2018 Annual Economic Forecast

Dragas Center for Economic Analysis and Policy

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2018 National and Virginia Economic Forecast

Accelerating Growth, Increasing Risk

Professor Robert McNab

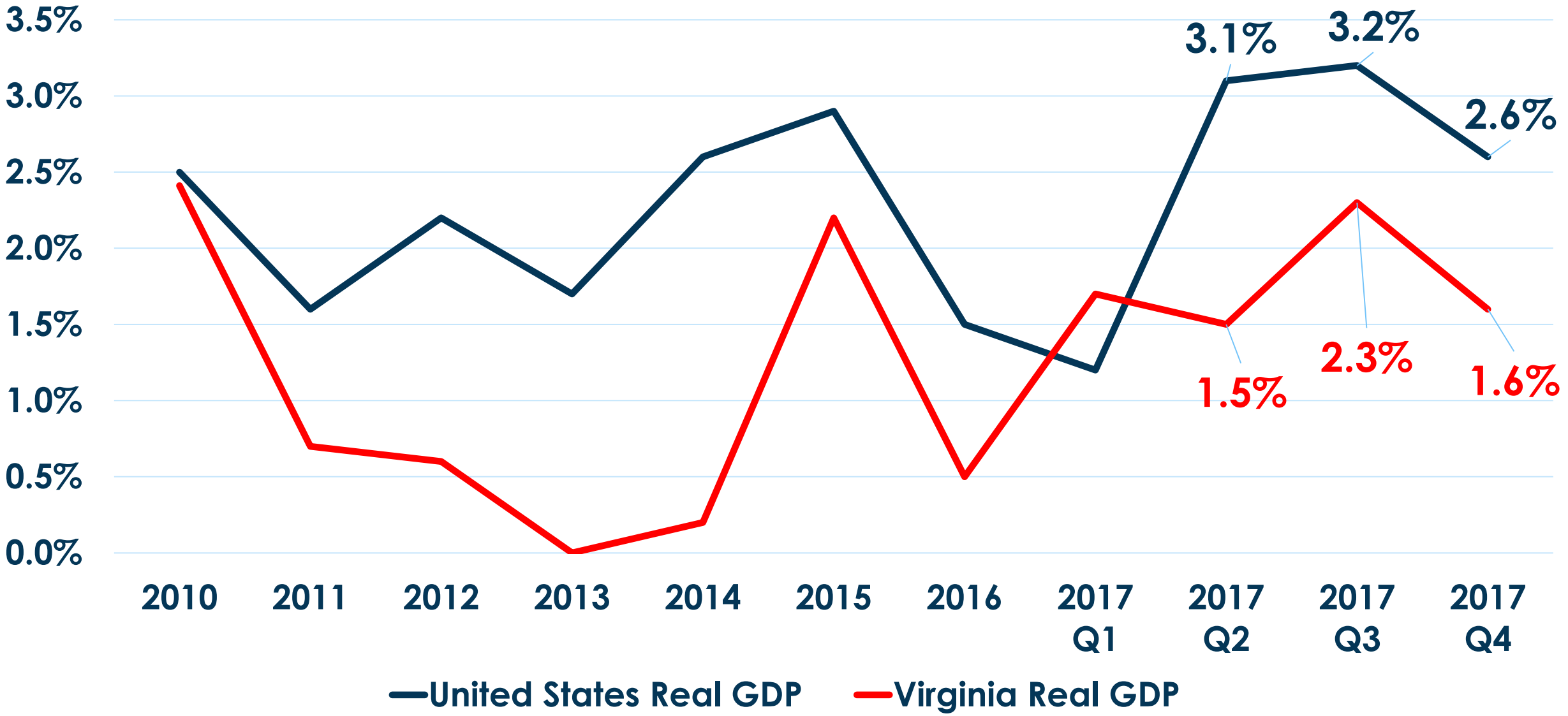
January 31, 2018

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	3.52%	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*	103	1.38%	2.14%

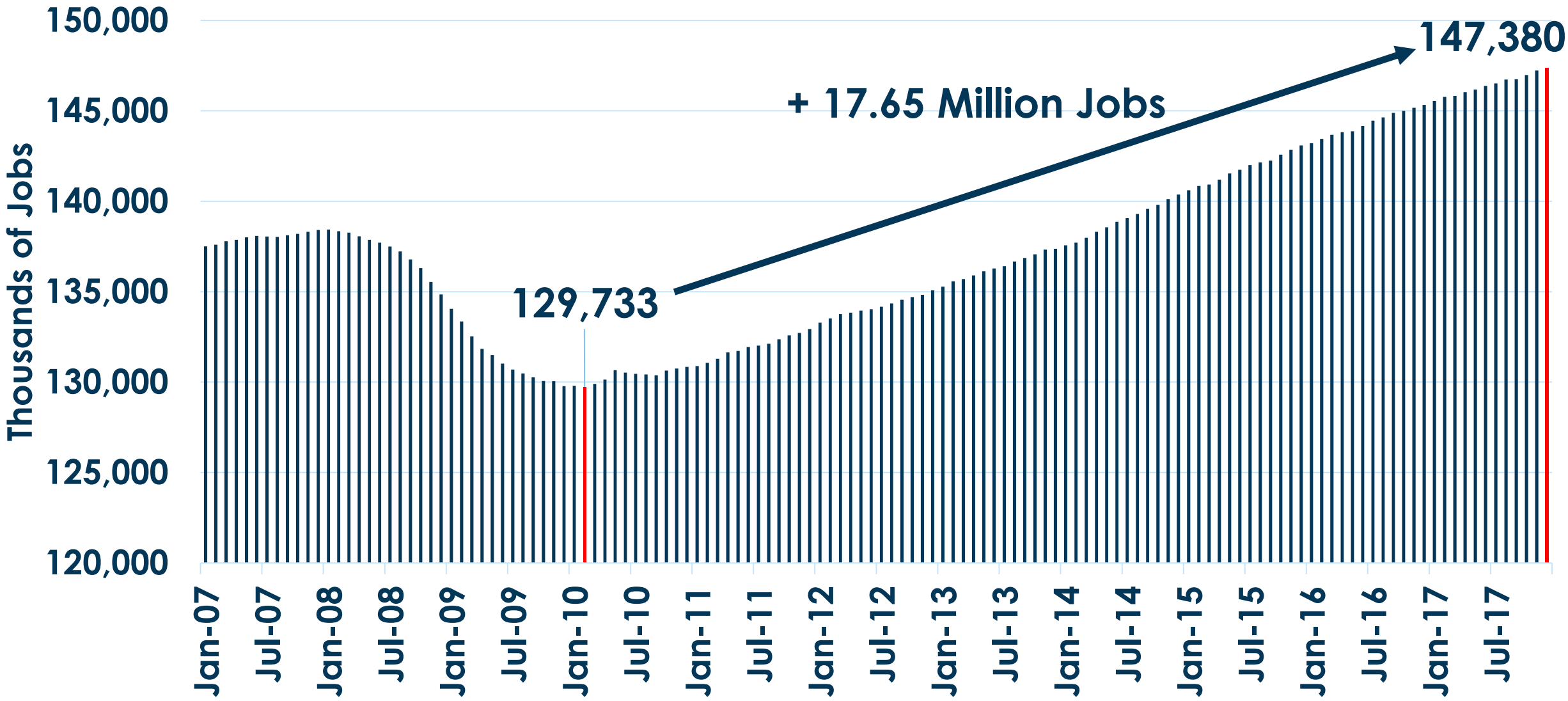
Source: Bureau of Labor Statistics, Bureau of Economic Analysis, National Bureau of Economic Research, and Old Dominion University Economic Forecasting Project. Real GDP in chained 2009 dollars. CAGR = Compound Annual Growth Rate. Annual Real GDP CAGR derived from quarterly series. Annual employment CAGR derived from monthly series. Current expansion data ends in 2017 Q3. Average annual Real GDP CAGR of previous expansions = 4.21% while average annual employment CAGR from previous expansions = 2.92%

Growth in Real Gross Domestic Product
United States and Virginia, 2010 - 2017 Q4



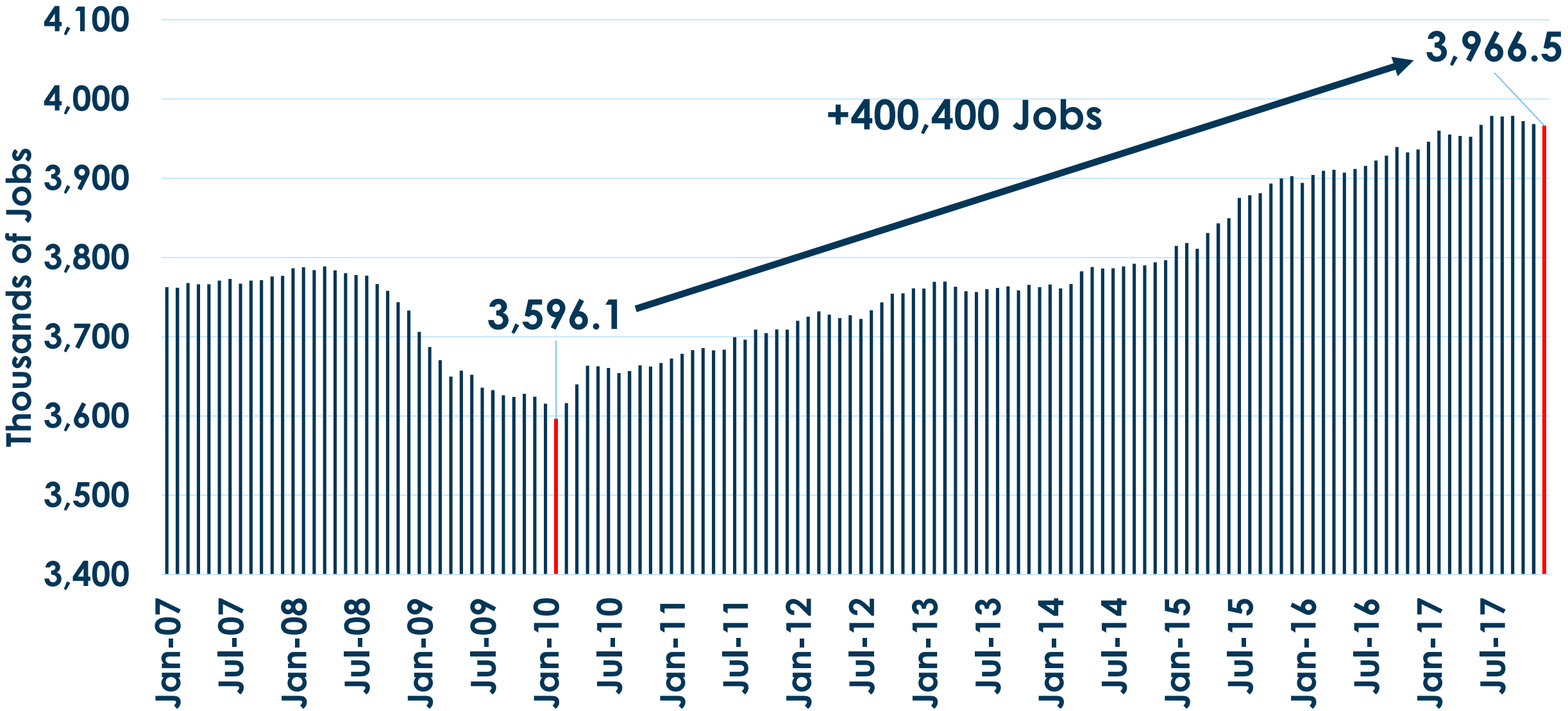
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Real GDP measured in chained 2009 dollars. U.S. Q4 and VA Q3 are advance estimates. VA Q4 is our forecast. Quarterly numbers are annualized rates of growth

Total Nonfarm Employment
United States, January 2007 – December 2017



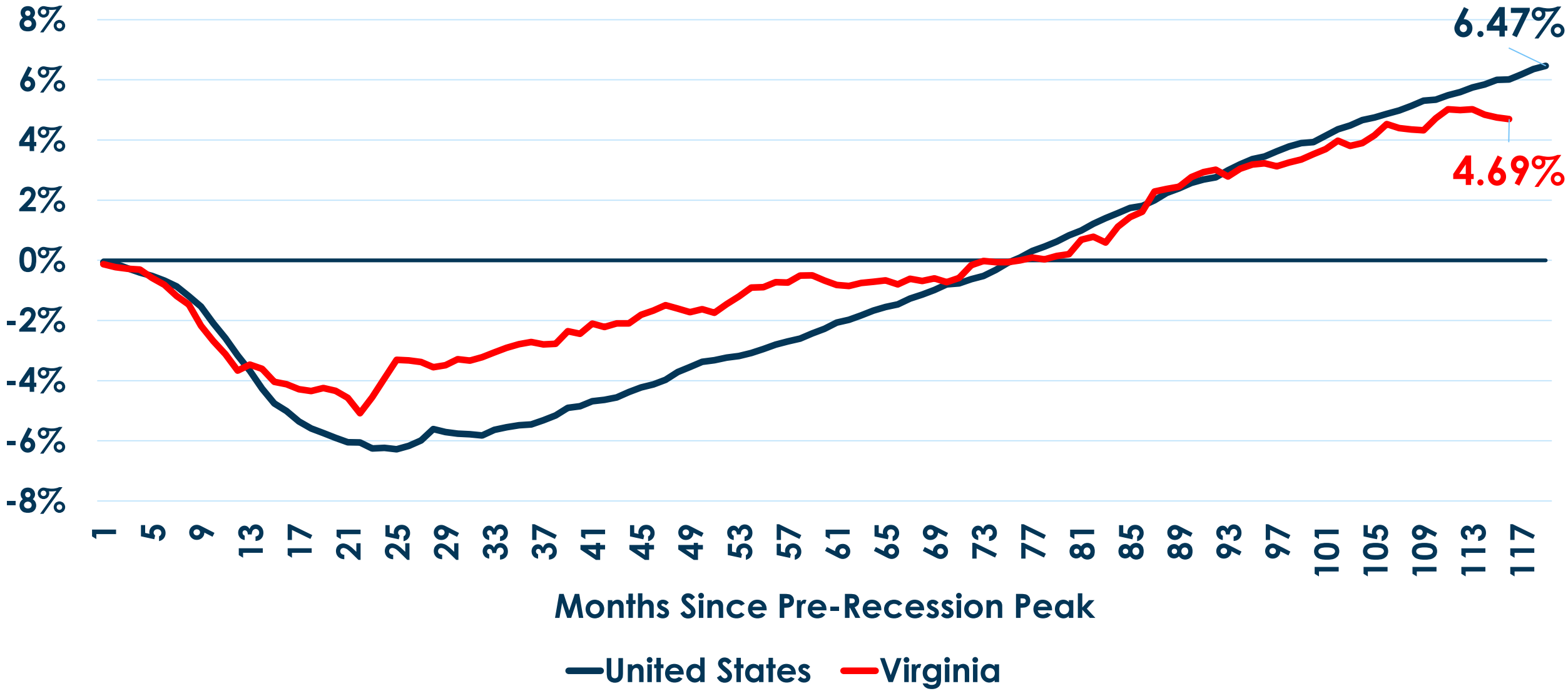
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Data for December 2017 are preliminary. Trough was February 2010.

Total Nonfarm Employment
Virginia, January 2007 - December 2017



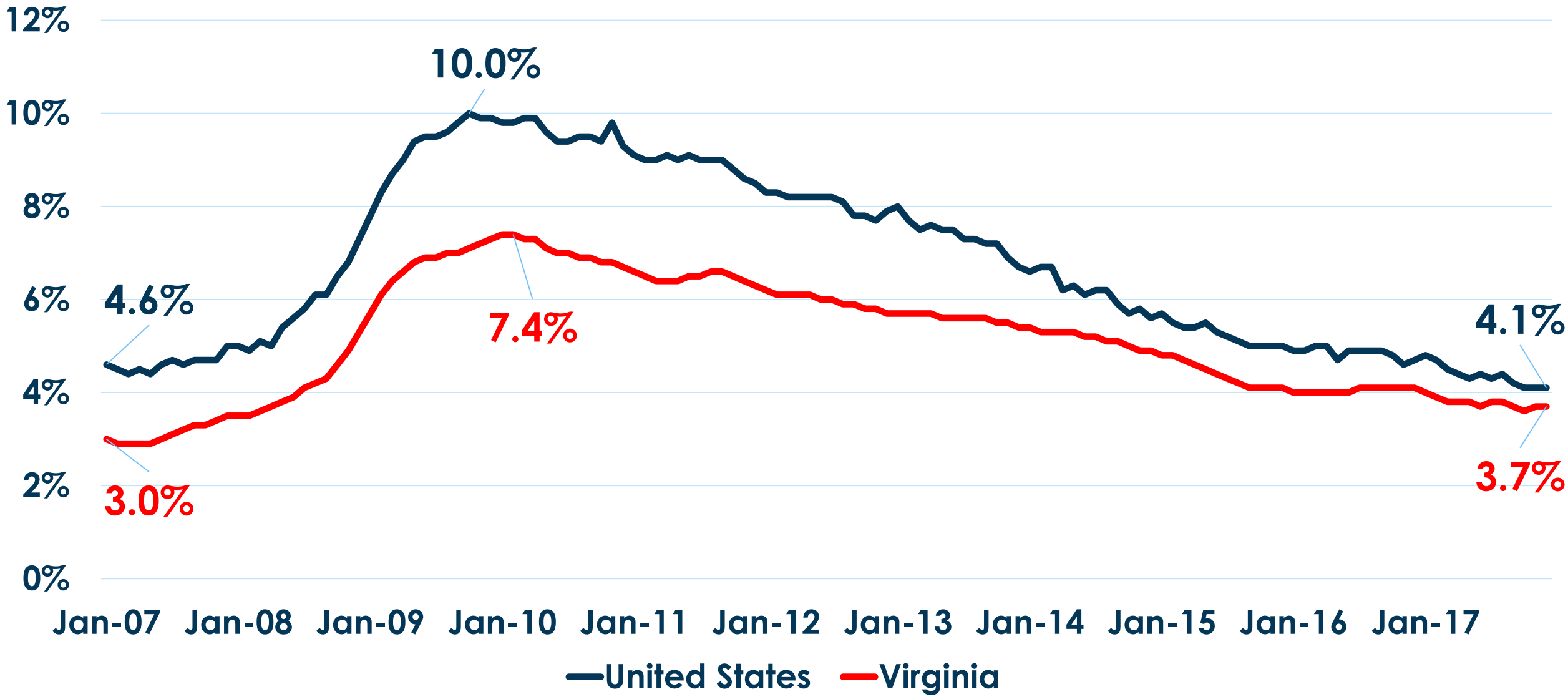
Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Seasonally adjusted data. Data for December 2017 are preliminary. Trough is February 2010.

Monthly Job Growth From Pre-Recession Peak Employment
Virginia and the United States, 2008-2017



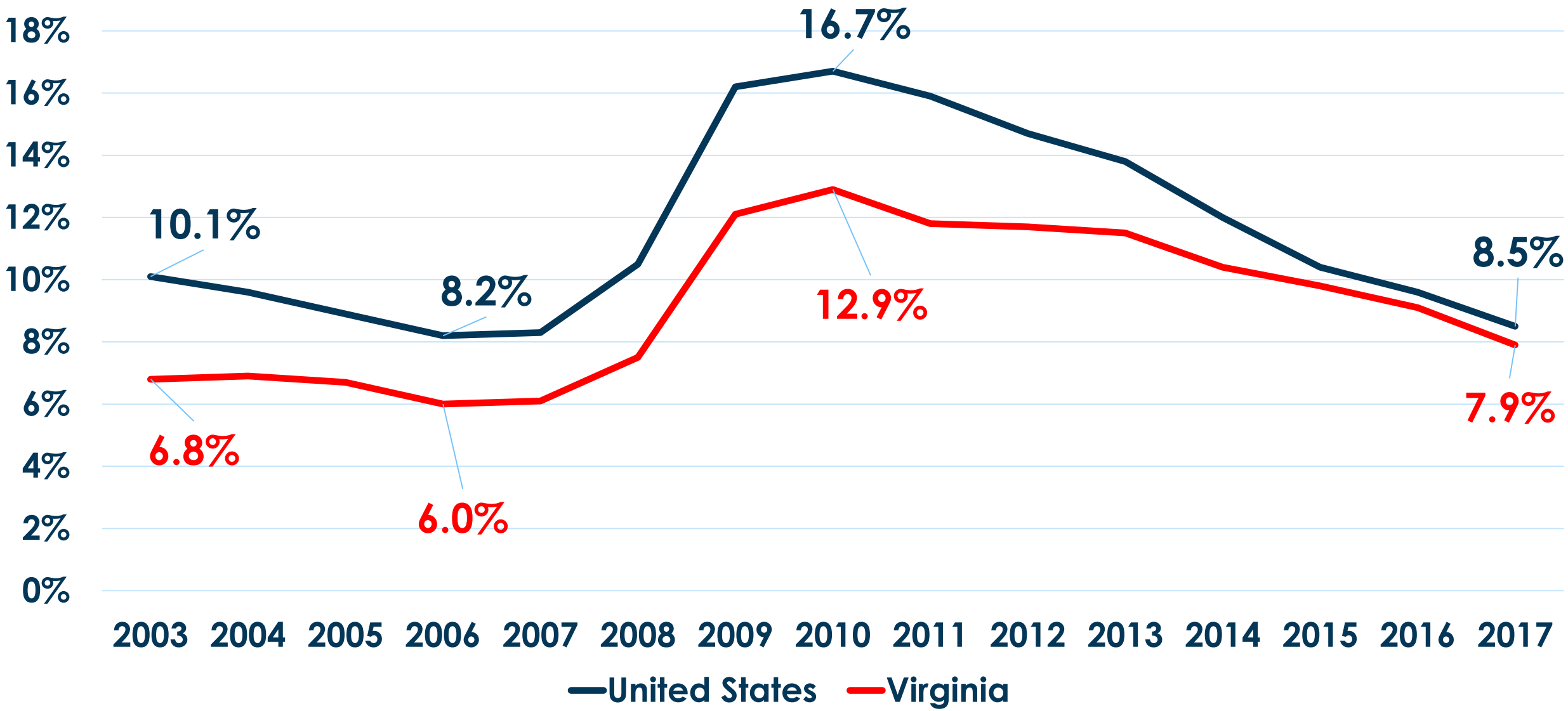
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak employment for the United States was January 2008. Peak employment for Virginia was April 2008. Seasonally adjusted data through December 2017. December 2017 data are preliminary. Data measure the number of reported jobs by the Current Employment Statistics (CES) program.

Headline Unemployment Rate (U3)
Virginia and United States, January 2007 - December 2017



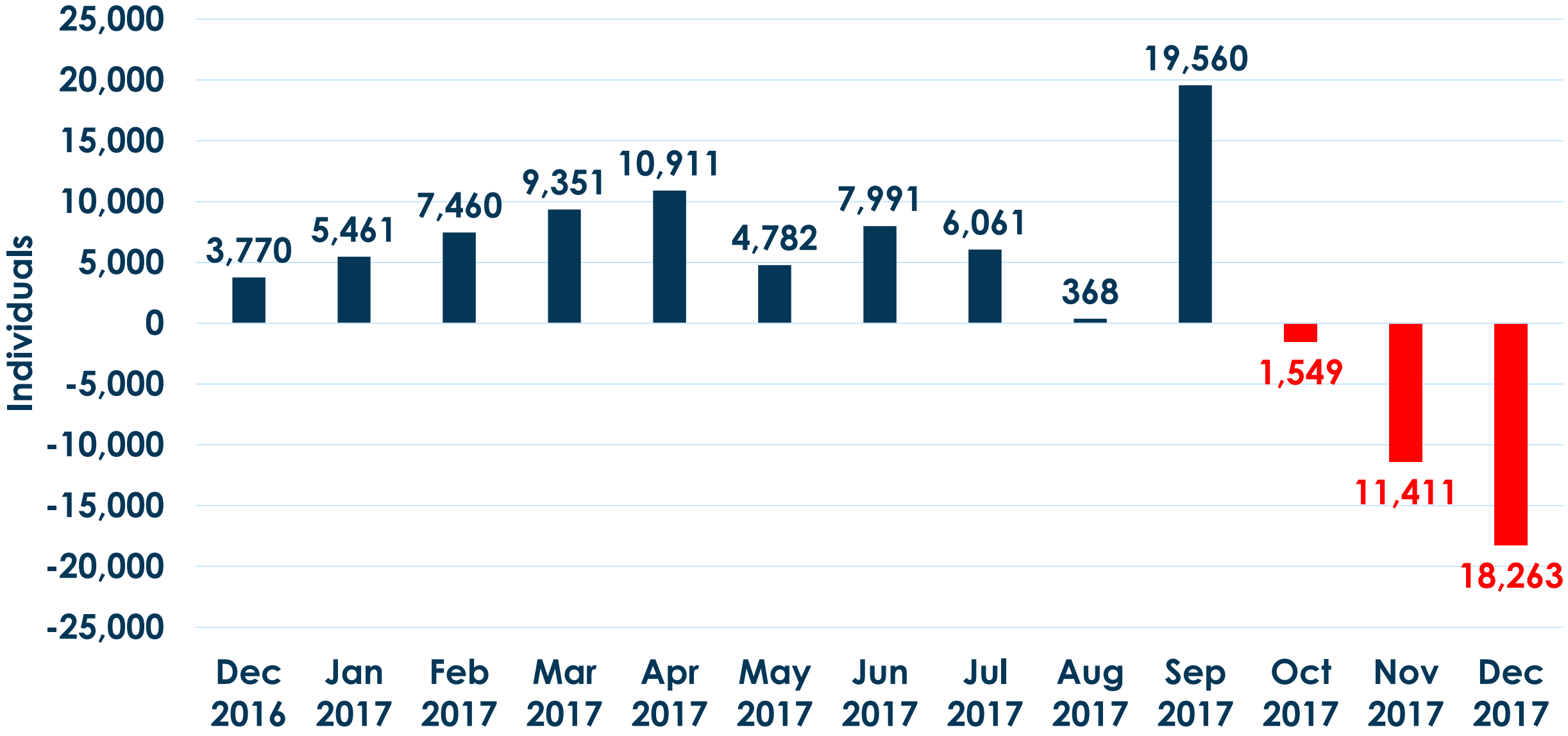
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted unemployment rates. December 2017 data are preliminary.

Alternative Measure of the Unemployment Rate (U6)
Virginia and the United States, 2003-2017



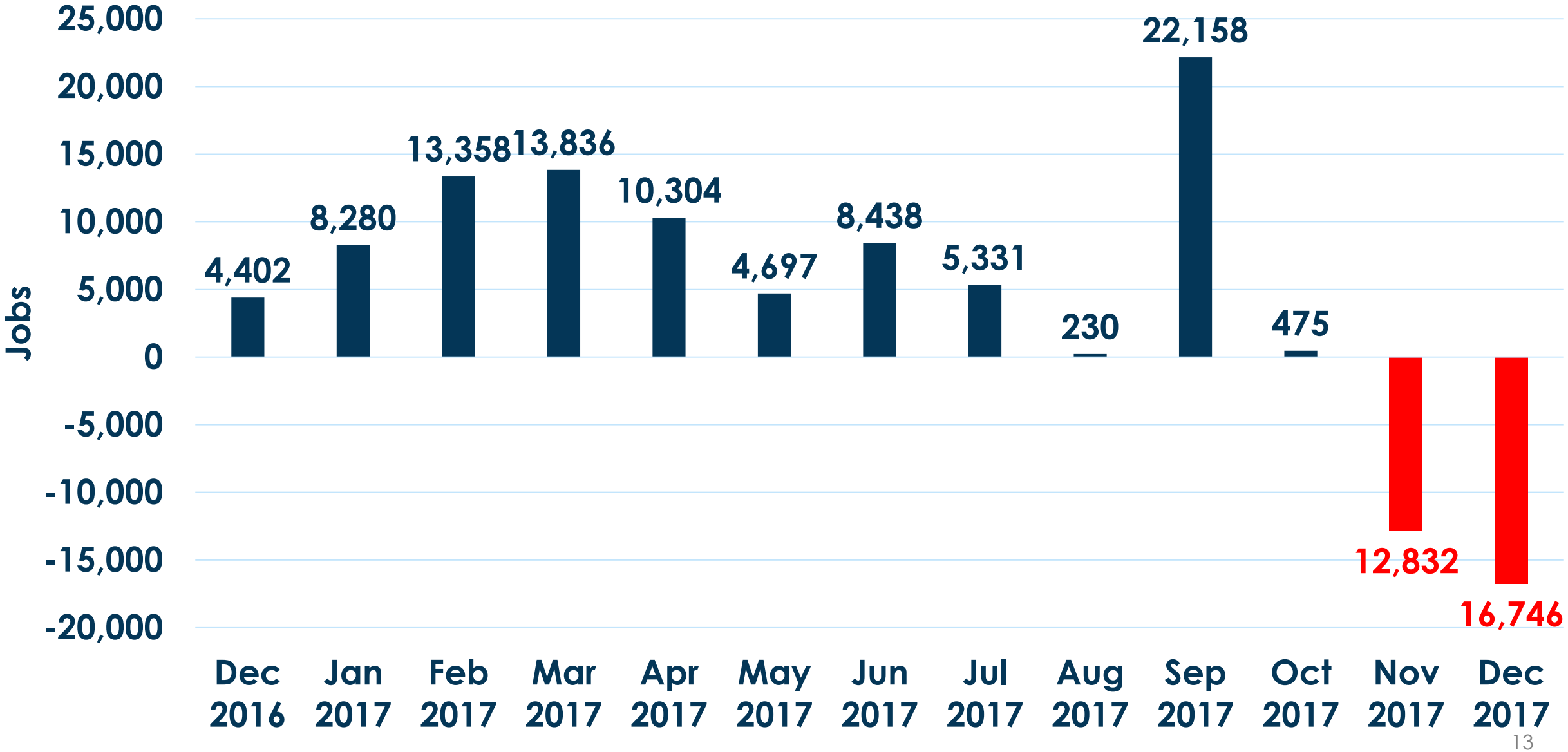
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. U-6 measures total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers. State level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

Month-to-Month Change in Labor Force
Virginia, December 2016 to December 2017



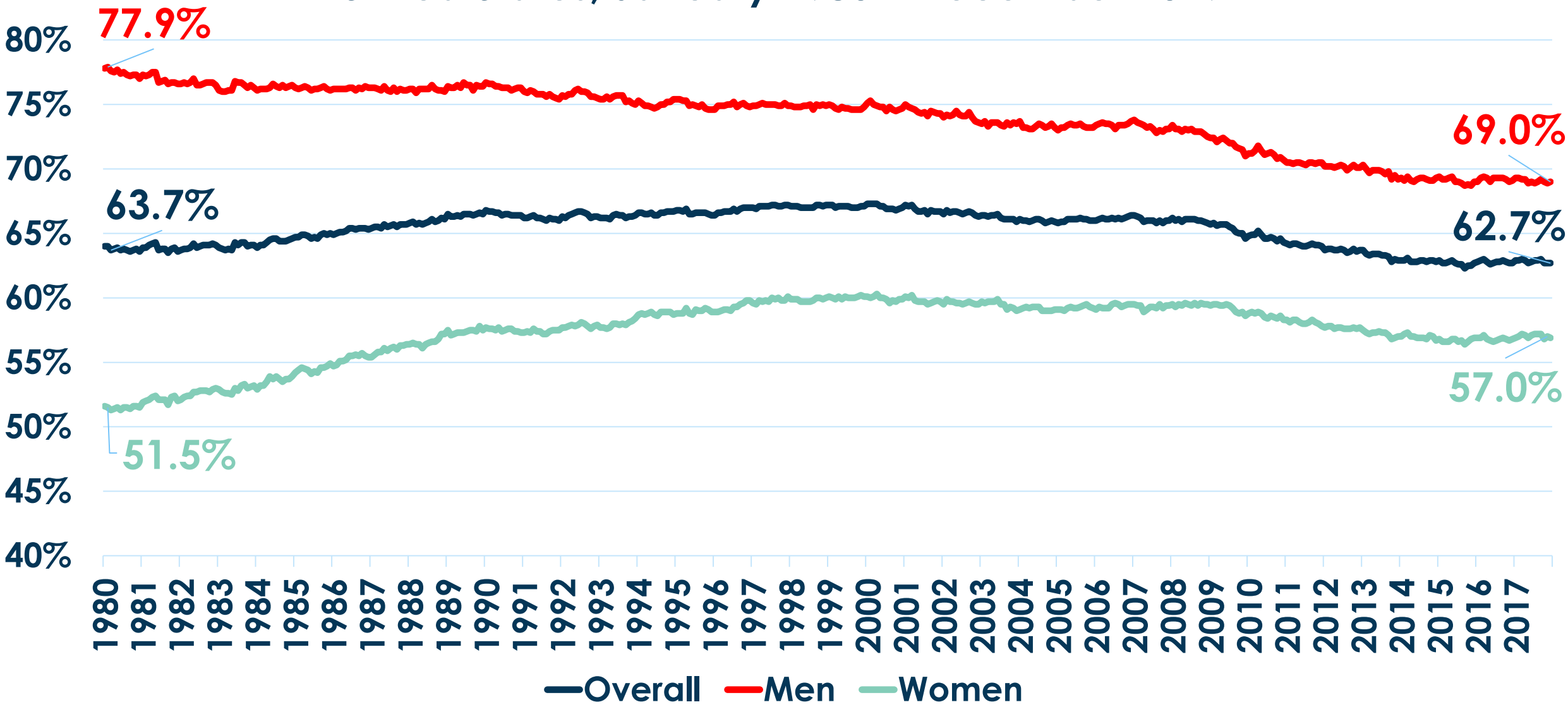
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Local Area Unemployment Statistics. Seasonally adjusted data. December 2017 data are preliminary.

Month-to-Month Change in Employment
Virginia, December 2016 to December 2017



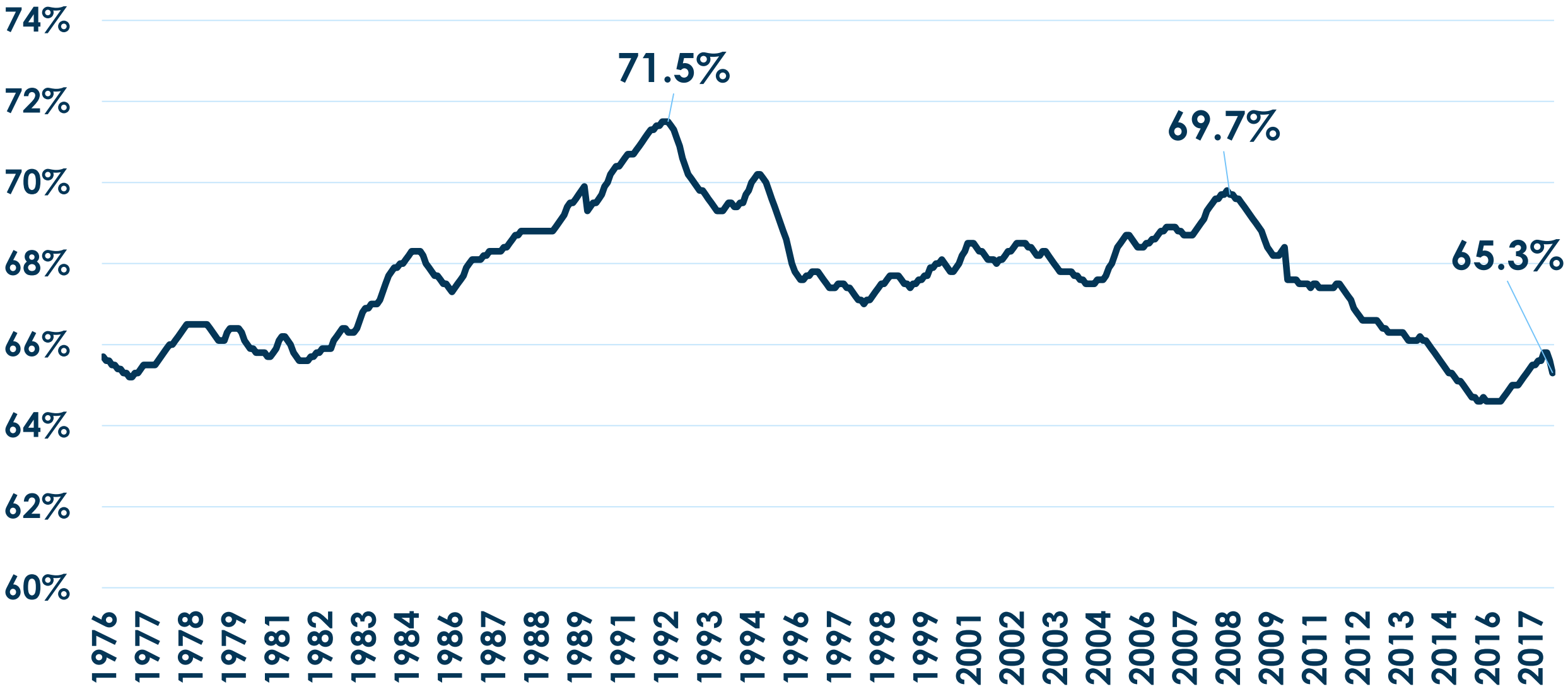
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Local Area Unemployment Statistics. Seasonally adjusted data. December 2017 data are preliminary.

Civilian Labor Force Participation Rate
United States, January 1980 – December 2017



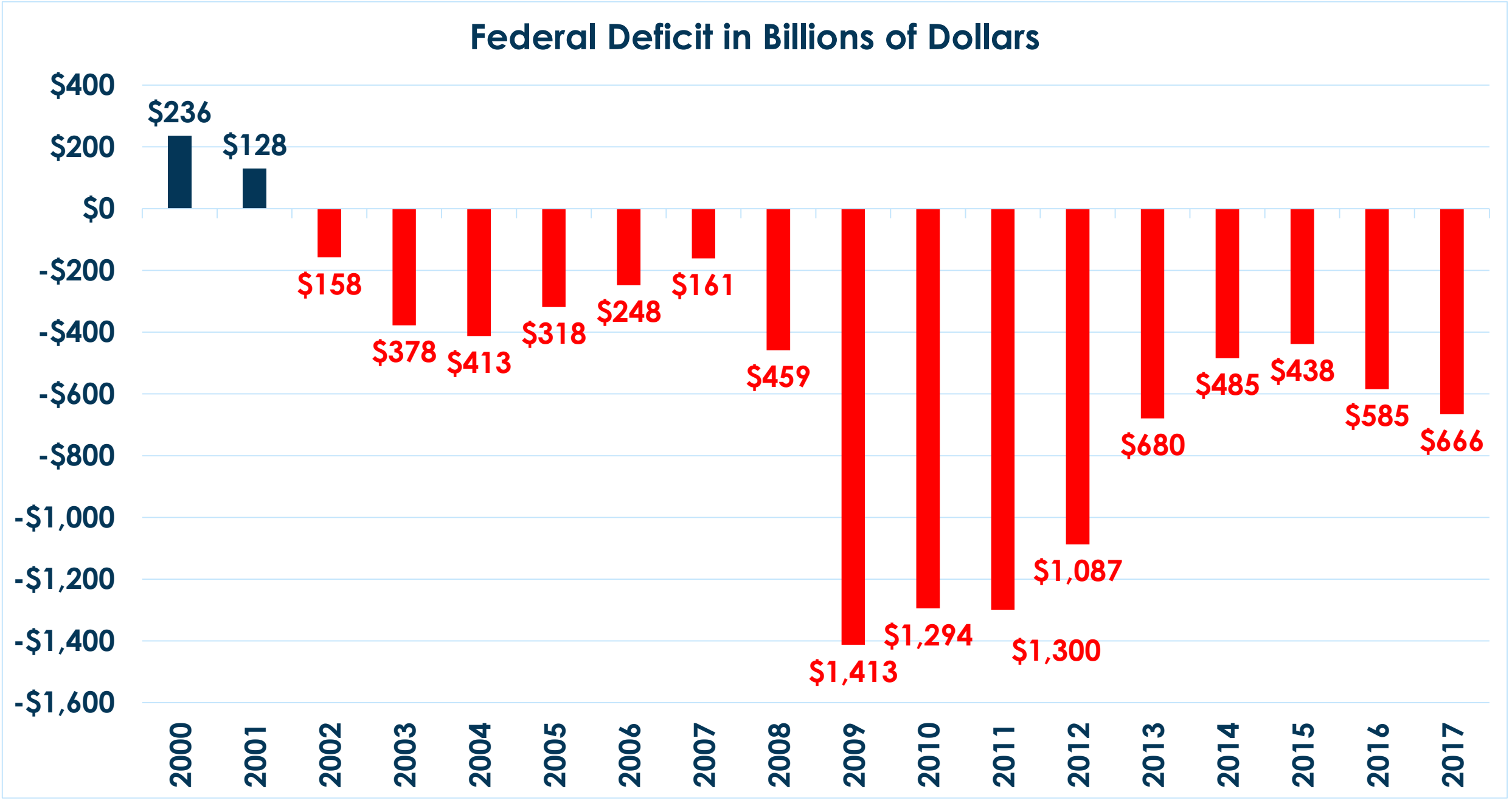
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted data.

Labor Force Participation Rate
Virginia, January 1976 to December 2017



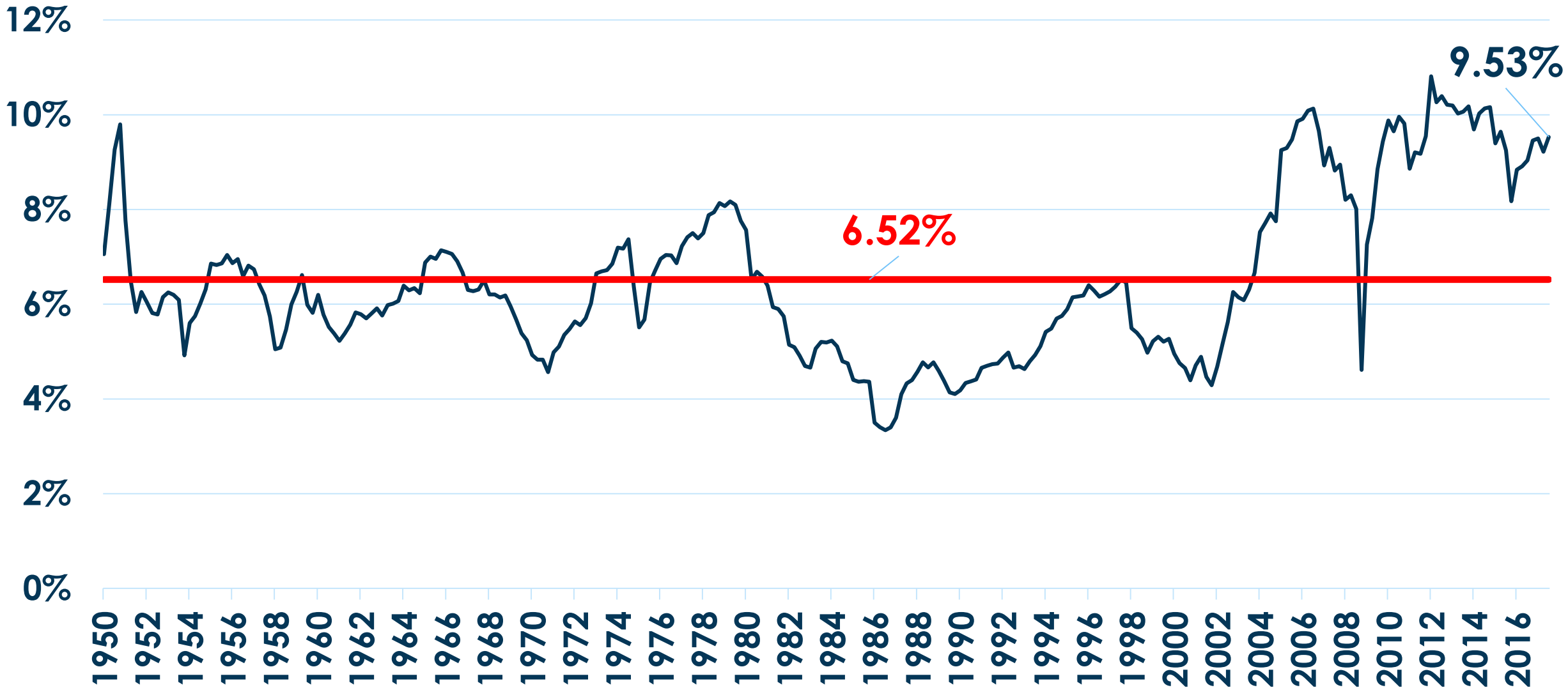
Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Seasonally adjusted data.

Federal Deficit in Billions of Dollars



Source: Office of Management and Budget and Old Dominion University Economic Forecasting Project. Federal deficits in nominal dollars.

Corporate Profits as Percent of GDP
United States, 1950-2017*

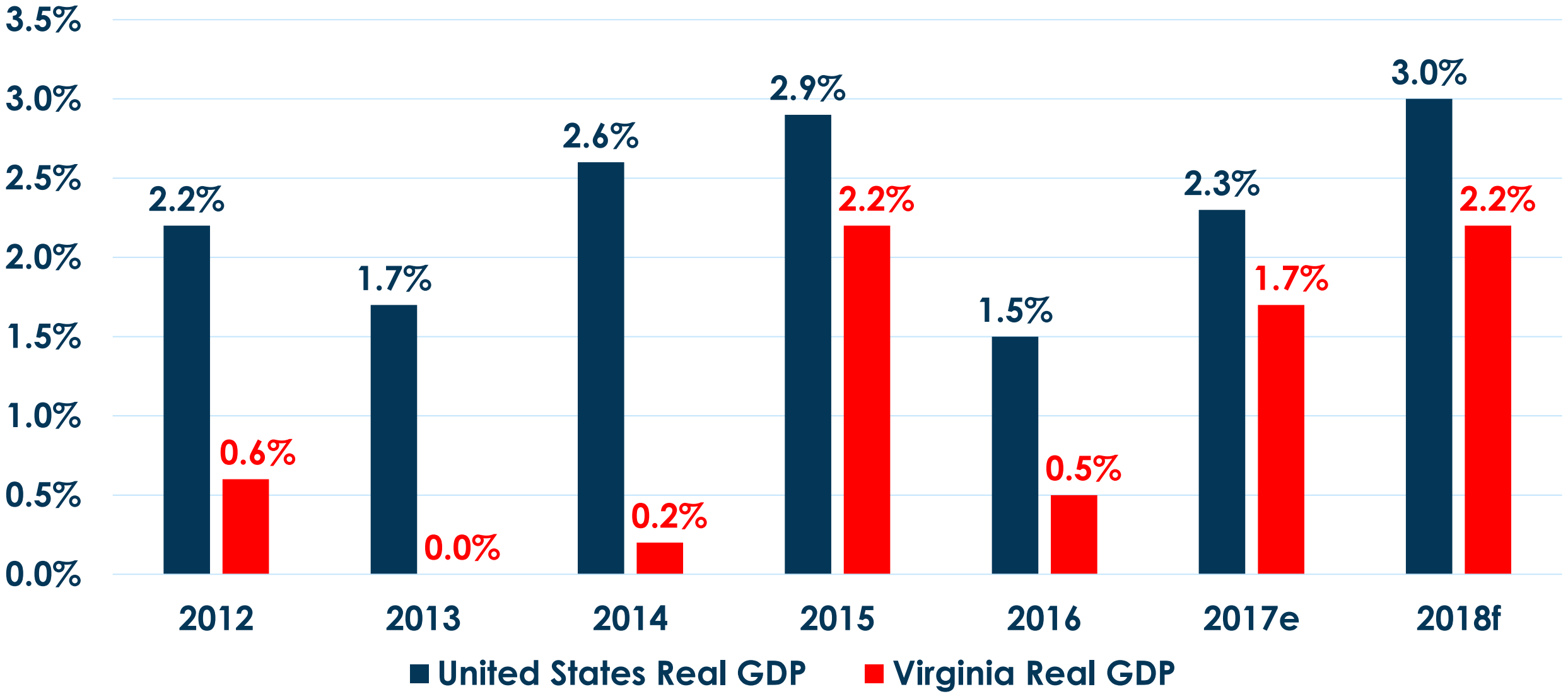


Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Corporate Profits After Tax Without Inventory Adjustment. 2017 is through the 3rd quarter.

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

Source: Robert Schiller, *Irrational Exuberance*. Prices and earnings are in January 2000 dollars. Data as of January 16th, 2018 market close. For further information: http://www.econ.yale.edu/~shiller/data.htm

Growth in Real Gross Domestic Product
Virginia and the United States, 2012-2018



Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Real GDP measured in chained 2009 dollars. 2017 US is an advance estimate. 2017 VA and 2018 are our forecasts.

	2017 Forecast	2017 Actual	2018 Forecast
U.S. Real Gross Domestic Product	2.2%	2.3%	3.0%
Civilian Job Growth	1.5%	1.2%	1.1%
Unemployment Rate	4.7%	4.1%	3.8%
Consumer Price Index	2.8%	2.2%	2.9%
Core Consumer Price Index	2.4%	1.7%	2.2%
3-month Treasury Bill	1.3%	1.4%	2.0%
10-year Treasury Bill	3.2%	2.4%	3.2%
30-year Treasury Bill	--	2.8%	3.6%
30-year Conventional Mortgage	4.3%	4.0%	5.0%
Federal Deficit	---	-$655 Billion	-$750 Billion
Virginia Real GDP*	1.5%	1.7%	2.2%
Virginia Employment Growth	---	1.4%	1.3%

Source: 2017 data reflects the annual rate of growth, last month, or day business day of 2017 where appropriate. 2017 VA GDP is an estimate based on the first 3 quarters. Data are rounded to nearest tenth.

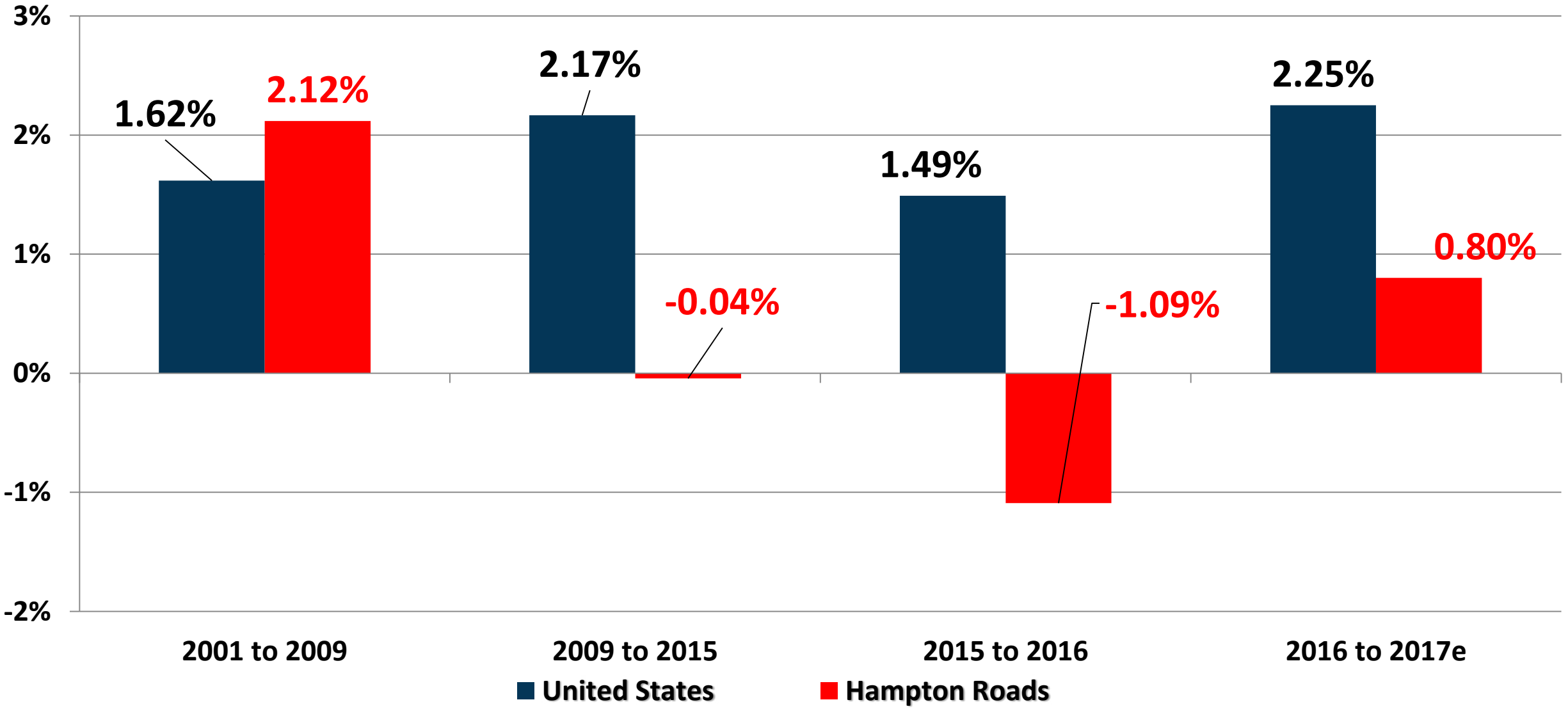
2018 Hampton Roads Economic Forecast

Stagnant Growth, Improving Future?

Professor Vinod Agarwal

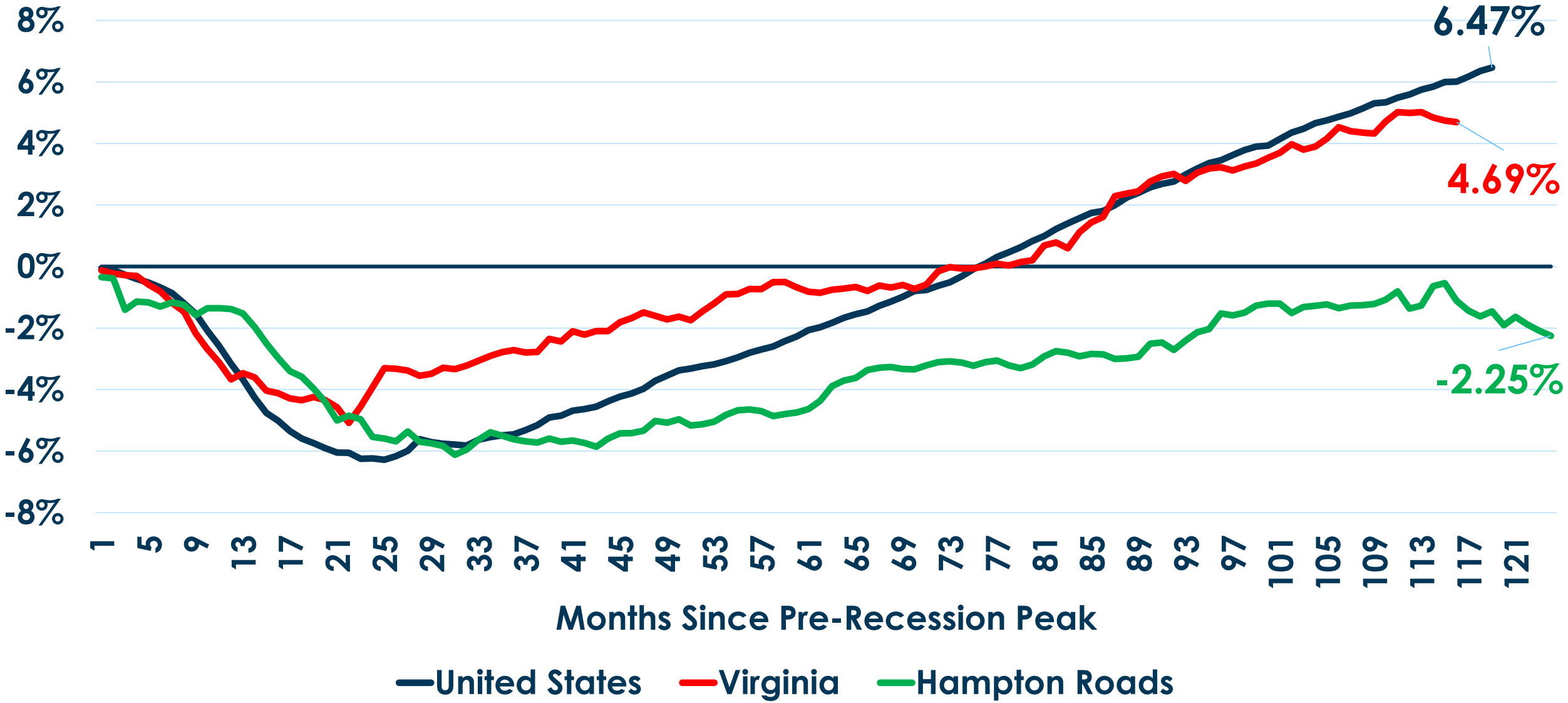
January 31, 2018

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. US GDP is advance estimate while Hampton Roads GDP is our estimates.

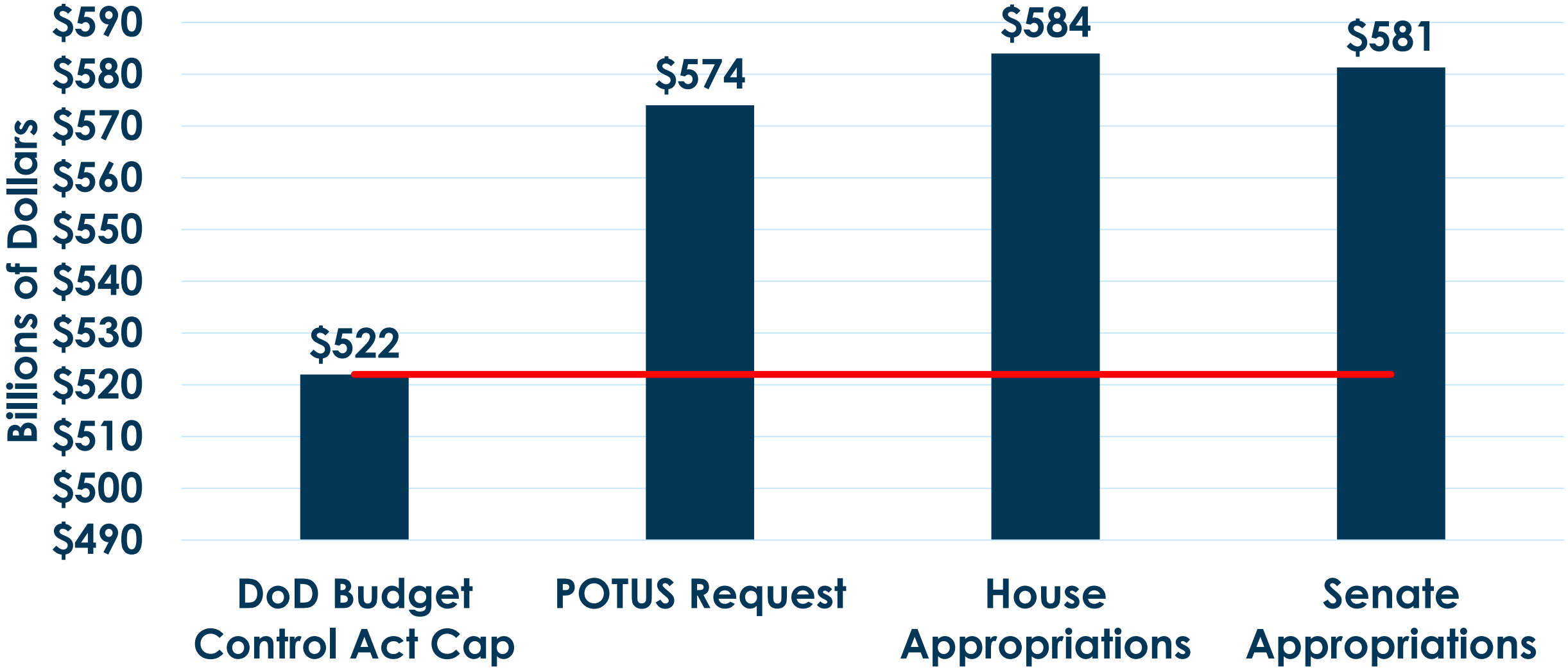
Monthly Job Growth From Pre-Recession Peak Employment
Hampton Roads, Virginia and United States, 2008-2017



Source: Bureau of Labor Statistics and Old Dominion University Economic Forecasting Project. Peak employment for the United States was January 2008, Virginia was April 2008, and Hampton Roads was July 2007. Seasonally adjusted data through December 2017 (US and VA) and November 2017 (HR). Last month of data are preliminary. Data measure number of reported jobs.

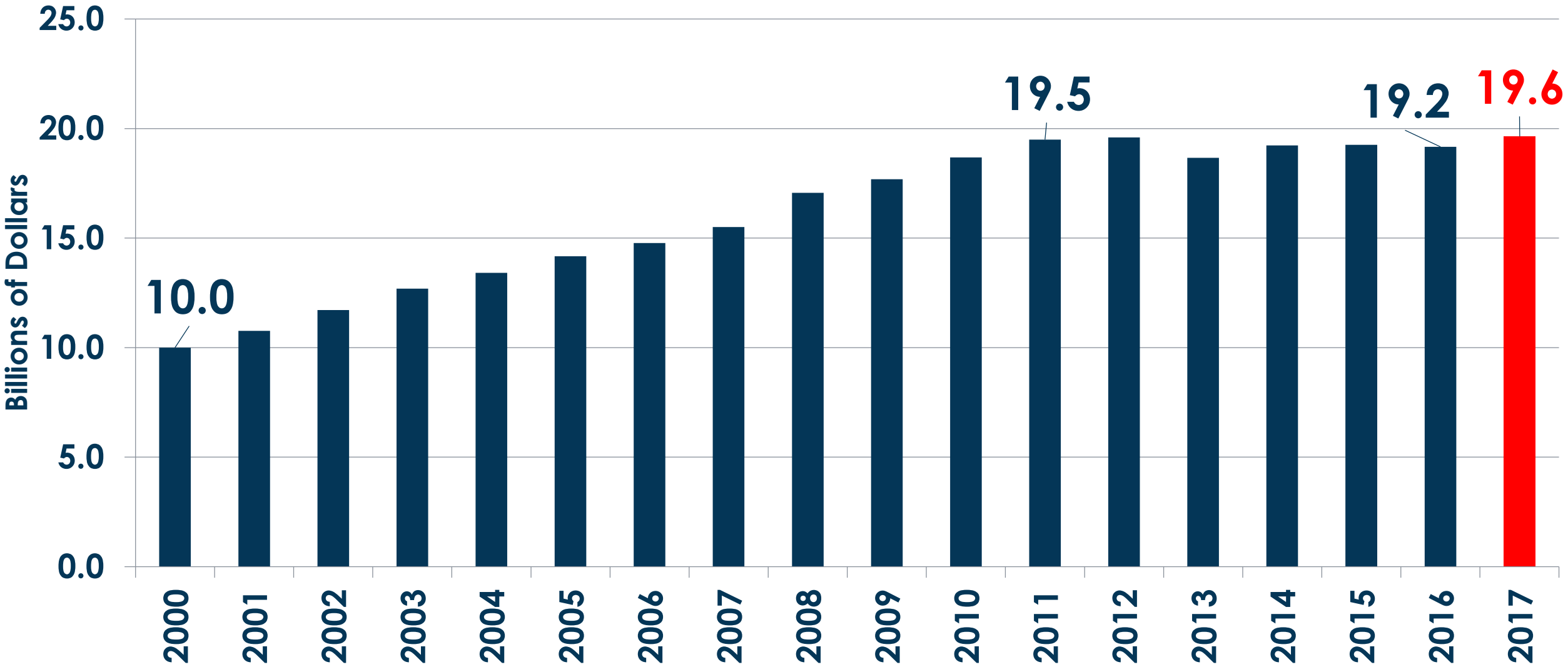
Defense Spending in Hampton Roads

DoD Base Budget Cap, Request, and Appropriations Bills Fiscal Year 2018



Sources: Budget Control Act of 2011, FY 2018 Presidential Budget Request, U.S. House of Representatives and U.S. Senate

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 2016 are estimates and data for 2017 are forecasts.

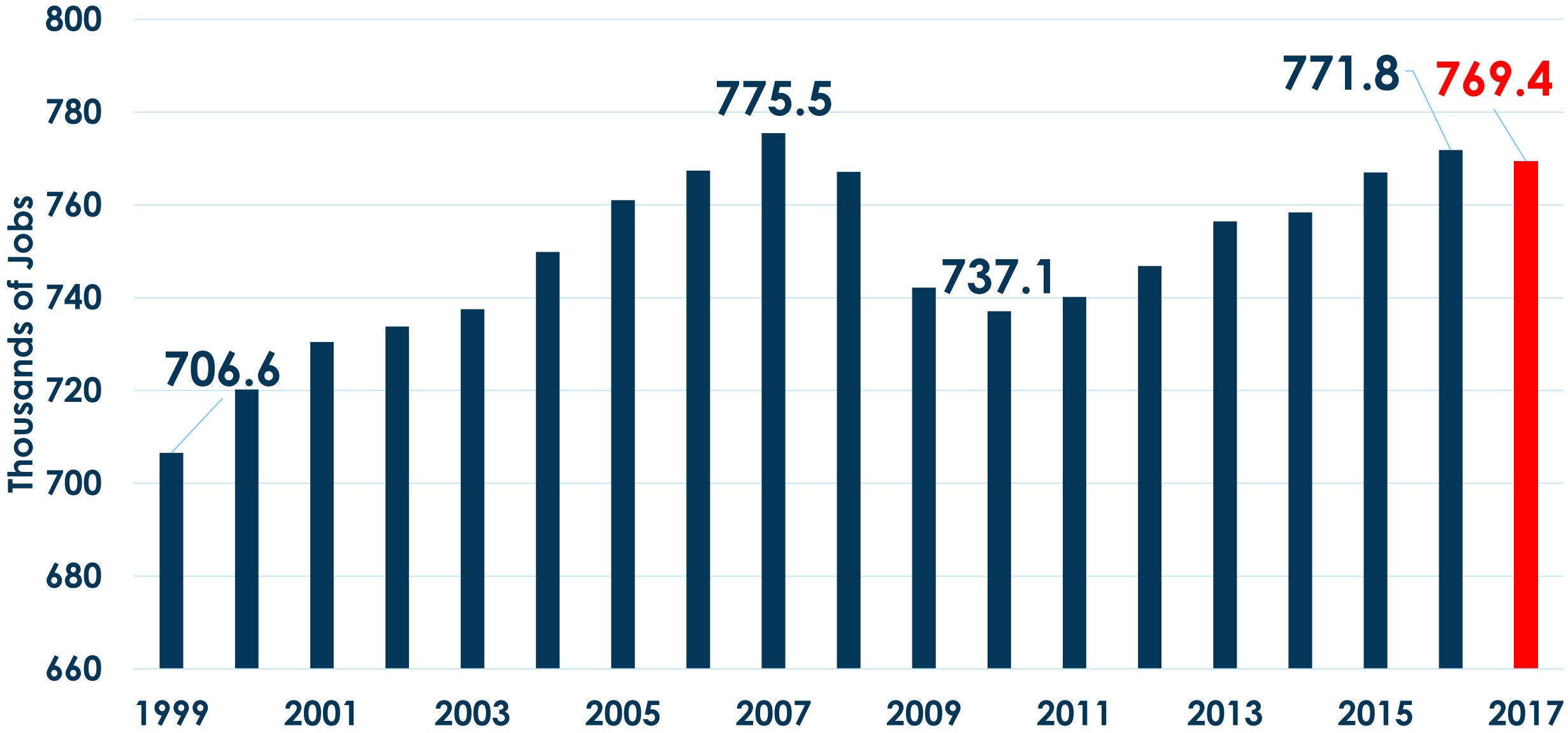
Estimated Average Compensation Hampton Roads, Selected Categories

	2015	2016	Change in Compensation
Military	$91,561	$92,189	0.69%
Federal Civilian Govt. Employees	$107,322	$109,624	2.15%
State and Local Govt. Employees	$62,602	$64,164	2.49%
Private Nonfarm	$42,189	$41,751	-1.04%

Source: Bureau of Economic Analysis and Old Dominion University Economic Forecasting Project. Compensation includes wages, salaries, and benefits.

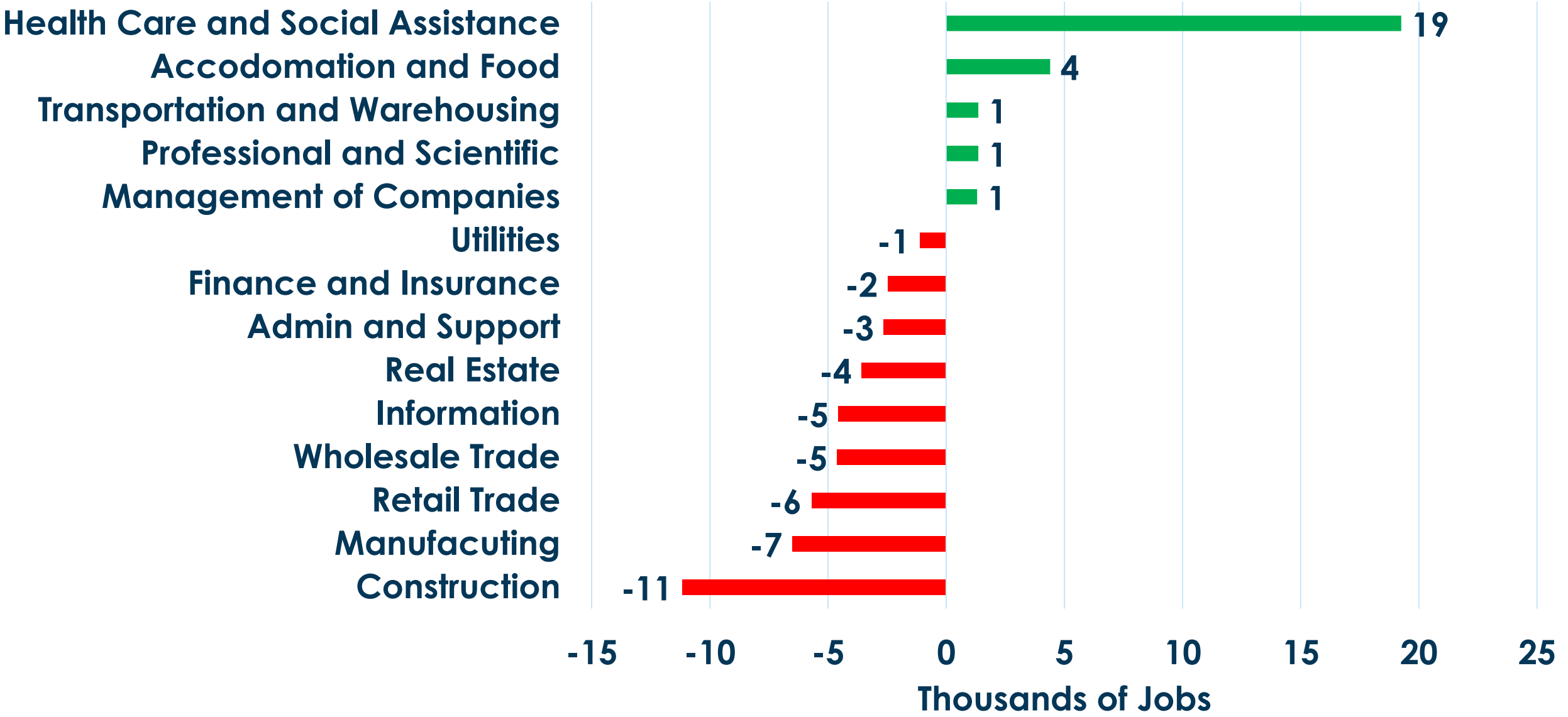
Where are the jobs?

Average Annual Civilian Jobs
Hampton Roads, 1999-2017



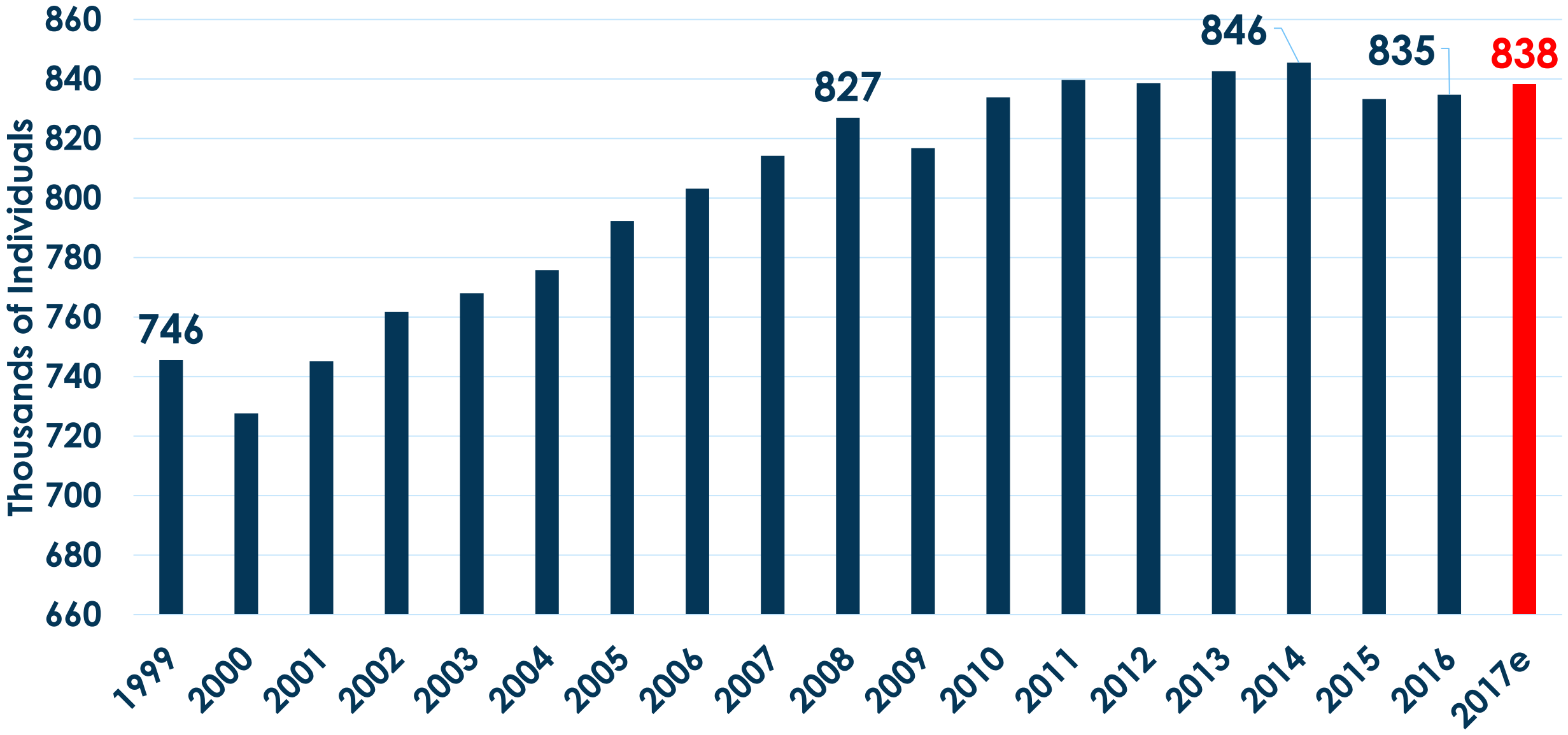
Source: U.S. Department of Labor CES data and the Old Dominion University Economic Forecasting Project. Not seasonally adjusted. **Data will be revised in March 2018**

Change in Private Sector Employment
Selected Industries in Hampton Roads, 2007 Q1 to 2017 Q1



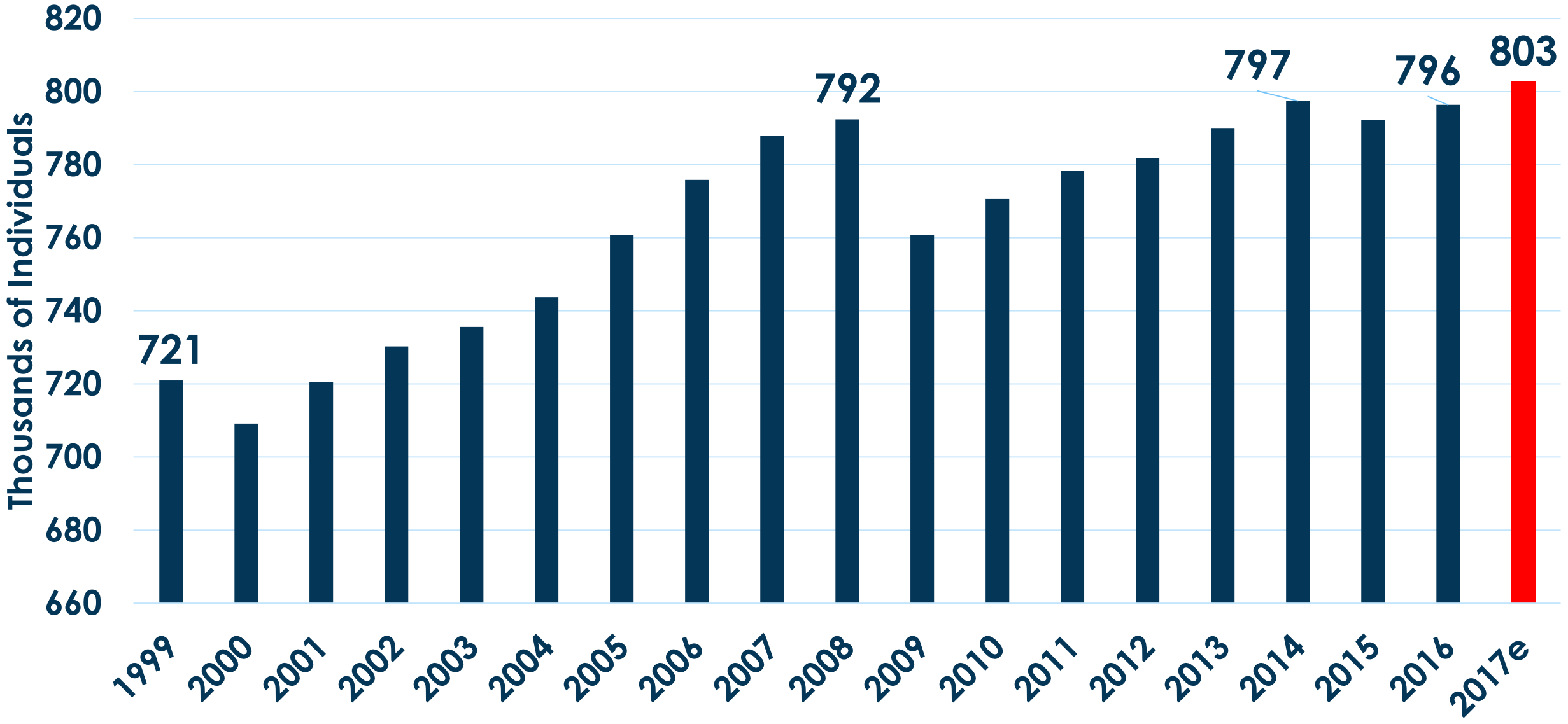
Source: Virginia Employment Commission: Covered Employment and Wages by Private Ownership and the Old Dominion University Economic Forecasting Project.

Civilian Labor Force
Hampton Roads, 1999-2017



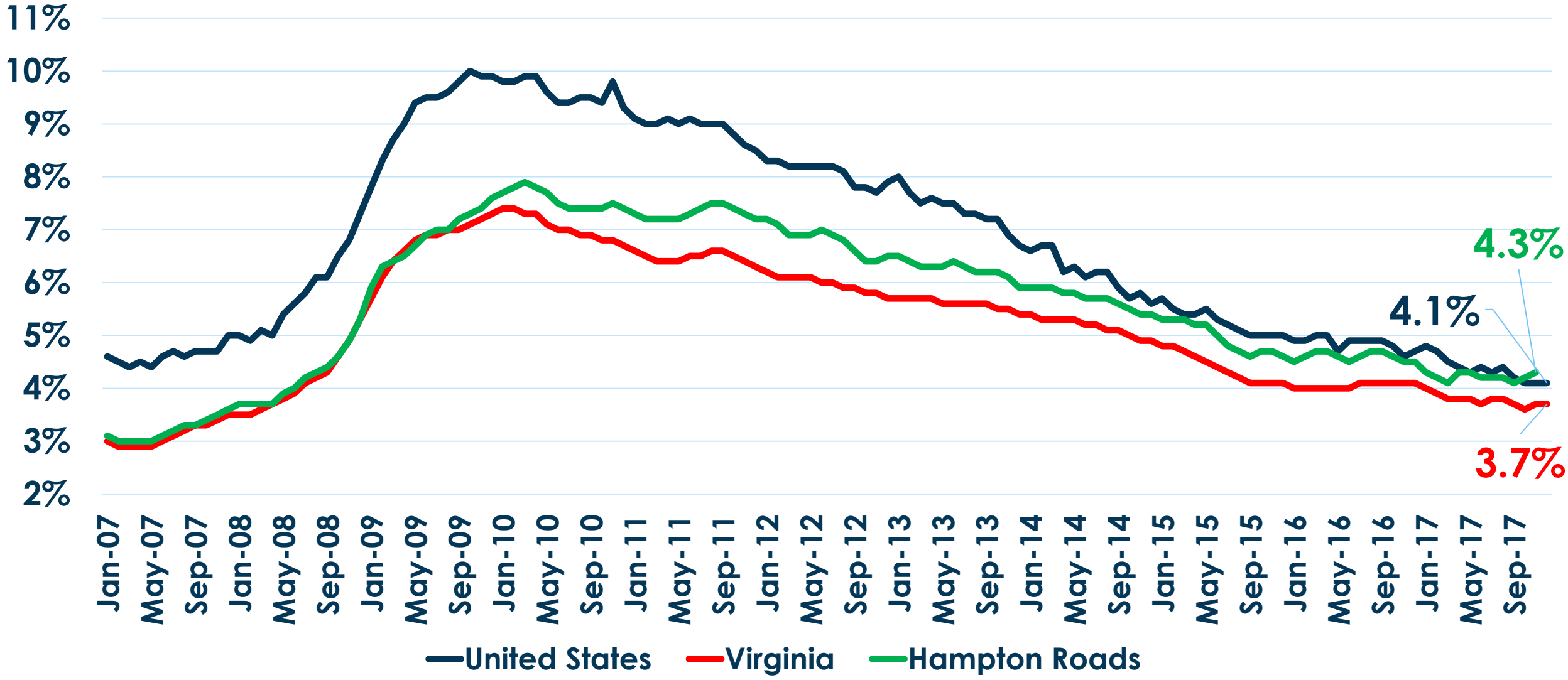
Source: U.S. Department of Labor LAUS data and the Old Dominion University Economic Forecasting Project. Not seasonally adjusted. **Data will be revised in March/April 2018**

Number of Individuals Employed
Hampton Roads, 1999 to 2017



Source: U.S. Department of Labor LAUS data and the Old Dominion University Economic Forecasting Project. Not seasonally adjusted. **Data will be revised in March/April 2018**

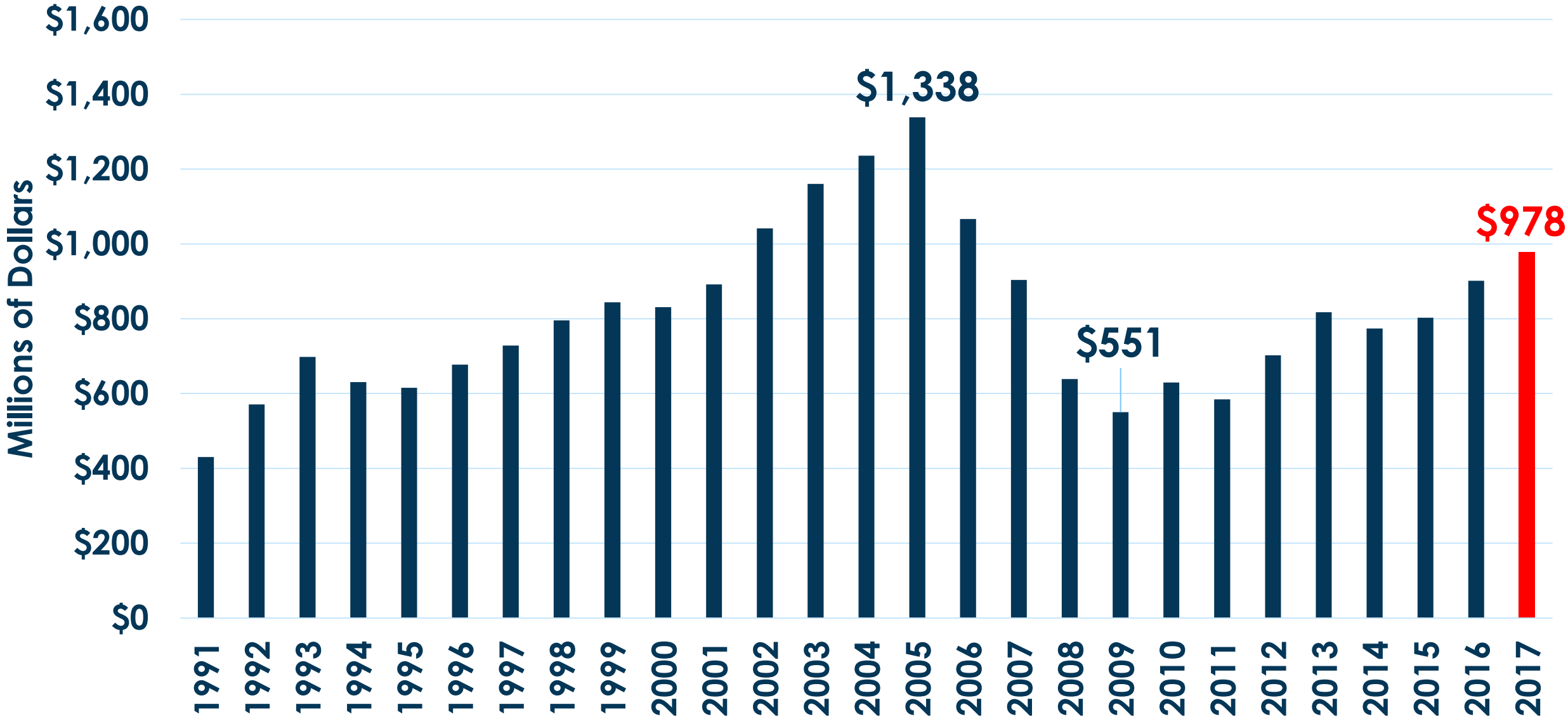
Headline Unemployment Rate (U3)
Hampton Roads, Virginia, and United States
January 2007-December 2017*



Source: Bureau of Labor Statistics Seasonally adjusted data and the Old Dominion University Forecasting Project. Preliminary data: US and VA (Dec 17) and HR (Nov 17). Hampton Roads data only through November 2017.

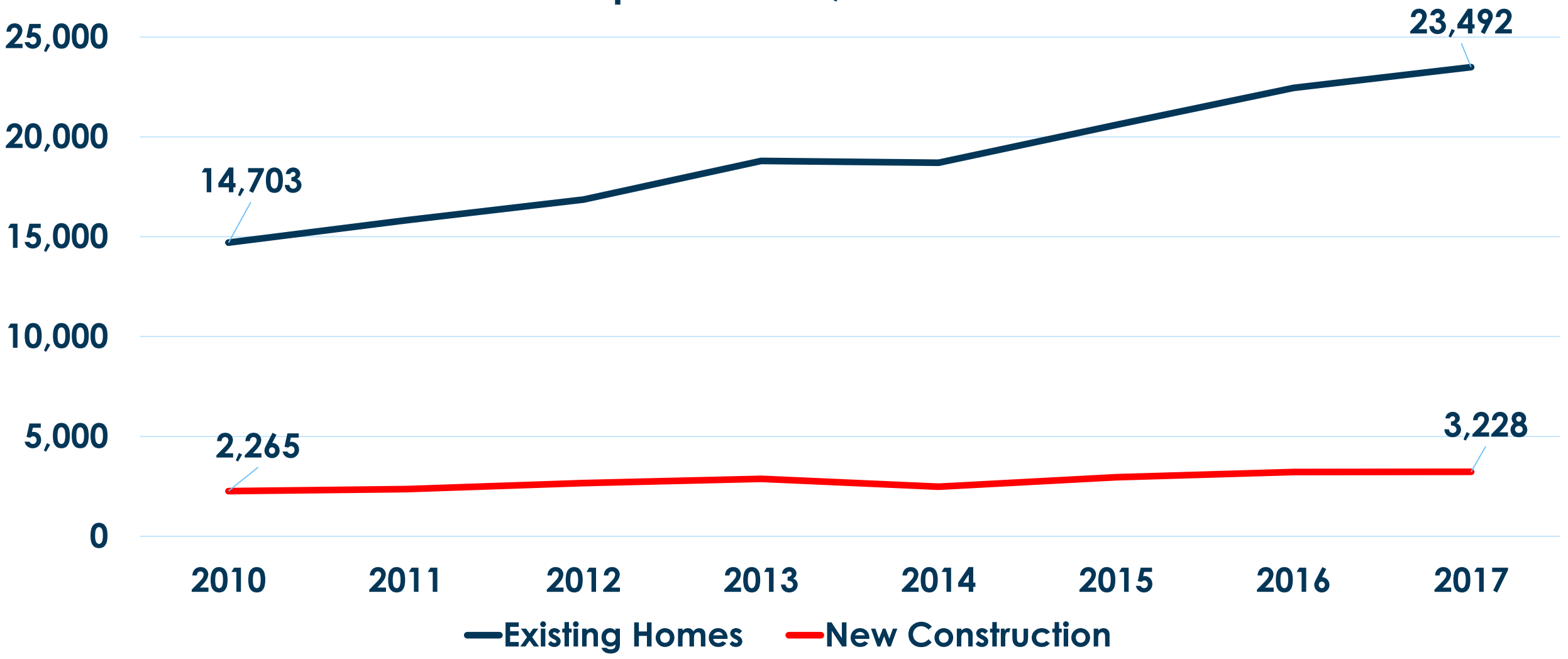
Residential Housing is Looking Up

Value of Building Permits for One-Unit Family Homes
Hampton Roads, 1991-2017



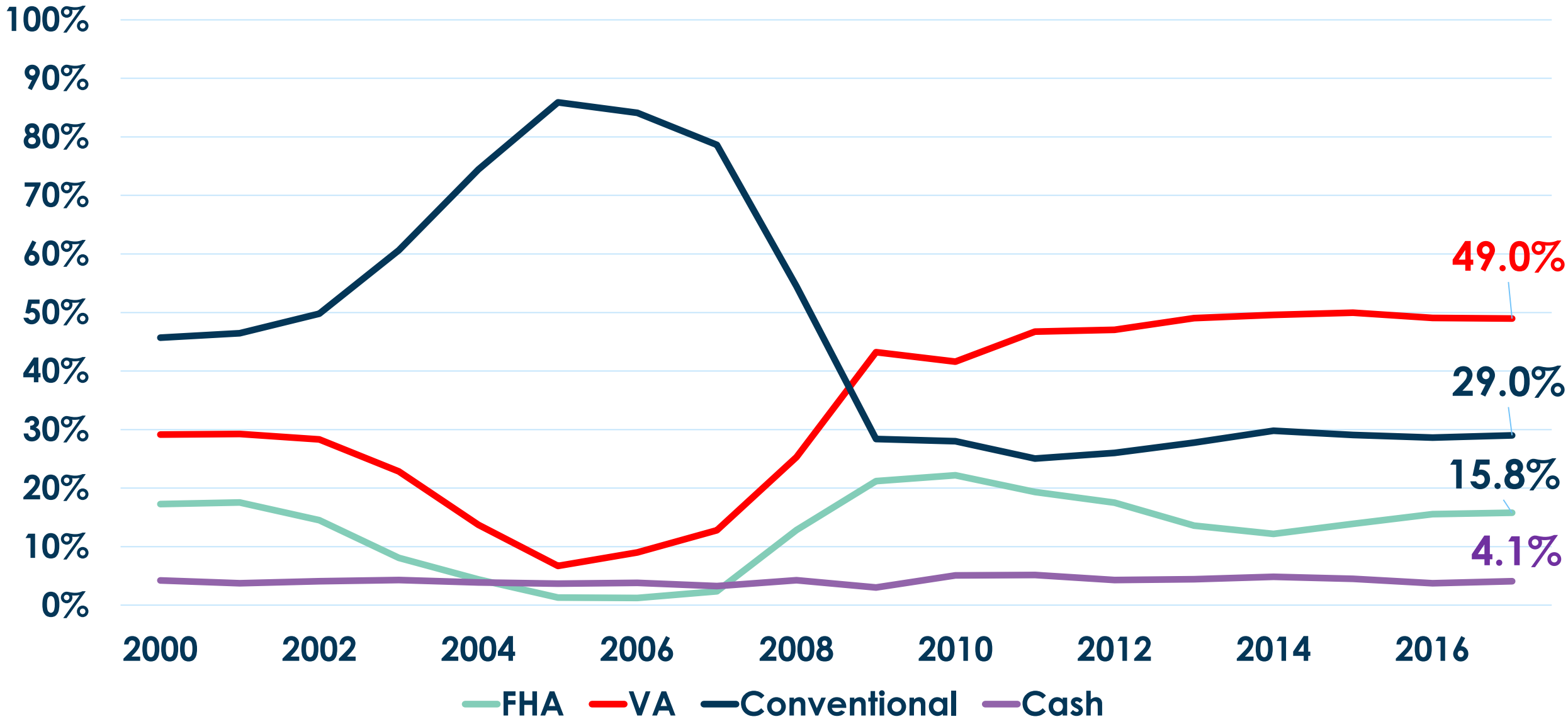
Source: U.S. Bureau of the Census and the Old Dominion University Economic Forecasting Project

Existing and New Construction Home Sales
Hampton Roads, 2010-2017



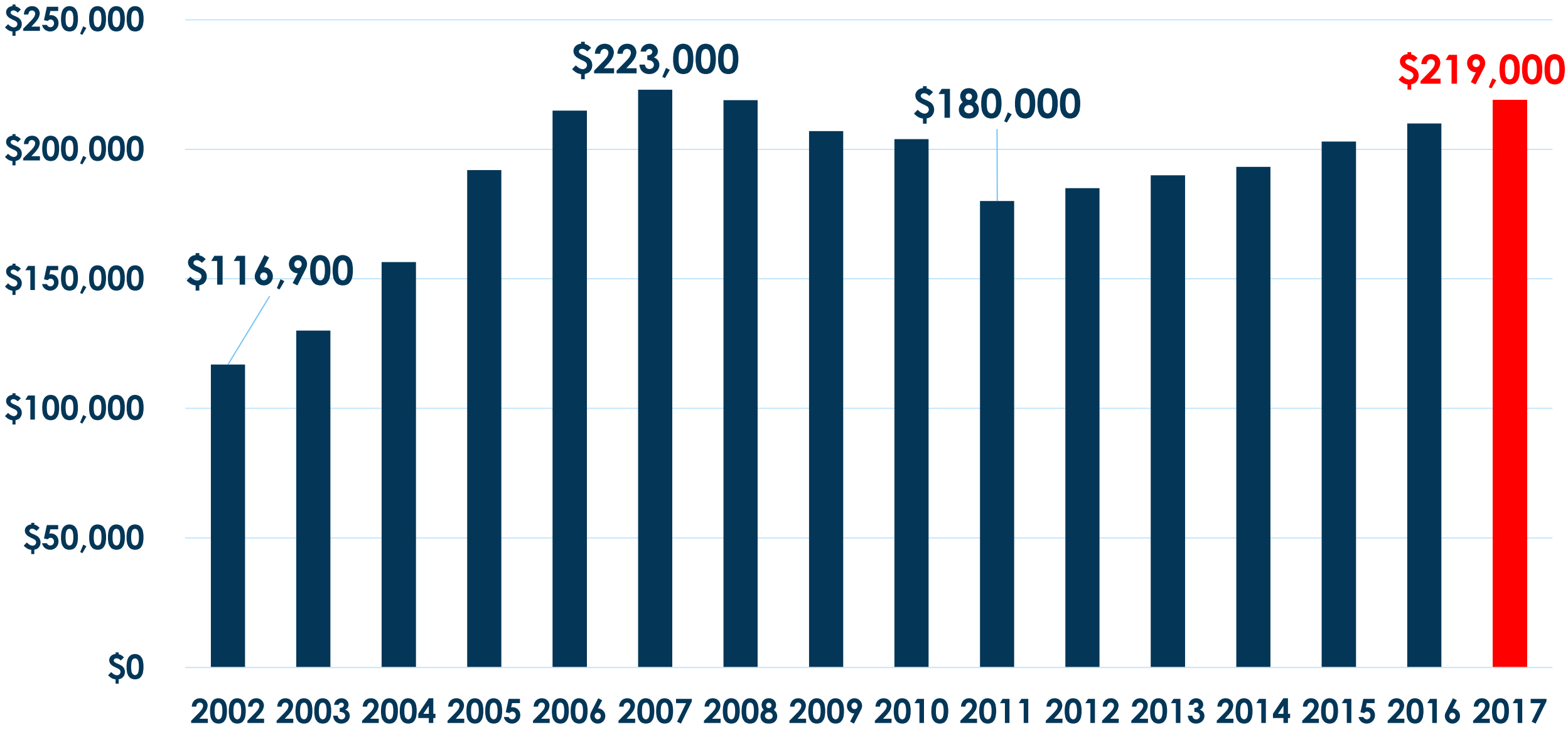
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed. Figures reported here represent only those properties that are listed through REIN by REIN members and may not represent all new construction activity in our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

Distribution of New Construction Home Sales by Financing Type
Hampton Roads, 2000-2017



Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.

Median Sales Price of Existing Homes
Hampton Roads, 2002-2017



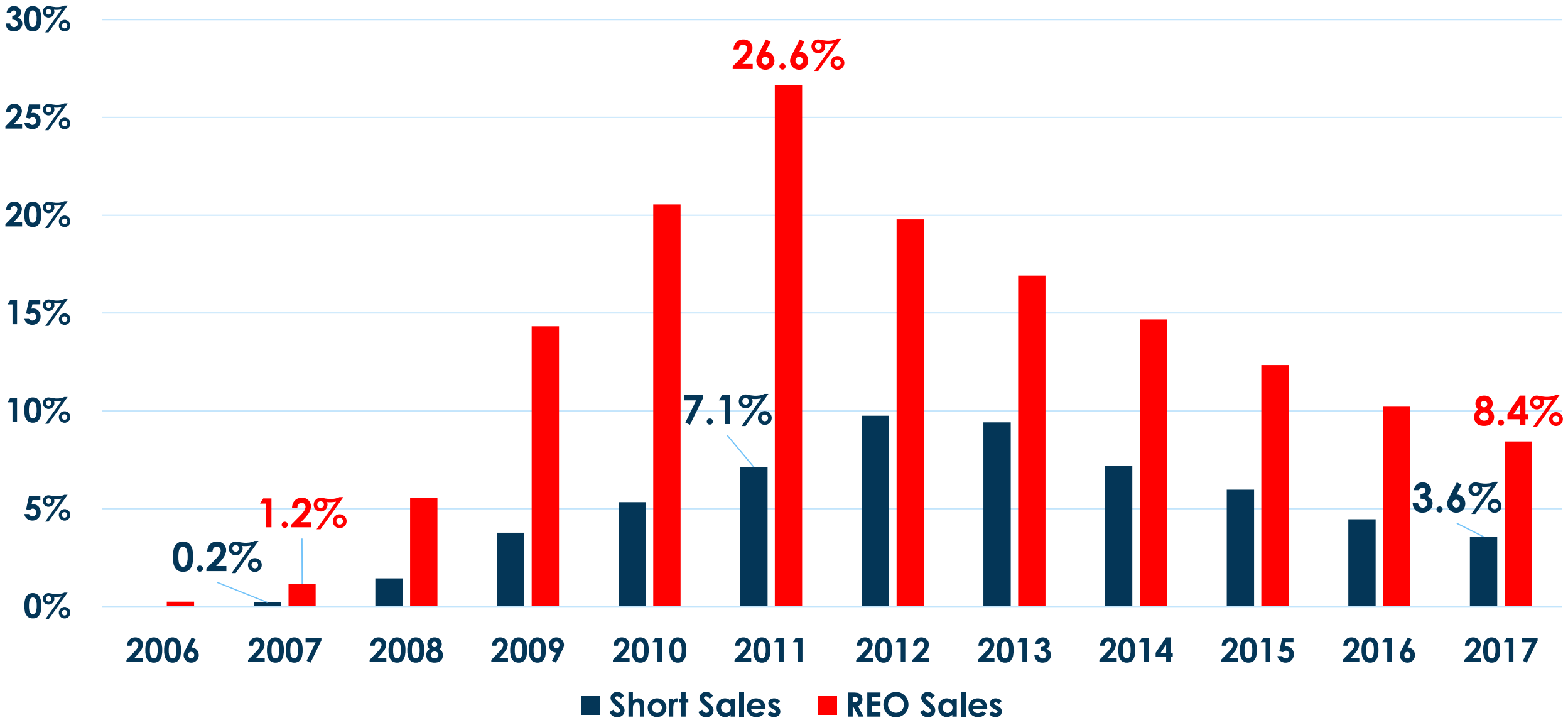
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information deemed reliable but not guaranteed. 2002-2007 = 91% increase. 2011-2017 is a 22% increase.

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

City	Median Price 2007	Median Price 2017	% change
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	$180,000	$155,000	-13.9%
Newport News	$199,250	$170,000	-14.7%
Williamsburg*	$284,450	$283,000	-0.5%
Hampton Roads	$223,000	$219,000	-1.8%

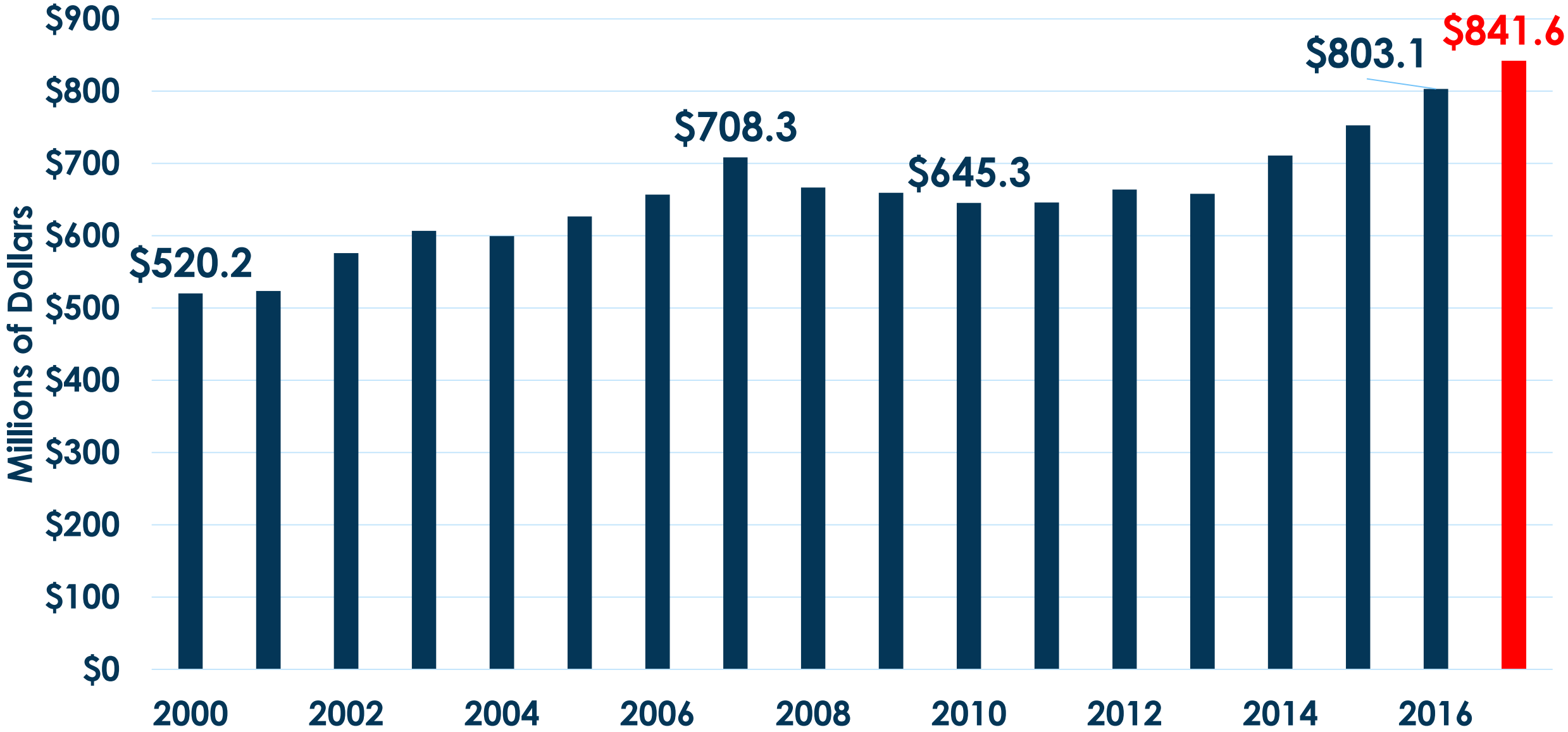
Source: Real Estate Information Network and Old Dominion University Economic Forecasting Project. Information Deemed Reliable But not Guaranteed.
* Williamsburg represents Williamsburg, James City County, York County and Gloucester County. ** Median price in Suffolk peaked in 2006 at $263,950

Short Sales and Bank-Owned Sales as Percent of Total Sales
Hampton Roads, 2006-2017



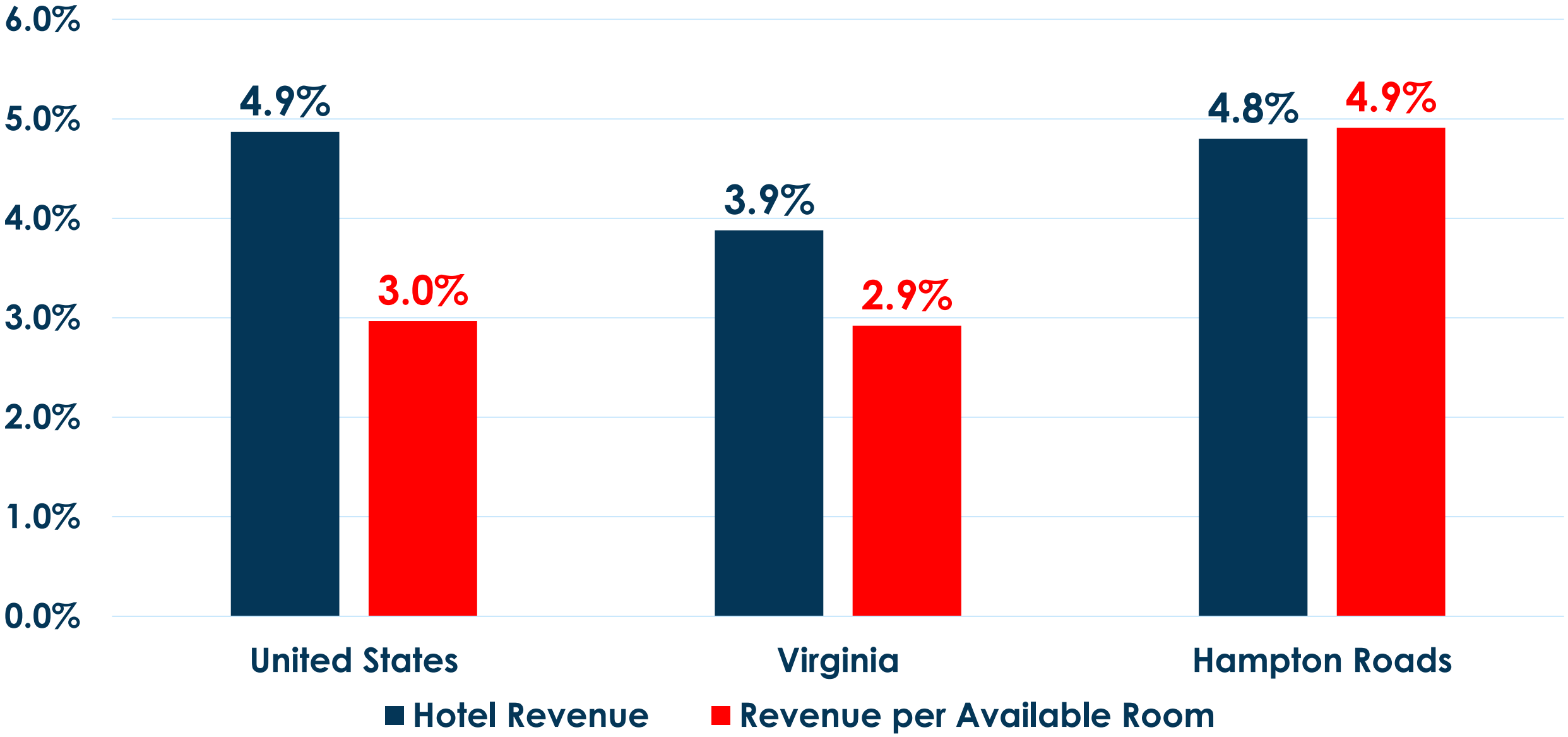
Hotel Industry

Hotel Revenue in Hampton Roads
2000-2017

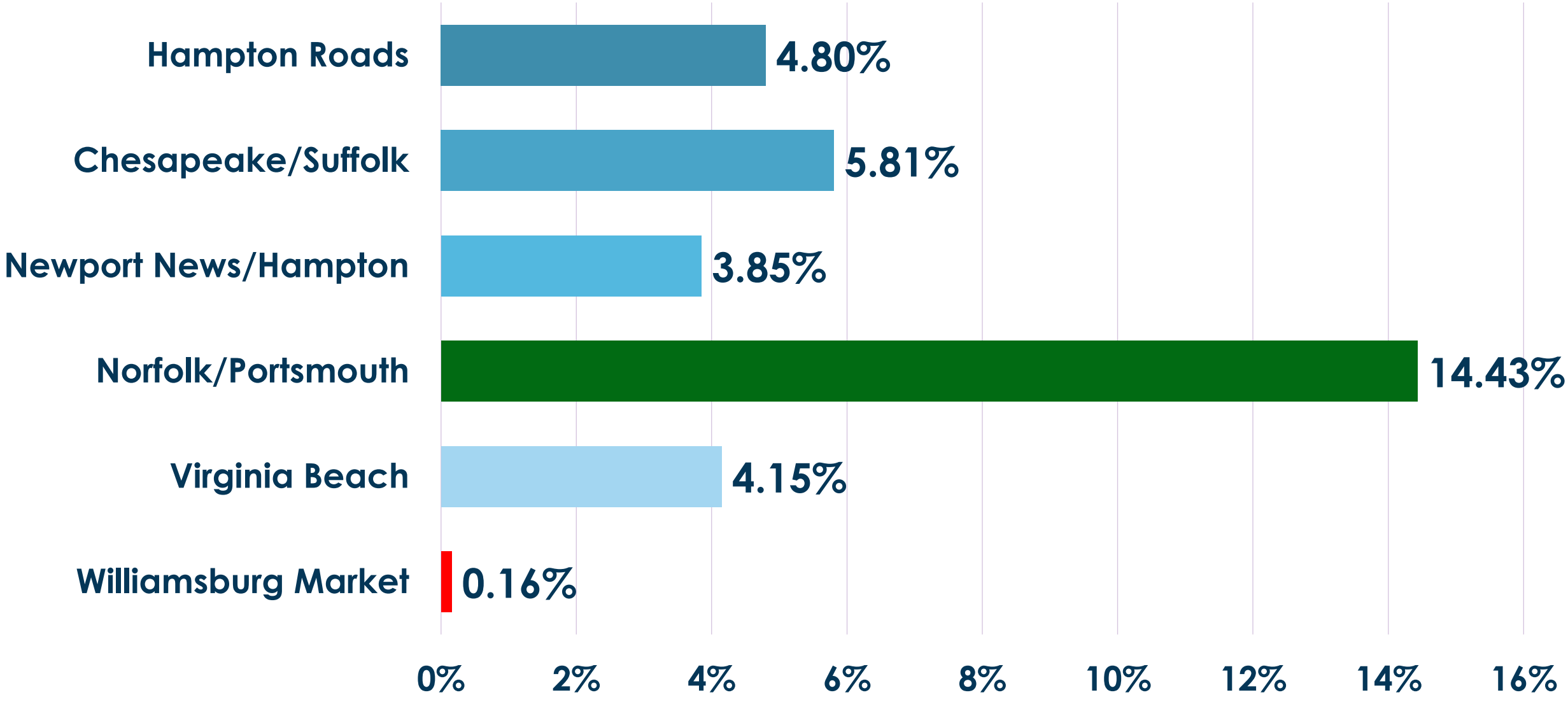


Source: STR Global and Old Dominion University Economic Forecasting Project.

Growth in Hotel Revenue and Revenue Per Available Room
United States, Virginia, and Hampton Roads, 2016-2017

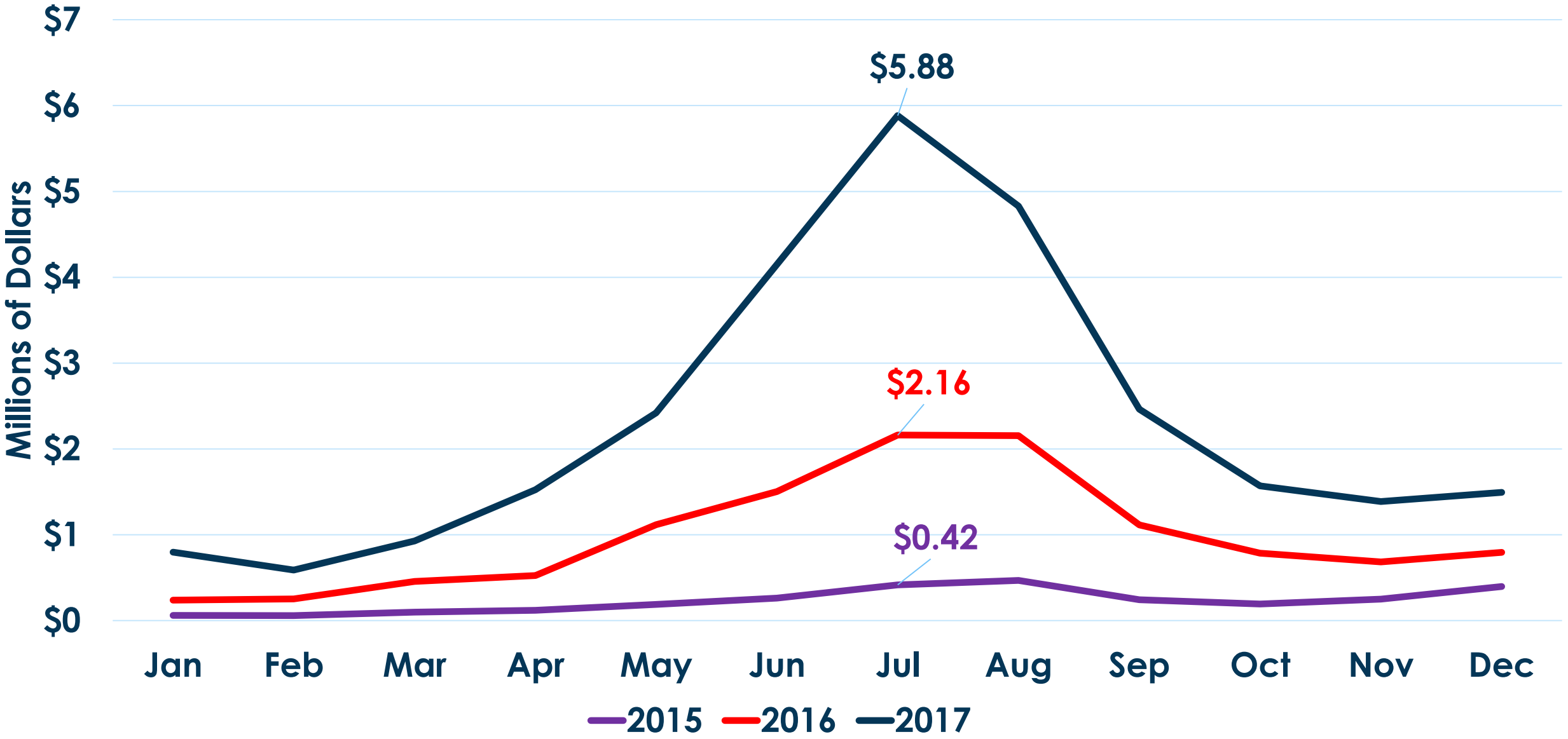


Growth in Hotel Revenue
Hampton Roads, 2016 to 2017



Source: STR Trend Report, January 17, 2018, and the Old Dominion University Economic Forecasting Project. Williamsburg Market includes James City County, York County, and City of Williamsburg.

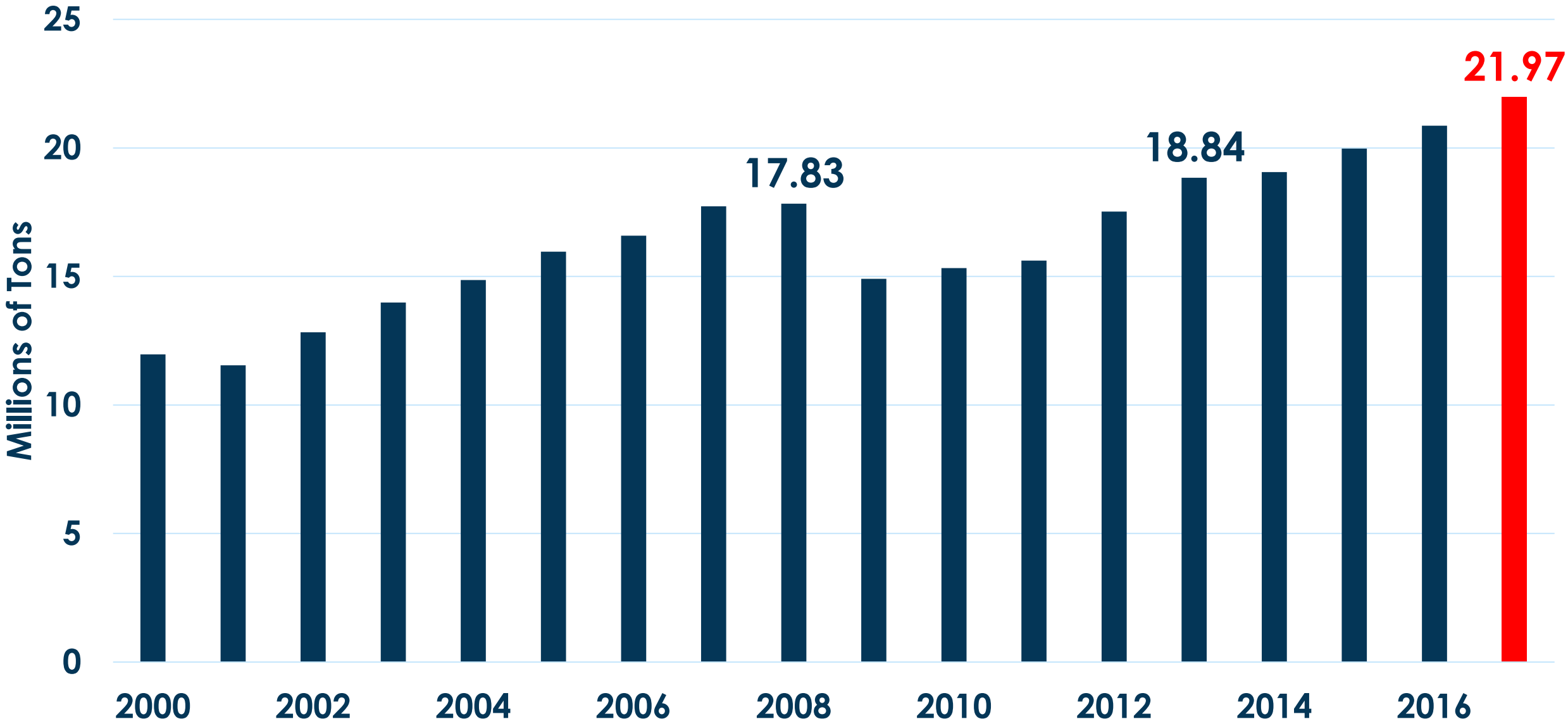
Monthly Airbnb Revenue in Hampton Roads 2015-2017



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

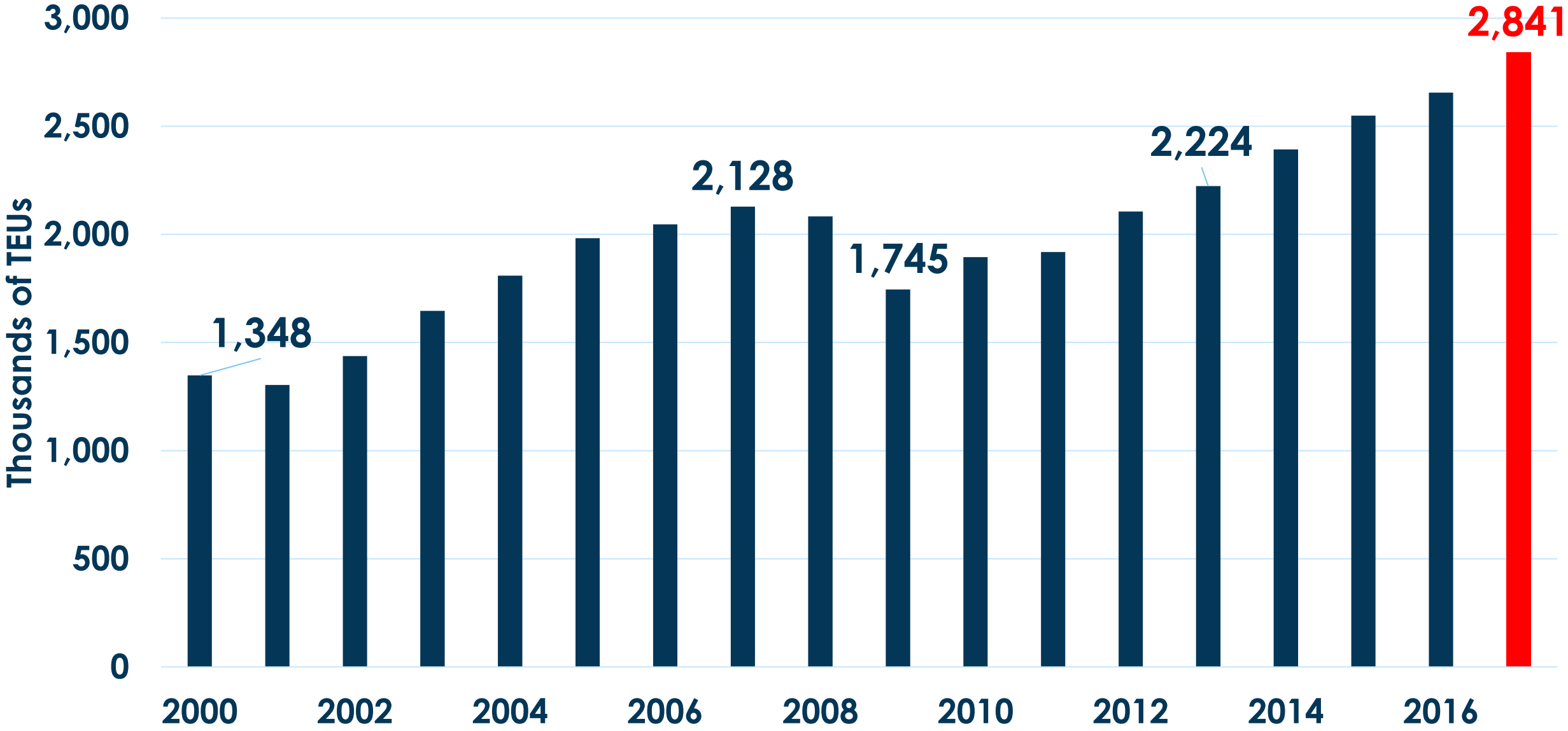
Port of Virginia: Growing rapidly

General Cargo Tonnage
Port of Virginia, 2000-2017



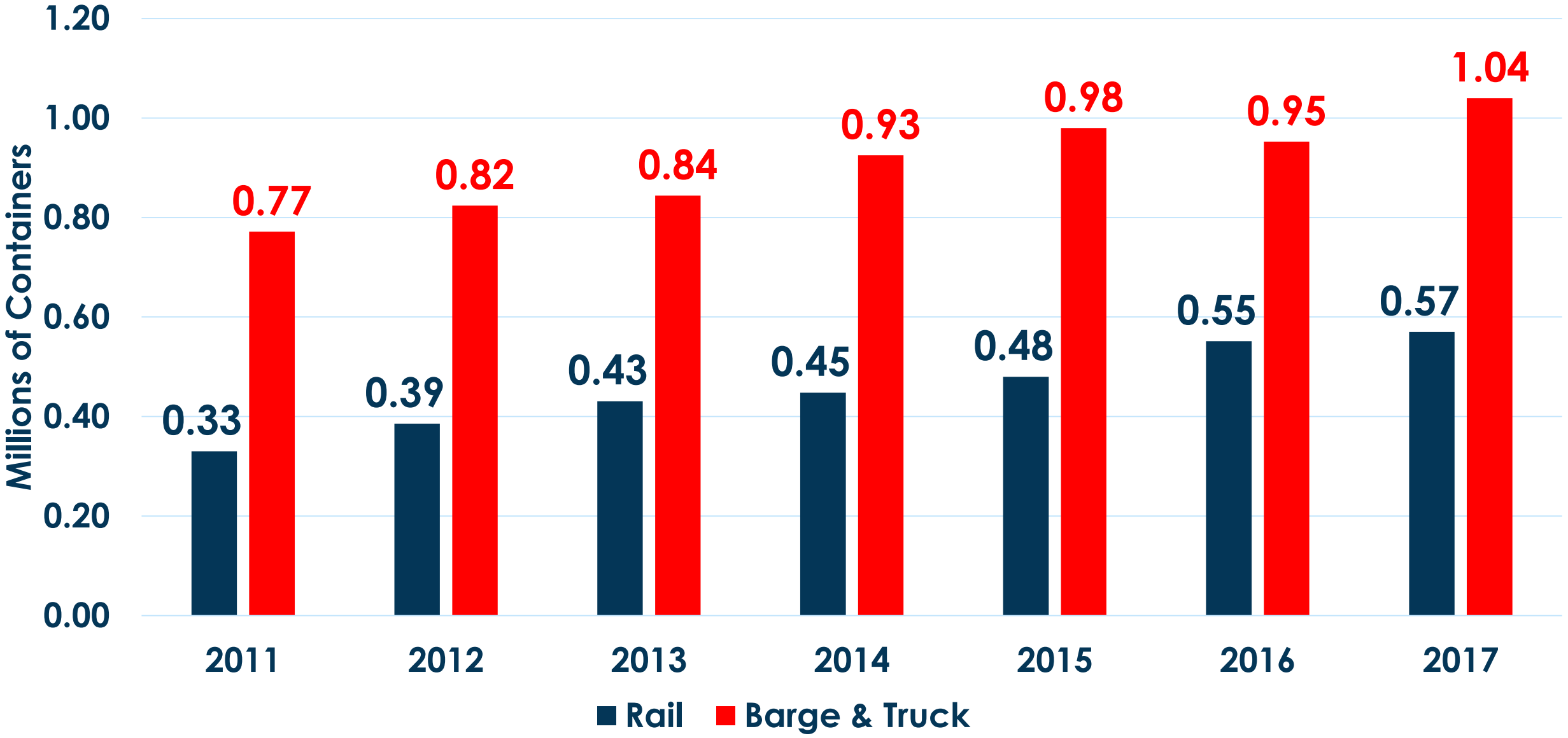
Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.

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

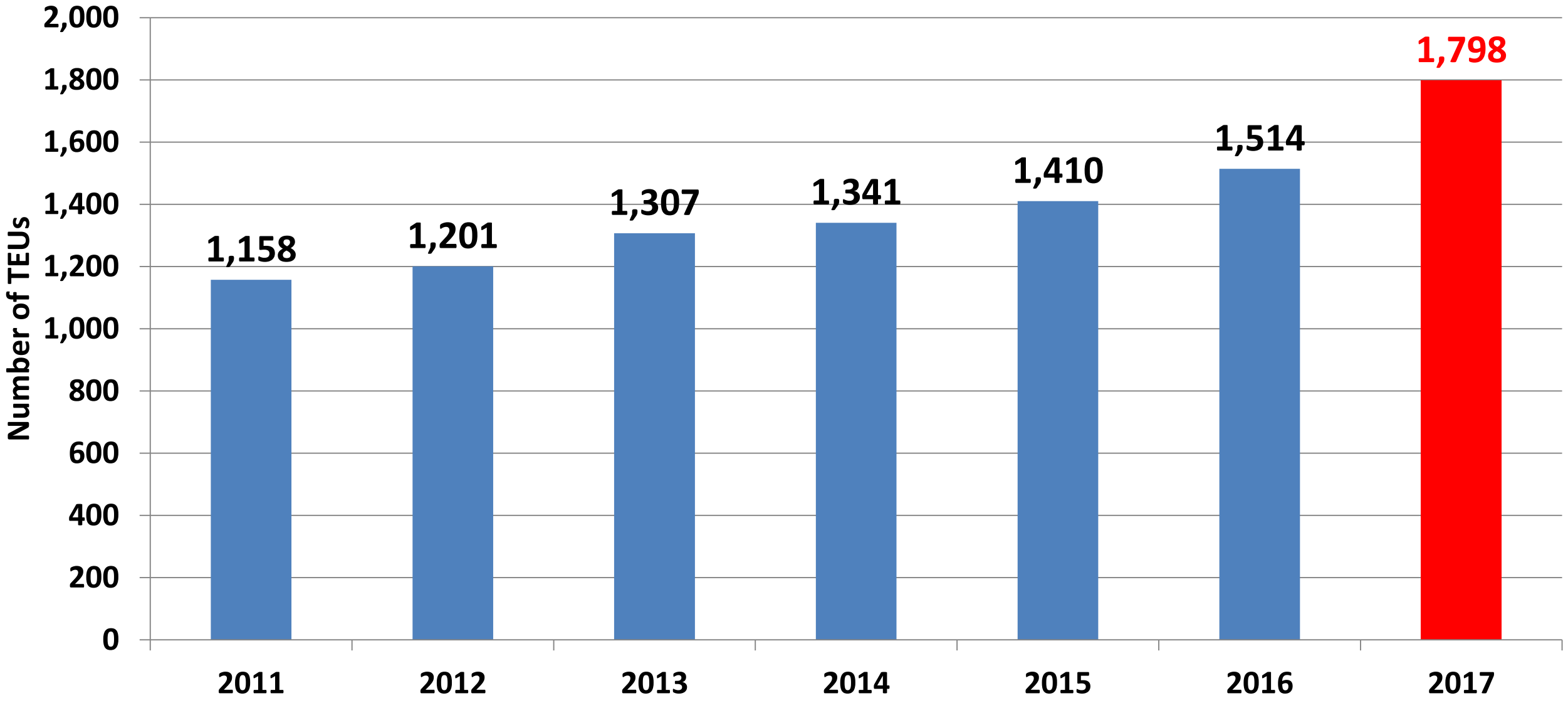


Source: Virginia Port Authority and Old Dominion University Economic Forecasting Project.

Movement of Containers by Type of Transportation
Port of Virginia, 2011-2017



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



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

	2017 Forecast	2017 Actual	2018 Forecast
Hampton Roads Real Gross Domestic Product Initial Forecast	1.4%	--	--
Hampton Roads Real Gross Domestic Product Mid-year revision	0.8%	--	1.2%
Civilian Job Growth	0.5%	-0.3%	0.5%
Unemployment Rate	4.3%	4.3%	3.9%
Taxable Sales	2.6%	3.0%	3.0%
Hotel Revenue	4.4%	4.8%	3.9%
General Cargo Tonnage	2.7%	5.3%	2.8%
One Unit Housing Permit Value	2.6%	8.5%	2.4%

Source: 2017 data reflects the annual rate of growth, last month, or day business day of 2017 where appropriate.

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Select Area: Virginia Beach-Norfolk-Newport News

REAL GDP 2016 **$81.36 bil** -1.09% from 2015	**UNEMPLOYMENT RATE** November 2017 **4.1%** -0.2% from November 2016	**TOTAL NONFARM EMPLOYMENT** 2017 Q4 **766,900** -0.98% from 2016 Q4
SIZE OF THE LABOR FORCE November 2017 **823,003** -0.78% from November 2016	**AVERAGE WEEKLY WAGES** 2017 Q2 **$886** 6.49% from 2016 Q2	**INITIAL UNEMPLOYMENT CLAIMS** December 2017 **1,927** -29.54% from December 2016
TAXABLE RETAIL SALES 2017 Q3 **$5.84 bil** 2.90% from 2016 Q3	**FHFA HOUSING PRICE INDEX** 2017 Q3 **2.26%** from 2016 Q3	**HOTEL REVENUE PER AVAILABLE ROOM (REVPAR)** YTD December 2017 **$62.64** 4.91% from YTD December 2016

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Questions?

Presentation slides will be available at:
www.ceapodu.com

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