

VIRGINIA'S GROWTH IMPROVES IN UNCERTAIN TIMES

And once the storm is over, you won't remember how you made it through, how you managed to survive. You won't even be sure, in fact, whether the storm is really over. But one thing is certain. When you come out of the storm, you won't be the same person who walked in. That's what this storm's all about.

- Haruki Murakami, Author

In the aftermath of the Great Recession, real (inflation-adjusted) economic growth in Virginia rebounded to 2.7% in 2010, suggesting to some that we were on the road to recovery. Yet, whether due to federal budget sequestration, poor private-sector job creation or superior economic opportunities in other states, the Commonwealth soon fell into an economic malaise, neither growing nor contracting – merely, it seemed, muddling along. Things, however, could have been worse. Joseph Stiglitz, a Nobel laureate in economics, commenting on the state of the U.S. and European economies in 2014, aptly noted, “Malaise is better than a recession, and a recession is better than a depression.”¹

If where you stand determines what you see, then one’s perspective on the state of the Virginia economy in 2019 is likely quite different than it was in 2014. 2019 will be the fifth consecutive year of real economic growth. Barring an unforeseen shock, 2019 also will be the second consecutive year with economic growth in excess of 2%. It speaks to the Commonwealth’s recent malaise that this is unabashed good news.

Several factors that produced the malaise simultaneously are responsible for the recent surge in economic activity in Virginia. Federal spending has risen in the latter half of the

¹ Joseph Stiglitz, “The current economic malaise is the result of flawed policies,” *The Guardian*, Feb. 6, 2014, <https://www.theguardian.com/business/economics-blog/2014/feb/06/current-economic-malaise-flawed-policies>.



current decade, fueling economic activity in Northern Virginia and Hampton Roads. The Commonwealth has made a concerted effort to improve its business climate and recently reclaimed the top position in CNBC's "business friendly" state rankings. Job creation has continued to increase, revenues have climbed and unemployment has declined. Virginia, it would seem, is poised to enter the third decade of the century from an advantageous position.

Increasing economic uncertainty, however, may undermine the promise of a bright start to the coming decade. At the national level, political uncertainty has (so far) not significantly affected equities markets. The impeachment proceedings and the 2020 presidential election could change that equation. Trade policy, on the other hand, has lowered global merchandise trade volumes and global economic growth. Immigration, which has offset the outflow of Virginians to other states, is an increasingly contentious issue. Reflecting decisions of the Trump administration, the number of international students enrolling in American colleges has declined.² This is one of the reasons why headcount college enrollments have declined eight years in a row. This may undermine the long-term growth of the Virginia and U.S. economies.³ While increases in federal spending are typically good news for the Commonwealth, these increases have been financed by federal deficit spending. The federal government is projected to run trillion-dollar annual deficits through the end of the next decade. At what point will investors hesitate to lend to an increasingly indebted United States?

Balancing the recent spate of good news with the growing uncertainties of the long term is the primary task we undertake in this chapter. We will work toward presenting a clearer picture of the state of the Commonwealth and ask what policies might work best for Virginia in these uncertain times.

Growth Accelerates, But Questions Linger

Gross domestic product (GDP) is the headline measure of economic performance in the United States and the Commonwealth of Virginia. GDP is an estimate of the level of economic output in an area and, when examined over time, provides insight into the ebb and flow of economic activity. While there is no perfect measure of economic well-being or performance, GDP is (for now) commonly used to gauge the success of local, state and national economies.⁴ As with many measures of economic activity at the state and local level, state GDP data arrive with a lag. The U.S. Department of Commerce's Bureau of Economic Analysis published data for the second quarter of 2019 in November 2019. This release not only provided advance estimates for the second quarter of 2019, but also revised annual estimates for 2014 to 2018 and the first quarter of 2019.

Table 1 presents annual GDP for Virginia in nominal and real (inflation-adjusted) dollars from 2008 to 2019. We focus on real GDP, as it removes the influence of inflation. While the Virginia economy contracted only once in the current decade (2014), the overall rate of growth has been underwhelming. From 2008 to 2018, Virginia's real GDP grew at an annual average rate of only 1.1%.⁵ If we focus on the last five years for which we have GDP data (2014 to 2018), the pace of economic activity in the Commonwealth ticked upward to 1.7%.

We forecast that real GDP growth for Virginia will be 2.5% in 2019, slightly below that of 2018. If this forecast is accurate, then the Commonwealth will have put together two consecutive years of real GDP growth in excess of 2%. This would boost the five-year annual average growth rate of 1.7% from 2014 to 2018 to 1.8% from 2015 to 2019.

² Bureau of Economic Analysis, 2019, available at: <https://www.bea.gov/data/gdp/gdp-state>.

³ Paul Fain, "College Enrollment Declines Continue," *Inside Higher Education* (May 30, 2019), www.insidehighered.com/quicktakes/2019/05/30/college-enrollment-declines-continue.

⁴ GDP does not capture the value of household production, likely underestimates the size of the informal economy and may not correlate with "happiness" or other measures of social well-being.

⁵ We use the compound annual growth rate (CAGR) to estimate the annual average rate of economic growth. CAGR can be expressed as the following: $CAGR = (Final\ Period/Initial\ Period)^{1/(number\ of\ periods-1)} - 1$.

Graph 1 compares the economic performance of Virginia and the United States from 2010 to 2019. Two points stand out. First, for most of the current decade, the Commonwealth's economic performance has lagged that of the nation. In 2010, we grew slightly faster than the national average. From 2010 to 2018, however, Virginia failed to keep pace with the nation. On the other hand (as economists tend to say), the Commonwealth's performance did improve considerably in 2017 and 2018, approaching that of the nation. We forecast that Virginia's real GDP growth will exceed that of the U.S. in 2019, as the national economy appears to be slowing considerably.



TABLE 1

VIRGINIA'S GROSS DOMESTIC PRODUCT AND ANNUAL GROWTH RATES, 2008-2019*

YEAR	NOMINAL GDP	REAL GDP	REAL GDP GROWTH
2008	\$399,032	\$425,804	-0.3%
2009	\$408,919	\$425,584	-0.1%
2010	\$422,902	\$437,268	2.7%
2011	\$432,393	\$441,609	1.0%
2012	\$444,950	\$444,950	0.8%
2013	\$455,070	\$446,560	0.4%
2014	\$463,782	\$445,527	-0.2%
2015	\$484,628	\$454,098	1.9%
2016	\$493,866	\$455,393	0.3%
2017	\$510,425	\$463,426	1.8%
2018	\$534,449	\$476,388	2.8%
2019	\$559,568	\$488,298	2.5%

Sources: Bureau of Economic Analysis, 2019, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SAGDP9N, real GDP by state. Millions of chained 2012 dollars. *2019 represents our Virginia forecast.

GRAPH 1

VIRGINIA AND THE UNITED STATES: ANNUAL CHANGE IN REAL GROSS DOMESTIC PRODUCT, 2010-2019*



Sources: Bureau of Economic Analysis, 2019, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SAGDP9N, real GDP by state. Millions of chained 2012 dollars. *2019 represents our national and Virginia forecast.

The Global Economy Taps The Brakes As Uncertainty Increases

Virginia's economic performance improved in 2017 and 2018 and we forecast continued growth in 2019. Political and economic uncertainty, however, has recently increased and may undermine prospects for future growth. Uncertainty makes it harder for businesses to plan, increasing the cost of doing business.

One measure of policy uncertainty is displayed in Graph 2. The Economic Policy Uncertainty Index attempts to capture newspaper articles about economic policy uncertainty, Congressional Budget Office (CBO) measures of temporary tax provisions that are set to expire within the next decade and the dispersion of the forecasts in the Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters.⁶ Index values greater than 100 suggest higher than average economic policy uncertainty, while values less than 100 suggest less policy uncertainty.

It should be no surprise that the index increases during periods of economic stress and declines during periods of economic expansion. Historically, the index increases during and in the aftermath of declines in economic activity. During the 2001 recession, the index peaked at 130.6, while the peak attributable to the Great Recession did not occur until 2011.⁷ **2019 was the first year in its history that the index signaled increasing uncertainty during a period of economic expansion. Similar spikes in uncertainty also occurred in the global and Chinese indices.**

In April 2019, the World Trade Organization (WTO) released its preliminary estimate for the growth in global merchandise trade for 2018. Global trade grew 3%, almost a full percentage point lower than the original forecast in 2018 of 3.9%. Global trade volumes declined by 0.3%

in the fourth quarter of 2018, largely a result of a trade conflict between the U.S. and China. In the first quarter of 2019, global merchandise trade flows were flat from the fourth quarter of 2018. In year-over-year terms, global exports and imports contracted by 2.7% and 3.1%, respectively.⁸

In April of 2019, the WTO forecasted that trade would grow by 2.6% in 2019, with the possibility of higher growth if there was a resolution to the ongoing trade conflict between the two countries.⁹ **In October 2019, however, the WTO significantly revised its global trade forecast downward, from 2.6% to 1.2%.**

With the growth in global merchandise trade slowing, it should be no surprise that global economic forecasts have been revised downward. In the summer of 2019, the EU lowered its 2020 real GDP growth forecast to 1.4%.¹⁰ Several private firms also have reduced their forecasts for Chinese real GDP growth in 2020 to below 6%.¹¹

For the United States, expectations for growth in 2019 have softened considerably and shifted the Federal Reserve's policy focus. From the first quarter of 2009 through the end of the fourth quarter of 2015, the Fed's Federal Open Market Committee (FOMC) did not change its target federal funds rate. In essence, the Federal Reserve maintained an accommodative monetary policy even though the U.S. economy grew over most of the period. As illustrated in Graph 3, the FOMC raised the target rate once in 2015 and once again in 2016. In 2017 and 2018, the market consensus was the FOMC would continue to raise its target federal funds rate and unwind its liabilities accrued during the Great Recession.

Increasing trade tensions, a slowdown in global growth and declining expectations about U.S. economic activity have led to a rapid shift in the FOMC's behavior. The FOMC lowered its target federal funds rate by 25 basis points in August, September and October of 2019.

6 More information about the index can be found at: <http://www.policyuncertainty.com/methodology.html>. For a discussion of the methodology, see Scott Baker, Nicholas Bloom and Steven Davis, "Measuring Economic Policy Uncertainty," *NBER Working Paper 21633*, October 2015.

7 The National Bureau of Economic Research determined that the 2001 recession was from March 2001 to November 2001. The Great Recession was from December 2007 to June 2009.

8 World Trade Organization, "Latest Trade Trends, 1st Quarter 2019," Aug. 28, 2019, https://www.wto.org/english/res_e/statist_e/daily_update_e/latest_trade_trends_e.pdf.

9 World Trade Organization, "Global trade growth loses momentum as trade tensions persist," April 2, 2019, https://www.wto.org/english/news_e/pres19_e/pr837_e.htm.

10 European Commission, "European Economic Forecast, Summer 2019 (Interim)," https://ec.europa.eu/info/sites/info/files/economy-finance/ip108_en.pdf.

11 Bloomberg, "China seen heading for sub-6% economic growth as tariffs soar," Sept. 2, 2019, <https://www.bloomberg.com/news/articles/2019-09-03/china-s-economy-will-grow-at-5-7-in-2020-oxford-economics-says>.

At the end of 2019, the FOMC's stance could best be described as “watch, wait and react.” In other words, the FOMC is watching the economy to see if the rate cuts boosted economic activity. If economic activity increases, the FOMC will become less accommodative. On the other hand, if economic activity falters, the FOMC may reduce its target federal funds rate again in 2020.

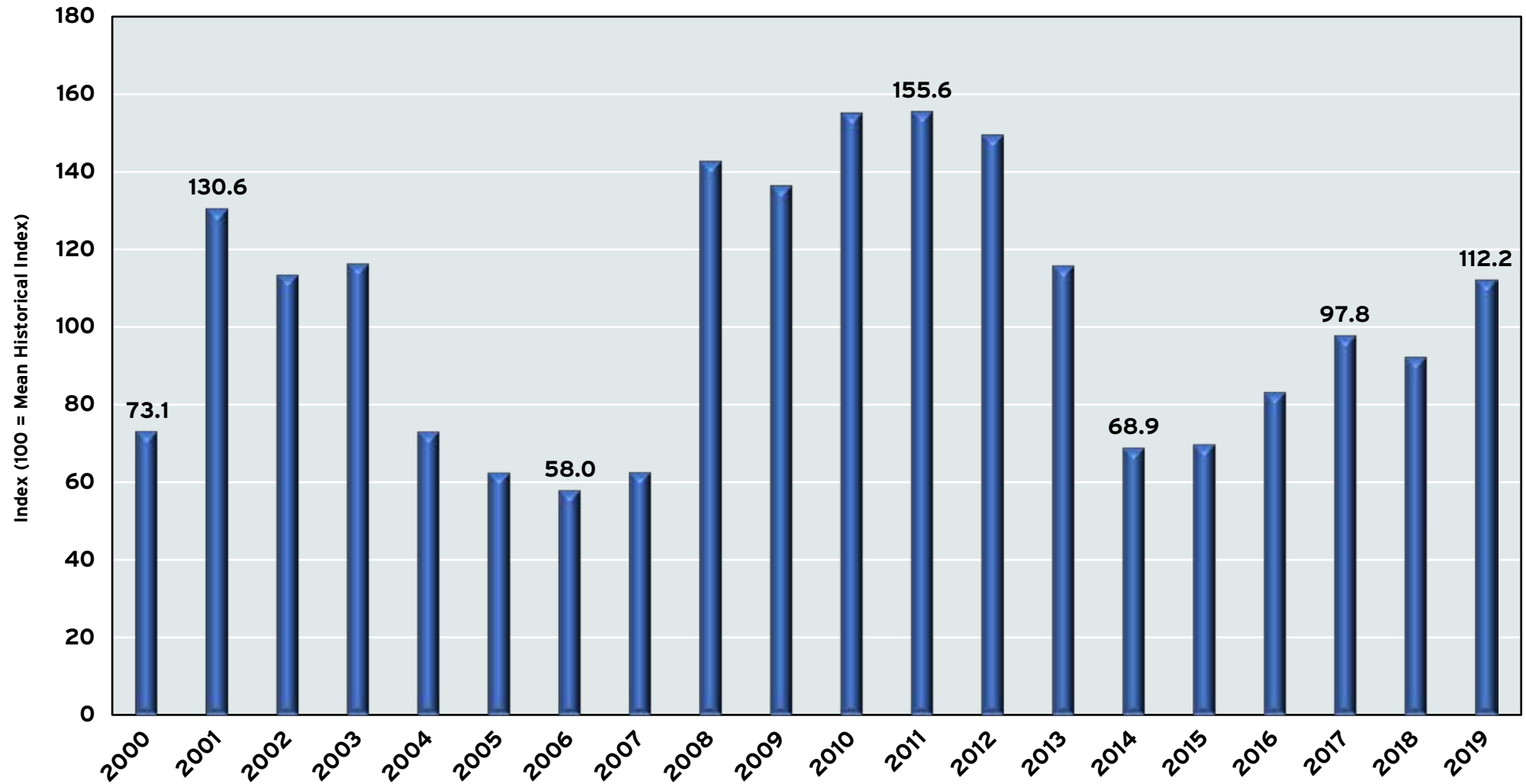
Graph 4 illustrates the change in the median forecast among members of the Federal Reserve Board of Governors from September 2018 to September 2019. Even with a more accommodative monetary policy, the most recent median forecast is that real GDP growth will slow to approximately 2% in 2020 and 2021, subject to the usual caveats about economic shocks and policy uncertainty.

Our concluding thought is that the increasing uncertainty undermines business and consumer confidence. If global growth continues to slow, the prospects for 2020 and beyond will certainly dim. While there remains the possibility that trade conflicts with China will abate and global trade volumes will rebound, there is also a strong likelihood that the ongoing trade conflicts will intensify. Forecasting in such an environment is exceedingly difficult, given the volatility of information, policies and politics. The Commonwealth, in such an environment, should be conservative in its expectations for economic growth.



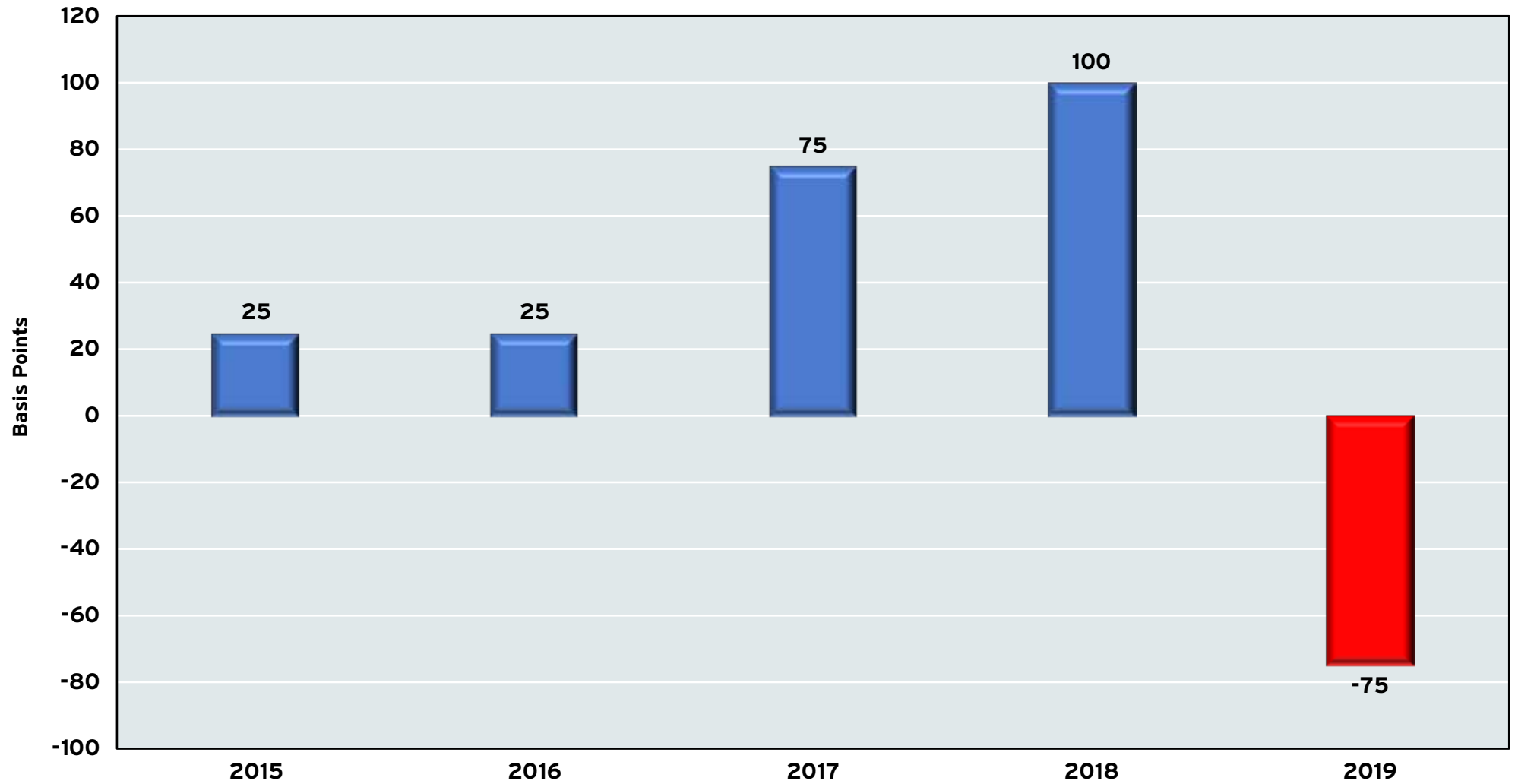
GRAPH 2

ECONOMIC POLICY UNCERTAINTY INDEX: UNITED STATES, 2000-2019*



Sources: Economic Policy Uncertainty Index (2019) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages constructed from weekly data. *2019 data represent the annual average through Sept. 10, 2019.

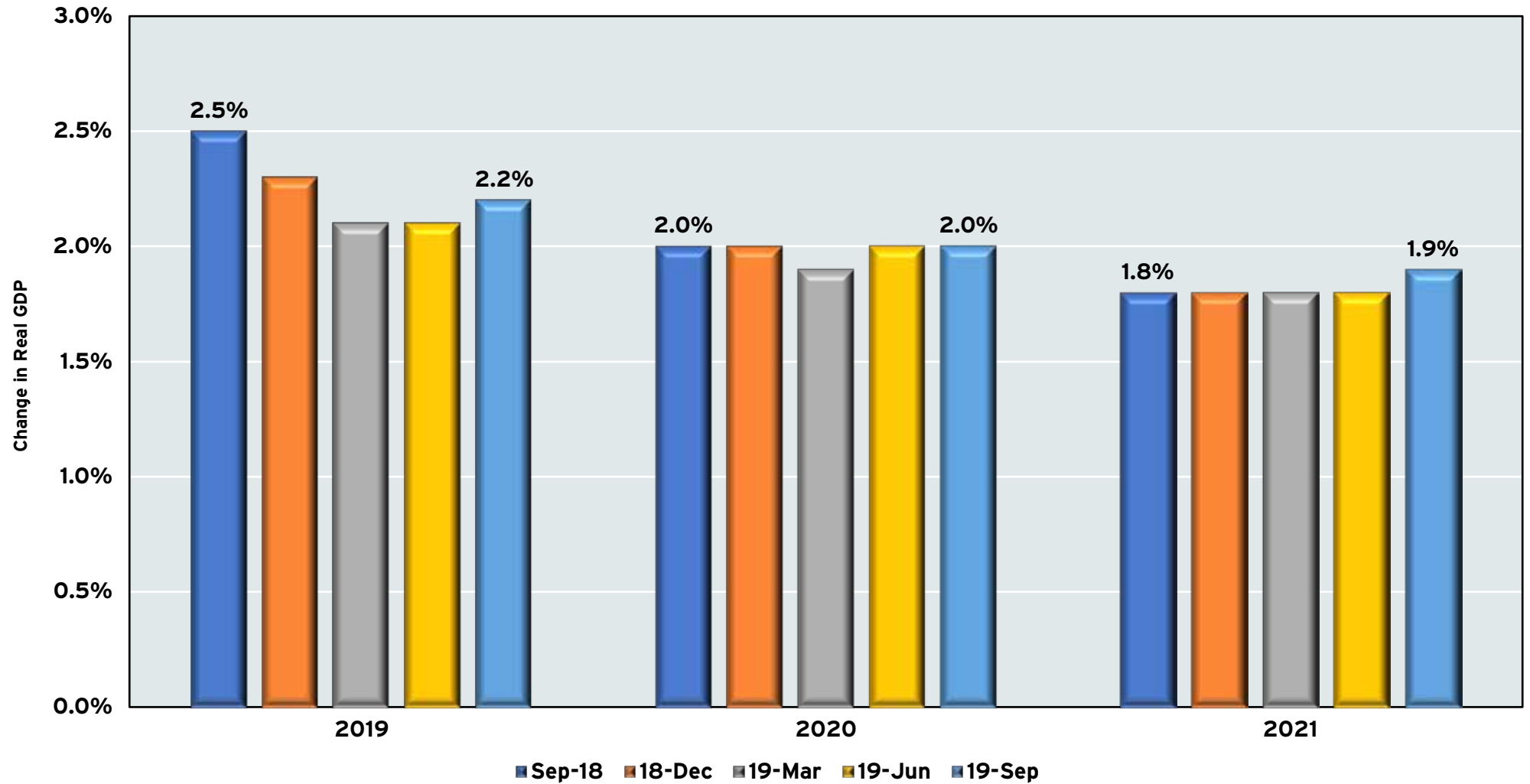
GRAPH 3
FEDERAL OPEN MARKET COMMITTEE:
TARGET FEDERAL FUND CHANGE IN BASIS POINTS, UNITED STATES, 2015-2019



Sources: Federal Reserve Board of Governors (2019) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. 1 basis point is equal to 0.01%. Data current as of Nov. 27, 2019, and subject to revision.

GRAPH 4

**MEDIAN PROJECTIONS OF FEDERAL RESERVE BOARD MEMBERS AND PRESIDENTS:
ANNUAL CHANGE IN REAL GDP, UNITED STATES, 2019-2021**



Source: United States, Federal Open Market Committee (2010). Data current as of Oct. 10, 2019, and subject to revision. <https://fraser.stlouisfed.org/title/677>

Labor Markets Hit New Highs

As economic activity in Virginia has improved in the last years of the current decade, it should be no surprise that labor market conditions in the Commonwealth have improved as well. Graph 5 illustrates how the seasonally adjusted civilian labor force and civilian individual employment have evolved from January 2005 to October 2019.¹² One can clearly see the impact of the Great Recession on the size of the labor force and individual employment. From its prerecession peak in October 2008, the civilian labor force fell by 1.4% to its trough in November 2009. The decline in individual employment, however, was more significant. From its prerecession peak in July 2008, individual employment fell by 4.6% to its bottom in December 2009.

Virginia's tepid economic performance in the first half of the decade is reflected in the labor force data. From December 2009 to December 2015, individual employment rose 6.4%, but the labor force only grew by 2.7%. The relatively rapid rise in individual employment relative to the labor force meant that Virginia's unemployment rate fell rapidly from a peak of 7.5% to 4.1% in December 2015 (Graph 6).

Since 2015, however, the pace of individual employment growth has slowed while the size of the labor force has accelerated compared to the earlier period. From December 2015 to December 2018, the civilian labor force in Virginia grew 3% while individual employment growth slowed to 4.4%. Since individual employment continued to grow faster than the labor force, the unemployment rate in the Commonwealth continued to decline, reaching 2.6% in October 2019. If someone wants a job, there is likely an employer in need of an employee to fill a position.

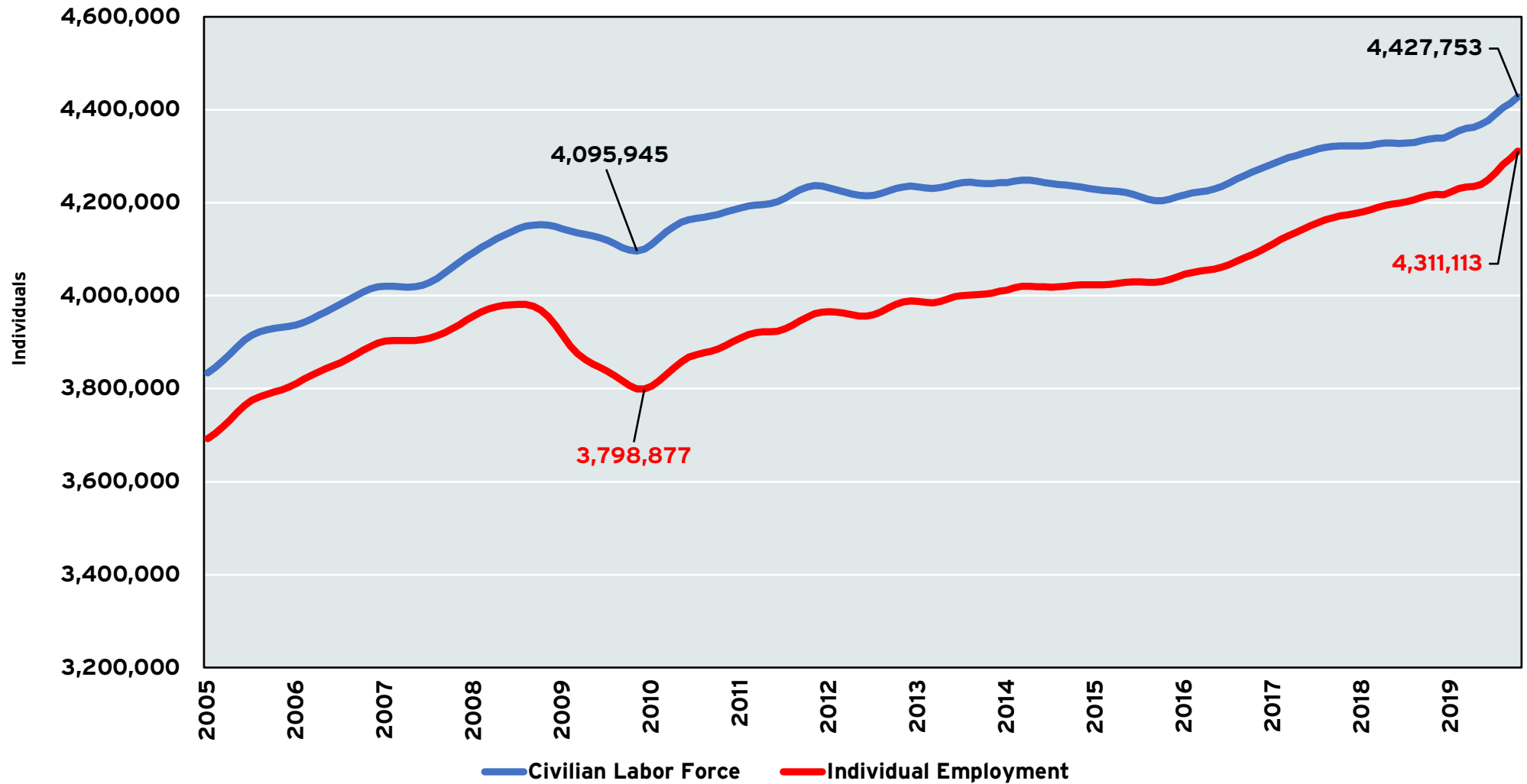
With unemployment nearing historical lows and individual employment growth slowing because those who want a job, have a job, how can the Commonwealth and the nation continue to grow? One route to increasing productivity growth is to spur the flow of inventions and innovations emanating from the Commonwealth's federal laboratories and university campuses. Other policy options include offering tax incentives for investments in business plants and equipment (including repeal of Virginia's machinery and tools tax) and finding ways to increase labor force participation rates. Addressing the urban-rural divide in education, broadband access, quality of infrastructure and other factors will also require concerted action. Each of these possibilities involves heavy economic and political lifting but realistically must receive consideration if we are to spur economic growth in our current situation.¹³

¹² The civilian labor force consists of employed persons and unemployed persons. The Bureau of Labor Statistics defines employed persons as "persons who did any work for pay or profit during the survey reference week; persons who did at least 15 hours of unpaid work in a family-operated enterprise; and persons who were temporarily absent from their regular jobs because of illness, vacation, bad weather, industrial dispute, or various personal reasons." The BLS classifies persons as unemployed "if they do not have a job, have actively looked for work in the prior 4 weeks, and are currently available for work. Persons who were not working and were waiting to be recalled to a job from which they had been temporarily laid off are also included as unemployed." For more information, see <https://www.bls.gov/cps/lfcharacteristics.htm>.

¹³ The debate of familial-based versus merit-based immigration is outside the scope of this chapter but a topic worthy of discussion. There is a trend toward merit-based immigration among developed countries, which, in turn, appears to affect familial-sponsorship and remittances as noted by Sandar Mukopadhyay and Miaomiao Zou, "Will skill-based immigration policies lead to lower remittances? An analysis of the relations between education, sponsorship, and remittances," *Journal of Development Studies*, 2019, <https://doi.org/10.1080/00220388.2019.1585812>.

GRAPH 5

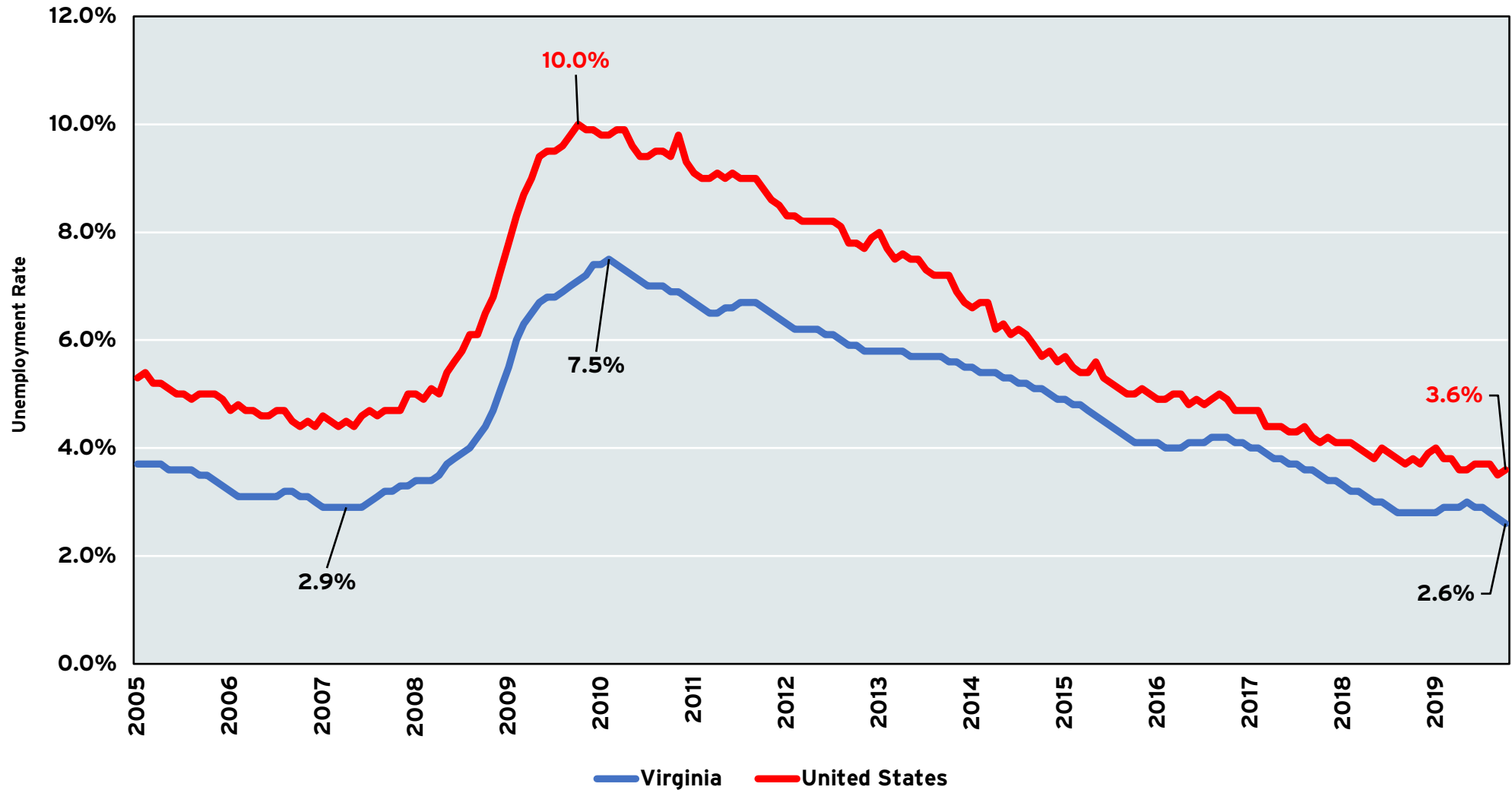
**SEASONALLY ADJUSTED CIVILIAN LABOR FORCE AND CIVILIAN INDIVIDUAL EMPLOYMENT:
VIRGINIA, JANUARY 2005 TO OCTOBER 2019**



Source: Bureau of Labor Statistics, 2019. Data current as of Nov. 27, 2019, and subject to revision.

GRAPH 6

SEASONALLY ADJUSTED UNEMPLOYMENT RATE:
VIRGINIA AND THE UNITED STATES, JANUARY 2005 TO OCTOBER 2019



Source: Bureau of Labor Statistics, 2019. Data current as of Nov. 27, 2019, and subject to revision.

Labor Force Participation Rates

The civilian labor force represents those individuals who are employed or who are seeking employment. Disaffected workers who have abandoned attempts to secure gainful employment are not included in the labor force, and thus not reflected in the employment and unemployment data. Labor force participation, which is a percentage of the working-age (16 to 64) population that is employed or unemployed and seeking employment, typically falls during economic contractions and rises during economic expansions. Graph 7 presents labor force participation rates for the U.S. and Virginia.

Whether nationally or in Virginia, labor force participation rates remain below their prerecession peaks. The long-term decline in labor force participation rates represents an economic puzzle, with demographic change (baby-boomer retirements), dependence on government benefits, structural unemployment (jobs exist, but workers are not qualified to fill them) and the opioid crisis all considered as potential contributing factors.

One perspective is that the demand for labor has shifted over the previous decades in favor of highly skilled labor and will likely continue in this vein over the coming decade.¹⁴ While manufacturing's share of GDP has remained relatively steady, manufacturing employment has fallen due to significant improvements in worker productivity. Fewer workers can produce more output, and this trend is likely to accelerate as automation continues to be utilized in the manufacturing and service industries. Historically, automation may have eliminated jobs within an industry,

but some workers could retrain and remain within the industry while others had to leave the industry altogether. An architect who may have previously spent hours producing blueprints with the help of staff can now achieve the same work with computer software, reducing the need for staff. Robotics has taken over parts of the car manufacturing process, increasing worker productivity and output, but also decreasing the demand for autoworkers.

The latest wave of automation, some argue, appears to eliminate entire industry employment cohorts. Legal firms are increasingly using sophisticated software that accelerates the speed of discovery but may also displace lawyers. If autonomous long-haul trucks enter the market, the livelihood of many truckers comes under significant pressure. For now, it is difficult to separate promises and reality, but it does appear we may be on the cusp of significant change. If so, automation will be to the benefit of consumers and businesses but to the detriment of the workers who now must learn new skills for different industries and professions.

Another perspective is that the labor supply is no longer as responsive to increases in real earnings as it was in the past. Disaffected workers may have high reservation wages due to their ability to cobble together cash income with public benefits.¹⁵ These workers may also be in poorer health as a result of “diseases of despair,” such as substance abuse, and are effectively unemployable in many industries.¹⁶ A not-so-uncommon complaint by employers in manufacturing and transportation industries, for example, is that skilled workers are in short supply and many who apply for work are disqualified due to substance abuse. This problem may only be exacerbated by the increasing number of states that have decriminalized or legalized recreational marijuana.

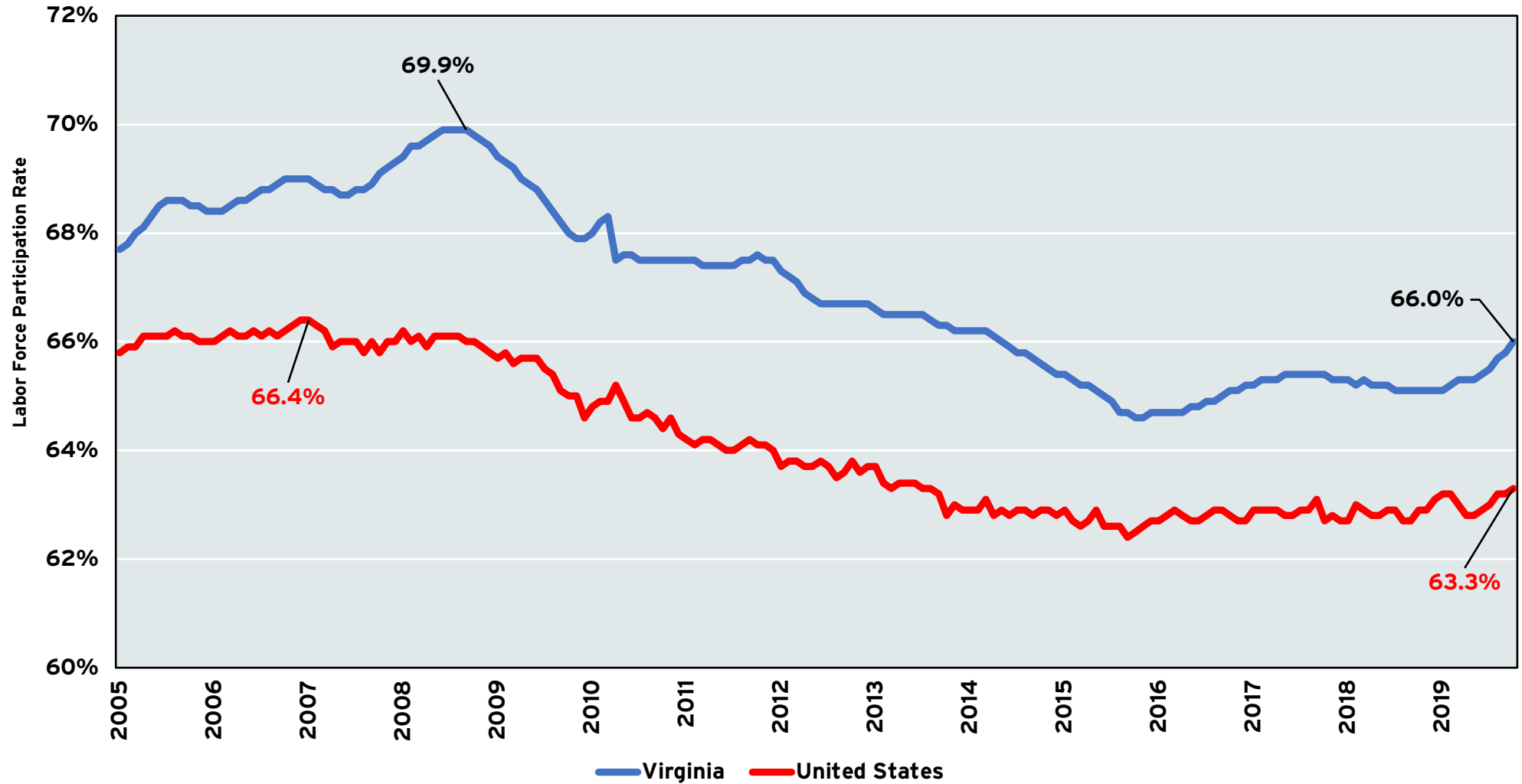
¹⁴ Eleanor Krause and Isabel Sawhill, 2017, “What we know and don't know about declining labor force participation: A review,” the Brookings Institution.

¹⁵ The reservation wage is the lowest wage rate at which an individual is willing to accept employment. Lizhong Peng, Xiaohao Guo and Chad Meyerhoefer (2018) found that Medicaid expansion has led to a “statistically significant decrease in employment of 1.3 percent one year after the Medicaid expansion. This disemployment effect is transitory and appears to primarily occur in low-wage sectors. In particular, employment returns to pre-expansion levels within two years.” In other words, immediately after Medicaid expansion, reservation wages appeared to temporarily increase. <https://www.nber.org/papers/w25105>.

¹⁶ <https://www.brookings.edu/bpea-articles/mortality-and-morbidity-in-the-21st-century/>.

GRAPH 7

LABOR FORCE PARTICIPATION RATES:
VIRGINIA AND THE UNITED STATES, JANUARY 2005 TO OCTOBER 2019



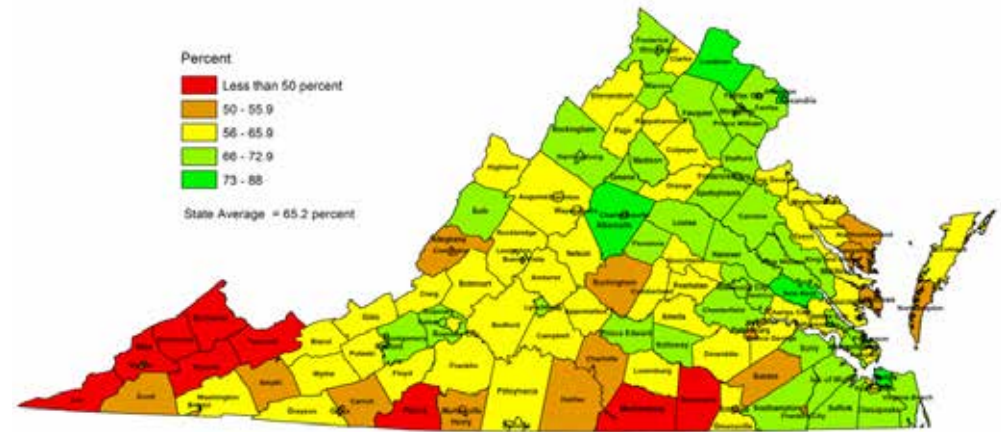
Source: Bureau of Labor Statistics, 2019. Data current as of Nov. 27, 2019, and subject to revision.

One factor that has received much attention is the rise of the “gig economy,” or “fauxmation economy.” If one drives for Uber or Lyft, delivers groceries for Postmates or DoorDash, finds jobs through Thumbtack or engages in a host of other activities, is this considered formal work? A 2016 survey of people 21 and older who were not retired found that 37% engaged in paid informal work. Even if one excluded those survey respondents who engaged solely in renting or selling activities, 20% of the respondents engaged in paid, informal work, the survey revealed.¹⁷ For those engaging in informal work, hourly wages were comparable or higher to the survey respondents’ former wages in traditional work.

The authors of the 2016 study argued that if informal workers who worked at least 20 hours a week were counted as employed, the national labor force participation rate in 2015 would have increased by 0.5% to 1%. If all informal workers were classified as employed, regardless of hours, the labor force participation rate would have been two percentage points higher in 2015. As the size of the gig economy grows, the gap between measured labor force participation and actual labor force participation is likely to widen. This is not just a measurement challenge for economists. Our labor laws and policies remain rooted in the concept of traditional employment. With an increasing number of Virginians and Americans in the gig economy or informal employment, policies and regulations must adapt to the new normal.

Labor force participation rates vary across the Commonwealth. Figure 1 displays these rates by county and independent city in 2018. Labor force participation rates were markedly lower in southwestern Virginia, with some counties observing participation rates below 50%. The highest labor force participation rates are those above 70%, seen in Northern Virginia, Richmond and parts of Hampton Roads.

FIGURE 1
LABOR FORCE PARTICIPATION BY COUNTY AND INDEPENDENT CITY: VIRGINIA, 2018



Source: Virginia Employment Commission (2019), “Labor Force Participation Rates,” <https://virginiaworks.com/labor-force-participation-rates/category/labor-force-participation-rates>

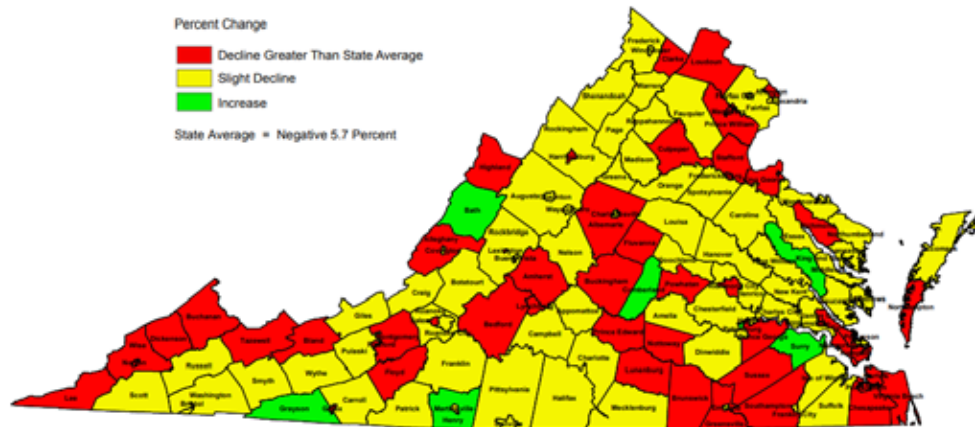
Figure 2 presents the change in labor force participation rates by county and independent city from 2013 to 2018. Over this period, Virginia’s average labor force participation rate declined by 5.7%. Fewer than 10 localities observed an increase in labor force participation rates, with the remainder of localities observing declines. Declines occurred not only in the western counties but also in Northern Virginia and Hampton Roads.

Different localities face different challenges. Unemployment is higher and labor force participation rates are lower in rural areas of the Commonwealth. A lack of economic opportunities, the decreasing importance of agriculture and manufacturing in Virginia’s economy and the devastating impact of the opioid crisis all play a role here. The challenge in these localities is to foster economic development in order to reduce unemployment rates and induce disaffected workers to return to the labor force.

¹⁷ Anat Bracha and Mary A. Burke, “Who counts as employed? Informal work, employment status, and labor market slack,” *Federal Reserve Bank of Boston Working Paper Series 16-29*, 2016.

FIGURE 2

CHANGE IN LABOR FORCE PARTICIPATION RATES BY COUNTY AND INDEPENDENT CITY, 2013-2018



Source: Virginia Employment Commission (2019), "Labor Force Participation Rates," <https://virginiaworks.com/labor-force-participation-rates/category/labor-force-participation-rates>

In many urban areas, declines in unemployment rates and the decline in labor force participation rates have exacerbated the shortage of workers. Moving disaffected workers back into the workforce has a host of benefits beyond addressing the need for labor. The challenge now is to ask the hard questions about what is to be done.

There is no magic elixir or “slam-dunk” economic development project that will solve these issues. Raising the capabilities of the existing and future workforce is a long-run effort that requires investments in K-12 schools, community colleges and public universities. Improving infrastructure should not just focus on roads. In an increasingly connected global economy, counties and cities without reliable, fast and cheap internet connections are left behind. These efforts take time and patience to bear fruit, so it is best to start sooner than later.

Businesses Continue To Add Jobs (Slowly)

As with individual employment, nonfarm payrolls (jobs) continued to expand in 2018 and into 2019. Graph 8 illustrates the number of jobs in the Commonwealth from January 2005 to October 2019. The seasonally adjusted number of jobs in Virginia set a historical record in July 2019. On the other hand, the growth in jobs has moderated somewhat in 2019. In the first eight months of 2018, year-over-year growth was over 1%. In 2019, only January saw year-over-year job growth higher than 1%, and some months approached 0.5% growth. More jobs, but at a slower rate.

Graph 9 compares the year-over-year change in jobs for Virginia and the United States. Virginia’s job growth was as strong as that of the U.S. prior to the Great Recession, and the Commonwealth’s economy did not shed as many jobs as the nation did during the recession. In the aftermath of the Great Recession and budget sequestration, Virginia’s job growth faltered when compared to that of the United States. Job growth in Virginia has, with few exceptions, been below that of the national average this decade. Focusing in on 2019, it appears that year-over-year job growth in the U.S. and Virginia is decelerating in the latter half of the year.

Graph 10 presents real average hourly earnings for Virginia and the United States for the period January 2007 to October 2019. While real average hourly earnings remained higher in Virginia than the nation, the gap between the Commonwealth and the U.S. has narrowed in recent years. It would appear that even with a tight labor market, workers in Virginia (on average) have not seen large increases in their paychecks in recent years. If labor markets are tightening in the Commonwealth, then we would reasonably expect that earnings would increase and likely outpace inflation.¹⁸ We are interested in **real average hourly earnings** because real earnings control for the impact of inflation.

Economists continue to explore the puzzle of why real earnings have not risen faster in the current economic expansion. One possible explanation is there is a large reserve of labor outside the labor force

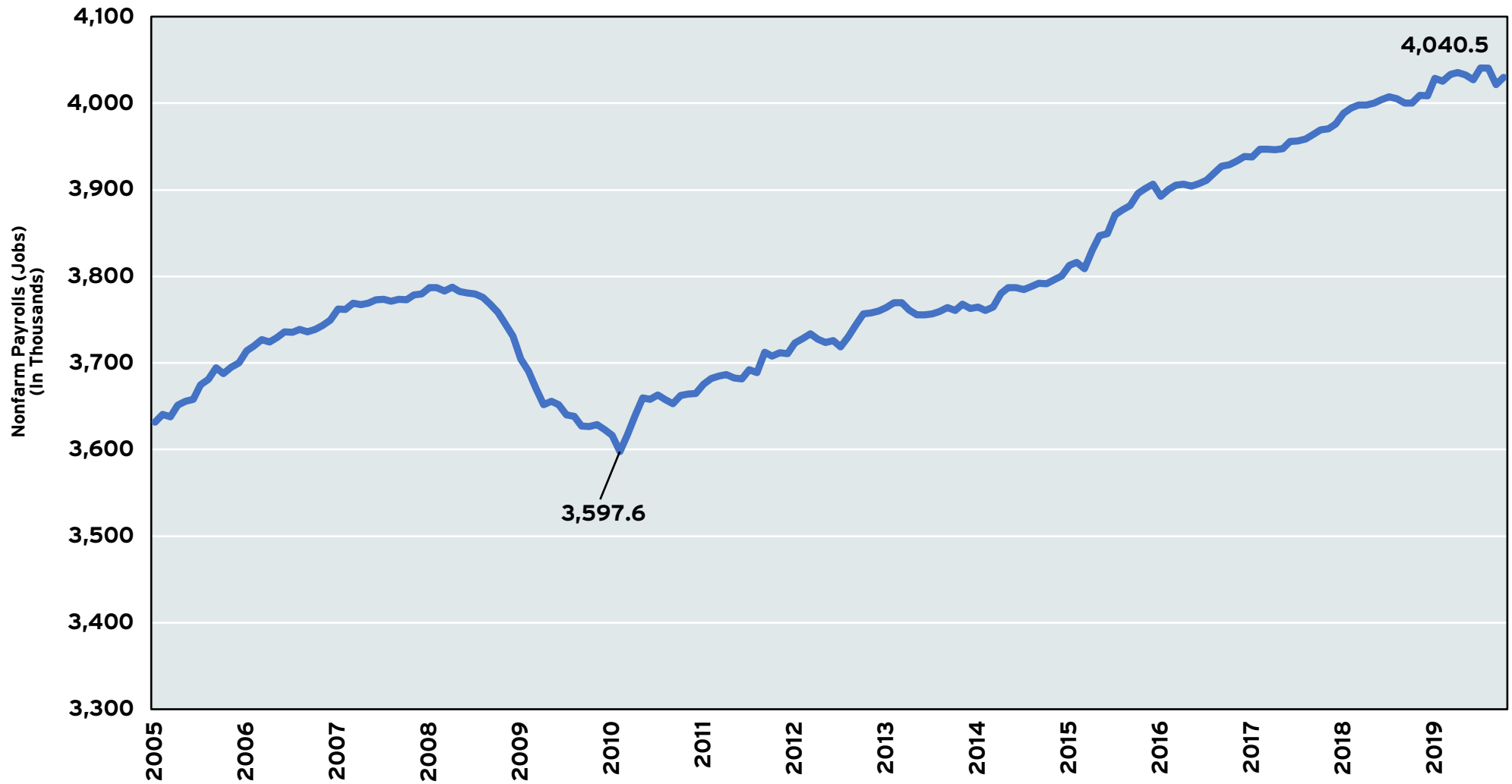
¹⁸ Average hourly earnings reflect not only changes in hourly and incentive wage rates, but also variable factors such as overtime and late-shift work. For more information, see <https://www.bls.gov/opub/hom/pdf/ces-20110307.pdf>.

and employers have used this development to restrain the growth in earnings. The growth of contract and informal employment and the decline of unions may also restrain wage growth. Automation plays a role here, as well, displacing workers and reducing their ability to negotiate for higher wages. Regardless of the reasons, this economic expansion has not led to the increases in earnings observed in previous periods of economic growth. Is this stagnation in workers' earnings an aberration? We will have to wait a bit longer to get our answer to this question.



GRAPH 8

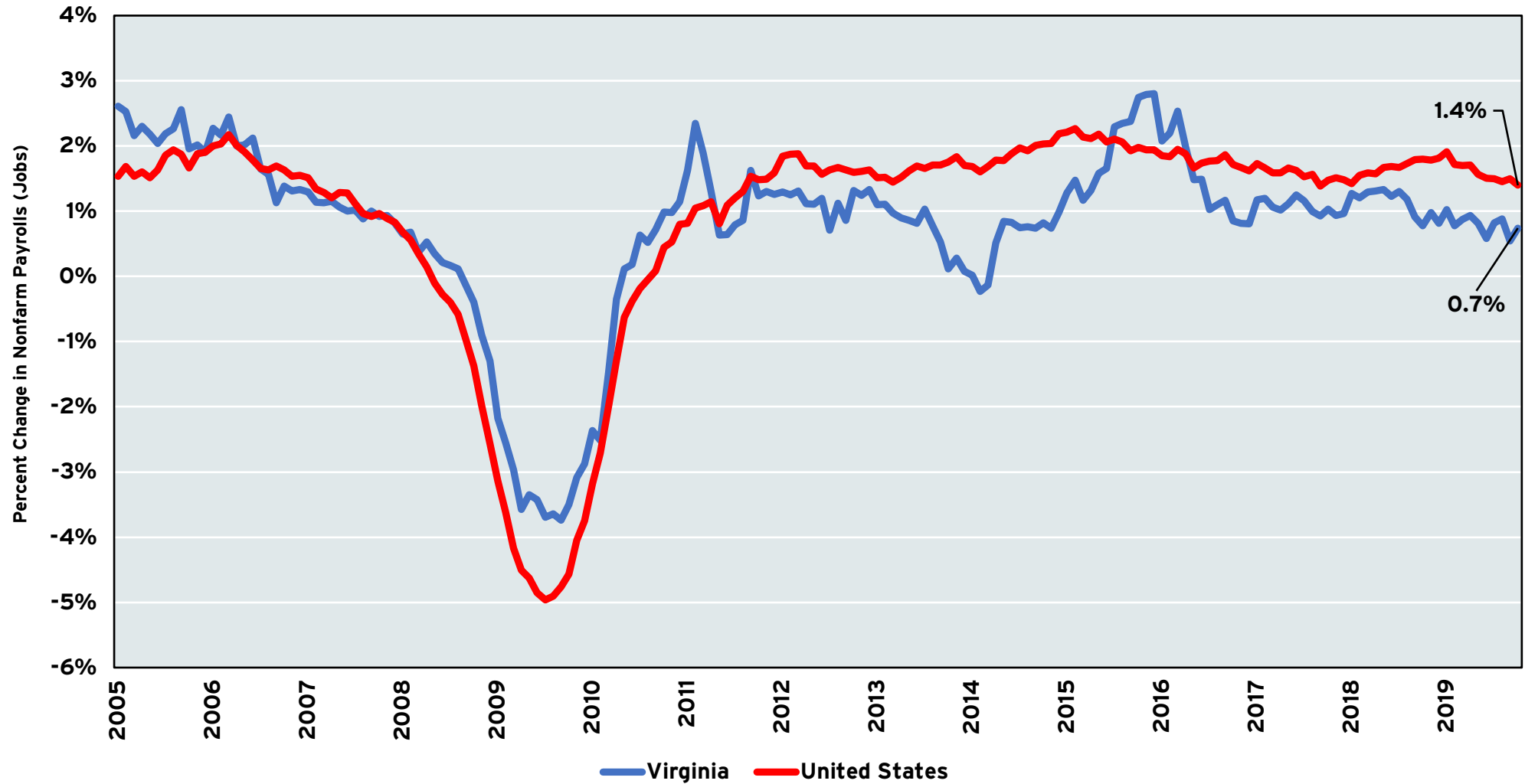
SEASONALLY ADJUSTED NONFARM PAYROLLS (JOBS):
VIRGINIA, JANUARY 2005 TO OCTOBER 2019



Source: Bureau of Labor Statistics, 2019. *Data current as of Nov. 27, 2019, and subject to revision.

GRAPH 9

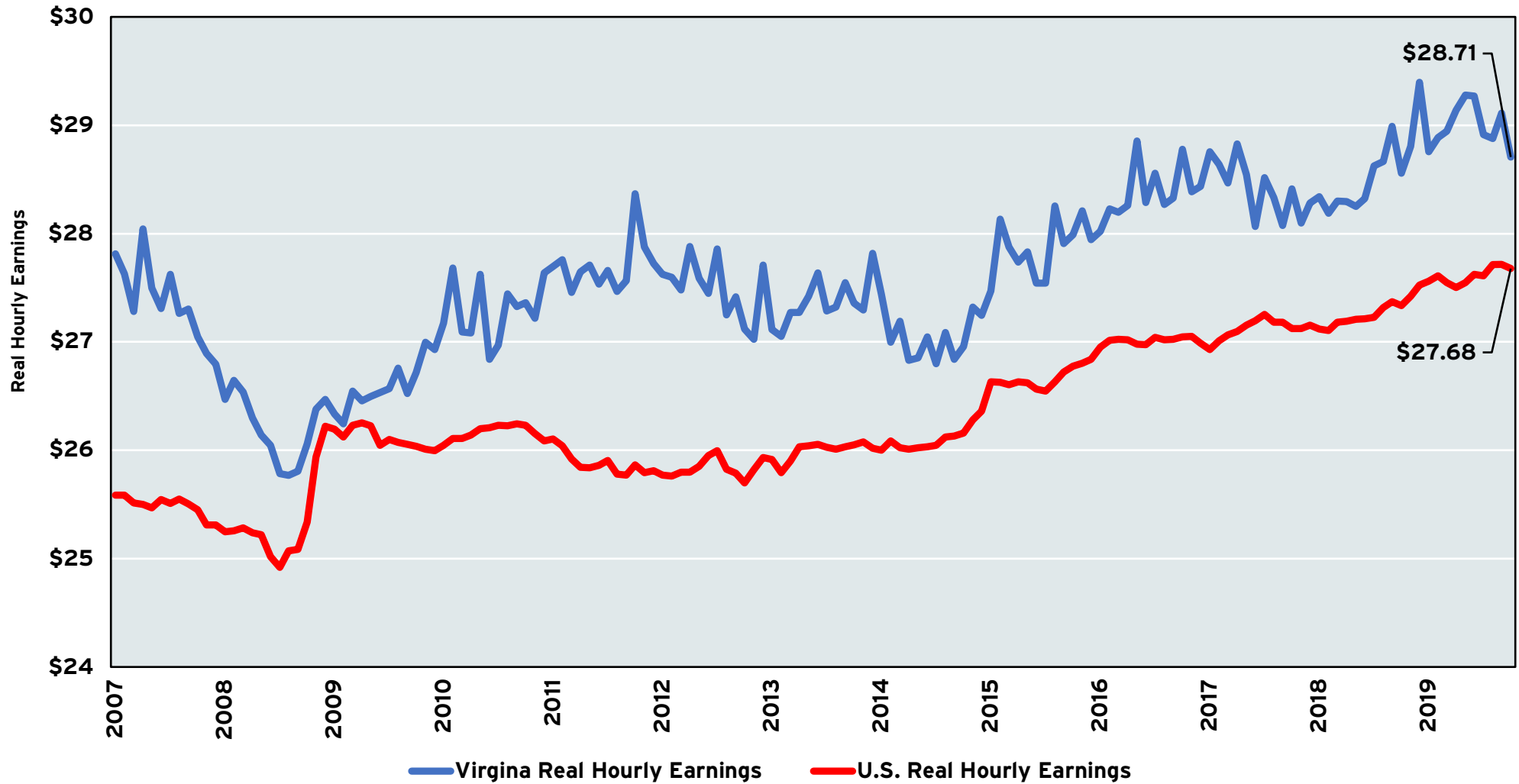
**YEAR-OVER-YEAR CHANGE IN SEASONALLY ADJUSTED NONFARM PAYROLLS (JOBS):
VIRGINIA AND THE UNITED STATES, JANUARY 2005 TO OCTOBER 2019**



Source: Bureau of Labor Statistics, 2019. *Data current as of Nov. 27, 2019, and subject to revision.

GRAPH 10

**SEASONALLY ADJUSTED REAL AVERAGE HOURLY EARNINGS IN 2019 DOLLARS:
VIRGINIA AND THE UNITED STATES, JANUARY 2007 TO OCTOBER 2019**



Source: Bureau of Labor Statistics, 2019. The Consumer Price Index for All Urban Consumers is used to obtain real average hourly earnings and is indexed to be 100 in January 2019. Data current as of Nov. 27, 2019, and subject to revision.

Sectoral Growth In Virginia

Table 3 reveals that the share of private industries in real GDP grew from 80.1% in 2000 to 82.1% in 2018. The increasing contribution of private industries to economic activity in the Commonwealth suggests that the economy is slowly diversifying.¹⁹

Table 3 also shows the contributions of each sector to real GDP for 2000, 2010 and 2018. Two sectors – finance, insurance, real estate, rental and leasing, and professional and business services – accounted for nearly 40% of real GDP in Virginia in 2018. The professional and business services sector continued to increase in size, exceeding 20% of real GDP in 2018. The share of real GDP contributed by government and government enterprises in 2018 was almost 18%, down from 20% in 2000.

From 1997 to 2016, the government and government enterprises sector was the largest sector in terms of economic activity in Virginia. However, in 2017, the professional and business services sector eclipsed the government and government enterprises sector. In 2018, the finance, insurance, real estate, rental and leasing sector was approximately the same size in terms of economic activity as the government sector. The growth of these two sectors once again reflects the reality that changes in federal spending reverberate throughout Virginia.

Table 3 sheds light on the growth of professional and business services. Within this sector, employment grew rapidly in the professional, scientific and technical services sub-sector from 2000 to 2010, though it grew at a slower pace from 2010 to 2018. Administrative and support services growth slowed a bit from 2000 to 2010 but increased from 2010 to 2018. Management of companies and enterprises, while growing absolutely over time, has fallen as a percentage of nonfarm employment. One might expect this category to grow slower than total nonfarm employment, as these jobs tend to be highly skilled and well compensated.

Let's compare this to the government and government enterprises sector as displayed in Table 3. Federal, state and local government employment

were all higher in 2018 than 2000; however, military employment declined significantly over this period. Military employment fell from approximately 168,000 in 2000 to about 152,000 in 2010, and then to approximately 136,000 in 2018. The gains in federal, state and local employment offset these losses, but the slow growth in overall employment in this sector meant that Virginia's share of total nonfarm jobs fell over the period.



¹⁹ We recognize that federal transfer payments to individuals (Social Security), federal payments for medical services (Medicare and Medicaid) and federal contracts to private businesses will increase the sectoral contributions of private businesses, even though the origination of this activity is the federal government.

TABLE 2

**SECTORAL CONTRIBUTIONS TO REAL GDP:
VIRGINIA, 2000, 2010 AND 2018**

SECTOR	2000	2010	2018
Agriculture, forestry, fishing and hunting	0.6%	0.4%	0.4%
Mining, quarrying and oil and gas extraction	0.9%	0.6%	0.4%
Utilities	1.7%	1.5%	1.5%
Construction	6.2%	3.5%	3.4%
Manufacturing	11.6%	9.6%	8.8%
Wholesale trade	4.7%	4.3%	4.5%
Retail trade	5.6%	5.1%	5.4%
Transportation and warehousing	2.8%	2.5%	2.5%
Information	3.8%	4.4%	4.3%
Finance, insurance, real estate, rental and leasing	16.7%	17.9%	17.8%
Professional and business services	13.0%	18.5%	20.5%
Educational services, health care and social assistance	5.9%	7.1%	7.4%
Arts, entertainment, recreation, accommodation and food services	3.7%	3.1%	3.0%
Government and government enterprises	20.0%	18.9%	17.9%
Addendum: Total private industries	80.1%	81.1%	82.1%
Addendum: Real GDP in millions of chained 2012 dollars	\$346,161	\$437,268	\$476,388

Source: Bureau of Economic Analysis, Gross Domestic Product by State, 2019. Table SAGDP9N Real GDP by State in millions of chained 2012 dollars.

TABLE 3

**SELECTED SECTORAL EMPLOYMENT AS A PERCENTAGE OF TOTAL NONFARM EMPLOYMENT:
VIRGINIA, 2000, 2010 AND 2018**

INDUSTRY	2000	2010	2018
PROFESSIONAL AND BUSINESS SERVICES	16.1%	18.1%	18.5%
<i>Professional, scientific and technical services</i>	372,566 (8.6%)	508,235 (10.8%)	572,803 (10.9%)
<i>Management of companies and enterprises</i>	72,978 (1.7%)	76,370 (1.6%)	80,830 (1.5%)
<i>Administrative and support services</i>	251,888 (5.8%)	266,387 (5.7%)	321,380 (6.1%)
GOVERNMENT AND GOVERNMENT ENTERPRISES	18.6%	18.6%	16.8%
<i>Federal civilian</i>	165,746 (3.8%)	191,161 (4.1%)	199,276 (3.8%)
<i>Military</i>	168,189 (3.9%)	152,360 (3.2%)	136,468 (2.6%)
<i>State government</i>	151,445 (3.5%)	156,188 (3.3%)	166,587 (3.2%)
<i>Local government</i>	321,759 (7.4%)	374,578 (8.0%)	383,405 (7.3%)
Addendum: Total nonfarm employment	4,337,959	4,689,327	5,275,447

Source: Bureau of Economic Analysis (2019). Table SA25N, Total Full-Time and Part-Time Employment by NAICS Industry.

A Rising Tide Of Federal Government Spending, Deficits And Debt

The presence of the federal government in Virginia ranges from government agencies and departments in Northern Virginia to aircraft carriers and military personnel stationed in Hampton Roads. For better or worse, Virginia’s economic performance is influenced by decisions about the size and scope of the federal government. It should be no surprise that a recent analysis by the Nelson A. Rockefeller Institute of Government (the State University of New York’s public policy research arm) estimated that Virginia ranks first for the net benefits it receives from the federal government.²⁰

The Rockefeller Institute defined the balance of payments as federal spending in each state minus the amount of revenue paid by state residents and other economic agents to the federal government. A state with a positive balance of payments received more spending than its residents and businesses paid in taxes to the federal government (and vice versa).

Table 6 displays the top five states in terms of the absolute balance of payments and per capita balance of payments. For fiscal year 2017, the Rockefeller Institute estimated that Virginia received approximately \$87.2 billion more than its residents and business paid in federal taxes, or \$10,301 per capita. Virginia’s estimated absolute net benefits from the federal government were almost twice that of the next state (Florida). On a per capita net payment basis, the Commonwealth “earned” almost \$1,200 more than the next highest state, Kentucky.

20 Laura Schultz and Michelle Cummings. “Giving or Getting? New York’s Balance of Payments with the Federal Government: 2019 Report,” Jan. 8, 2019, <https://rockinst.org/issue-areas/fiscal-analysis/balance-of-payments-portal/>.
 21 The federal government defines a contract as an agreement between the federal government and a prime recipient to provide goods and services for a fee.
 22 The federal government defines a direct payment as a cash payment made by the federal government to an individual, a private firm or another private institution.
 23 The federal government defines a grant as an award of financial assistance from a federal agency to a recipient to carry out a public project or service authorized by a United States law. Unlike loans, grants do not need to be repaid. Most grants are awarded to state and local governments.

TABLE 4

TOP FIVE STATES IN BALANCE OF PAYMENTS WITH THE FEDERAL GOVERNMENT, FISCAL YEAR 2017

RANK	STATE	ABSOLUTE BALANCE OF PAYMENTS (IN BILLIONS)	STATE	PER CAPITA BALANCE OF PAYMENTS
1	Virginia	\$87.2	Virginia	\$10,301
2	Florida	\$45.9	Kentucky	\$9,145
3	Kentucky	\$40.7	New Mexico	\$8,692
4	Maryland	\$36.5	West Virginia	\$7,283
5	North Carolina	\$34.5	Alaska	\$7,048

Source: Laura Schultz and Michelle Cummings, “Giving or Getting? New York’s Balance of Payments with the Federal Government: 2019 Report”

An award is defined as money the federal government has promised to pay a recipient. Funding may be awarded to a company, organization, government or individual. An obligation is a binding agreement between the federal government and the recipient of an award to spend the award now or in the future.

Contracts²¹ are typically the largest category of federal spending in Virginia, followed by direct payments²² and grants.²³ Direct payments are typically made to individuals and are largely determined by law. The most common direct payment is Social Security. Since the law typically sets eligibility and payments that are made directly to individuals, direct payments are largely outside the purview of the annual budgeting process and are considered mandatory spending. Contracts and grants, on the other hand, are typically the result of an annual appropriations bill. Unlike mandatory spending, contracts and grants are (for the most part) determined on an annual basis and are considered discretionary spending.

Table 5 illustrates how federal funds flowed into the Commonwealth from FY 2015 to FY 2018. Contract spending continued to be the largest category of federal awards in Virginia, followed by direct payments. Regarding direct payments, most of these were to individuals; the Social Security Administration accounted for over 80% of all federal government direct payment expenditures in the Commonwealth in FY 2018. Per capita federal awards to the Commonwealth were \$12,856 in FY 2018, higher than Maryland (\$11,868), West Virginia (\$9,339) and North Carolina (\$6,973).²⁴

Graph 11 summarizes total federal awards, Department of Defense awards and non-DOD awards made to individuals or organizations in Virginia from FY 2008 to FY 2018. Total federal awards in Virginia rose by \$10.6 billion from FY 2016 to FY 2017 and \$8.9 billion from FY 2017 to FY 2018. It should be no surprise that the increasing levels of federal awards from FY 2016 to FY 2018 were closely correlated with improving economic growth in the Commonwealth.

Of the \$108.9 billion in total federal awards in Virginia in FY 2018, approximately 54% were for federal contracts (\$58.3 billion), up slightly from approximately 53% of all federal awards in FY 2017 (Graph 12). Two observations emerge from the contract data. First, the level of federal contracts peaked in FY 2011 and declined through FY 2015. Total federal contract awards started to increase in FY 2016 and almost returned to the FY 2011 peak in FY 2018. Second, DOD contract awards declined this decade, falling almost 15% from FY 2011 to FY 2018. The most recent data suggest that contract awards continued to increase in FY 2019. If so, FY 2019 awards and, more specifically, contracts, will exceed the FY 2011 peak. However, even if this were to occur, the real (inflation-adjusted) value of federal contracts in Virginia has declined this decade.

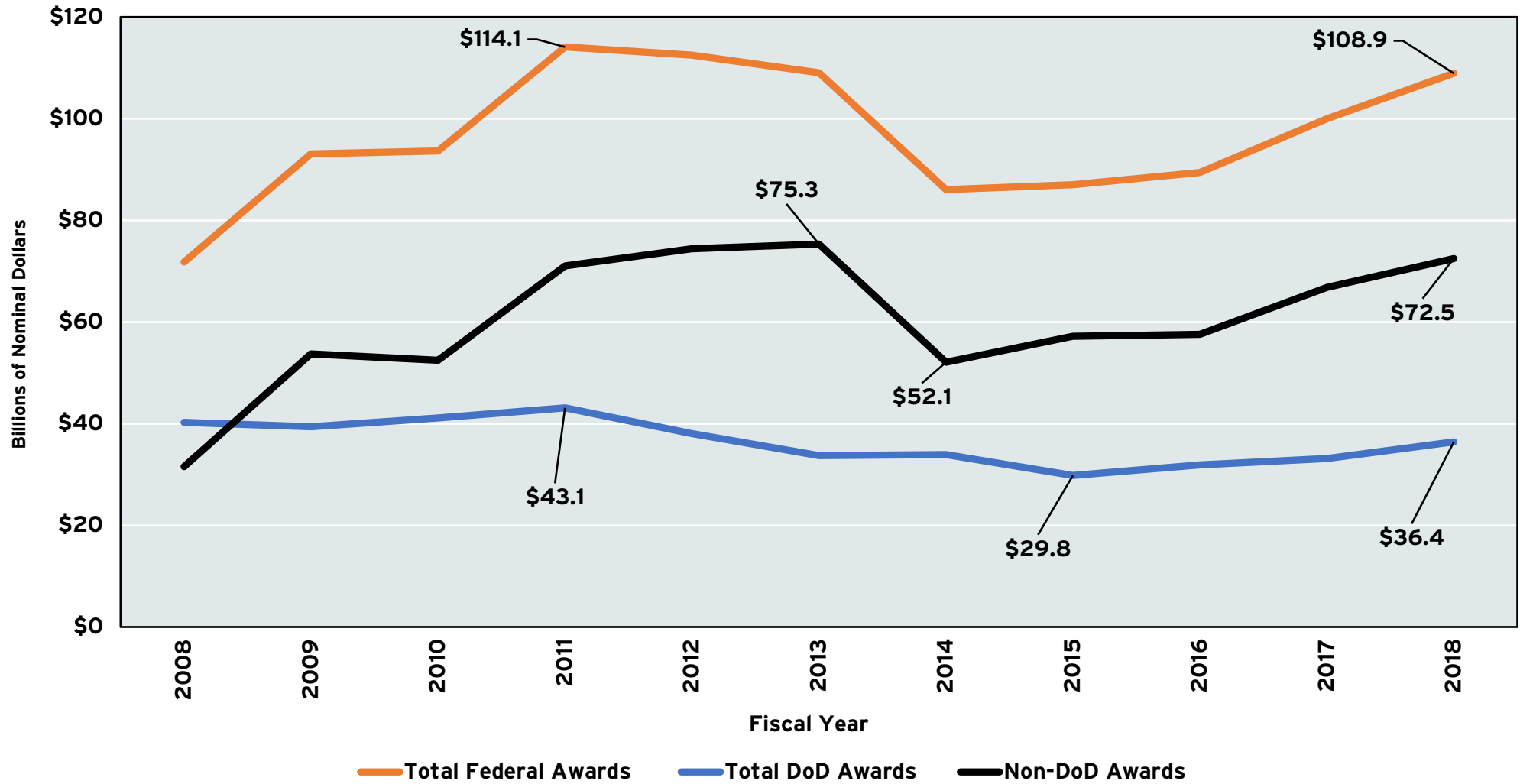
YEAR	FY 2015	FY 2016	FY 2017	FY 2018
Contracts	\$48.7	\$50.6	\$52.9	\$58.3
Direct payments	\$27.8	\$29.5	\$33.9	\$35.4
Grants	\$9.7	\$9.0	\$11.3	\$12.2
Other financial assistance	\$0.2	\$0.3	\$1.7	\$1.7
Loans	\$0.6	\$0.01	\$0.1	\$1.2
Total	\$87.0	\$89.4	\$100.0	\$108.9

Source: USAspending.gov. Data are current as of Oct. 21, 2019, and subject to revision. *We note that the FY 2019 data continued to be revised, as the fiscal year concluded on Sept. 30, 2019, and are not included in the table. Categories may not sum to the total due to rounding and miscellaneous awards.

²⁴ USAspending.gov. Data are current as of Oct. 21, 2019, and subject to revision. We note that the FY 2019 data continued to be revised, as the fiscal year concluded on Sept. 30, 2019, and thus are not included in the analysis.

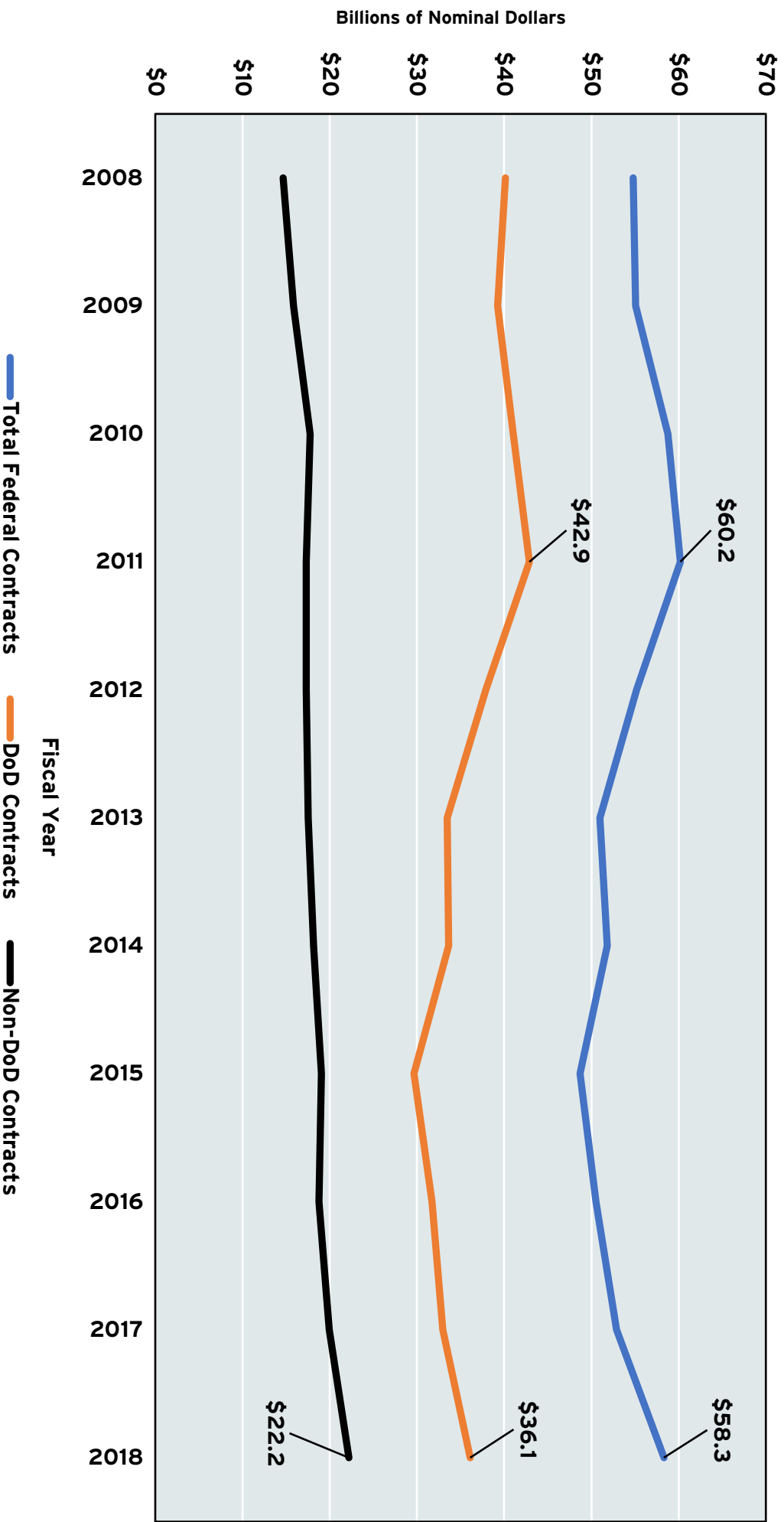
GRAPH 11

**NOMINAL TOTAL FEDERAL, DOD AND NON-DOD AWARDS:
VIRGINIA, FY 2008 TO FY 2018***



Source: USAspending.gov. Data are current as of Oct. 21, 2019, and subject to revision. *We note that the FY 2019 data continued to be revised, as the fiscal year concluded on Sept. 30, 2019, and are not included in the analysis.

GRAPH 12
NOMINAL TOTAL FEDERAL, DOD AND NON-DOD CONTRACTS:
VIRGINIA, FY 2007 TO FY 2018*



Source: USAspending.gov. Data are current as of Oct. 21, 2019, and subject to revision. *We note that the FY 2019 data continued to be revised, as the fiscal year concluded on Sept. 30, 2019, and are not included in the analysis.

We also need to note that the federal government entered FY 2020 under a continuing resolution (CR). A CR freezes spending levels (with some small variances) to those of the previous fiscal year and typically prohibits new program starts. The promised increases in DOD spending in FY 2020 require the timely passage of the DOD appropriations bill by Congress, else Virginia's economy may enter 2020 in a weaker position than expected.

The recent agreement to extend the debt ceiling to mid-2021 and raise the discretionary spending caps, on the surface, is welcome news for the Commonwealth. The Bipartisan Budget Act of 2018 set the national defense discretionary base budget authority cap at \$647 billion for FY 2019. The Bipartisan Budget Act of 2019 then raised the national defense discretionary caps to \$667 billion for FY 2020 and \$672 for FY 2021.²⁵ These increases will lead to a rise in DOD expenditures on maintenance, operations, personnel and procurement in Virginia, assuming timely passage of the requisite appropriations acts. The question is: How long can the federal government sustain its current fiscal path?

Graph 13 displays the Congressional Budget Office's projections of the federal deficits for FY 2019 to FY 2029. Over the last several years, a series of bipartisan budget agreements has boosted discretionary spending, while mandatory spending has continued to rise as the population ages. The Tax Cuts and Jobs Act of 2017 reduced corporate taxes permanently and individual income taxes through the mid-2020s. The cumulative effect of these decisions has been a significant erosion of the fiscal position of the federal government. If nothing changes, the CBO projects the federal government will run trillion-dollar deficits through 2029.

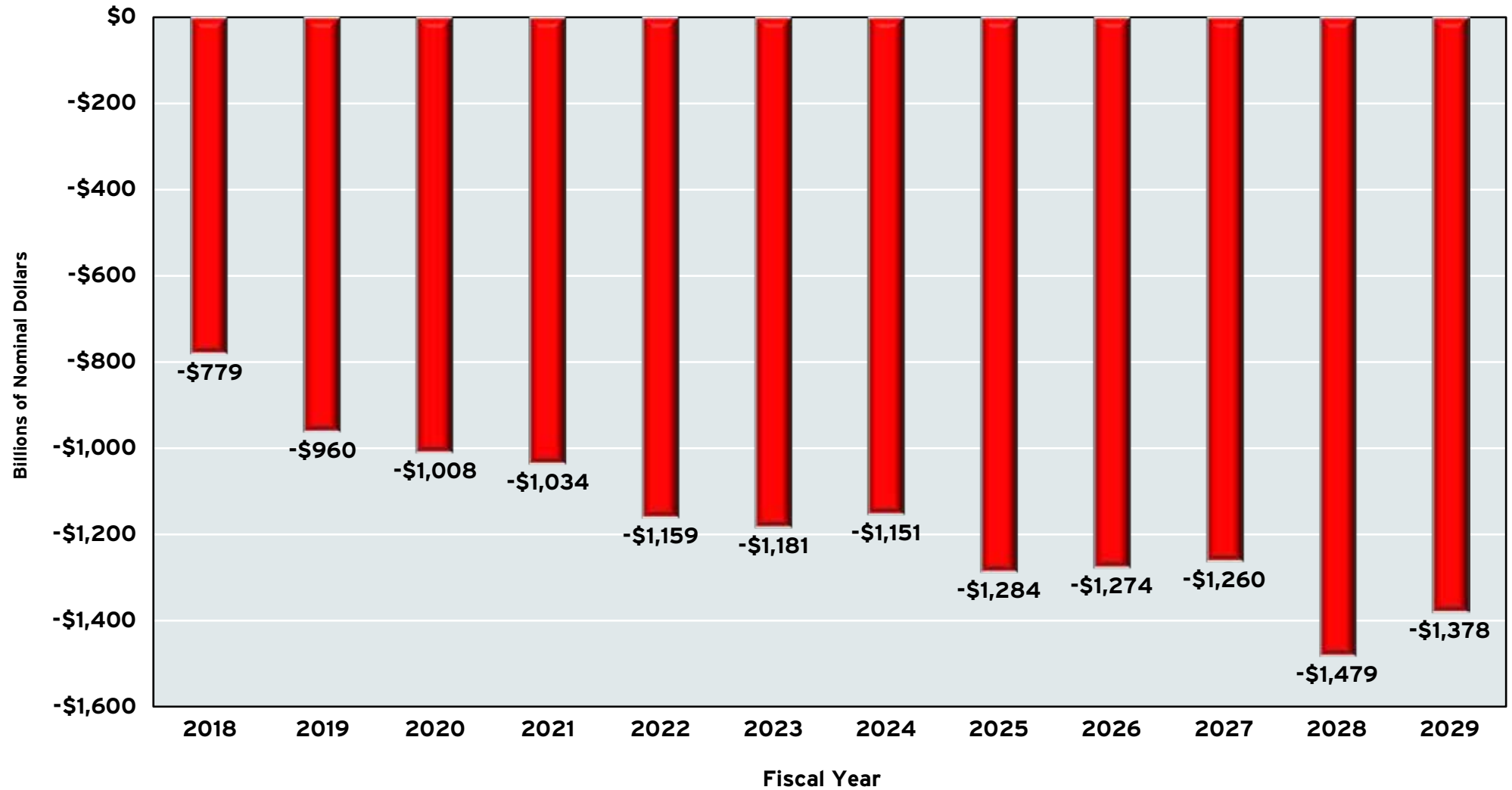
Deficits and debt matter. It's not a question of whether a recession will occur, but when it will occur. A slowing national economy will reduce revenue growth and increase demands for public services, swelling the federal deficit. At some point, the bill will come due and the federal government will have to increase taxes and cut expenditures to right its fiscal ship.

Federal spending is a cornerstone of the Virginia economy. As the past few years have demonstrated, increases in federal spending have helped Virginia's economy pick up the pace. Yet, Virginia is also vulnerable to decisions (and tweets) emanating from Congress and the White House. The Commonwealth cannot and should not completely transition away from its reliance on federal government spending. Instead, it should seek out opportunities to encourage private-sector growth by leveraging its strengths and relationships with the federal government.

²⁵ Congressional Research Service, "The defense budget and the Budget Control Act: Frequently asked questions," Sept. 30, 2019.

GRAPH 13

**ACTUAL AND PROJECTED FEDERAL DEFICITS,
FY 2019 TO FY 2029***



Sources: Congressional Budget Office (2019), Update to the Budget and Economic Output: 2018 to 2029, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Federal deficits in nominal dollars. Off-Budget includes the revenue and outlays of the Social Security Trust Funds and the net cash flow of the U.S. Postal Service. *Actual deficit for FY 2018 and projected deficits for FY 2019 to FY 2029.

Troubling Signs In Establishment Data

An establishment is the single physical location where business is conducted or where services or industrial operations are performed. A state’s economic activity is not only reflected in the value of output and the number of people employed by businesses, but also in whether the number of establishments is growing over time. States displaying robust economic growth will display gains in output, employment and establishments. States that are performing relatively poorly will display slow growth or declines in output, employment and establishments.

At the start of the century, establishment growth in Virginia reflected improving economic performance. From 2000 to 2007, the number of establishments in Virginia increased over 14% (Graph 14). As one might expect, the number of establishments declined during the Great Recession, reaching its nadir in 2011. At the end of 2016 (the most recent data), there were still about 1,000 fewer establishments in Virginia than the peak observed prior to the Great Recession.

More troubling is the relative decline of Virginia when compared to the United States. Table 6 illustrates that Virginia’s establishment growth was faster than that of the nation in previous decades. Not so for the current decade. The lackluster performance of the Virginia economy is apparent in the slow growth of the number of establishments. Given the recent upticks in economic activity in the Commonwealth, it may turn out that the number of establishments surged in the state in recent years. We will only be able to determine this in the coming years due to significant lags in the data.

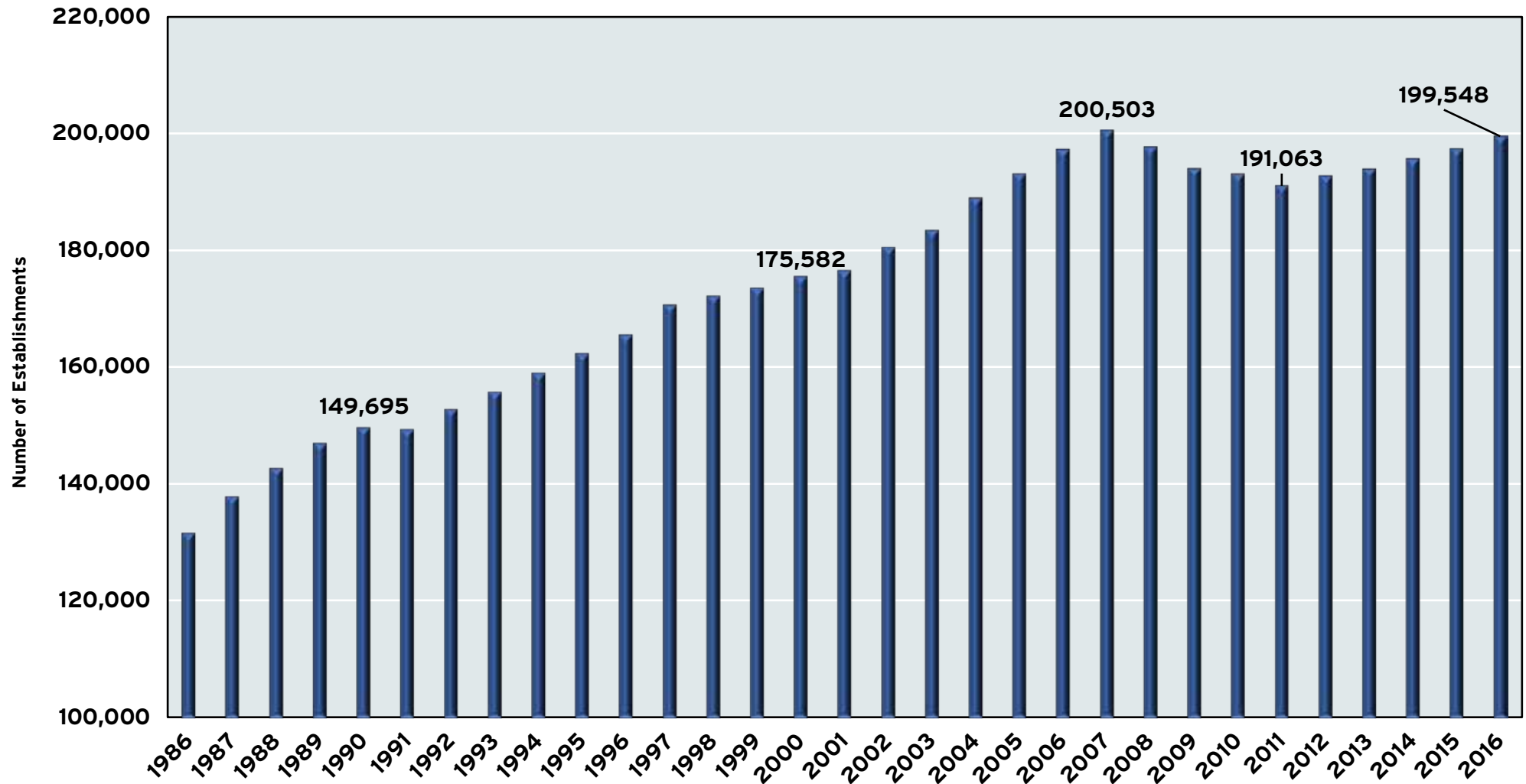
TABLE 6

ANNUAL AVERAGE ESTABLISHMENT GROWTH, VIRGINIA AND THE UNITED STATES

	ANNUAL ESTABLISHMENT GROWTH 1990-1999	ANNUAL ESTABLISHMENT GROWTH 2000-2009	ANNUAL ESTABLISHMENT GROWTH 2010-2016
United States	1.4%	0.6%	0.8%
Virginia	1.7%	1.1%	0.6%

Sources: U.S. Census Bureau, County Business Patterns, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. The growth rate is the compound annual growth rate.

GRAPH 14
TOTAL ESTABLISHMENTS:
VIRGINIA, 1986-2016



Sources: U.S. Census Bureau, County Business Patterns, and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Virginia Compared To Other States

Comparing Virginia's economic performance with that of other states provides an objective benchmark of how the Commonwealth is doing. Yes, Virginia suffered through the blows of the Great Recession and federal budget sequestration, but other states could point to similar economic shocks. Table 7 illustrates that Virginia's economic performance, as measured by growth in real GDP, fell from 20th in 2010 to a low of 47th in 2014. Our recent surge in economic activity is reflected in the data, with the Commonwealth being ranked 20th in 2017 and 13th in 2018. Last year

was the first time in over a decade that Virginia ranked among the top 15 states in terms of economic performance.

What should also be clear from Table 7 is that some states (Alaska, North Dakota, Texas) experienced natural resource booms and busts this decade. North Dakota provides an illustrative example, with the highest rates of growth from 2010 to 2012 and the most significant rates of contraction from 2015 to 2017. Federal government spending acts in a similar fashion for the Virginia economy. The stagnation of spending in the early part of the decade constrained growth in the Commonwealth, while the recent surges in federal spending are closely correlated with Virginia's improving economic fortunes.



TABLE 7**ANNUAL REAL GDP GROWTH AND REAL GDP GROWTH RANKINGS: VIRGINIA AND SELECTED STATES, 2010-2018**

YEAR	VIRGINIA RANK	HIGHEST-PERFORMING STATE	LOWEST-PERFORMING STATE
2010	20 (2.7%)	North Dakota (7.6%)	Wyoming (-3.8%)
2011	35 (1.0%)	North Dakota (11.3%)	Louisiana (-5.4%)
2012	29 (0.8%)	North Dakota (22.4%)	Wyoming (-2.4%)
2013	35 (0.4%)	Texas (4.3%)	Alaska (-5.1%)
2014	47 (-0.2%)	Delaware (7.7%)	Alaska (-2.8%)
2015	28 (1.9%)	Oregon (5.3%)	North Dakota (-3.0%)
2016	38 (0.3%)	Oregon (4.6%)	North Dakota (-7.1%)
2017	20 (1.8%)	Washington (4.1%)	North Dakota (-1.6%)
2018	13 (2.8%)	Washington (5.7%)	Alaska (-0.3%)

Source: Bureau of Economic Analysis, "Gross Domestic Product by State, Various Years." Growth rates of real GDP are in parentheses.

Of course, Virginia’s improvement in economic performance should not be entirely attributed to increases in federal government spending. While no measure of business climate is perfect, CNBC annually scores all 50 states on more than 60 measures of competitiveness. Although a state’s rank may fluctuate year to year, the trend over time is illustrative of whether the business climate is improving or deteriorating, relative to other states.

Table 8 reveals that Virginia consistently ranked among the top three states from 2007 to 2012. The Commonwealth then proceeded to slide in the rankings, falling to 13th in 2016. As other states aggressively moved to improve their business climates, Virginia appeared to be satisfied with the status quo. Concerted action to address its business climate helped Virginia climb back into the top 10 in 2017 and the Commonwealth regained the top position in the rankings in 2019.

Yet, the Commonwealth should not rest on its laurels. In Graph 15, we present individual rankings for the top four states in the 2019 CNBC index. Lower ranks reflect more desirable rankings. The Commonwealth ranked first in the workforce category but was outside the top 10 in the other primary categories. This is a change from 2018, when Virginia ranked first in infrastructure, first in economy and was in the top 10 in workforce and technology. A significant warning sign is the relatively poor ranking in the cost of doing business. It is certainly time for Virginia to examine its tax structure and determine whether there are taxes, such as the Business, Professional and Occupational License Tax (BPOL), which have significant variation across localities and could be readily replaced by a slight increase in the corporate tax rate.

A familiar story emerges from the CNBC rankings. Long-run investments in workforce development and infrastructure are more likely to pay off than massive bets on “one-off” projects. These patient policies establish the foundation for long-term growth. One only needs to look south to the success of the Research Triangle in North Carolina to see how sound, long-term investments can pay off in terms of economic development.

TABLE 8

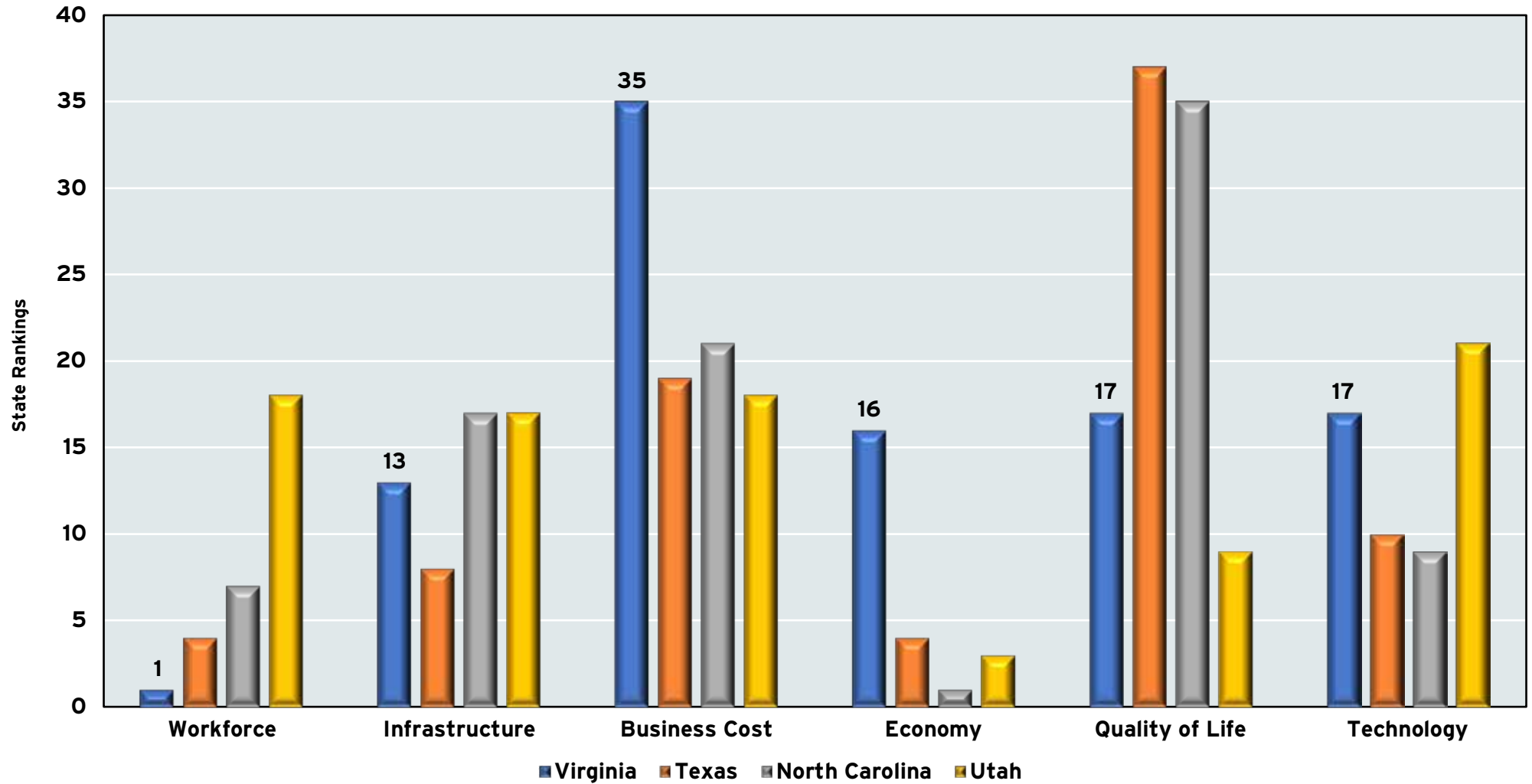
CNBC: AMERICA'S TOP STATES FOR BUSINESS, 2007-2019

YEAR	VIRGINIA	HIGHEST-PERFORMING STATE	LOWEST-PERFORMING STATE
2007	1	Virginia	Alaska
2008	2	Texas	Alaska
2009	1	Virginia	Alaska
2010	2	Texas	Alaska
2011	1	Virginia	Rhode Island
2012	3	Texas	Rhode Island
2013	5	South Dakota	Hawaii
2014	8	Georgia	Rhode Island
2015	12	Minnesota	Hawaii
2016	13	Utah	Rhode Island
2017	7	Washington	West Virginia
2018	4	Texas	Alaska
2019	1	Virginia	Rhode Island

Source: CNBC, “America’s Top States for Business, Various Years”

GRAPH 15

CNBC BUSINESS RANKINGS BY CATEGORY: TOP FOUR STATES, 2019



Source: CNBC, "America's Top States for Business, 2019"

Final Thoughts

Virginia is poised to grow for a fifth consecutive year and its growth may exceed 2% for the second consecutive year. Improvements in economic activity are reflected by growth in the labor force, individual employment, jobs and, to a lesser extent, real hourly earnings. The Commonwealth's fiscal situation has continued to improve but, as Virginia Secretary of Finance Aubrey Layne noted earlier this year, a recession in the next 12 to 18 months is "more likely than not."²⁶

As markets have become increasingly pessimistic about the prospects for growth in 2020, it is time for Virginia to take stock. The Commonwealth's labor markets are at (or beyond) full employment and when appropriations bills are finally passed, the federal government is likely to spend more money in Virginia in FY 2020 than it did in previous fiscal years. One might look at the economic data and conclude that Virginia is poised to leap into the next decade. Another might look at the same data and conclude the leap could be off the proverbial economic cliff into a recession.

If there is one thing we can (hopefully) agree upon, it is that we live in uncertain times. Equities markets have been roiled by incomplete (or false) information about trade talks between China and the United States.²⁷ Even though median household income in the nation reached almost \$62,000 in 2018, income and wealth inequality continued to climb, reaching levels not seen in the past 60 years.²⁸ While some will point to social media for much of the coarseness of our political discourse,²⁹ history suggests that politics have always been personal.

The Commonwealth has performed well in recent years and should be commended for improving its business climate. Virginia, however, must resist the lures of quick fixes, whether it is casinos to address the fiscal shortcomings of local governments or publicly subsidized sports stadiums for professional sports franchises.

As we have noted, it would be more prudent to improve the regulatory climate, reform the tax system and make wise investments in infrastructure, rural broadband and K-12 education. These efforts will take time to bear fruit but will position Virginia for growth in the coming years. Patience is indeed a virtue when it comes to economic development.

A storm is coming, and when we come through it, we will be different. How we prepare now for the storm will, in part, determine how resilient we are in times of economic trouble. Robert Baden-Powell, the founder of the worldwide Boy Scout movement, wrote that the motto of the Scouts was "Be Prepared." When asked what they should be prepared for, he famously replied, "Why, for any old thing."³⁰ Virginia should take this advice to heart.

26 Fadel Allassan, "Virginia finance chief says recession likely: 'We just need to be prepared,'" *Virginia Mercury*, Aug. 16, 2019, <https://www.virginiamercury.com/2019/08/16/virginia-finance-chief-says-recession-likely-we-just-need-to-be-prepared/>.

27 Sarah Ponczek and Vildana Hajric, "Nonsense market moves have investors 'exhausted' by trade talks," *Bloomberg*, Oct. 10, 2019.

28 Jacob Knutson, "U.S. income inequality surges to highest level in 50 years," *Axios*, Sept. 26, 2019.

29 Jay David Bolter, "Social media are ruining political discourse," *The Atlantic*, May 19, 2019, <https://www.theatlantic.com/technology/archive/2019/05/why-social-media-ruining-political-discourse/589108/>.

30 Bryan Wendell, "Be Prepared: The origin story behind the Scout motto," May 9, 2017, <https://blog.scoutingmagazine.org/2017/05/08/be-prepared-scout-motto-origin/>.

