THE VIRGINIA ECONOMY STRUGGLES TO COPE WITH ECONOMIC HEADWINDS

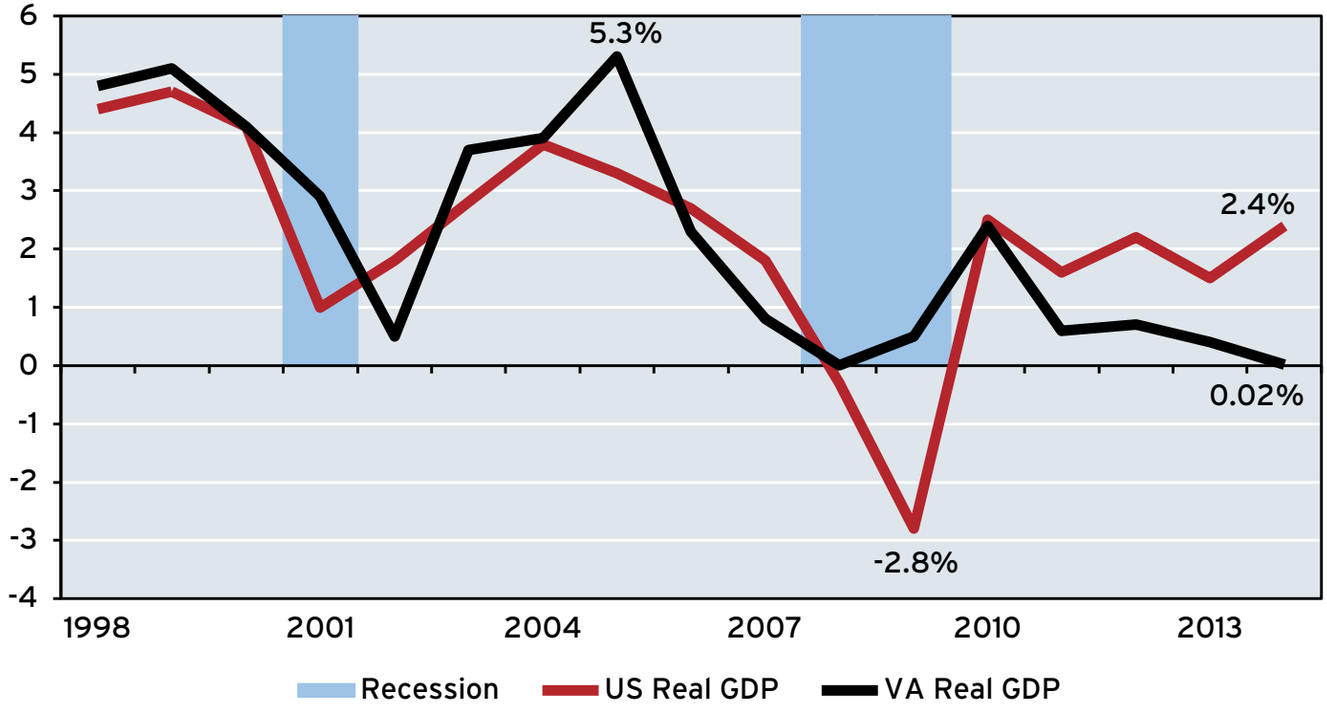
The end of the 2009 Great Recession brought with it significant optimism as well as economic recovery in Virginia. The Commonwealth's economy expanded in real terms at 2.4 percent in 2010, signaling what appeared to be a strong recovery. However, that optimism soon faded and Graph 1, which reports year-over-year real economic growth rates for gross domestic product (GDP) inside Virginia between 2002 and 2015, shows why.

The good news from Graph 1 is that the state's economy did not contract as much as the U.S. economy during 2009. The bad news is that since 2010, real GDP growth has been anemic in Virginia, with no year-over-year growth rate exceeding 1 percent. This trend continued into 2014. **The U.S. Department of Commerce's Bureau of Economic Analysis (BEA) estimate of 2014 real GDP growth for Virginia was a meager 0.02 percent, placing us a distant 48th among the 50 states. Our 2014 growth rate exceeded only the growth rates of Mississippi (-1.2 percent) and Alaska (-1.3 percent) – the only two states actually to experience contractions. Meanwhile, the nation's economy was growing at 2.4 percent.**

The GDP (gross domestic product) attributable to Virginia used to be labeled GSP – gross state product. The BEA now uses these two terms almost synonymously.

GRAPH 1

UNITED STATES AND VIRGINIA REAL GDP



Source: Bureau of Economic Analysis

Why Has Virginia Been Growing So Slowly?

One way to provide an answer to this question is to examine the industry sectors within the state's economy to see if they have either been growing or contracting. Graph 2 provides the industry contributions to the change in GDP between 2013 and 2014, the latest period for which we have data. The BEA numbers reveal that the construction sector easily experienced the largest slowdown between 2013 and 2014, contracting 5 percent. This alone shaved .19 percent from Virginia's 2014 GDP growth. Other sectors that exercised a significant drag on economic growth included professional and technical services (-0.10 percent), real estate, rental and leasing (-0.06 percent) and the government (-0.03). Taken together, these four large sectors reduced GDP growth by 0.38 percent.

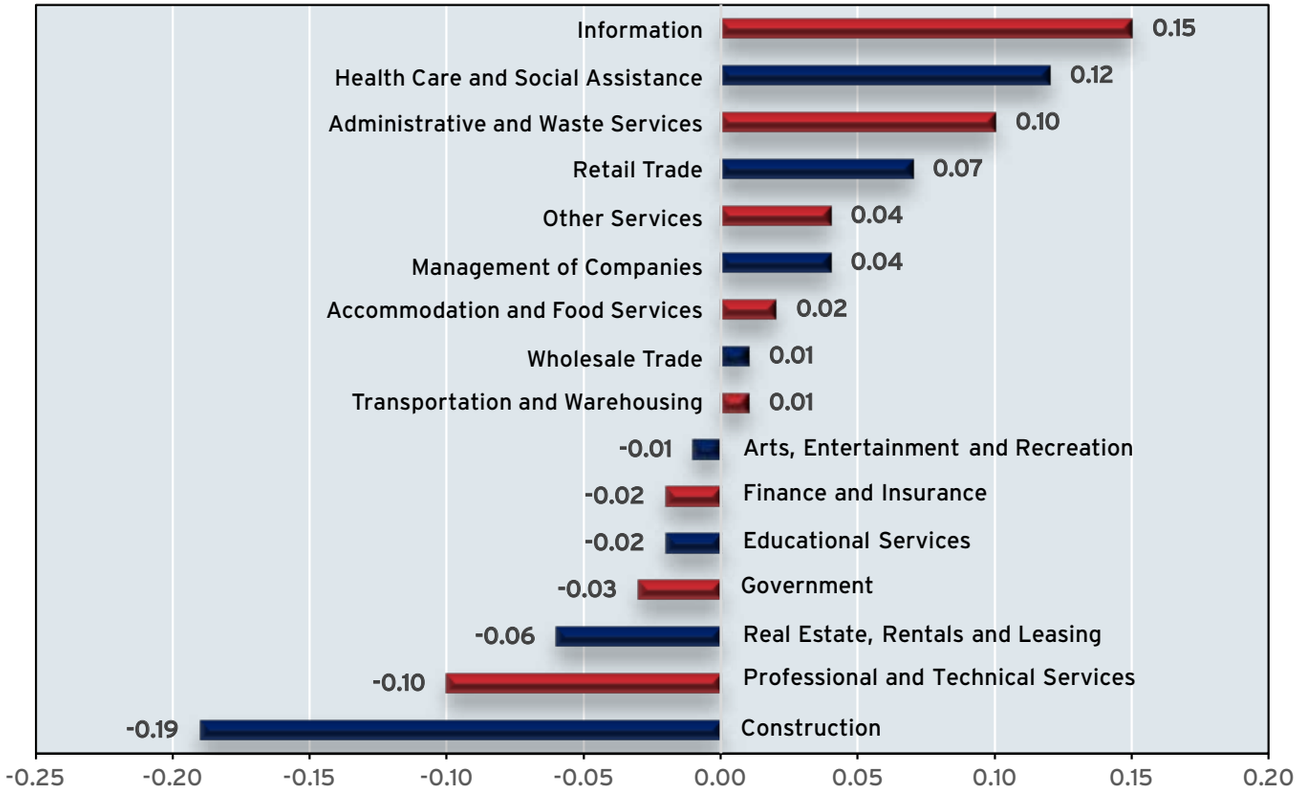
Nevertheless, several of Virginia's major industry sectors did expand at least modestly in 2014. Information, along with health care and social assistance, continued to be bright spots and together contributed 0.27 percent to GDP growth, thus extending the strong performance both have evidenced in recent years. Administrative and waste services (0.10) and retail trade (0.07) also provided positive contributions to growth in 2014.

Note that government (local, state and federal) was not a major source of GDP weakness in the Commonwealth over the past year, accounting for only a -.03 percent decline. This better-than-expected performance reflects in part the "deal" that Congress made to diminish the impact of budget sequestration in the federal government's 2014 and 2015 fiscal years. This made a significant difference. In 2014, with sequestration in full force, Virginia's GDP grew by a very modest 0.02 percent, but government-sector contraction reduced that growth by 0.28 percent.

However, in 2014, thanks to sequestration budget relief approved by Congress, the government sector's drag on economic growth declined to only -.03 percent. Since the state's overall GDP grew only .02 percent, this underlines that the contributions of both the government and private sectors in 2014 to Virginia's economic growth were rather close to zero. **Simply put, neither the public nor the private sector exhibited much economic thrust in Virginia in 2014.**

GRAPH 2

CONTRIBUTION TO VIRGINIA 2014 GDP GROWTH RATE BY MAJOR INDUSTRY SECTOR



Source: Bureau of Economic Analysis

Government Spending Often Drives Sector Declines

Much, though not all, of Virginia's lackadaisical economic performance in 2014 can be laid at the door of stagnant or declining federal spending. There's no way to avoid this conclusion: Federal spending is a big deal in Virginia. A 2014 study conducted by the Joint Legislative Audit Review Commission (JLARC) estimated that federal spending approached $136 billion in 2012 and that nearly half of all Virginians received a direct federal payment during that year – either through assistance programs, retirement benefits or federal employment.[1]

Defense spending in Virginia is a particularly important part of the federal government-spending picture where Virginia is concerned and will approximate $65 billion in 2015 (The Washington Post, Aug. 23, 2015). A 2013 Bloomberg study estimated that 13.9 percent of Virginia's GDP could be attributed to defense spending.[2] The relevant point is that fluctuations in federal spending in general and defense spending in particular have much to do with the expansion or contraction of major industry sectors in the Commonwealth's economy.

Let's take a look at one particular aspect of federal spending in Virginia – the awarding of federal contracts and related financial assistance. Table 1 reports the total financial awards made by the federal government and received by organizations located in the Commonwealth between FY 2010 and FY 2015 and also compares those awards to national trends. One can see that during this time period, not only did Virginia's awards decline (by 33 percent), but also that our share of total federal awards declined from 4.04 percent to 3.04 percent. Graph 3 illustrates these data for Virginia.

TABLE 1

FEDERAL AWARDS TO VIRGINIA AND THE UNITED STATES, FY 2010 TO FY 2015

	VIRGINIA	UNITED STATES	VIRGINIA SHARE
FY 2010	$100,360,955,880	$2,483,467,578,015	4.04%
FY 2011	$117,719,352,350	$3,291,133,474,231	3.58%
FY 2012	$114,727,180,194	$3,707,697,652,770	3.09%
FY 2013	$92,834,852,113	$2,917,384,826,071	3.18%
FY 2014	$91,792,683,992	$2,763,815,862,356	3.32%
FY 2015	$67,245,801,851	$2,214,678,966,201	3.04%
Change FY2010-FY2015	-33.0 percent	-10.8 percent	-1.00%

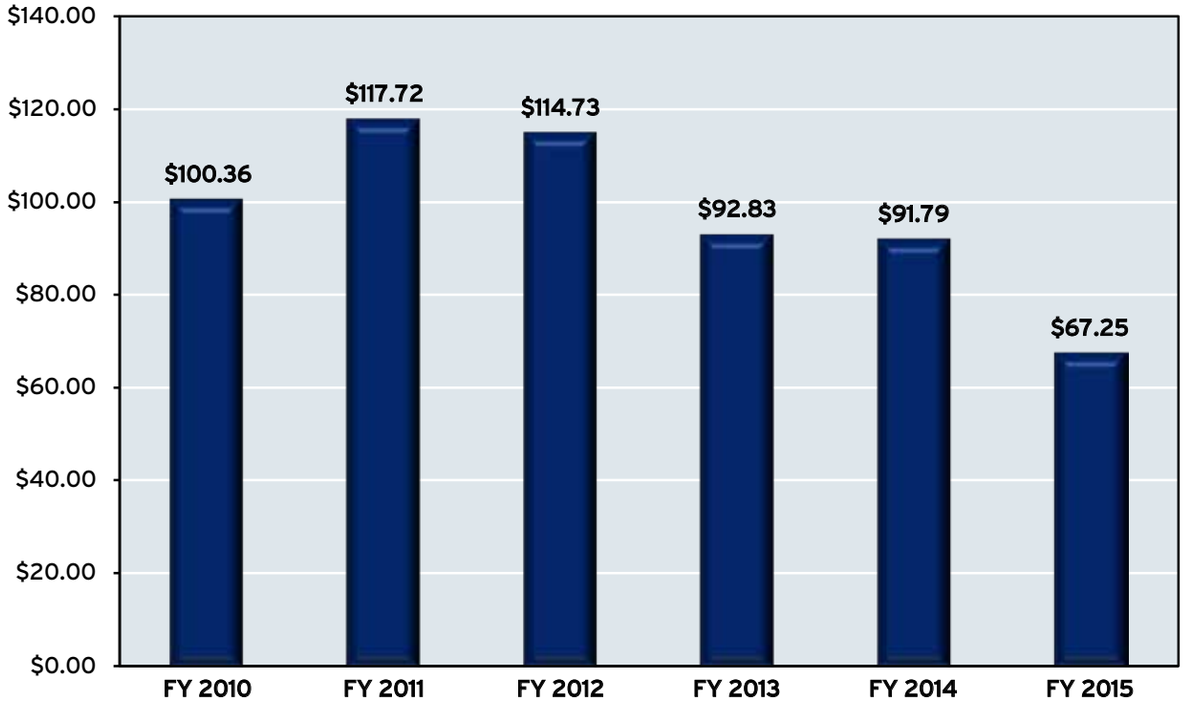
Source: www.usaspending.gov

1 *Size and Impact of Federal Spending in Virginia*, Joint Legislative Audit Review Commission, June 2014.

2 Robert Levinson et al., *Impact of Defense Spending: A State-by-State Analysis*, November 2011.

GRAPH 3

FEDERAL AWARDS TO VIRGINIA, FY 2010 TO FY 2015
(BILLIONS OF $)



Source: www.usaspending.gov

Federal Sequestration And Sequestration Relief

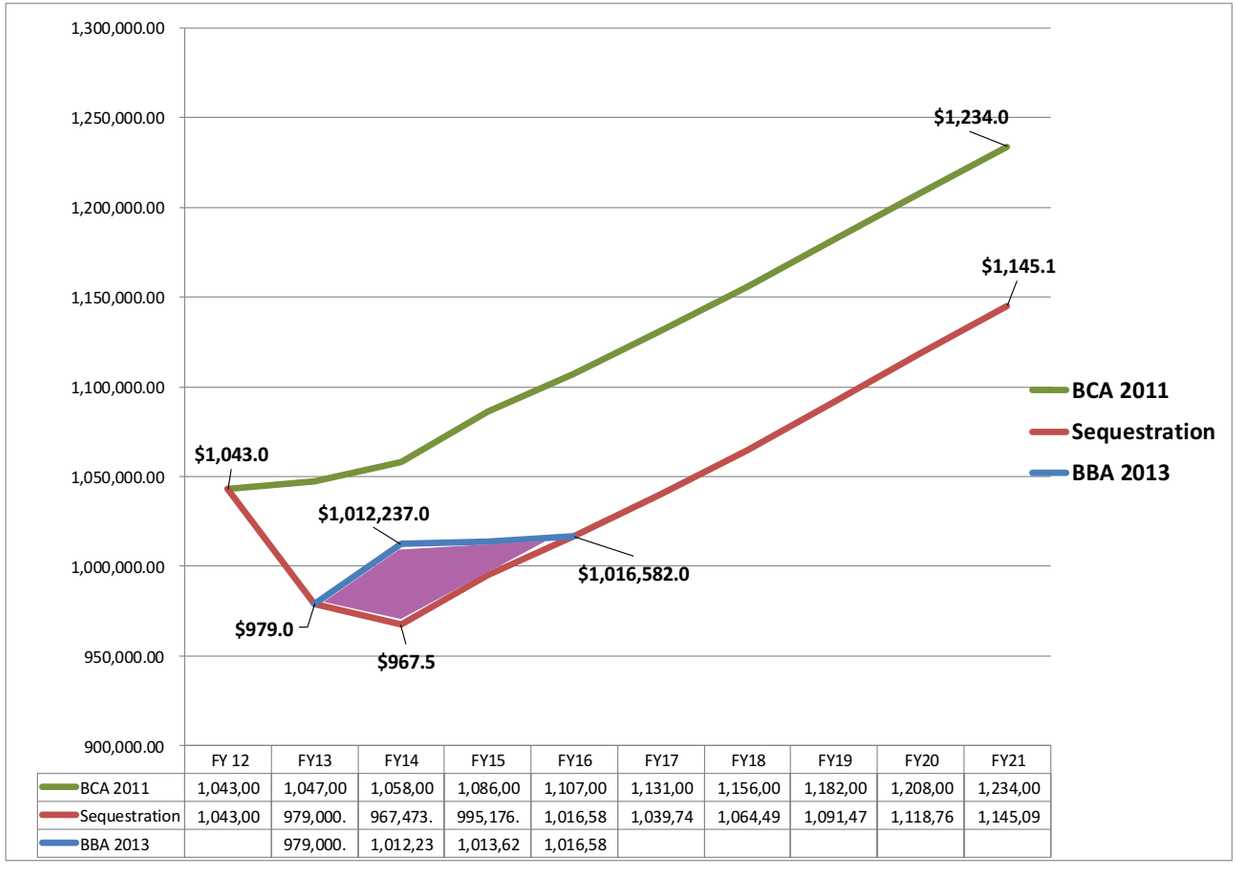
The Bipartisan Budget Act of 2013 (BBA) provided some financial relief from the sequestration cuts in the federal government's 2014 and 2015 fiscal years. However, even this medicine was insufficient to cure the patient named Virginia. Graph 4 provides an illustration of the impact of the BBA and related pieces of legislation through FY 2021. The green line in Graph 4 tells us what federal spending would have been if there had been no sequestration. The red line tells us what federal spending will be like with sequestration and without another spending agreement. The red line is a reality scenario and reflects what federal budgets will be from FY 2016 through FY 2021 if we revert to the full sequestration spending caps enunciated in the Budget Control Act of 2011. A renewal of something like the BBA would fill in some of the gap between the spending levels of BCA and the spending levels that will take effect if full sequestration caps are renewed. The area of the purple trapezoid in Graph 4 represents the increased spending (about $63 billion) that occurred in FY 2014 and FY 2015 because of the BBA. Roughly one-half of this amount ($32 billion) involved restoration of defense spending.

Sequestration relief has undeniable political dimensions. Republicans tend to favor relaxing spending caps with respect to defense expenditures, while Democrats tend to favor relaxing spending caps for nondefense items and social programs. If a solution is to emerge, then that agreement probably will involve a bit of both. The issue, a critical one for Virginia, was still unresolved by late October.

While the major financial pain experienced by Virginia due to sequestration was felt in 2013, 2014 and 2015, if there is no new sequestration relief, then defense spending in FY 2016 could be as much as $45 billion less than the amount budgeted under the BCA. Other nondefense federal spending would decline approximately an equivalent amount.

GRAPH 4

DISCRETIONARY FEDERAL SPENDING CAPS UNDER ALTERNATIVE LEGISLATION



	FY 12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21
BCA 2011	1,043,00	1,047,00	1,058,00	1,086,00	1,107,00	1,131,00	1,156,00	1,182,00	1,208,00	1,234,00
Sequestration	1,043,00	979,000.	967,473.	995,176.	1,016,58	1,039,74	1,064,49	1,091,47	1,118,76	1,145,09
BBA 2013		979,000.	1,012,23	1,013,62	1,016,58					

Sources: Old Dominion University Economic Forecasting Project and the Department of Defense

An Alternative (And Perhaps More Useful) Way To Assess The Virginia Economy

Reliance upon GDP estimates alone to evaluate the health of a state's economy is problematic because, unlike national GDP data which are issued quarterly, state data are reported with a significant lag – typically nine months in length. As a consequence, often we cannot definitively announce a turning point in Virginia's economic performance until six to nine months after that change actually has occurred.

Fortunately, there is available another set of reputable statewide economic data that is generated both on a monthly and quarterly basis for states. These data, which come from the Federal Reserve Bank of Philadelphia, provide a much more timely view of economic conditions. The "Philly Fed" produces both a *Coincident Economic Index* and a *Leading Economic Index* for all 50 states. The Coincident Index combines four important monthly measures of the economy into one index.[3] The Leading Index projects forward the growth of the Coincident Index over the succeeding six months.

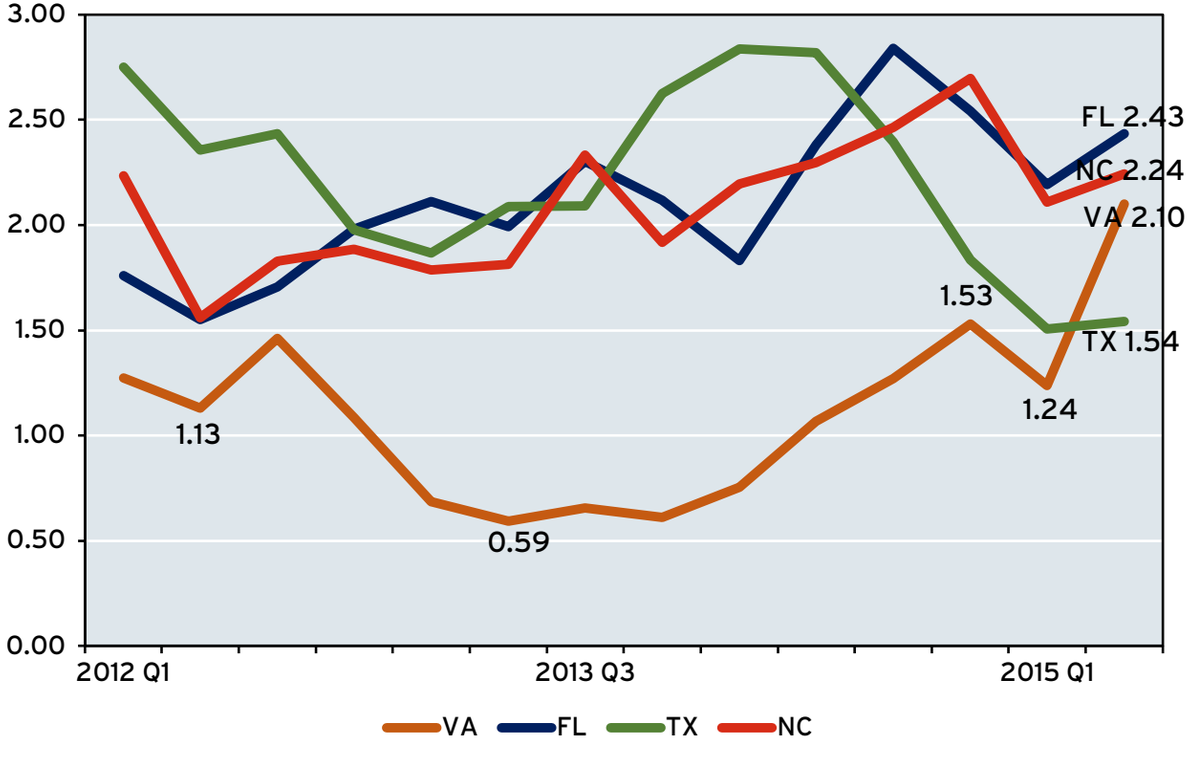
Let's focus on the Leading Economic Index because we are interested in what is going to happen with Virginia's economy in 2016. Graph 5 provides the Philly Fed's Leading Index for Virginia along with the same indices for Texas, Florida and North Carolina. These states were selected for comparison because each, like Virginia, is highly dependent on federal government spending. Indeed, Texas, Florida and North Carolina are ranked 2nd, 4th and 12th, respectively, in terms of the total number of dollars of federal spending they receive. Virginia ranks in the middle of this pack at 6th.

One can see in Graph 5 that the Philly Fed Leading Index captured Virginia's anemic real GDP growth in both 2013 and 2014. More substantively, however, the Leading Index provides us with considerable cause for optimism for 2016. Since the beginning of 2015, Virginia's Leading Index has shot upward from 1.24 to 2.10, even while an oil-dependent state such as Texas was experiencing a declining index value. Optimism with respect to the remainder of 2015 and 2016 therefore is in order. If – and this is a big if – Congress once again is able to craft meaningful sequestration spending relief, then 2016 could see expanding, robust economic conditions in the Commonwealth.

3 The index includes four measures of economic activity: nonfarm payroll employment, average hours worked in the manufacturing sector, the unemployment rate, and real wages and salaries.

GRAPH 5

PHILADELPHIA FEDERAL RESERVE LEADING INDEX OF ECONOMIC ACTIVITY: FLORIDA, NORTH CAROLINA, TEXAS, VIRGINIA, 2012-2015



Source: www.philadelphiafed.org/research-and-data/regional-economy/indexes/leading

Employment

In the eyes of many, jobs are the ultimate payoff insofar as economic activity is concerned. Graph 6 illustrates the pace of employment growth in both the United States and Virginia since 2008. **The Commonwealth reached a milestone of sorts in November 2014 when payroll employment finally surpassed the pre-recession peak level of 3,787,000. Alas, it took nearly 81 months after the start of the recession to re-establish this level of employment, providing a stark illustration of the sometimes job-less nature of our recent economic recovery.** By contrast, the nation had recovered all the jobs lost in the Great Recession already by April 2014.

While total employment in Virginia did snap back to its 2008 levels (3.78 million jobs) in November 2014, jubilation was short-lived because job losses in the first quarter of 2015 pushed the state back below that level. Fortunately, the Commonwealth's post-January 2015 payroll growth has been stronger and by August 2015, total employment in Virginia exceeded the 2008 peak level by nearly 1 percent, or approximately 30,000 jobs.

Job creation in the United States continues to be robust. In August 2015, national employment stood at about 3 percent, or 3.9 million higher than the previous peak level of employment in January 2008.

Payroll employment growth generally results in declining unemployment rates. Graph 7 presents unemployment rates for both Virginia and the United States. Virginia fared better than the nation insofar as unemployment rates were concerned during the recession. When the national unemployment rate topped out at 10 percent in October 2009, Virginia's rate was only 7.1 percent and our maximum unemployment rate of 7.4 percent was reached three months later in January 2010.

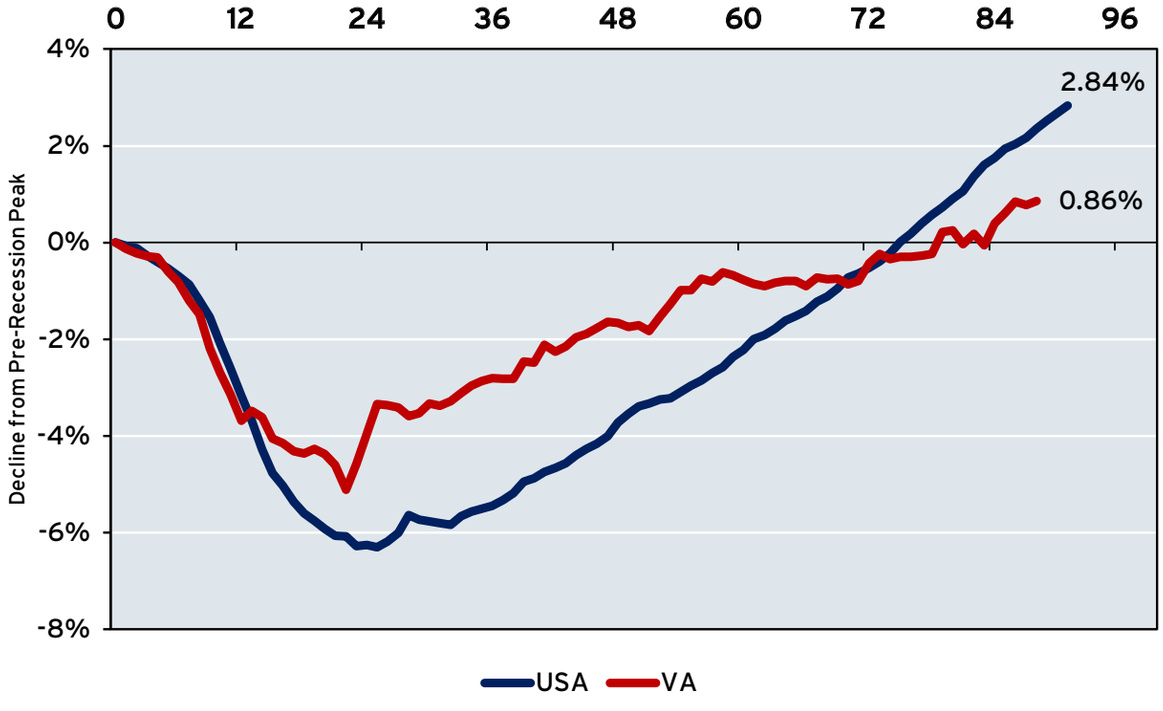
However, as we will discuss in greater detail, while unemployment rates provide us with broad information about the condition of the economy, they are calculated on the basis of who is actively looking for a job, but can't find one. If one isn't looking, one isn't counted as unemployed. Unfortunately, labor force participation both in the United States and Virginia has declined in recent years. As a consequence, it is possible for both the rate of unemployment and the number of jobs to decline at the same time.

Initial claims for unemployment compensation always have been regarded as a useful, forward-looking economic indicator because they often disclose trends. Those filing for unemployment compensation today not only will show up in unemployment statistics in the near future, but also their unemployment often portends lower expenditures and potential economic decline.

Graph 8 illustrates that initial claims for unemployment definitely have trended downward since the recession. On average, initial claims have fallen about 1,000 per month since 2010. The dotted line exhibits that trend. Note that these data are not seasonalized, so many of the sharp ups and downs in the initial claims line reflect normal calendar year variations, not long-term trends.

GRAPH 6

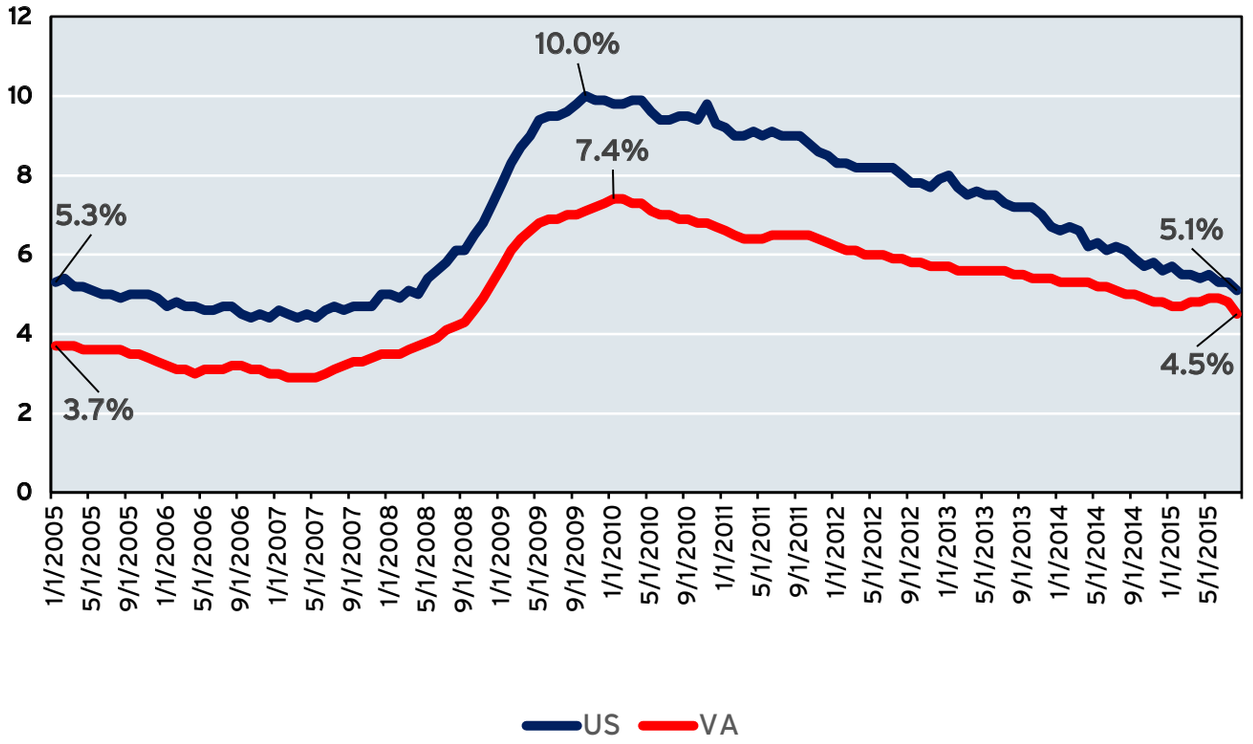
MONTHS REQUIRED TO RE-ESTABLISH PEAK EMPLOYMENT LEVELS



Sources: Bureau of Labor Statistics and the Bureau of Economic Analysis

GRAPH 7

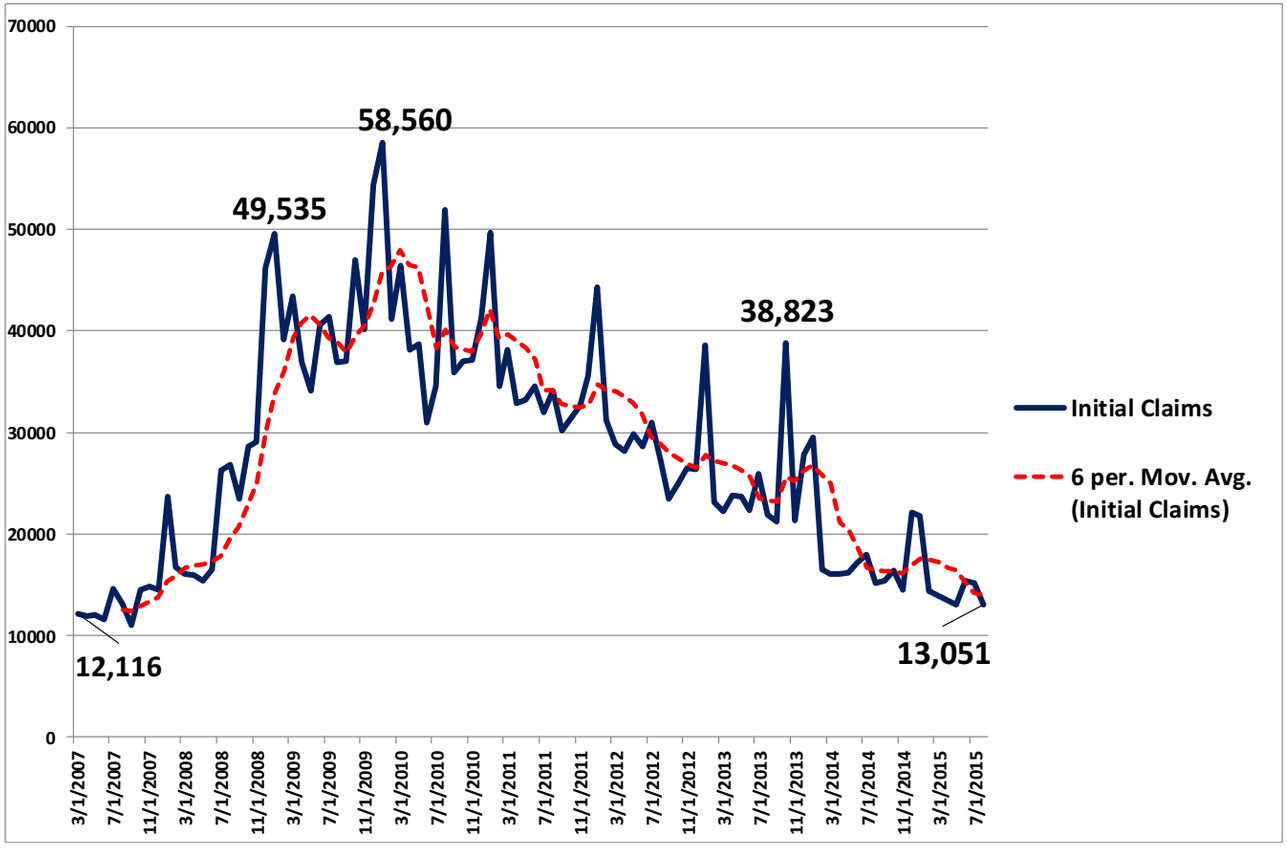
UNEMPLOYMENT RATES: UNITED STATES AND VIRGINIA



Source: Bureau of Labor Statistics

GRAPH 8

INITIAL UNEMPLOYMENT CLAIMS AND THEIR SIX-MONTH MOVING AVERAGE



Source: Bureau of Labor Statistics

The Port

While the Commonwealth's economy has not exhibited much energy in the past several years, one particular sector – international trade, as symbolized by the Port of Virginia – has reversed field and become an engine for economic growth. Perhaps the most important measure of Port activity is the number of ubiquitous TEUs (20-foot equivalent units) that the Port handles. These metal boxes often are 20 feet long and their most common height is 8 feet, 6 inches.[4] Their contents (technology equipment, food products, clothing, etc.) are the foundation stones of international trade.

One can see in Graph 9 that since July 2010, the number of TEUs handled by the Port of Virginia has increased by 59 percent. This is an impressive performance that not only reflects recession recovery, but also more efficient (and profitable) management of the flow of TEUs.

The Port of Virginia, which serves the entire Commonwealth (see Figure 1), currently enjoys a comparative advantage over most East Coast ports because it is a deep-draft port and therefore able to handle the very large, super ships that can carry 10,000 or more TEUs. This advantage will dissipate within several years as competitor ports such as New York/New Jersey re-engineer themselves so they can handle the largest ships. New York/New Jersey, for example, is spending $1.3 billion to raise the Bayonne Bridge about 65 feet so that it can accommodate the largest ships. The Port of Miami is investing more than $2 billion to improve its facilities.

If our Port wishes to maintain its current "large ship" advantage, then it must be dredged to 55 feet (from its current 50 feet). The largest ships that enter the Port of Virginia today already draft 48 feet. It must also find ways to handle these larger ships efficiently, not the least because it may take 24 hours or more to unload their cargo. Clearly, this cannot be accomplished by a single shift of workers, and the mere size of these ships often requires different equipment and trucking arrangements.

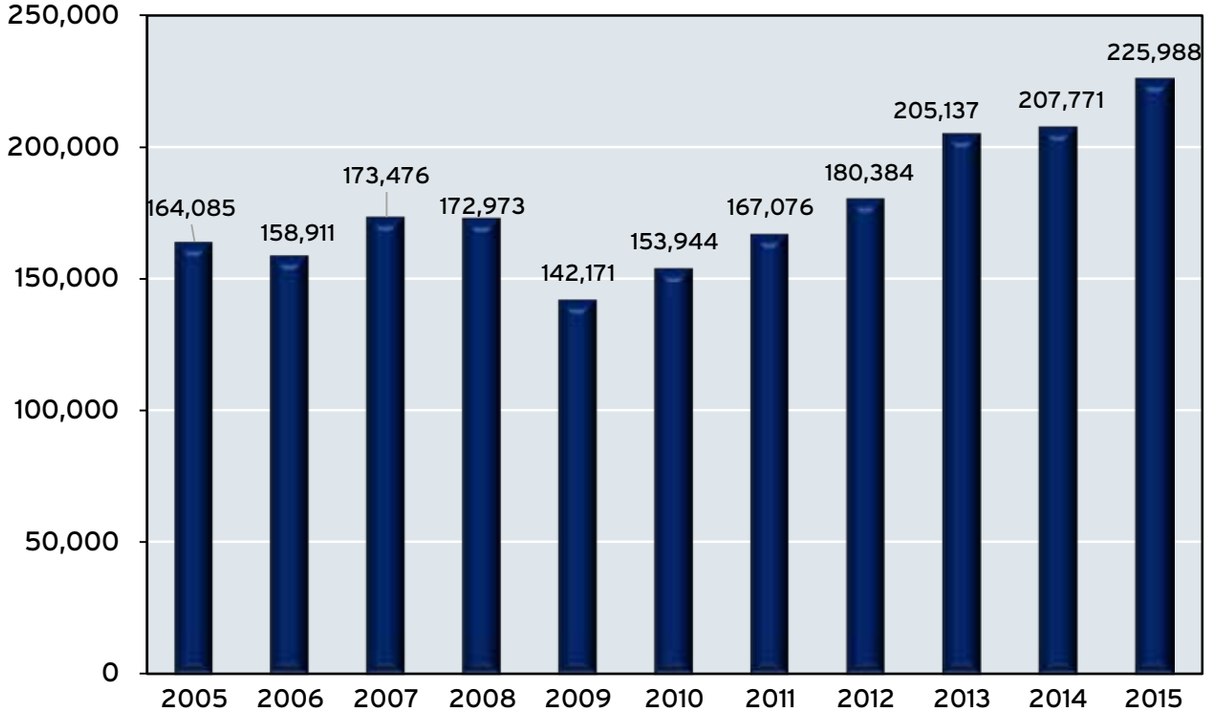
There are several potential wild cards to consider within this situation, however. The Panama Canal is being expanded and improved so that it will be able to handle larger ships, and the Port of Virginia could benefit from (or be passed over by) this development. The Suez Canal already has been widened and deepened and has become more attractive to ships that carry goods from Asia to East Coast ports. In addition, traffic in and out of the Port of Virginia also now must contend with tunnel tolls. The deal negotiated by the Commonwealth with Elizabeth River Crossings means that truck tolls could rise from $7.36 per truck, one-way, in 2016 to as high as $86.24 per truck, one-way, in 2070 if experience holds. It will not surprise the reader that this agreement has been unpopular with the citizenry of Hampton Roads and commercial truckers.

In 2011, APM Maersk ordered 20 super-sized ships, each of which will be able to carry more than 18,000 TEUs, and in June 2015 announced a $1.8 billion order for 11 new megaships that will handle more than 19,000 TEUs each (Costas Paris, The Wall Street Journal, June 5, 2015). As recently as 10 years ago, such huge ships were a pipe dream.

4 "Double" TEUs also exist and typically measure 45 feet in length. Such boxes usually are counted as 2.25 TEUs in the United States.

GRAPH 9

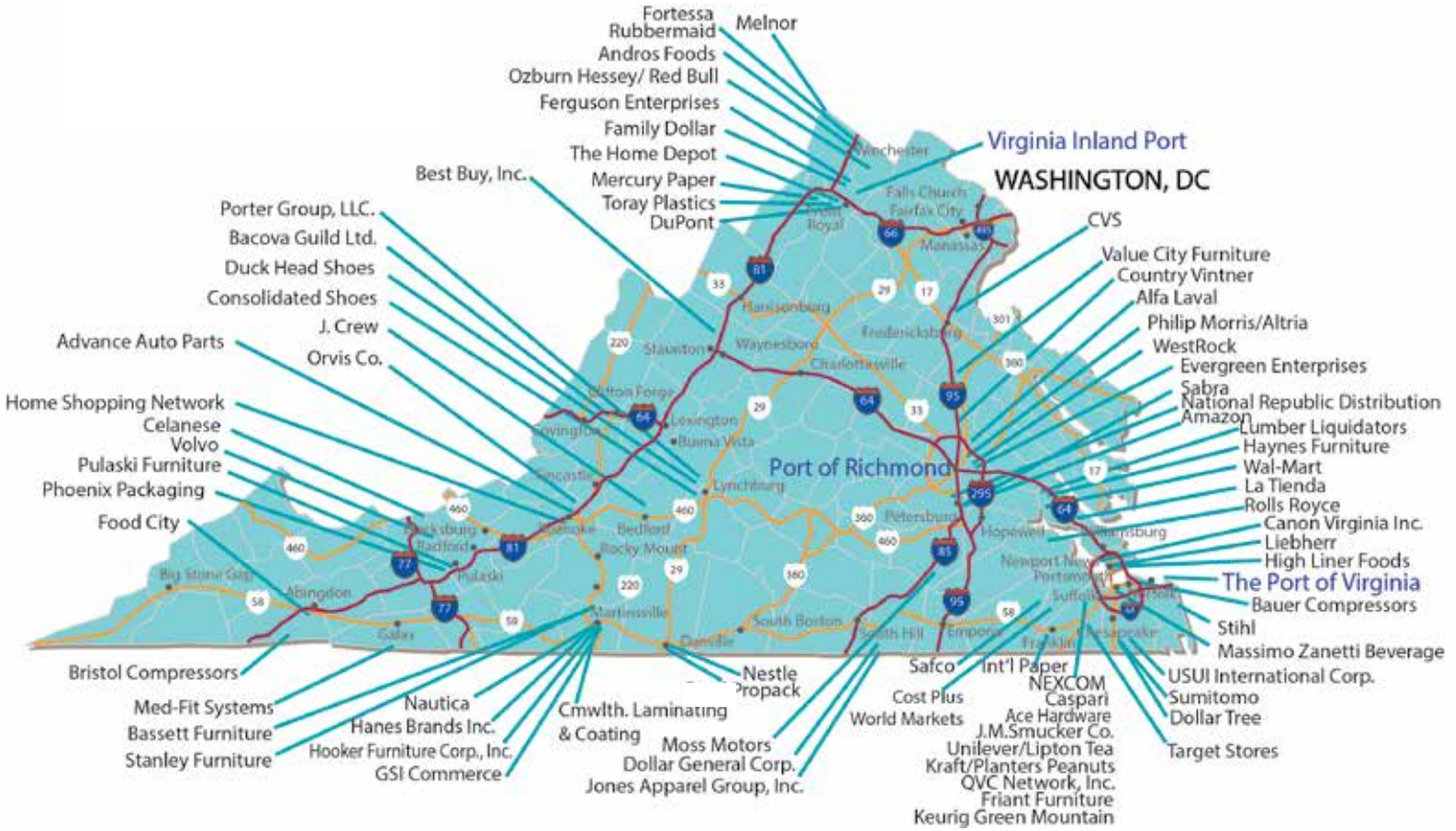
TWENTY-FOOT EQUIVALENT UNITS (TEUS) HANDLED BY THE PORT OF VIRGINIA, 2005-2015 (JULY OF EACH YEAR)



Source: Virginia Port Authority

FIGURE 1

VIRGINIA DISTRIBUTION FACILITIES CONNECTED TO THE PORT OF VIRGINIA



Source: Virginia Port Authority

Hotels And Tourism

The Commonwealth's "Virginia is for Lovers" website reports that in 2014, domestic travelers inside the state spent $22.4 billion on transportation, lodging, food, amusement and recreation – a 3.67 percent increase over 2013 and an 18.05 percent increase over 2010.[5] There is no doubt that tourism constitutes a major industry within Virginia and that several regions of our state depend on travelers and tourists for substantial income and employment.

The occupancy of hotels where tourists and travelers stay and the revenues earned by those hotels are important indicators of the health of the tourism industry. Consider Graph 10, which reports the revenues of Virginia hotels from 1996 to 2014. The 2008 recession took a huge bite out of hotel revenues, and even six years later those revenues were only 5.8 percent above their 2007 level. During this time period, the CPI-U, the consumer price index for all urban consumers, increased 8.8 percent. Hence, in real terms, hotel revenues in Virginia shrank between 2008 and 2014.

Graph 11 tells us that the hotel occupancy rate in Virginia was 59.7 percent in 2014; this was below the 61.8 percent occupancy rate in 2007 that existed prior to the recession. Note also in Graph 11 that the reduced occupancy rates were not the result of Virginia hoteliers building lots of new room capacity. The total number of hotel rooms available in Virginia in 2014 actually declined slightly between 2011 and 2014.

Within the hotel industry, REVPAR, the revenue earned by hotels per available room, often is considered to be the best indicator of overall industry health because it incorporates both supply and demand influences. Graph 12 divulges that REVPAR in 2014 still was 3.9 percent below its 2007 level. **When price inflation is taken into account, "real," price-adjusted hotel REVPAR in Virginia fell more than 12 percent between 2007 and 2014.** This demonstrates that Virginia's hotels (which are directly connected to the tourist industry) have yet to regain the financial ground they lost after 2008.

Reality is that some hotels in some locations in the Commonwealth are doing quite well, yet the overall economic picture for Virginia hotels has been mixed in recent years. It would be a mistake to lay the entire blame for this on the depth and length of the recent recession because there have been supply-side problems as well. Between 2007 and 2011, hotel capacity in Virginia (the number of available rooms) increased more than 10 percent (see Graph 11) even while the demand for hotel rooms was lethargic. It appears that the Commonwealth still is in the process of working off excess capacity in many hotel markets.

Conventions and meetings of all sorts are an important lifeblood for the tourist industry and hotels. Unfortunately, attendance at such events nationally has been stagnant or even declining since the turn of the century (well before the recession).[6] Declining federal budgets for travel (particularly for the Department of Defense) have put a dent in convention and meeting attendance in Virginia and "virtual" conventions and meetings held over the Internet are becoming increasingly popular. One doesn't need to leave town to have the opportunity to interact with others.

Tourism revenues, as calculated by the U.S. Travel Association for the Commonwealth, usually include all trips to places 50 miles or more away from the traveler's original destination, plus expenditures for lodging, campground stays, time shares, vacation rentals, food and recreation.[7] U.S. Travel relies upon a proprietary economic impact model in order to generate its estimates, a model that seeks to portray the significant impact of tourism on local economies. The U.S. Travel model generously estimates that more than $3 billion in tourism-related expenditures were made in Arlington County in 2014 (generating 24,700 jobs), followed closely by Fairfax County with $2.9 billion (29,000 associated jobs). "Touristy" Virginia Beach ranked only fourth in Virginia with an estimated $1.4 billion in expenditures and 12,600 jobs, according to U.S. Travel. Graph 13 provides U.S. Travel estimates of the growth in tourism expenditures in various parts of the Commonwealth between 2013 and 2014.

5 www.virginia.org/pressroom/tourism.asp.

6 See the work of Professor Heywood Sanders of the University of Texas at San Antonio, including his book, *Convention Center Follies: Politics, Power, and Public Investment in American Cities* (University of Pennsylvania Press, 2014). Attendance data from 2014 and 2015, however, indicate that this long-term trend may finally be reversing itself, albeit gently.

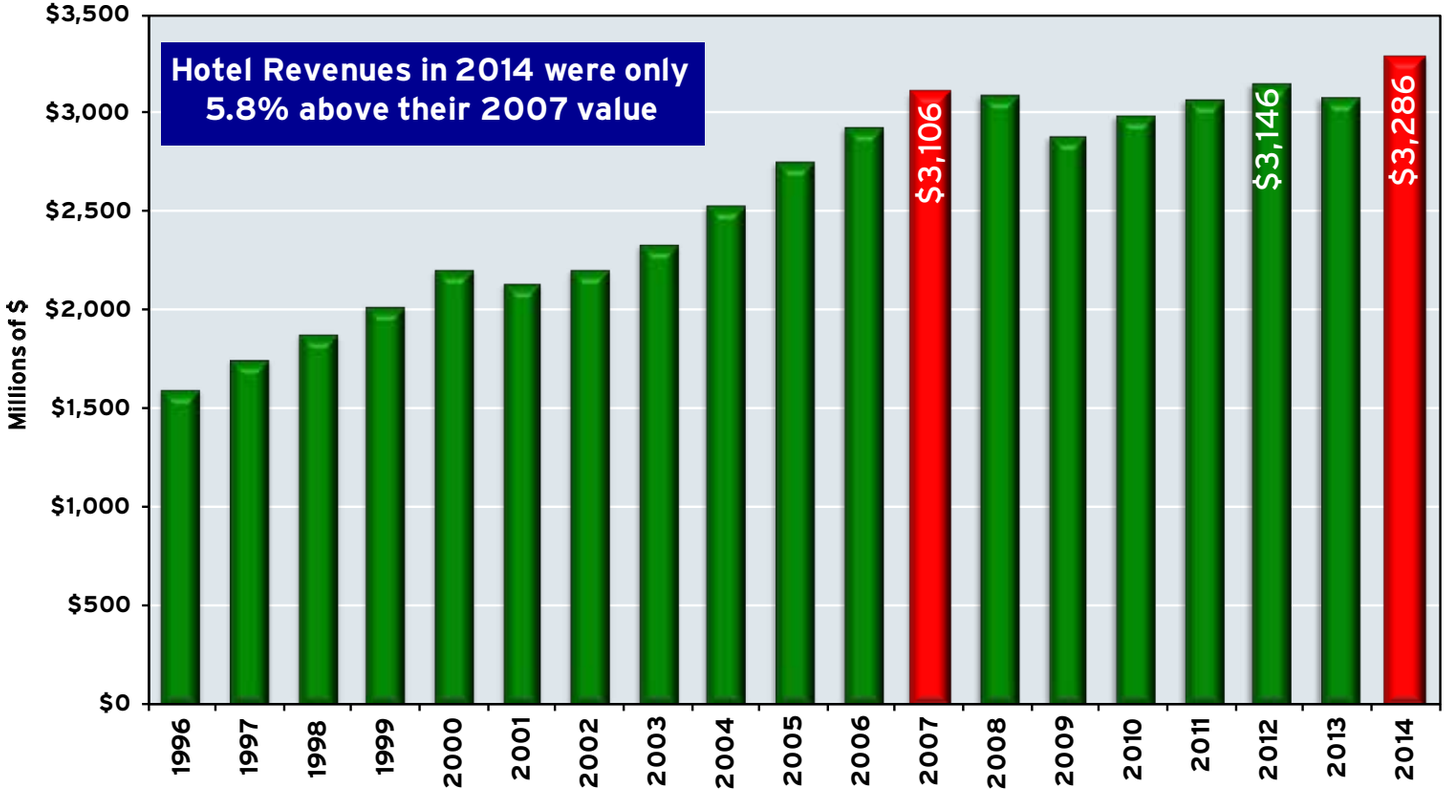
7 www.vatc.org/uploadedFiles/Research/2014EconomicImpactofDomesticTravelonVirginiaandLocalities.pdf.

U.S. Travel's estimates of tourism expenditure growth between 2013 and 2014 are encouraging, though perhaps generous. Other indicators of tourism activity, such as hotel occupancy and revenues, are not quite so promising. Major economic and social forces – including declining defense spending, increasing use of the Internet in lieu of travel to meetings, declining flights and traffic at many Virginia airports, and subpar economic growth rates in the Commonwealth – have altered the competitive landscape for tourism and hotels.

Against this, falling fuel prices and a recovering economy have made travel less expensive for many. Continuing national economic expansion also bodes well for tourism.

GRAPH 10

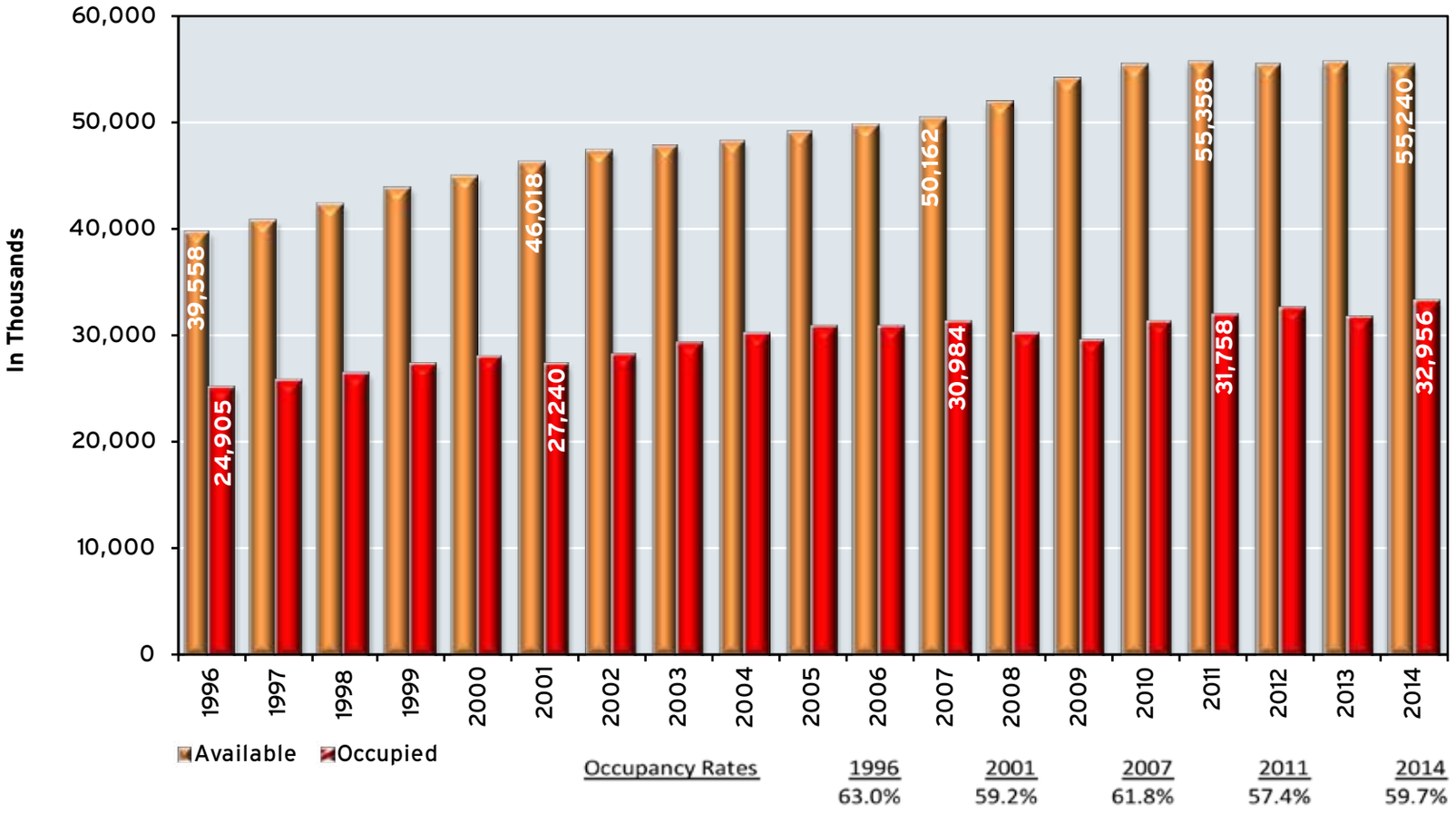
HOTEL REVENUES IN VIRGINIA, 1996-2014



Sources: Smith Travel Research Trend Report, Sept. 4, 2015, and the Old Dominion University Economic Forecasting Project

GRAPH 11

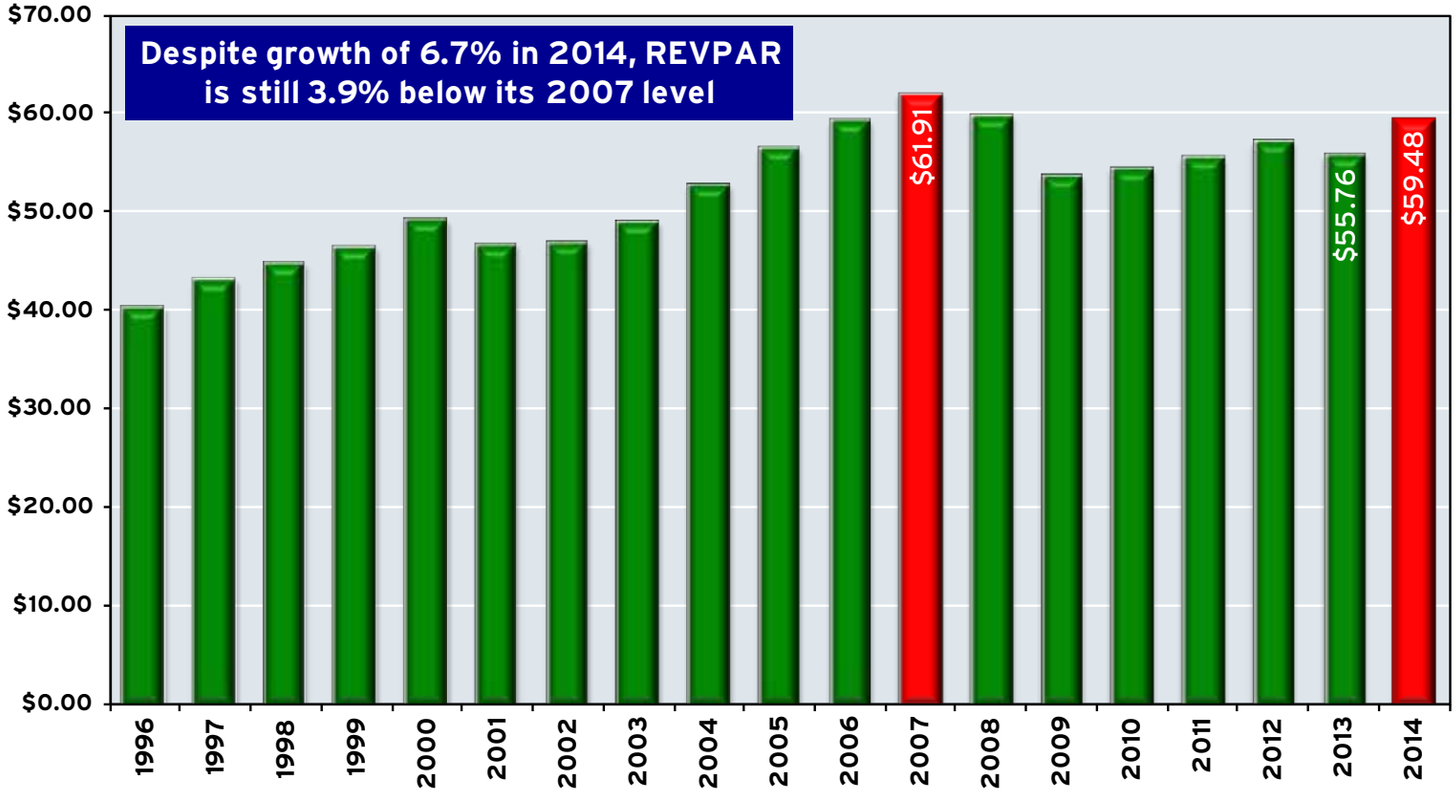
TOTAL HOTEL ROOMS AVAILABLE, ROOMS OCCUPIED AND HOTEL OCCUPANCY RATES IN VIRGINIA, 1996-2014



Sources: Smith Travel Research Trend Report, Sept. 4, 2015, and the Old Dominion University Economic Forecasting Project

GRAPH 12

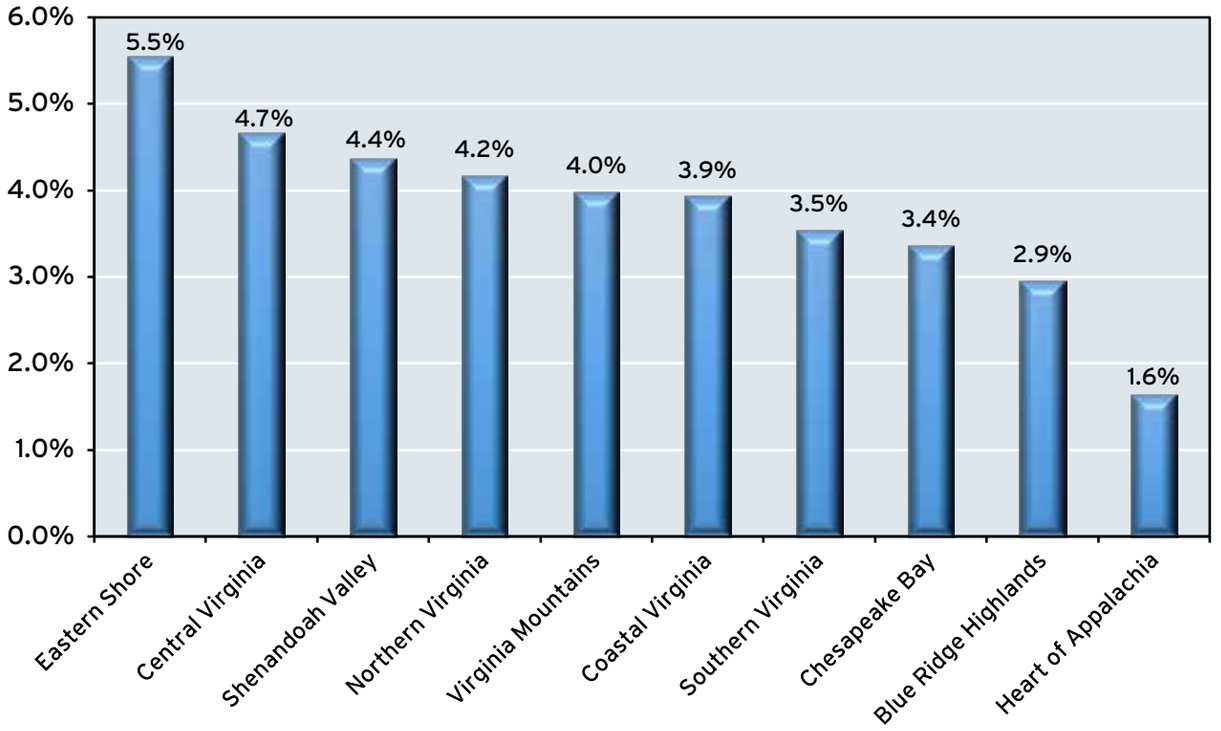
REVENUE PER AVAILABLE ROOM (REVPAR) IN VIRGINIA HOTELS, 1996-2014



Sources: Smith Travel Research Trend Report, Sept. 4, 2015, and the Old Dominion University Economic Forecasting Project

GRAPH 13

U.S. TRAVEL ESTIMATES OF DIRECT TOURISM EXPENDITURE GROWTH BETWEEN 2013 AND 2014



Source: U.S. Travel Association

Housing

The Federal Housing Finance Agency (FHFA) is a relatively new independent federal agency that was created to deal with the statutory merger of the Federal Housing Finance Board, the Office of Federal Housing Enterprise Oversight and the housing-oriented mission team that exists inside the U.S. Department of Housing and Urban Development. FHFA regulates both Fannie Mae and Freddie Mac, which together insure approximately 75 percent of all mortgages and the 11 Federal Home Loan Banks.

Our major interest here is not the FHFA's regulatory activities, but the FHFA Expanded Data House Price Index that it publishes because this provides us with important information about the overall trend in housing prices. Graph 14 records the ups and downs of the FHFA All-Transactions House Price Index for Virginia between 2001 and 2014. It is readily apparent that between 2001 and 2006, there was a significant run-up in home prices – 80.9 percent cumulatively – followed by a 31.3 percent cumulative decline between 2007 and 2010. Since then, there has been a modest 11.1 percent increase. The bottom line is that Virginia housing markets have shaken off most of the effects of the recession, but certainly have not returned to the dynamic days that we saw in the first half of the first decade of the 2000s.

How do these price changes compare to those that have occurred nationally? Graph 15 compares the path of housing prices in Virginia to those in the nation's largest 20 cities and the United States overall. Each of those three price variables has been indexed to 1.00 in 2000. Hence, the 1.741 value for Virginia indicates that home prices in Virginia have risen 74.1 percent since 2000.

Graph 15 tells us that since 2000, home prices in Virginia have increased cumulatively more than either home prices in the largest 20 cities of the United States, or home prices in the nation as a whole. However, one also can see that since 2012, home prices in the largest 20 cities have been rising more rapidly than home prices in Virginia. Even so, the paths of home prices in Virginia and in the entire United States have been quite similar since 2012 – both have been increasing modestly.

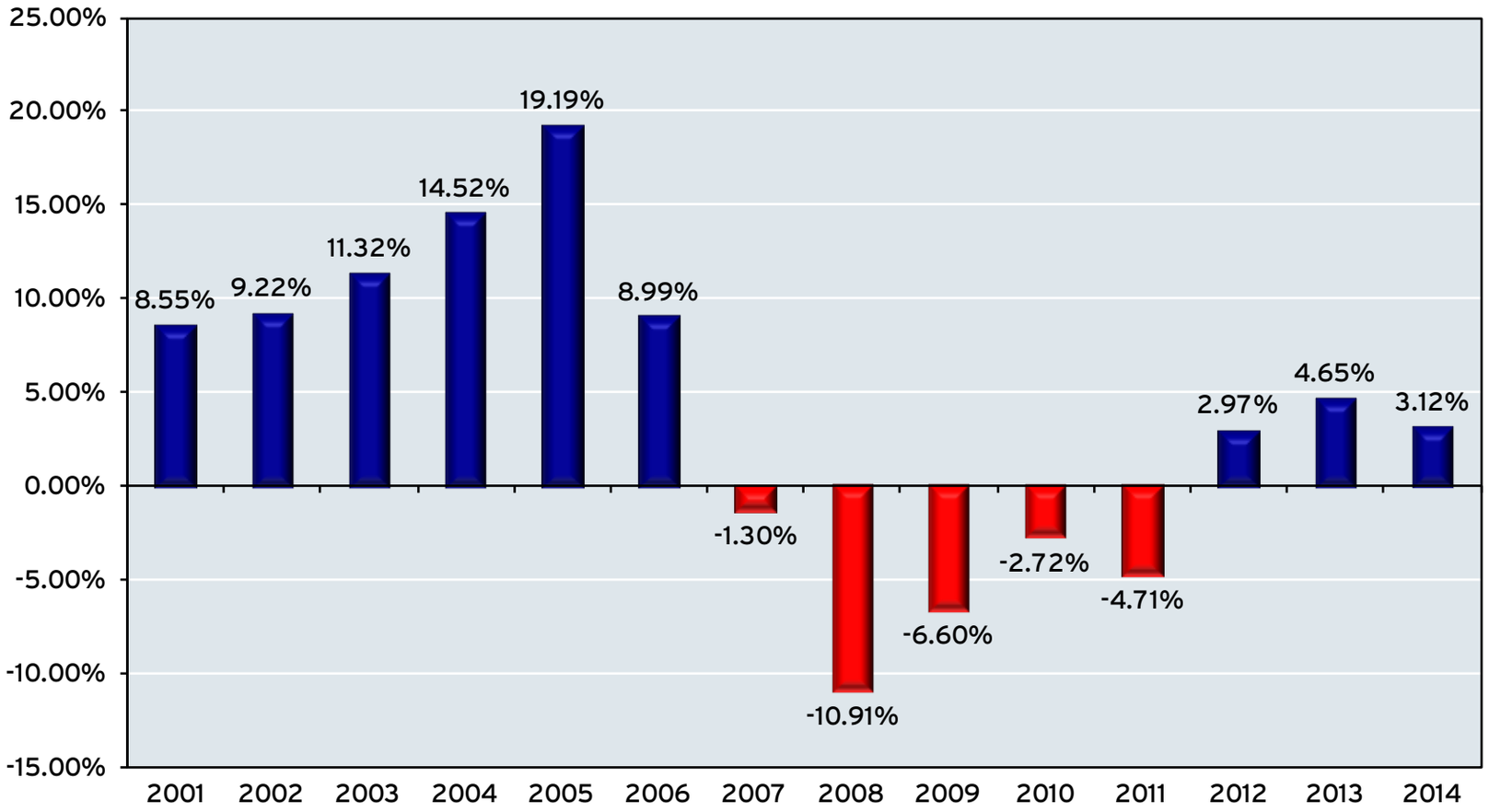
Another important indicator of the health of the housing sector is the number of building permits issued. Except in unusual circumstances, builders and developers construct homes because they believe they will be able to sell them for a profit. Rising numbers of building permits often presage improved economic conditions in the near future.

Graph 16 depicts the annual average for permits to construct one-unit (single-family) structures. One can readily detect that while the volume of building permits is highly cyclical, the volume of new single-family housing is far below previous peak levels. Declines in single-family housing permits were leading indicators for each of the last three economic recessions. Since the 2008 recession, there has been only modest recovery in the number of single-family housing permits, and that number actually declined between 2013 and 2014. **The message is that new home building in Virginia, at least that involving single-family residences, remains in the doldrums by historical standards. This may be one of the reasons why home prices in Virginia have increased faster than those nationally.**

Housing price changes and building permits provide interesting data, but do not directly tell us how affordable a home purchase is for a typical Virginia household. Table 2 examines housing affordability in Virginia since 2006. In 2006, 27 percent of the median (50th percentile) household's income was required to cover the principal and interest (P&I) on a median-priced single-family home. The affordability percentage fell to 13.9 percent in 2012, but began to move in the opposite direction in 2013 and by 2014 was 15.7 percent. Table 2 also tells us that housing usually has been a bit more affordable to the median household in the United States than in the Commonwealth.

GRAPH 14

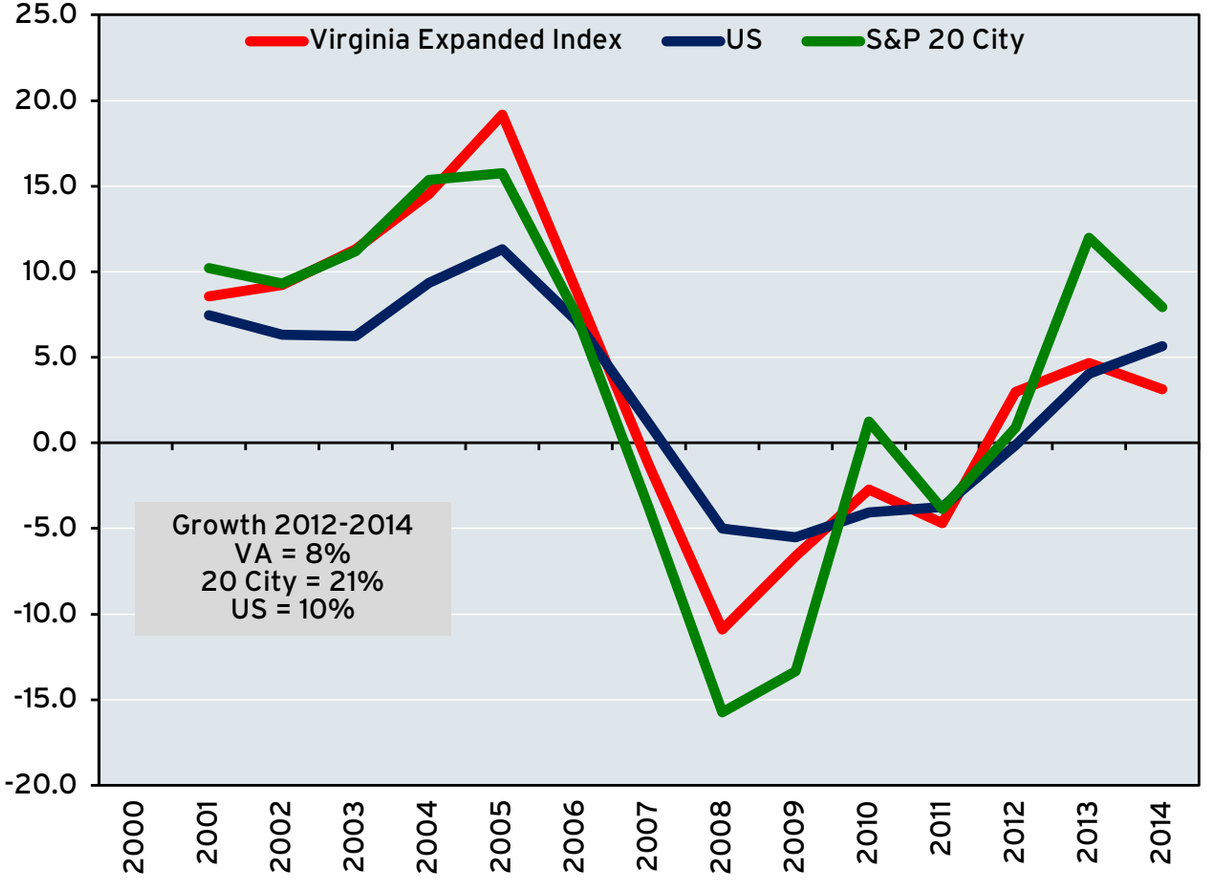
CHANGES IN HOUSING PRICES IN VIRGINIA AS MEASURED BY THE FHFA ALL-TRANSACTIONS HOUSE PRICE INDEX, 2001-2014



Source: Federal Housing Finance Agency

GRAPH 15

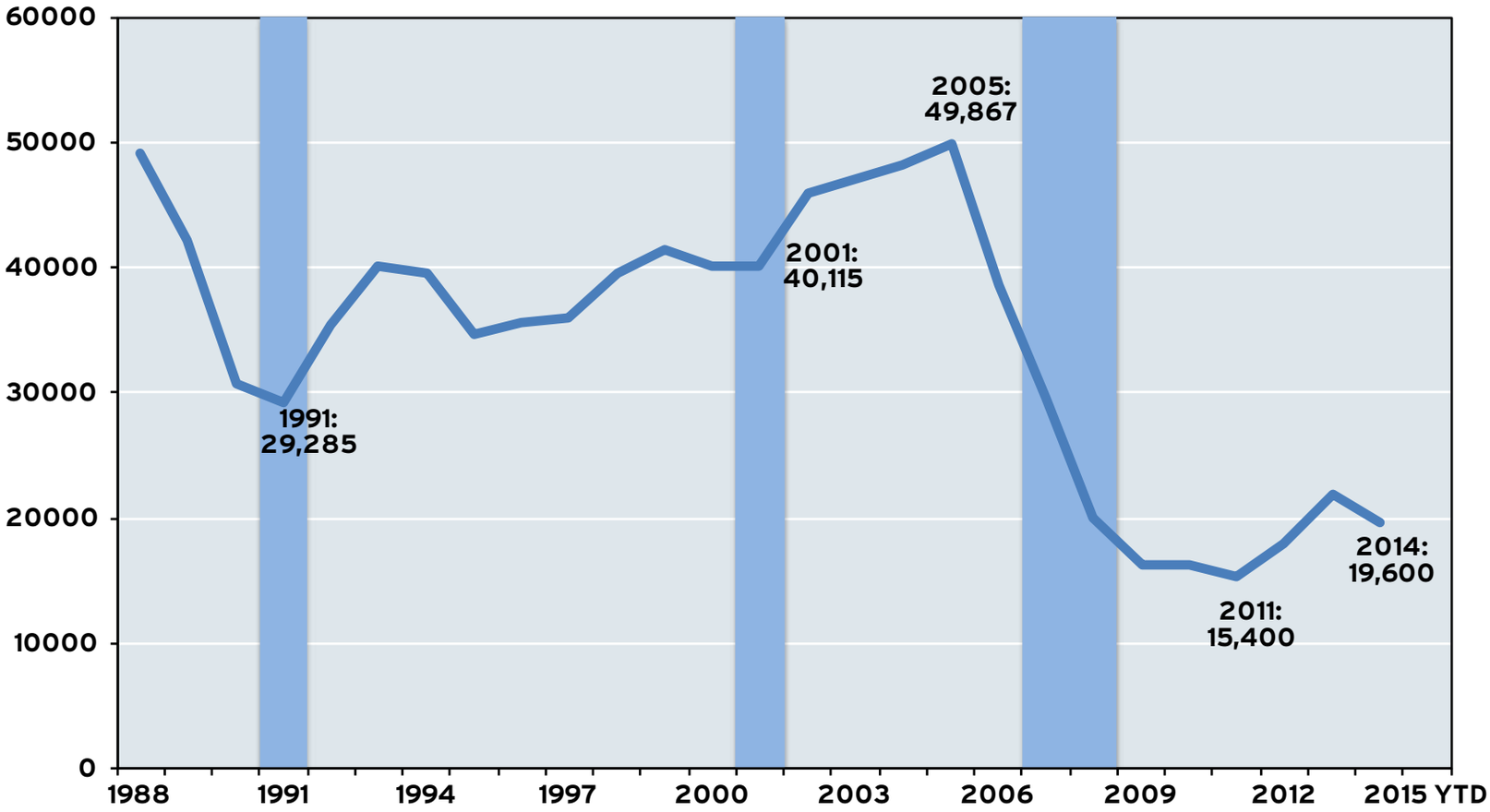
COMPARING HOME PRICE CHANGES IN VIRGINIA TO THOSE IN THE 20 LARGEST CITIES IN THE U.S. AND THE U.S. OVERALL, 2000-2014



Sources: Federal Housing Finance Agency and Standard & Poor's

GRAPH 16

BUILDING PERMITS: SINGLE-FAMILY STRUCTURES, 1988-2015



Sources: Federal Housing Finance Agency and Standard & Poor's

TABLE 2

HOUSING AFFORDABILITY: VIRGINIA AND THE UNITED STATES, 2006-2014

YEAR	MEDIAN PRICE SINGLE-FAMILY HOME	MORTGAGE RATE	MONTHLY P&I	REAL MEDIAN HOUSEHOLD INCOME	PAYMENT PERCENTAGE OF INCOME (VA)
2006	$244,267	6.64%	$1,253	$57,119	26.3%
2007	$246,575	6.53%	$1,251	$59,161	25.4%
2008	$233,717	6.19%	$1,144	$61,985	22.1%
2009	$219,692	5.15%	$ 960	$60,501	19.0%
2010	$212,050	4.97%	$ 908	$60,367	18.0%
2011	$203,542	4.83%	$ 857	$61,616	16.4%
2012	$200,800	3.83%	$ 751	$64,632	13.9%
2013	$207,267	4.00%	$ 792	$65,907	14.4%
2014	$218,950	4.31%	$ 868	$66,155	15.7%

Note: Estimates assume a 20 percent down payment and a 30-year fixed rate mortgage product. Median household income is the Census Bureau's American Community Survey estimate.
Sources: U.S. Census Bureau and the Old Dominion University Economic Forecasting Project

A Look At Our Largest Metropolitan Areas

Let's narrow our focus and look at some broad measures of economic performance in Virginia's largest metropolitan areas. Northern Virginia is temporarily excluded from this analysis because our next chapter is entirely devoted to the Northern Virginia economy.

Economic growth in Virginia's metro areas has been uneven. Table 3 provides real GDP growth for Virginia's eight largest MSAs during the post-recession period (2009-2014). Note that GDP measures the value of economic activity, not the number of jobs.

While Roanoke and Richmond had the highest GDP growth rates in the state in 2013, a number of the MSAs experienced negative growth rates. Northern Virginia shrank by nearly 1 percent and Hampton Roads, the other metropolitan area highly dependent on federal spending, barely grew at 0.18 percent.

For the full 2009-14 period, average real GDP growth was anemic in nearly every metropolitan area in Virginia. The two exceptions were the largest college towns, Blacksburg and Charlottesville, and neither grew very rapidly by historical standards. Roanoke and Lynchburg in particular have struggled to overcome the effects of the recession. After accounting for inflation, the value of the output produced in these two regions actually shrank over this five-year period.

A focus on employment, however, delivers a slightly different story. Table 4 focuses on job recovery, post-recession, in the eight metropolitan areas. How long did it take each area to recover the jobs lost in the recession? Alas, in three of the eight metropolitan areas (Lynchburg, Roanoke and Hampton Roads), employment remains smaller than it was in 2009. Interestingly, while Hampton Roads has recorded modest real GDP growth, it has achieved this with 22,800 fewer employees.

Which major industry sectors have been doing the best (and worst) in each of the eight metropolitan areas? Table 5 reveals that the federal government, information employers and construction firms were the most likely to have shed jobs between 2009 and 2014. The best-performing sectors, job-wise, were education, health and professional services.

Stagnant employment growth usually translates into unimpressive wage growth, and that is the message delivered by Graph 17. Once again, the imprint of declining federal spending is present – Washington, D.C., recorded only a 1.5 percent increase in average wages between 2009 and 2014, a rate which fell to 0.9 percent between 2012 and 2014. Blacksburg recorded the largest increase in wages between 2009 and 2014, while Roanoke experienced the largest increase between 2012 and 2014, despite having a negative real GDP growth rate in recent years and losing employment as well. This suggests a change in the mix of jobs in the Roanoke metropolitan area in favor of higher-paying employment.

Our analysis of metropolitan economic performance has not included or emphasized unemployment rates. Here's why: Unemployment rates have been falling continuously in the Commonwealth and all of its metropolitan areas. Yet, this is somewhat deceptive because unemployment rates have been falling significantly even in Virginia regions where there now are fewer individuals employed than there were in 2009. Why? Because increasing numbers of people have been migrating out of Virginia, or dropping out of the labor force. This latter phenomenon of falling labor force participation is occurring across the country. It includes both men and women, virtually all ethnic groups and all age groups, except those 65 or older.

The bottom line is that falling labor force participation seriously biases the usefulness of measured unemployment rates. One is not counted as unemployed if one isn't actively seeking a job. This means that other variables we have introduced, including the size of the labor force and wage increases, generate more useful information about labor markets.

TABLE 3

REAL GDP GROWTH IN THE EIGHT LARGEST VIRGINIA METROPOLITAN AREAS, 2009-2014

	2009	2010	2011	2012	2013	2014	AVERAGE ANNUAL GROWTH 2009-2014
Blacksburg-Christiansburg-Radford, VA	-4.79	1.68	3.01	5.61	-0.29	0.7	2.36
Charlottesville, VA	-0.01	3.71	3.54	3.22	-0.71	-0.2	2.35
Harrisonburg, VA	5.28	7.75	-1.38	0.20	-0.04	-1.7	0.28
Lynchburg, VA	-1.94	3.40	-1.86	-0.41	-0.41	-1.1	-0.50
Richmond, VA	-2.22	2.41	-0.05	1.48	2.53	1.6	1.06
Roanoke, VA	-2.57	-1.11	-0.81	0.80	1.64	1.3	-0.18
Virginia Beach-Norfolk-Newport News, VA-NC	0.14	0.45	0.46	1.62	0.18	-0.1	0.31
Washington-Arlington-Alexandria, DC-VA-MD-WV	-0.01	3.14	1.69	0.60	-0.82	0.3	1.00

Source: Bureau of Economic Analysis

TABLE 4

MONTHS TO RECOVER JOBS LOST IN 2009 RECESSION OR NUMBER OF JOBS STILL SHORT

METROPOLITAN AREA	JOB RECOVERY CYCLE
Blacksburg	74 months
Charlottesville	72 months
Hampton Roads	Still 22,800 short of 2009
Harrisonburg	77 months*
Lynchburg	Still 6,500 short of 2009
Richmond	77 months
Roanoke	Still 3,300 short of 2009
Washington, D.C.	30 months

* Harrisonburg initially recovered all of its lost jobs in 58 months, but then suffered an economic relapse.
Sources: Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

TABLE 5

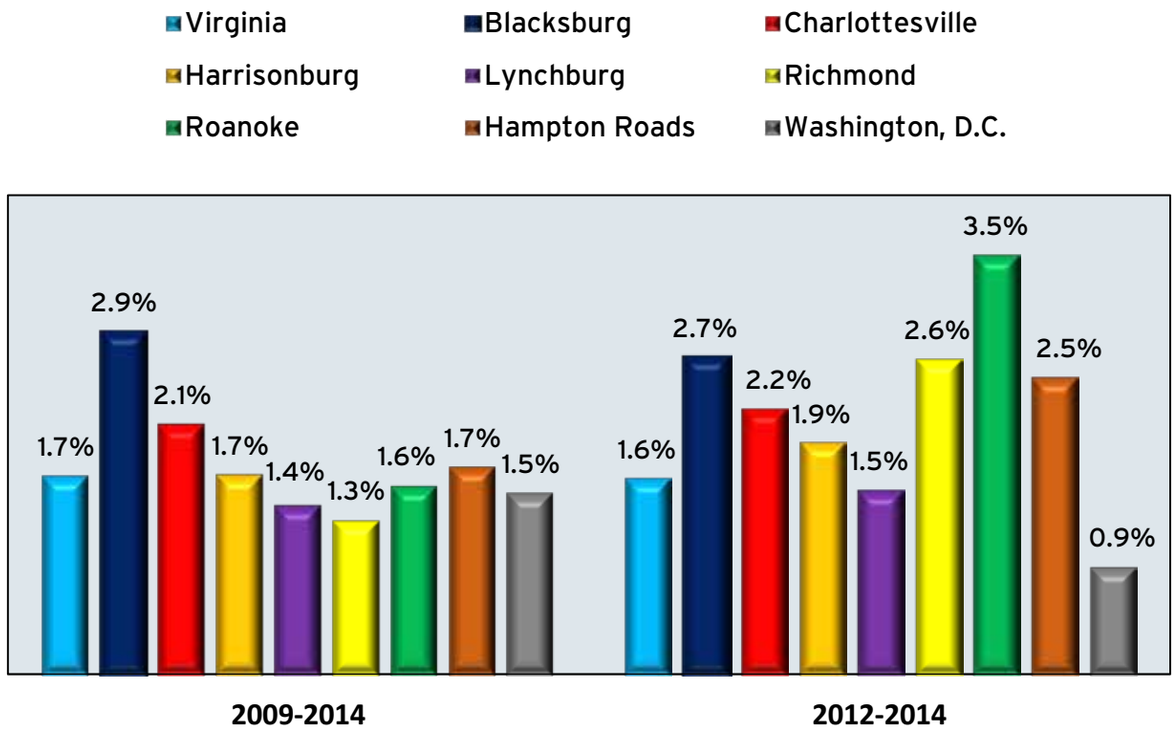
SECTOR-LEVEL EMPLOYMENT CONTRACTION AND GROWTH, 2009-2014

METROPOLITAN AREA	BEST-PERFORMING SECTOR	WORST-PERFORMING SECTOR
Blacksburg	Goods Producing 9.02%	Federal Government 0%
Charlottesville	Professional and Business Services 20.34%	Manufacturing -7.32%
Hampton Roads	Employment Services 28.36%	Information -30.13%
Harrisonburg	Private Service Provision 11.30%	Goods Producing -9.59%
Lynchburg	Education and Health Services 20.42%	Construction -31.25%
Richmond	Employment Services 44.66%	Information -22.77%
Roanoke	Education and Health Services 13.19%	Information -22.73%
Washington, D.C.	Ambulatory Health Services 29.48%	Hospitals -7.66%

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

GRAPH 17

2013 AVERAGE WAGE GROWTH IN THE EIGHT LARGEST METROS IN VIRGINIA, 2009-2014 AND 2012-2014



Source: Bureau of Labor Statistics

Summing It Up

Table 6 and Graph 18 summarize where we have been, economically speaking, in the Commonwealth of Virginia and where the Economic Forecasting Project within the Center for Economic Analysis and Policy in Old Dominion University's Strome College of Business believes we are going. In a nutshell, 2013 and 2014 were uninspiring. Thankfully, we are seeing some improvement in the year-to-date 2015 numbers. The Philadelphia Fed's Leading Economic Index for Virginia increased rapidly through the summer, suggesting the next six months will be favorable. Payroll employment is up over 2014, and through July 2015, taxable sales data are quite strong – up almost $3 billion compared to July 2014.

Even with the state's recent economic turnaround, our real GDP forecast for 2015 is only 1.33 percent (see Graph 18). Unfortunately, our forecast for 2016 – 1.98 percent – will place us well below the consensus national growth rate estimate of almost 3 percent in 2016. This is hardly a sensational performance for Virginia, but clearly superior to the zero economic growth we posted in 2014.

The Commonwealth of Virginia is in the midst of a period of economic transition. Perhaps this is a description that would fit any time period. However, currently, federal financial sequestration and related constant or declining defense spending in Virginia constitute the equivalent of a modest-sized anchor tied to our economy's ankle. This chilling economic influence is compounded by the gradual decline in the size of Virginia's coal industry and an international economic slowdown most visibly exemplified by China, Latin America and Europe.

Yet, this is reality and Virginia must find ways to adjust to a new world in which the Commonwealth will be somewhat less dependent on federal spending than it is currently. Economic diversification, refocusing of defense contractors, increased attention to export activity (Virginia's Economic Development Partnership is providing vital leadership here), improved K-12 education, additional focus on job-generating research and development at the Commonwealth's research universities and medical schools, intelligent investments in infrastructure, and well-devised regional economic development efforts are among the most productive means by which Virginia can transform its current situation into an opportunity rather than accepting it as an unavoidable sentence.

TABLE 6

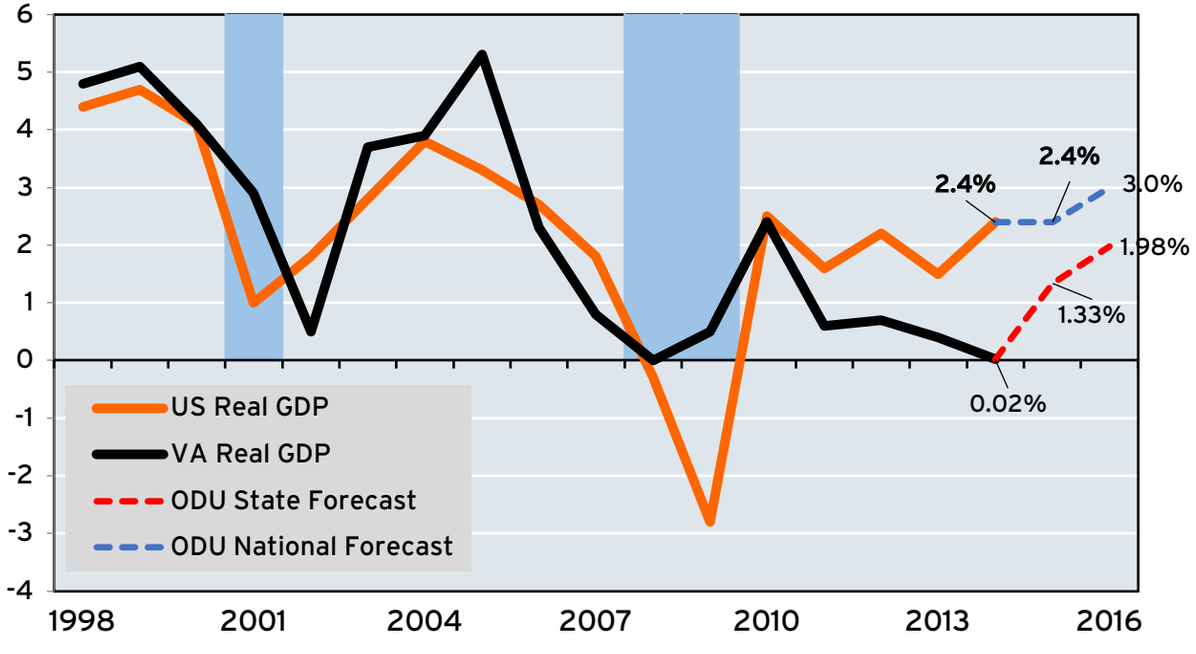
COMMONWEALTH OF VIRGINIA ECONOMIC DASHBOARD

	2013	2014	2015
Real GDP Growth Rate	0.45%	0.02%	1.33%F
Leading Index	164.48	166.47	169.59 (YTD)
Payroll Employment	3.76 million	3.78 million	3.80 million
Unemployment Rate (August)	5.5%	5.0%	4.5%
Taxable Sales* (in Billions)	$62.6	$63.6	$66.2
Building Permits*	18,480	10,844	10,772

F – Forecasted Value
* January-July for comparison
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics and the Old Dominion University Economic Forecasting Project

GRAPH 18

REAL GDP FORECAST FOR VIRGINIA AND THE UNITED STATES



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