominion University Economic Forecasting Project. Total nonfarm employment, not seasonally adjusted. Data revised on March 12, 2018.

Average Annual Employment : Hampton Roads, 2000 to 2017



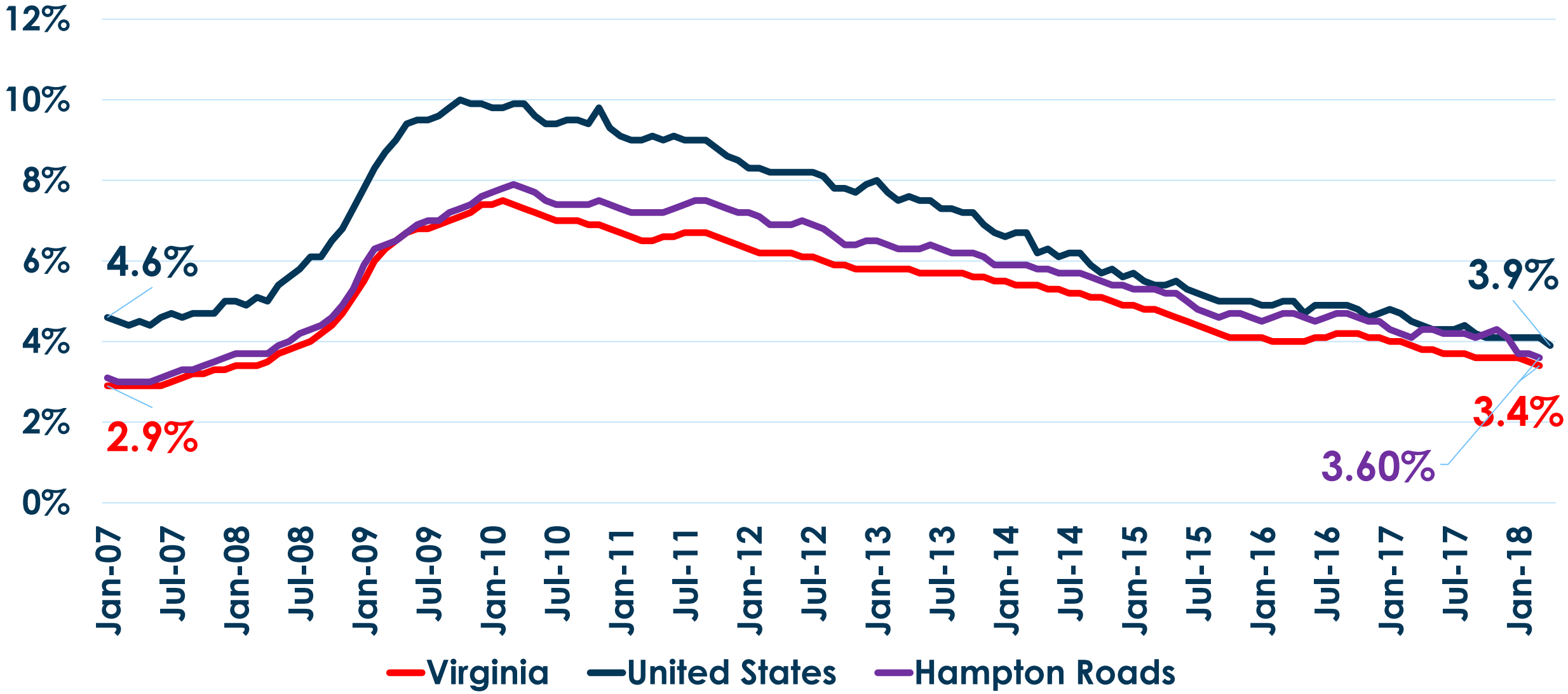
Source: U.S. Department of Labor LAUS data and the Old Dominion University Economic Forecasting Project. Annual averages. Not seasonally adjusted. Data revised on April 20, 2018

Average Annual Civilian Labor Force
Hampton Roads, 2000 to 2017



Source: U.S. Department of Labor LAUS data and the Old Dominion University Economic Forecasting Project. Annual averages. Not seasonally adjusted. Data revised on April 20, 2018

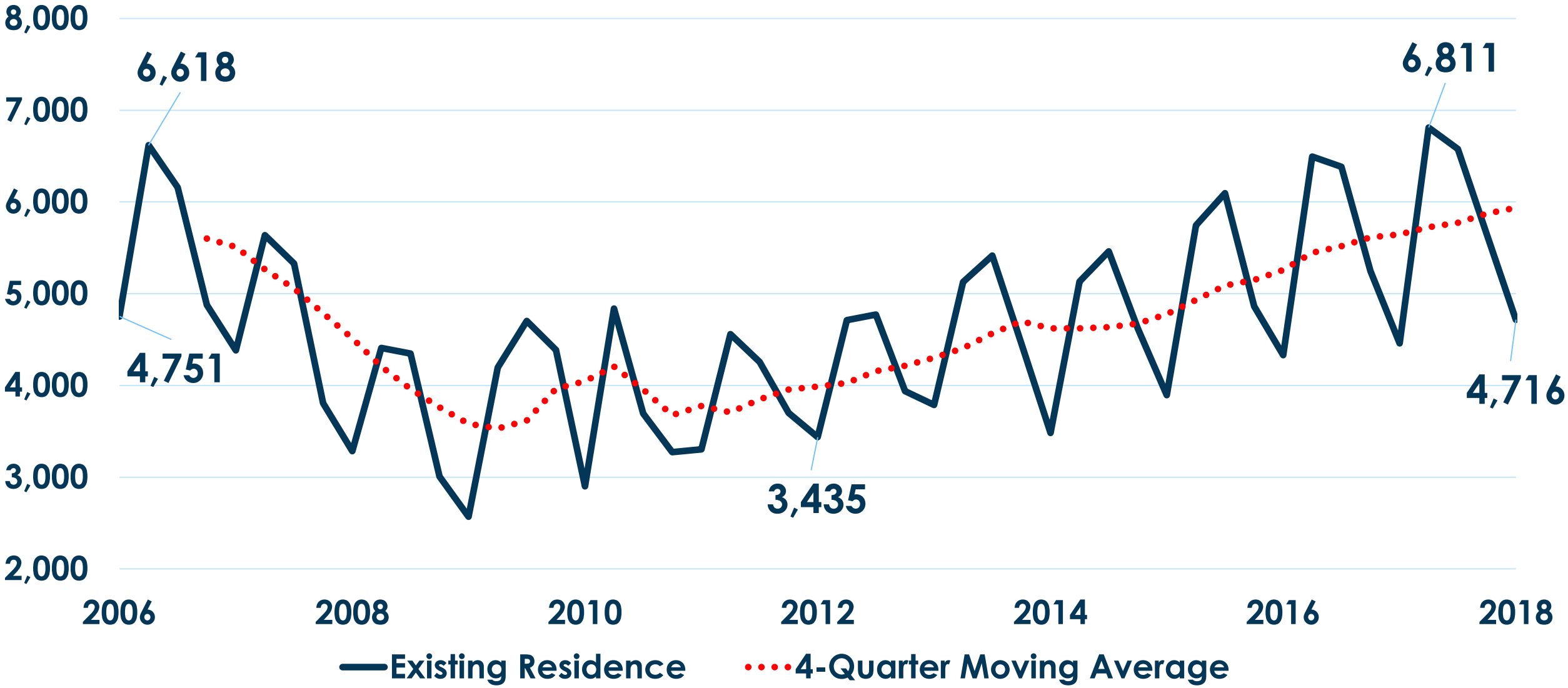
Headline Unemployment Rate (U3)
United States, Virginia and, Hampton Roads, 2007 – 2018



Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted unemployment rates. Virginia and Hampton Roads data through March 2018 while US data through April 2018. Next update: US: June 1, 2018 and Virginia: May 18, 2018

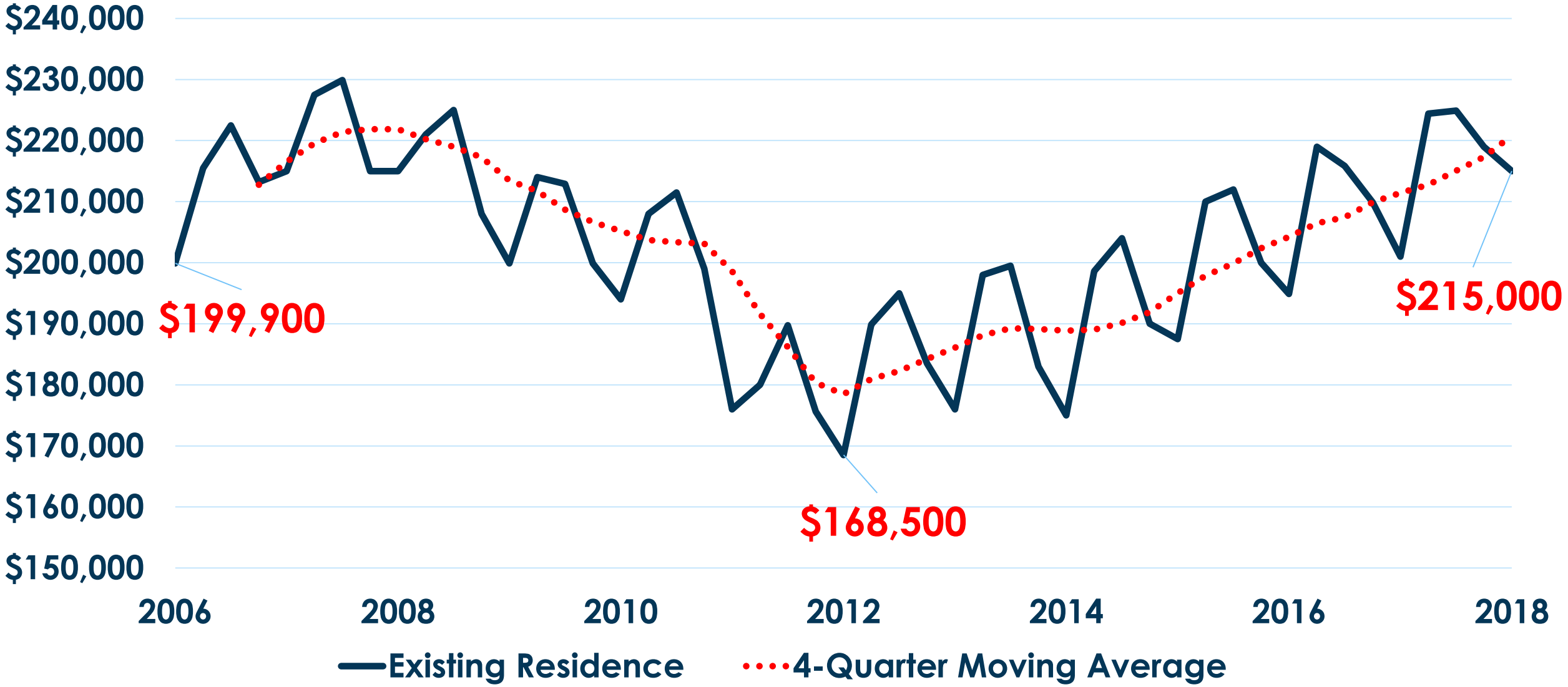
Residential Housing is Looking Up

Existing Residential Home Sales
Hampton Roads, 2006 Q1 to 2018 Q1



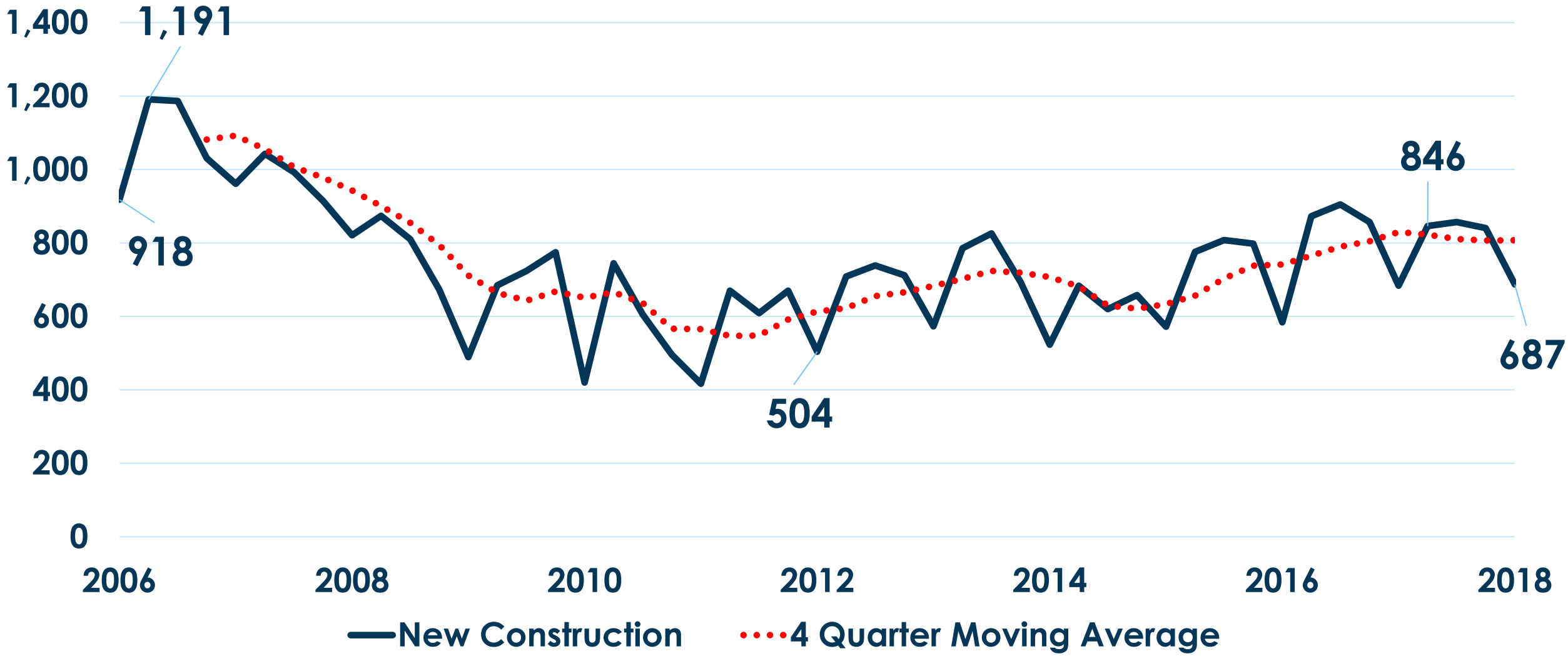
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all sales activity in our region.

Median Sale Price for Existing Homes
Hampton Roads, 2006 Q1 to 2018 Q1



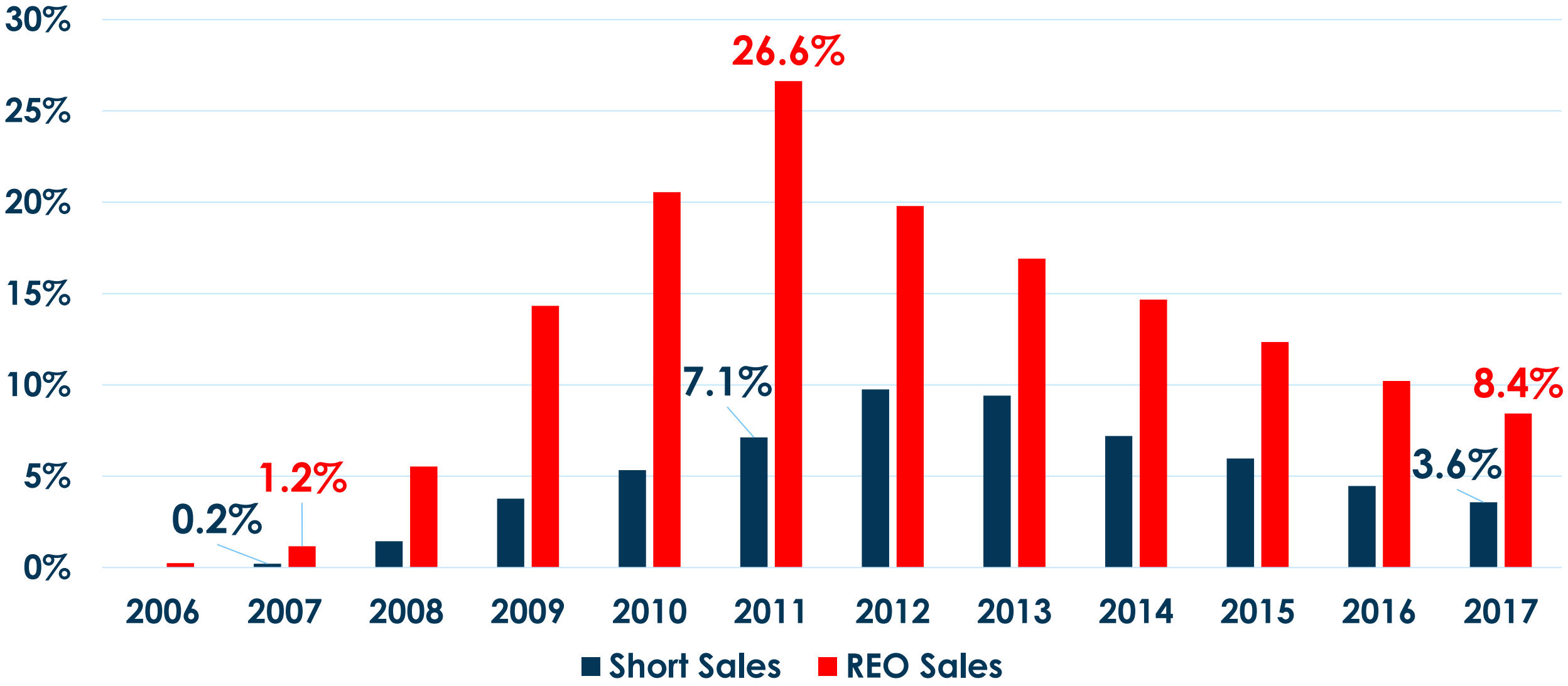
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all sales activity in our region.

New Construction Residential Home Sales
Hampton Roads, 2006 Q1 to 2018 Q1



Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all new construction activity in our region.

Short Sales and Bank-Owned Sales as Percent of Existing Homes Sales: Hampton Roads, 2006-2017



Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.
* Williamsburg represents Williamsburg, James City County, York County and Gloucester County.

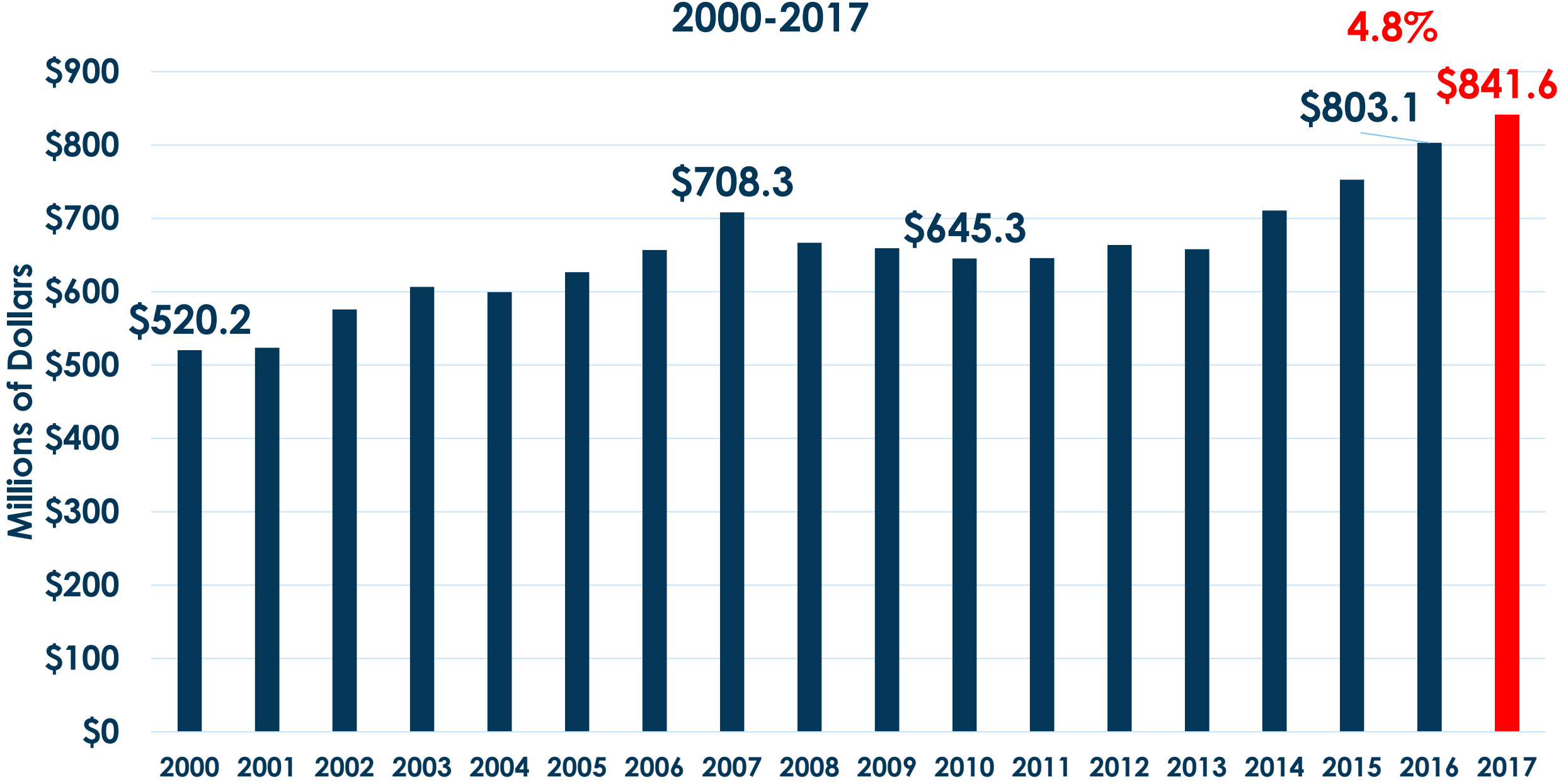
Median Sale Price of Existing Residential Homes for Selected Cities in Hampton Roads: 2007 and 2017

City	Median Price 2007	Median Price 2017	% change
Hampton	$180,000	$155,000	-13.9%
Newport News	$199,250	$170,000	-14.7%
Williamsburg*	$284,450	$283,000	-0.5%
Chesapeake	$250,100	$245,000	-2.0%
Norfolk	$195,000	$183,500	-5.9%
Portsmouth	$165,500	$140,000	-15.4%
Suffolk**	$257,500	$240,000	-6.8%
Virginia Beach	$245,000	$247,500	+1.2%
Hampton Roads	$223,000	$219,000	-1.8%

Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.
* Williamsburg represents Williamsburg, James City County, York County and Gloucester County. ** Median price in Suffolk peaked in 2006 at $263,950

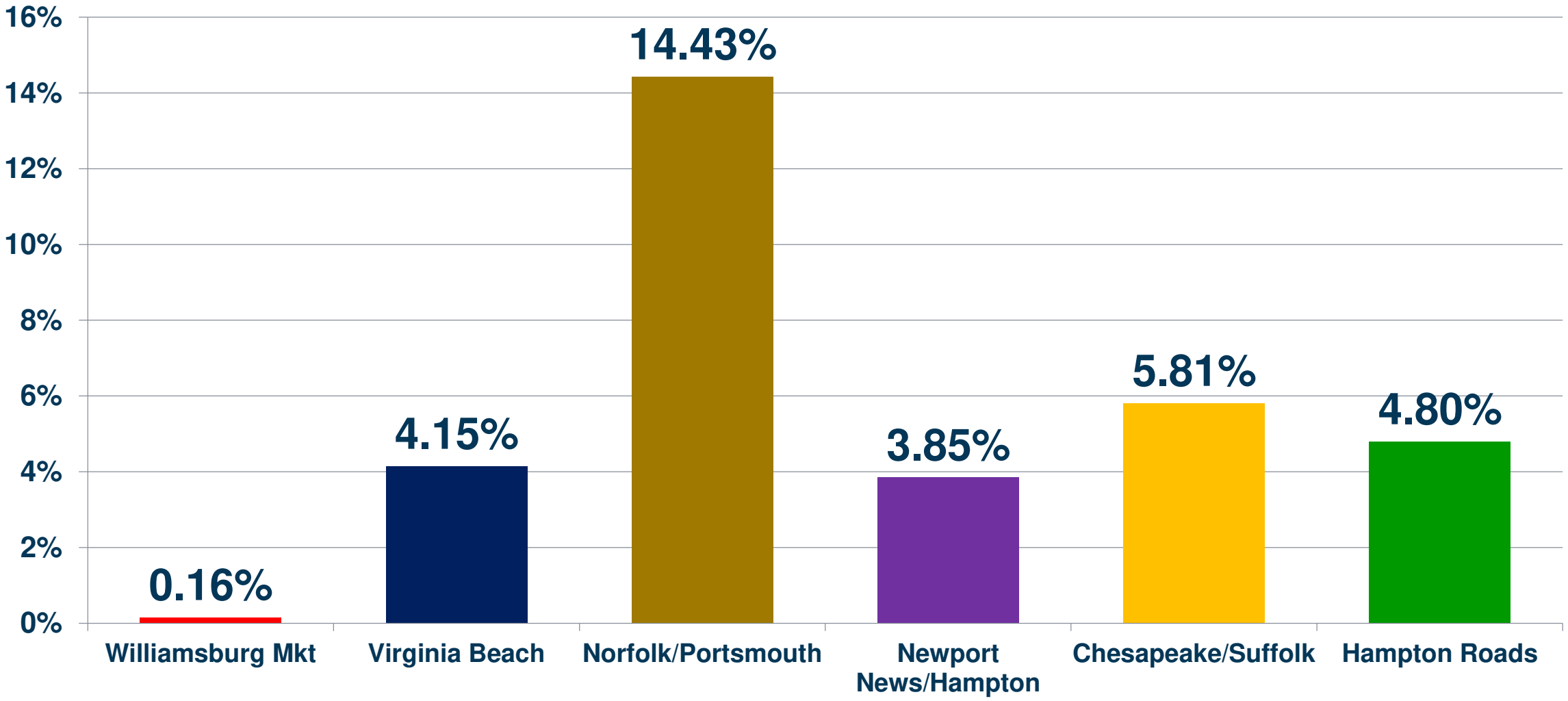
The Hotel Industry Continues to Grow

Hotel Revenue in Hampton Roads
2000-2017



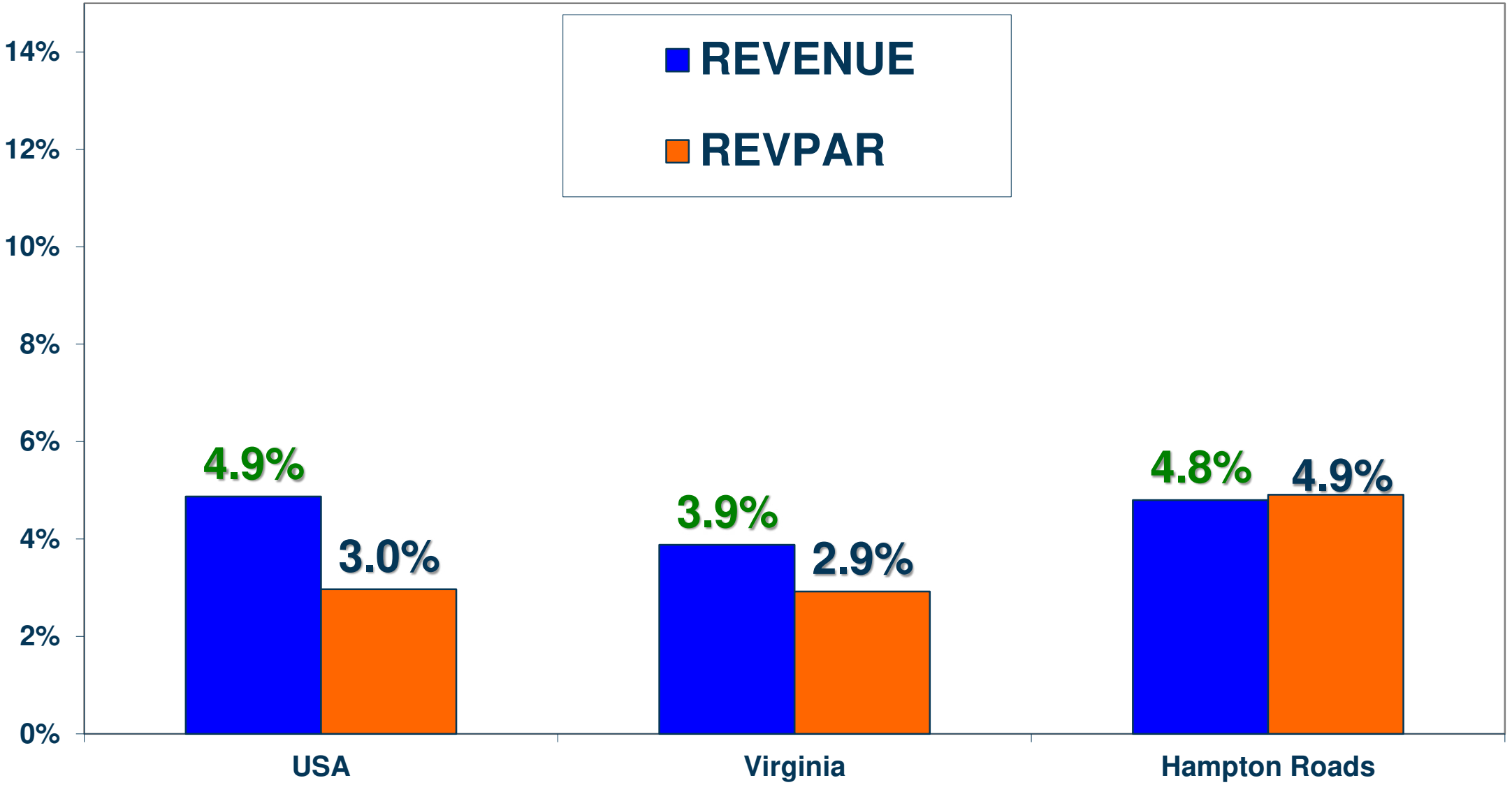
Source: STR Global and Old Dominion University Economic Forecasting Project.

Percent Change in Hotel Revenue within Hampton Roads: 2016 to 2017



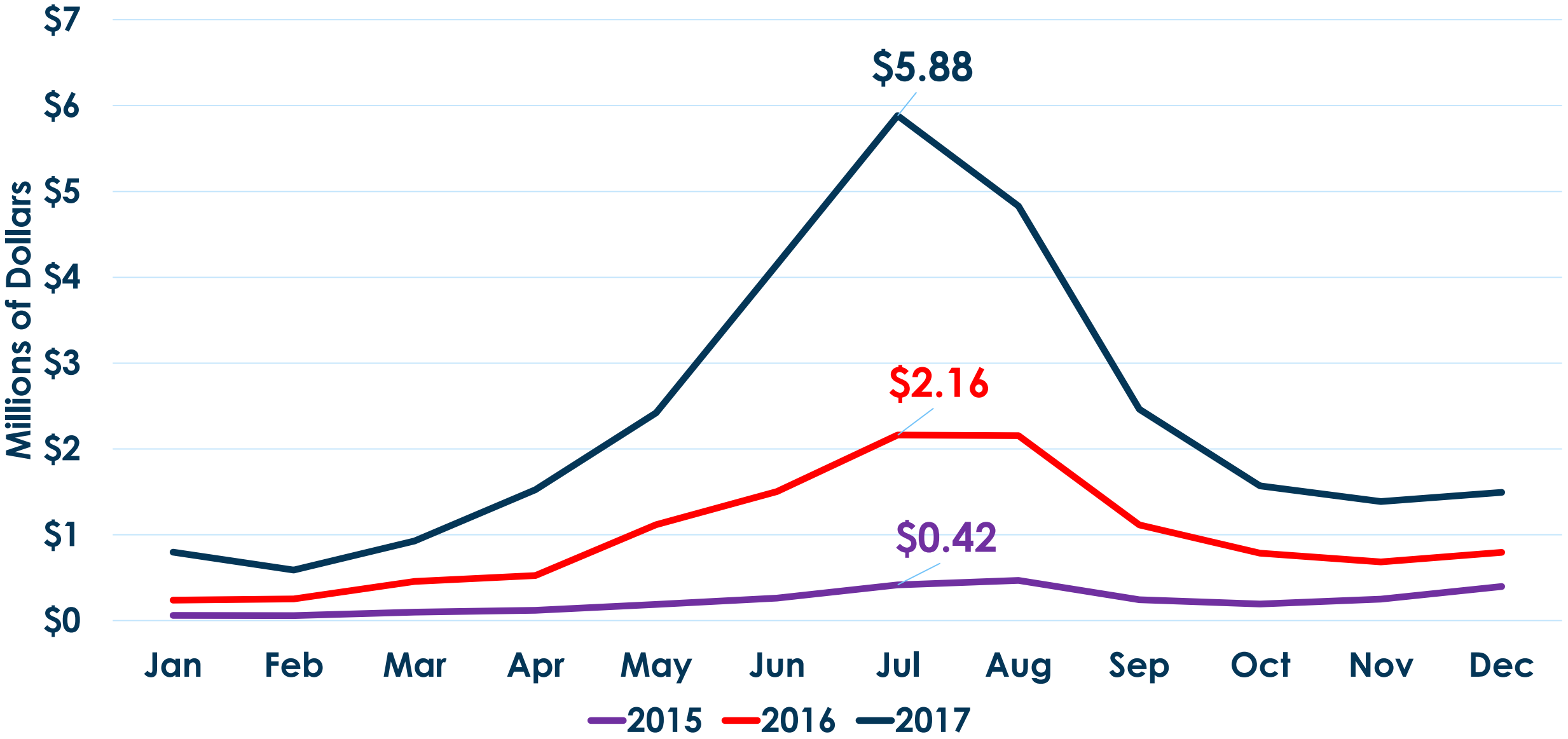
Source: STR Trend Reports January 24, 2017, January 17, 2018, and the Old Dominion University Economic Forecasting Project.

Percent Change in Hotel Revenue and REVPAR
2016 to 2017



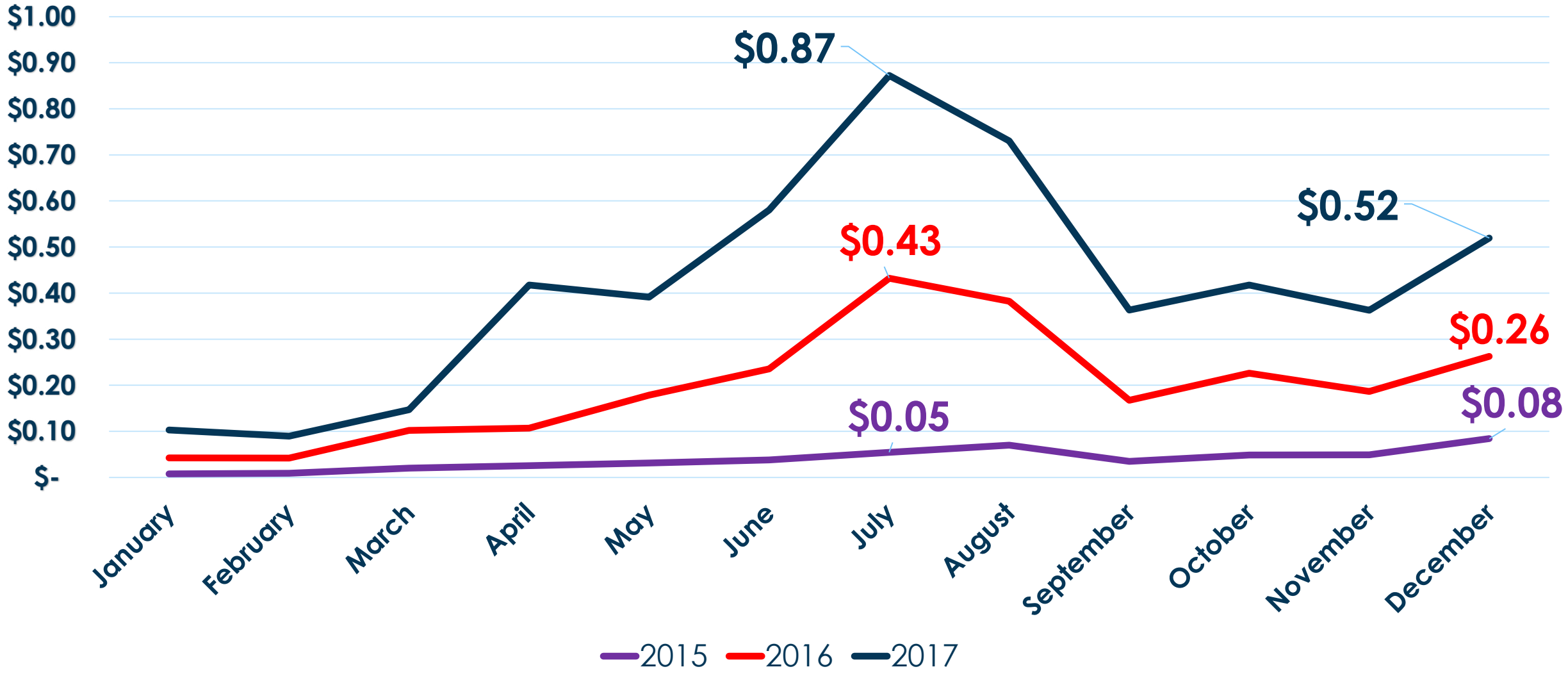
Source: STR Trend Reports January 24, 2017, January 17, 2018, and the Old Dominion University Economic Forecasting Project.

Monthly Airbnb Revenue in Hampton Roads 2015-2017 (Millions of $)



Source: Airdna (2018) market data adjusted by Dragas Center for Economic Analysis and Policy. Excludes shared rooms

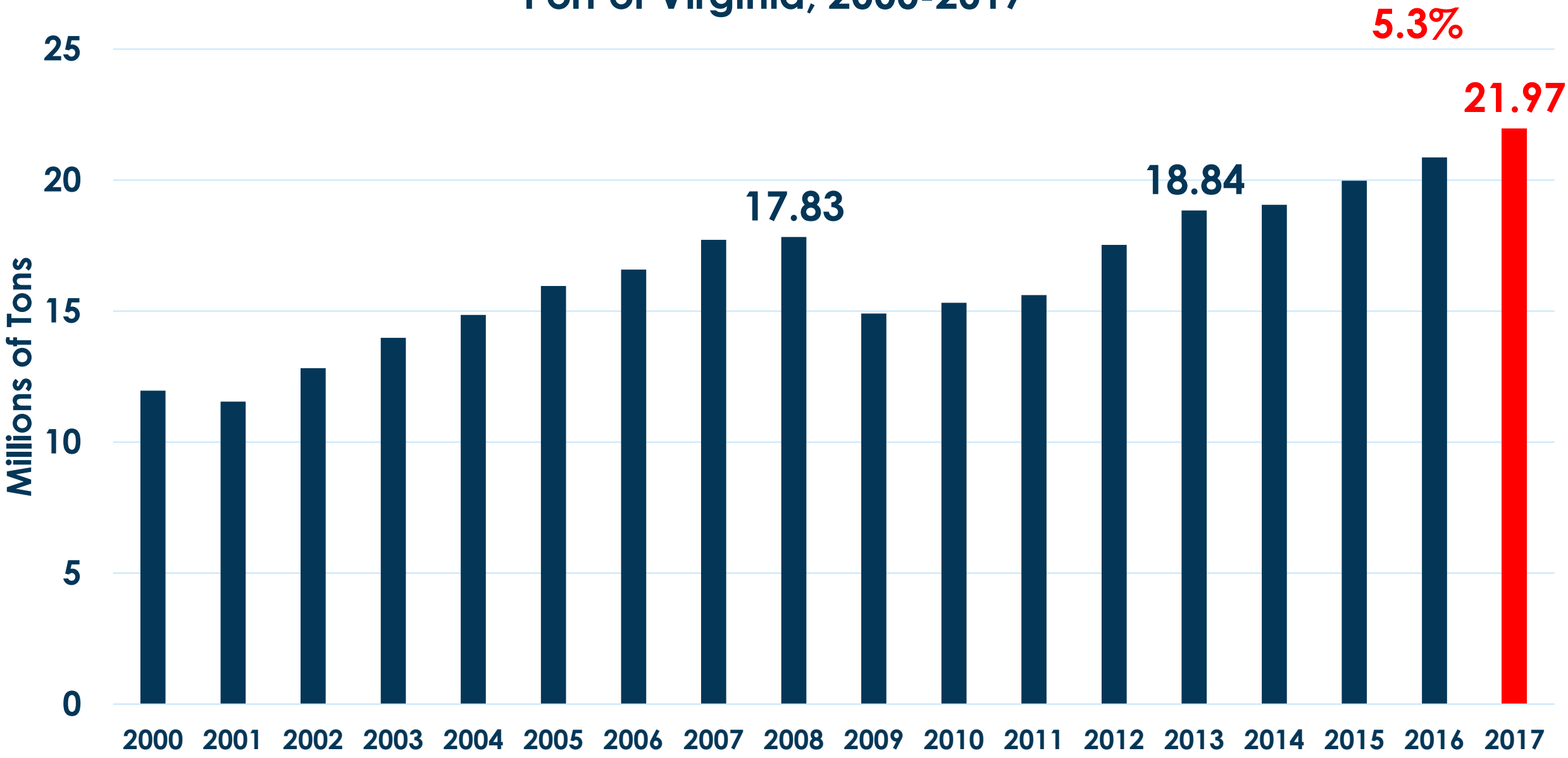
Monthly Revenue of All Airbnb Properties: Williamsburg Market, 2015-2017 (Millions of $)



Source: Airdna data received in January 2018 excluding shared rooms

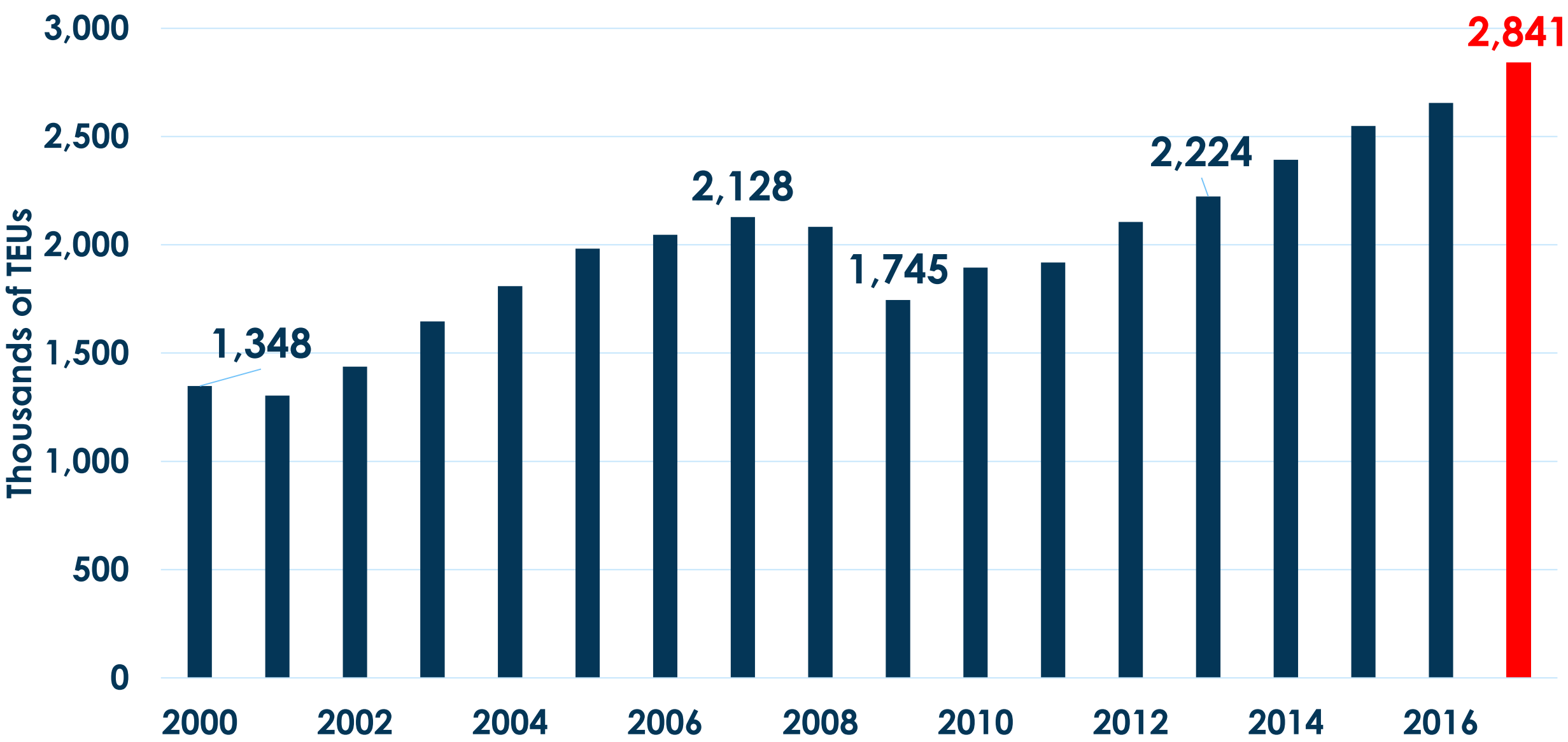
The Port of Virginia: Strong Growth and Prospects for 2018

General Cargo Tonnage
Port of Virginia, 2000-2017



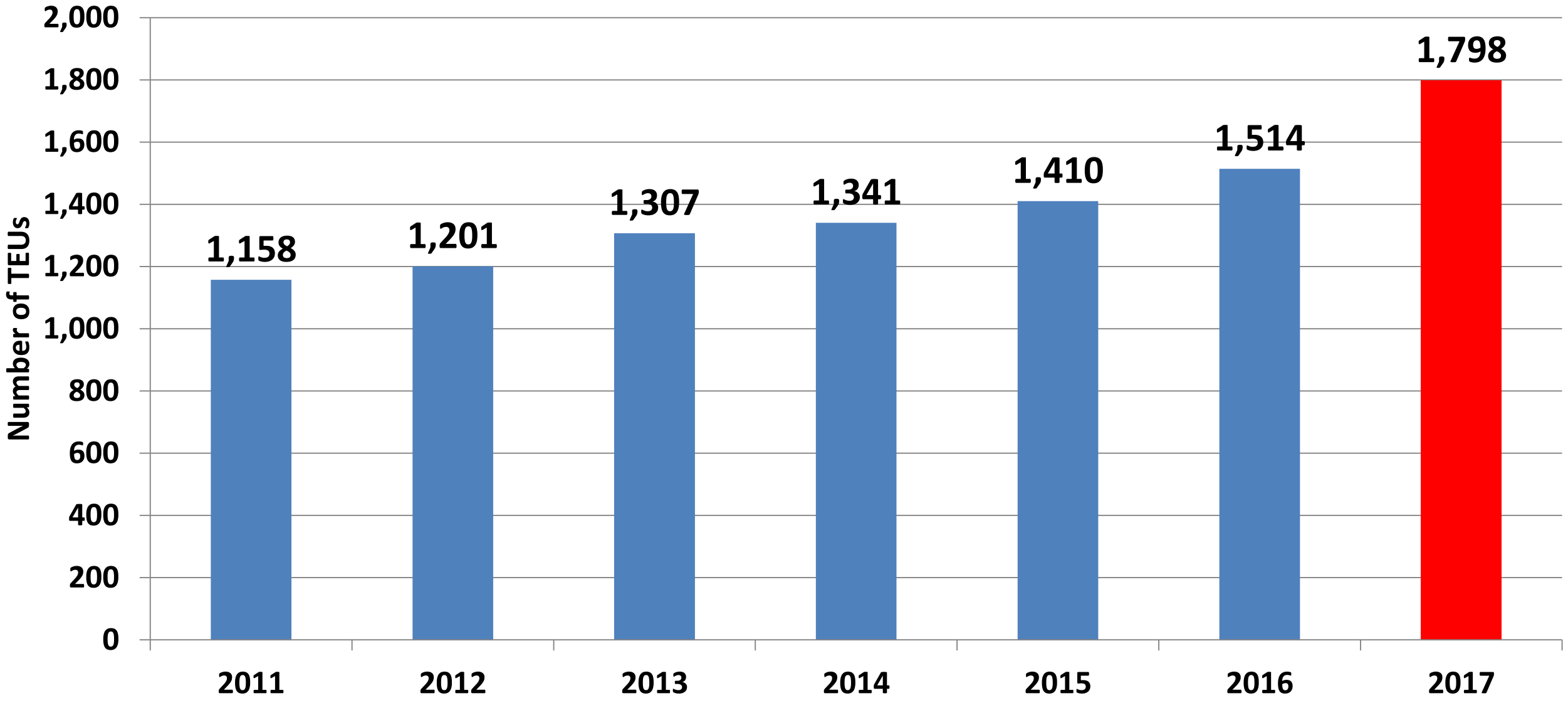
Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.

Twenty Foot Equivalent Container Units (TEUs)
Port of Virginia, 2000-2017



Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.

Average TEUs per Container Vessel Call
Port of Virginia, 2011-2017



Source: Virginia Port Authority and the Old Dominion University Economic Forecasting Project.

Performance of the Hampton Roads Economy: Year to Date March 2017 and Year to Date March 2018

	YTD March 2017	YTD March 2018	Percentage Change
Civilian Labor Force	840,978	841,657	+0.08%
Employment	802,545	810,019	+0.93%
Unemployment	38,433	31,638	-17.68%
Unemployment Rate	4.57%	3.76%	--
Civilian Nonfarm Payrolls	767,167	768,033	+0.11%
Taxable Sales	$5.09 Billion	$5.28 Billion	+3.74%

Source: Multiple sources available upon request.

Performance of the Hampton Roads Economy: Year to Date March 2017 and Year to Date March 2018

	YTD March 2017	YTD March 2018	Percentage Change
Hotel Revenue	$131.32 Million	$141.22 Million	+7.54%
General Cargo Tonnage**	7.35 Million	7.39 Million	+0.55%
TEU Containers**	906,236	910,772	+0.50%
Number of 1 Unit Housing Permits	1,209	1,100	-9.02%
Value of 1 Unit Housing Permits	$270.74 Million	$245.11 Million	-9.47%
Number of Existing Homes Sold**	6,424	6,865	+6.86%
Distressed Sales as Percentage of Existing Homes Sold**	15.47%	12.34%	--
Median Price of Existing Homes Sold**	$206,000	$216,900	+5.29%

Source: Multiple sources available upon request. **Data are for YTD April 2017 and YTD April 2018.

	2017 Forecast	2017 Actual	2018 Forecast
Hampton Roads Real Gross Domestic Product Initial Forecast	1.4%	--	1.2%
Hampton Roads Real Gross Domestic Product Mid-year revision	0.9%	--	2.2%
Civilian Job Growth	0.5%	0.9%	0.5%
Unemployment Rate	4.3%	4.2%	3.8%
Taxable Sales	2.6%	2.8%	3.0%
Hotel Revenue	4.4%	4.8%	3.9%
General Cargo Tonnage	2.7%	5.3%	2.7%
One Unit Housing Permit Value	2.6%	8.6%	2.4%

Source: 2017 data reflects the annual rate of growth. Dragas Center forecast current as of April 2018.

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COMMONWEALTH ECONOMIC DASHBOARD

Select Area: VA

REAL GDP

2017 Q4

$446.34 bil

2.5% from 2017 Q3

UNEMPLOYMENT RATE

March 2018

3.3%

-0.6% from March 2017

TOTAL NONFARM EMPLOYMENT

2017 Q4

3.99 mil

0.90% from 2016 Q4

SIZE OF THE LABOR FORCE

March 2018

4.35 mil

1.0% from March 2017

AVERAGE WEEKLY WAGES

2017 Q3

$1,053

-0.85% from 2016 Q3

INITIAL UNEMPLOYMENT CLAIMS

April 2018

9,643

-4.6% from April 2017

TAXABLE RETAIL SALES

2018 Q1

$28.92 bil

2.74% from 2017 Q1

FHFA HOUSING PRICE INDEX

2017 Q4

3.52%

from 2016 Q4

HOTEL REVENUE PER AVAILABLE ROOM (REVPAR)

YTD March 2018

$57.05

0.33% from YTD March 2017

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- ***We put the economy into context so that you can better understand the numbers.***

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