We May Have Turned The Economic Corner

WE MAY HAVE TURNED THE ECONOMIC CORNER

After the great Allied military victory at El Alamein in November 1942, over none other than Erwin Rommel – the legendary "Desert Fox" – Winston Churchill observed, "Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning." Perhaps the same might now be said of our regional economy. After eight years of piddling economic growth, it appears that Hampton Roads finally is poised for much better things. Let's examine the details.

Changes In Output And Incomes

Our estimate of economic growth in the Hampton Roads economy in 2017 is 1.41 percent, only slightly higher than 2016's 1.36 percent (see Table 1). Once again, we will grow more slowly than our historical average of 2.6 percent over the past 30 years and we will grow more slowly than the United States.[1]

This is not thrilling news, but we also estimate that the value of our region's nominal gross output will approach $103.17 billion in 2017. If Hampton Roads were a nation, we would have approximately the 60th-largest economy in the world. Thus, some perspective is required.

Earlier this year, the Bureau of Economic Analysis (BEA) reported that the region's economy, as measured by real gross regional product (GRP), expanded at a rate of 3.71 percent in 2015. This followed a 0.73 percent contraction in 2014. The difference between the two estimates was unexpectedly huge and we fully expect the BEA to revise this number significantly downward.[2] At the same time, the BEA also estimated that Virginia's economy grew by 2.41 percent in 2015. It further estimated that the Washington, D.C., metropolitan economy grew by only 1.27 percent. Since Northern Virginia accounts for approximately 45 percent of the Commonwealth's economic activity, it is difficult to see how Virginia overall could grow more than 1 percent faster than Northern Virginia. We don't see that level of growth occurring elsewhere in the Commonwealth. One should anticipate revisions of these discordant numbers as well.

Graph 1 provides some historical perspective to our regional situation. During the first decade of this century, the Hampton Roads economy grew about 55 percent faster than the national economy. Since then, the story has been very different and we have grown more slowly than the nation. The key to our superb economic performance in the first decade was expanding defense spending. Between 2001 and 2009, direct defense spending in our region grew at an average of 6.3 percent annually.

There is a similar story to be recited when we talk about median household income. In Hampton Roads, median (50th percentile) household income increased significantly until 2008, but since has stagnated. As one can see in Graph 2, median household income in Hampton Roads historically has been higher than that of the nation, but has been growing more slowly during this decade. The gap between the two has narrowed. **Our regional median household income was 14.5 percent higher than that of the nation in 2010, but by 2015 was only 7.7 percent higher.**

Interestingly, when we focus on per capita income – income per person – it turns out that we now trail the nation in this regard (see Graph 3). Not only have we grown slower than the nation but also the average size of households in our region exceeds the national average.

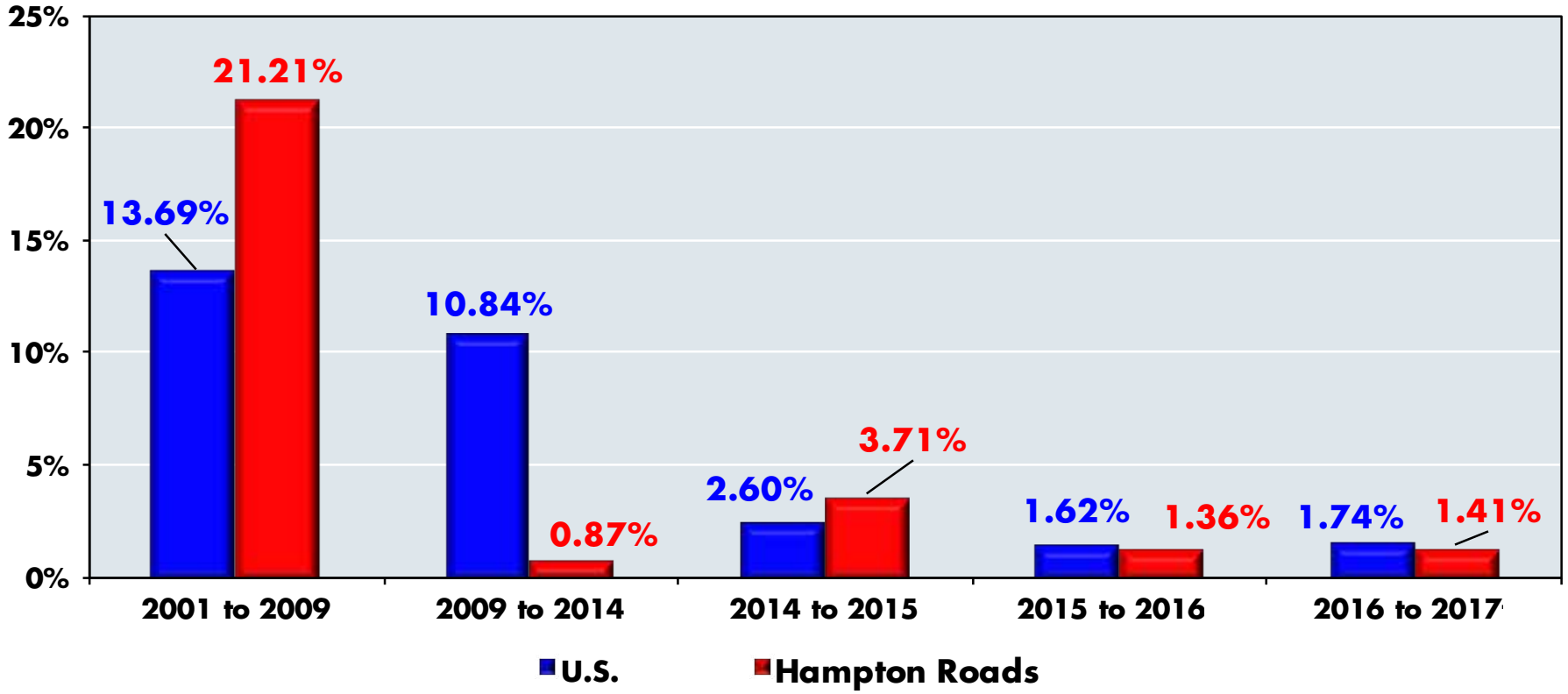
[1] Note that the 2016 economic growth number is our estimate and the 2017 number our forecast.
[2] Post-completion of this report and prior to its release, the BEA will have revised the 2015 GDP data and released the 2016 advanced GDP estimate.

TABLE 1 NOMINAL AND REAL (INFLATION-ADJUSTED) GROSS REGIONAL PRODUCT: HAMPTON ROADS, 2001-2017			
YEAR	NOMINAL GRP (BILLIONS OF $)	REAL GRP (2009=100) (BILLIONS OF $)	REAL GRP GROWTH RATE PERCENT
2001	$54.04	$67.48	4.00%
2002	$57.38	$69.55	3.07%
2003	$61.74	$72.59	4.37%
2004	$65.41	$74.73	2.95%
2005	$70.45	$77.75	4.05%
2006	$74.99	$80.19	3.14%
2007	$79.00	$81.51	1.64%
2008	$79.85	$81.27	-0.29%
2009	$81.80	$81.80	0.65%
2010	$82.69	$81.67	-0.16%
2011	$84.27	$82.20	0.66%
2012	$86.79	$82.89	0.83%
2013	$88.51	$83.11	0.28%
2014	$89.87	$82.51	-0.73%
2015	$95.68	$85.56	3.71%
2016	$98.96	$86.73	1.36%
2017	$103.17	$87.95	1.41%

Source: Old Dominion University Economic Forecasting Project. The data incorporate U.S. Department of Commerce personal income revisions through September 2016. The base year for real GRP is 2009.

GRAPH 1

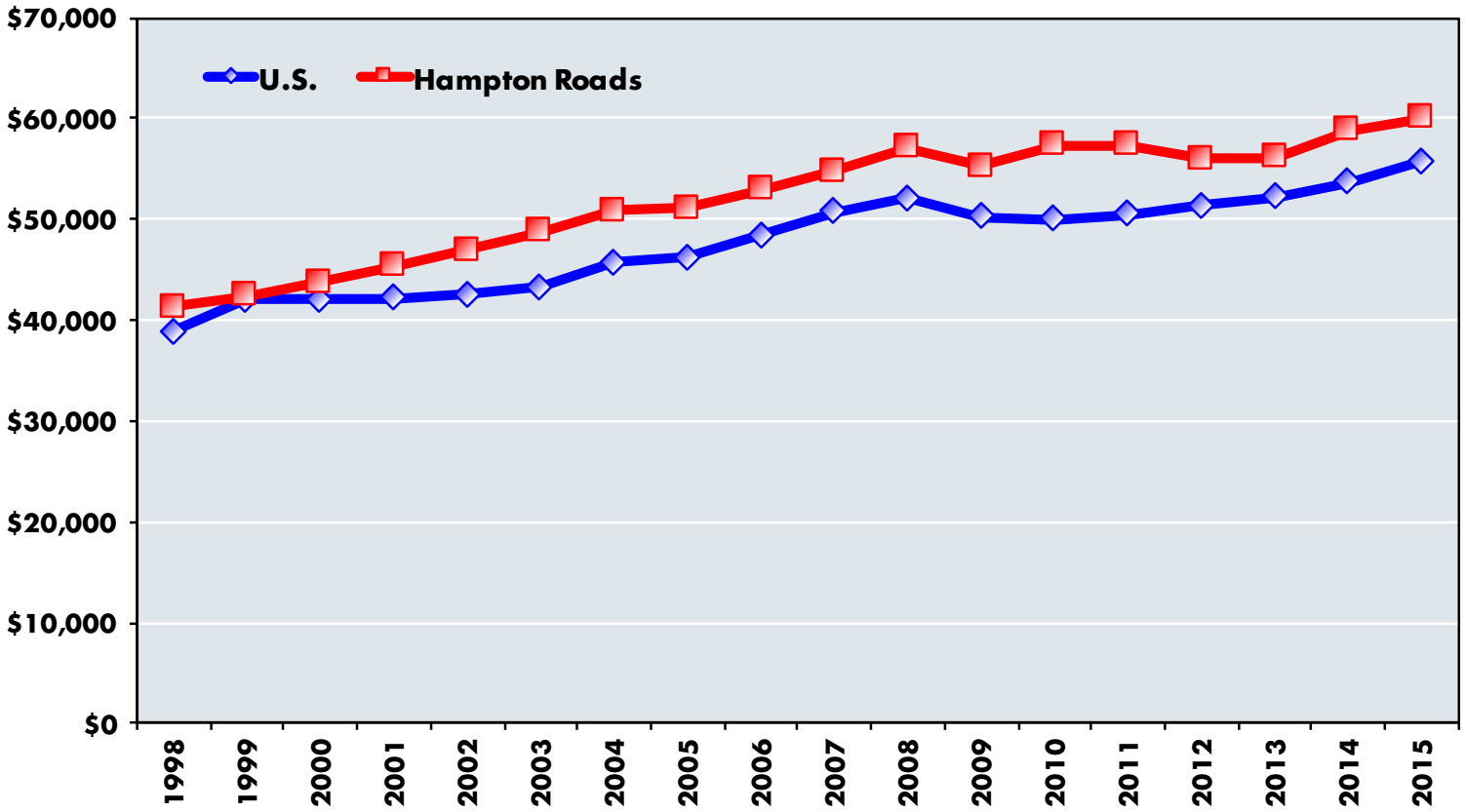
RATE OF GROWTH OF REAL GROSS DOMESTIC PRODUCT (U.S.) AND GROSS REGIONAL PRODUCT (HAMPTON ROADS): SELECTED TIME PERIODS FROM 2001 TO 2017*



Sources: Bureau of Economic Analysis and the Old Dominion University Economic Forecasting Project. Data on GDP incorporate latest BEA revisions in September 2016. *GRP numbers for 2016 are estimates. GDP and GRP growth rates for 2017 represent our forecast.

GRAPH 2

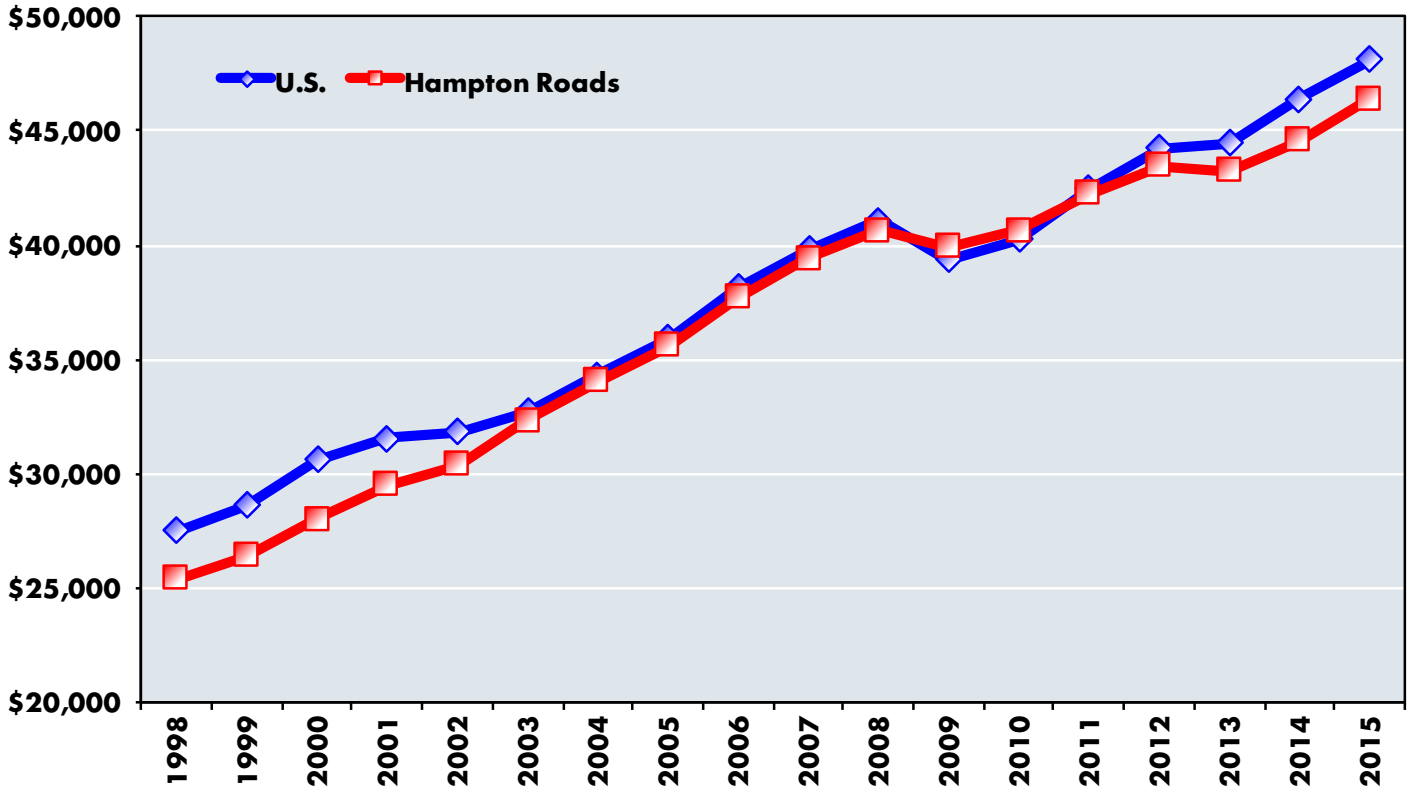
COMPARISON OF MEDIAN HOUSEHOLD INCOME: HAMPTON ROADS AND THE U.S., 1998-2015



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

GRAPH 3

COMPARISON OF PER CAPITA INCOME: HAMPTON ROADS AND THE U.S., 1998-2015



Sources: U.S. Department of Commerce - Bureau of Economic Analysis (BEA) tables CA1 and SA1 and the Old Dominion University Economic Forecasting Project

Recovery From The Great Recession

The Great Recession inflicted economic pain on Hampton Roads and we still are feeling some of this distress. The recession saw the sharpest decline in economic activity since the Great Depression. Initially, we were fortunate not to experience as large a decline in economic activity as the rest of the nation, but subsequently our region has recovered more slowly than the rest of the country.

Graph 4 reveals that as of April 2017, Hampton Roads still had not regained all the jobs it lost in the Great Recession. By contrast, this graph also tells us that both Virginia and the United States have recovered the jobs they lost, and then some. Graph 5 discloses that we still were about 3,700 jobs short of complete recovery by the end of 2016, but will recover all of our lost jobs by the end of the year if current trends continue.

Economic change typically produces winners and losers, and such has been the case in Hampton Roads (see Graph 6). Sectors that have gained jobs recently include Health Care and Social Assistance, Public Administration, Accommodation and Food Services, and Professional, Scientific and Technical Services. Losing economic sectors include Construction (an especially large decline), Retail Trade (continuing a long trend), Administrative Support and Waste Management, Information, Wholesale Trade and Manufacturing.

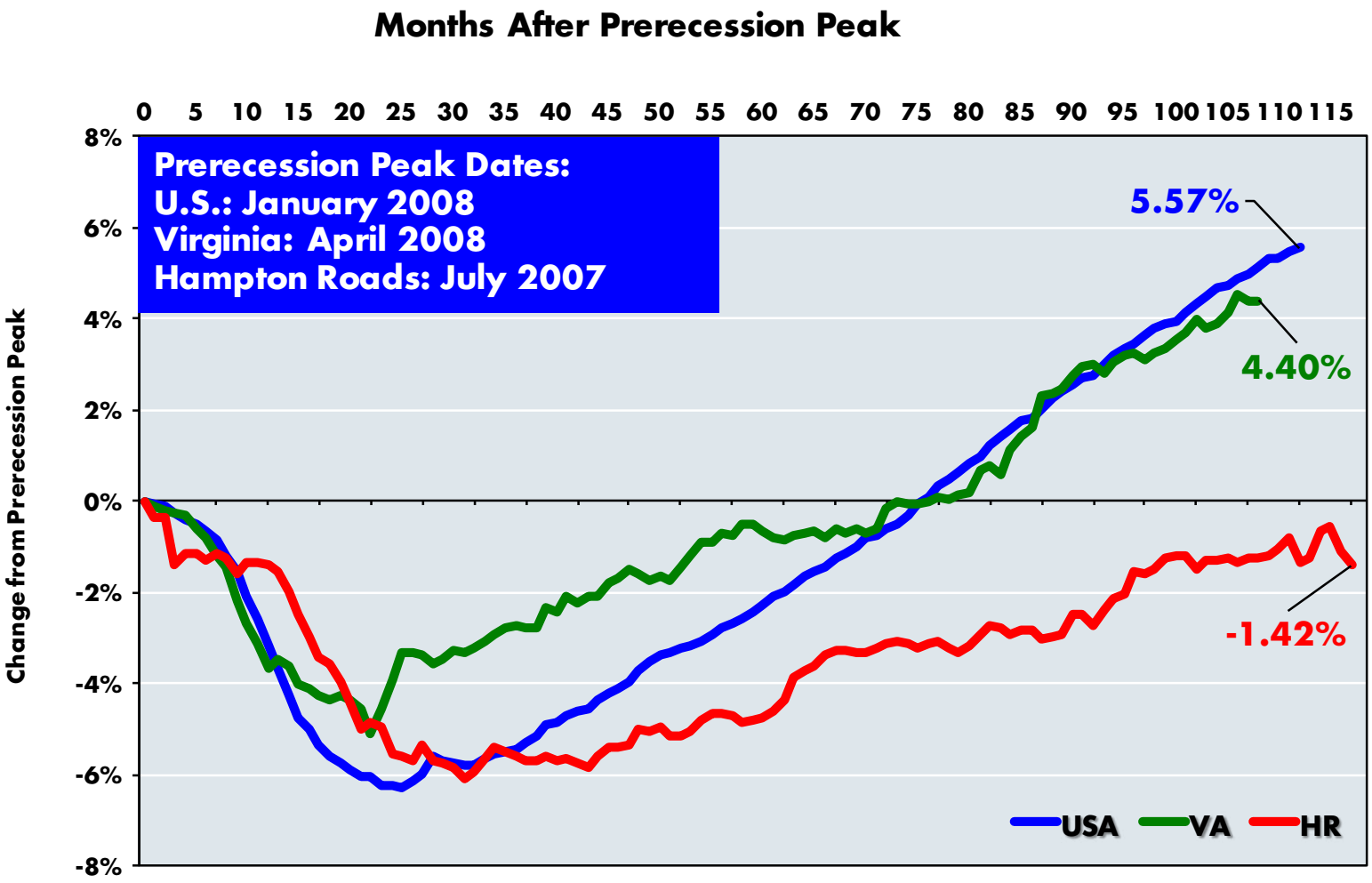
The data in Table 2 reflect the average weekly wage earned by individuals in the major categories we have cited and what has happened to those wages over the space of a decade. Broadly speaking, the sectors that have been losing jobs also have been experiencing declining wages. The lesson is that stagnant or declining demand for an industry's products is a recipe for slow wage growth. On the other hand, when industries are expanding, they must compete to attract and retain workers and this usually leads to larger wage increases.

Hampton Roads is not a high-wage region in any case. In May 2016, the average hourly wage (all occupations) in our region was 6.8 percent below the national average.[3] In a subsequent chapter, we will explore whether this might be one reason why our region has experienced a net out-migration of residents in recent years.

[3] www.bls.gov/regions/mid-atlantic/news-release/occupationalemploymentandwages_virginiabeach.htm.

GRAPH 4

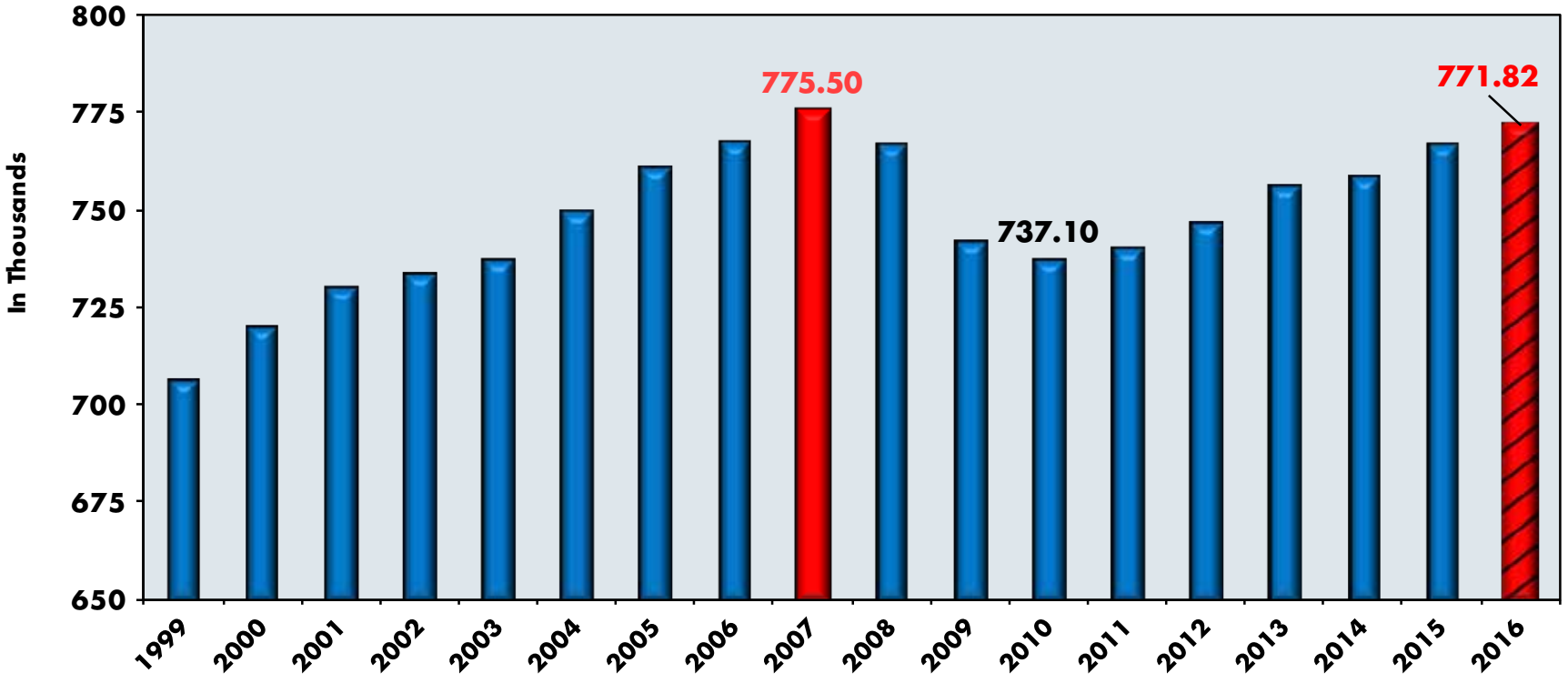
RECESSION RECOVERY IN THE U.S., VIRGINIA AND HAMPTON ROADS MEASURED BY TOTAL JOBS RESTORED, 2007-2017*



Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project. *Data for Virginia and Hampton Roads are through April 2017.

GRAPH 5

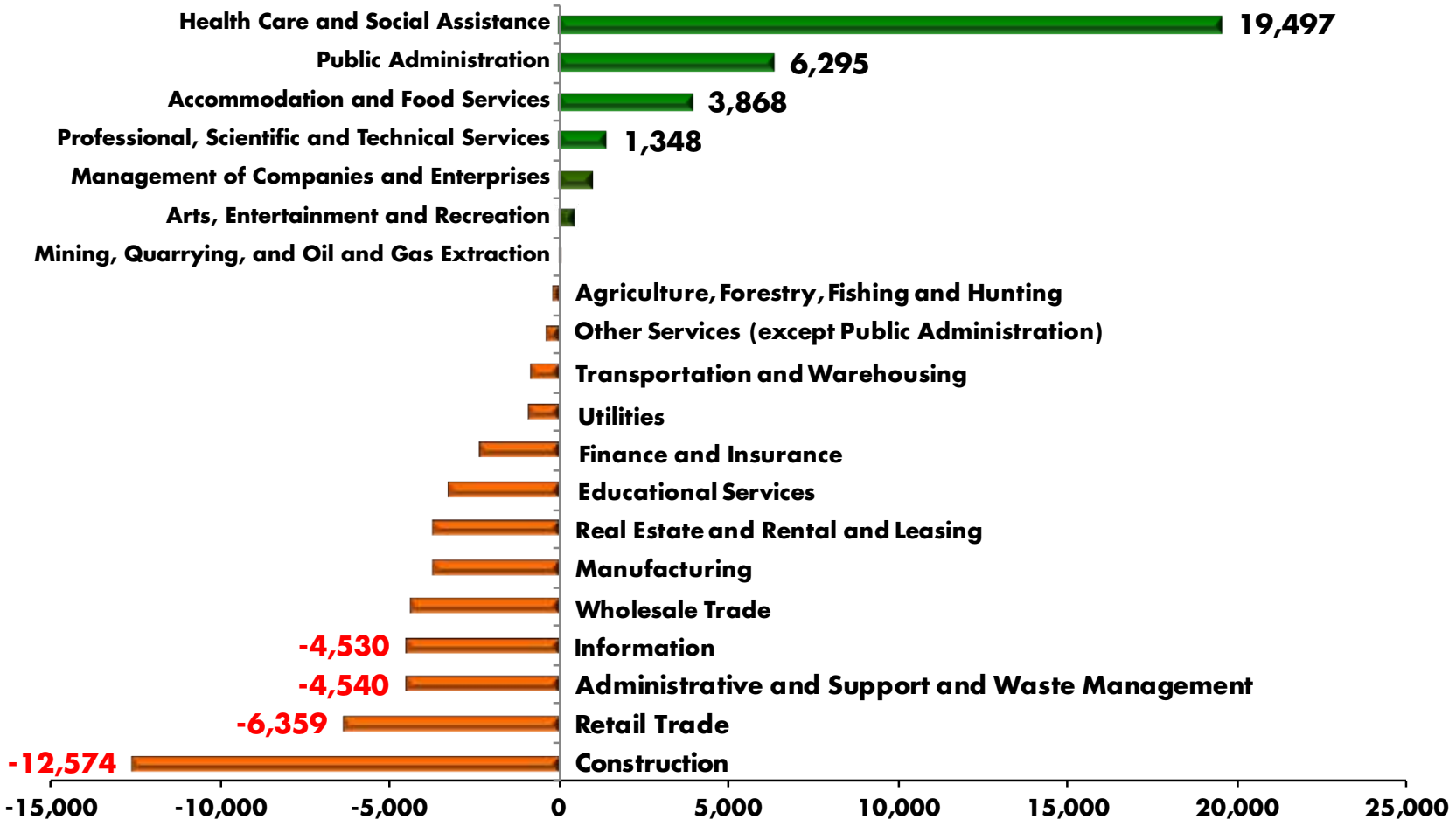
CIVILIAN EMPLOYMENT IN HAMPTON ROADS, 1999-2016 (000S)



Sources: U.S Department of Labor CES Data and the Old Dominion University Economic Forecasting Project (not seasonally adjusted)

GRAPH 6

CHANGE IN EMPLOYMENT BY SECTORS IN HAMPTON ROADS FROM 1ST QUARTER 2007 TO 1ST QUARTER 2016 (VIRGINIA PORTION OF HAMPTON ROADS)



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

TABLE 2 AVERAGE WEEKLY WAGES IN SELECTED INDUSTRIES: HAMPTON ROADS, 2007 AND 2016			
Industry	**1st Quarter 2007**	**1st Quarter 2016**	**Changes**
Management of Companies and Enterprises	**$1,268**	**$2,503**	**$1,235 (97.4%)**
Finance and Insurance	**$1,093**	**$1,400**	**$307 (28.1%)**
Public Administration	**$1,044**	**$1,283**	**$239 (22.9%)**
Professional, Scientific and Technical Services	**$1,085**	**$1,277**	**$192 (17.7%)**
Wholesale Trade	**$902**	**$1,077**	**$175 (19.4%)**
Information	**$891**	**$1,048**	**$157 (17.6%)**
Administrative and Support and Waste Management	**$484**	**$632**	**$148 (30.6%)**
Real Estate and Rental and Leasing	**$671**	**$814**	**$143 (21.3%)**
Health Care and Social Assistance	**$716**	**$854**	**$138 (19.3%)**
Construction	**$739**	**$876**	**$137 (18.5%)**
Transportation and Warehousing	**$867**	**$988**	**$121 (14.0%)**
Manufacturing	**$1,075**	**$1,185**	**$110 (10.2%)**
Educational Services	**$681**	**$781**	**$100 (14.7%)**
Retail Trade	**$428**	**$478**	**$50 (11.7%)**
Accommodation and Food Services	**$258**	**$304**	**$46 (17.8%)**
Utilities	**$1,313**	**$1,202**	**-$111 (-8.5%)**
Sources: U.S. Department of Labor Quarterly Census of Employment and Wages for Virginia portion of the Hampton Roads area and the Old Dominion University Economic Forecasting Project			

Defense Spending

Total Department of Defense (DOD) spending in Hampton Roads almost doubled from 2000 to 2011, growing at about 6.3 percent per year, compounded (see Graph 7). However, DOD spending since that time has been stagnant and even has declined in some years. We anticipate that DOD spending in Hampton Roads in 2017 will be only about $50 million higher than its peak in 2012.

The somnolent character of defense spending in our region has reduced the proportion of our regional economic activity that one can attribute to the DOD. **Graph 8 discloses that estimated defense spending accounted for almost half of the value of our regional gross output in 2011, but since has fallen to 37.1 percent. Given this change, we might be tempted to congratulate ourselves for having successfully diversified our regional economic base, but the truth is that our diversification is due primarily to sluggish defense spending rather than a dramatic expansion in our private sector.**

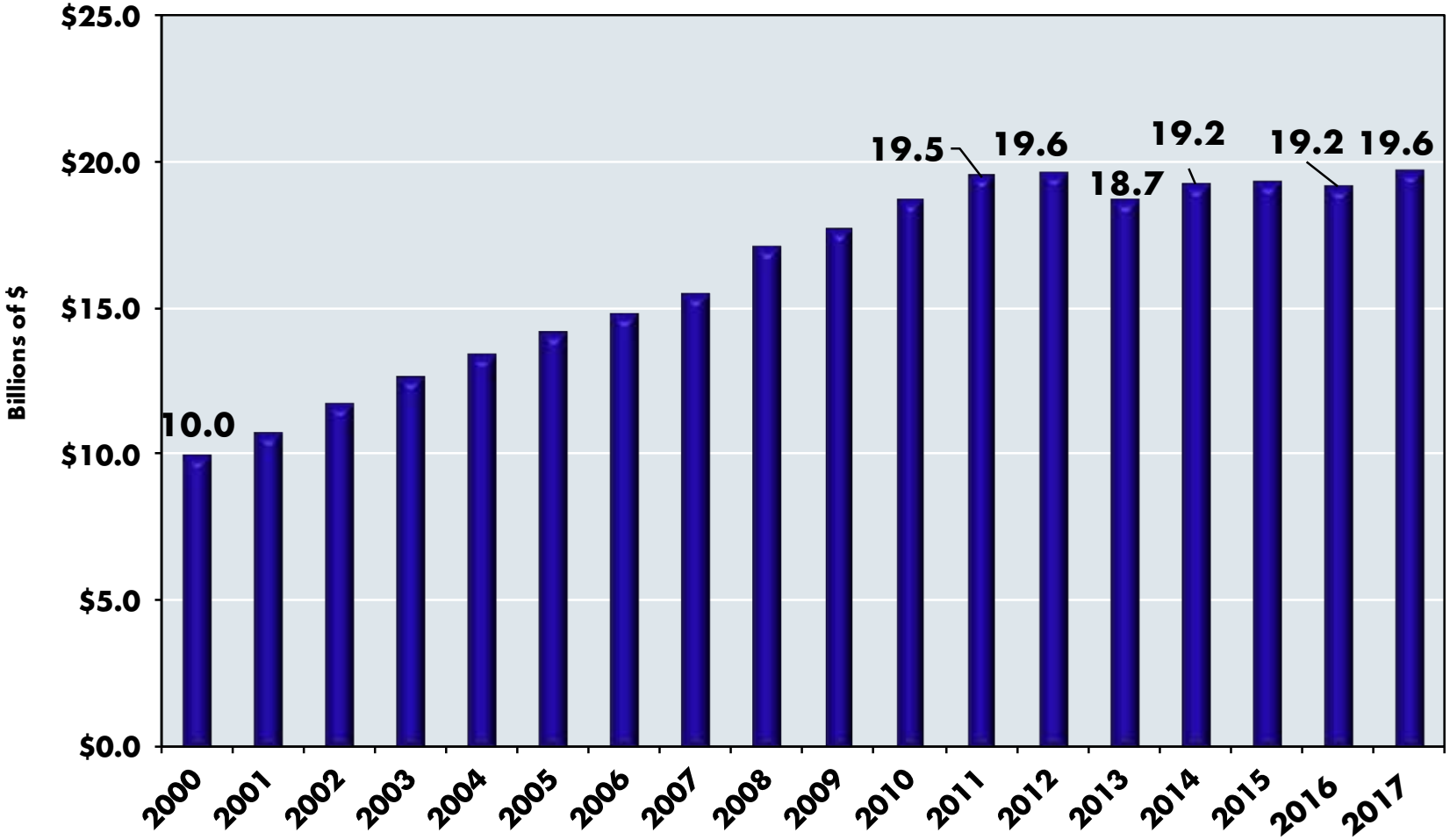
What happened to military employment and compensation while defense spending was remaining roughly constant? Table 3 tells us that military employment (both active duty and reserves) shrank considerably in recent years and that compensation increases for those employees also tapered off. Indeed, the total compensation paid to all military employees in Hampton Roads has declined in the very recent past.

Fortunately, private-sector and nonmilitary federal activities have been much more energetic, with employment and compensation increases occurring in both of those sectors between 2010 and 2015. This helps explain why the proportion of our regional economic activity generated by DOD spending has declined by approximately 8 percent during this decade.

Table 4 is revealing because it presents compensation data on a per-employee basis. Three important inferences can be drawn. First, both overall and on a per-person basis, military compensation per individual has stagnated in our region. **Second, federal civilian employees in Hampton Roads constitute fiscal gold; their average compensation (a term that includes the value of fringe benefits) is more than double the private-sector average.** Third, federal government budget sequestration rules that limit federal spending and federal government hiring freezes represent economic bad news for us. Whatever one's views on the efficacy of federal spending, it remains true that the typical federal civilian jobs in our region are quite valuable. Moves to reduce the federal workforce would undoubtedly negatively impact our region.

GRAPH 7

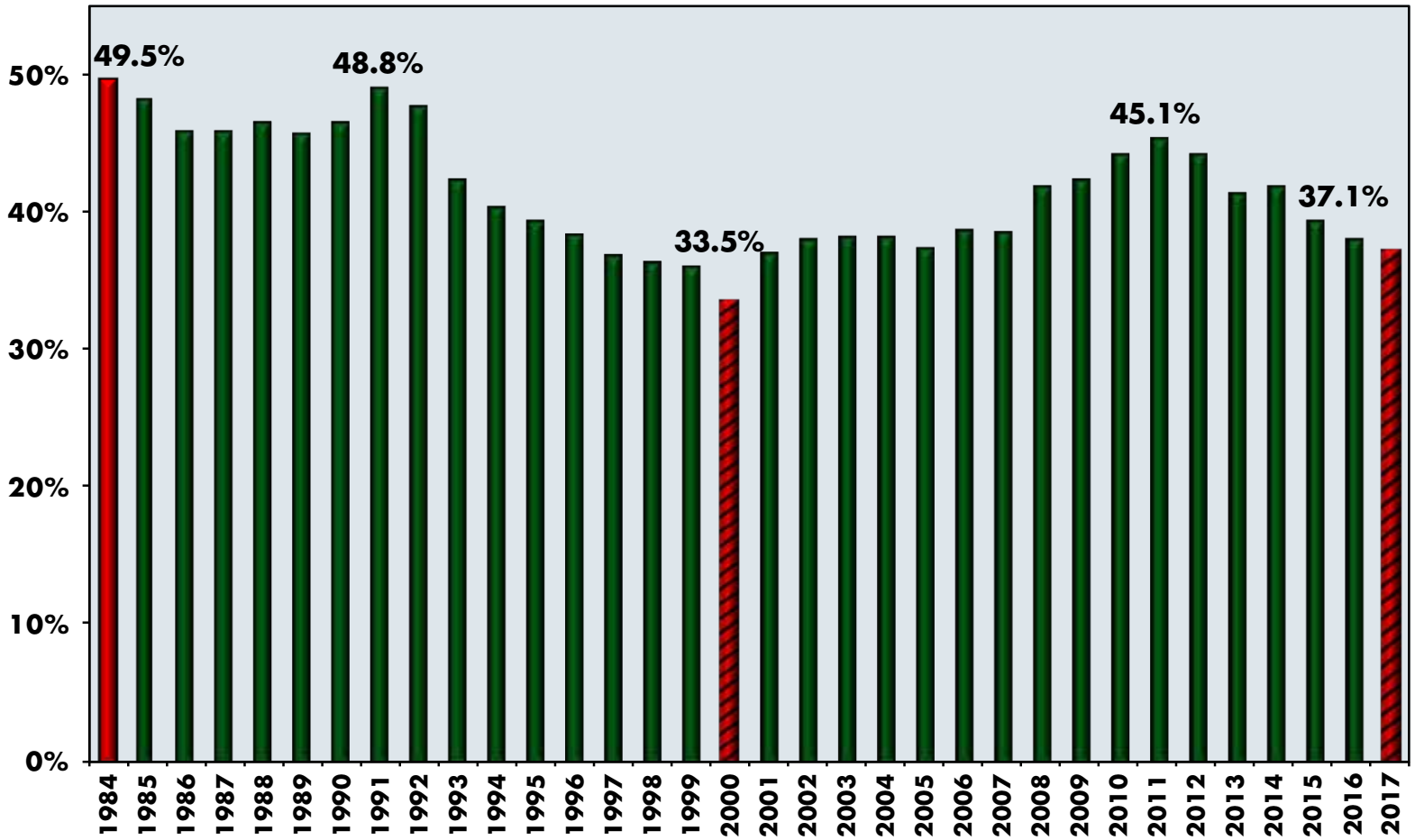
ESTIMATED DIRECT DOD SPENDING: HAMPTON ROADS, 2000-2017



Sources: U.S. Department of Defense and the Old Dominion University Economic Forecasting Project. *Includes federal civilian and military personnel and procurement. 2016 represents our estimate and 2017 represents our forecast.

GRAPH 8

GROSS REGIONAL PRODUCT ATTRIBUTABLE TO DOD SPENDING: HAMPTON ROADS, 1984-2017



Sources: U.S. Department of Defense, U.S Department of Commerce and the Old Dominion University Economic Forecasting Project. 2016 represents our estimate and 2017 represents our forecast.

TABLE 3

GROWTH IN EMPLOYMENT AND TOTAL COMPENSATION (WAGES, SALARIES AND FRINGE BENEFITS) FOR MILITARY, FEDERAL CIVILIAN GOVERNMENT, AND PRIVATE NONFARM SECTORS IN HAMPTON ROADS, 1991-2000, 2001-2010 AND 2010-2015

	Percent Change 1991-2000	Percent Change 2001-2010	Percent Change 2010-2015	Percent Change 2014-2015
Military Employment	-21.3%	-13.6%	-9.9%	0.1%
Military Compensation	5.9%	61.6%	-6.7%	-0.2%
Federal Civilian Government Employment	-20.6%	13.3%	12.5%	6.5%
Federal Civilian Government Compensation	11.0%	68.6%	27.8%	10.6%
Private Nonfarm Employment	22.3%	5.1%	6.3%	1.9%
Private Nonfarm Compensation	69.3%	36.4%	17.4%	4.1%

Sources: U.S. Bureau of Economic Analysis (BEA) and the Old Dominion University Economic Forecasting Project
*BEA chooses to label compensation as earnings.

TABLE 4

ESTIMATED AVERAGE COMPENSATION (WAGES, SALARIES AND FRINGE BENEFITS) IN SELECTED CATEGORIES: HAMPTON ROADS, 2014 AND 2015

	Earnings in 2014	Earnings in 2015	Percent Change 2014 to 2015
Military	$91,531	$91,283	-0.27%
Federal Civilian Government Employees	$103,583	$107,521	3.80%
State and Local Government Employees	$59,150	$61,088	3.28%
Private Nonfarm	$41,279	$42,185	2.19%

Sources: U.S. Bureau of Economic Analysis (BEA) and the Old Dominion University Economic Forecasting Project
*BEA chooses to label compensation as earnings.
Data updated on Nov. 17, 2016.

A Closer Look At Defense Spending

The data we have presented thus far concerning DOD spending in Hampton Roads signal that this spending no longer is the powerful economic growth engine for us that it used to be. Even so, Graph 9, which portrays discretionary defense spending caps for fiscal years 2012 through 2021 as amended, suggests that defense spending could increase in the future. There are significant hurdles, however, to overcome before we see increases in defense spending in Hampton Roads.

As Graph 9 illustrates, there have been several major "budget deals" done by Congress to diminish the impact of sequestration spending limits on favorite Congressional programs, one of which is national defense. The Budget Control Act (BCA) of 2011 set the original spending caps. The Bipartisan Budget Act (BBA) of 2013 provided $63 billion in sequestration relief in FY 2014 and FY 2015, split evenly among defense and nondefense discretionary accounts. Specifically, this act increased the defense discretionary spending cap from $498 billion to $520 billion for FY 2014 and from $512 billion to $521 billion for FY 2015. In addition, nondefense discretionary spending increased from $469 billion to $491 billion for FY 2014 and from $483 billion to $492 billion for FY 2015.

Congress came back to the trough once again via the Bipartisan Budget Act of 2015 and agreed to pass sequester financial relief for FY 2016 and FY 2017. This relaxation raised the discretionary defense-spending cap from $521 billion in FY 2015 to $548 billion (5.18 percent) for FY 2016 and by another $3 billion for FY 2017. Current law extends these caps through FY 2025.

It does not take a Nobel Prize winner to observe that in the current political milieu, it is difficult to determine the outcome of the budget debate. Congress must not only approve an increase in the debt ceiling and pass a budget law (which will set the table for any tax reform efforts), but must also reconcile competing defense authorization and appropriation bills. The numbers involved are not trivial. There may not be enough time in the legislative calendar to reconcile the significant differences in policy and spending between the House and the Senate.

Comparing the authorization and appropriation bills sheds light on these differences. The BCA's cap on national defense discretionary budget authority for FY 2018 is $549 billion (see Graph 10).[4] The president's request for national defense in the FY 2018 budget was $603 billion, $54 billion above the BCA's cap. The House's version of the National Defense Authorization Act (NDAA) proposes national defense spending of $624 billion. While the full Senate has yet to act, the Senate Armed Services Committee's NDAA proposes to authorize a base national defense budget of $632 billion. Regardless of the proposal, these levels are clearly well above the existing BCA caps.

Turning to the Department of Defense's appropriations process, the president's base budget request for FY 2018 was $574 billion, exceeding the BCA's caps by $52 billion (see Graph 11). The House passed a defense appropriations bill in July 2017, setting the DOD's base budget at $584 billion. On the other hand, the Senate Appropriations Subcommittee on Defense has set the DOD's base budget at $513.1 billion. Senate Appropriations Chairman Thad Cochran noted that negotiations between the president and Congress may produce a new budget agreement, but added, "Until such time, however, it is reasonable that we move forward using fiscal year 2017 funding levels."[5]

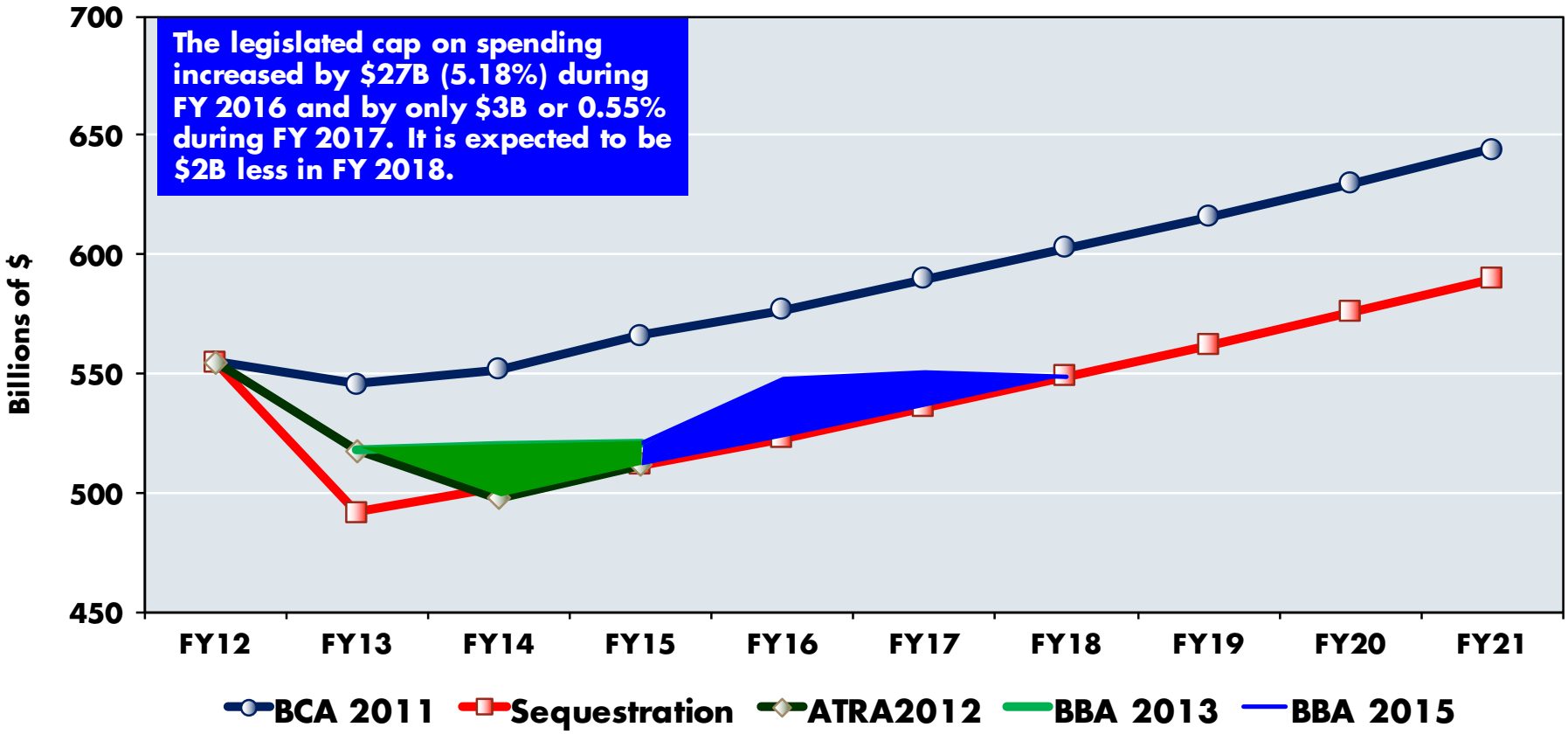
Given the significant legislative hurdles that must be cleared to fund the government, it is likely the federal government will enter the new fiscal year under a Continuing Resolution (CR). Over the last decade, the DOD has entered all but one fiscal year under a CR (see Graph 12). The most recent delay, for example, between the start of FY 2017 and the passage of a defense appropriations bill was 217 days, a delay only exceeded once since 1970. CRs adversely affect the DOD, as the spending rate is typically limited to that previous fiscal year and, with few exceptions, new program starts are prohibited. CRs also result in the delay of maintenance programs (including ship repair) and reductions in training and readiness.

[4] The National Defense budget function (050) consists of the DOD military (subfunction 051), defense-related programs in the Department of Energy (subfunction 053) and Department of Justice (subfunction 054). DOD activities have typically been 95 percent of the national defense budget request.

[5] http://www.rollcall.com/news/policy/analysis-senators-writing-placeholder-defense-money-bill.

GRAPH 9

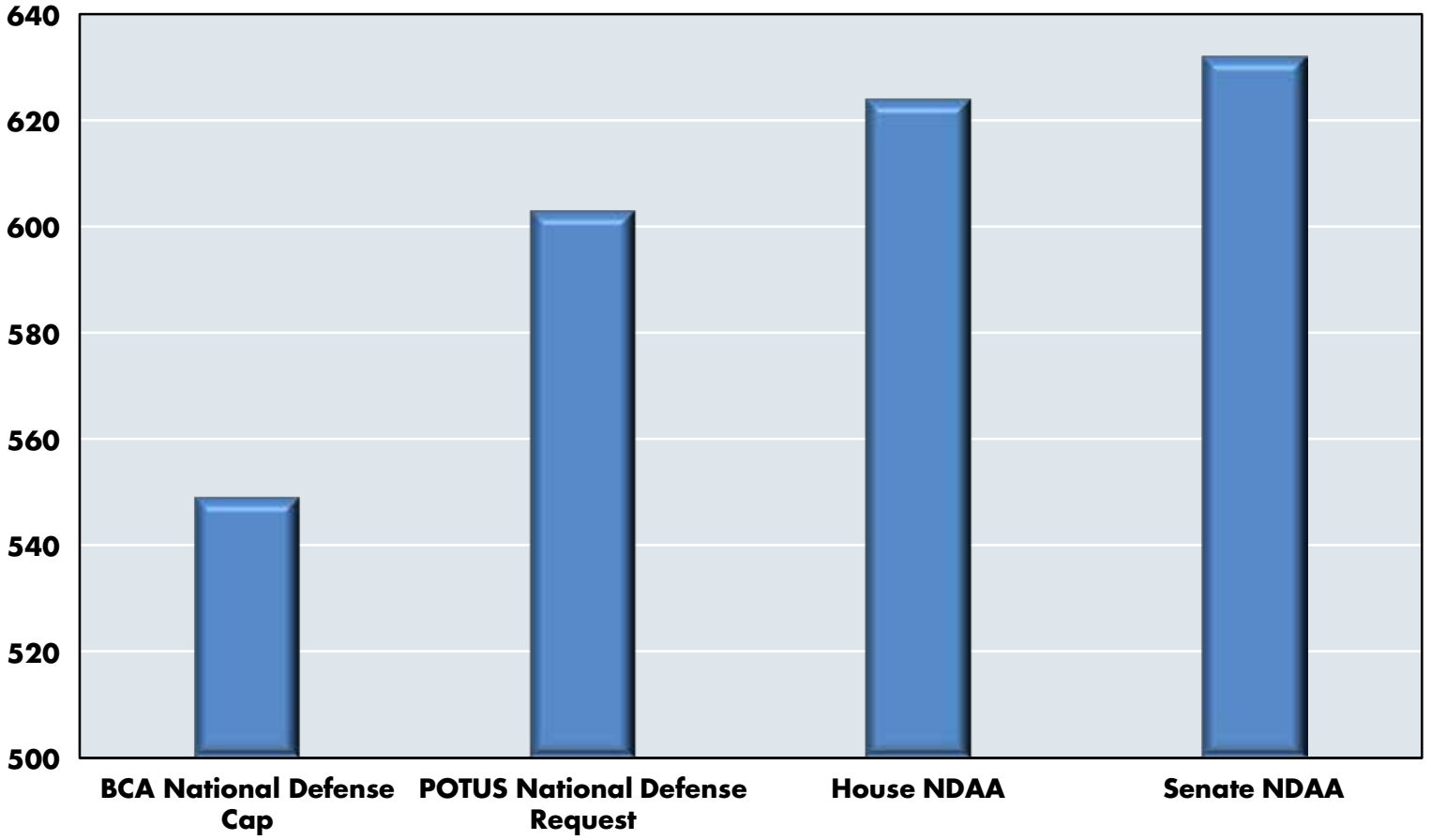
CAPS ON NATIONAL DEFENSE DISCRETIONARY SPENDING, FY 2012 TO FY 2021



Sources: BCA2011, Budget Requests for FY14, CBO Sequestration Update Report and the Old Dominion University Economic Forecasting Project

GRAPH 10

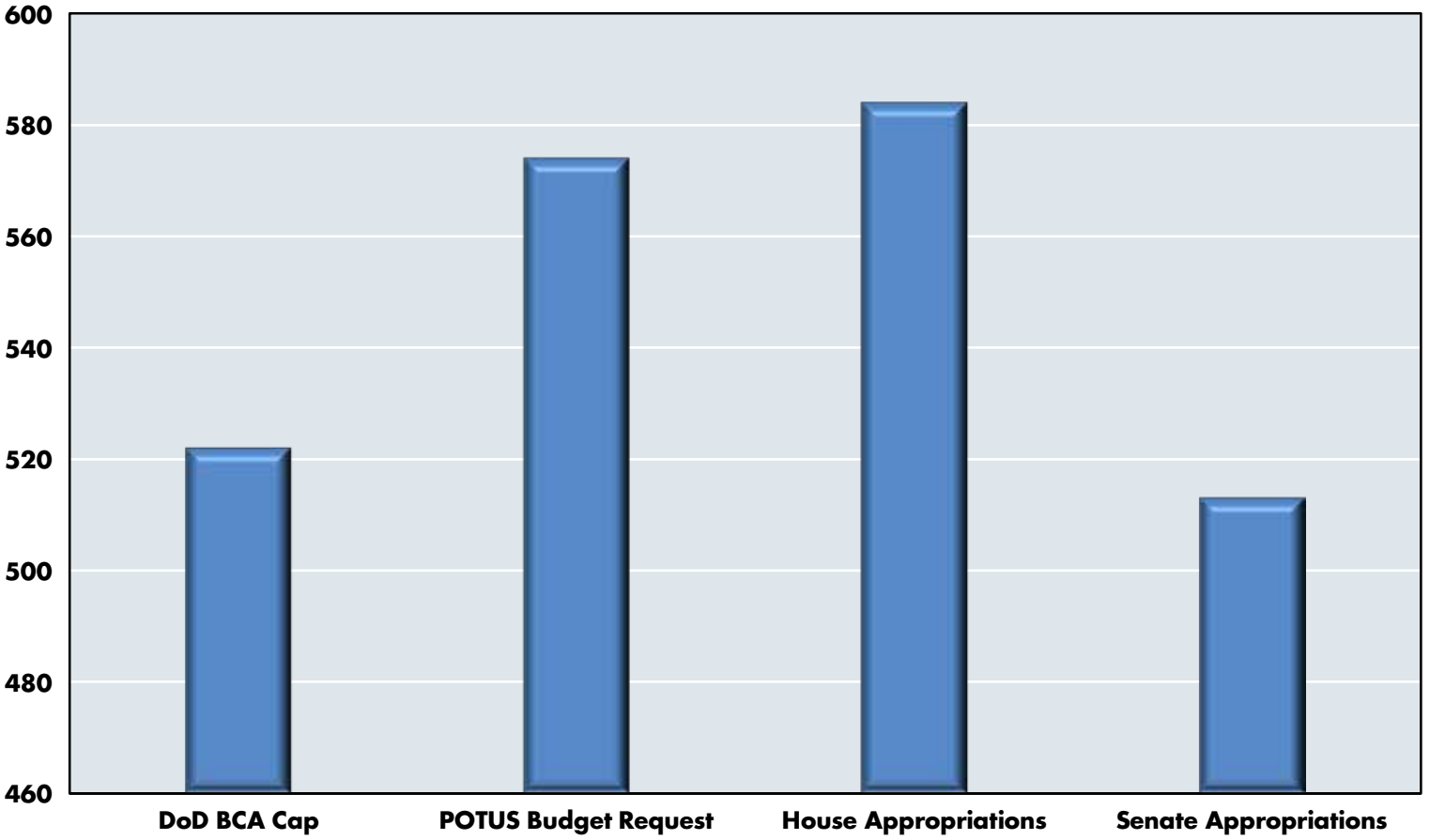
FY 2018 – NATIONAL DEFENSE CAPS, REQUESTS AND AUTHORIZATION BILLS (BILLIONS OF DOLLARS)



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

GRAPH 11

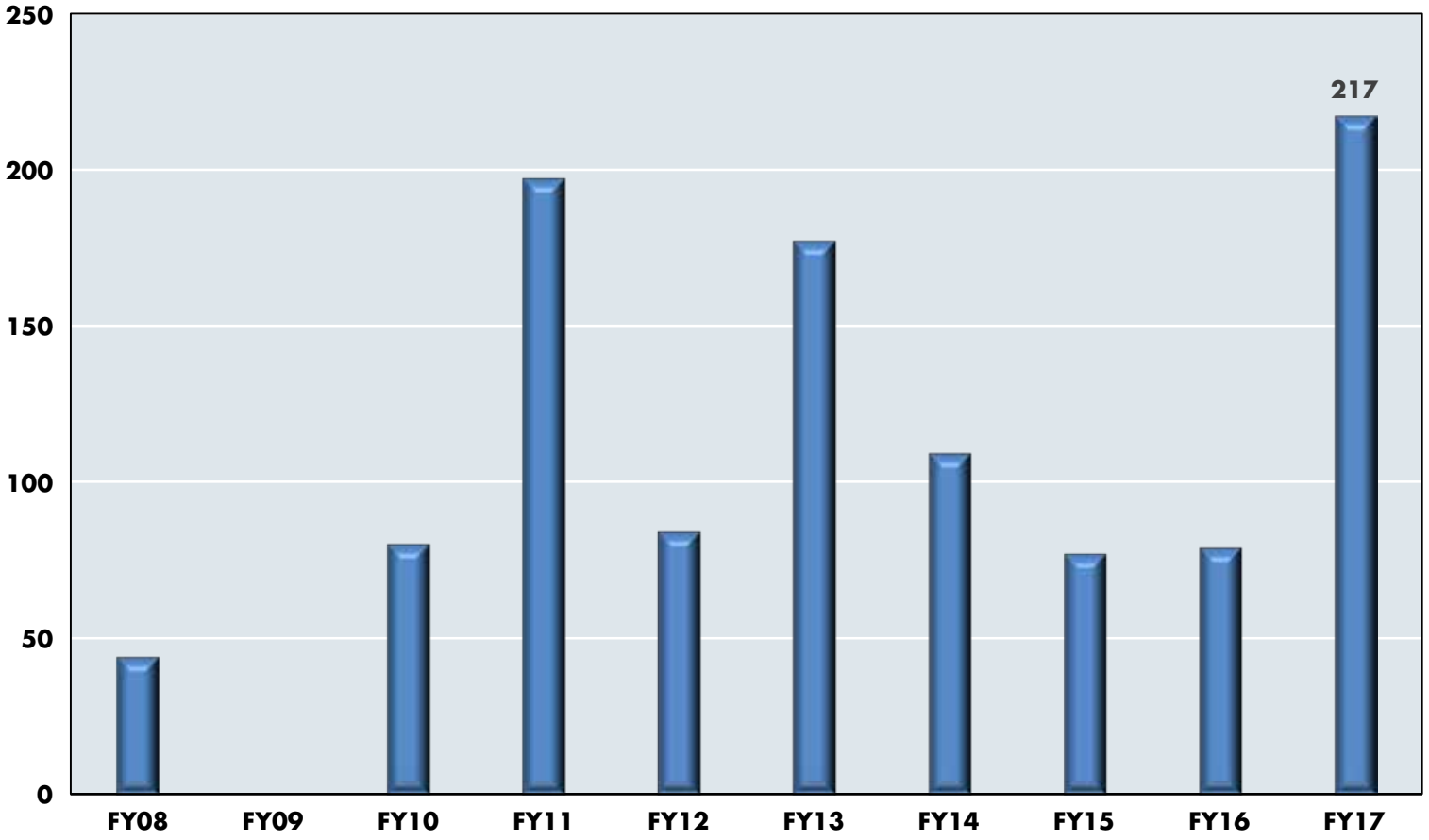
COMPETING VERSIONS OF THE FY 2018 DOD BASE BUDGET
(BILLIONS OF DOLLARS)



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

GRAPH 12

LENGTH OF CONTINUING RESOLUTION FOR DOD APPROPRIATIONS (DAYS FROM OCT. 1)



Sources: Center for Strategic and International Studies and Todd Harrison (2017)

Looming over the debate on the appropriate amount of defense spending is the BCA. While members of the House and Senate have publicly acknowledged that the BCA's limits on discretionary spending are well below Congress' proposed levels, no action has been taken to amend or repeal the BCA caps. This means that even if Congress agrees to higher levels of FY 2018 defense spending, the president will be required to implement a sequester to reduce spending to the FY 2018 caps. Using the House appropriations bill as a reference point, for example, the president would be required under the BCA to order the DOD to implement an across-the-board 13 percent sequester, twice the amount of the FY 2013 sequester. To say that such a sequester would significantly harm the DOD's operations is an understatement.

While the political climate remains tense and forecasting the actions of Congress and the president is fraught with uncertainty, we can draw on previous history for a bit of good news. The genesis of the BCA was the debt ceiling debate of 2011. Congress may tie a new debt ceiling deal in 2017 to a modification of the BCA caps that would result in increased defense spending. Those hoping for a large increase in defense spending, however, may be disappointed in 2017, as the proposed increases may not materialize until well into 2018.

Additional military spending may not translate to higher personnel levels, however. Military employment in Hampton Roads during the 1980s and 1990s approximated 140,000. By 1998, it had declined to 106,000 and currently is 85,900 (see Graph 13). The DOD progressively has substituted equipment and technology for people. For example, the personnel complement of the new fleet carrier Gerald R. Ford is about 600 fewer than the older-generation carrier it is replacing.

The military services have also continued to express support for the DOD request for authorization to conduct a Base Realignment and Closure (BRAC) round in 2021. While Congress so far has not shown an appetite for another BRAC round, if other policies result in significant increases in the federal deficit, then we may see Congress authorize the DOD to close and realign bases to generate savings that then can be invested in force structure or readiness requirements. We remain cautiously optimistic about the role of Hampton Roads in national defense and continue to urge policymakers to be proactive in preparing for the next (and we believe, inevitable) round of BRAC.

The DOD is behaving very much like a private-sector business in this regard. **Confronted with rapidly escalating personnel costs (especially related to health care and pensions), the DOD is automating and substituting technology for people. Faced with an abundance of infrastructure, the DOD is seeking to reduce its footprint to reduce costs.** One should not lose sight of the economic ramifications of this behavior for our region. Falling numbers of active-duty military personnel will translate into lower expenditures on a wide range of regional items, from pizzas to new homes. True, increased DOD expenditures will be made on equipment and technology, but not necessarily in Hampton Roads. The change in the DOD's mixture of expenditures does not bode well for us unless it is counteracted by an expansion of the fleet, or added emphasis upon special forces such as those trained at the Joint Expeditionary Base Little Creek-Fort Story.

Taking a longer view, however, it is not a certainty that defense spending will increase significantly in Hampton Roads over the next decade. Graph 14 models some of the possibilities (with the solid red line representing the current sequestration world).

- First, Congress and the president could agree on rapid and sustained increases in defense spending that raise national defense expenditures by 5 percent annually (the blue dashed line in Graph 14). This could include a massive shipbuilding program to reach a fleet size of 350 ships; increased production of the F-35A and movement of the F-35B and F-35C into full-rate production; Army and Marine Corps growth to match 2007 personnel levels; and new procurement to replace aging armor, helicopters and other weapons systems.

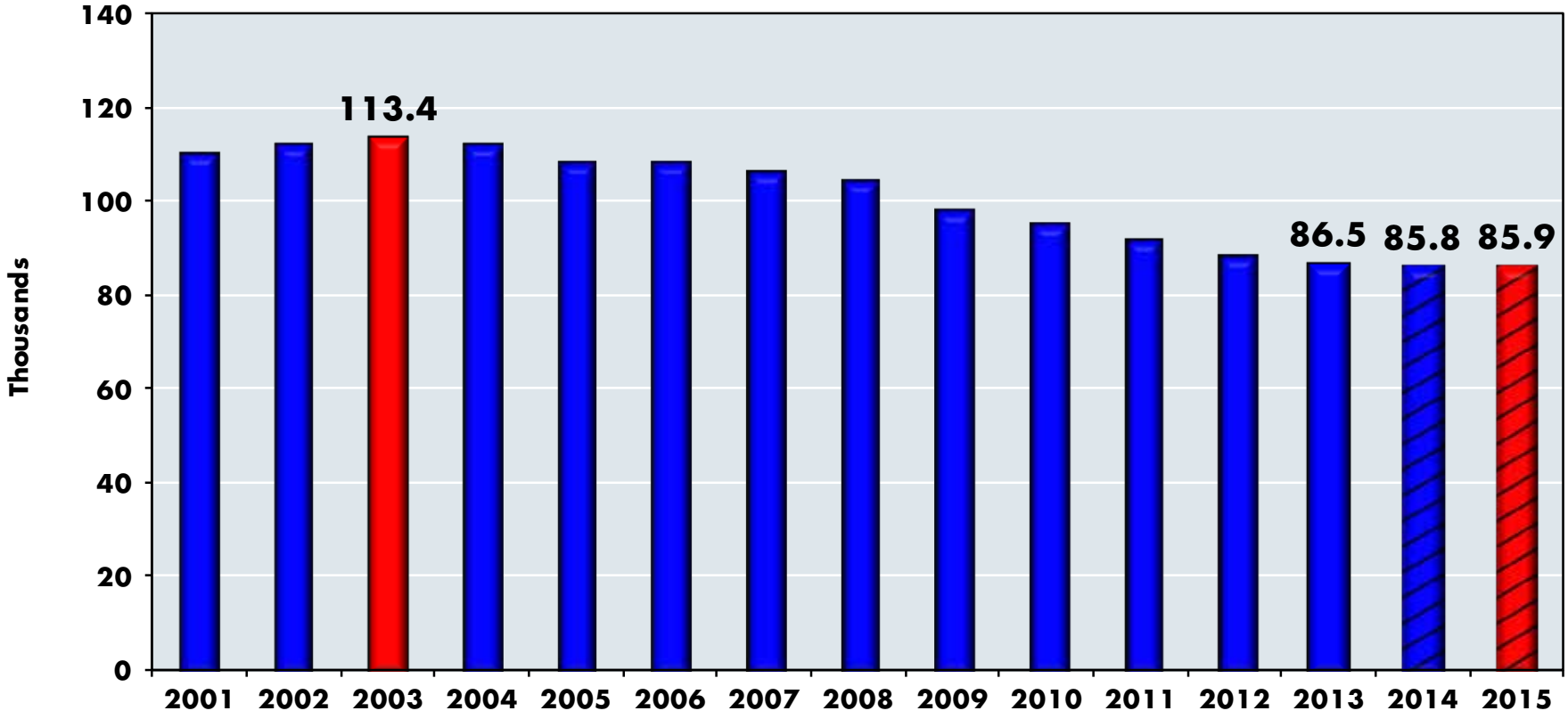
- Second (and what one might label a Hades scenario), Congress and the president agree on significant cuts to corporate and personal taxes coupled with large expenditures on infrastructure investment and defense expenditures. All of this occurs within two years. This results in significant increases in the federal deficit and stirs the fires of price inflation. The Federal Reserve reacts by increasing interest rates to dampen the price inflation. Bond yields spike upward and interest rates generally rise. (Do you remember the prime rate exceeding 15 percent early in the 1980s?) Over time, required federal government debt service payments crowd out discretionary expenditures, including defense. The end result? DOD expenditures eventually flatten and we enter a new round of base closings (BRAC). This dystopian world is represented by the dotted red line in Graph 14.

- Third, tax reform, infrastructure spending and defense spending compete for attention and resources in this future. Faced with this pressure, Congress modifies the Budget Control Act spending caps on a two-year cycle. The Navy remains at 300 ships and shelves expensive shipbuilding plans. The Air Force continues to buy the F-35A, while the F-35B and F-35C remain in low-rate initial production. While the downsizing of the Army and Marine Corps halts at current levels, no significant increases in active-duty military personnel occur through 2022. Once again, increasing fiscal pressure results in a new BRAC round that significantly cuts the DOD footprint. Facilities such as Oceana Naval Air Station go on the chopping block. The dotted green line in Graph 14 depicts this view of the world.

In the short run, however, potential increases in DOD funding are good news. For example, the FY 2018 budget for ship maintenance and repair may be as much as 12 percent higher than that for FY 2017. This will stimulate activity at locations such as the Norfolk Naval Shipyard (which is located in Portsmouth and one of the largest shipyards in the world), BAE and Huntington-Ingalls. The proposed increases in operational readiness, which include increases in the procurement of parts, supplies and maintenance contracts, will lead to increased regional spending. Looking forward, a new defense strategy and proposals for increasing the force structure will likely also increase shipbuilding and ship repair and maintenance, though we caution that these effects are not likely to appear until well into 2018 and 2019.

GRAPH 13

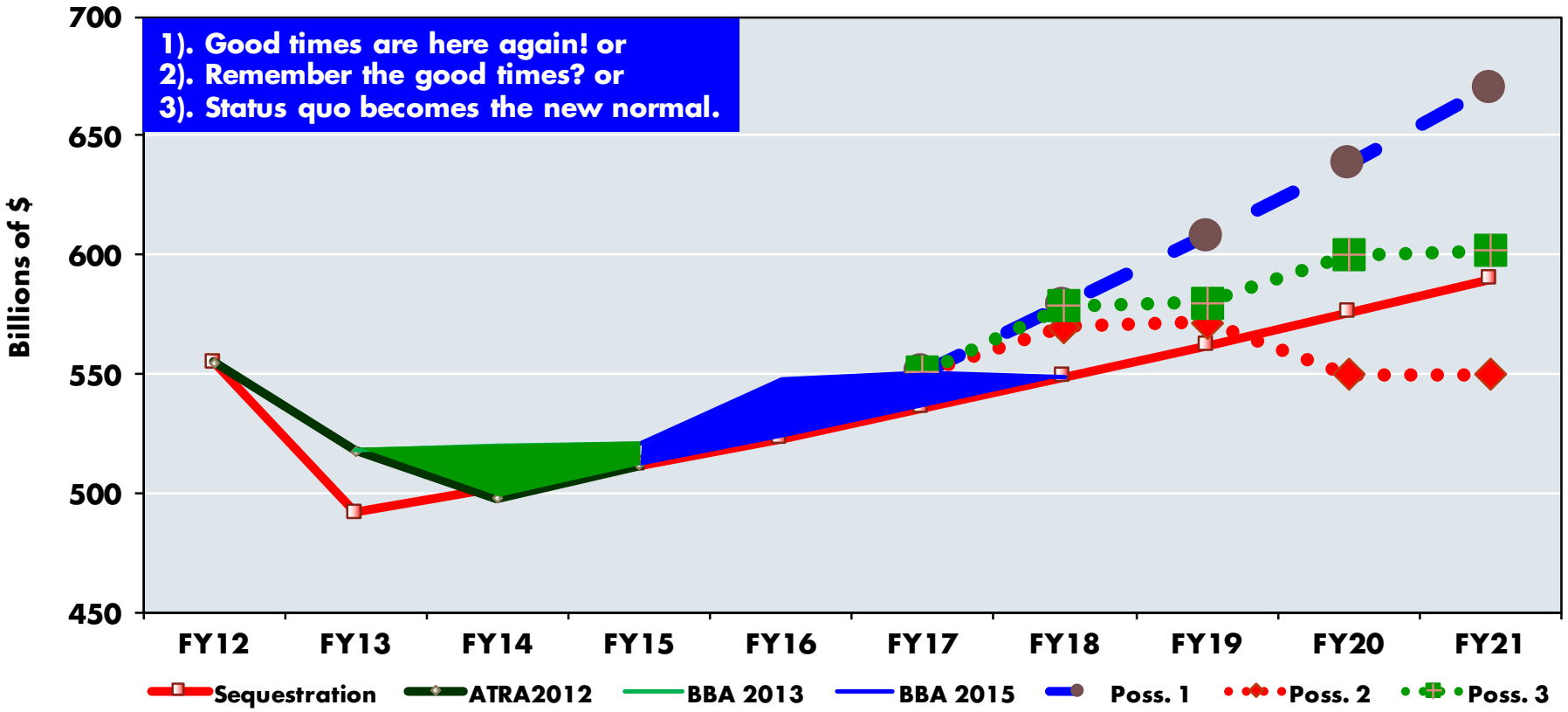
MILITARY EMPLOYMENT IN HAMPTON ROADS, 2001-2015



Sources: Bureau of Economic Analysis and the Old Dominion University Economic Forecasting Project

GRAPH 14

POSSIBILITIES OF A CHANGE IN CAPS ON DOD DISCRETIONARY SPENDING, FY 2012 TO FY 2021



Sources: BCA2011, Budget Requests for FY14, CBO Sequestration Update Report and the Old Dominion University Economic Forecasting Project

Employment And Unemployment

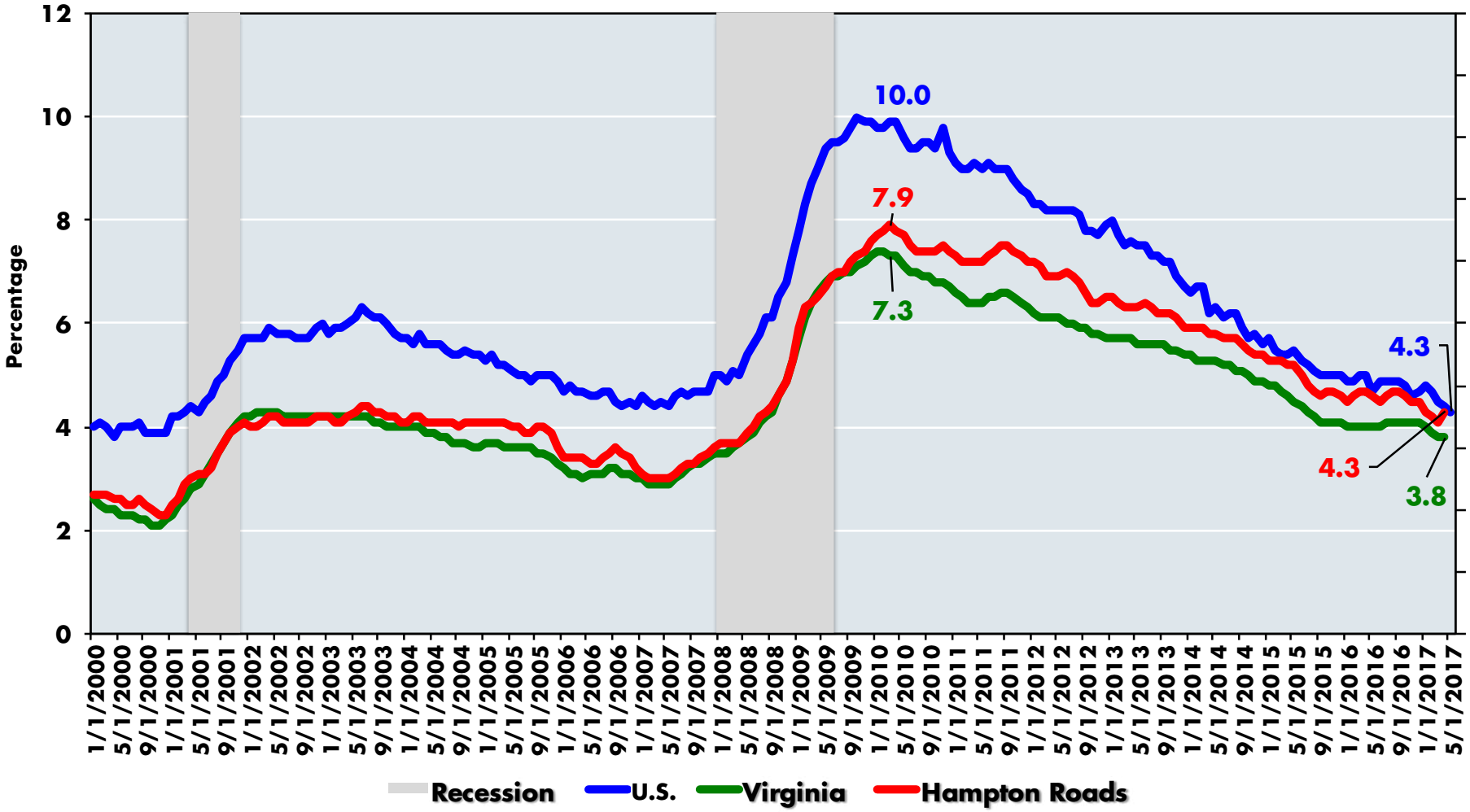
Since the Great Recession, Hampton Roads has recorded unemployment rates higher than our historical average. Nevertheless, our unemployment rate has been lower than that of the nation (see Graph 15). However, the gap between the national and Hampton Roads unemployment rates has been shrinking and in April 2017 our rate was the same as the national rate.

While the unemployment rate has fallen year-over-year in Hampton Roads and the labor force has expanded, the region continues to struggle to generate job growth. Recently released data from the BEA show that nonfarm employment has fallen over the last several months. The preliminary data for July 2017 suggest that nonfarm employment has fallen back to levels last seen in June 2015 .

Let's dig deeper. Graph 16 tells us that initial monthly unemployment claims have declined considerably since their peak in 2010 and now are smaller than the prerecession low observed in December 2007. **Most of the people looking for jobs in our region have found them. If there is a problem with this rosy scene, it is that the proportion of people of prime working age who have stopped looking for jobs has increased, both in Hampton Roads and nationally.** These individuals are not counted as unemployed because they are not looking for a job. The net result is a curious combination of a falling unemployment rate even while we have a rising number of people not working.

GRAPH 15

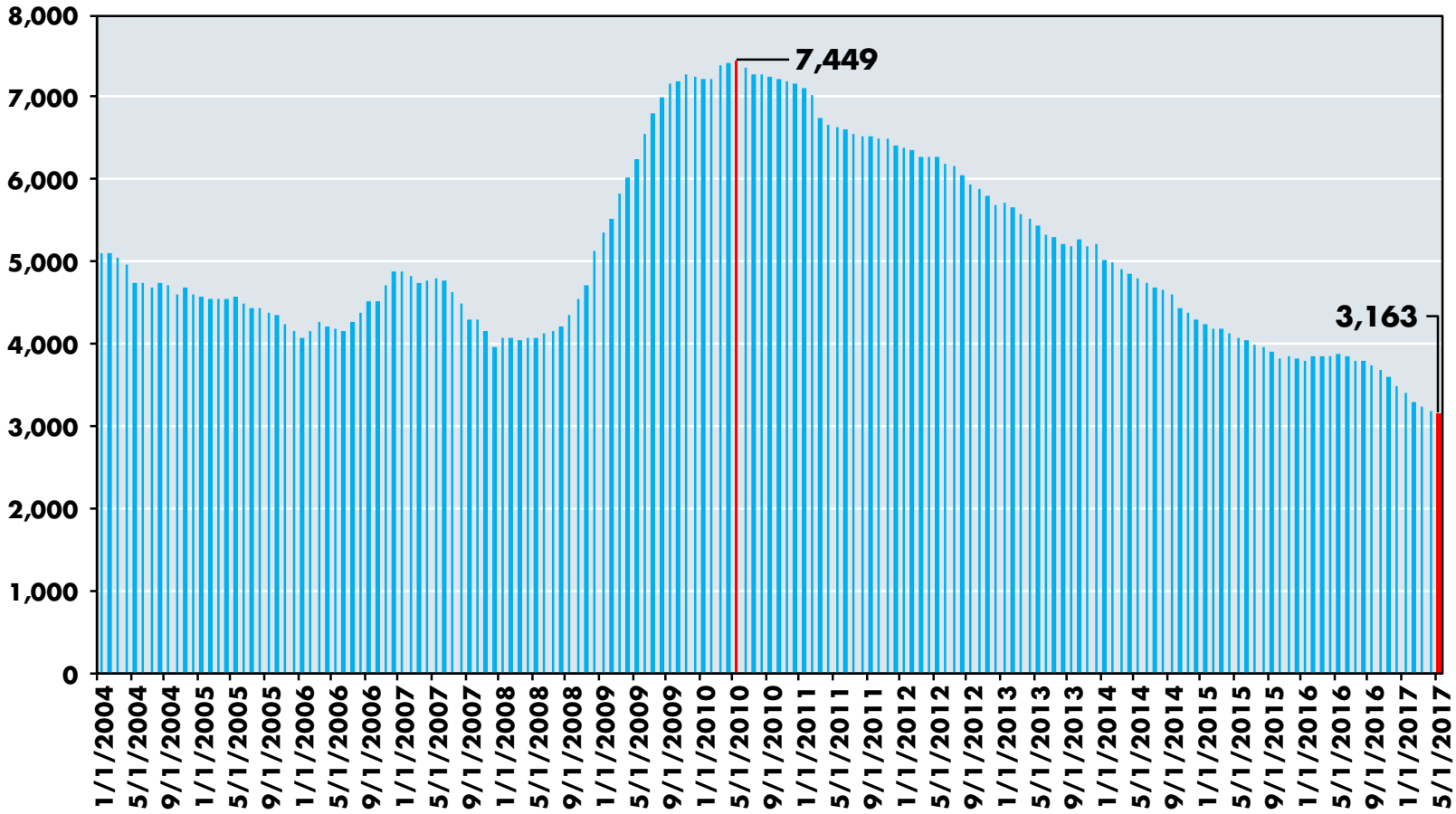
UNEMPLOYMENT RATES: U.S., VIRGINIA, HAMPTON ROADS, 2000-2017



Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

GRAPH 16

MONTHLY NEW UNEMPLOYMENT CLAIMS: HAMPTON ROADS, JANUARY 2004 - MAY 2017 (12-MONTH MOVING AVERAGE)



Sources: Virginia Employment Commission and the Old Dominion University Economic Forecasting Project

The Port

The Port of Virginia has continued to excel. Activity and volumes at the Port rebounded smartly from Great Recession lows and the Port itself now is being managed more efficiently. It has improved its handling of cargoes, is pricing its services more prudently than in the past and is welcoming capacious new ships that carry more than 13,000 20-foot equivalent units (TEUs).

Graphs 17 (general cargo tonnage) and 18 (20-foot equivalent units) track port activity. Recovery from the Great Recession began to occur in 2011 and 2012, and general cargo tonnage increased by 4.5 percent in 2016. Twenty-foot equivalent containers increased 4.8 percent. Note that Port activity now consistently expands at an annual rate that exceeds the economic growth of the United States, Virginia and Hampton Roads.

The Port has become one of the region's more productive economic engines and a variety of studies attribute tens of thousands of jobs throughout Virginia to its activities. However, we need to note that its TEU market share in 2017 is slightly lower than it was in 2013 and that the Port appears to have lost market share to competitor ports such as Charleston and Savannah (see Graph 19).

Graph 20 contains good news, however, in the form of the Port's increasing ability to serve its customers via rail. Such customers are far enough away from the Port that it usually is uneconomic to serve them via trucks. These "middle of the country" customers can be served by several different ports. The fact that the Port of Virginia is winning more of this discretionary business is good news.

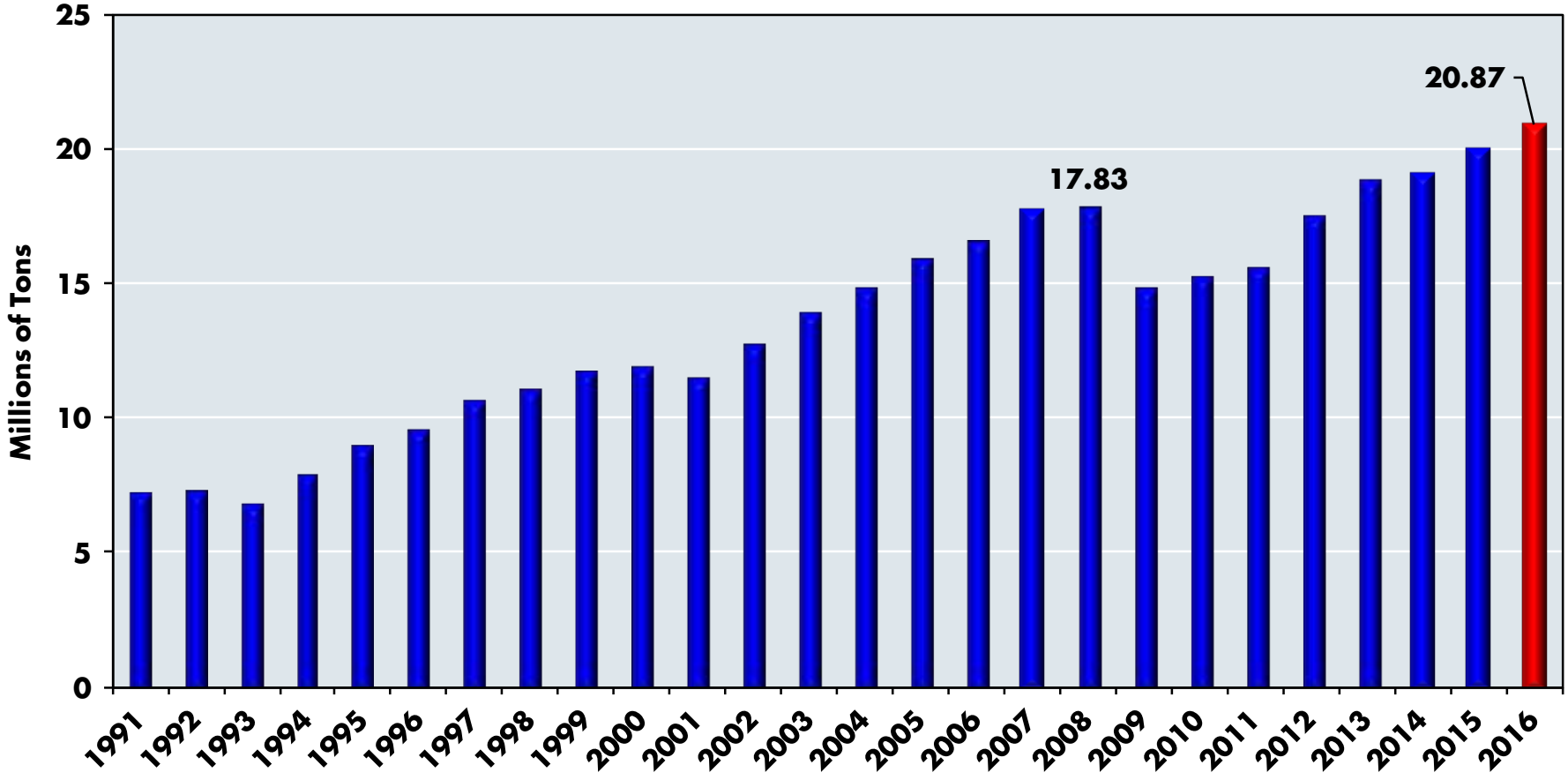
Ultimately, the ability of the Port to expand and excel critically depends upon the Commonwealth's transportation infrastructure (for example, the completion of an interstate-grade highway between Hampton Roads and Raleigh-Durham); the continued dredging of the Port so that it can handle larger ships, and the modernization of its equipment and operational procedures, to name only several of the Port's needs. None of these can be accomplished without significant investments.

Reality is that the Port (and Hampton Roads) operates in a highly competitive economic world that does not stand still. More than most institutions in our region, the Port stands on the front lines of the competition. Either we move forward with the Port, or we will soon find ourselves moving backward.

The Port of Virginia announced a major expansion project that will provide momentum for continued growth and progress at its Norfolk International Terminal (NIT) South Optimization and Virginia International Gateway (VIG) II. The two projects attracted $670 million in support from the General Assembly. Therefore, by 2020, the Port will have the capacity to process 1 million additional container units, a 40 percent increase overall.

GRAPH 17

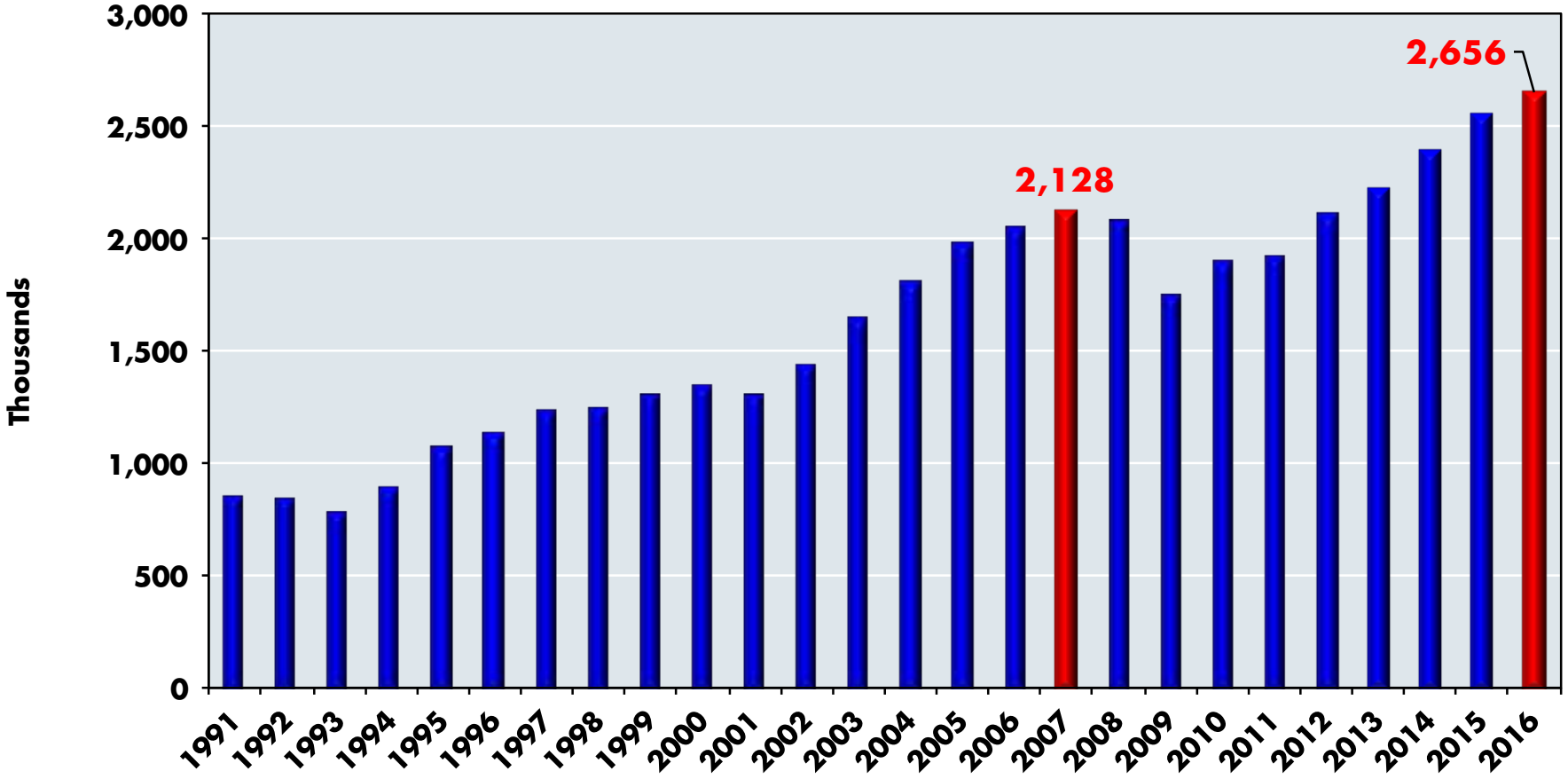
GENERAL CARGO TONNAGE: PORT OF VIRGINIA, 1991-2016



Sources: Port of Virginia and the Old Dominion University Economic Forecasting Project

GRAPH 18

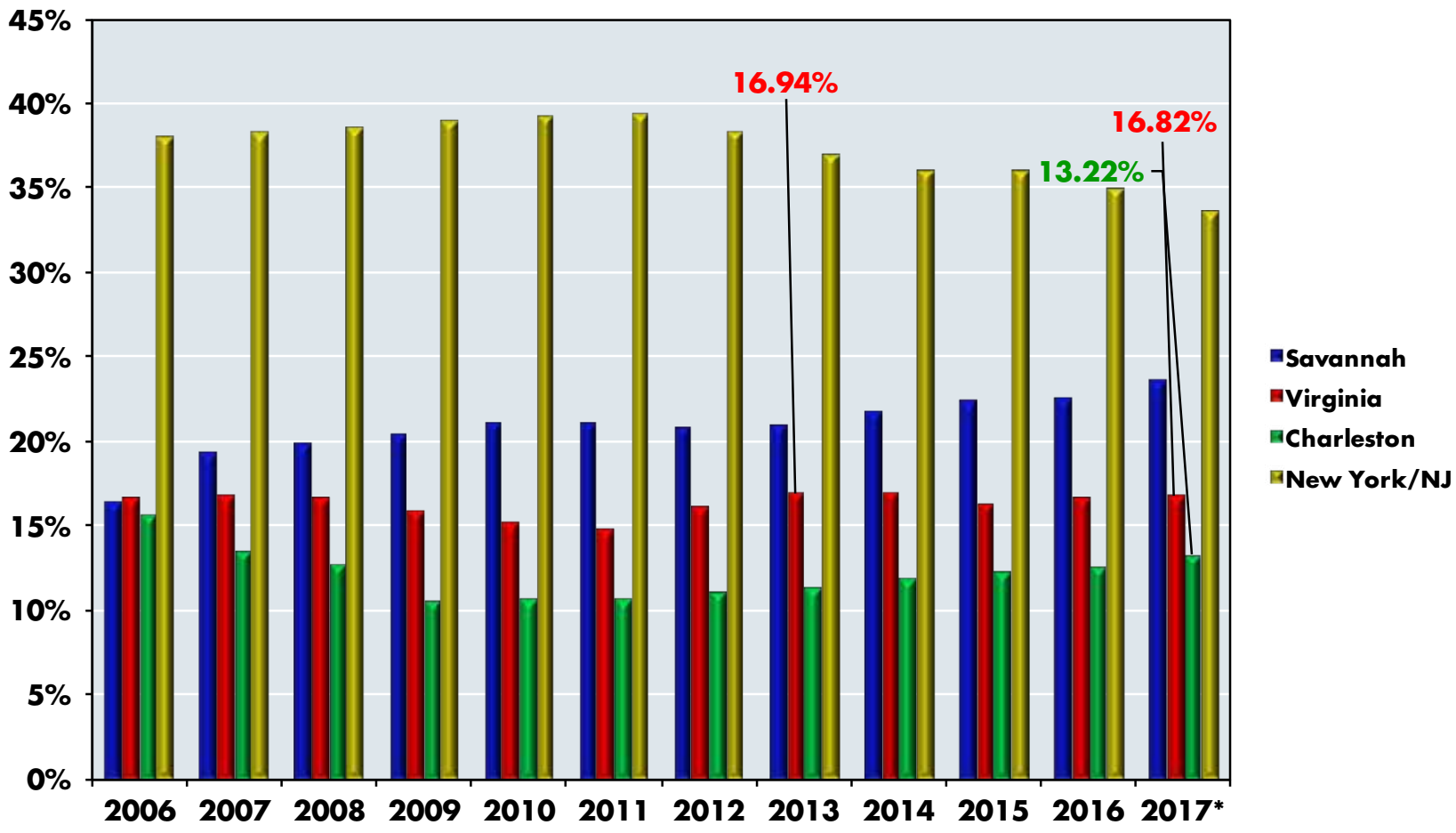
PORT OF VIRGINIA HISTORICAL 20-FOOT EQUIVALENT UNITS, 1991-2016 (000S)



Sources: Port of Virginia and the Old Dominion University Economic Forecasting Project

GRAPH 19

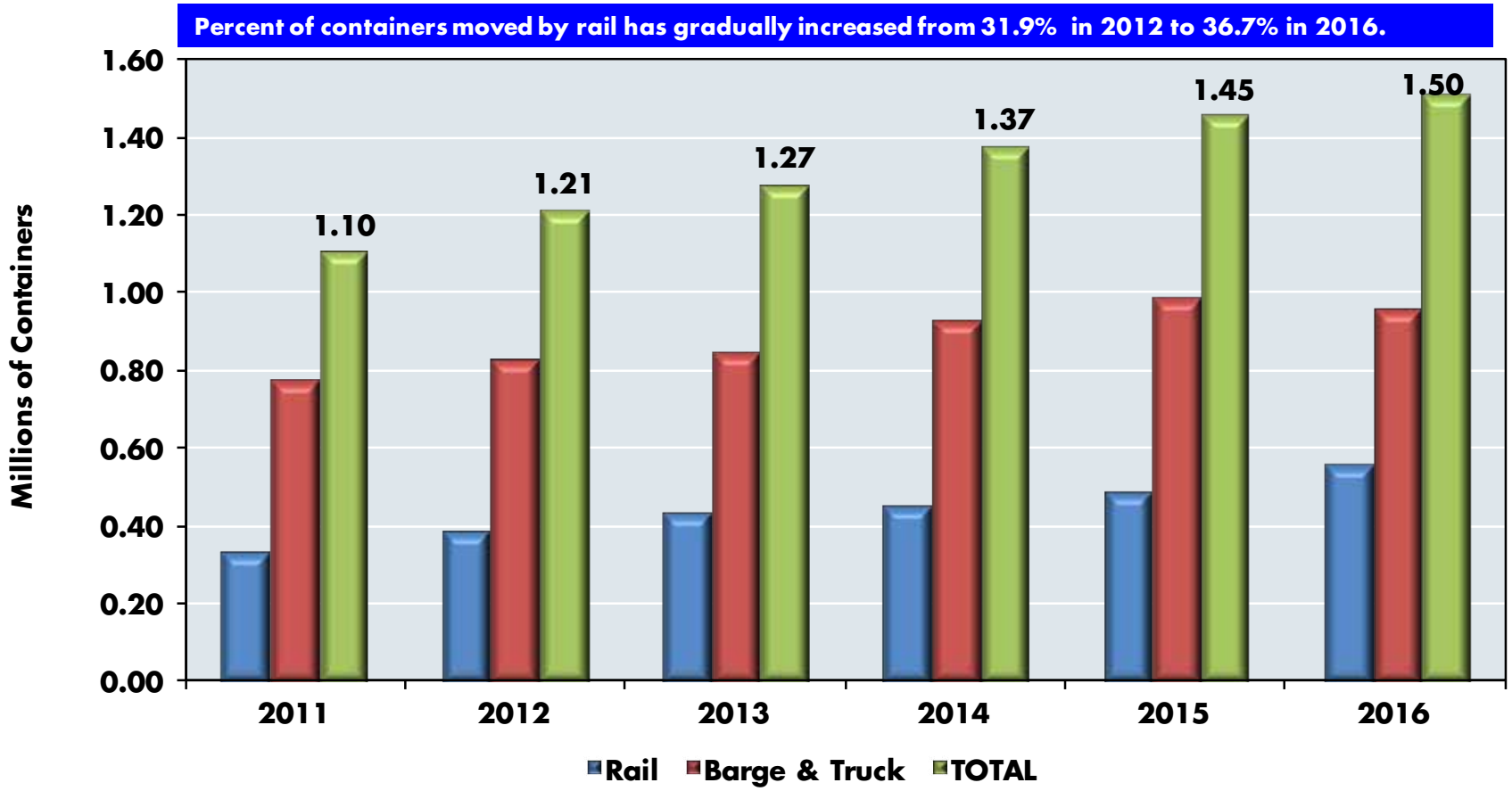
EAST COAST PORT MARKET SHARES OF LOADED TEU CONTAINERS, 2006-2017



Sources: American Association of Port Authorities and the Old Dominion University Economic Forecasting Project. Market shares exclude TEUs for Philadelphia, Miami, Palm Beach and Port Everglades. *2017 data are through April 2017.

GRAPH 20

MOVEMENT OF CONTAINERS AT THE PORT OF VIRGINIA BY TYPE OF TRANSPORTATION, 2011-2016



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

The Hotel Industry

Three factors punished the hotel industry in Hampton Roads between 2008 and 2012. First, hotel patronage is sensitive to the general state of the economy and declined with the downturn in economic activity. Second, the number of hotel rooms demanded is visibly affected by the willingness of governmental units to pay for travel and, simply put, they stopped paying for as many employee trips. Third, both public and private bodies increasingly have been utilizing technology such as Skype to substitute electronic connections for in-person meetings.

The confluence of these three factors can be seen in operation in Graph 21. Real, after-inflation hotel revenues fell in Hampton Roads by $58.77 million between 2007 and 2013 (17.2 percent). The industry has recovered admirably since then, but in 2016, real revenues still trailed their previous high in 2007 by more than $7 million. Further, the sudden emergence of firms like Airbnb as a competing factor could dampen further revenue increases.

Another factor affecting the hotel scene has been the shrinking supply of hotel rooms in our region since 2010 (see Graph 22). To generate additional revenue from a smaller cohort of rooms, hotels must charge higher prices. By and large, the regional lodging industry recently has been able to push its prices upward, but further action in this regard is likely to be disciplined by new rivals such as Airbnb.

The emerging prosperity of the hotel industry has not been shared equally across Hampton Roads. One can see in Graph 23 that since the turn of the century, relative to other cities, Virginia Beach and Chesapeake/Suffolk have gained market share, while Williamsburg (the Historic Triangle) has lost significant market share. The good news for Williamsburg is that the long-term decline may have halted.

Perhaps the single most informative indicator of the health of hotels and motels is revenue earned per available room (REVPAR) because it incorporates both supply and demand influences. Table 5 reports REVPAR in several important regional markets, as well as for Virginia and the United States, in 2007 and 2016. REVPAR in several of these markets (adjusted for inflation) remained lower in 2016 than it was in 2007. Virginia Beach and Williamsburg are exceptions. This could be construed as good news for Williamsburg because it is earning more "real" REVPAR on its reduced patronage. As Graph 24 reveals, Williamsburg's rising real REVPAR is the result of this submarket supplying fewer hotel rooms (down 16.3 percent since 2001) rather than a significant change in the number of rooms occupied (down, but only 1.3 percent since 2009). Supply and demand is in much closer balance in the Williamsburg submarket currently than it has been for many years.

Graph 25 focuses on the Chesapeake/Suffolk hotel submarket, which has gone through some particularly challenging times, primarily because hoteliers overbuilt capacity from 2004 through 2009. Only now is the demand for rooms in this submarket rebounding (43.8 percent since 2008) to utilize what otherwise have been large numbers of empty rooms. It will take several more years, however, before this adjustment is complete.

TABLE 5

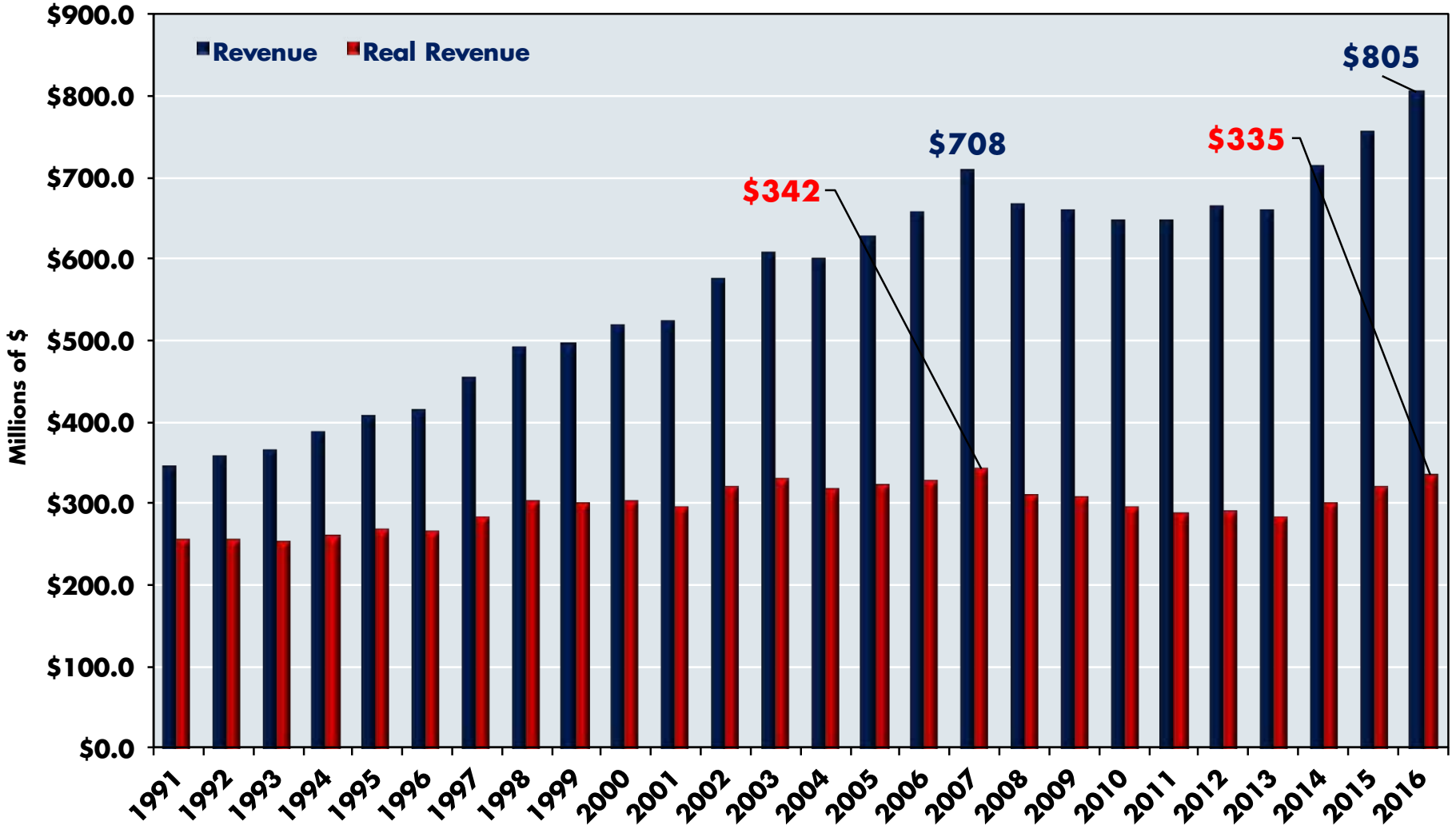
REVPAR IN SELECTED HOTEL MARKETS, 2007 AND 2016

	2007	2016	Percent Change	Real Percent Change
U.S.	$65.55	$81.19	23.9%	7.0%
Virginia	$61.91	$68.04	9.9%	-5.1%
Hampton Roads	$52.93	$59.46	12.3%	-3.0%
Virginia Beach	$64.62	$79.36	22.8%	6.1%
Williamsburg	$47.47	$56.35	18.7%	2.6%
Newport News/ Hampton	$41.49	$43.47	4.8%	-9.5%
Norfolk/ Portsmouth	$54.05	$54.68	1.2%	-12.6%
Chesapeake/ Suffolk	$52.90	$49.93	-5.6%	-18.5%

Sources: STR Trend Report, Jan. 24, 2017, the Old Dominion University Economic Forecasting Project and the Bureau of Labor Statistics

GRAPH 21

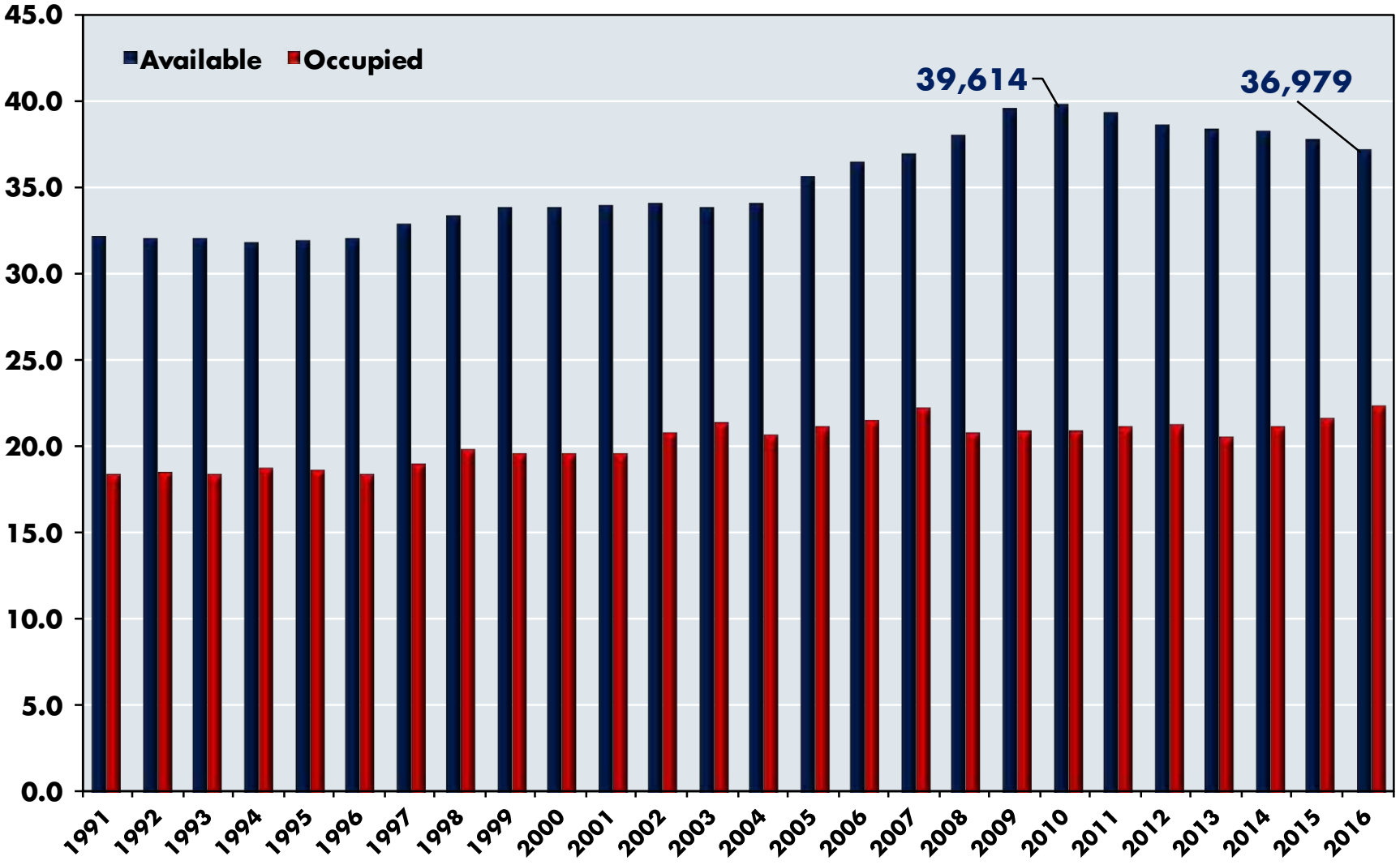
MONEY AND REAL HOTEL REVENUE IN HAMPTON ROADS, 1991-2016



Sources: STR Trend Report, Jan. 24, 2017, and the Old Dominion University Economic Forecasting Project

GRAPH 22

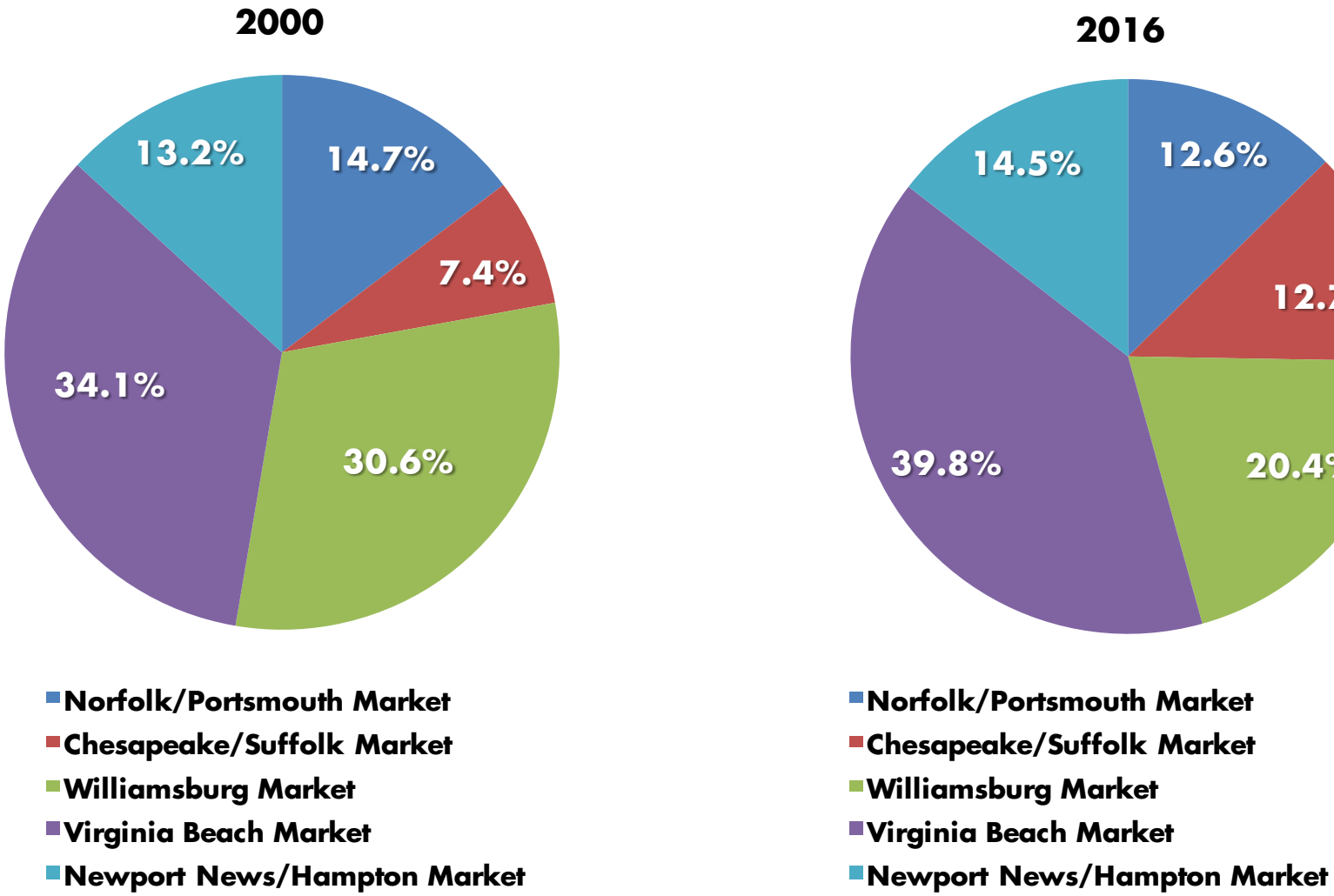
AVERAGE AVAILABLE ROOMS AND AVERAGE ROOMS OCCUPIED: HAMPTON ROADS, 1991-2016



Sources: STR Trend Report, Jan. 24, 2017, and the Old Dominion University Economic Forecasting Project

GRAPH 23

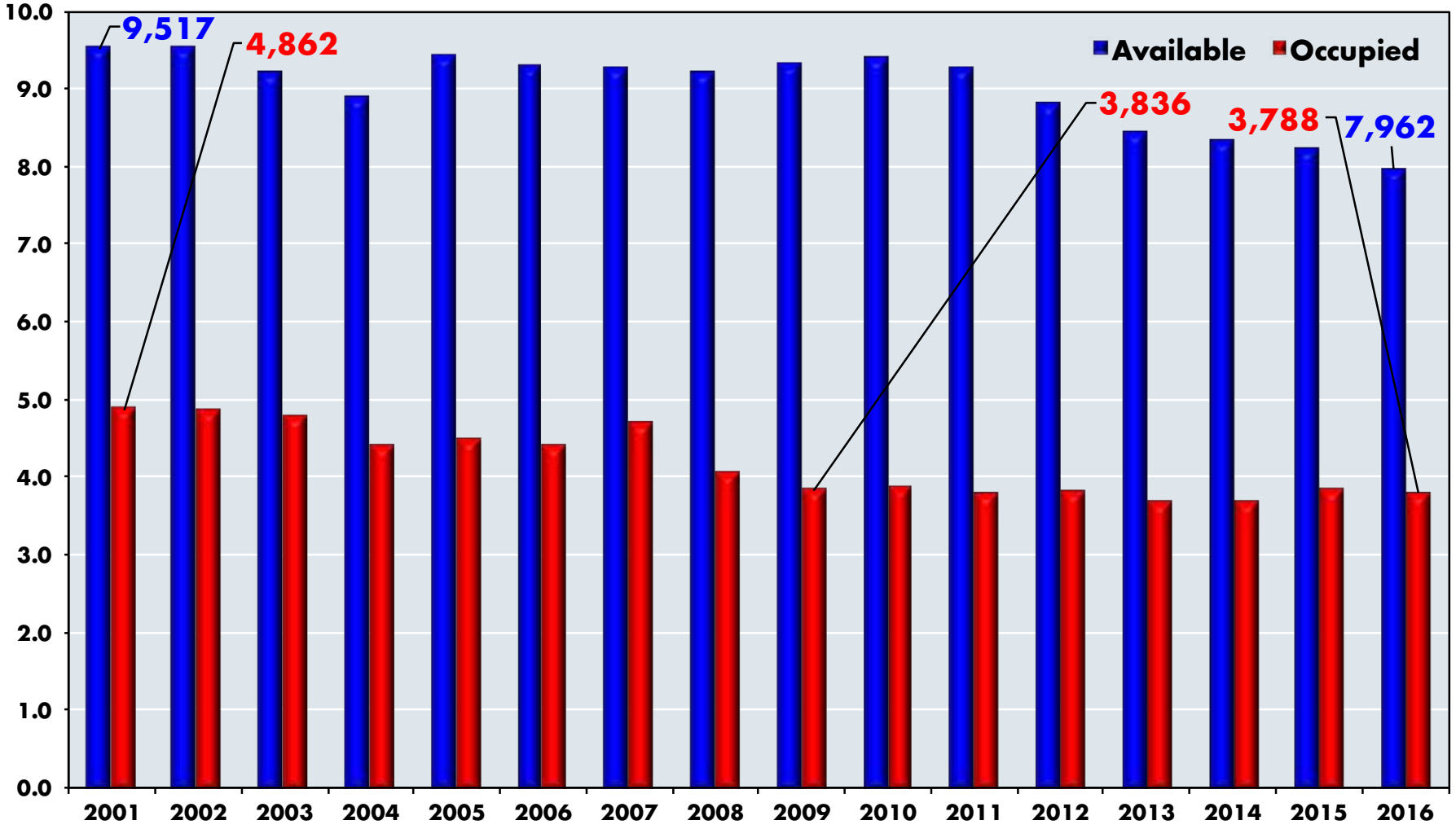
ESTIMATED HOTEL INDUSTRY MARKET SHARES IN HAMPTON ROADS (MEASURED BY HOTEL ROOM REVENUE, 2000 AND 2016)



Sources: STR Trend Report, Jan. 24, 2017, and the Old Dominion University Economic Forecasting Project

GRAPH 24

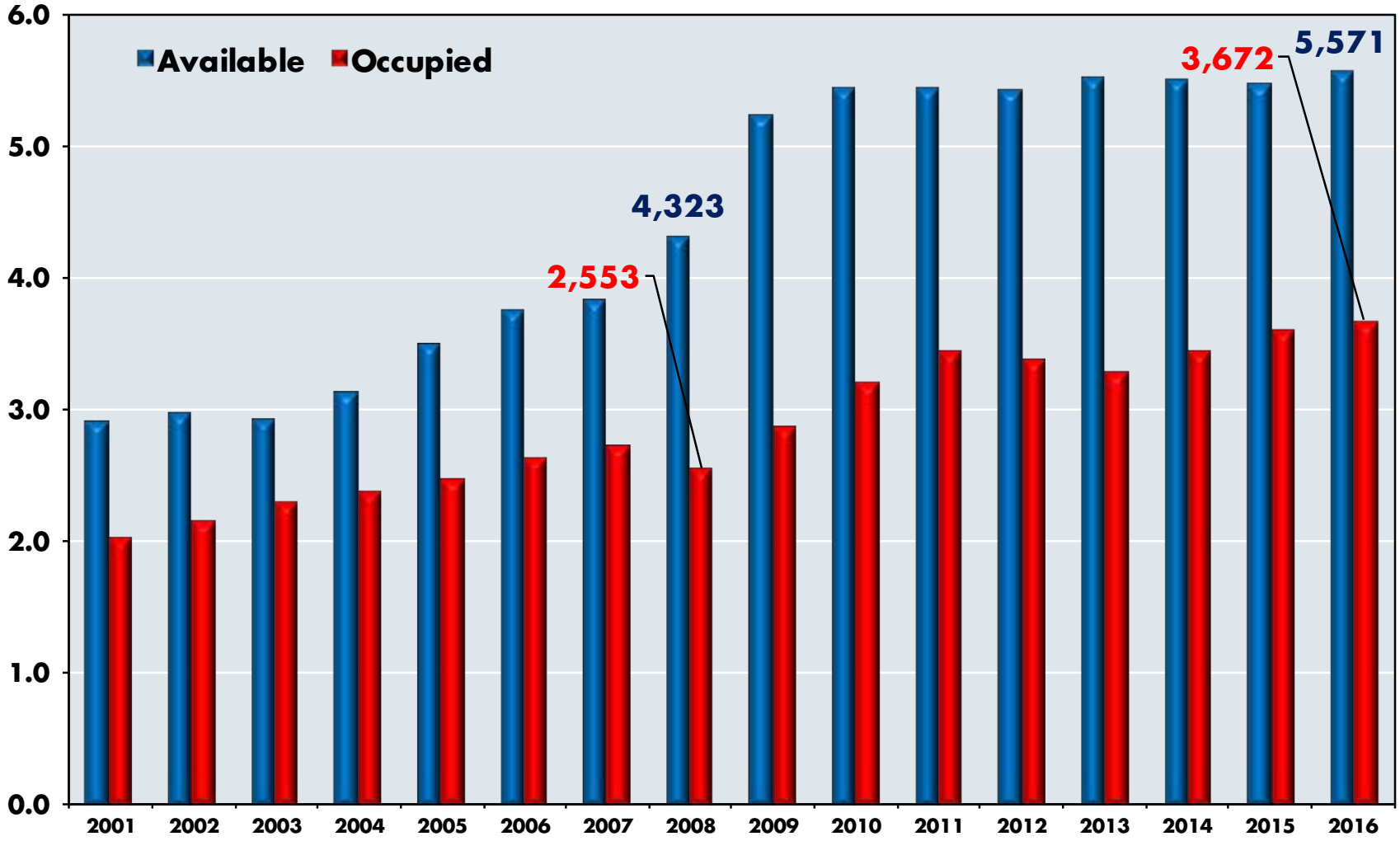
AVERAGE SUPPLY OF HOTEL ROOMS AND AVERAGE NUMBER OF ROOMS OCCUPIED: WILLIAMSBURG SUBMARKET, 2001-2016



Sources: STR Trend Report, Jan. 25, 2017, and the Center for Economic Analysis and Policy at Old Dominion University

GRAPH 25

AVERAGE SUPPLY OF HOTEL ROOMS AND AVERAGE NUMBER OF ROOMS OCCUPIED: CHESAPEAKE/SUFFOLK SUBMARKET, 2001-2016



Sources: STR Trend Report, Jan. 25, 2017, and the Center for Economic Analysis and Policy at Old Dominion University

Housing

If one focuses on indicators such as the number of sales, sales prices and inventories, then the Hampton Roads housing market is exhibiting visible signs of recovery from the dual impact of the Great Recession and federal government spending sequestration. Even so, it is fair to note that our recovery typically has not been as robust as that experienced in the rest of the country.

SALES PRICES OF EXISTING HOMES

Let's begin our analysis by looking at sales prices, which have increased moderately every year since 2011 (see Table 6). **Nevertheless, by the first quarter of 2017, our region's median sales price for existing single-family homes still was 13 percent below the peak observed in the third quarter of 2007.** At the end of the day, home purchases are tightly tied to jobs and the mediocre job creation of our region in recent years has put a serious damper on the demand for homes.

MORE HOMES ARE BEING SOLD – AND MORE QUICKLY

Nevertheless, more homes are being sold and newly listed homes do not remain on the market as long as in past years (see Graph 26). Additionally, the average number of months a newly listed home remains on the market before being sold has declined to 4.77, well below our long-term average of 5.64 (Graph 27). No one close to the housing market, however, is mistaking our current situation for the "go-go" real estate boom of 2004 to 2006.

TABLE 6

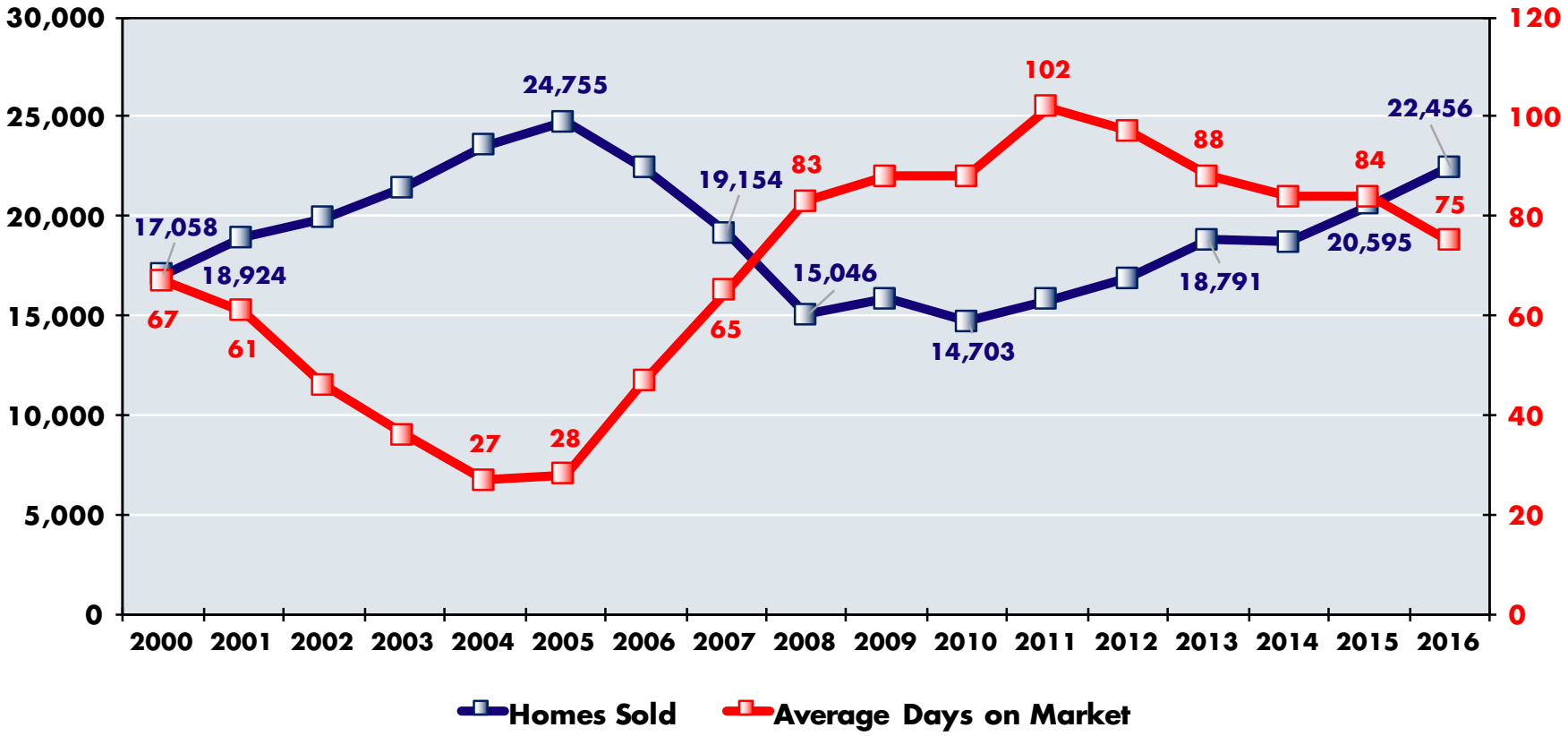
MEDIAN SALES PRICE OF EXISTING RESIDENTIAL HOMES: HAMPTON ROADS, 2002-2016

Year	Median Sales Price	Percent Change Year to Year
2002	$116,900	7.3%
2003	$130,000	11.2%
2004	$156,500	20.4%
2005	$192,000	22.7%
2006	$214,900	11.9%
2007	$223,000	3.8%
2008	$219,000	-1.8%
2009	$207,000	-5.5%
2010	$203,900	-1.5%
2011	$180,000	-11.7%
2012	$185,000	2.8%
2013	$190,000	2.7%
2014	$193,205	1.7%
2015	$203,000	5.1%
2016	$210,000	3.4%

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project (information deemed reliable but not guaranteed)

GRAPH 26

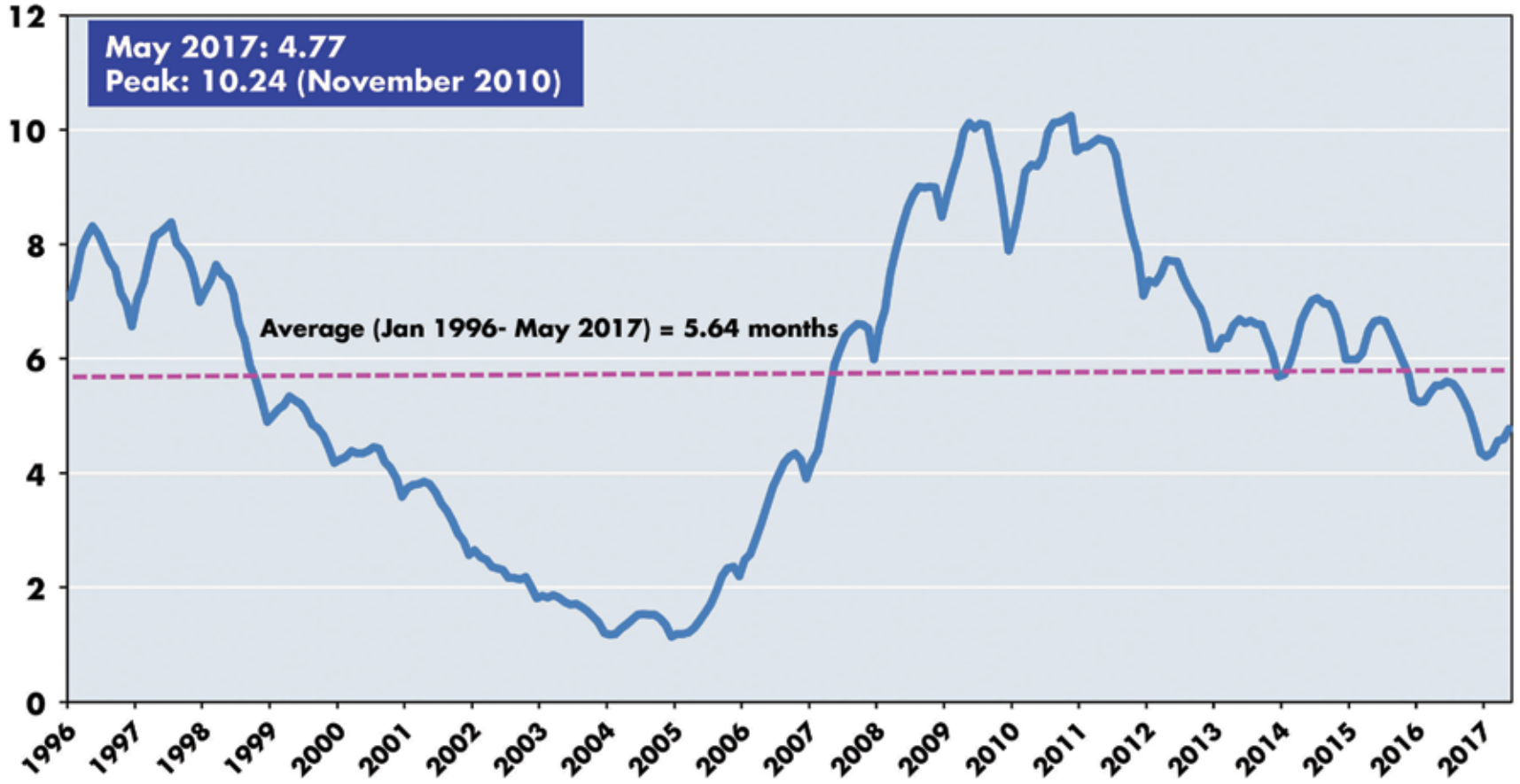
EXISTING RESIDENTIAL HOMES SOLD AND AVERAGE NUMBER OF DAYS ON THE MARKET: HAMPTON ROADS, 2000-2016



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project (information deemed reliable but not guaranteed)

GRAPH 27

ESTIMATED MONTHS OF SUPPLY OF EXISTING HOMES: HAMPTON ROADS, JANUARY 1996 – MAY 2017



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project (information deemed reliable but not guaranteed)

THE ISSUE OF DISTRESSED HOMES

Lurking in the housing market background is the continuing presence of a significant number of bank-owned and short sale homes, which often are labeled "distressed" homes. These are homes that financial institutions have foreclosed upon, or where for a variety of reasons owners have had to sell their properties under distressed circumstances. Not infrequently, the unhappy homeowners found themselves "underwater" – that is, they owed more on their mortgages than their properties were worth. The relevant point is that when these properties are placed on the market, they tend to depress housing prices, both because their sellers are anxious to get rid of them and some of these homes are not in tip-top shape.

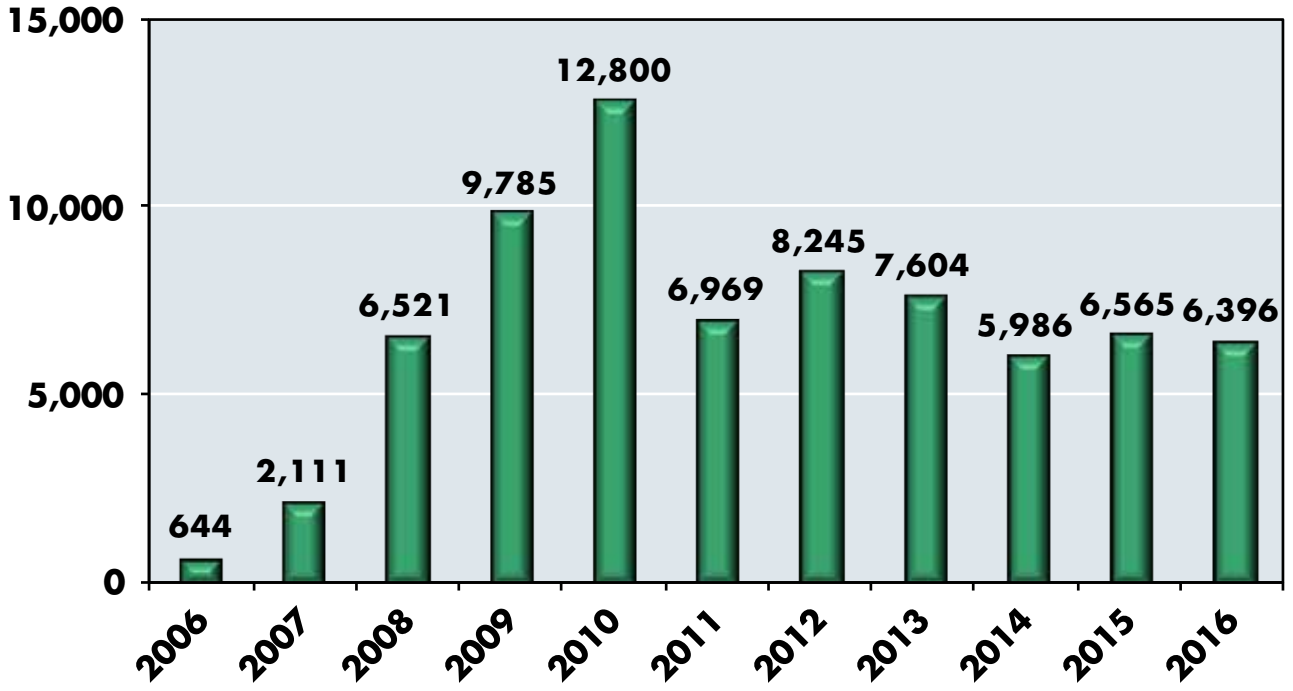
The good news is that the number of housing foreclosures in Hampton Roads has declined significantly (see Graph 28) and that the total number of distressed homes listed for sale also has fallen noticeably (Graph 29). What is unknown, however, is how much "hidden" inventory of these "distressed" homes banks, financial institutions and individuals still are holding that they have not fed into the market because of the still modest recovery in housing prices.

What we can say with confidence, however, is that when distressed homes are sold, their sales prices are well below those of other homes. Hence, they constitute a visible drag on the housing market and are an important reason why housing prices have not recovered more energetically. Table 7 provides some detail. In 2016, the average sales price of a bank-owned home was only 51.5 percent of non-distressed home sales prices, while the average sales price of a short sale home was only 67.3 percent of non-distressed home prices.

GRAPH 28

HAMPTON ROADS RESIDENTIAL FORECLOSURE FILINGS, 2006-2016

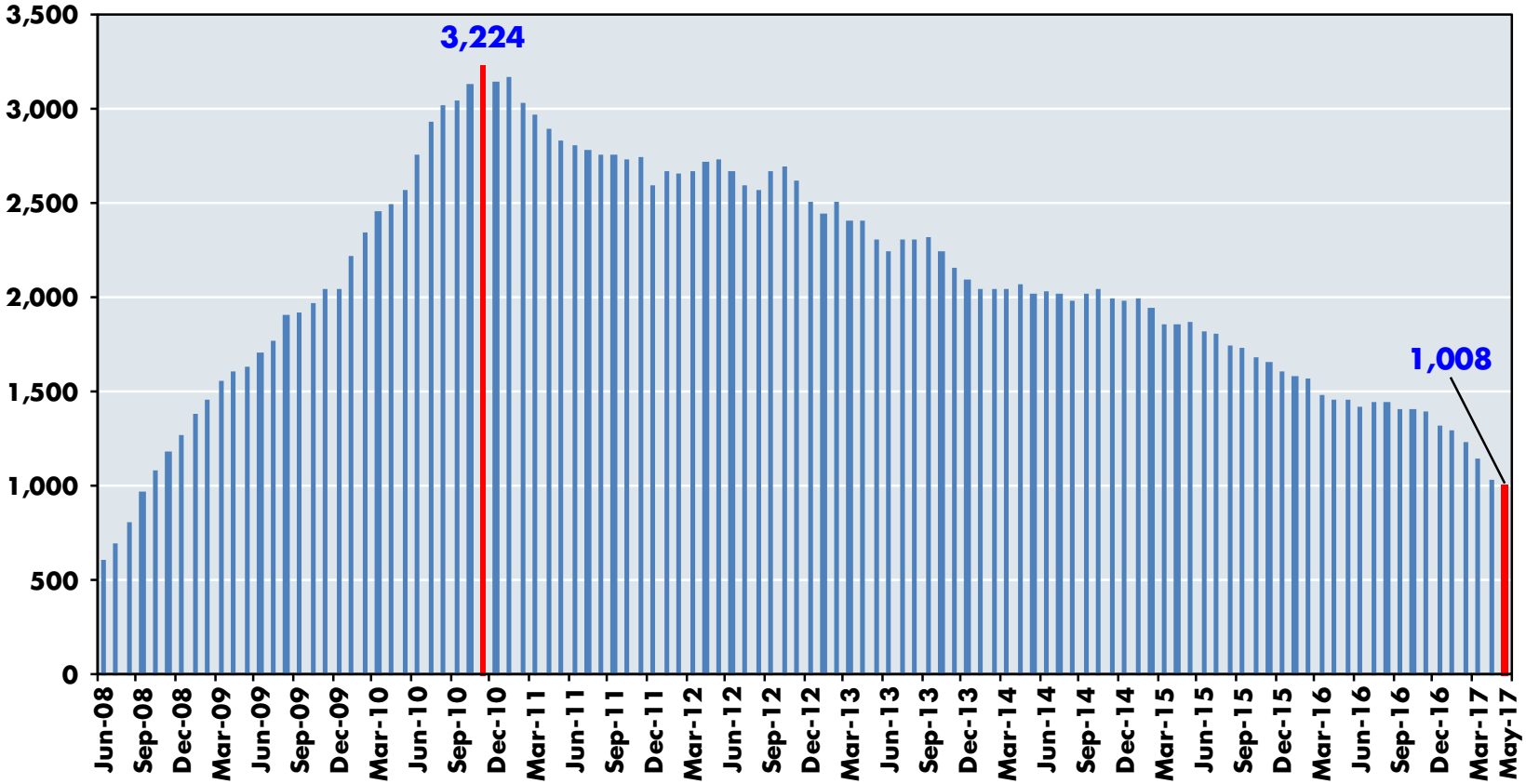
Foreclosure filings in Hampton Roads decreased by 2.6% in 2016, compared to an increase of 5.9 % for the Commonwealth. Filings in Hampton Roads in 2016 were 50% below their peak in 2010.



Sources: ATTOM Data Solutions, formerly known as RealtyTrac, and the Old Dominion University Economic Forecasting Project

GRAPH 29

TOTAL NUMBER OF DISTRESSED HOMES (BANK-OWNED AND SHORT SALE) ON THE MARKET: HAMPTON ROADS, JUNE 2008 - MAY 2017



Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project

TABLE 7

AVERAGE PRICE OF EXISTING NON-DISTRESSED, SHORT SALE, AND REO RESIDENTIAL HOMES SOLD IN HAMPTON ROADS, 2006-2016

Year	Non-Distressed Sales	Short Sales	Short Sales Price % Non-Distressed Price	REO Sales	REO Price % Non-Distressed Sales
2006	$250,254	$241,666	96.6	$120,817	48.3
2007	$261,723	$237,897	90.9	$163,421	62.4
2008	$255,852	$239,110	93.5	$184,462	72.1
2009	$243,902	$239,913	98.4	$164,229	67.3
2010	$251,572	$231,211	91.9	$151,612	60.3
2011	$236,358	$212,967	90.1	$135,304	57.3
2012	$237,215	$187,527	79.1	$134,535	56.7
2013	$245,344	$180,001	73.4	$131,644	53.7
2014	$244,940	$171,745	70.1	$128,242	52.4
2015	$251,941	$174,577	69.3	$130,959	52.0
2016	$254,815	$171,432	67.3	$131,143	51.5

Sources: Real Estate Information Network and the Old Dominion University Economic Forecasting Project (information deemed reliable but not guaranteed). REOs represent bank-owned homes.

IS PURCHASING A HOME A GOOD DEAL?

The answer to this question is yes. If a prospective buyer does not intend to move immediately and can obtain a conventional mortgage at currently offered terms and rates, then owning a home typically makes more financial sense than renting. Let's look at the mathematics that leads to this conclusion.

Table 8 compares the cost of owning to the cost of renting a three-bedroom home in Hampton Roads, and Graph 30 compares Hampton Roads to the United States in this regard. We include as ownership cost the monthly principal, interest and taxes paid for the median-priced three-bedroom and compare this total to the cost of renting the same. The ratio of ownership costs to rental costs is recorded in the last column of Table 8. One can see that the 2016 ratio was 1.38, indicating that renting was approximately 38 percent more expensive than owning. While this ratio is not quite as high as it was in 2013, it still represents a historically favorable circumstance for owning rather than renting.

Of course, the fact that owning is superior to renting does not matter if one cannot afford to purchase a home. The further good news is that existing homes in Hampton Roads have been quite affordable, at least since 2013. The monthly principal/interest/taxes payment for the median-priced existing home in Hampton Roads has constituted less than 20 percent of median household income in our region for several years and is now much more affordable than a decade ago during the housing boom. The continuing availability of relatively low mortgage interest rates is an important contributing factor.

TABLE 8

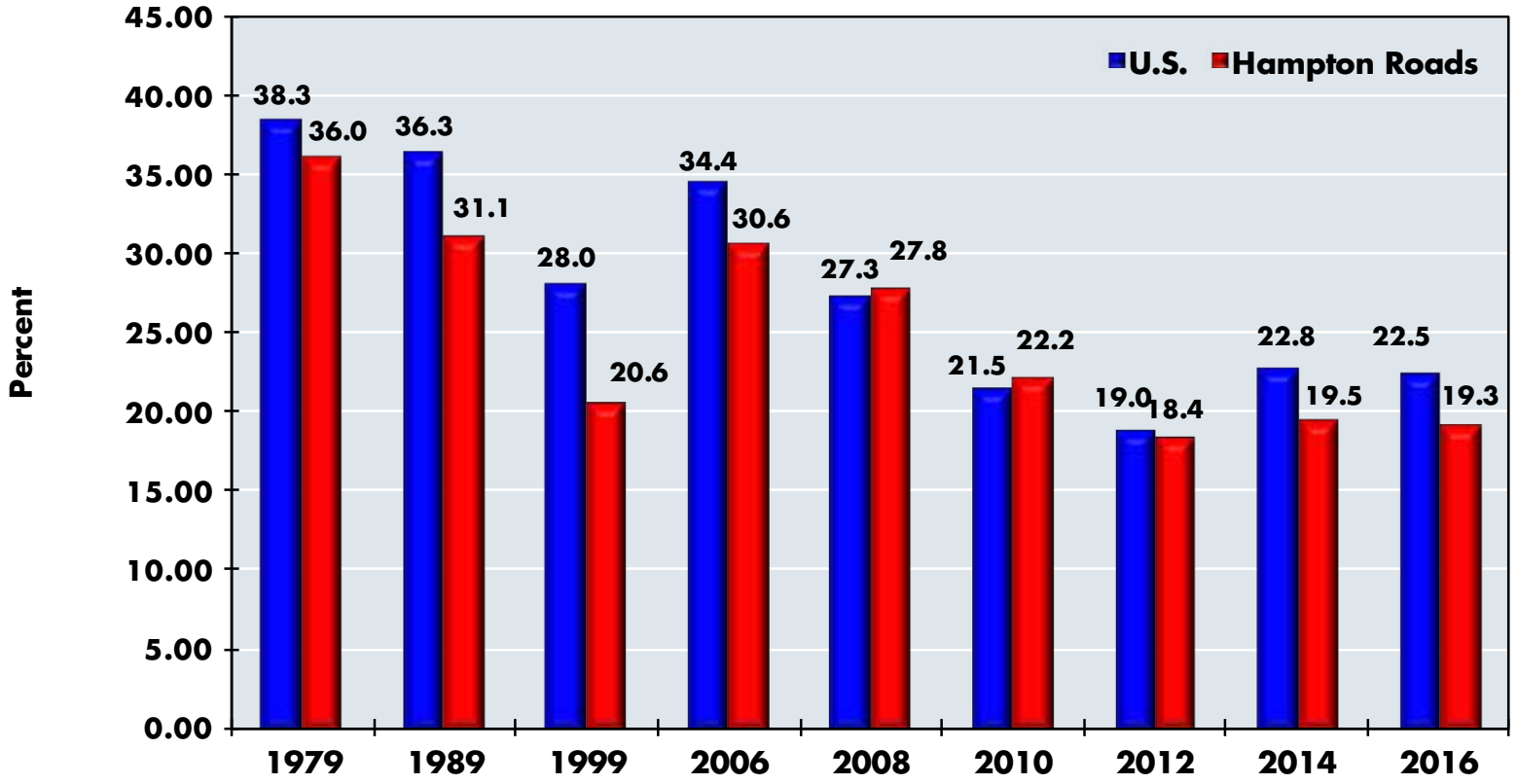
ESTIMATED HOUSE RENTAL AND PRINCIPAL, INTEREST AND TAXES FOR A HOUSE PAYMENT IN HAMPTON ROADS, 2002-2016

Year	Median Monthly Rent for a Three-Bedroom House	PI&T Monthly for a Median-Priced Existing House	Ratio of Monthly Rent to PI&T
2002	911	861	1.06
2003	1,037	890	1.16
2004	1,044	1,073	0.97
2005	1,087	1,315	0.83
2006	1,118	1,533	0.73
2007	1,164	1,598	0.73
2008	1,247	1,507	0.83
2009	1,236	1,307	0.95
2010	1,277	1,233	1.04
2011	1,319	1,071	1.23
2012	1,454	1,015	1.43
2013	1,570	1,080	1.45
2014	1,562	1,118	1.40
2015	1,530	1,154	1.33
2016	1,601	1,163	1.38

Sources: U.S. Department of Housing and Urban Development and the Old Dominion University Economic Forecasting Project
Notes: A real estate tax rate of 1 percent was assumed and also that the mortgage tax benefit received by homeowners compensates them for their insurance and maintenance expenditures. The prevailing 30-year average mortgage rate was used for each year.

GRAPH 30

HOUSING AFFORDABILITY: MONTHLY PAYMENT FOR A MEDIAN PRICE RESALE HOUSE AS A PERCENT OF MEDIAN HOUSEHOLD MONTHLY INCOME IN HAMPTON ROADS AND THE U.S., 1979-2016



Source: Old Dominion University Economic Forecasting Project. The prevailing 30-year average mortgage rate is used for each year. For example, the rate used for 2015 is 3.85 percent and for 2016 it is 3.65 percent.

Final Thoughts

Independent of defense spending, our regional economy is beginning to show signs of life. We have three major economic drivers in Hampton Roads – defense spending, tourism and the Port. Collectively, they account for about 55 percent of the value of our regional economic output annually. Two of these three (tourism and the Port) are expanding and the third (defense spending) might be on the cusp of an expansion as well, depending, of course, on congressional action.

Consequently, we forecast modestly increased economic growth for Hampton Roads in 2018 and 2019. Yes, we attach all the usual caveats to this forecast: Events ranging from trade wars and terrorism to hurricanes and a collapse of the stock market could derail our expectations. Nevertheless, for the first time in several years, our primary regional economic building blocks are starting to fall into place and better times appear to be on the horizon.