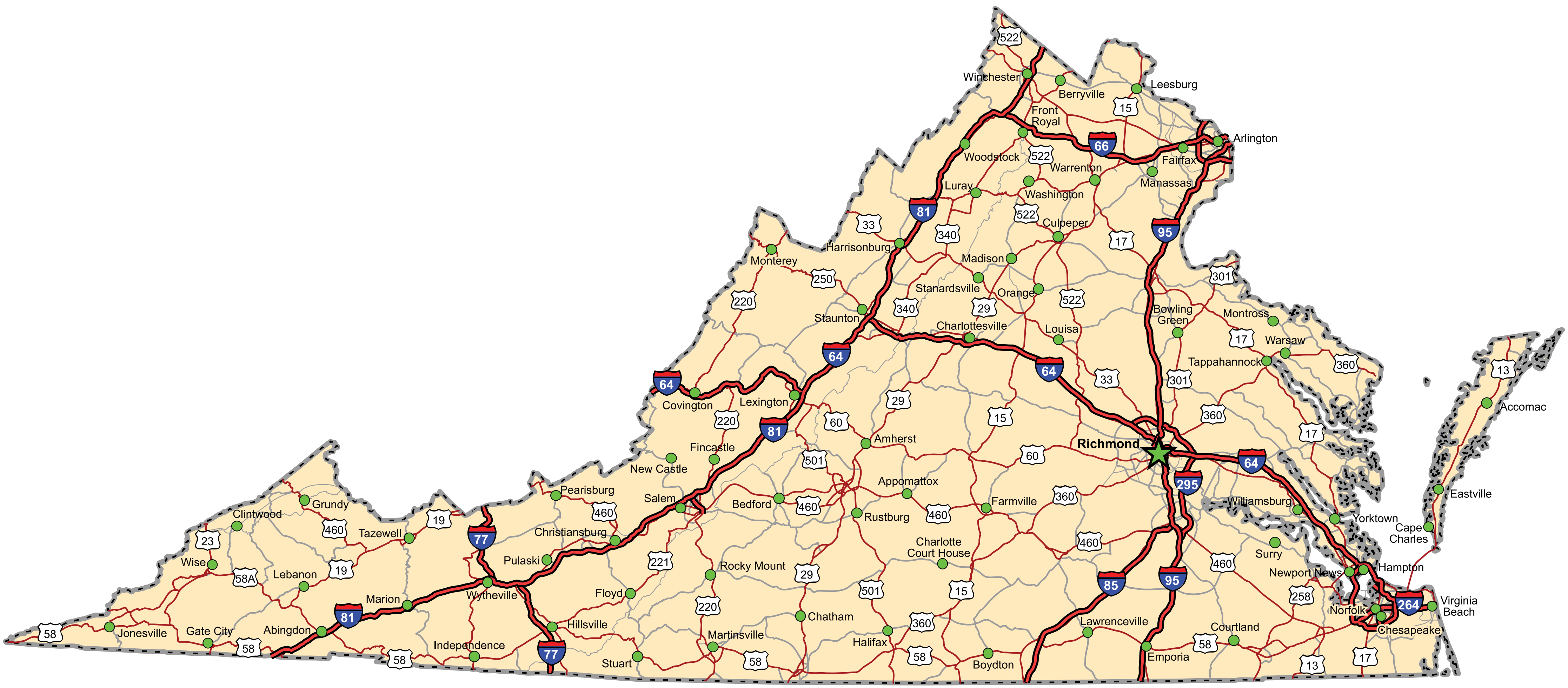
2021 State of the Commonwealth Report

■ DRAGAS CENTER FOR ECONOMIC ANALYSIS AND POLICY ■ STROME COLLEGE OF BUSINESS ■ OLD DOMINION UNIVERSITY



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December 2021

Dear Reader:

This is Old Dominion University's seventh annual State of the Commonwealth Report. While it represents the work of many people connected in various ways to the university, the report does not constitute an official viewpoint of Old Dominion, its president, Brian O. Hemphill, Ph.D., the Board of Visitors, the Strome College of Business or the generous donors who support the activities of the Dragas Center for Economic Analysis and Policy.

With the 2021 election in the rearview mirror, the question now becomes: Where does Virginia go from here? Our work seeks to contribute to this conversation without glossing over the challenges we face. We want to encourage the difficult conversations to help Virginia improve the outcomes for all its residents in the coming years.

The 2021 State of the Commonwealth Report is divided into six parts:

Inflection Point? COVID-19, Vaccines and the Recovery

To say that most Virginians would prefer to forget 2020 might be an understatement. The COVID-19 pandemic threw tens of thousands of Virginians out of work, shuttered businesses and abruptly transitioned much of education into the world of remote learning. As 2021 draws to a close, the story has changed from one of shock to one of recovery. In this chapter, we examine the impact of the pandemic, the ongoing recovery and prospects for continued growth in 2022.

A Recovery at Different Speeds: Virginia's Metropolitan Areas

Virginia's economic recovery in 2021 has been driven by the performance of some, but not all, of its metropolitan areas. While Hampton Roads and Richmond have lagged the performance of the state and nation since the onset of the pandemic, smaller metros like Blacksburg and Winchester have recovered jobs more quickly. As we near the end of 2021, we discuss how Virginia's metros have fared over the last 24 months and present the challenges for creating growth across the Commonwealth in the coming years.

Bounce Back? The Pandemic and Tourism in Virginia

For the Virginia hotel industry, the last 24 months have been challenging in a number of ways. The pandemic and associated social distancing measures resulted in a collapse of visitors and revenue in the spring and summer of 2020. In 2021, the Hampton Roads market set records for hotel revenue, but other markets continued to struggle. In this chapter, we look at how the markets in Virginia have performed over the past two years and how 2022 may bring good news for the hotel industry.

Let It Ride: Casinos, Online Betting and the Future of Gambling in Virginia

In 1987, Virginia voters approved the state lottery, bringing legalized gambling to the Commonwealth. By 2021, Virginians could buy lottery tickets online, place sports bets on their phones, wager in historical horse racing parlors and play "gray machines" in convenience stores, restaurants and bars. Now, with casinos opening soon in Bristol, Danville, Norfolk and Portsmouth, we discuss the benefits and costs of casinos in the Commonwealth.

Viewed Through a Different Lens: Evaluating Virginia Higher Education

The University of Virginia, Virginia Tech and William & Mary historically have played important roles in the Commonwealth. They have assembled impressive records in admitting and graduating talented students who (predictably) do well after they leave these campuses. Except for our historically black colleges and universities (HBCUs) and the University of Virginia's College at Wise, no public four-year institution in Virginia enrolls a significant percentage of low-income students. We discuss what the Commonwealth and its public colleges and universities can do to make higher education more affordable.

The Winchester Metropolitan Area Outperforms the Commonwealth

Conversations about growth in Virginia primarily focus on the metropolitan areas of Northern Virginia, Hampton Roads and Richmond. Often forgotten in these discussions is how the smaller metropolitan area of Winchester has outperformed many of the larger metros in the Commonwealth. We explore why Winchester is growing and how this growth could change the quality of life of its residents in the future.

The Strome College of Business and Old Dominion University continue to provide support for the State of the Commonwealth Report. However, it would not appear without the vital backing of the private donors whose names appear below. They believe in Virginia and the power of rational discussion to improve our circumstances but are not responsible for the views expressed in the report.

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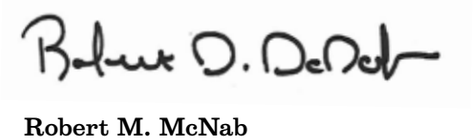
Sincerely,



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INFLECTION POINT? COVID-19, VACCINES AND THE RECOVERY

You were sick, but now you're well again, and there's work to do.

– Kurt Vonnegut, "Timequake"

To say that most Virginians would prefer to forget 2020 might be an understatement. The COVID-19 pandemic not only presented a historic public health challenge, but it also brought the fractures of our economic and social lives into full display. Over the course of two months, 1 in 10 Virginia workers found themselves cast onto the unemployment rolls, businesses struggled to adapt to social distancing requirements and many schools switched to virtual learning. Social media amplified disinformation about the benefits of masking, purported cures (such as hydroxychloroquine) for COVID-19 and, in late 2020, the safety and efficacy of the COVID-19 vaccines. Supply chain disruptions roiled retailers and consumers (and continued to do so in 2021). To borrow a phrase from Queen Elizabeth II, 2020 was not a year on which we shall look back with undiluted pleasure.

2021 has not been without its high and low points. While the Commonwealth initially struggled to provide COVID-19 vaccines to Virginians, by late fall more than 70% of the population had received at least one dose, and over 63% were fully vaccinated. The delta variant surge in other Southern states in the summer of 2021 proved the wisdom of Virginia's response, as hospitals here were not overwhelmed with COVID-19 cases, and deaths per capita were significantly lower than in states such as Florida and Texas. Economic activity has rebounded from its 2020 lows, and the Commonwealth has continued to regain

jobs in 2021. However, mismatches between labor supply and labor demand have left some employers scrambling to fill open positions. Hyper-partisan political discourse, fueled, in part, by a desire to gain traction on social media, continues to threaten the "Virginia Way" of fiscal discipline, civility and democracy.

As Virginia prepares to enter 2022 with a new governor and new majority in the House of Delegates, the challenge is to build upon the recovery of 2021 and address fractures that exist in the Commonwealth's economy. Population and economic activity are increasingly concentrated in the urban crescent of Northern Virginia, Richmond and Hampton Roads. Fostering an environment that creates incentives for entrepreneurship and job creation outside these major urban areas remains an unaddressed challenge. Improving the performance of our public schools and investing in public infrastructure are necessary steps to enhance the business climate in the state. If people follow jobs, then Virginia must increase private-sector job creation. Diversification of the Commonwealth economy will not only spark higher rates of economic growth, but it will also reduce Virginia's economic dependence on decisions made in the halls of Congress and the White House. The Virginia Way has served the Commonwealth well. Now is not the time to abandon this ideology by succumbing to our baser instincts.

To understand where Virginia is going, we must review where it has been. This chapter looks back on the performance of the state economy over the past 24 months and identifies impediments to growth in 2022 and beyond. We discuss how the pandemic affected Virginia workers and businesses. We also explore the disproportionate burden of the pandemic on minorities. Lastly, we conclude with thoughts on how the Commonwealth can address its challenges in the coming years.

Gross Domestic Product: Shock, Rebound, Relapse And Recovery

Real gross domestic product (GDP) is one of the headline measures of economic performance, as it estimates the real (after-inflation) dollar value of final goods and services produced in an area during a given period of time. GDP is an imperfect measure in that it does not capture nonmarket transactions (barter, for example), may understate the extent of the "gig economy" and does not place a value on household production. National data typically lag two to three months from the end of the most recent quarter. State data can lag four to six months from the end of the previous quarter. Quarterly data are also somewhat volatile and subject to revision, especially at the state level.[1]

To say Virginia's economy faced turbulence over the last two years would be an understatement. The COVID-19 shock in 2020 caused an unprecedented contraction in economic activity. However, with the introduction of vaccines and a steady decline in infections in the spring of 2021, economic activity picked up the pace. The delta variant created another wave of infections this summer, primarily among the unvaccinated. The most severe consequences from the pandemic in 2021 were increasingly concentrated among the unvaccinated. Rising vaccination rates and the promise of new anti-viral treatments for COVID-19 offer hope that future infection cycles will have lower peaks than those observed previously. As Winston Churchill aptly observed in November 1942, "Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

Graph 1 shows the annualized quarterly change in real GDP for Virginia from the first quarter of 2017 to the second quarter of 2021. Prior to the pandemic, the Virginia economy had grown during 10 of the previous 12 quarters. The onset of the COVID-19 pandemic led to a 2.9% contraction in real GDP in the first quarter of 2020, followed by a historic 28.6% decline in the second quarter of 2020. The historic decline was followed by a historic expansion in economic activity as Virginia "reopened" in the third quarter of 2020. After growing by 5.2% in the last quarter of 2020, however, the fall 2020-winter 2021 wave of infections, hospitalizations and deaths led to a slowdown in the recovery during the first quarter of 2021 (1.4%). As infections eventually subsided and vaccinations increased, growth ticked upward by 5.8% in the second quarter of 2021.

While forecasting economic activity in 2021 (and 2022) remains somewhat of an exercise in futility, we project that the Commonwealth will continue to rebound in the third and fourth quarters of this year (Table 1). As we highlight throughout the chapter, the recovery slowed in the third quarter of 2021 when the delta variant created another wave of infections. But with rising vaccination rates and declining infections, it is reasonable to expect an uptick in economic growth in the fourth quarter and into 2022. However, ongoing global supply chain disruptions are likely to continue to constrain business activity and push prices higher. New variants may lead to surges in infections, hospitalizations and deaths, further clouding prospects for 2022. If inflationary expectations harden in 2022, then the prospects for a sustained recovery will certainly dim.

1 We revisit Graph 1 in each *State of the Commonwealth Report*. In the 2018 report, for example, estimated real GDP growth in 2017 Q1 was 0.8%, but this was later revised downward to -1.0%. In the 2021 report, this was revised down again to -2.3%, illustrating how revisions can affect the data.

TABLE 1

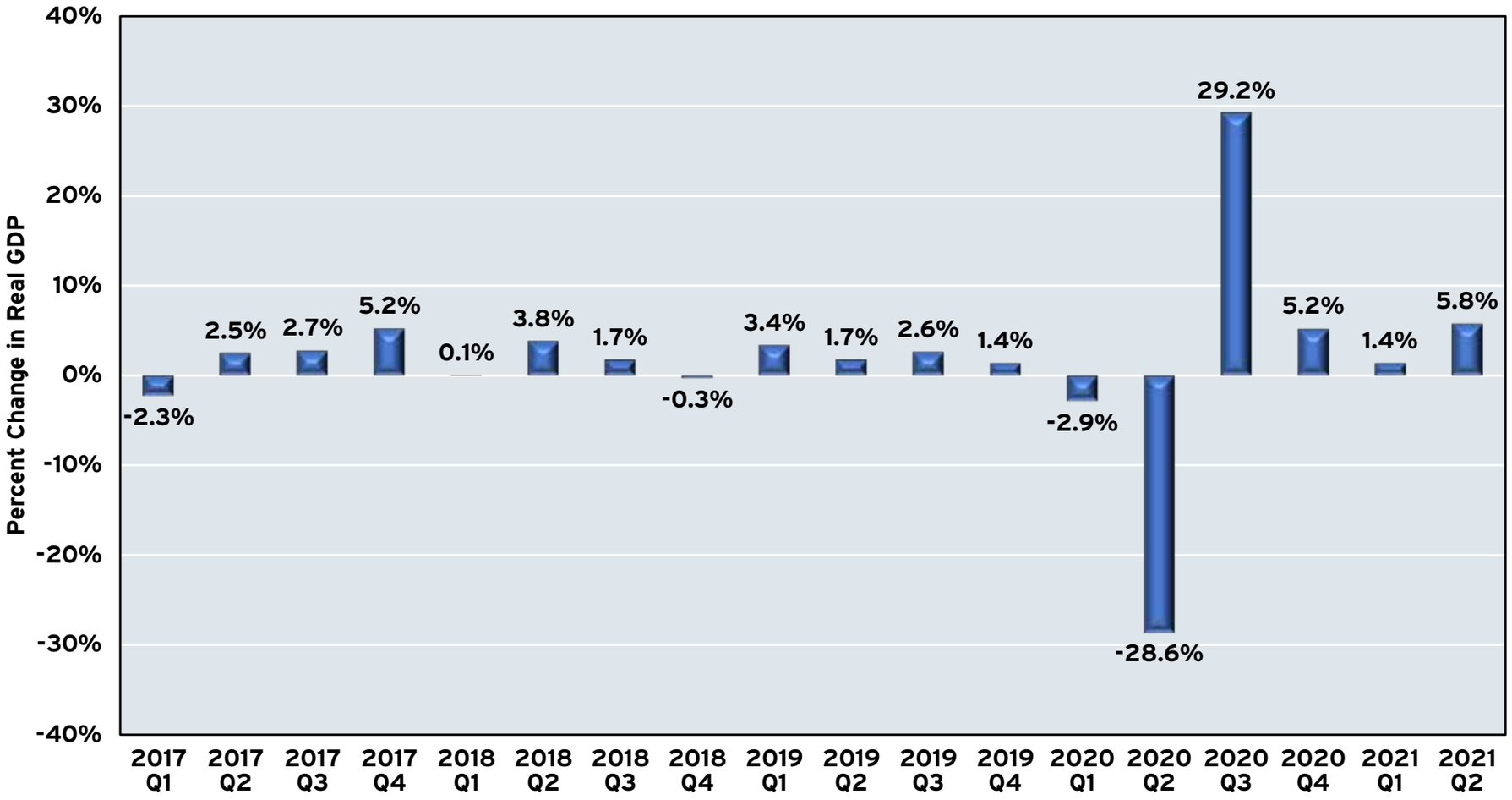
**QUARTERLY REAL GROSS DOMESTIC PRODUCT:
VIRGINIA AND THE UNITED STATES, 2019 Q1-2021 Q4
(MILLIONS OF DOLLARS)**

Year	United States	Annualized Quarterly Real GDP Growth	Virginia	Annualized Quarterly Real GDP Growth
2019 Q1	18,833,195	2.4%	483,714	3.4%
2019 Q2	18,982,528	3.2%	485,816	1.7%
2019 Q3	19,112,653	2.8%	488,911	2.6%
2019 Q4	19,202,310	1.9%	490,566	1.4%
2020 Q1	18,951,992	-5.1%	486,994	-2.9%
2020 Q2	17,258,205	-31.2%	447,669	-28.6%
2020 Q3	18,560,774	33.8%	477,279	29.2%
2020 Q4	18,767,778	4.5%	483,327	5.2%
2021 Q1	19,055,655	6.3%	484,974	1.4%
2021 Q2	19,368,310	6.7%	491,838	5.8%
2021 Q3	19,465,195	2.0%	494,521	2.2%
2021 Q4	19,633,325	3.5%	498,672	3.4%

Sources: Bureau of Economic Analysis, 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. U.S. data from Table T10106 of the National Income and Product Accounts. Virginia data from Table SQGDP9, real GDP by state. Forecasted values for U.S. real GDP for 2021 Q4 and Virginia real GDP for 2021 Q3 and 2021 Q4.

GRAPH 1

ANNUALIZED PERCENTAGE CHANGE IN QUARTERLY REAL GROSS DOMESTIC PRODUCT: VIRGINIA, 2017 Q1-2021 Q2



Sources: Bureau of Economic Analysis, 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SQGDP9, real GDP by state. Millions of chained 2012 dollars.

Where Are The Workers?

To understand the impact of the COVID-19 pandemic on workers in the Commonwealth, we first focus on measures from the Current Population Survey (CPS). The CPS asks the civilian noninstitutionalized population whether they are working, looking for work or not attached to the labor force. The civilian labor force represents the civilian noninstitutionalized population that is either working or actively looking for work, while individual employment reflects those in the labor force who are working. An individual can only be counted once in the CPS – that is, one either is working, unemployed or not seeking to work.

Graph 2 illustrates the ongoing impact of the COVID-19 pandemic on the civilian labor force and individual employment in the Commonwealth. Before the onset of the pandemic in February 2020, both the labor force and individual employment had risen to their highest levels on record. From February 2020 to the trough in May 2020, the civilian labor force fell by 3.9% and individual employment declined by 9.8%.

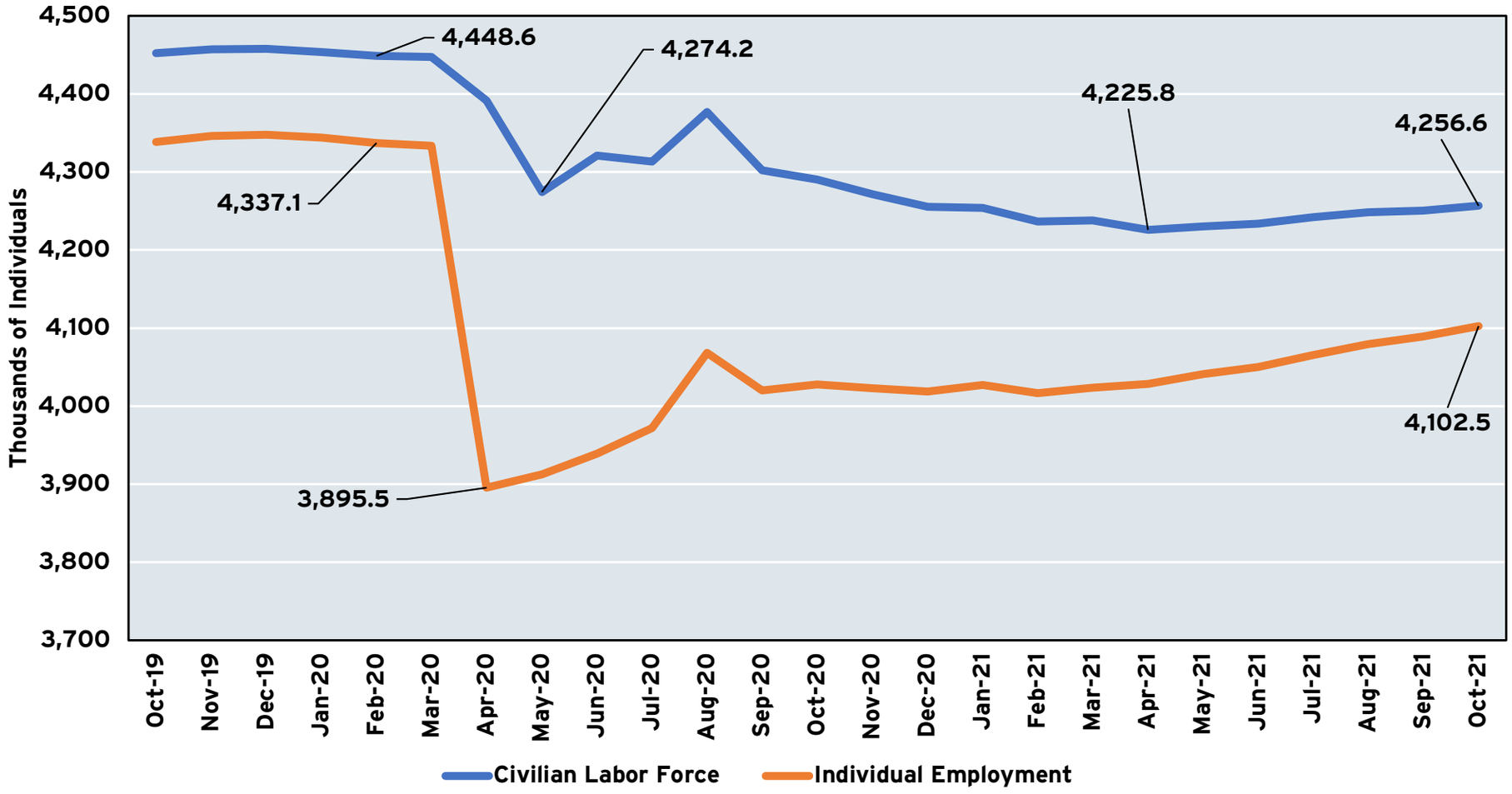
While individual employment has been on a relatively steady path toward recovery, the same cannot be said about the civilian labor force in Virginia. Although some individuals came back to work in the summer of 2020, the labor force trended downward in the ensuing months. From February 2020 to October 2021, the size of Virginia's labor force was down 4.3%, approximately 191,989 fewer individuals. Simply put, there were fewer Virginians willing to work than there were prior to the start of the pandemic.

While pundits and politicians prefer simple explanations of why the labor force has declined in Virginia (and the United States) when compared to the start of the pandemic, the reasons are more nuanced. Surveys suggest that child care availability, pandemic-related health concerns and transitions to other forms of employment influence exits from the labor force. Estimated retirements have also noticeably ticked upward. We do know one thing: People who have left the labor force do not qualify for unemployment insurance and blaming expanded unemployment benefits (which ended in early September) for the decline in the labor force is misleading.

National-level data on labor force participation by gender help shed some light on who has left the labor force over the last 20 months. Male and female labor force participation declined as the pandemic's economic shock disrupted labor markets. Neither has returned to prepandemic levels. Compared to February 2020, the male labor force participation rate in October 2021 was down 1.6 percentage points, while the female participation rate had declined 1.8 percentage points (Graph 3). Looking forward to 2022, a continued recovery will be, in part, constrained by the smaller labor force in the Commonwealth and nation. Rising wages, however, may induce some of those who have left the labor force to return.

GRAPH 2

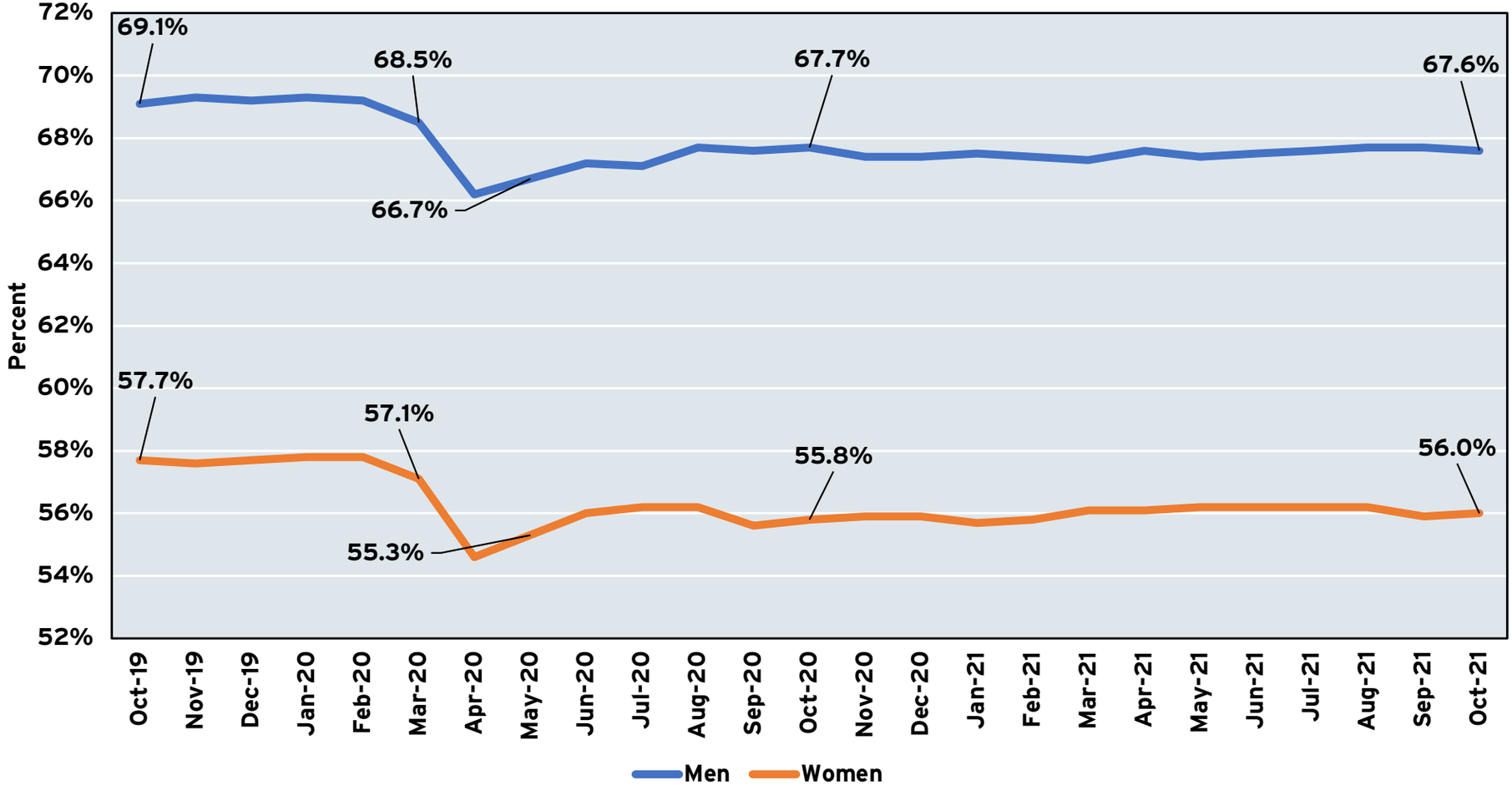
CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT: VIRGINIA, OCTOBER 2019-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 3

LABOR FORCE PARTICIPATION RATES BY GENDER: UNITED STATES, OCTOBER 2019-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

Virginia's Unemployment Rate Falls

The headline unemployment rate measures the ratio of unemployed individuals to the civilian labor force. In Virginia, the unemployment rate jumped from 2.5% in February 2020 to 11.3% in April 2020. This was the highest recorded unemployment rate for the Commonwealth since recording began in 1990. However, the sharp increase was short-lived. By January 2021, the rate had declined to 5.3% and was below 4% in the fall of 2021.

It is important to note, however, that the unemployment rate can misrepresent the state of the labor market. In the best case, the civilian labor force is expanding, and the number of unemployed individuals is contracting. The unemployment rate can also decline when the civilian labor force declines and the number of unemployed individuals falls. This is what has occurred in Virginia and also nationally. A smaller labor force and a smaller number of unemployed individuals mask the actual extent of unemployment.

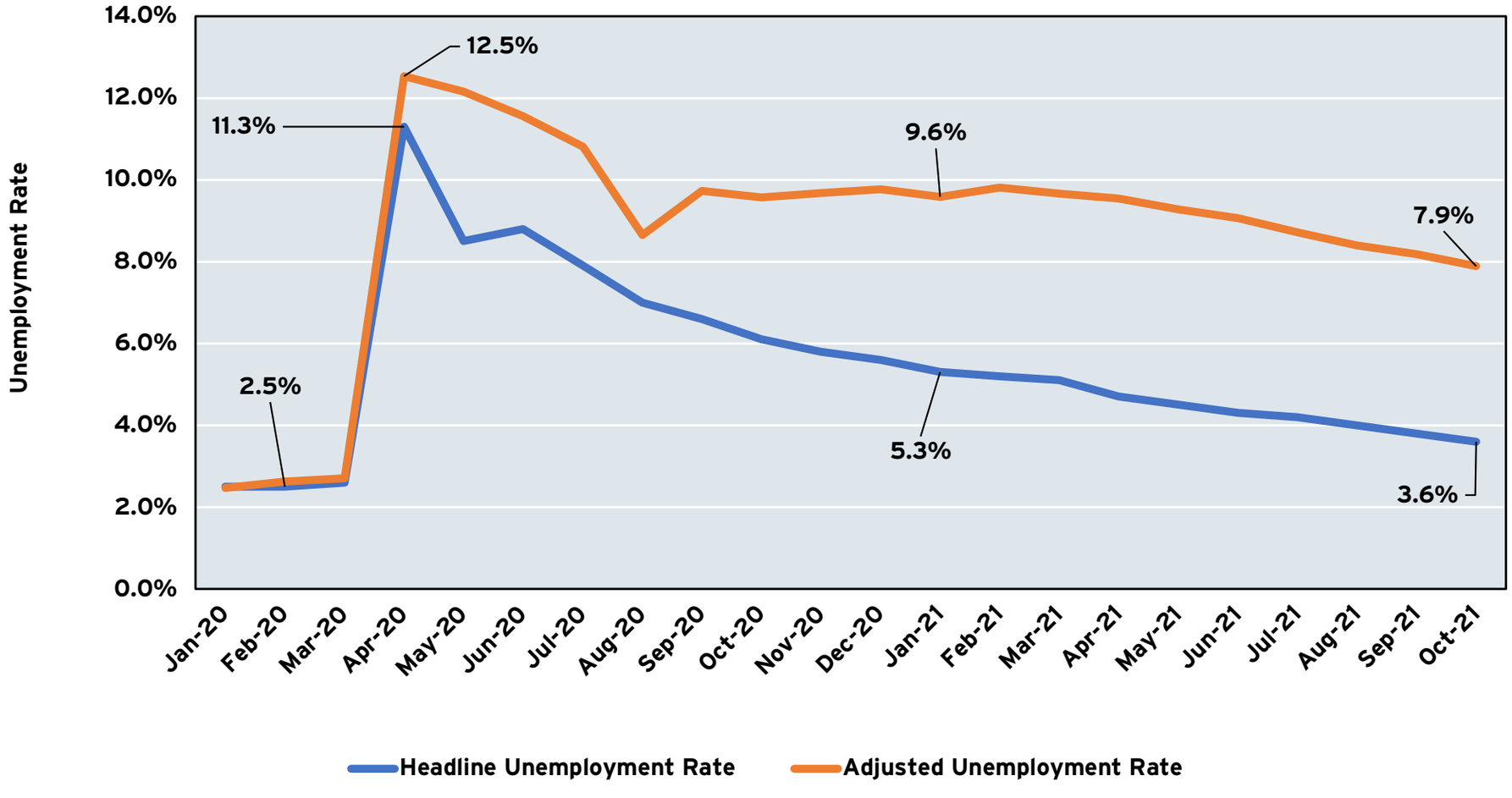
In Graph 4 we also suggest an alternative measure of unemployment that provides insight into this phenomenon. We treat those who exit the labor force as unemployed individuals instead of removing them from the labor force entirely. While we understand that some departures from the labor force may be permanent (retirees, health conditions), this alternative measure provides an upper-bound view of the extent of unemployment in the Commonwealth. In October 2021, the official unemployment rate was 3.6%. Treating departures from the labor force as unemployed yields an alternative measure of 7.9%. The true extent of unemployment in Virginia likely lies between these two data points.

The unemployment rate can obscure the difficulties in employment transitions for some Virginians. In 2018, Ernest Ray found himself laid off after 26 years of employment at a company in southwest Virginia. He applied for and received about $9,000 in unemployment benefits. Today, the Virginia Employment Commission (VEC) is attempting to take these payments back. The dispute centers on a doctor's note Ray provided the VEC during a brief illness that prevented him from searching for a new job. The VEC interpreted the note as Ray was unable to work and therefore ineligible for benefits. Complicating the dispute is the fact that Ray is deaf and only fluent in American Sign Language and, like many others, had difficulty understanding the fine print of the appeals process. The pandemic overwhelmed the VEC and a state audit found numerous deficiencies. As of December 2021, Ray finds himself still embroiled in the appeals process, a process that has weighed significantly on his mental health.

Source: https://www.dailypress.com/virginia/vp-nw-unemployment-benefit-battle-virginia-20211125-fknwenabozevbojmlgtiqrlqla-story.html

GRAPH 4

HEADLINE (U3) AND ADJUSTED UNEMPLOYMENT RATE: VIRGINIA, JANUARY 2020-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Adjusted unemployment rate includes departures in the labor force. Data are seasonally adjusted.

Initial Unemployment Claims Trend Downward

At the peak of the COVID-19 economic shock in May 2020, more than 1 in 10 workers in Virginia had filed an initial claim to receive unemployment benefits. By the end of 2020, initial unemployment claims had declined significantly but were historically high when compared to previous recessions. By October 2021, however, initial claims were only slightly above prepandemic levels observed in 2019, a positive signal of economic recovery in the Commonwealth.

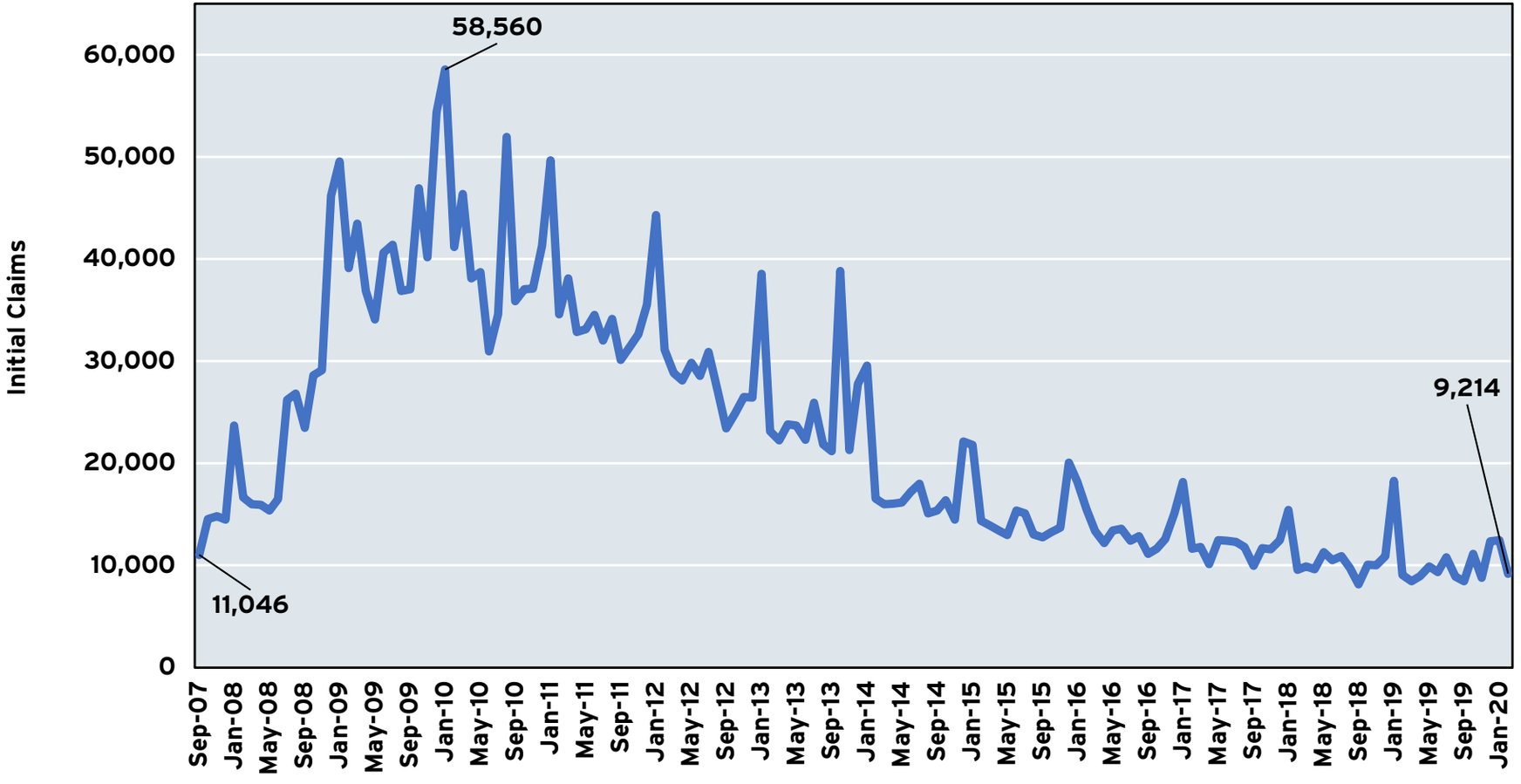
Graph 5 provides context for the pandemic's economic shock. Immediately prior to the Great Recession of 2007-09, slightly more than 11,000 Virginians filed an initial claim for unemployment benefits in September 2007. Initial unemployment claims in the Commonwealth peaked after the recession was officially over, with more than 58,500 workers filing an initial claim in January 2010. While initial claims are volatile, the downward trend over the succeeding decade is apparent, with initial claims declining to just over 9,000 by February 2020.

Graph 6 displays the historic shock and recovery from COVID-19 in initial unemployment claims in Virginia. Initial unemployment claims rose from 9,214 in February 2020 to 371,411 in April 2020. In the span of two months, initial claims jumped to more than six times the previous peak observed during the Great Recession. While initial claims declined in the summer of 2020, claims remained elevated through the spring of 2021. However, the summer of 2021 saw a marked decline in the number of initial claims, dropping from over 160,000 in March 2021 to slightly less than 18,000 in October 2021. While monthly initial claims in October 2021 were 1.5 times higher than February 2020 (showing there is still work to be done), the level of monthly initial claims had fallen by 80.4% when compared to October 2020 (showing much has been accomplished).

Initial unemployment claims represent the number of people who have filed a request for benefits after separation from an employer. Continued claims, or what is known as insured unemployment, reflect those who have already filed their initial claims, had the claims accepted by the government and continue to file claims to receive benefits for the current week of unemployment. In other words, continuing claims show the number of insured unemployed individuals, while initial claims reflect the number of initial requests for unemployment benefits in a given week.

GRAPH 5

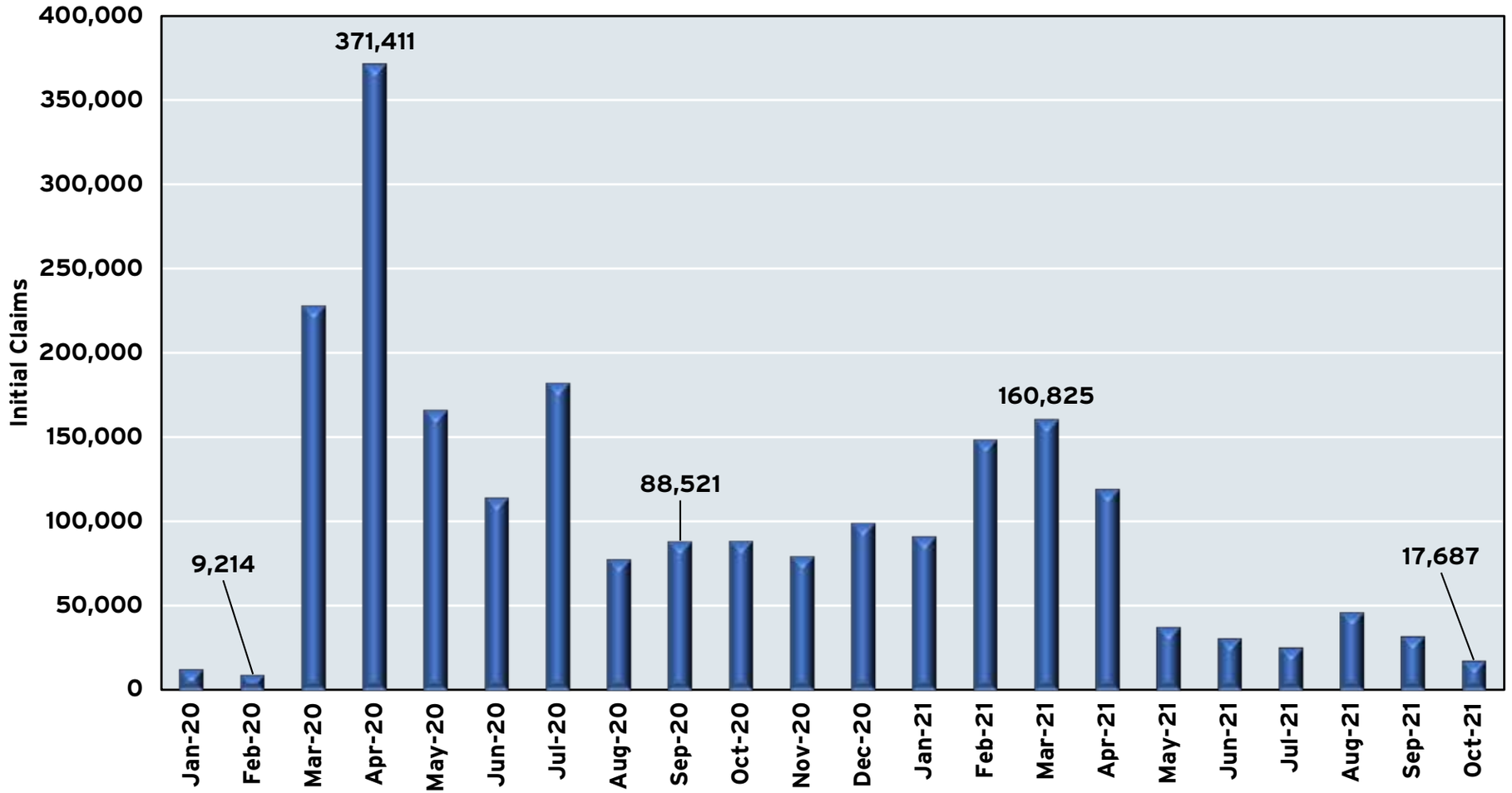
**MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
VIRGINIA, SEPTEMBER 2007-FEBRUARY 2020**



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 6

MONTHLY INITIAL UNEMPLOYMENT CLAIMS: VIRGINIA, JANUARY 2020-OCTOBER 2021



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

Continued Claims Spike And Decline

Initial unemployment claims are one part of the story. Temporary furloughs may not remain on the unemployment rolls for an extended period of time, as workers are recalled to work when economic conditions improve. If layoffs become permanent, however, workers may claim unemployment for an extended duration. Graph 7 illustrates monthly continuing unemployment claims in Virginia from August 2007 to February 2020.

Immediately prior to the Great Recession, approximately 34,000 Virginians received continued unemployment benefits in October 2007. Continued claims increased to over 104,000 in March 2009 and then declined over the subsequent decade. In February 2020, more than 26,000 Virginians received continued unemployment benefits. The relatively low level of continued claims was a strong signal of the need for labor in the Commonwealth and contributed to expectations of a continued economic expansion in 2020. Those expectations, however, were quickly dashed by the emergence of the COVID-19 pandemic.

Graph 8 displays the shock of the COVID-19 pandemic and the federal response to the surge in unemployment claims. Three programs – Pandemic Unemployment Assistance (PUA), Federal Pandemic Unemployment Compensation (FPUC) and Pandemic Emergency Unemployment Compensation (PEUC) – expanded the scope of state run unemployment insurance programs, provided an additional $600 (later, $300) in weekly benefits and an additional 13 weeks of benefits for those who exhausted their original benefits. While some states ended participation in these federal programs in early summer 2021, Virginia continued to participate until these programs lapsed on Sept. 4, 2021.

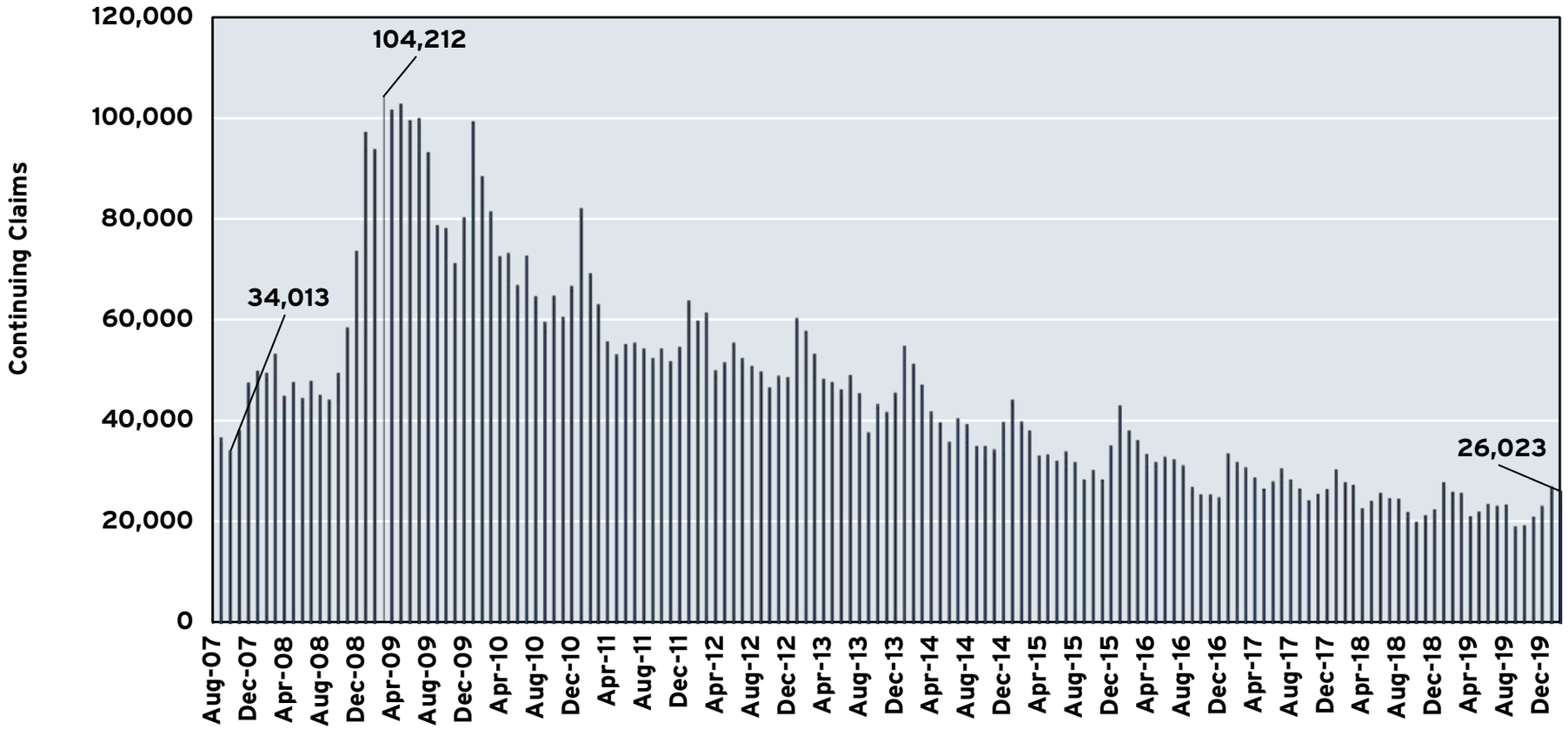
Continued unemployment claims in Virginia increased 39-fold from the week ending March 14, 2020, to the week ending July 11, 2020. Adjectives fail to describe the magnitude of this increase. More than 1 in 6 Virginia workers received some form of unemployment benefits at the peak of the COVID-19 shock. However, and fortunately, the peak was relatively short-lived, and the level of continued claims had fallen by 60.1% by the last week of 2020. By October 30, 2021, continued claims filed under state programs were only 1.4 times higher when compared to the same week in 2019.

Some pundits and politicians have pointed to the enhanced federal unemployment benefits as a culprit for mismatches in labor markets. This theory, however, is not borne out in the data. From April 2021 to July 2021, jobs in the 25 states that ended benefits early rose 1.33%, and for the 25 states that didn't, jobs rose 1.37%.[2] Data for Virginia show that for the week ending Sept. 4, 2021, the final number of continued claims for unemployment benefits covered under state programs was 40,624. Over the next eight weeks, there was an average of 41,880 continued claims filed each week.

2 "States That Cut Unemployment Benefits Saw Limited Impact on Job Growth," *The Wall Street Journal* (Sept. 1, 2021), https://www.wsj.com/articles/states-that-cut-unemployment-benefits-saw-limited-impact-on-job-growth-11630488601.

GRAPH 7

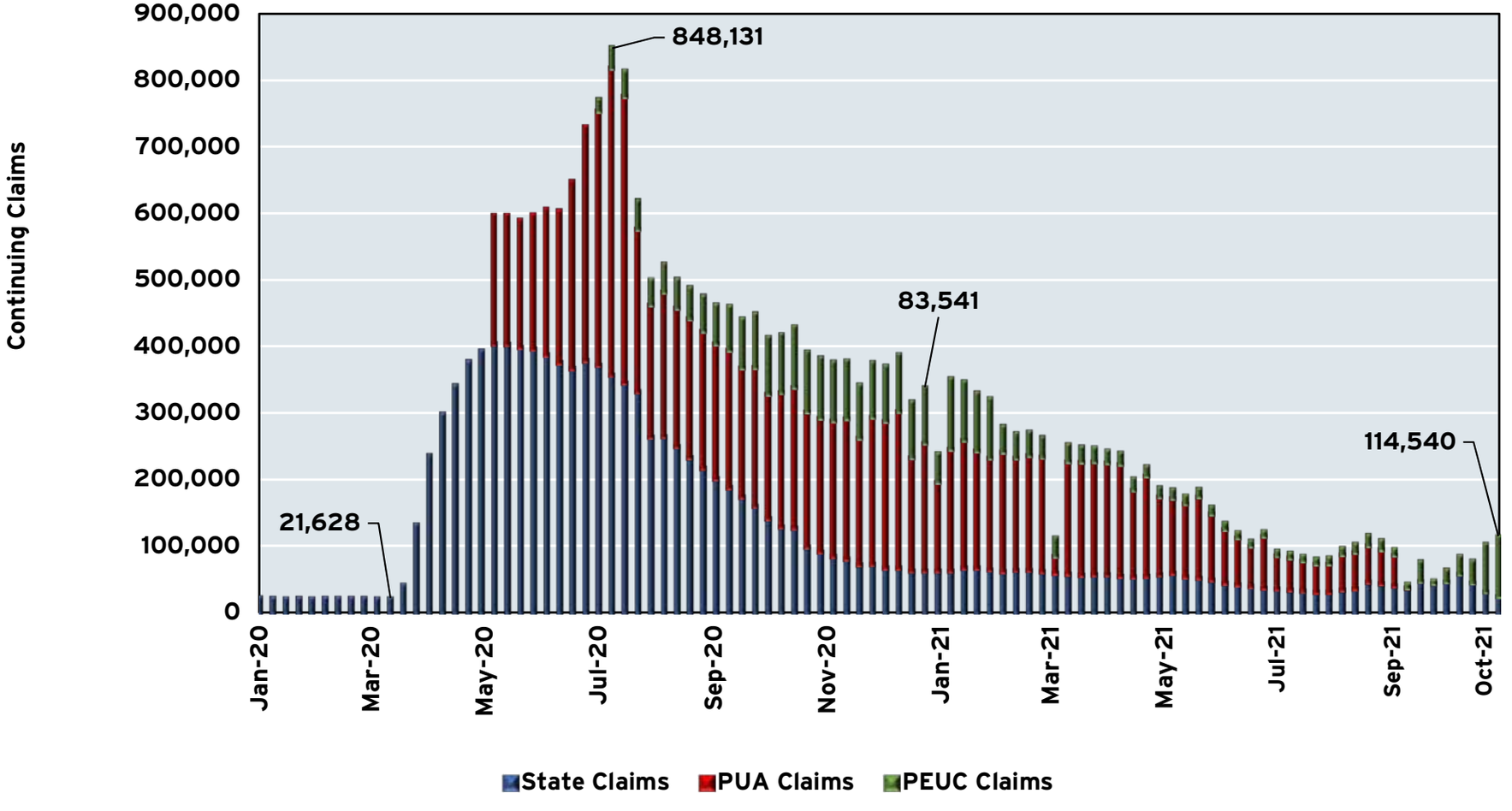
MONTHLY REGULAR CONTINUING UNEMPLOYMENT CLAIMS: VIRGINIA, AUGUST 2007-FEBRUARY 2020



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted.

GRAPH 8

WEEKLY CONTINUED UNEMPLOYMENT CLAIMS: VIRGINIA, JAN. 4, 2020-OCT. 30, 2021



Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. PUA and PEUC continuing claims filed after Sept. 6, 2021, are delayed payments for claims filed in prior weeks.

The Great Resignation

From the trough of the Great Recession in February 2010 to February 2020, Virginia added approximately 492,100 jobs (Graph 9). Within two months, the COVID-19 pandemic and associated social distancing measures wiped out nearly a decade of job gains. Initially, jobs rebounded quickly. Of the 480,000 jobs lost between February 2020 and April 2020, approximately 213,000 jobs returned by October 2020. The recovery in the year since, however, has slowed considerably. From October 2020 to October 2021, the Commonwealth added only about 79,500 jobs.

Graph 10 displays job openings in Virginia from January 2006 to September 2021. As one might expect, the number of openings declined in the aftermath of the Great Recession, falling to 72,000 in January 2010. As the Commonwealth economy recovered from the Great Recession and budget sequestration, the number of job openings increased, with an estimated 217,000 openings in February 2020. The job openings rate, which is the ratio of job openings to total possible jobs (current jobs + job openings), increased from 2.0 in January 2010 to 5.0 in February 2020.

The number of job openings fell from 217,000 in February 2020 to 152,000 in May 2020, reflecting the surge in layoffs and reductions, if not outright closure, of businesses. As Virginia reopened, the number of job openings has surged. In September 2021, the latest data available, job openings rose to a record 328,000. The job openings rate increased from 5.0 in February 2020 to 7.7 in September 2021. Simply put, there has been a historic number of job openings in 2021 in the Commonwealth.

At the same time, the number of Virginians quitting their jobs also rose to the highest level on record. Graph 11 illustrates the number of job quits in Virginia from January 2006 to September 2021. Prior to the Great Recession, there were roughly 80,000 job quits in a given month. Following the recession, job quits declined (not surprisingly) to 31,000 in August 2009. The number of job quits increased over the decade and reached 83,000 in February 2020. The job quits rate, which is equal to the ratio of job quits to total employment, peaked to 2.8 in August 2019 before falling to 2.0 in February 2020.

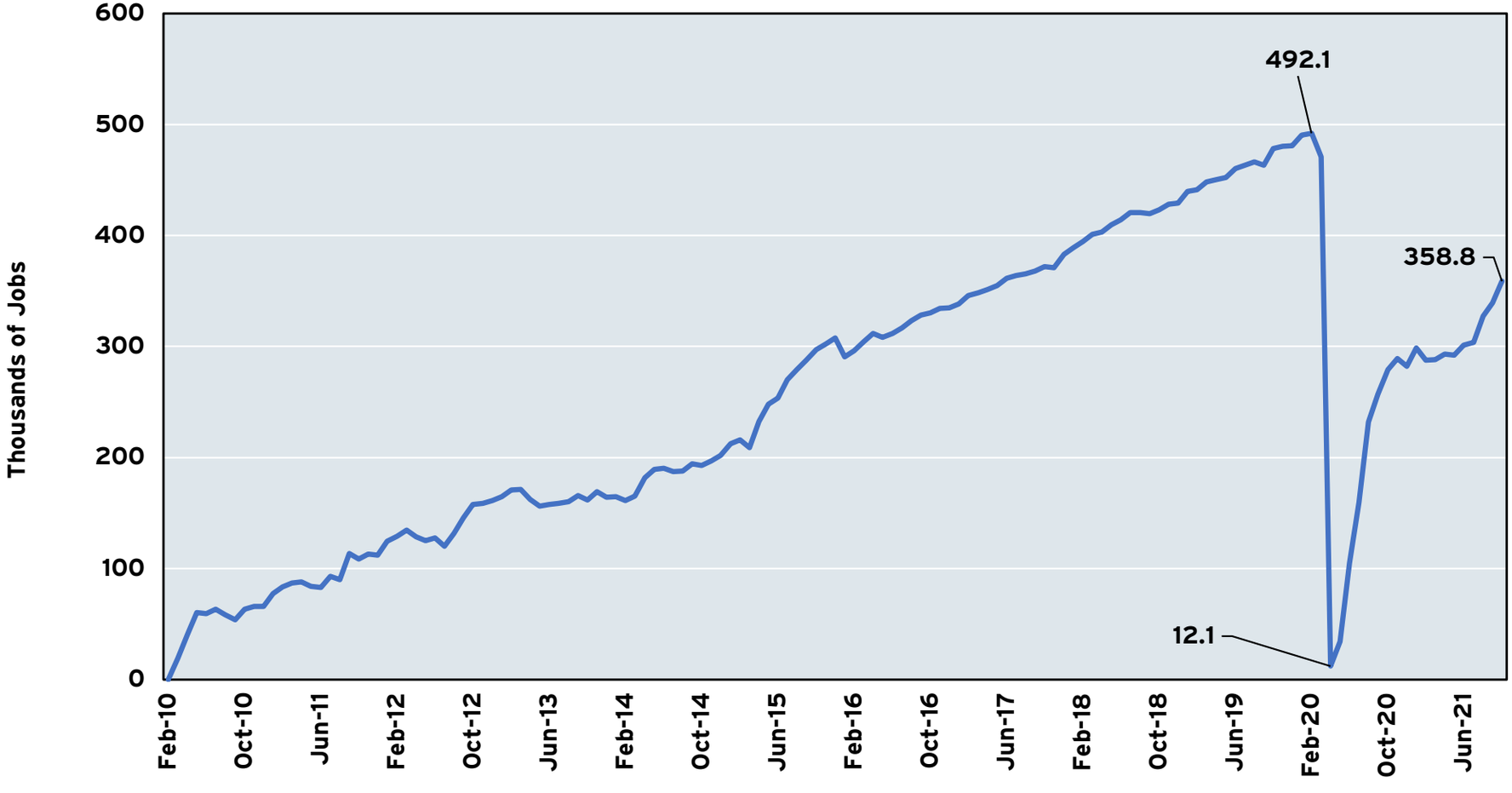
The decline in job quits in the spring of 2020 was short-lived. As economic activity picked up in the Commonwealth, job quits surged, peaking at 127,000 in April 2021. Workers in Virginia quit 3.3% of all jobs in April 2021. Through the fall of 2021, job quits have remained near record levels. In September 2021, workers quit 3.1% of all jobs.

The recent trend in workers quitting their jobs in record numbers is not unique to Virginia. In what has been dubbed "The Great Resignation," workers across the country are leaving their jobs. National data from the Bureau of Labor Statistics (BLS) show that the resignation wave is also not isolated to one industry. Quit rates have increased across virtually all major industries. Accommodation and food services (6.6), arts, entertainment and recreation (5.7) and retail trade (4.4) had the highest average quit rates in September 2021. Employers are having to raise wages to compete and retain workers. According to the BLS, from September 2020 to September 2021, total compensation costs for service occupations (e.g., server, bartender, housekeeper, accountant, financial manager) rose 5.3% compared with 3.7% for all workers. Accommodation and food service compensation costs rose by 7.2% over the same period.

There are a few possible explanations for the recent wave in resignations. First, unstable in-person schooling, a shortage of available child care and pandemic-related health concerns probably continue to play a role. Second, with the existing labor shortages, workers, especially those in lower-wage industries, are quitting their jobs for higher wages elsewhere. Third, and harder to measure, the pandemic's public and economic shocks have led some workers to reevaluate their life choices and seek their fortunes elsewhere.

GRAPH 9

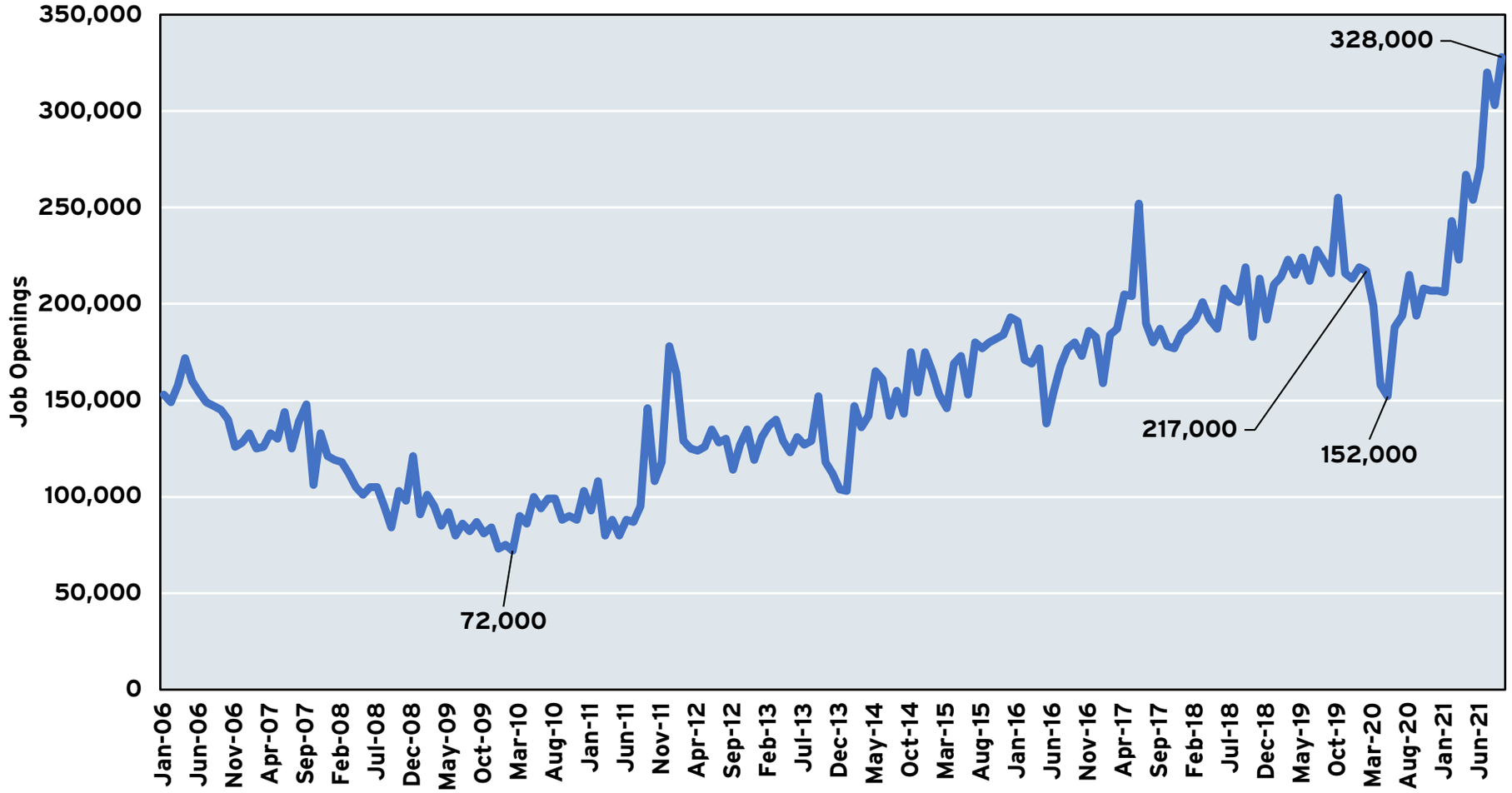
CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS): VIRGINIA, FEBRUARY 2010-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 10

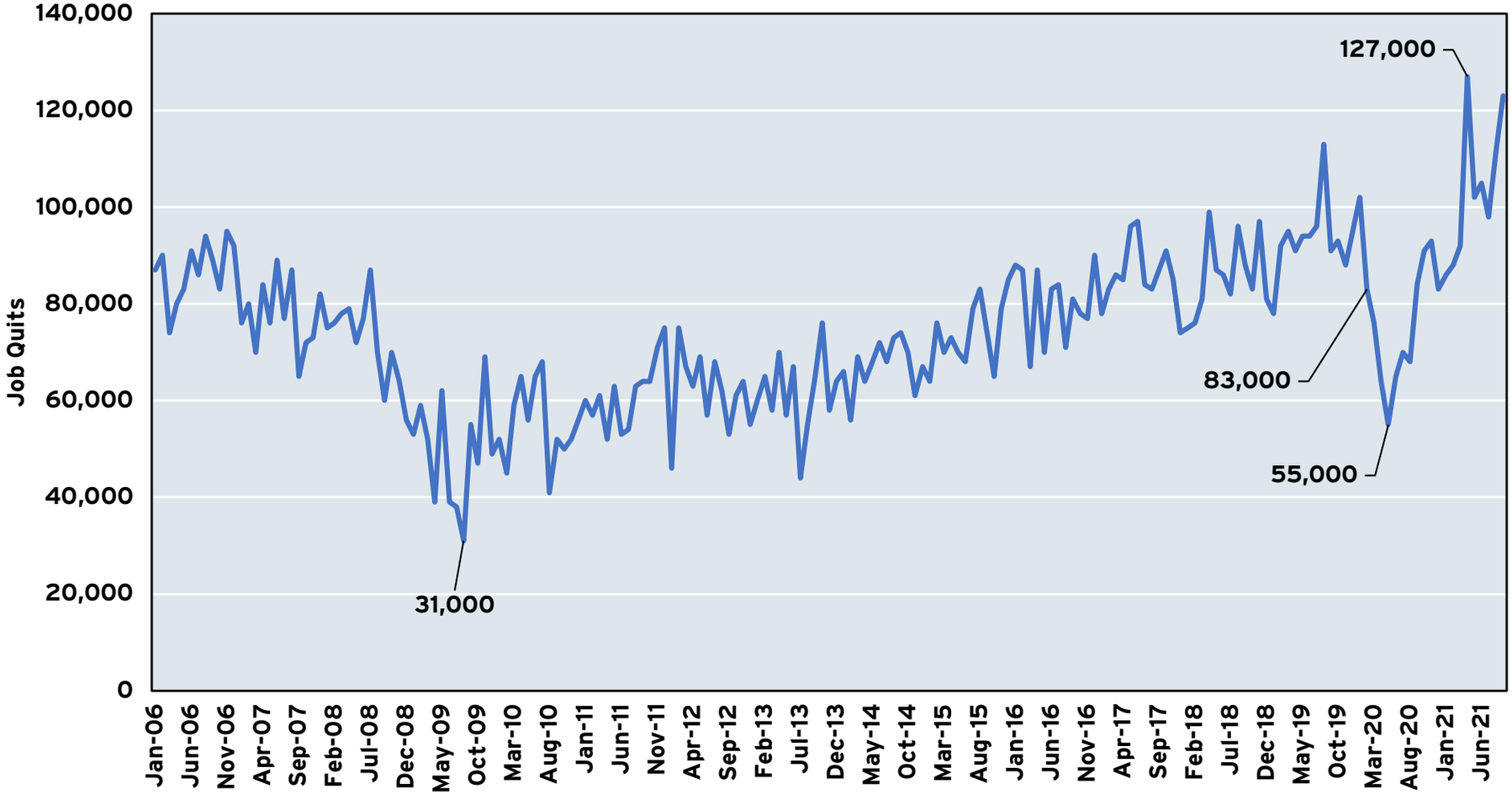
JOB OPENINGS:
VIRGINIA, JANUARY 2006-SEPTEMBER 2021



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS). Jobs openings for total nonfarm payrolls. Data are seasonally adjusted.

GRAPH 11

JOB QUITS:
VIRGINIA, JANUARY 2006-SEPTEMBER 2021



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS). Quits include employees who left voluntarily, with the exception of retirements. The quits rate is the number of quits during the entire month as a percentage of total employment. Data are seasonally adjusted.

Department Of Defense Spending In Virginia

In fiscal year 2020, total Department of Defense (DOD) spending accounted for approximately 11.3% of Virginia's GDP, the highest share in the nation. DOD contract spending in the Commonwealth climbed to $44.9 billion in FY 2020, the second-highest level in the nation behind Texas (Graph 12). While DOD spending provides fuel to the regional economies of Northern Virginia and Hampton Roads, the question is whether these regions and the Commonwealth can continue to rely on this spending in the future.

President Joe Biden proposed a base DOD budget of $715 billion for FY 2022, a 1.6% increase from FY 2021 (Graph 13).[3] In inflation-adjusted terms, this represented a real decline in the DOD base budget. However, congressional appropriators appear likely to increase the DOD's base budget, perhaps as high as the $740 billion authorized in the recently passed National Defense Authorization Act.

Graph 14 presents data on military employment in Virginia from the Bureau of Economic Analysis and highlights the differences between the 2019 and 2020 estimates. In the most recent release, the BEA utilized data from the Defense Manpower Data Center (DMDC) to estimate military employment at the state and metropolitan-area levels. Unlike previous years, the data on military employment no longer include military personnel on temporary duty assignments. In other words, deployed service members are no longer included in the military employment estimates. Furthermore, the BEA did not make the revisions backward compatible, revising the data only from 2016 forward. In other words, prior to 2016, the military employment data reflect the BEA's estimates, while data from 2016 to 2020 are based on DMDC data. We caution the reader that comparing specific employment estimates prior to 2016 and after 2016 is not possible, and the best one may be able to accomplish is an examination of the trends in the data.

What is clear, even with the change in methodology, is that the number of military jobs in the Commonwealth of Virginia has declined this century. Discounting the structural break in the series in 2016, we note that the newest data series suggests that the number of military jobs ticked upward slightly in 2020 to 121,549. The open question is whether Virginia will continue to observe a downward trend in the number of military jobs in the coming years.

We can examine other trends to provide insight into military personnel trends. Military personnel costs continue to increase, driven by the increasing cost of health care and other benefits. At the same time, procurement costs of new weapons have marched upward while delivery schedules have slipped forward in time. Each of the military services has proposed to reduce current capabilities (ships, tanks, planes, helicopters) to fund modernization efforts. Retiring current platforms now in the expectation of replacing them in the future with newer, more capable (and more expensive) versions also impacts the stationing of personnel. The Navy's plan to retire seven Ticonderoga-class cruisers as well as 15 other ships, would, if enacted, disproportionately impact Virginia. While funds are being added to defense appropriations bills to reduce or forestall these retirements outright, it is merely kicking the proverbial can down the road. These ships are increasingly expensive to operate, and the Navy (as well as the other services) can't operate, maintain and build new systems simultaneously.

At the same time, the rise of China is likely to continue the shift in U.S. national security policy towards the Pacific. At some point, assets will follow policy. When this happens, Virginia is likely to see departures of a Carrier Battle Group and other assets and the thousands of military personnel and civilian contractors that work on and support these systems. Such shifts would reduce DoD spending growth in the Commonwealth or, in the most likely case, lead to a smaller DoD footprint in Virginia. To ignore this possibility is to invite economic peril, especially in regions heavily dependent on DoD spending, such as Hampton Roads.

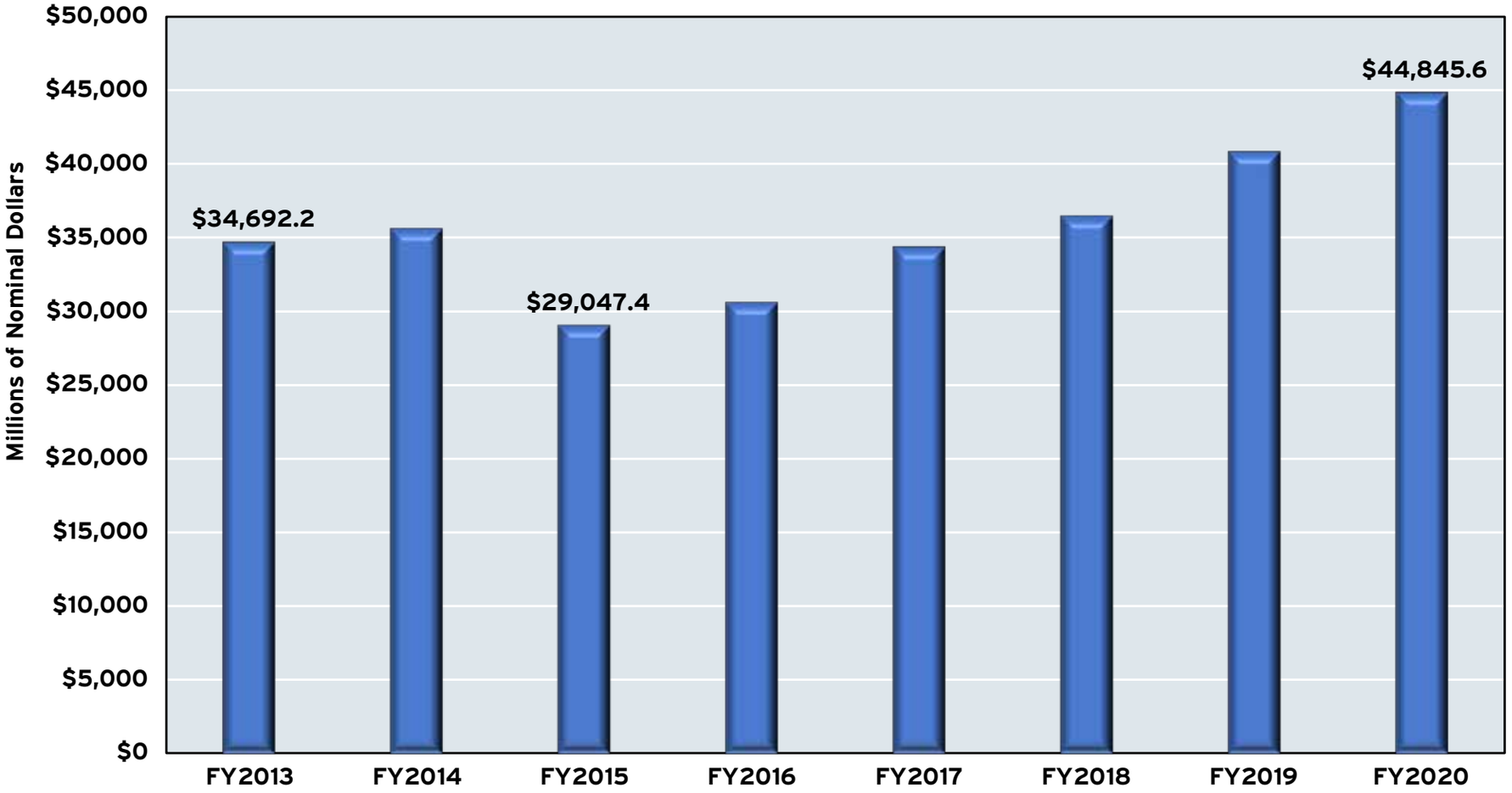
3 We note that the DOD now presents the base budget as the combination of what used to be the base budget and the overseas contingency operations (OCO) budget.

Even relatively modest increases in the DOD budget in the coming years could well be constrained by the unbridled spending habits of Congress and the president. The last time the federal government ran a surplus was FY 2001, and that was quickly undone by tax cuts in 2001 and 2003, as well as the fiscal impact of wars in Iraq and Afghanistan (Graph 15). After the fiscal response to the Great Recession, budget discipline (to some extent) and economic growth reduced the deficit to $442 billion in FY 2015. By FY 2019, the deficit had reached $984 billion as the Tax Cuts and Jobs Act of 2017 reduced revenue growth, and the discretionary spending caps were abandoned. The fiscal response to the COVID-19 pandemic was relatively swift and large in magnitude and likely staved off an ever-greater economic shock. However, the deficit rocketed to $3.1 trillion in FY 2020 and declined to only $2.8 trillion in FY 2021.

While we cannot say for certain when markets will demand higher rates of return for U.S. treasuries, we do know that the federal debt held by the public was 125% of GDP in the second quarter of 2021. Even if we exclude holdings of the Federal Reserve, the federal government owes the public over $17 trillion. At some point, the butcher's bill will come due, and when it does, the federal government will find itself having to raise taxes and cut expenditures. The DOD, as the largest discretionary program in the federal government, would be an obvious target in such a scenario.

GRAPH 12

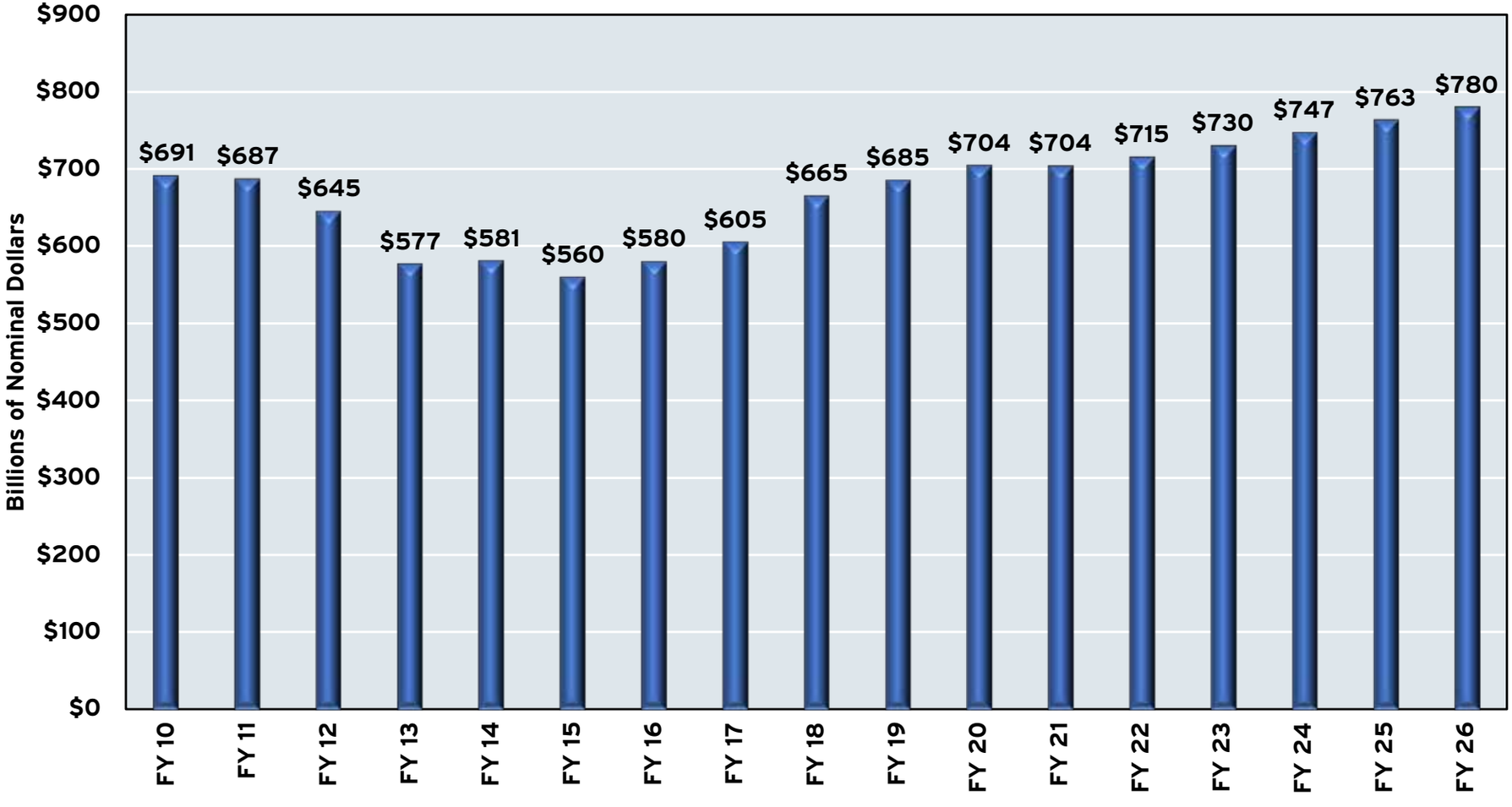
DOD CONTRACT DEFENSE SPENDING: VIRGINIA, FY 2013-FY 2020



Source: U.S. Department of Defense Office of Local Defense Community Cooperation, Defense Spending by State - Fiscal Year 2020

GRAPH 13

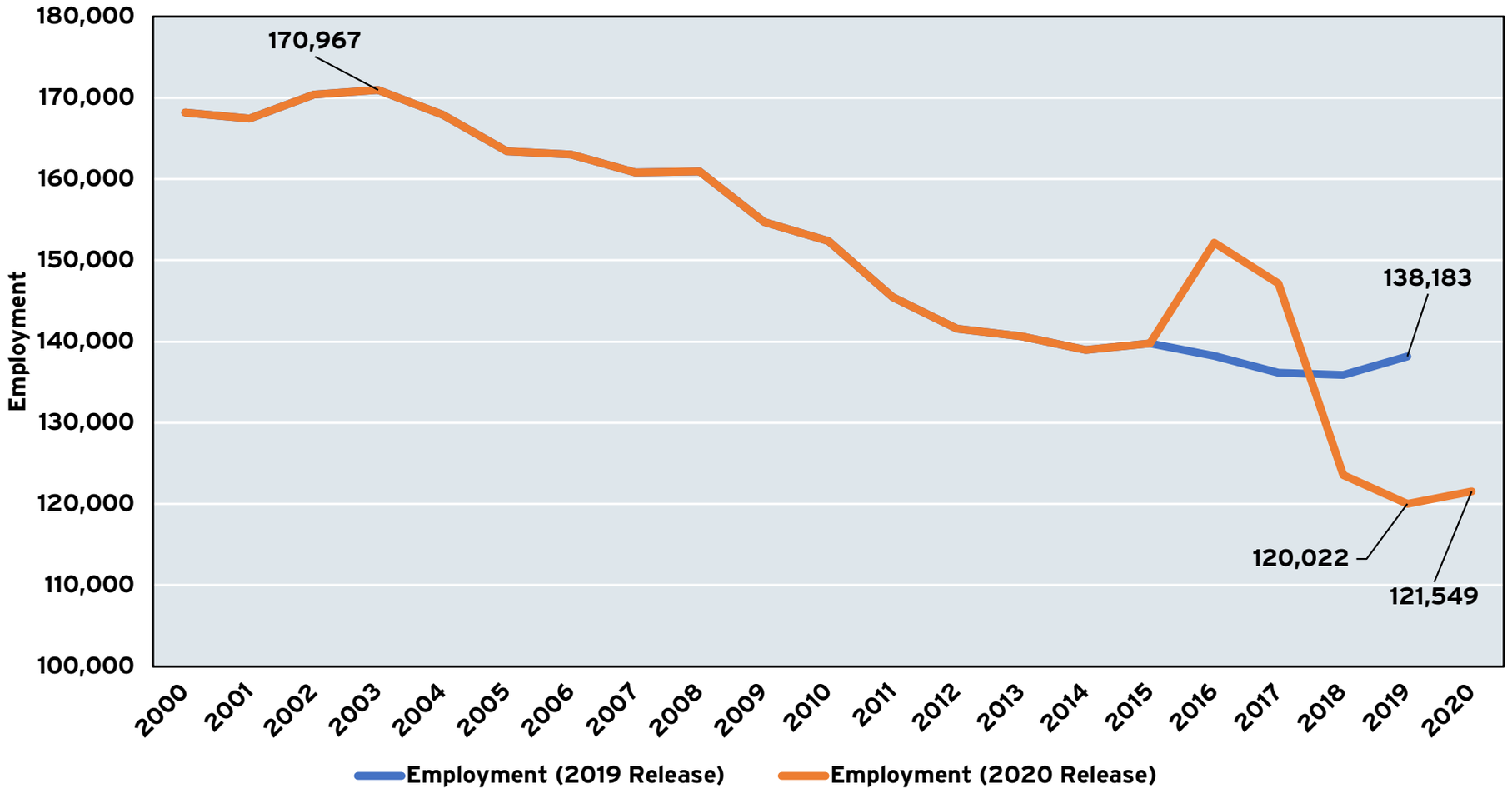
DEPARTMENT OF DEFENSE DISCRETIONARY BUDGET AUTHORITY, FY 2010-FY 2026



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; Office of Management and Budget FY 2022 Presidential Budget (Table 20-1 Policy); and Office of the Secretary of Defense (Comptroller) Department of Defense Fiscal Year 2022 Budget Request (May 2021). The FY 2022 budget presentation includes overseas contingency operations (OCO) in the DOD base budget. For backward comparison, we present the DOD base as the sum of base funding and OCO funding. Does not include emergency budget authority.

GRAPH 14

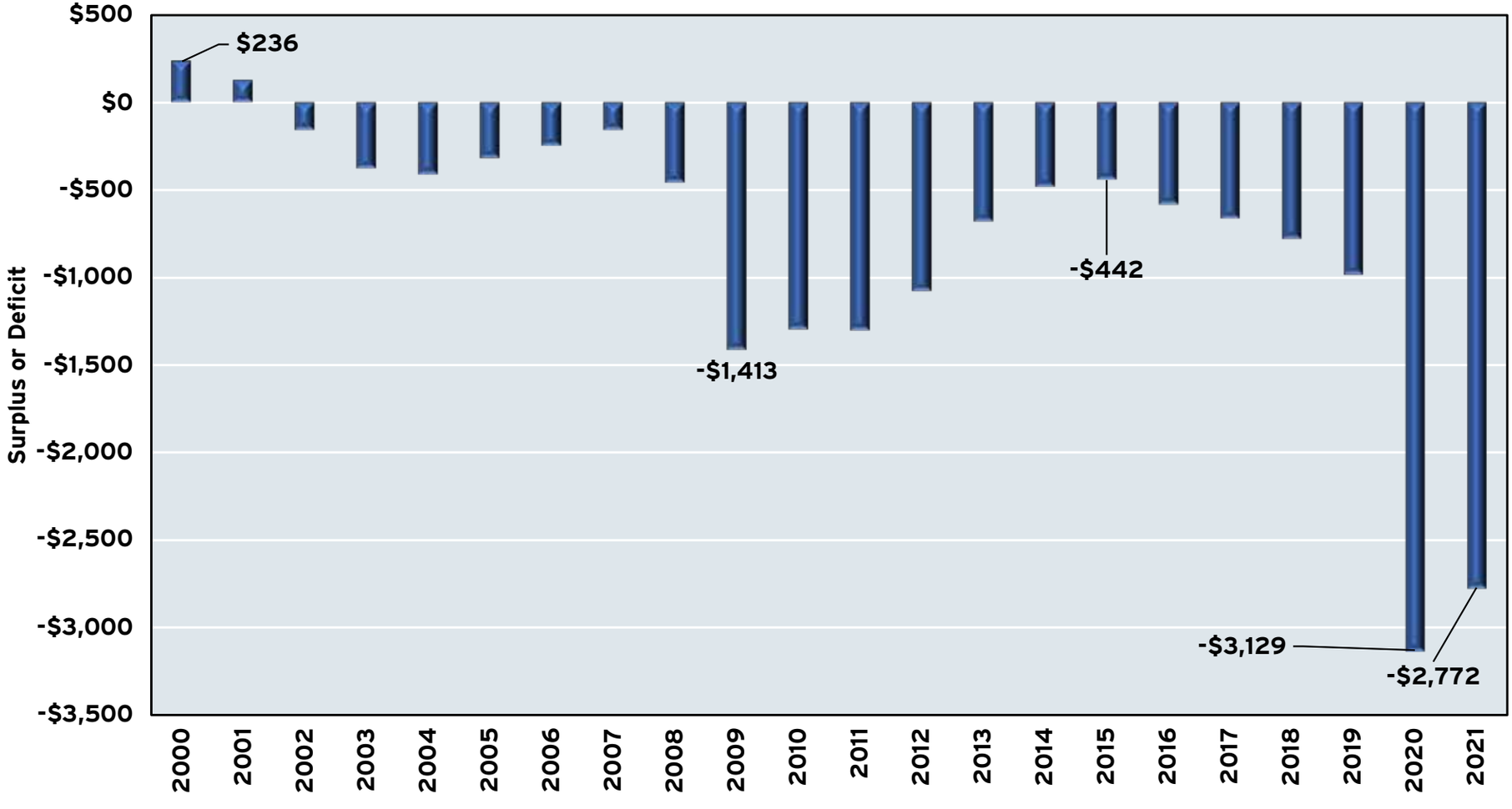
TOTAL FULL-TIME AND PART-TIME MILITARY JOBS IN VIRGINIA, 2000-2020



Source: Bureau of Economic Analysis, Table SAEMP25N

GRAPH 15

FEDERAL BUDGET SURPLUS OR DEFICIT IN BILLIONS OF NOMINAL DOLLARS, FY 2000-FY 2021



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University, and Office of Management and Budget FY 2022 Presidential Budget (Table 1.1 – Summary of Receipts, Outlays, and Surpluses or Deficits: 1789 - 2026). Estimated deficit for FY 2021.

Real Estate Prices Continue To Climb Higher

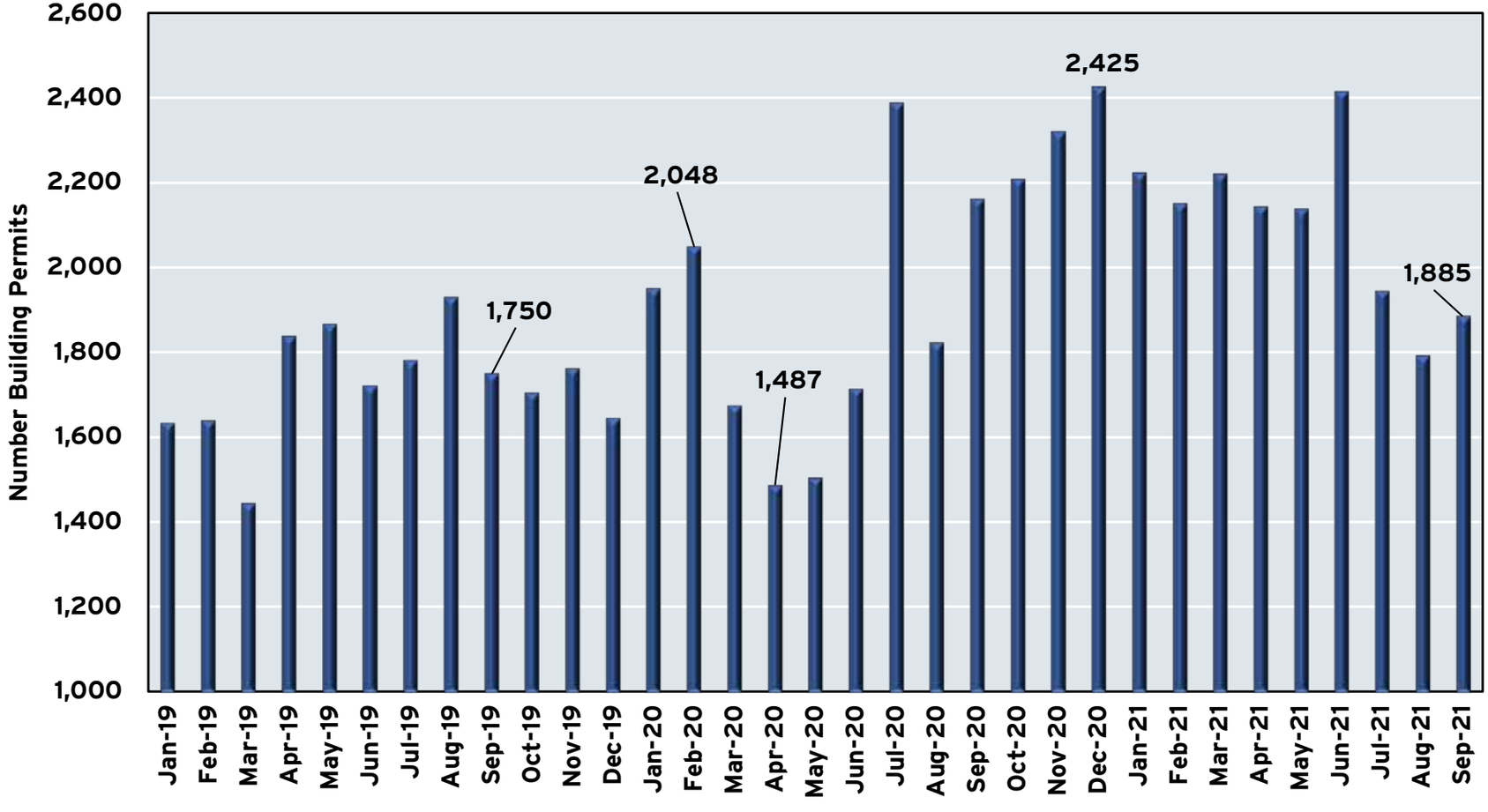
In previous recessions, layoffs and business closures typically reverberated throughout housing markets, depressing prices and increasing foreclosures. However, we have not observed a similar impact in the aftermath of the short-lived COVID-19 recession. Low interest rates, coupled with the ability of many high-salaried workers to shift to remote work, appeared to insulate the housing market in the Commonwealth from the impact of the pandemic.

As illustrated in Graph 16, the number of building permits fell in the spring of 2020 but rebounded throughout the summer of 2020. By December 2020, building permits issued in Virginia rose to 2,425, the highest level in a decade. The level of single-family housing permits declined from a record high in 2021, but 1,885 building permits were issued in the Commonwealth in September 2021. Graph 17 shows the value of permits dipped slightly in January and February 2021 before rising to a pandemic high in March 2021. Both indicators suggest that the volume of single-family residential housing construction was largely unaffected by the pandemic.

Median housing values reflect the interaction between housing supply and demand. In December 2011, the nominal median value of single-family homes was $232,220 in Virginia. By February 2020, the median home value in the Commonwealth had risen to $293,990 (Graph 18), an increase of 26.2%. By October 2021, the median home value in Virginia had jumped to $348,259, an increase of 18.8% in about 21 months. The rise in median housing values in Virginia was reflected in the national average, with median housing values accelerating during the pandemic.

GRAPH 16

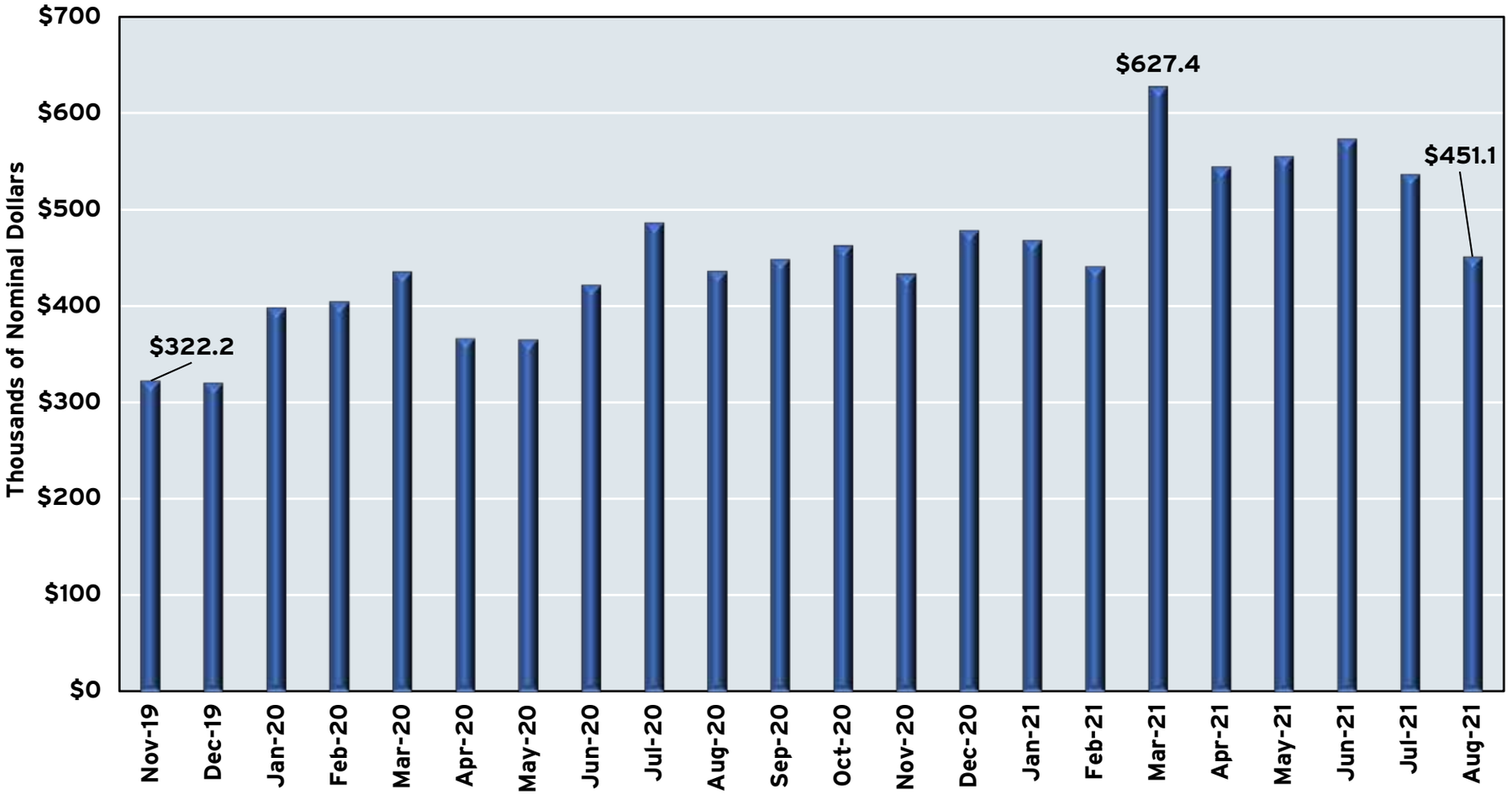
NUMBER OF ONE-UNIT SINGLE-FAMILY RESIDENTIAL BUILDING PERMITS: VIRGINIA, JANUARY 2019-SEPTEMBER 2021



Source: U.S. Census Bureau, New Private Housing Units Authorized by Building Permits: 1-Unit Structures for Virginia [VABP1FHSA], retrieved from FRED, Federal Reserve Bank of St. Louis. Data are seasonally adjusted.

GRAPH 17

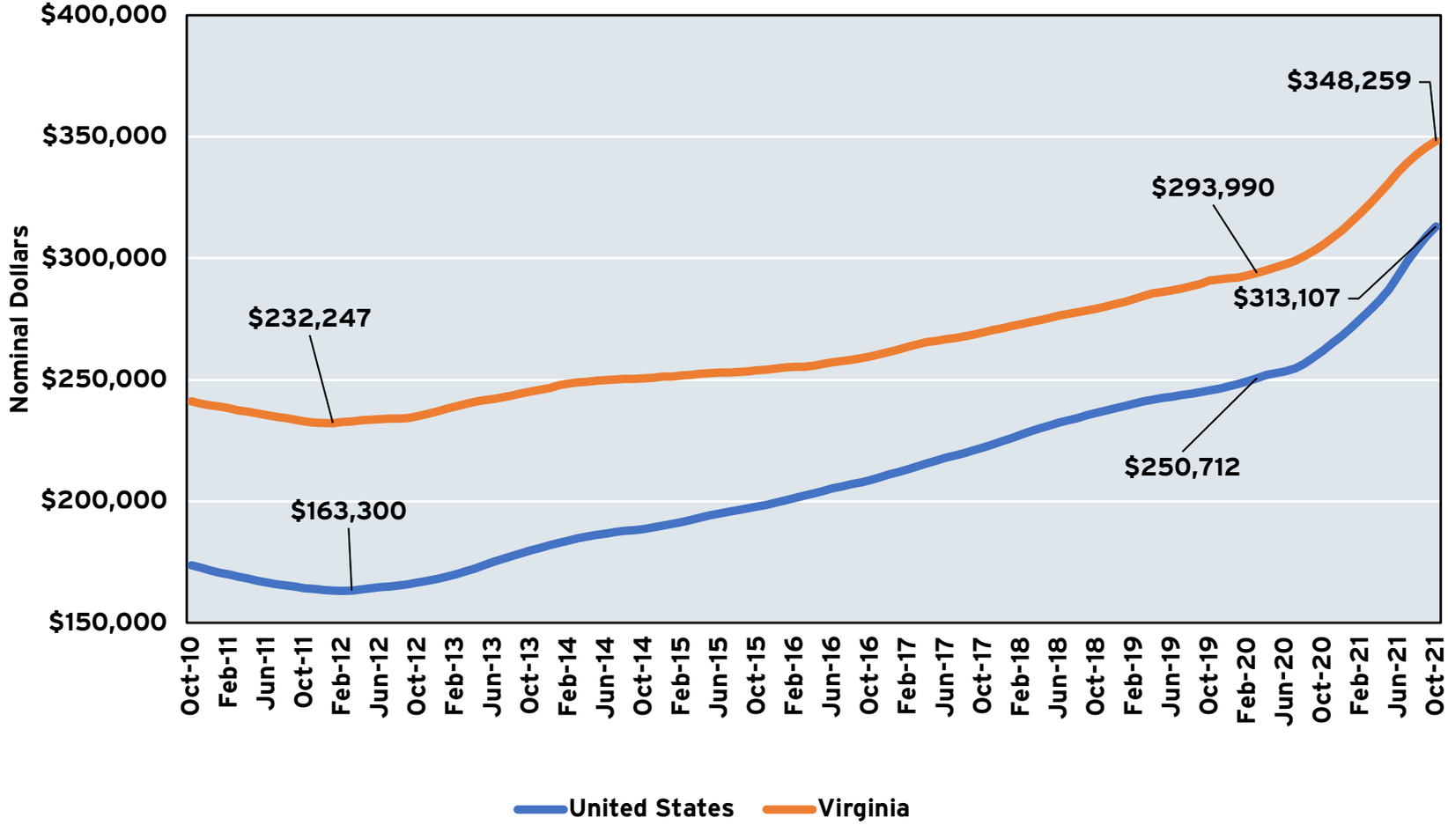
VALUE OF SINGLE-FAMILY BUILDING PERMITS: VIRGINIA, NOVEMBER 2019-AUGUST 2021



Sources: U.S. Census Bureau and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are not seasonally adjusted. New Privately-Owned Housing Units Authorized Valuation, 1-unit structures. Valuation in current month.

GRAPH 18

ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES: UNITED STATES AND VIRGINIA, OCTOBER 2010-OCTOBER 2021



Sources: Zillow (2020) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Zillow Home Value Index (ZHVI) for single-family residence.

The Burden Of COVID-19

In 2020, 19.1% of Virginians identified as Black or African American (subsequently referred to as Black), while 60.8% identified as white. As of Nov. 13, 2021, Black Virginians accounted for 24.8% of all COVID-19 deaths in the Commonwealth, compared to 64.7% for white Virginians (Graph 19). While the proportion of Black Virginians dying from COVID-19 has remained relatively steady over the past 12 months, the proportion of white Virginians has steadily increased over time.

National and Virginia data show Black Virginians are less likely to be vaccinated against COVID-19, although this gap narrowed in 2021.[4] Vaccination rates at the county level in Virginia were also negatively correlated with the share of Republican votes in the 2020 presidential election. Data from the Virginia Department of Health show that, at the health region level, the rate of hospitalizations per 100,000 Virginians was 13 to 15 times higher in September 2021 among unvaccinated individuals.[5]

As illustrated in Graph 20, from February 2020 to October 2021, the proportion of white workers (-2.1%) that have left the labor force is higher than the proportion of Black (1.7%) and Hispanic (-0.4%) workers. Compared to February 2020, there were 2% more Asian workers in the civilian labor force. However, if we examine individual employment by race, a different story emerges. While the number of Black individuals in the labor force has declined by 1.7%, Black or African American employment has shrunk by 3.8%. Hispanic employment has fallen by 1.9% relative to a 0.4% decline in the labor force. In other words, while white workers left the labor force at greater rates than Black, Hispanic or Asian workers, the declines in white employment relative to white departures from the labor force were smaller. This helps explain, in part, why the unemployment rate for whites has declined faster than other races.

Graph 21 provides data on the change in the labor force and employment by race and gender. The number of white men in the labor force declined by 1.8% from February 2020 to October 2021. Over the same period, the number of Black men in the labor force rose by 0.3%. However, employment dropped by 2.6% and 1.8% for white and Black men, respectively. For women, the declines were more pronounced. The number of white and Black women in the labor force declined by 2.5% and 3.5%, respectively, over the same period. While employment for white women declined by 3.6% from February 2020 to October 2021, the number of Black women employed dropped by 5.4%. In other words, Black employment has experienced a more significant economic shock, especially when compared to the faster recovery in the Black labor force relative to the white labor force.

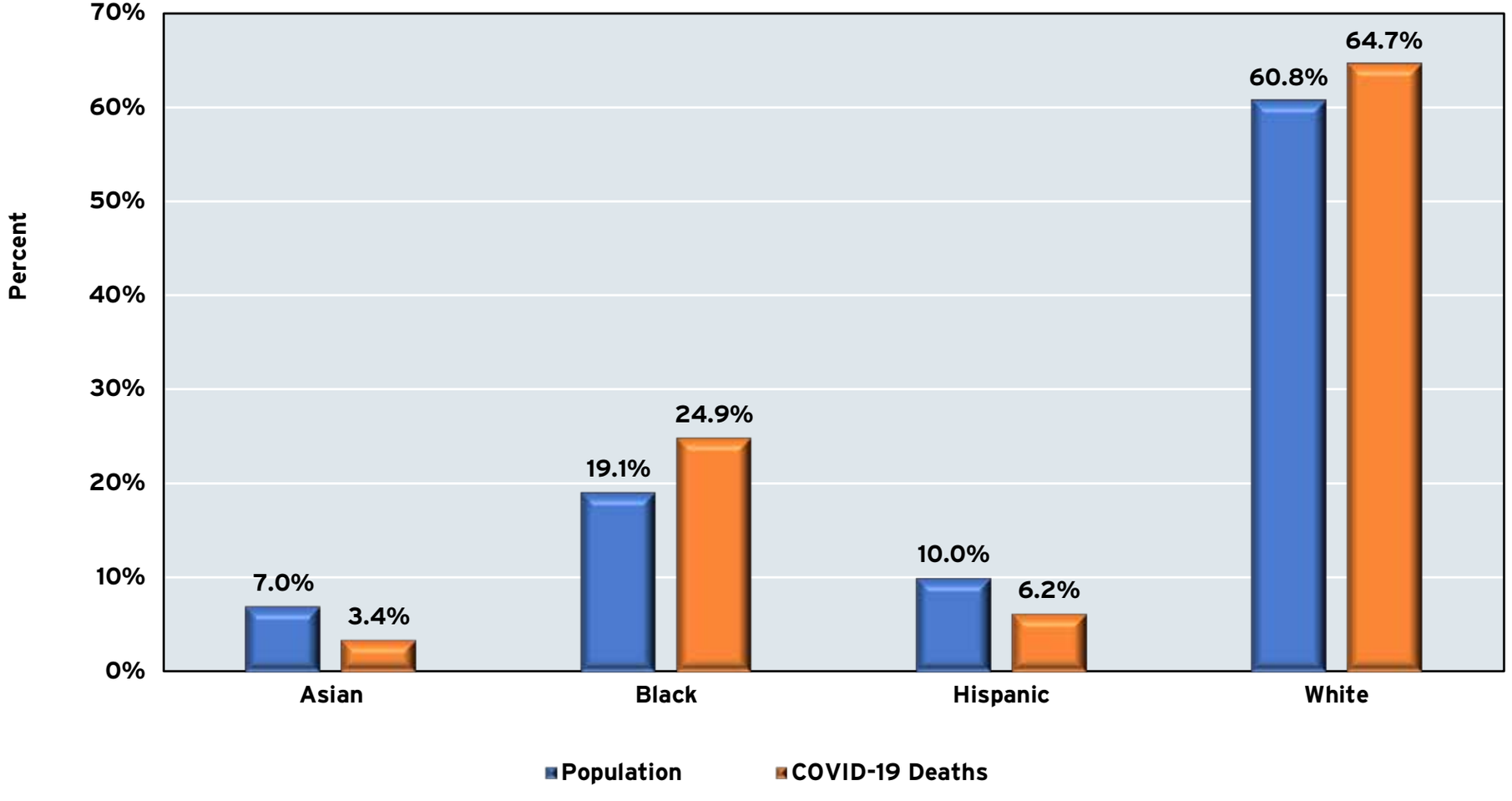
Table 2 presents the distribution of continuing claims for unemployment insurance in October 2019, 2020 and 2021. White workers experienced a smaller increase in continuing claims in the initial pandemic impact period compared to Black and Hispanic workers but have had a slower recovery. Compared to October 2019, continuing claims in October 2020 rose faster among Black and Hispanic workers relative to white workers. By October 2021, continuing claims among white workers were 113.3% above the level of claims observed in October 2019, higher than those of Black workers (47.6%).

If we examine continuing unemployment claims by gender, the disparities in both the initial pandemic impact period and recent recovery are apparent. Women comprised 50.8% of the total population in 2020 and accounted for 49.3% of all continuing claims in October 2019. The share of continuing claims filed by women rose to 54.3% in October 2020. By October 2021, their share had declined slightly to 53.6%. There are a few possible reasons why women continue to face a disproportionate burden in the labor market. While in-person schooling largely resumed in 2021, the delta variant-induced wave in infections in early spring 2021 led some women to hold off on returning to the workforce due to child care concerns. Also impeding the recovery for women was the decline in the availability of child care, with daycare centers struggling to fill positions. Unfortunately, child care constraints are unlikely to ease in 2022 as employers will continue to struggle to attract and retain labor.

4 https://www.kff.org/coronavirus-covid-19/issue-brief/latest-data-on-covid-19-vaccinations-by-race-ethnicity/.
5 https://www.vdh.virginia.gov/coronavirus/covid-19-in-virginia/covid-19-cases-by-vaccination-status/.

GRAPH 19

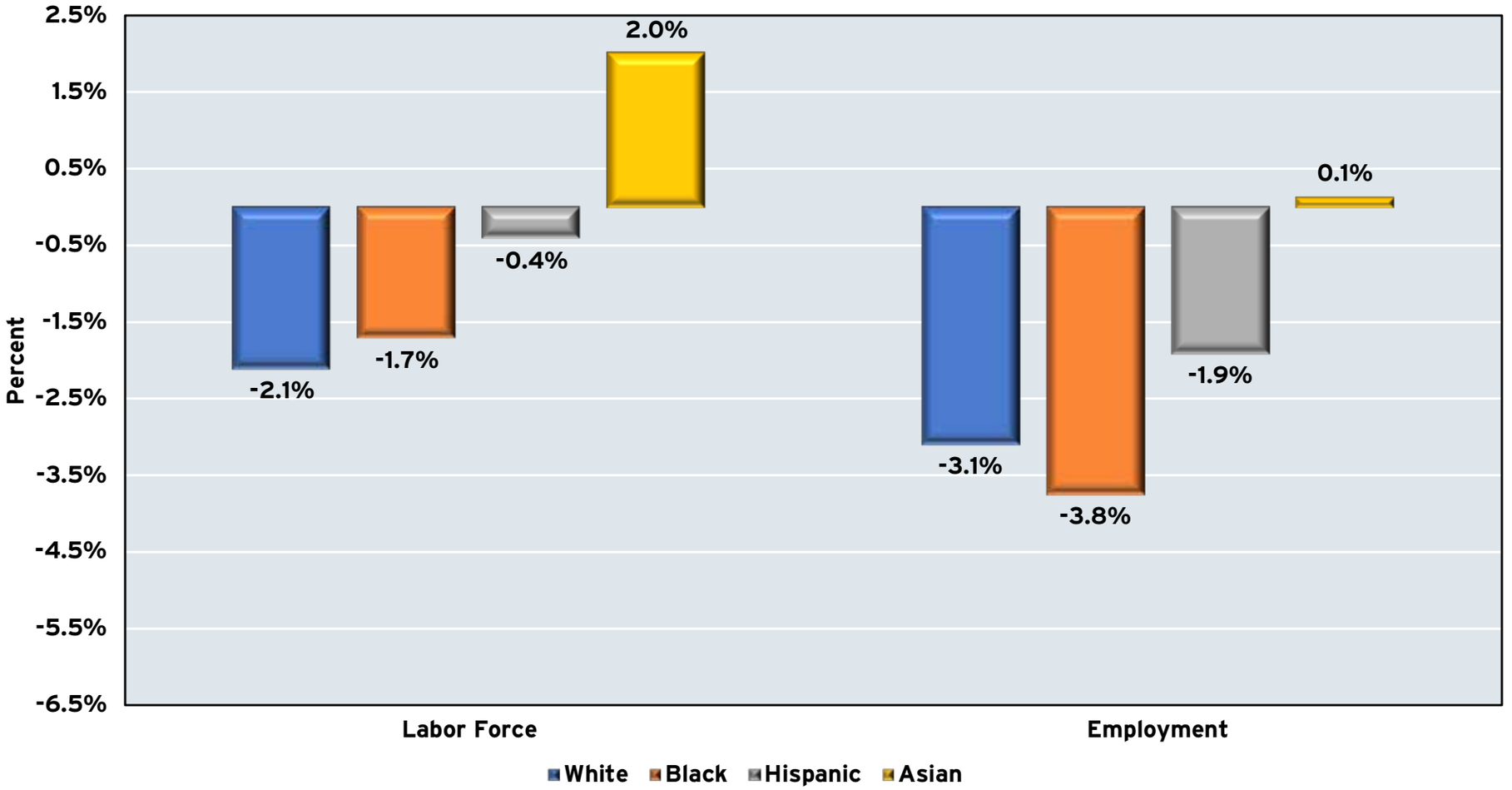
**SARS-COV-2 (COVID-19) DEATHS BY RACE:
VIRGINIA, JAN. 1, 2020-NOV. 13, 2021**



Source: Centers for Disease Control and Prevention, Provisional Death Counts by Race

GRAPH 20

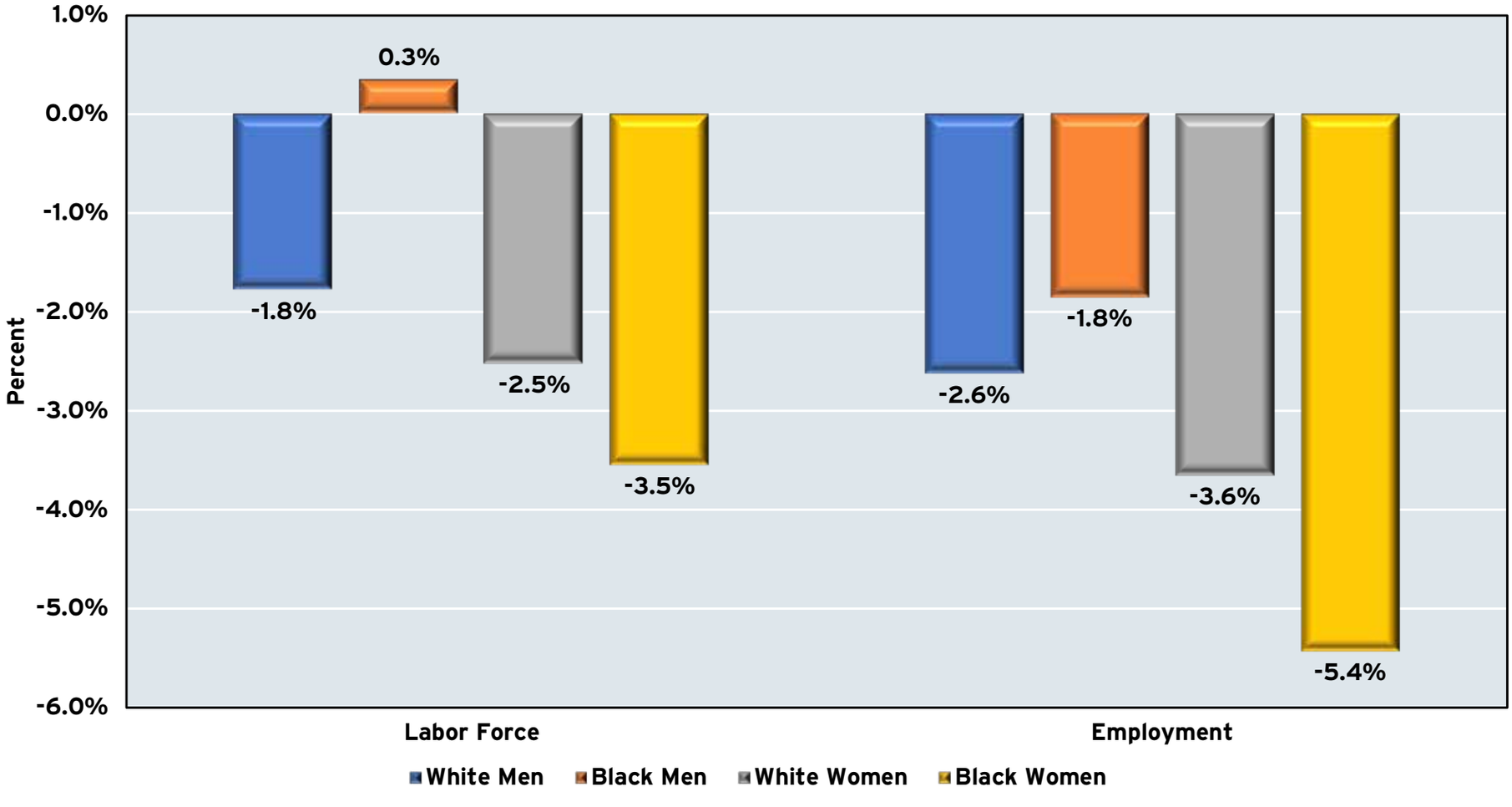
CHANGE IN CIVILIAN LABOR FORCE AND EMPLOYMENT BY RACE: UNITED STATES, FEBRUARY 2020-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 21

CHANGE IN CIVILIAN LABOR FORCE AND EMPLOYMENT BY SELECTED RACE AND GENDER: UNITED STATES, FEBRUARY 2020-OCTOBER 2021



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

TABLE 2

CONTINUING CLAIMS FOR UNEMPLOYMENT INSURANCE BY SELECTED DEMOGRAPHICS: VIRGINIA, OCTOBER 2019, OCTOBER 2020 AND OCTOBER 2021

Demographic Category	Percent of the Population in 2020	October 2019 Continuing Claims	October 2020 Continuing Claims	October 2021 Continuing Claims	Percent of October 2021 Continuing Claims
RACE/ETHNICITY					
White	60.8%	9,557	55,165	20,386	43.6%
Black or African American	19.1%	7,434	51,524	10,975	23.4%
American Indian and Alaska Native	0.3%	94	602	170	0.4%
Asian	7.0%	517	7,476	926	2.0%
Hispanic or Latino	10.0%	168	613	7	0.0%
Other Races	2.9%	1,328	10,945	14,340	30.6%
AGE					
16 to 22 years	6.6%	234	6,661	1,985	4.2%
22 to 24 years	4.0%	537	8,423	3,946	8.4%
25 to 34 years	13.9%	4,001	33,810	13,341	28.5%
35 to 44 years	13.1%	4,448	27,042	10,009	21.4%
45 to 54 years	12.6%	4,678	22,367	8,306	17.7%
55 to 64 years	13.0%	4,194	19,529	7,162	15.3%
65 years and over	16.3%	1,006	8,493	2,055	4.4%
GENDER					
Male	49.2%	9,676	57,791	21,724	46.4%
Female	50.8%	9,422	68,534	25,080	53.6%

Sources: Virginia Employment Commission and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Continuing claims cover 100% of total continuing claims for each month. U.S. Census Bureau, Vintage 2020 Population Estimates. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

Final Thoughts

With 2021 coming to a close, it is a good time to pause and reflect on the economic performance of the Commonwealth over the last 24 months. While conditions have dramatically improved from the depths of the pandemic's economic shock in the spring of 2020, work remains to be done. In the short term, the task is to continue the recovery and establish the conditions whereby Virginia can grow faster in the coming years. In the longer term, we should examine the lessons and impacts of the pandemic and build our resilience in preparation for the next economic downturn. We can hope that the next economic shock is years away, but hope is not policy.

What, then, should be done?

First, the Commonwealth must avoid the temptation to rapidly expand public spending and/or cut taxes without clear analysis of the costs and benefits. While some may point to the current state surplus as a windfall, we remind the reader that the surplus is, in part, due to conservative revenue projections formulated during the depths of the pandemic's economic shock. The best courses of action are to direct any surplus to the revenue stabilization fund and to make productive public investments (such as continued investments in the Port of Virginia and the expansion of broadband throughout the Commonwealth). While the federal government may lack fiscal discipline or foresight, that is no reason for Virginia to follow in its footsteps.

Second, Virginia must continue to focus on improving its business climate and avoid increasing the regulatory burden on businesses that operate in the Commonwealth. The state should modernize its antiquated tax system to harmonize tax administration at the state and local level across Virginia. In the longer term, continued investments in human capital through the K-12 and public university systems will provide employers with a high-talent workforce. Building an apprentice system for those Virginians whose skills naturally lend themselves to the trades also benefits individuals, employers and the state.

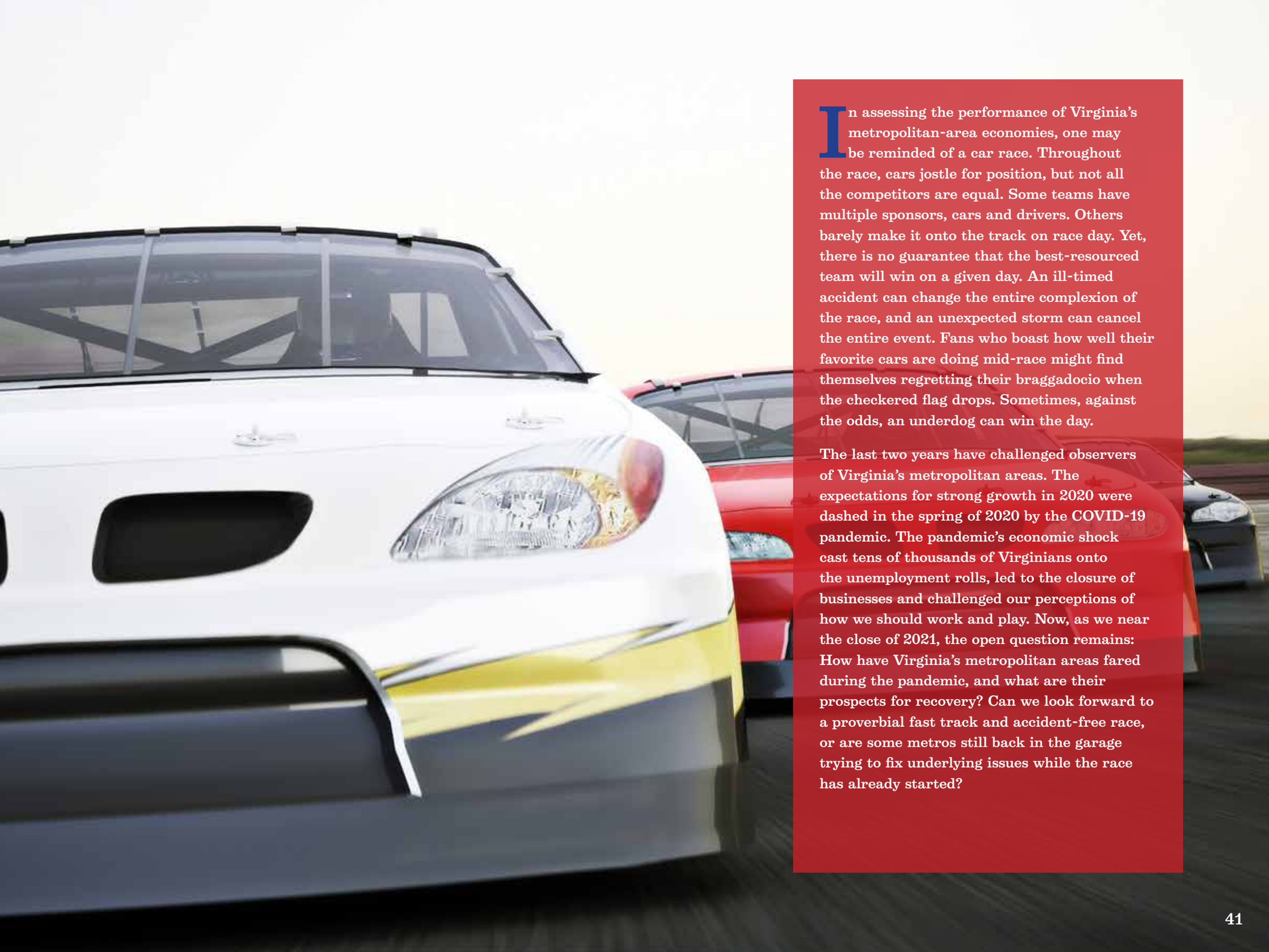
Third, a continued focus on vaccinations and public health will benefit all of Virginia. With an estimated 162 COVID-19 deaths per 100,000 residents, Virginia's toll is the lowest among neighboring states. While the Commonwealth has not been perfect, it has avoided some of the rancor that has pervaded the discourse over COVID-19 in other states. Virginia should continue to allow employers to decide whether vaccine requirements are in their best interest and provide resources so that trusted representatives of the community can work to increase vaccination rates across the state.

Lastly, a renewed focus on the Virginia Way will benefit us all. Fiscal discipline, comity and a commitment to democracy have proven successful in the Commonwealth for over 400 years. Not every step has been perfect, but the general arc of progress in the state has been moving forward. While we may disagree on many things, we should always keep in mind the ties that bind us and not be distracted by the differences that separate us.

A RECOVERY AT DIFFERENT SPEEDS: VIRGINIA'S METROPOLITAN AREAS

If you ain't first, you're last.

– Will Ferrell as Ricky Bobby, "Talladega Nights"



In assessing the performance of Virginia's metropolitan-area economies, one may be reminded of a car race. Throughout the race, cars jostle for position, but not all the competitors are equal. Some teams have multiple sponsors, cars and drivers. Others barely make it onto the track on race day. Yet, there is no guarantee that the best-resourced team will win on a given day. An ill-timed accident can change the entire complexion of the race, and an unexpected storm can cancel the entire event. Fans who boast how well their favorite cars are doing mid-race might find themselves regretting their braggadocio when the checkered flag drops. Sometimes, against the odds, an underdog can win the day.

The last two years have challenged observers of Virginia's metropolitan areas. The expectations for strong growth in 2020 were dashed in the spring of 2020 by the COVID-19 pandemic. The pandemic's economic shock cast tens of thousands of Virginians onto the unemployment rolls, led to the closure of businesses and challenged our perceptions of how we should work and play. Now, as we near the close of 2021, the open question remains: How have Virginia's metropolitan areas fared during the pandemic, and what are their prospects for recovery? Can we look forward to a proverbial fast track and accident-free race, or are some metros still back in the garage trying to fix underlying issues while the race has already started?

Many indicators of economic performance suggest that Virginia's metropolitan areas contracted in 2020 and began growing again, albeit at different speeds, in 2021. While metro-area measures of economic output for 2020 and 2021 are not yet available, we do know that individual employment peaked in early 2020, fell precipitously in the spring of 2020 and climbed out of the trough over the intervening months. The unemployment rate has declined from the pandemic peak in each of Virginia's metros, and jobs have also increased from their lows. Population growth was uneven among the metro areas and well below the national average for most. Population and economic activity continue to shift toward Virginia's urban crescent, defined by Northern Virginia, Richmond and Hampton Roads. These shifts, along with political currents, suggest that the Commonwealth is pulling apart, creating a challenge for current and future decision makers on how to spur development in those areas of the state that have been left behind.

The road ahead is neither straight nor lacking potential hazards. Northern Virginia and Hampton Roads are closely tied to the size and composition of federal government spending. While the federal government plans to spend more in 2022 (especially on defense), the question remains: How long can increases in defense spending continue? A shift in defense strategy toward the Pacific and the increasing vulnerability of large weapons systems (including carriers) threaten the level of defense spending in the Commonwealth. Even if one believes this spending will stay the same, there is the question of why some Virginians have chosen to seek their fortunes elsewhere. Domestic migration was negative for much of the last decade. The COVID-19 pandemic also reduced international tourism and migration, a source of growth for Northern Virginia and Hampton Roads.

The good news is that as vaccinations increase in the Commonwealth, nation and globally, it is reasonable to expect that flows of tourists and migrants will return in 2022. Vacation tourism has already rebounded off its lows and should continue to increase in the coming year. However, as services increasingly dominate the state's economy and agriculture and mining wane in importance, the economic base of some metro areas continues to shrink. Creating equitable growth that benefits all Virginians while remaining a business-friendly state that attracts investment is a difficult balancing act. These challenges await the new Virginia General Assembly and lawmakers at the local government level.

To explore how Virginia is faring at the metropolitan level, we examine a number of economic performance measures: median household income, poverty, employment, wages and population. Each of these measures is available on a more frequent basis than gross domestic product (GDP), and they provide a more current picture of the economic activity in each metro area. We also present the most recent (but significantly lagged) data for metro-area GDP. From these measures, we work to construct as clear a picture as possible of the health of Virginia's metropolitan-area economies.

One difficulty in comparing metropolitan statistical areas (MSAs) is that different government agencies and departments use different definitions for these areas. The U.S. Bureau of Labor Statistics (BLS), for example, has some data available for Northern Virginia, which is the Virginia portion of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA. Other data from the BLS are only available for the entire Washington-Arlington-Alexandria MSA. The U.S. Bureau of Economic Analysis (BEA) provides economic data on the performance of MSAs. However, the BLS, BEA and U.S. Census Bureau may use a different basis to define which counties and independent cities are in specific MSAs. Individual MSAs also see the addition and subtraction of counties and cities over time. In 2018, for example, the U.S. Office of Management and Budget (OMB) added Camden County in North Carolina, and Southampton County and the city of Franklin in Virginia, to the Virginia Beach-Norfolk-Newport News MSA.[1] The reader should be aware of these geographical differences and exercise care when examining data from different sources, even if those sources are from the same department or agency. For comparability across different sources, we will use metropolitan-level data even if the metropolitan area crosses a state line, such as in the cases of Kingsport-Bristol, Virginia Beach-Norfolk-Newport News, Washington-Arlington-Alexandria and Winchester.

1 https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf.

Changes In Population

From 2000 to 2020, Virginia's population increased at a faster rate than that of the nation. As illustrated in Graph 1, Virginia's total population increased by 7.1%, 0.6 percentage points more than the United States. Among Virginia's metropolitan areas, population growth varied significantly, from a 0.4% contraction in Kingsport-Bristol to an 11.4% increase in the Washington, D.C., metro area.

Population growth in six metro areas was slower than the state or the nation. Five of the six were smaller metros – Kingsport-Bristol (-0.4%), Roanoke (1.7%), Blacksburg-Christiansburg (2.5%), Lynchburg (4.5%) and Staunton (5.2%). Hampton Roads, with a population of 1.7 million in 2010, grew only by 3.7% to a population of 1.8 million in 2020.

How then did the population of Virginia grow faster than the nation? First, while relatively small in population when compared to Richmond or Hampton Roads, the metros of Harrisonburg (8.1%), Charlottesville (8.9%) and Winchester (10.4%) grew more rapidly than the state or nation from 2010 to 2020. Second, the other two largest metro areas, Richmond and Washington-Arlington-Alexandria, grew by 9.7% and 11.4%, respectively.

Table 1 displays the components of population change for Virginia's metropolitan areas, Virginia and the United States from 2010 to 2020. The U.S. Census breaks population change into two broad components: the natural increase in the population and net migration. The natural increase in the population is equal to births minus deaths. Net migration, on the other hand, consists of domestic migration and international migration. For example, if more people move into a metro area from overseas countries than depart the metro area for overseas destinations, then net international migration is positive (and vice versa). Turning first to the Commonwealth, the natural increase in the population from 2010 to 2020 was positive, indicating more Virginians were born than died during this period. Even though net domestic migration was negative, it was more than compensated by net positive international migration.

Graph 2 displays the annual level of net domestic and international migration from 2010 to 2020, as well as net migration, for the state. Net international migration peaked in 2015 at 39,097 individuals and then declined through 2020. Net domestic migration, on the other hand, was positive at the beginning of the previous decade, signaling that residents of other states sought better fortunes in the Commonwealth. Net domestic migration turned negative in 2014 and bottomed out at -25,347 in 2015. While net domestic migration remained negative through 2020, the outflow of Virginians to other states ebbed somewhat. Although international migration more than offset domestic outmigration, negative domestic migration is not a positive signal of the Commonwealth's attractiveness. However, when we examine the metropolitan-level data, we find that two regions were responsible for Virginia's negative net domestic migration levels: Hampton Roads and the Washington, D.C., metro region.

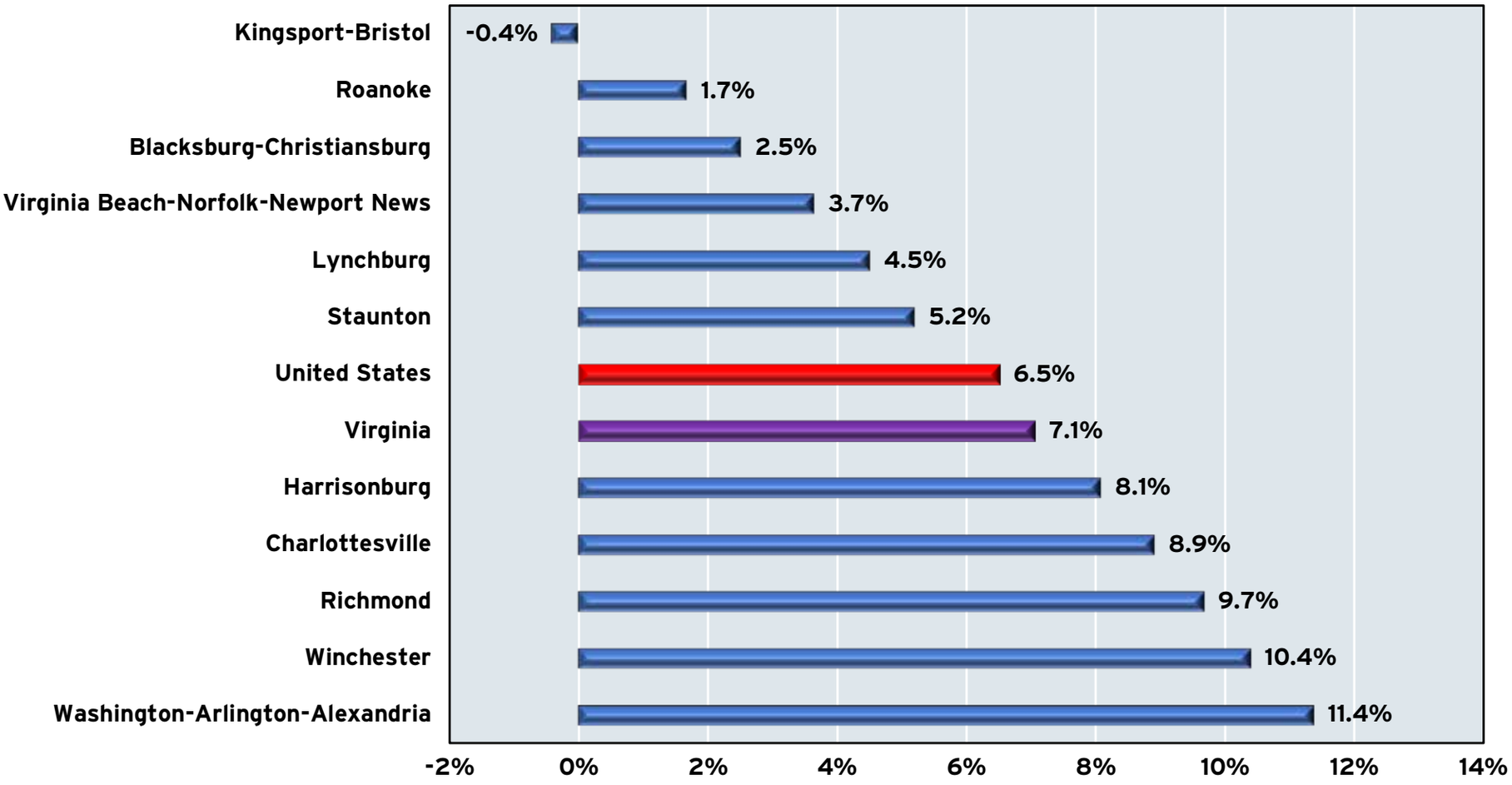
Graph 3 displays the components of population change and the change in total population for the Virginia portion of Hampton Roads from 2010 to 2020. While the population of Hampton Roads increased every year, the population grew only by 3.7% over this period. The natural increase in the population (births minus deaths) peaked at 10,175 in 2012 and declined to slightly less than 5,000 in 2020. Net domestic migration was negative every year and, in seven of the 11 years, net migration (international migration plus domestic migration) was also negative. In other words, Hampton Roads residents were "voting with their feet" with regard to economic conditions in the region.

Graph 4 displays a similar story for the Washington-Arlington-Alexandria, DC-VA-MD-WV, MSA (of which Northern Virginia is the largest entity). The natural increase in the population peaked at 49,161 in 2012 and was 34,171 in 2020. While net domestic migration was positive from 2010 to 2013, it turned negative in 2014 and has remained negative since. In 2020, about 31,000 more residents left this metro area than relocated to the region. Net migration, which was positive for most of the previous decade, was negative in 2018 and 2020.

We must be careful to avoid painting the Hampton Roads and Washington, D.C., metros with the same brush. Hampton Roads' economic growth over the previous decade was paltry at best, and the region has struggled to diversify its economic base from a dependence on federal government spending. While economic growth in the Washington, D.C., metro has not exactly been stellar, the region continues to attract private firms. In some aspects, the metro area's success has led to a downside: higher than average cost of living. It should be no surprise that suburban areas of the Washington metro area have seen an influx of new residents who then commute to work in the D.C. region.

GRAPH 1

POPULATION CHANGE:
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA AND THE UNITED STATES, 2010-2020



Source: U.S. Census Bureau, Vintage 2020 Population Estimates. National, state, and metropolitan and micropolitan statistical areas totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

TABLE 1

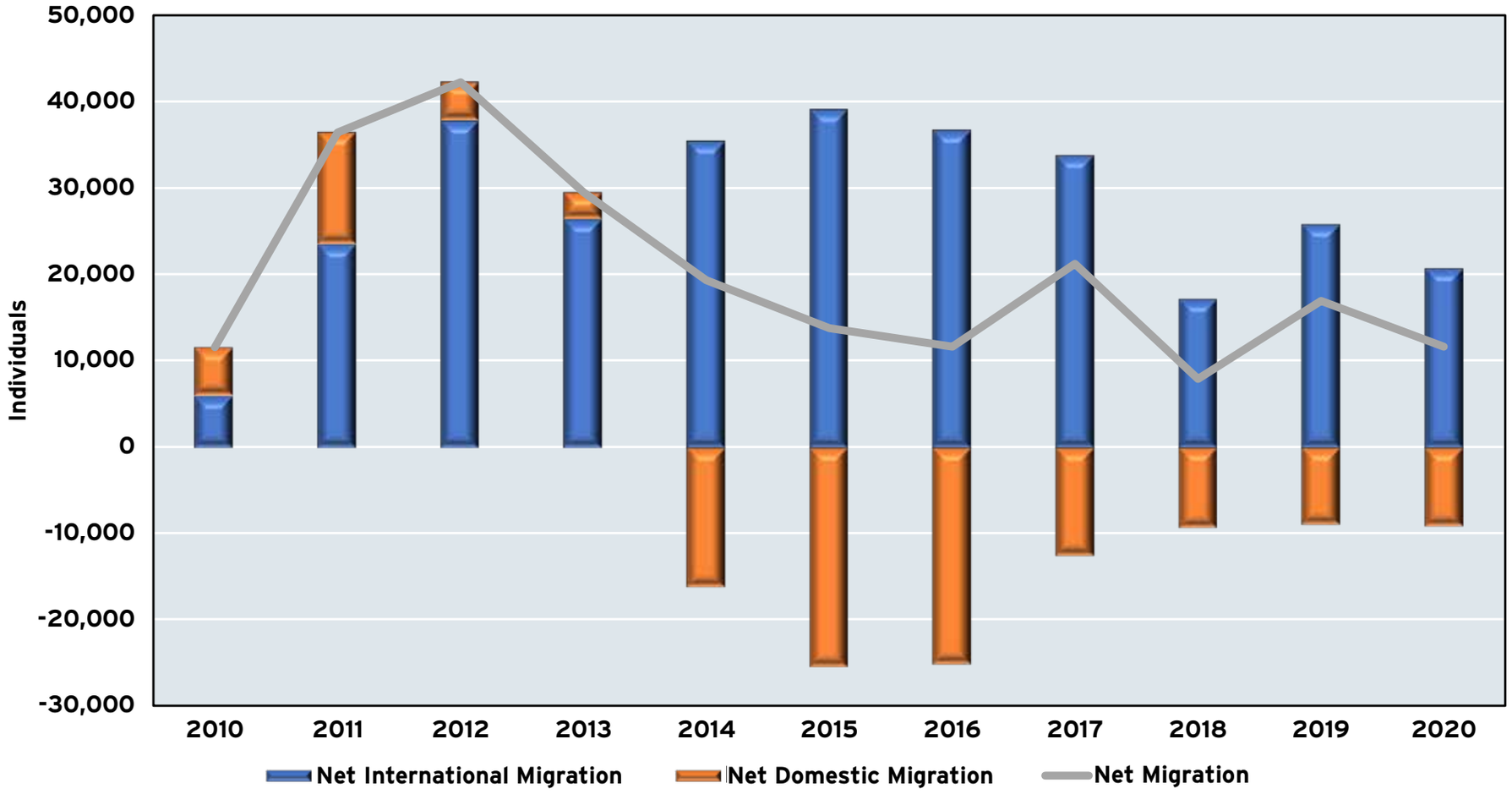
COMPONENTS OF POPULATION CHANGE:
VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES,
2010-2020

	Natural Increase	Net Domestic Migration	Net International Migration	Population Change
United States	12,257,668	--	8,468,350	20,726,018
Virginia	366,671	-80,255	302,228	589,517
Blacksburg-Christiansburg	488	-1,925	5,736	4,285
Charlottesville	6,074	4,977	7,373	18,331
Harrisonburg	4,479	764	5,105	10,324
Kingsport-Bristol	-10,468	8,928	467	-1,310
Lynchburg	1,634	5,799	4,395	11,732
Richmond	41,339	42,783	32,866	116,858
Roanoke	-2,812	1,702	6,427	5,116
Staunton	-889	5,340	1,564	5,977
Hampton Roads	83,925	-61,337	43,388	65,869
Washington-Arlington-Alexandria	463,701	-156,947	366,096	674,931
Winchester	3,444	7,962	2,194	13,568

Source: U.S. Census Bureau, Vintage 2020 Population Estimates. National, state, and metropolitan and micropolitan statistical areas totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results. Population change includes a statistical residual and components may not sum to total population change as a result.

GRAPH 2

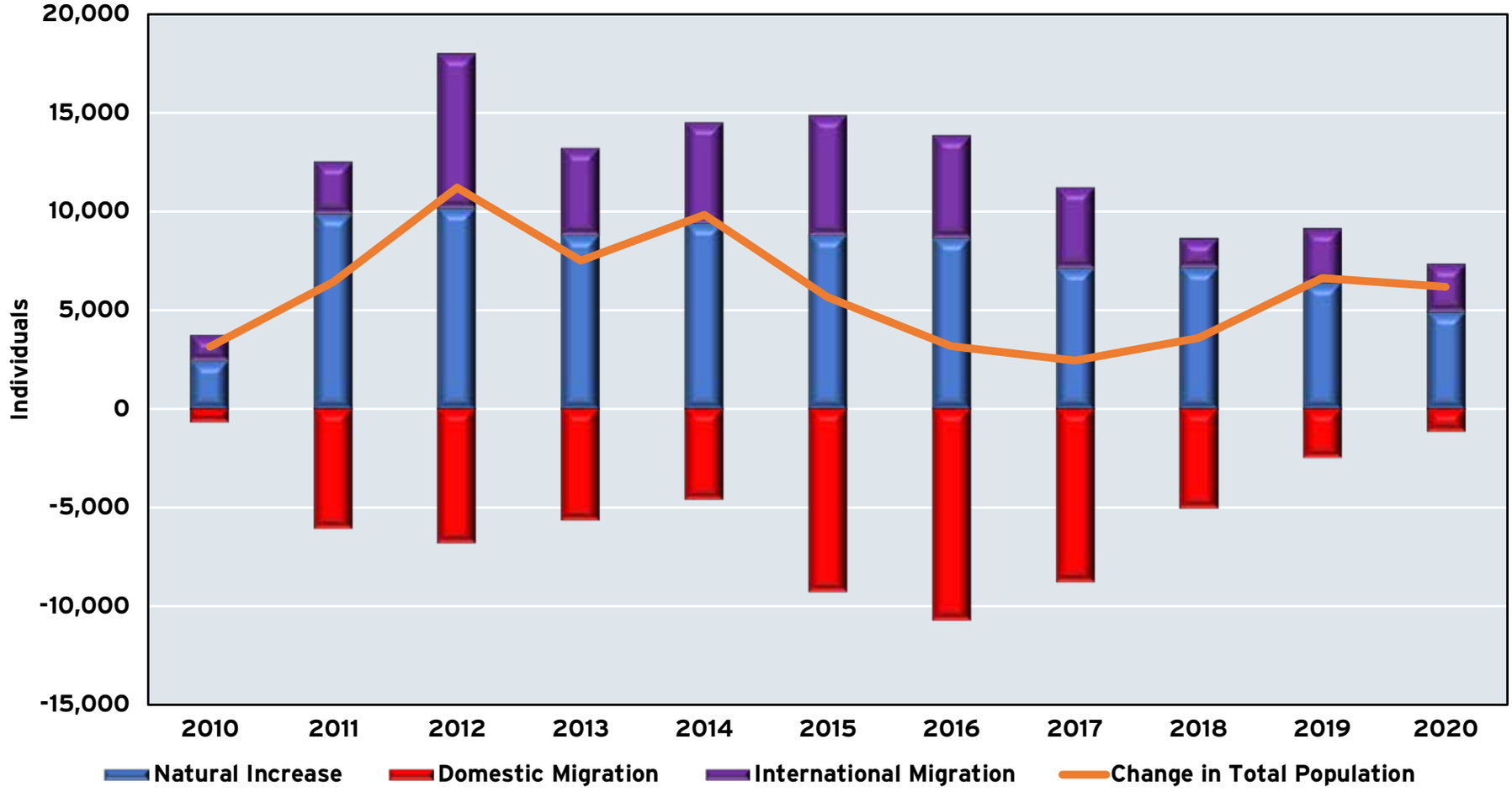
NET DOMESTIC MIGRATION, NET INTERNATIONAL MIGRATION AND NET MIGRATION: VIRGINIA, 2010-2020



Source: U.S. Census Bureau, Vintage 2020 Population Estimates. National, state, and metropolitan and micropolitan statistical areas totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results. Migration components include a statistical residual and may not sum to net migration as a result.

GRAPH 3

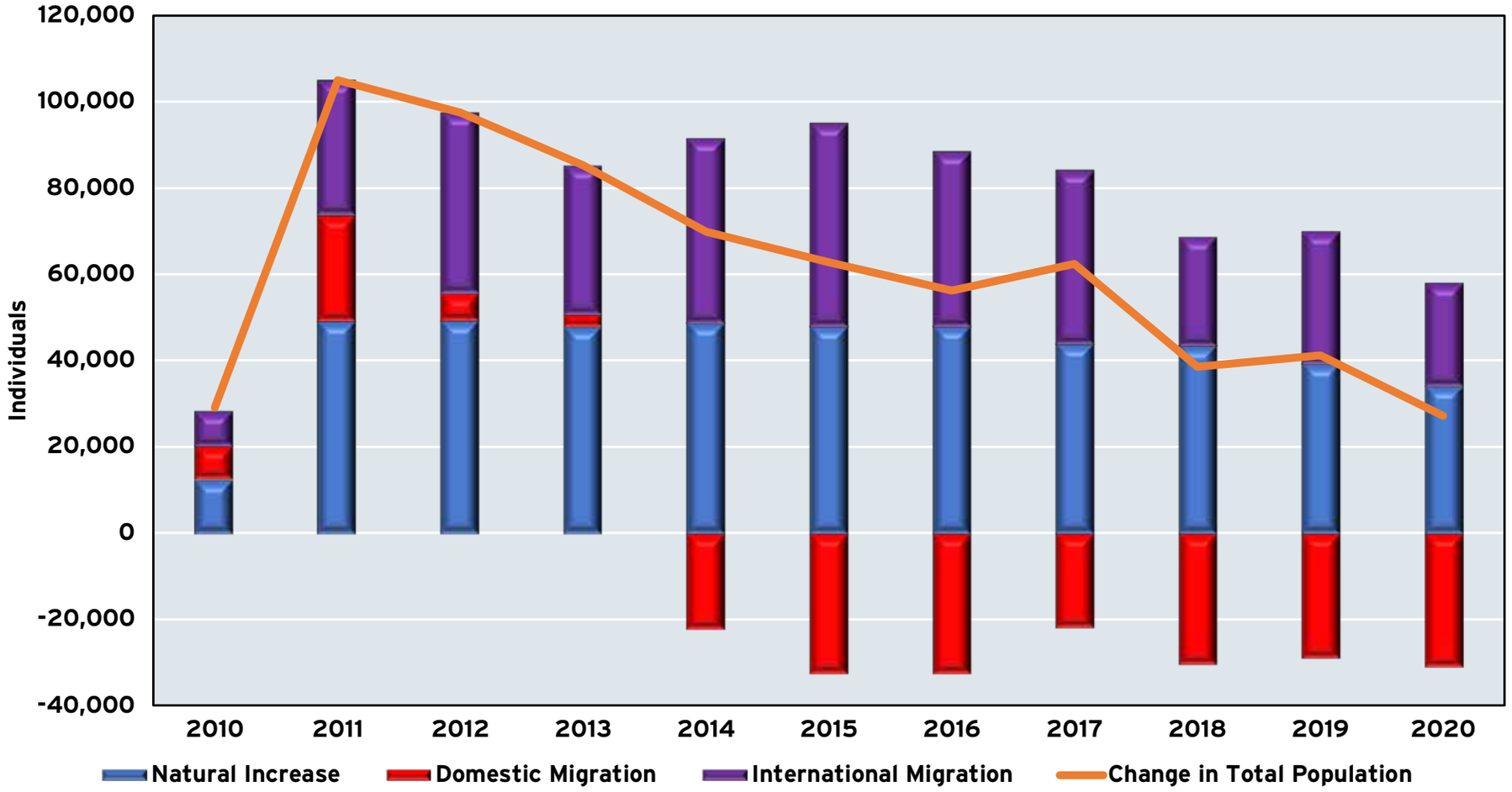
COMPONENTS OF POPULATION CHANGE AND CHANGE IN TOTAL POPULATION: HAMPTON ROADS METROPOLITAN STATISTICAL AREA, 2010-2020



Source: U.S. Census Bureau, Vintage 2020 Population Estimates. National, state, and metropolitan and micropolitan statistical areas totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results. Migration components include a statistical residual and may not sum to net migration as a result.

GRAPH 4

COMPONENTS OF POPULATION CHANGE AND CHANGE IN TOTAL POPULATION: WASHINGTON-ARLINGTON-ALEXANDRIA, DC-VA-MD-WV, MSA, 2010-2020



Source: U.S. Census Bureau, Vintage 2020 Population Estimates. National, state, and metropolitan and micropolitan statistical areas totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results. Migration components include a statistical residual and may not sum to net migration as a result.

Real Gross Domestic Product: New Data That's Old

Table 2 presents real (inflation-adjusted) rates of growth for GDP, a measure of economic activity. The BEA produces the national, state, metropolitan area and county estimates of GDP, which provide a benchmark for economic activity over time. The metro-area estimates, especially those for 2020, should be viewed with an abundance of caution. The BEA released "advance" estimates for metro-area GDP for 2020 in December 2021. The advance estimates for 2020 are likely to be significantly revised (in light of the pandemic economic shock) in December 2022. With such a lag, we advise the reader to examine the underlying trends and focus less on the estimates for a specific year, which are likely to change in the next release.

The real GDP data illustrate how economic performance lagged in the Commonwealth and among its metropolitan areas in the wake of the Great Recession and in the midst of budget sequestration and caps on federal discretionary spending. If anything, the initial years of the decade could be characterized as a "one step forward, one step back" recovery. What should be clear from the data is that a number of metro areas in the Commonwealth struggled to generate consistent growth over the decade and these woes are likely to persist in the coming years. The past may indeed be a prologue.

From 2010 to 2020, there was not a single year when all the metro areas in the Commonwealth experienced economic growth. More recently, in 2016, all the metros except Staunton saw an increase in real GDP. In 2017, it was all the metros except Roanoke. In 2018, we see the same story: all the metros experiencing growth except for Hampton Roads. It should be no surprise that Virginia's real GDP growth lagged behind the nation's over the last decade.

The advance estimates of metro GDP also highlight the impact of the COVID-19 pandemic. Among the smaller metros, Lynchburg's real GDP contracted by 5.6% from 2019 to 2020. Among the larger metros, the largest decline was observed in Hampton Roads, even though defense spending in the region increased in 2020. Only Winchester appeared to escape a significant contraction in metro GDP, with only a 0.1% decline from 2019 to 2020.

In all likelihood, the advance estimates are likely to change significantly in the coming years. We suspect that these estimates will be revised downward, especially given the impact of the pandemic on employment. The larger story, however, is that the pandemic wiped away the gains in real GDP over the last decade for a number of metros. Anemic pre-pandemic growth coupled with the pandemic's economic shock meant that, in some cases, metro GDP contracted for these regions over the recently concluded decade.

How we recover from this economic shock is one of the most significant policy questions facing Virginia in the coming years. The increasing concentration of population and economic activity in the urban crescent and, in particular, Northern Virginia and Richmond, is creating "two Virginias." Political and economic divisions will only sharpen in the coming years unless we have honest discussions about how to improve growth across Virginia over the coming decades.

TABLE 2

REAL (INFLATION-ADJUSTED) GROSS DOMESTIC PRODUCT: YEAR-ON-YEAR RATES OF GROWTH, 2010-2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	CAGR 2010-2020
United States	2.7%	1.5%	2.3%	1.8%	2.3%	2.7%	1.7%	2.3%	2.9%	2.3%	-3.4%	1.6%
Virginia	3.2%	0.7%	0.4%	0.7%	-0.3%	1.7%	1.1%	1.5%	2.4%	2.0%	-2.8%	0.7%
Blacksburg-Christiansburg	1.5%	3.3%	-1.6%	0.6%	0.5%	3.1%	-0.1%	2.3%	5.1%	-1.9%	-3.2%	0.8%
Charlottesville	5.5%	0.0%	1.0%	0.5%	0.5%	3.0%	1.7%	5.1%	2.6%	0.2%	-4.1%	1.0%
Harrisonburg	6.4%	0.5%	1.1%	2.2%	-4.6%	-3.1%	-3.7%	2.3%	2.5%	2.1%	-0.9%	-0.2%
Kingsport-Bristol	-0.4%	2.4%	0.6%	-2.1%	-3.5%	1.7%	1.2%	3.5%	0.9%	-2.9%	-4.0%	-0.3%
Lynchburg	4.7%	-2.1%	-2.8%	0.0%	-1.1%	0.2%	-1.2%	1.1%	4.8%	-0.2%	-5.6%	-0.7%
Richmond	2.6%	2.5%	1.8%	2.3%	0.8%	3.6%	1.4%	1.5%	2.0%	2.0%	-2.5%	1.5%
Roanoke	1.6%	-0.4%	-0.5%	1.8%	1.4%	1.9%	-1.7%	-1.1%	1.5%	-1.3%	-3.0%	-0.1%
Staunton	1.6%	-3.2%	-4.4%	3.0%	-1.0%	-0.2%	-0.5%	0.6%	1.1%	0.8%	-2.1%	-0.6%
Hampton Roads	0.4%	-0.6%	-1.2%	0.7%	-1.3%	1.4%	0.6%	0.0%	-0.8%	1.2%	-3.9%	-0.4%
Washington-Arlington-Alexandria	4.7%	1.8%	0.5%	-0.1%	1.0%	2.0%	2.6%	1.8%	2.1%	1.4%	-2.8%	1.0%
Winchester	3.6%	0.3%	-0.1%	2.8%	-0.7%	4.1%	1.7%	0.1%	2.4%	2.1%	-0.1%	1.2%

Source: Bureau of Economic Analysis, 2021. Base year for real GDP is 2012. Year-on-year rate of growth is the compound annual growth rate (CAGR).

Personal Incomes Rise (Slowly) Across The Commonwealth

Personal income measures the income that residents of a geographical area receive from paychecks, employer-provided benefits such as insurance, business ownership, rental properties, Social Security and other public benefits, interest and dividends.[2] At the state and metropolitan-area level, personal income captures the combined personal incomes of residents, including those who work outside the geographical boundaries of the metro area or state. To compare personal income per capita across geographical regions and time, we need to not only adjust for the influence of inflation in general, but also differences in regional prices relative to the national average.

Table 3 presents real (inflation-adjusted) personal income per capita that is also adjusted for regional price differences for the Commonwealth's metropolitan areas, Virginia and the United States from 2010 to 2019. Over this period, real personal income per capita grew at an annual average of 2% in the United States, 0.5 percentage points higher than Virginia. Among Virginia's metro areas, only Charlottesville (2.7%) had a higher annual average rate of growth than the nation. Richmond (1.9%), Blacksburg-Christiansburg (1.7%), Harrisonburg (1.7%) and Winchester (1.6%) all grew faster than the state average of 1.5%. Hampton Roads and the Washington-Arlington-Alexandria metro area grew at approximately the state average. As the Commonwealth lagged the nation, this performance was nothing to write home about.

TABLE 3

REAL PERSONAL INCOME PER CAPITA AND COMPOUND ANNUAL GROWTH RATE: VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES, 2010 AND 2019

	2010	2019	2010-2019 CAGR
United States	$42,367	$51,424	2.0%
Virginia	$46,217	$53,837	1.5%
Blacksburg-Christiansburg	$33,869	$40,247	1.7%
Charlottesville	$49,082	$64,141	2.7%
Harrisonburg	$34,828	$41,304	1.7%
Kingsport-Bristol	$39,552	$44,484	1.2%
Lynchburg	$38,319	$41,994	0.9%
Richmond	$46,601	$56,181	1.9%
Roanoke	$43,107	$48,710	1.2%
Staunton	$43,419	$47,545	0.9%
Hampton Roads	$42,798	$49,527	1.5%
Washington-Arlington-Alexandria	$50,785	$58,205	1.4%
Winchester	$41,878	$49,271	1.6%

Sources: Bureau of Economic Analysis and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Real personal income is personal income divided by regional price parities and the national Personal Consumption Expenditures price index. Real personal income per capita is equal to total real personal income divided by total midyear population, expressed in chained 2012 dollars.

2 Bureau of Economic Analysis (2021), https://www.bea.gov/resources/learning-center/what-to-know-income-saving.

More troubling from an economic development perspective is the lack of personal income per capita growth among some of the smaller metropolitan areas in the Commonwealth. These metros are growing slower in terms of population and income – not a winning combination in the long run. As the last decade has shown, moving the needle on this situation has inspired a great deal of rhetoric but little in the way of measurable progress. The variation in real per capita growth rates highlights the challenge facing the new governor and General Assembly: Can the Commonwealth spur economic growth outside the urban crescent? We continue to argue for investments in improving primary and secondary education, providing access to broadband and addressing infrastructure issues to lay the foundation for more equitable growth throughout the state.

We caution to avoid expansions of entitlement programs or significant new tax expenditures. While these may produce short-term benefits, we point to success stories in other states that have taken a longer view. Virginia is well positioned to continue to improve its workforce and to reduce administrative and regulatory burdens to improve private-sector job creation. The challenge is to avoid the temptations of the moment and focus on those efforts whose rewards are further in the future.

Civilian Labor Force: Where Is Everyone?

How has the pandemic affected the number of people working in Virginia's metropolitan areas? There are two broad measures we can examine to answer this question: individual employment and nonfarm payrolls (jobs). Employment data capture responses by individuals to the questions of whether they are employed, looking for work or have abandoned attempts at finding employment. Nonfarm payroll data measure the number of jobs in an economy. A person who has two jobs would appear once in the employment data but twice in the jobs data.[3] One of the advantages of labor market data is that that these numbers are more current than many other measures of economic activity.

The Bureau of Labor Statistics asks people about their employment status. If an individual is employed or looking for work, the BLS reports that he or she is in the civilian labor force.[4] An expanding labor force is a sign that more people are available for work or working in a geographical area and is typically correlated with economic growth. A stagnant or declining labor force may be a signal that a region is struggling to attract and retain labor; simply put, workers are seeking better fortunes elsewhere.

Graph 5 displays the growth in the civilian labor force for Virginia's metropolitan areas, Virginia and the United States from January 2010 to February 2020. Virginia's civilian labor force grew by 7.5% over this period, 0.4 percentage points higher than the nation. This growth was powered, in part, by two of the three largest metro areas: Richmond (11.6%) and Washington-Arlington-Alexandria (13.5%). For the second-largest area in the Commonwealth, the Hampton Roads region, the civilian labor force grew by 5.6%, 1.9 percentage points lower than the state.

3 The Current Population Survey (CPS) covers households and asks whether an individual was employed or actively seeking employment. The Current Establishment Survey (CES) covers businesses and reports the number of jobs. An individual who is employed with two jobs would be counted once in the CPS and twice in the CES.

4 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.

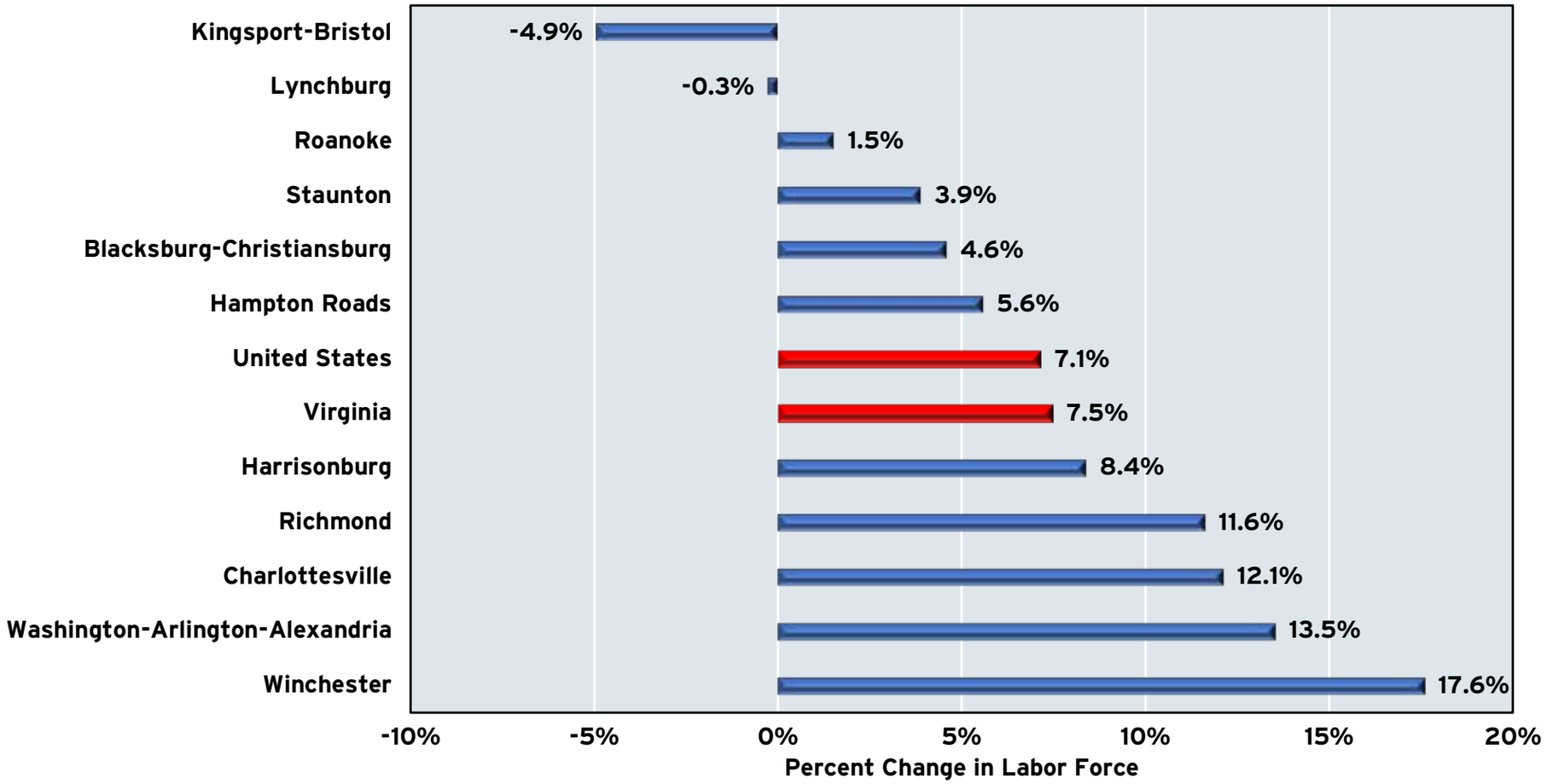
Among Virginia's smaller metropolitan areas, Winchester (17.6%), Charlottesville (12.1%) and Harrisonburg (8.4%) outperformed the state average. However, three metro areas – Blacksburg (4.6%), Staunton (3.9%) and Roanoke (1.5%) – grew slower than the state. Further, two metros, Lynchburg (-0.3%) and Kingsport-Bristol (-4.9%), saw their labor forces contract over the January 2010 to February 2020 period.

Graph 6 reflects the impact of the COVID-19 pandemic on the civilian labor force in Virginia's metro areas, Virginia and the United States from February 2020 to October 2021. It is immediately apparent that the labor force has contracted more in the Commonwealth than the nation. Winchester was the only metro area to outperform the nation in terms of the recovery of its labor force relative to February 2020.

The departure of workers from the civilian labor force in Virginia is a puzzle that has generated much discussion but little resolution. People who have left the labor force entirely do not qualify for unemployment benefits. Virginia's COVID-19 infections, hospitalizations and deaths are lower on a per capita basis than many Southern states, and vaccination rates are, on average, higher. The "fear of COVID-19" hypothesis seems to have little weight in the face of these data. National data suggest that women have left the labor force at greater rates than their male counterparts, so it is likely we are witnessing a similar impact in the Commonwealth. We suspect it is a confluence of factors that, hopefully, will be resolved as the economy continues to improve in 2022.

GRAPH 5

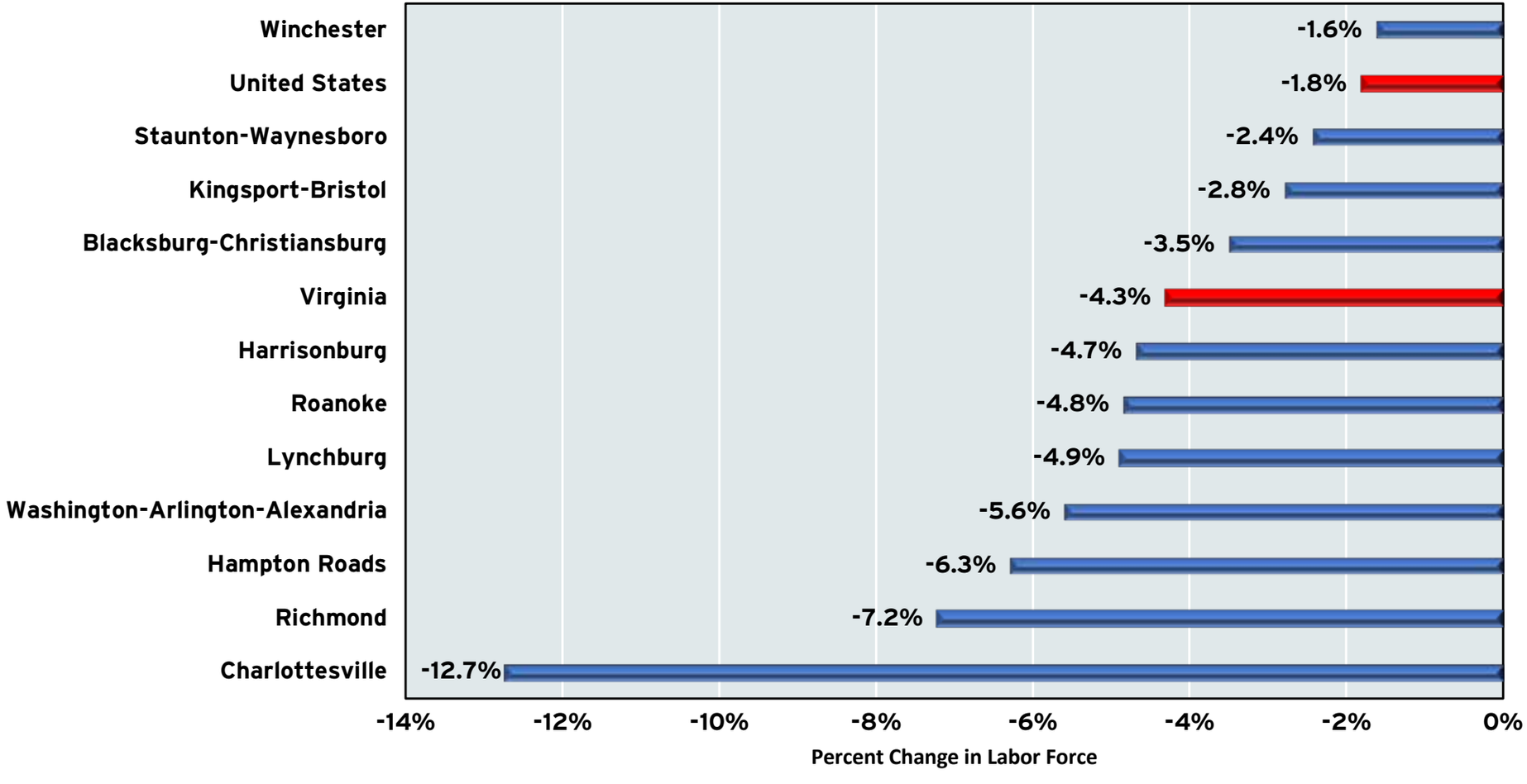
PERCENT CHANGE IN THE CIVILIAN LABOR FORCE: VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES, JANUARY 2010-FEBRUARY 2020



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA.

GRAPH 6

**PERCENT CHANGE IN THE CIVILIAN LABOR FORCE:
VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES,
FEBRUARY 2020-OCTOBER 2021**



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA.

Employment And Unemployment Among Virginia's Metros

Graph 7 illustrates the change in individual employment among Virginia's metropolitan areas from January 2010 to February 2020. This time period approximates the post-Great Recession trough and the prepandemic peak. A familiar story emerges from this data. Two of the largest metro areas, Richmond and Washington-Arlington-Alexandria, saw individual employment grow faster than the state or the nation. Winchester, Charlottesville and Harrisonburg also outperformed the state and nation. Blacksburg-Christiansburg, Hampton Roads and Staunton were relatively close to the Commonwealth's performance, with double-digit growth over the period. The Roanoke, Lynchburg and Kingsport-Bristol metro areas lagged much further behind, reinforcing the perception that economic prospects were lacking in these regions.

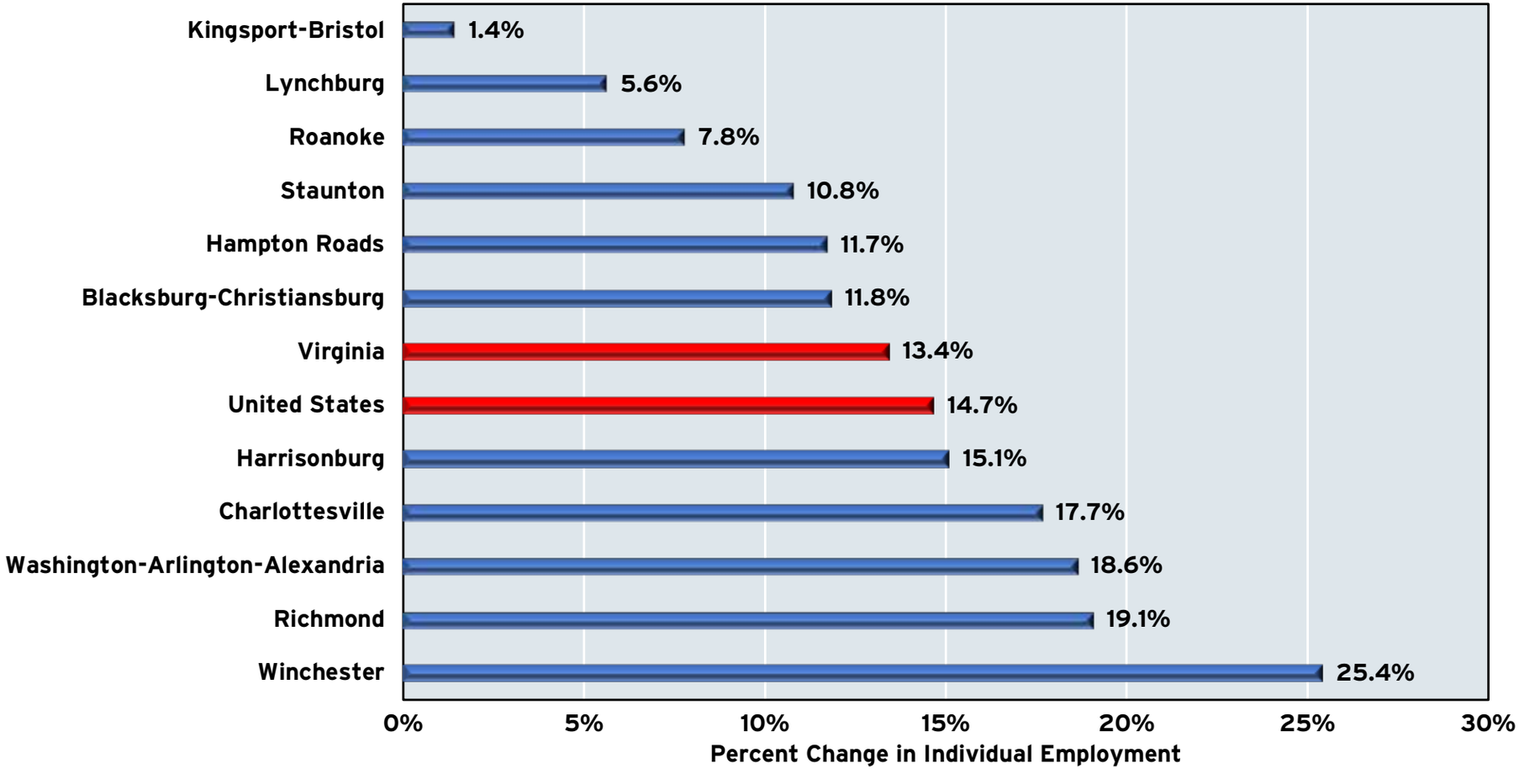
Graph 8 shows the percentage change in individual employment from the prepandemic peak in February 2020 to October 2021. Two regions, Winchester and Kingsport-Bristol, fared better than the nation. The rest of Virginia's metropolitan areas lagged behind the nation in recovering from the pandemic's shock to individual employment.

In February 2020, the unemployment rate in Virginia's metropolitan areas was below 4% and, in the majority of metros, below 3% (Graph 9). The discussion in early 2020 centered on how employers would grapple with increasingly scarce labor and whether labor scarcity would slow Virginia's economic expansion. The pandemic's economic shock turned this discussion on its proverbial head, with unemployment rates spiking into the double digits in the spring of 2020. Fortunately, a reopening and recovery brought unemployment rates down into the single digits in the summer of 2020. Graph 10 displays the unemployment rate among Virginia's metros in October 2021.

While unemployment rates have not returned to prepandemic levels, one could say that, in some cases, they are within shouting distance. However, given that the labor force has declined among Virginia's metros, we should caution that the unemployment rates are biased downward. If one were to treat those who have left the labor force as unemployed, unemployment rates across the Commonwealth would be closer to 8% than 4%. The challenge over the coming months is to sustain the recovery in individual employment and to induce those who have left the labor force to return. Failing that, the recovery may plateau in Virginia in 2022 as workers become increasingly scarce.

GRAPH 7

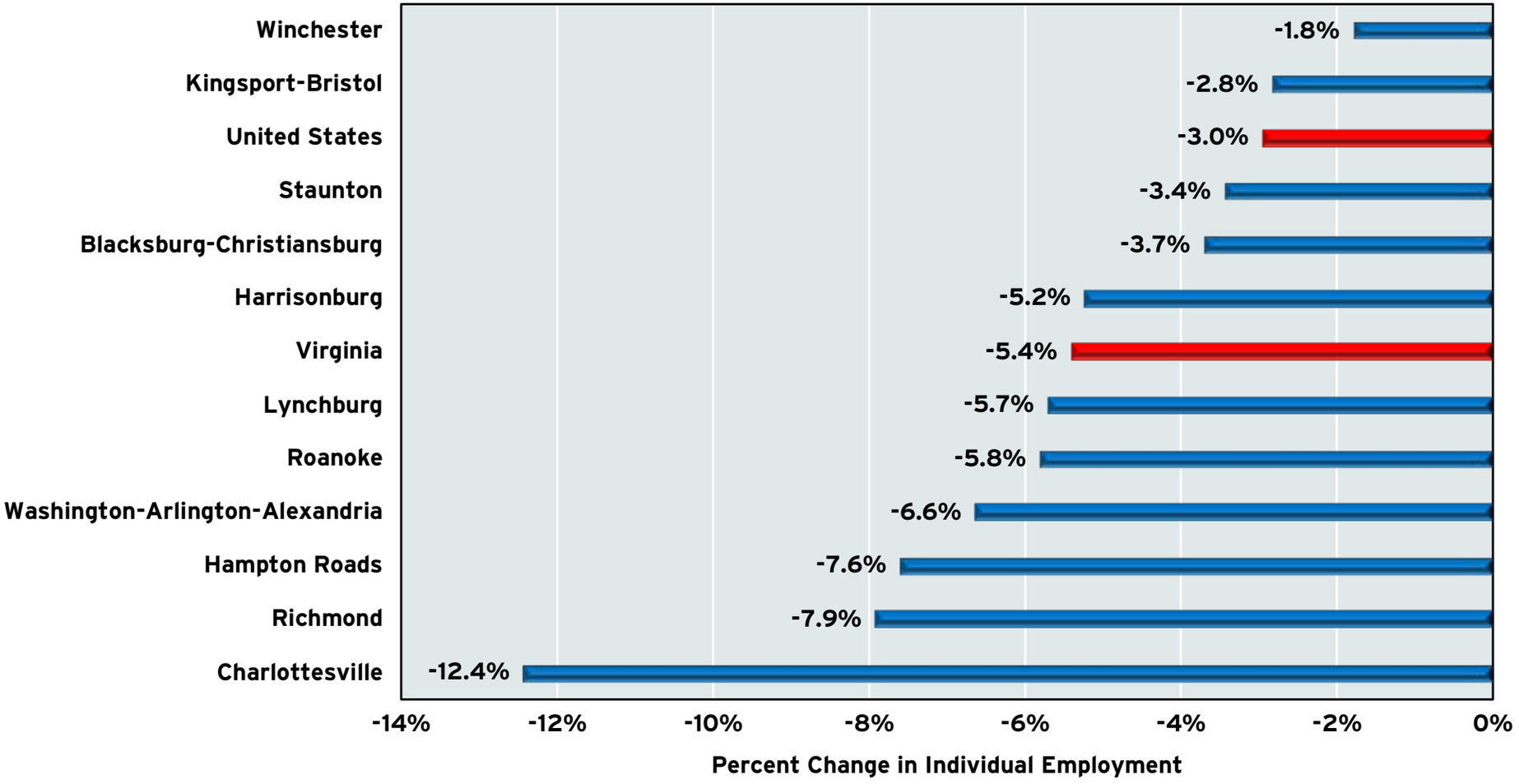
**PERCENT CHANGE IN INDIVIDUAL EMPLOYMENT:
VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES,
JANUARY 2010-FEBRUARY 2020**



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach–Norfolk–Newport News MSA.

GRAPH 8

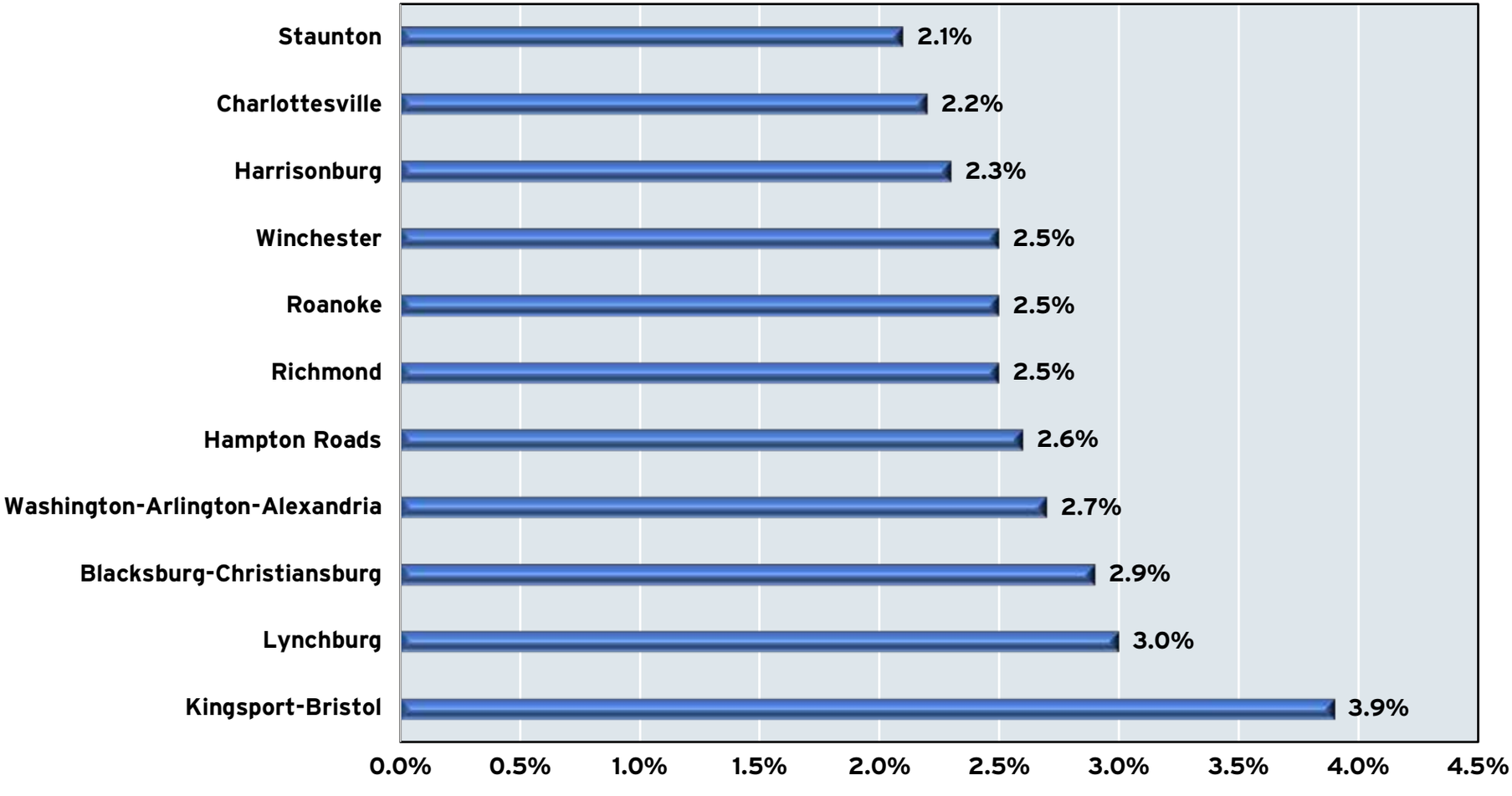
PERCENT CHANGE IN INDIVIDUAL EMPLOYMENT: VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES, FEBRUARY 2020-OCTOBER 2021



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA.

GRAPH 9

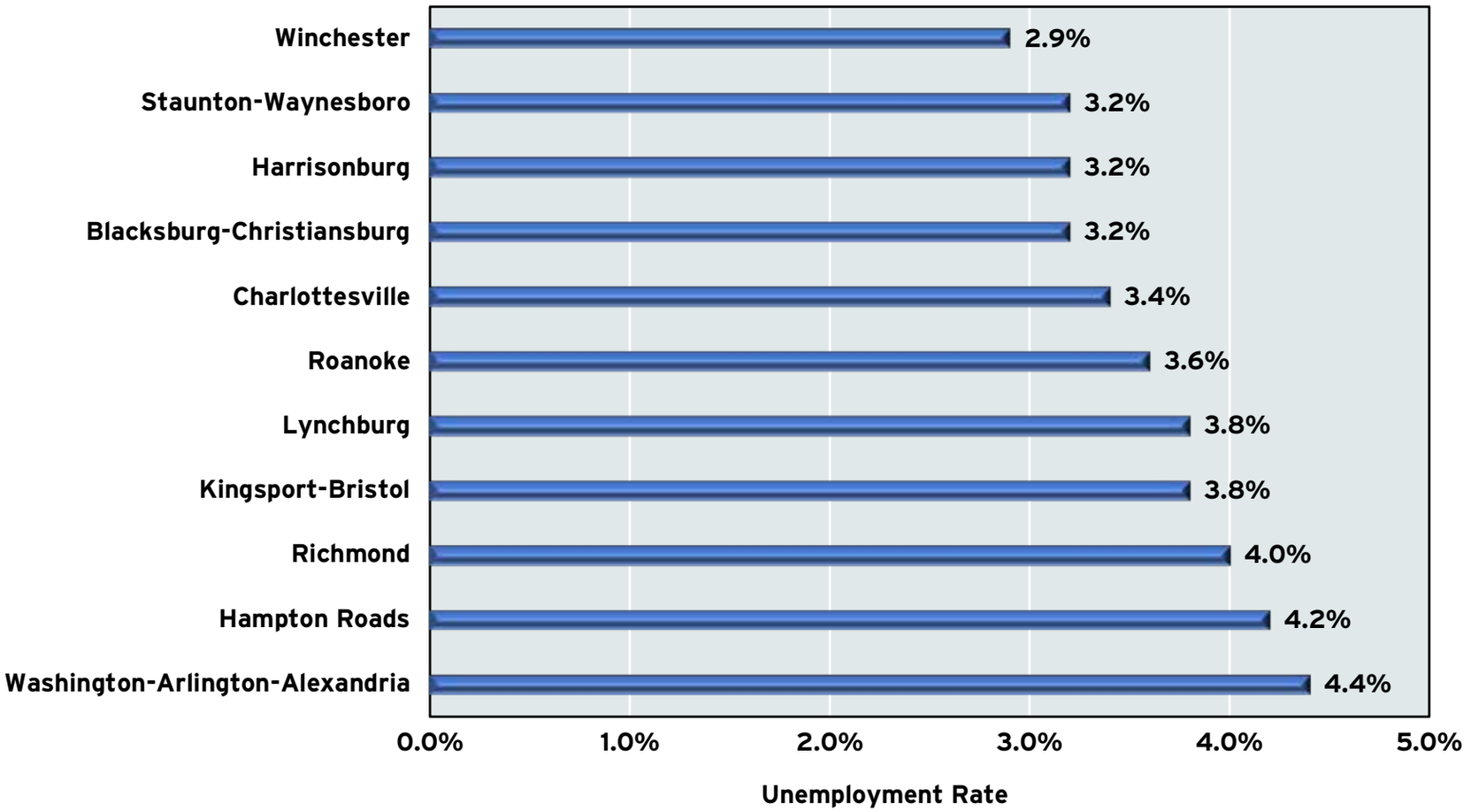
UNEMPLOYMENT RATE: VIRGINIA'S METROPOLITAN STATISTICAL AREAS, FEBRUARY 2020



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA.

GRAPH 10

UNEMPLOYMENT RATE: VIRGINIA'S METROPOLITAN STATISTICAL AREAS, OCTOBER 2021



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Hampton Roads refers to the Virginia Beach-Norfolk-Newport News MSA.

Jobs, COVID-19 And Virginia's Metropolitan Areas

We first present the percentage change in nonfarm payrolls (jobs) from January 2010 to February 2020 for Virginia's metropolitan areas, Virginia and the United States (Graph 11). Over this period, the number of jobs in the Commonwealth increased by 13.1%, 4.4 percentage points below that of the United States. The lingering effects of the Great Recession were compounded by the effects of federal budget sequestration and subsequent caps on federal discretionary spending. As the decade wound on, Virginia's job growth picked up, but it remained behind that of the nation.

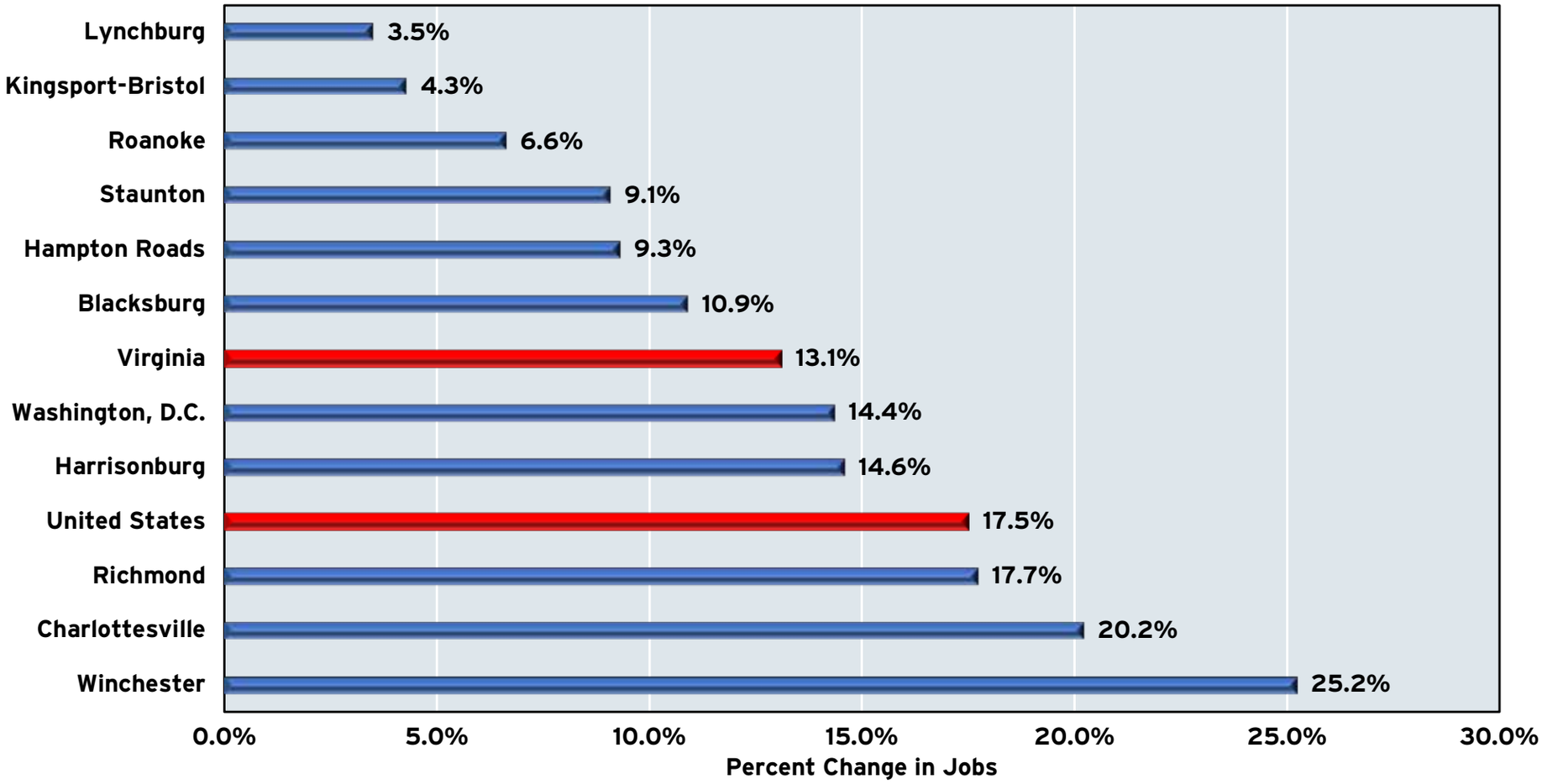
At the metro level, Richmond (17.7%), Charlottesville (20.2%) and Winchester (25.2%) outpaced the nation in terms of job creation over the period. Washington-Arlington-Alexandria (14.4%) and Harrisonburg (14.6%) saw larger increases in the number of jobs than the Commonwealth but lagged the performance of the United States. More troubling was the performance of some of the smaller metro areas. Lynchburg (3.5%), Kingsport-Bristol (4.3%) and Roanoke (6.6%) saw increases in jobs, but the pace of job creation lagged considerably behind the state. Staunton (9.1%), Hampton Roads (9.3%) and Blacksburg-Christiansburg (10.9%) were closer to the state average, but their performances were nothing to brag about.

Graph 12 examines the percentage change in jobs from February 2020 to October 2021. What is immediately apparent is that two metro areas, Winchester and Blacksburg-Christiansburg, have not only recovered all the jobs lost during the pandemic, but also created additional jobs. Staunton (-0.4%) had almost recovered its lost jobs in October 2021, followed by Harrisonburg (-1.9%). Kingsport-Bristol and Roanoke outperformed the nation and the state but were still 3% (or more) below February 2020 job levels. For some smaller metros, the recovery in jobs has been more robust than one might have expected, given their performance over the previous decade.

The three largest metropolitan areas in the Commonwealth have struggled to regain all the jobs they lost during the pandemic. Richmond (-6.2%), Hampton Roads (-4.8%) and Washington-Arlington-Alexandria (-3.7%) have all suffered significant job losses in the leisure and hospitality industry as well as education and health services. If there is a modicum of good news it is that increasing vaccination rates should lead to higher levels of domestic and international travel in 2022. Until these metro areas pick up the pace of recovery, the Commonwealth will continue to lag behind the nation in terms of job recovery.

GRAPH 11

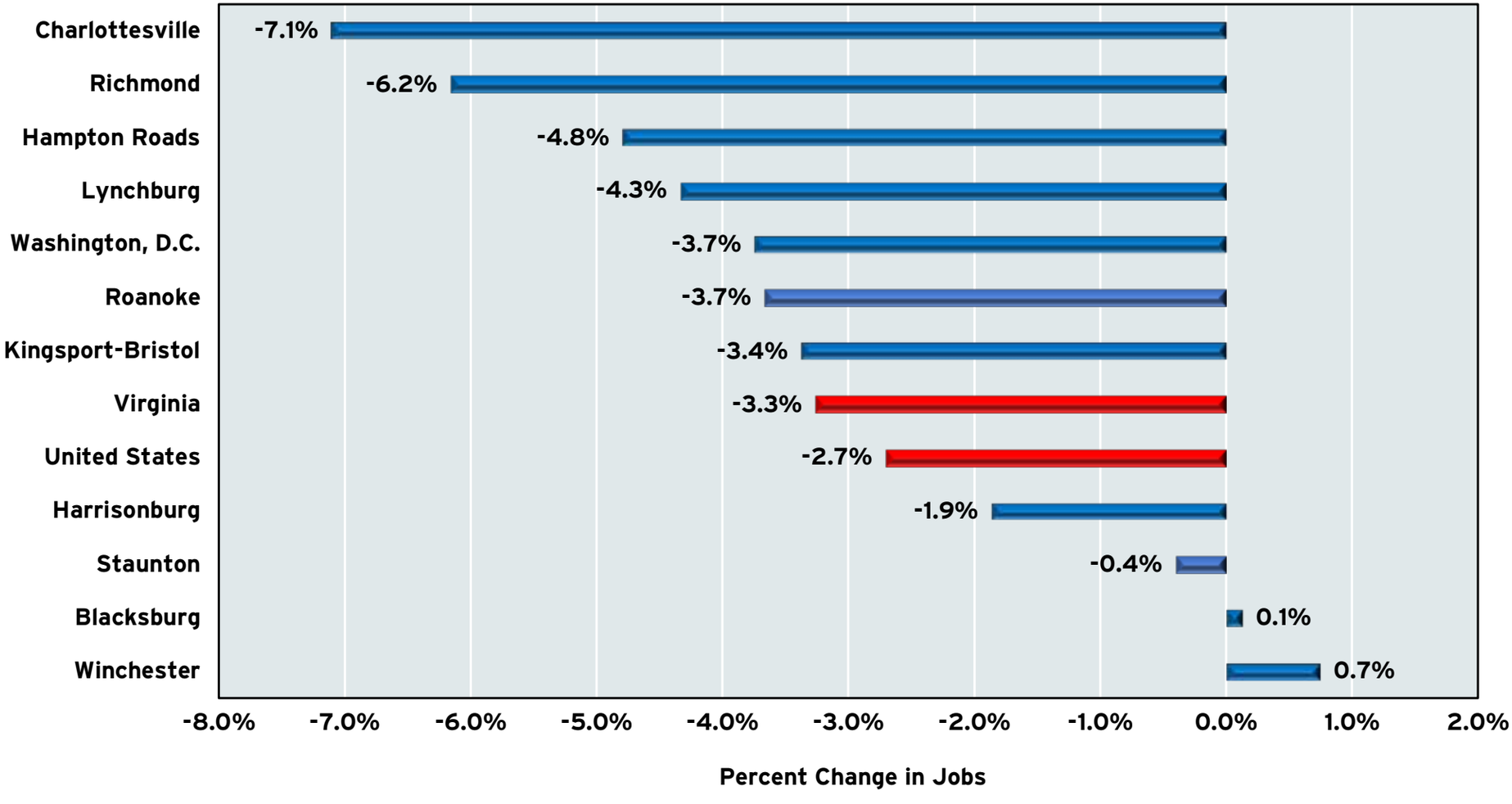
PERCENT CHANGE IN NONFARM PAYROLLS (JOBS): VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES, JANUARY 2010-FEBRUARY 2020



Source: Bureau of Labor Statistics, Current Establishment Survey and State Employment and Unemployment, seasonally adjusted data

GRAPH 12

PERCENT CHANGE IN NONFARM PAYROLLS (JOBS): VIRGINIA'S METROPOLITAN STATISTICAL AREAS, VIRGINIA AND THE UNITED STATES, FEBRUARY 2020-OCTOBER 2021



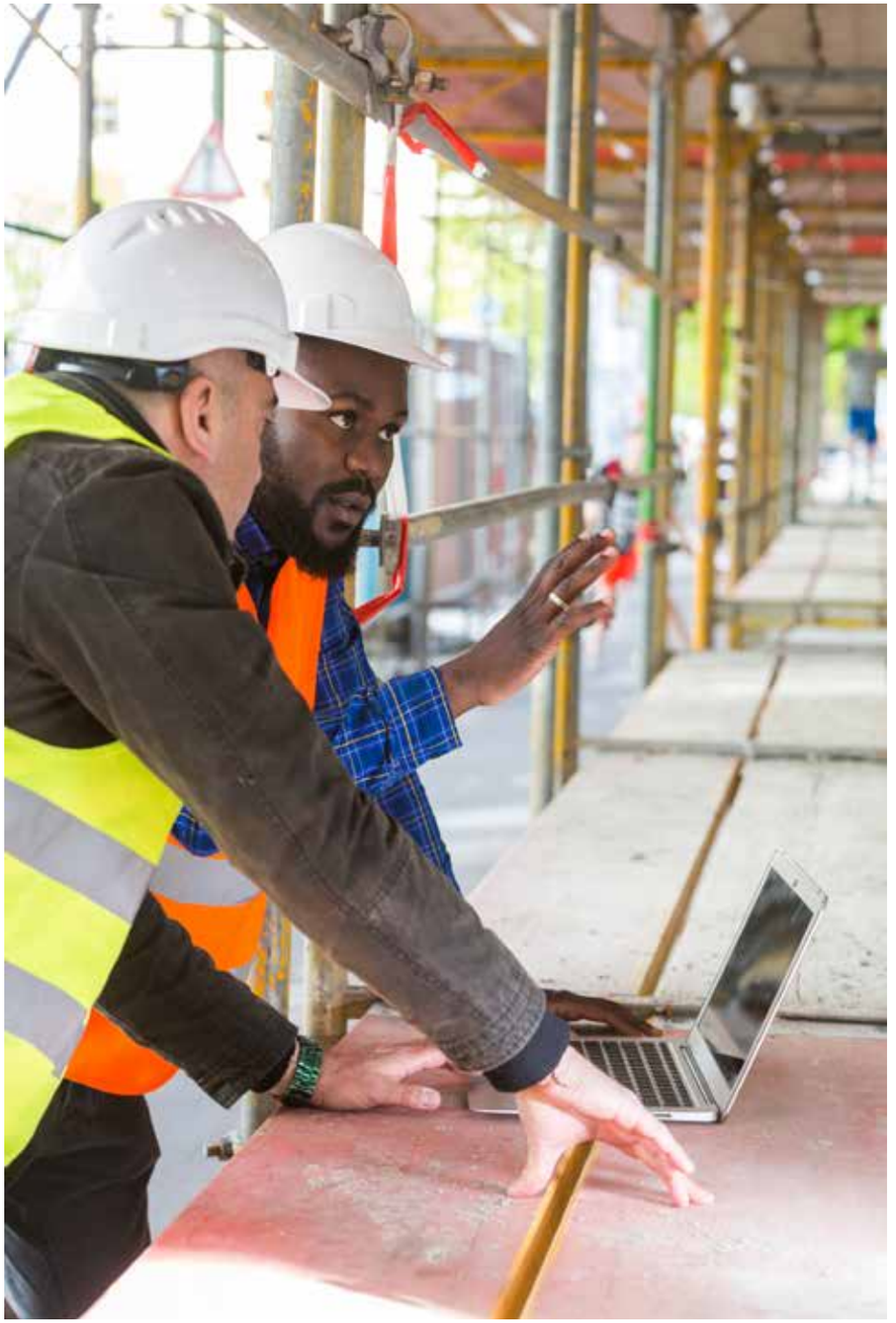
Source: Bureau of Labor Statistics, Current Establishment Survey and State Employment and Unemployment, seasonally adjusted data

Final Thoughts

Thinking of Virginia's metropolitan areas as race cars can be helpful in visualizing a major challenge facing the Commonwealth. Some metro areas are trying to race but lack a pit crew and trained driver, and, at times, must pull into the economic garage. Other metros, with a talented team and veteran driver, have built a car that is firing on all cylinders and lapping other competitors. If the Commonwealth is to share a destiny, the challenge will be not only to get all the metros in the proverbial economic race, but also to equip them with the resources necessary to "go fast."

In the coming year, increases in defense spending are likely to drive economic growth in Hampton Roads and Northern Virginia. Rebounds in domestic and international tourism will benefit these metro areas as well. Some of the smaller metros are exhibiting signs of a robust economic recovery. In these areas, employment is nearing the prepandemic high, and jobs are almost completely recovered. In Winchester's case, a new expansion appears to have begun. However, we must not forget that some metro areas struggled to generate jobs prior to the pandemic, and their prospects for a sustained recovery are not as bright in 2022.

Virginia can act to improve regional outcomes if it chooses to do so. We continue to offer the following suggestions. Targeted investments in infrastructure are necessary to promote economic development and attract new businesses. Improving the quality of education, including investments in physical infrastructure, is necessary to produce a workforce that can compete in an increasingly globalized economy. Virginia's antiquated tax structure must be reformed to compete with neighboring states. Regulatory relief, or at least regulatory clarity, is also a necessary component of economic growth. Lastly, regional collaboration should be more than a slogan. The Commonwealth should continue to promote regional collaborations through efforts like GO Virginia. These recommendations are not new, but until Virginia acts, they bear repeating.



BOUNCE BACK? THE PANDEMIC AND TOURISM IN VIRGINIA

All was black, gloomy and awful. There was no light at the end of the tunnel – or if there was, it was an oncoming train.

– Terry Pratchett, English humorist, satirist and author

For the hotel industry in Virginia, the last 24 months have been a period that many will not look upon nostalgically in future years. Prior to those two years, however, it was a different story. In 2019, traditional hotels reported a record $4.1 billion in revenue. The longest economic expansion since World War II, February 2010 to February 2020, continued to power increasing levels of tourism, business travel and large conventions throughout many of Virginia's metropolitan areas. The entry of short-term rentals in the previous decade, led by Airbnb, posed a challenge to the traditional hotel industry and local policymakers, but hoteliers remained optimistic for their prospects in 2020 and beyond.

By now, the tale of spring 2020 is familiar to the reader. The COVID-19 pandemic led to dramatic declines in economic activity in the Commonwealth and the nation beginning in March and April 2020. Hotel revenue in April 2020 was $75.1 million in Virginia, 80% less than the $378.5 million recorded the previous year. Northern Virginia observed some of the most significant declines in hotel traffic, with revenue falling from $175.7 million in April 2019 to $23.1 million in April 2020. Throughout the Commonwealth, hotel occupancy rates dropped below 32% in April 2020 as domestic and international travel fell to record lows. Hotels had to furlough staff, reduce room inventories and, in some cases, close altogether. The proverbial economic tunnel was dark, and

the sense of optimism from just a year ago was replaced with a grim hope that things could not get any worse.

Yet, for all the darkness of spring 2020, we now stand in a different place. The Emergency Use Authorization of COVID-19 vaccines in late 2020 and early 2021 has led to a marked reduction in the rates of infection, hospitalization and death among the fully vaccinated when compared to the unvaccinated. While the rise of the COVID-19 delta variant in the summer of 2021 dampened consumer sentiment, the 2021 summer surge predominantly affected the unvaccinated, increasing confidence in the efficacy of the vaccines. And new evidence indicates that an additional booster shot of the COVID-19 vaccine is over 90% effective for those who had previously been fully vaccinated. By fall 2021, over 80% of the U.S. population 12 and older had received at least one vaccination dose, and the U.S. Food and Drug Administration was seeking approval of new anti-viral treatments.

The performance of the hotel industry has been closely correlated with public perceptions over the course of the pandemic. As consumer and business sentiment and activity have improved in 2021, hoteliers have observed an uptick in demand. In September 2021, hotel revenue in Virginia was 8% lower than September 2019, but there was substantial regional variation. Hotel revenue eclipsed 2019 levels in Hampton Roads, even in the face of reported labor shortages in the industry. Northern Virginia remains below its 2019 levels, but it has improved from the lows of 2020. With continued increases in vaccinations nationally and globally, expectations for 2021 are improving, especially in areas dependent on business- and convention-oriented travel. Barring an unexpected economic shock or a COVID-19 variant that renders vaccines largely ineffective, there is indeed a light at the end of the tunnel.

In this chapter, we explore the impact of the COVID-19 pandemic on the hotel industry in the Commonwealth of Virginia. We delve into the impact on traditional hotels and compare their performance with that of short-term rental properties (Airbnb, Vrbo and others). While there is much to be optimistic about for 2022, there are long-term challenges that must be addressed to complete the recovery and start a new expansion of Virginia's hotel industry.

2019: A Year To Remember

2019 and 2020 were years for the history books for the tourism industry in the Commonwealth, albeit for dramatically different reasons. 2019 was a year in which hotel revenue set a new record and traditional hotels continued to move upscale. The following year was one that many in the hotel industry would like to forget, marked by record declines in revenue, occupancy and staffing.

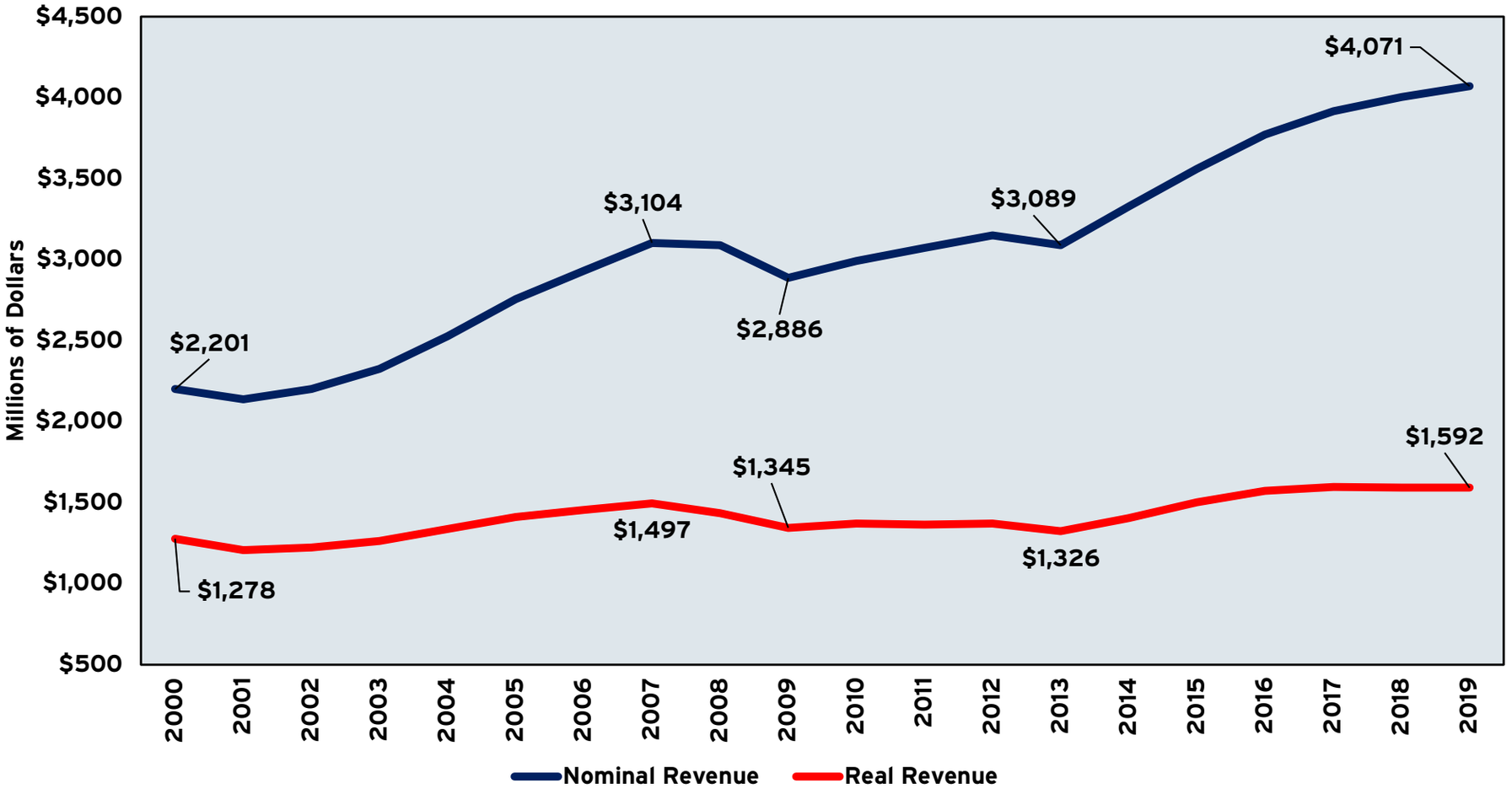
Graph 1 displays nominal and real (inflation-adjusted) hotel revenue for the Commonwealth from 2000 to 2019. Nominal hotel revenue peaked at $3.1 billion prior to the Great Recession of 2007-2009, but did not recover from the recession until 2013. From 2013 to 2019, nominal hotel revenue increased from $3.1 billion to $4.1 billion. After adjusting for inflation, hotel revenue in Virginia grew at an annual average rate of 3.1% from 2013 to 2019.[1]

Graph 2 presents the shares of major markets in the Commonwealth in 2019. Not surprisingly, three areas – Hampton Roads, Northern Virginia and Richmond – generated the largest levels of hotel revenue in 2019. Northern Virginia accounted for 43.2% of hotel revenue in Virginia, followed by Hampton Roads (21.9%) and Richmond (12.2%). The next-largest market area in 2019 was Charlottesville, which accounted for 3.2% of hotel revenue. Markets outside the urban crescent collectively accounted for approximately 23% of hotel revenue statewide in the year prior to the pandemic.

1 We use the compound annual growth rate, which is equal to ((end value/beginning value)^(1/number of periods))-1 to estimate the annual average growth in hotel revenues.

GRAPH 1

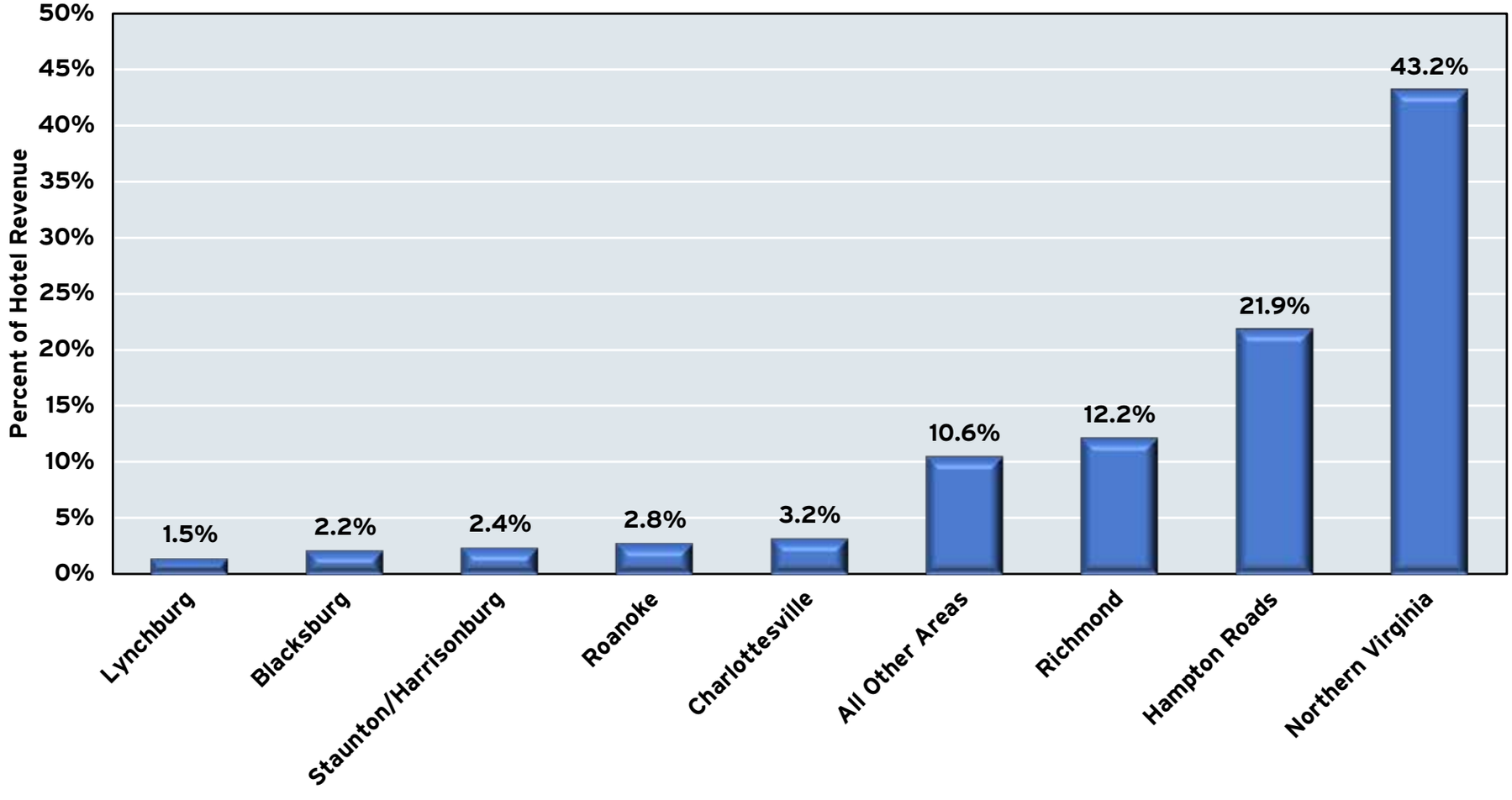
NOMINAL AND REAL HOTEL REVENUE: VIRGINIA, 2000-2019



Sources: STR Trend Reports, January 2017 and January 2021; Bureau of Labor Statistics; and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Base years for the consumer price index are 1982-1984.

GRAPH 2

ESTIMATED SHARES OF HOTEL ROOM REVENUE: VIRGINIA, 2019



Sources: STR Trend Report, January 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market.

2020: A Year To Forget

To say the COVID-19 pandemic significantly impacted the hotel industry in Virginia would be an understatement. Annual hotel revenue declined from $4.1 billion in 2019 to $2.1 billion in 2020, a drop of approximately 47.9%, mirroring that of the nation (49.4%). However, much of this decline was driven by Northern Virginia. From 2019 to 2020, annual hotel revenue in Northern Virginia declined by 62.1% (Graph 3). Richmond, the third-largest market in Virginia, saw annual revenue fall by 41.2%, while revenue in Hampton Roads declined only 35.2%. Times were indeed bleak when one considered a 35%-plus decline in hotel revenue as better-than-average performance.

The annual data mask the extent to which hotel revenue collapsed in Northern Virginia during the depths of the pandemic. Monthly hotel revenue declined from $109.6 million in February 2020 to $23.1 million in April 2020 (Graph 4). In other words, in the span of two months, hotel revenue dropped 78.9% in Northern Virginia. While hotel revenue has rebounded from the 2020 lows, the industry has not completely recovered from the pandemic. September 2021 revenue was 83.8% higher than September 2020, but also was 38.8% percent lower than the same month in 2019. One has reason to be optimistic for the continued recovery in Northern Virginia, but there still is a hill to climb before the recovery is complete.

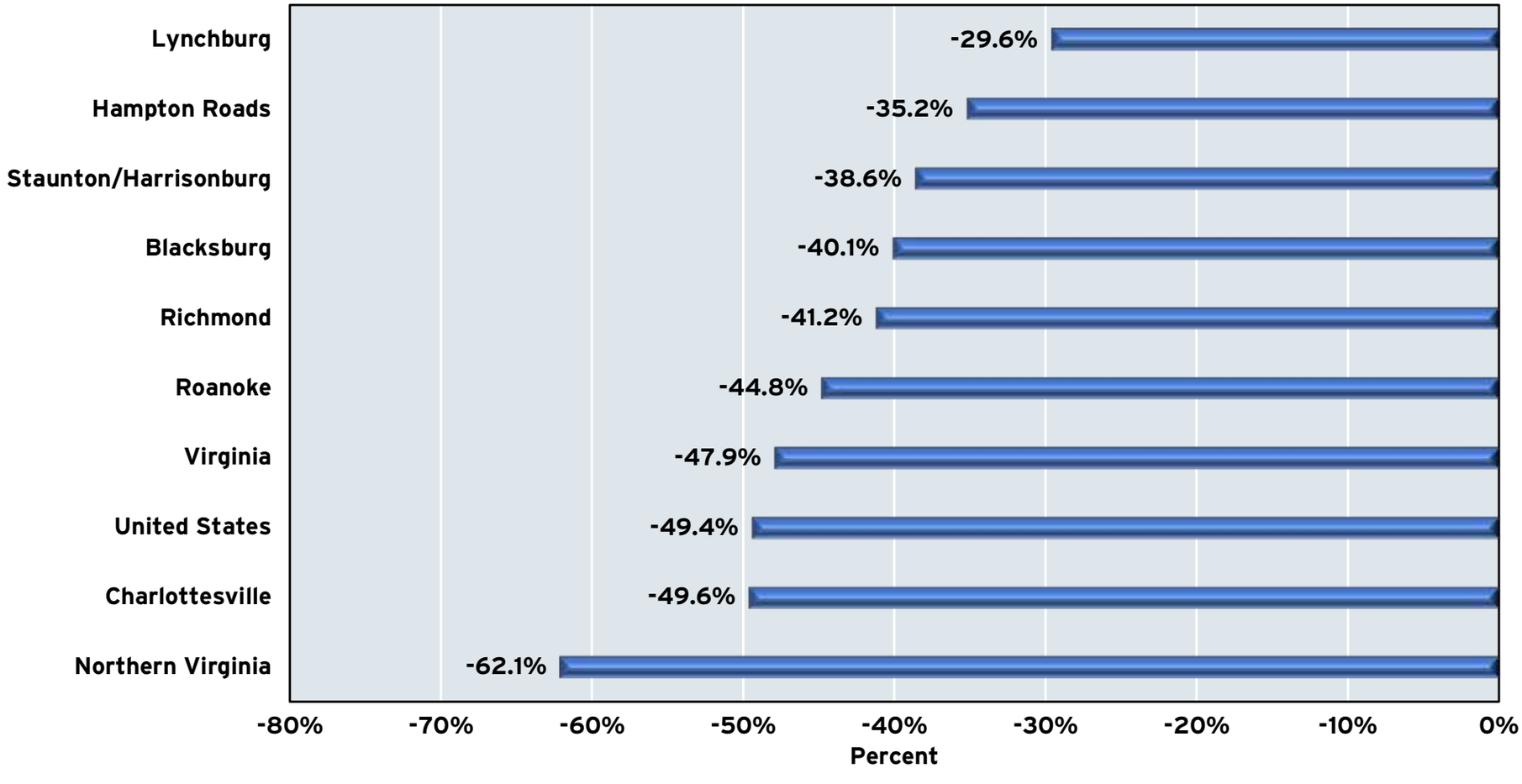
Why did many of the markets in the Commonwealth fare relatively better in 2020 than the nation, and why did Northern Virginia fare significantly worse? While the number of hotel rooms rented fell across the Commonwealth, the declines were not as bad as elsewhere, with the exceptions of Northern Virginia and Charlottesville (Graph 5). In Northern Virginia, hotel rooms rented in 2020 fell by nearly 50% when compared to 2019 and, for most of 2020, occupancy rates were below 40%. Hotels in Northern Virginia rely more on business traffic, international tourism and conventions than those in other areas of the Commonwealth. If there is a modicum of good news, it is that we expect these types of travel to continue to recover in 2022, a projection which bodes well for Northern Virginia hotels.

RevPAR is a key measure of performance in the hotel industry as it represents both the demand (revenue) and supply (available rooms) sides of the market. As displayed in Graph 6, RevPAR declined by almost 47% from 2019 to 2020 in Virginia. It must be pointed out that the actual declines in RevPAR were likely higher, since many hotels either significantly reduced the supply of rooms or closed temporarily during the depths of the pandemic. In any case, hotel rooms in the Commonwealth earned about 50% less in 2020 than they did in 2019.

Yet, we would be remiss if we did not point out the large and negative downward influence of the Northern Virginia market on this measure. RevPAR in Northern Virginia declined an astonishing 59.5% from 2019 to 2020. Given that Northern Virginia accounted for approximately 43.2% of hotel revenue in the Commonwealth prior to the pandemic, its lagging performance in 2020 impacted Virginia's overall negative performance.

GRAPH 3

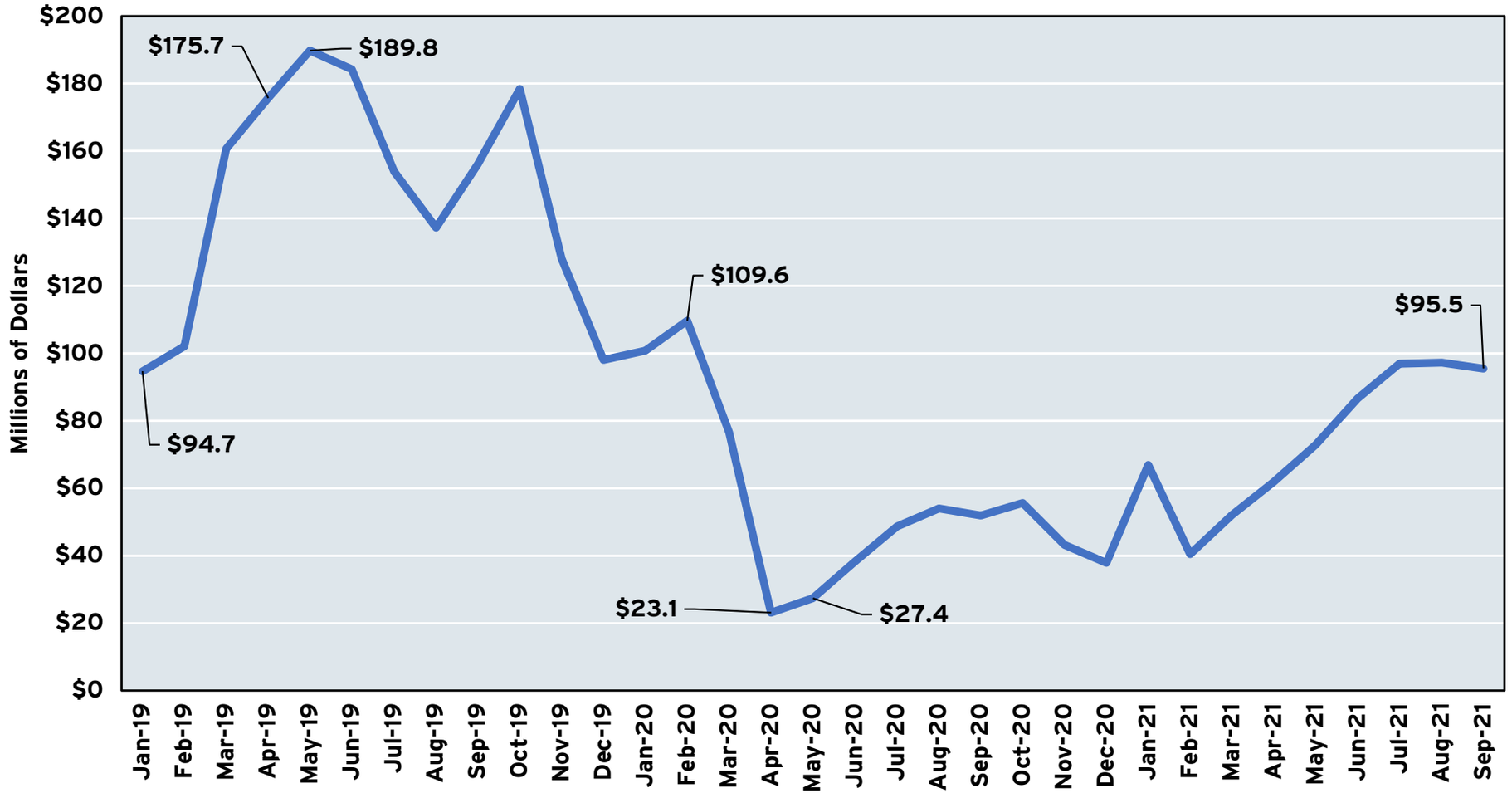
PERCENT CHANGE IN HOTEL REVENUE IN SELECTED MARKETS: VIRGINIA METROS, VIRGINIA AND THE UNITED STATES, 2019-2020



Sources: STR Trend Report, January 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market.

GRAPH 4

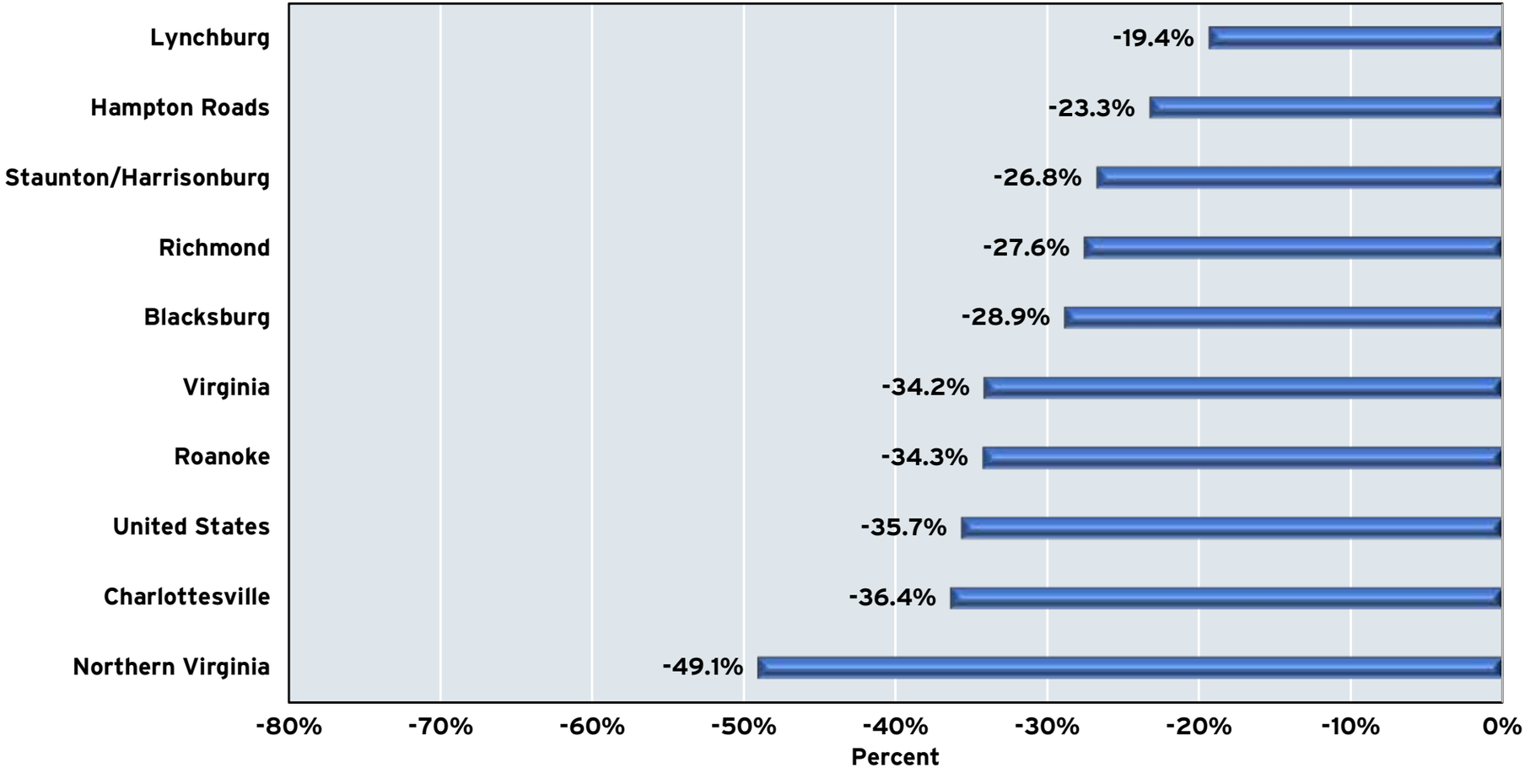
NOMINAL MONTHLY HOTEL REVENUE: NORTHERN VIRGINIA, JANUARY 2019-SEPTEMBER 2021



Sources: STR Trend Report, January 2021; STR Monthly Reports; and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 5

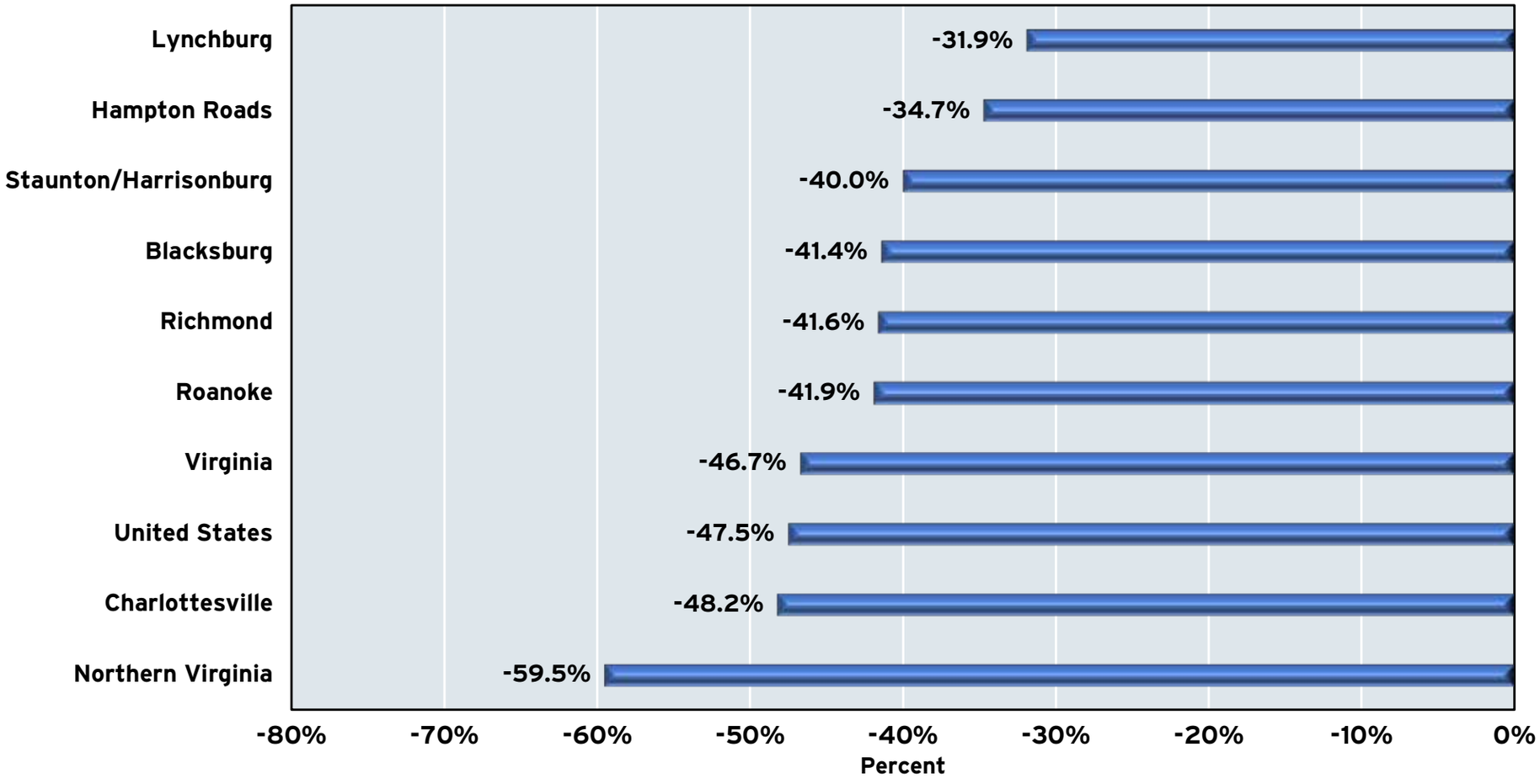
PERCENT CHANGE IN HOTEL ROOMS RENTED IN SELECTED MARKETS: VIRGINIA METROS, VIRGINIA AND THE UNITED STATES, 2019-2020



Sources: STR Trend Report, January 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market.

GRAPH 6

PERCENT CHANGE IN REVENUE PER AVAILABLE ROOM IN SELECTED MARKETS: VIRGINIA METROS, VIRGINIA AND THE UNITED STATES, 2019-2020



Sources: STR Trend Report, January 2021, and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market.

2021: A Recovery Underway

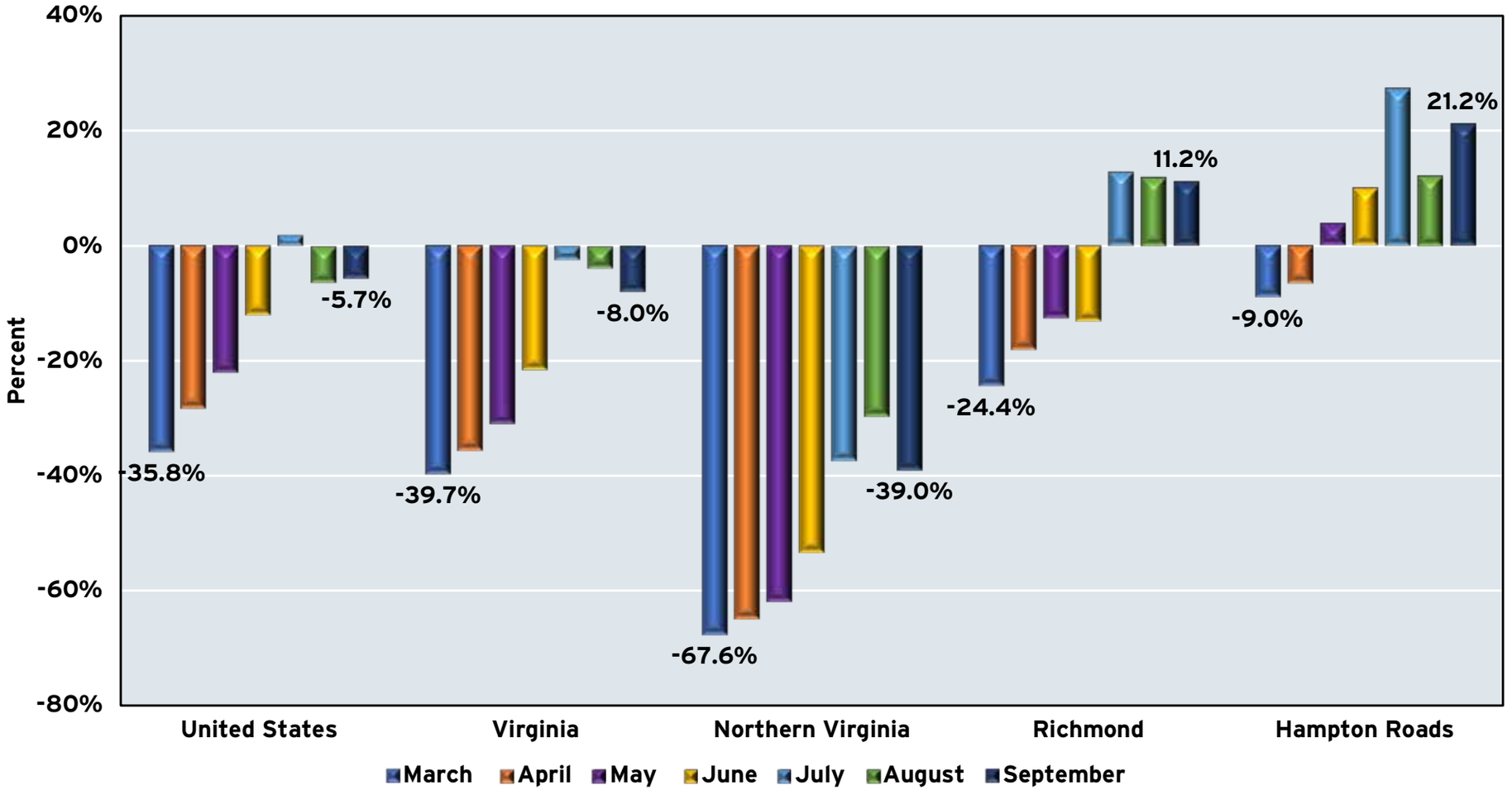
Virginia hotels fared better than most of their counterparts in major U.S. markets this year. Graph 7 highlights the percentage change in monthly hotel revenue for selected months and markets from 2019 to 2021. We choose 2019 as the basis of comparison because the shock in 2020 would bias our conclusions about the progress of the recovery. Hotel revenue for Virginia was 8% lower in September 2021 than the same month in 2019. However, the statewide data obscure the performance of the Richmond and Hampton Roads markets. In Richmond, hotel revenue was 11% higher in September 2021 when compared to September 2019. In Hampton Roads, revenue was up 21% in September 2021 relative to the same month in 2019. Richmond and Hampton Roads had not only recovered from the pandemic economic shock, but they were also setting new records in the summer and fall of 2021.

Why did the markets in Richmond and Hampton Roads, and others in the Commonwealth, fare better than the markets in Northern Virginia and Charlottesville? Some insight can be gained by examining the distribution of hotel rooms according to class. More than half of the hotel rooms in Northern Virginia and Charlottesville are upscale, compared to approximately a third in Hampton Roads and Richmond. As displayed in Graph 8, economy and midscale hotels have outperformed upscale hotels in 2021. Economy and midscale hotels typically cater to leisure travelers rather than business or convention travelers. As such, it should be no surprise that these hotels recovered faster than upscale hotels as we progressed further into 2021.

How has the recovery been in 2021? By September, many of the hotel industry markets in Virginia had either completely recovered or a recovery was in sight. We can compare year-to-date revenue per available room in 2019 and 2021 to gain more insight into this recovery (Graph 9). Nationally, RevPAR from January to September 2021 was 21.1% lower than for the same period in 2019. In Virginia, year-to-date RevPAR was 47.5% lower in Northern Virginia. On the other hand, RevPAR in Richmond was down 13.6% and up 6.7% in Hampton Roads. In this one industry, Hampton Roads was outperforming the state and the nation. That, in itself, is a measure of good news for a region that struggled to generate economic growth over the previous decade.

GRAPH 7

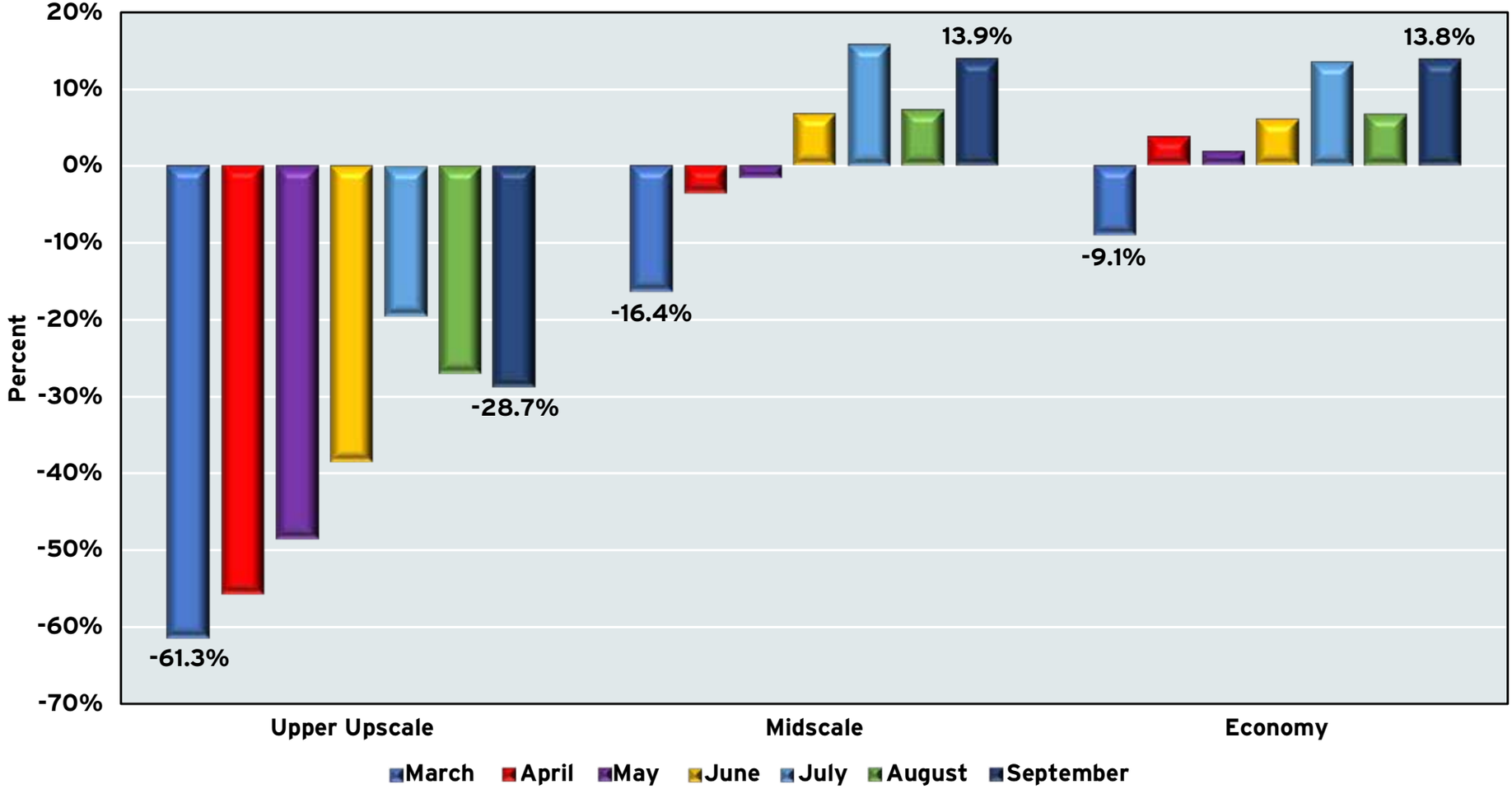
PERCENT CHANGE IN MONTHLY HOTEL REVENUE: UNITED STATES, VIRGINIA, NORTHERN VIRGINIA, RICHMOND AND HAMPTON ROADS, 2019-2021



Sources: STR Monthly Trend Reports and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 8

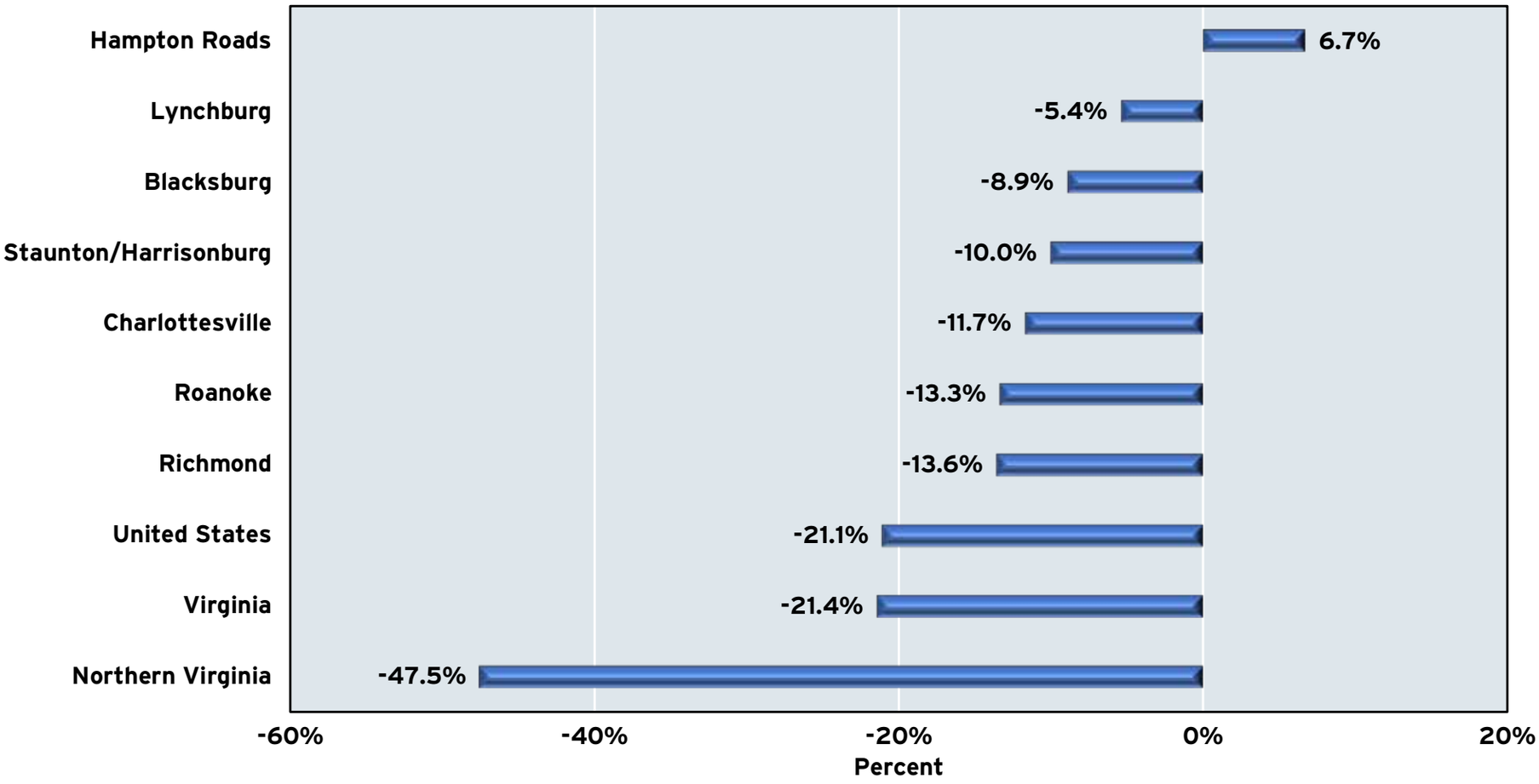
PERCENT CHANGE IN MONTHLY HOTEL REVENUE IN UNITED STATES
UPPER UPSCALE, MIDSCALE AND ECONOMY CHAIN HOTELS, 2019-2021



Sources: STR Monthly Trend Reports and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 9

PERCENT CHANGE IN REVENUE PER AVAILABLE ROOM IN SELECTED MARKETS: VIRGINIA METROS, VIRGINIA AND THE UNITED STATES, YEAR-TO-DATE SEPTEMBER 2019 - YEAR-TO-DATE SEPTEMBER 2021



Sources: STR Monthly Trend Report for September 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market.

Airbnb Makes Its Way Through The Pandemic

The rise of Airbnb from its humble beginnings is a remarkable story. Starting with the rental of an air mattress in San Francisco in 2008, Airbnb is now one of the largest (if not the largest) short-term rental companies in terms of listings, funding and name recognition. Airbnb continues to expand its business model, offering "experiences" (hosted tours) and an increasing number of connections to travel websites. To track Airbnb's activities in Hampton Roads, we use data from AirDNA, a private company not associated with Airbnb, to examine listings, revenue and occupancy of Airbnb-hosted properties.[2]

Graph 10 illustrates the meteoric rise of Airbnb in Virginia. In October 2014, the first month for which data are available, Airbnb revenue was approximately $1.5 million. By 2016, peak monthly revenue had reached $9.3 million, jumping to $32.6 million by 2018. In 2019, peak monthly revenue climbed to $43.8 million. Airbnb revenue in July 2020 set yet another record, $47.4 million, coinciding with the "reopening" of Virginia's economy. One year later, Airbnb revenue reached $59.2 million.

We can further visualize the growth of Airbnb in Virginia when we look at the ratio of Airbnb revenue to the traditional hotel industry (Graph 11). In October 2014, Airbnb revenue was equal to only 0.5% of the traditional hotel industry. By August 2019, Airbnb revenue was equivalent to 11.1% of hotel industry revenue. The sharp increase in the ratio of Airbnb's revenue to traditional hotel revenue in the first half 2020 was not driven by an expansion of Airbnb properties. The sudden collapse of hotel occupancy and revenue in the spring of 2020, while Airbnb revenue remained relatively constant, might create the false impression that Airbnb revenue increased markedly in the initial months of the pandemic. As the hotel industry in the Commonwealth has continued to recover, the ratio of Airbnb revenue to traditional hotel revenue has returned to more typical levels.

Graph 12 presents the shares of Airbnb revenue for major metropolitan areas in Virginia for 2019. Hampton Roads dominated Airbnb listings and revenue, accounting for 29.2% of Airbnb revenue in 2019. Northern Virginia (21.3%) and Charlottesville (13.4%) were the next two largest markets in the Commonwealth for that year, followed by Richmond (5.7%), Blacksburg (4.9%), Lynchburg (4.8%) and Staunton/Harrisonburg (3.9%). The other areas of Virginia accounted for about 15.2% of Airbnb revenue in 2019.

From 2019 to 2020, Airbnb revenue increased by 4.4% in the Commonwealth but, as with the hotel data, there is substantial variation at the regional market level (Graph 13). Hampton Roads, the largest Airbnb market in Virginia, saw revenue decline by 7.3%, far less than the traditional hotel industry. In Richmond and Northern Virginia, Airbnb revenue declined 7.4% and 14.2%, respectively. Some markets, on the other hand (Lynchburg, Roanoke, Staunton/Harrisonburg), saw double-digit increases in revenue even as traditional hotels struggled in these markets. If there is one conclusion to draw, it is that Airbnb properties outperformed traditional hotel properties in 2020.

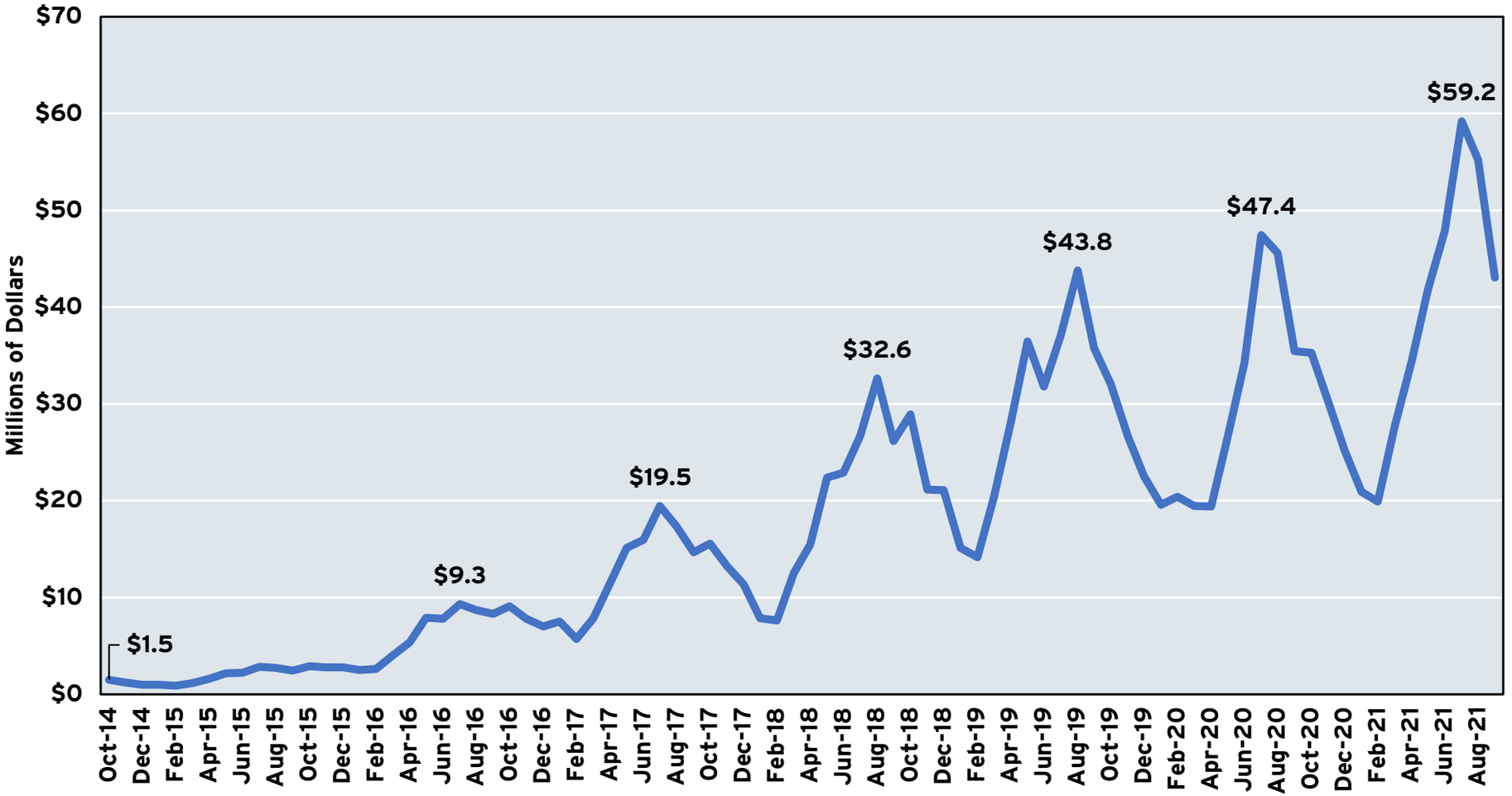
Accounting for approximately 5 of every 10 dollars in Airbnb revenue in 2019, Hampton Roads and Northern Virginia were the focal points of Airbnb activity in the state. In Hampton Roads, Airbnb revenue fell by $7.4 million in 2020 when compared to 2019, but declines were not spread evenly throughout the year. As illustrated in Graph 14, peak revenues in 2019 and 2020 were essentially the same, at $16.7 million and $16.9 million, respectively. However, monthly revenues were lower in the fall of 2020 and winter of 2021, declining to $2.3 million in February 2021. The good news is that Airbnb revenue recovered sharply, reaching a new record of $19 million in Hampton Roads in July 2021.

In Northern Virginia, Airbnb revenue declined by $10.4 million in 2020 when compared to 2019. Comparing the first nine months of the year for Airbnb in Northern Virginia, revenue declined from $55.2 million in 2019 to $45.7 million in 2020. As shown in Graph 15, peak monthly revenue declined from $7.2 million in 2019 to $6.4 million in July 2020. However, monthly Airbnb revenue for Northern Virginia bounced back in the spring of 2021. Monthly revenue set a new record at $9.1 million in July 2021 and remained above 2020 levels through September 2021.

2 As Airbnb does not provide open access to its data, AirDNA tracks the performance of listings and predicts whether properties are booked or not. For more information, see www.airdna.co/methodology.

GRAPH 10

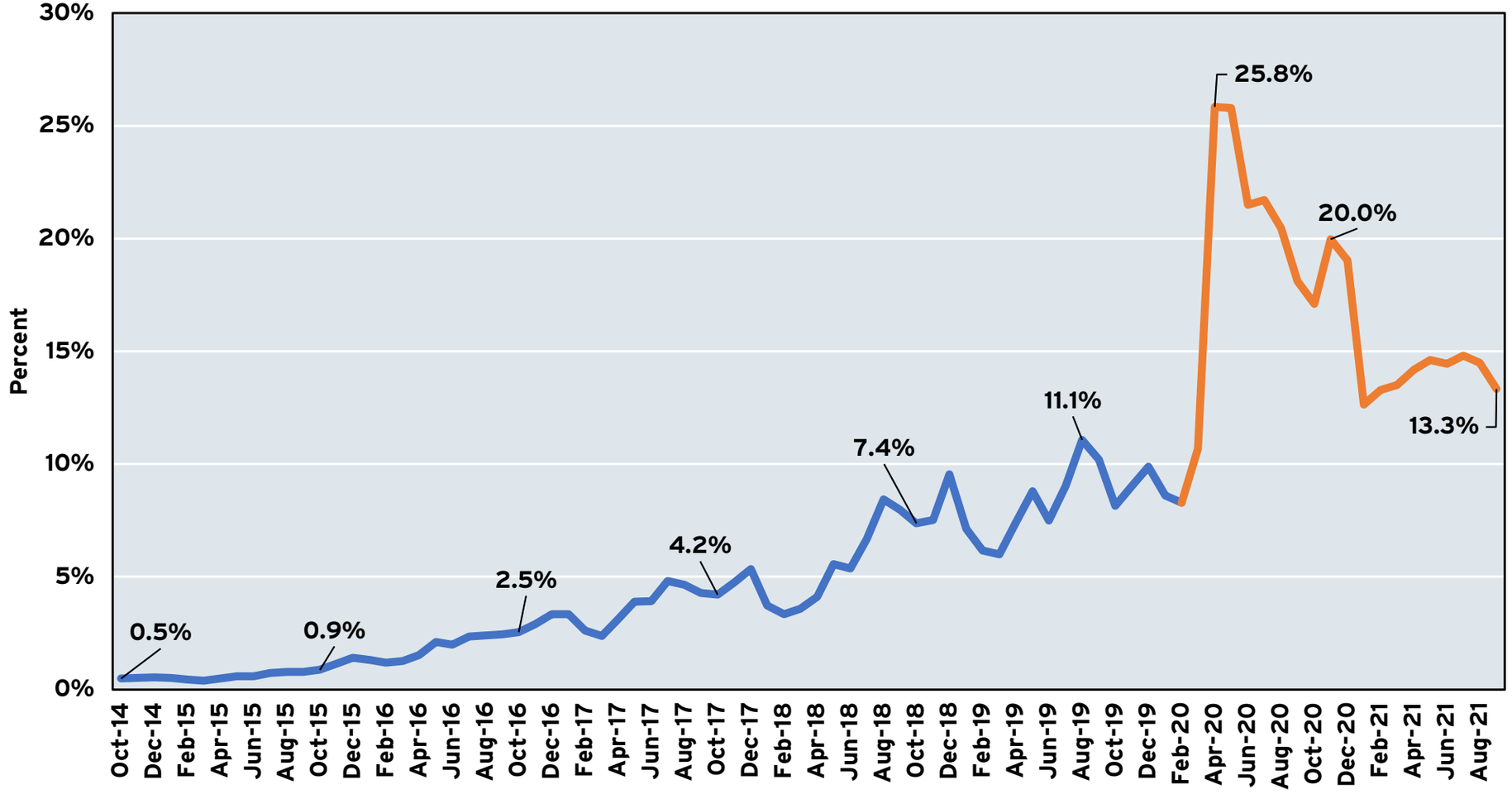
MONTHLY AIRBNB REVENUE IN VIRGINIA, OCTOBER 2014-SEPTEMBER 2021



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data exclude shared rooms.

GRAPH 11

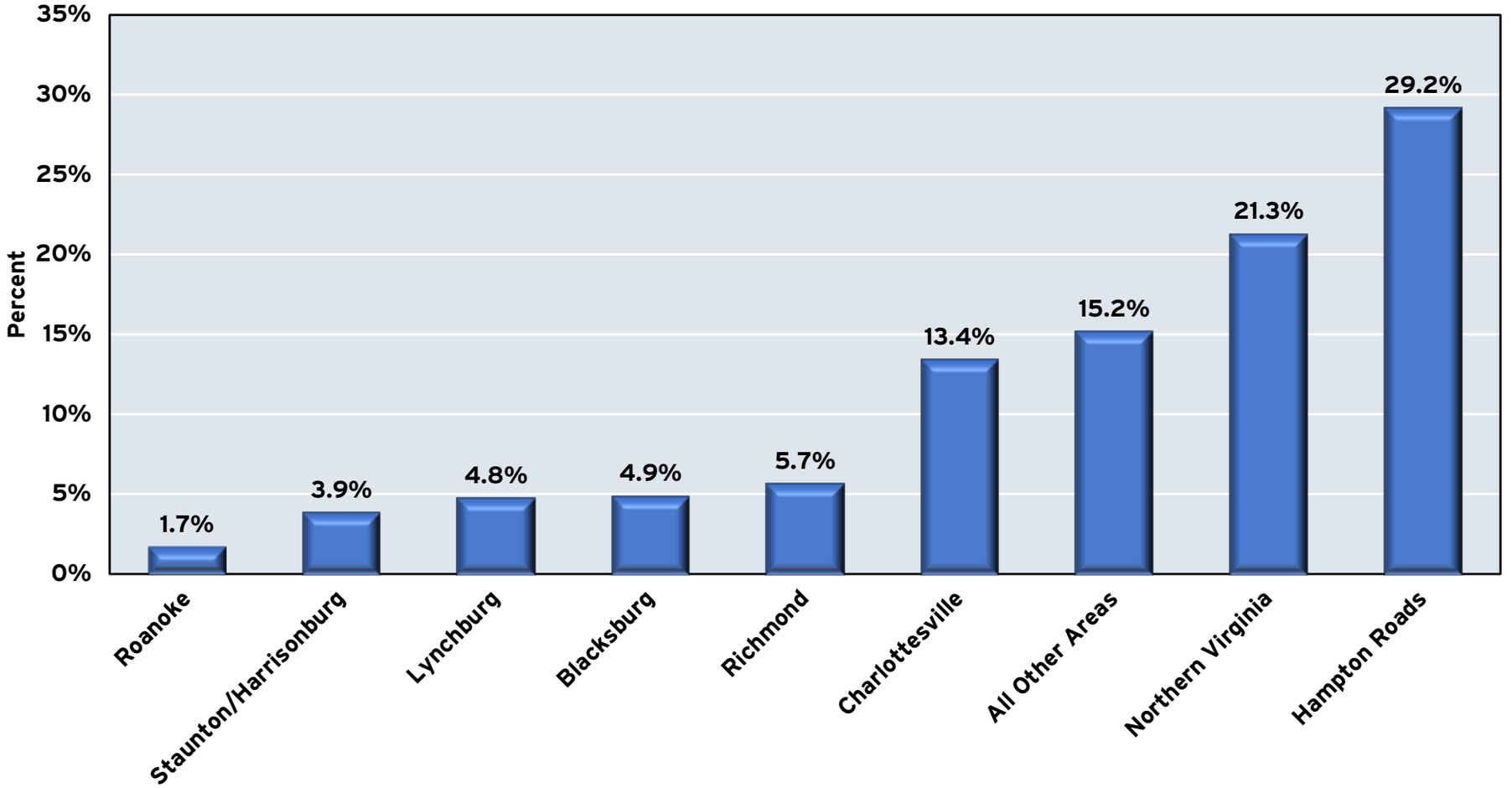
AIRBNB REVENUE AS A PERCENT OF HOTEL REVENUE: VIRGINIA, OCTOBER 2014-SEPTEMBER 2021



Sources: STR Trend Reports; AirDNA data received in October 2021; and the Dragas Center for Economic Analysis and Policy, Old Dominion University. AirDNA data exclude shared rooms.

GRAPH 12

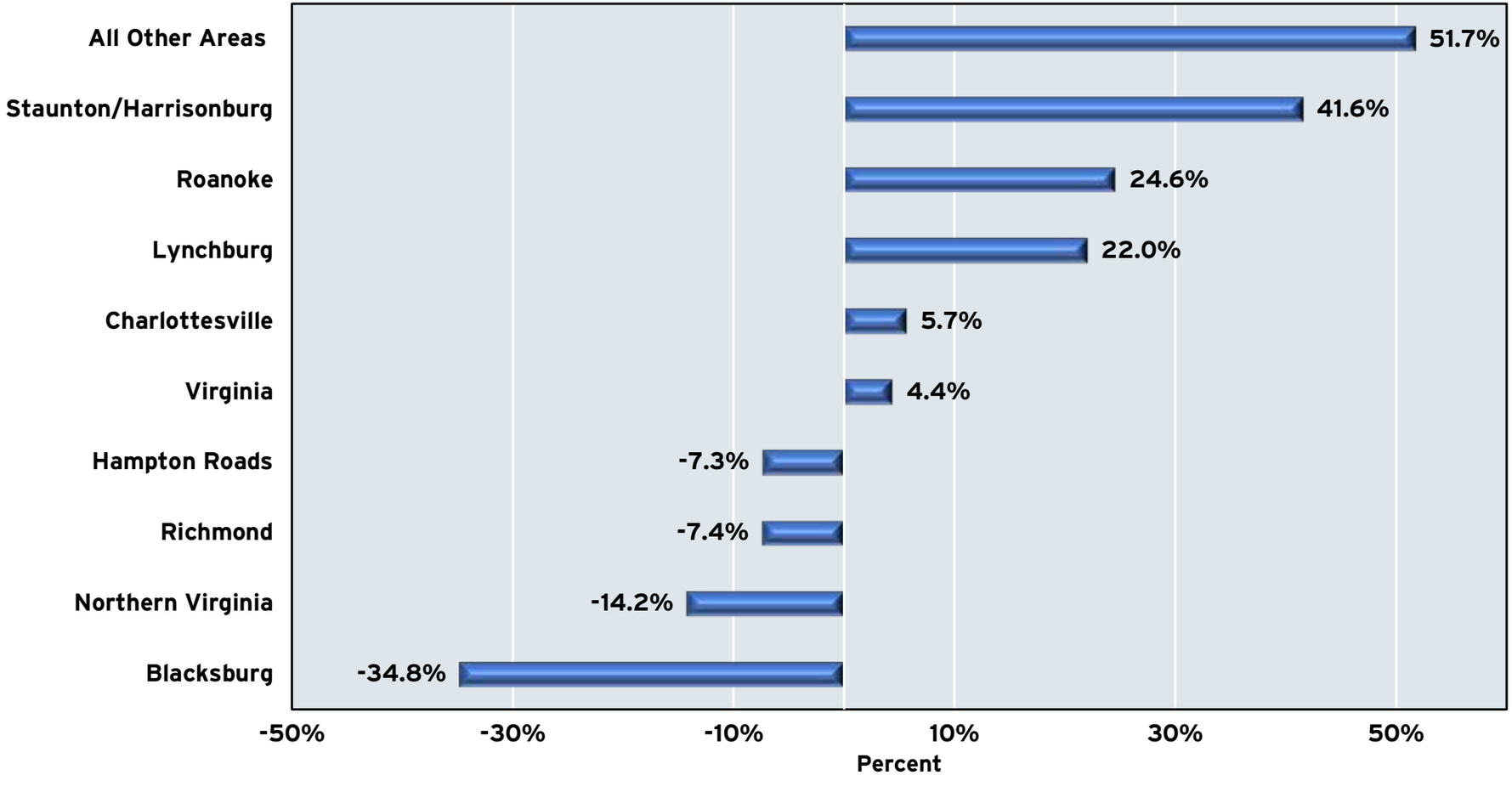
VIRGINIA METROPOLITAN AREAS' SHARE OF AIRBNB REVENUE, 2019



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market. Data exclude shared rooms.

GRAPH 13

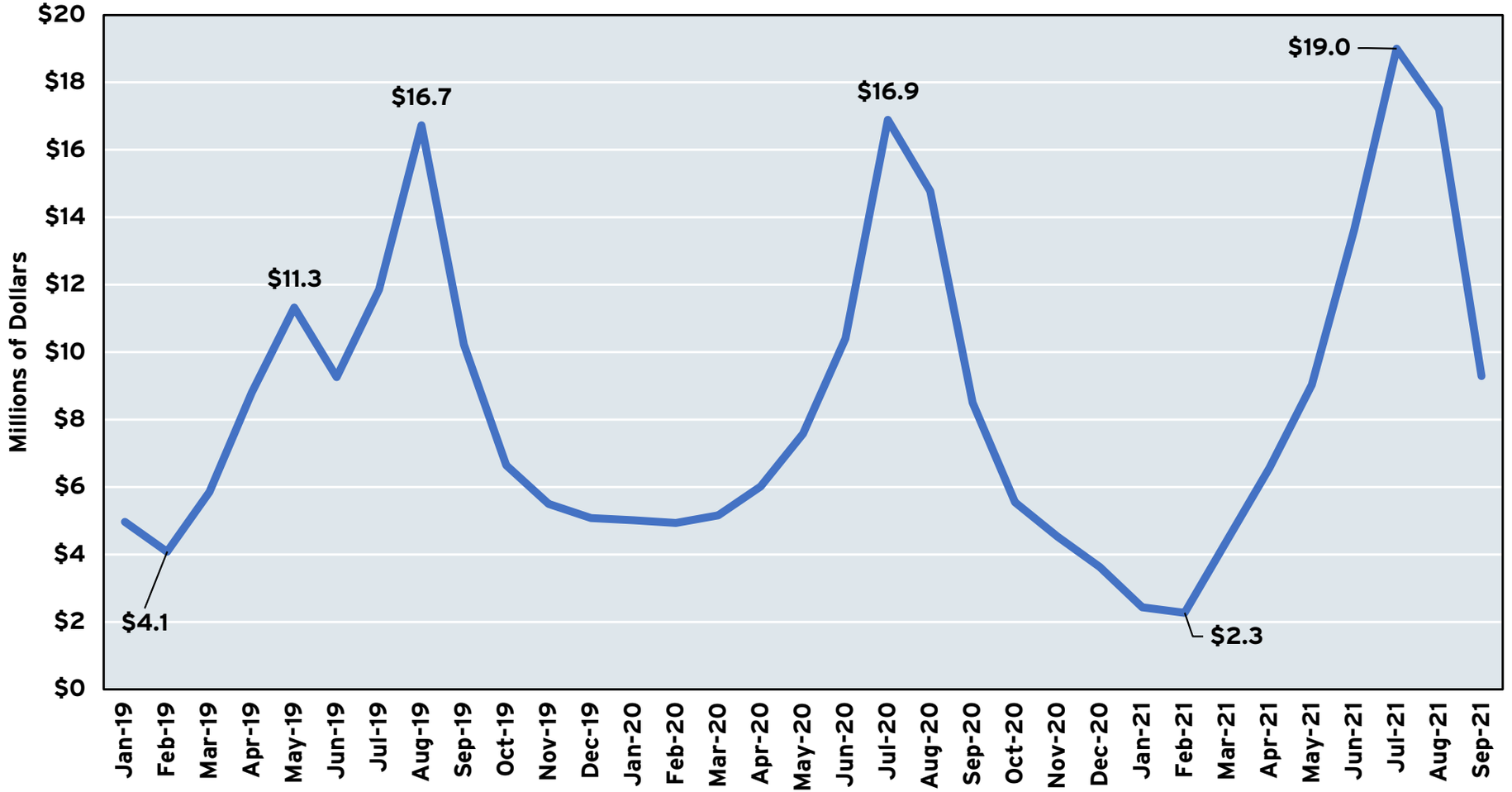
CHANGE IN AIRBNB REVENUE:
VIRGINIA METROPOLITAN AREAS AND VIRGINIA, 2019-2020



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market. Data exclude shared rooms.

GRAPH 14

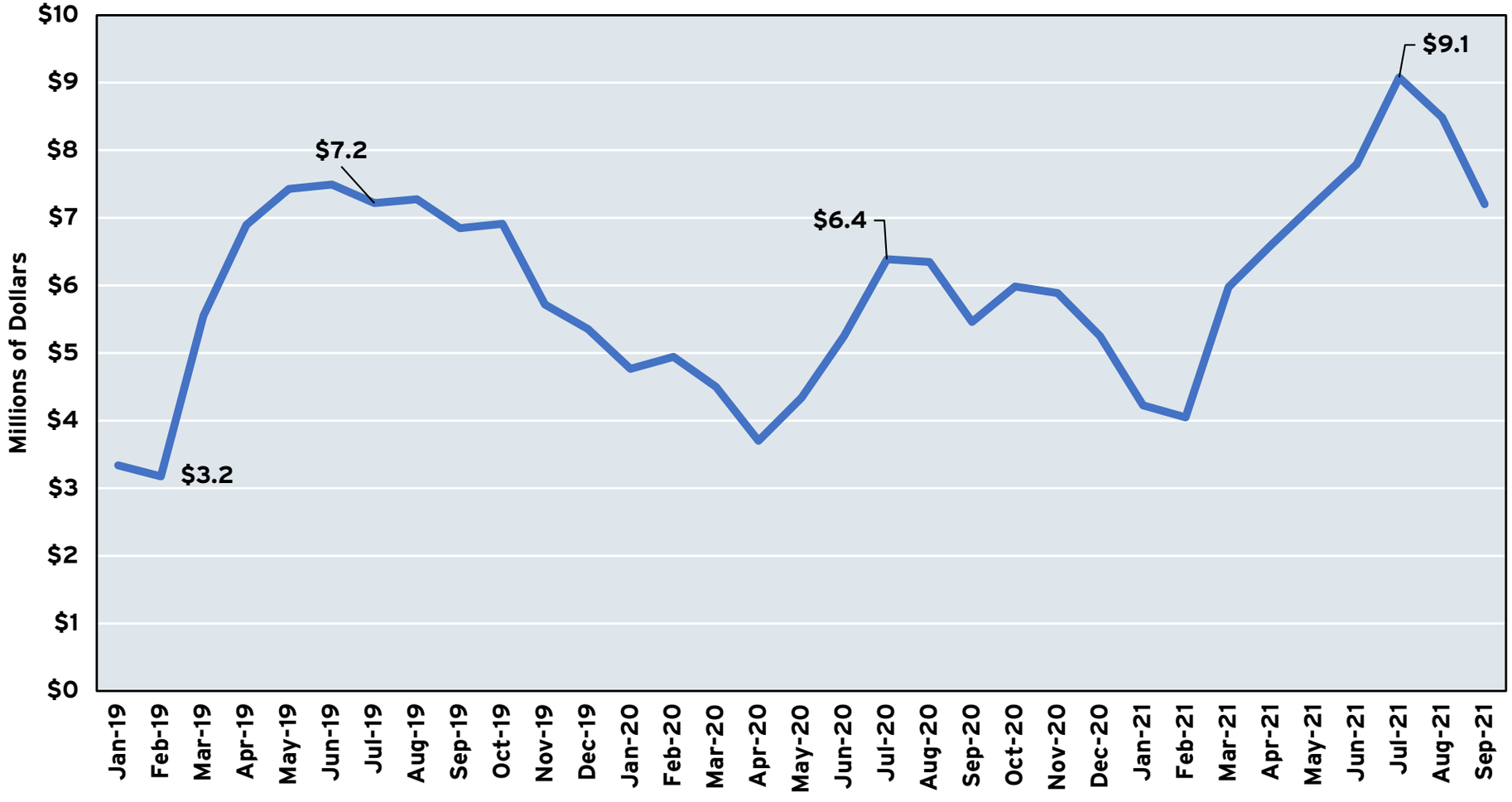
MONTHLY AIRBNB REVENUE:
HAMPTON ROADS, JANUARY 2019-SEPTEMBER 2021



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data exclude shared rooms.

GRAPH 15

MONTHLY AIRBNB REVENUE:
NORTHERN VIRGINIA, JANUARY 2019-SEPTEMBER 2021



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data exclude shared rooms.

Entire-Place Versus Private-Room Rentals

When we dive into the data on what types of properties were rented, we observe that consumers continue to express a strong preference for entire-place rentals as opposed to the rental of rooms in private homes. Graph 16 displays Airbnb annual revenue by type of property from 2016 to 2020. It should be clear that rentals of entire apartments, condominiums and homes are driving Airbnb revenue growth in the Commonwealth. The aggregate level of revenue from the rental of rooms in private homes declined in 2020, and the share of Airbnb revenue from these rooms declined as a consequence.

This point is driven home further by examining the data on the change in Airbnb room by type of listing. As shown in Table 1, Airbnb revenue from the rental of entire places generally increased in 2020, but revenue derived from private rooms declined by double digits in most markets. At the metro-area level, we observe that private-room rental revenue declined in every metro area. In those metros where entire-place rentals also declined, private-room rental revenue fell more steeply in 2020. As we discuss in the next section, it should be no surprise that consumers preferred entire-place rentals as a risk mitigation measure during the initial months of the pandemic.

TABLE 1

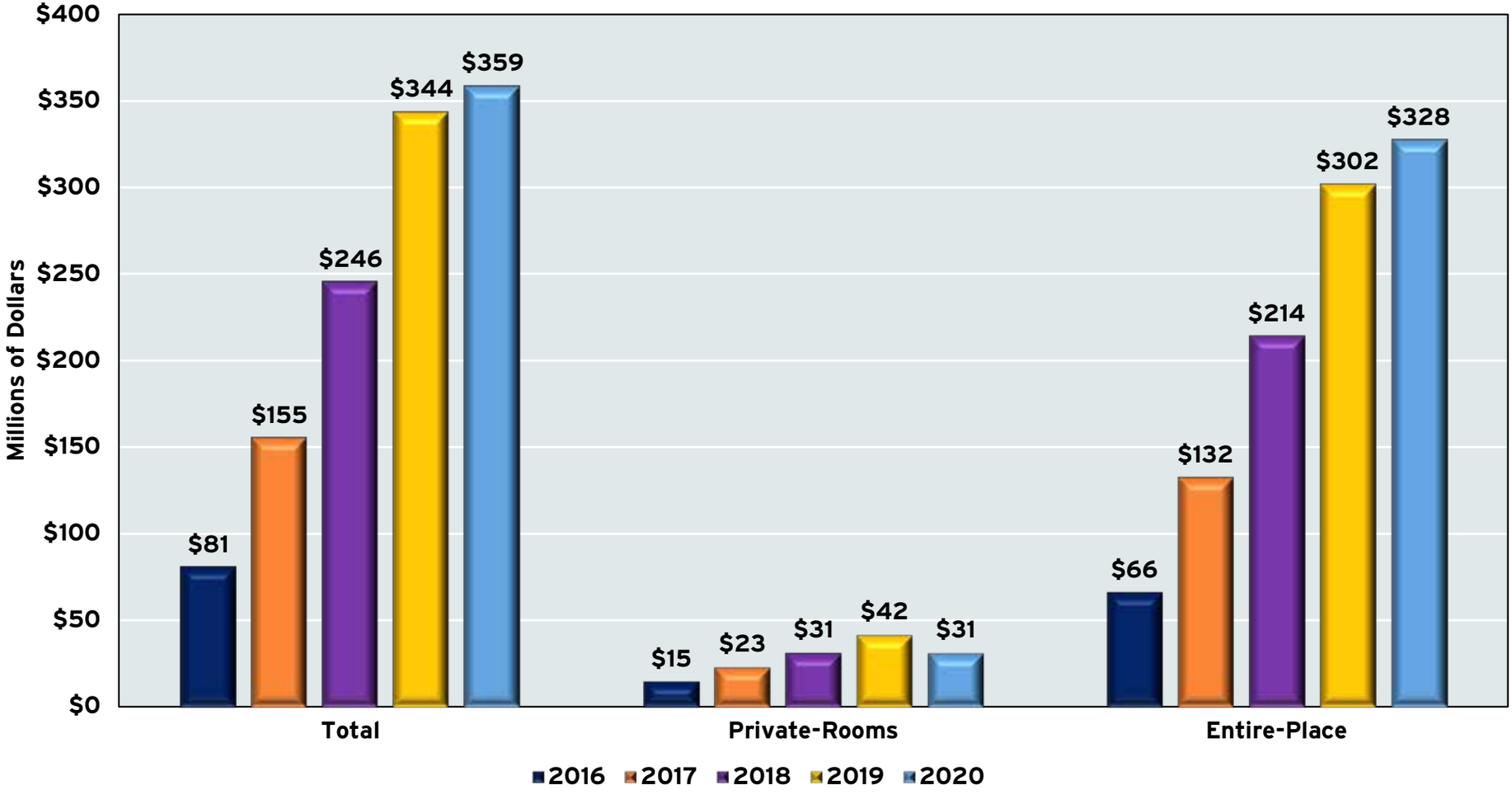
PERCENT CHANGE IN AIRBNB REVENUE BY TYPE OF RENTALS: VIRGINIA AND ITS MAJOR METRO AREAS, 2019-2020

	Percent Change in Total Revenue	Percent Change in Revenue from Private-Room Rentals	Percent Change in Revenue from Entire-Place Rentals
Virginia	4.40%	-25.16%	8.48%
Hampton Roads	-7.34%	-29.07%	-5.07%
Northern Virginia	-14.20%	-35.79%	-8.65%
Charlottesville	5.70%	-14.75%	7.15%
Richmond	-7.39%	-37.27%	0.24%
Blacksburg	-34.75%	-44.29%	-33.43%
Lynchburg	22.01%	-8.61%	25.15%
Staunton/ Harrisonburg	41.50%	-14.06%	47.71%
Roanoke	24.71%	-14.70%	32.49%
All Other Areas	51.73%	21.59%	54.45%

Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Staunton and Harrisonburg MSAs are combined here, as STR considers these metros representing one market. Data exclude shared rooms.

GRAPH 16

ANNUAL REVENUE OF AIRBNB PROPERTIES IN VIRGINIA: PRIVATE-ROOMS AND ENTIRE-PLACE RENTALS, 2016-2020 (IN MILLIONS OF DOLLARS)



Sources: AirDNA data received in October 2021 and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data exclude shared rooms.

Risk, Comfort And Airbnb

Recent research suggests that tourist risk perceptions increased significantly during the pandemic. Tourists, hotel staff and short-term rental hosts all expressed concerns about the possibility of being infected by the COVID-19 virus. As a result, hotels and short-term rental listing companies announced new cleaning protocols and other measures to mitigate transmission risk.[3] These measures, however, imposed additional costs at the same time reservations and revenue were under significant pressure. Short-term rental hosts noted that, unlike traditional hoteliers, they were unlikely to qualify for government aid, and some short-term hosts exited the industry entirely.[4] As listings and revenues declined worldwide, Airbnb laid off 1,900 of its 7,500 employees.[5]

Yet, Airbnb revenue increased slightly in 2020 in Virginia. Meanwhile, revenue declined by nearly 50% in the traditional hotel sector. What factors might explain why the Airbnb sector outperformed its peers in the Commonwealth and other markets in the United States?

A possible explanation is that, unlike traditional hotels, Airbnb listings offered more opportunities for social distancing. Over time, the composition of Airbnb listings has shifted toward multiroom, entire-place properties. Airbnb no longer can be thought of as grandmothers renting spare rooms in the back of their houses (if that ever was the case). Airbnb's share of revenue originating from entire-place properties increased from 87.8% in 2019 to 91.3% in 2020. During the pandemic, if people were going to travel, they were likely more comfortable with having an entire property to themselves than staying at a traditional hotel.

Airbnb supply is also sensitive to market conditions. Unlike traditional hotels, Airbnb property owners can bring their properties on market (or take them off market) with little notice. Highly desirable properties that commanded a premium were more likely to remain listed while less-desirable properties that may have been listed during large events fell by the wayside. Knowing this, property owners may have been able to command a premium for their properties during the pandemic, unlike hoteliers, who had to cut room rates in the face of slumping demand.

Final Thoughts

The hotel industry plays an important role in the Virginia economy. As we near the end of 2021, we are witnessing a recovery in many of our markets. While the tunnel may be long, the light at the end is not a train, but the prospect of a continued recovery and new expansion of the industry in 2022.

For now, the good news is that vaccinations and improving consumer confidence in 2021 have led to the Hampton Roads hotel industry recovering from the pandemic. Other markets are not far behind. While the Northern Virginia market's performance has lagged the state and the nation, we expect that its rebound will be significant in 2022. As international travel picks up and life returns to a semblance of normality, Northern Virginia hotels are likely to experience a surge in traffic. This bodes well for the region as well as the Virginia economy.

Surprisingly, amid the pandemic, Airbnb fared relatively well in the Commonwealth. Explanations abound as to why Airbnb revenue did not decline as much as traditional hotel-sector revenue in many of Virginia's metropolitan areas. Perhaps the simplest explanation is best: Airbnb listings in the Commonwealth provided a viable option for those who traveled during the pandemic. Whether these accommodations were "safer" than traditional hotels is a matter of debate. What cannot be debated is the performance of these short-term rental properties in 2020. Now, with the traditional hotel sector on the rebound, the question is whether the short-term rental sector will continue its growth seen in earlier years as vaccinations increase and consumer confidence grows. If local governments do not fall into the trap of imposing ever-increasing regulations, then the answer is, likely, yes. If, on the other hand, local governments create ever-higher barriers to entry and operation, how Airbnb will fare in Virginia is an open question. Time will tell.

3 https://www.emerald.com/insight/content/doi/10.1108/JTF-02-2020-0014/full/html.
4 https://www.sciencedirect.com/science/article/pii/S0278431920302152#bib0250.
5 https://news.airbnb.com/a-message-from-co-founder-and-ceo-brian-chesky/.

LET IT RIDE: CASINOS, ONLINE BETTING AND THE FUTURE OF GAMBLING IN VIRGINIA

Nobody has ever bet enough on a winning horse.

– American Proverb

In 1987, Virginia voters faced a choice: approve a public referendum on a state lottery or continue to prohibit most forms of legal gambling in the Commonwealth. While proponents pointed to how a state lottery could increase funding for K-12 education, opponents argued that a lottery would not only be a regressive tax, but also the gateway to other forms of gambling.[1] With 57% of voters casting a "yes" ballot in November that year, Virginia joined the growing ranks of other states in having a lottery.

In retrospect, the lottery opponents were prescient, although it took a while for their prophecies to be realized. In 1988, Virginia voters approved pari-mutuel betting by a 56% to 44% margin. In 1992, local referendums for off-track betting parlors passed in Brunswick County, Chesapeake, Greensville County, Henrico County, Richmond and Virginia Beach. In 1993, Hampton voters approved an advisory referendum on off-track betting, although zoning was not approved until 1997. The Colonial Downs Racetrack opened in New Kent County in 1997. Over ensuing decades, state and local bills and referendums were considered by the General Assembly and voters, but, until 2015, legal gambling consisted primarily of the Virginia Lottery, horse racing and games associated with charitable giving.

1 https://www.washingtonpost.com/archive/local/1987/09/23/virginia-lottery-referendum-debate-is-no-ticket-to-excitement/7d3c7174-0758-4f51-9dd6-f4d0387a17db/.

Since 2015, the Commonwealth has, in effect, gone "all in" on gambling. Virginians can now purchase lottery tickets online as well as play online lottery games. They can visit historical horse racing parlors and off-track betting sites. If they don't want to get off the couch, they can wager on sporting events through a number of online sportsbooks. The only notable exception to this "gold rush" was the narrow defeat in November 2021 of the referendum that would have allowed the construction and operation of a casino in Richmond. In the coming years, however, Virginians will be able to visit commercial casinos in Bristol, Danville, Norfolk and Portsmouth.

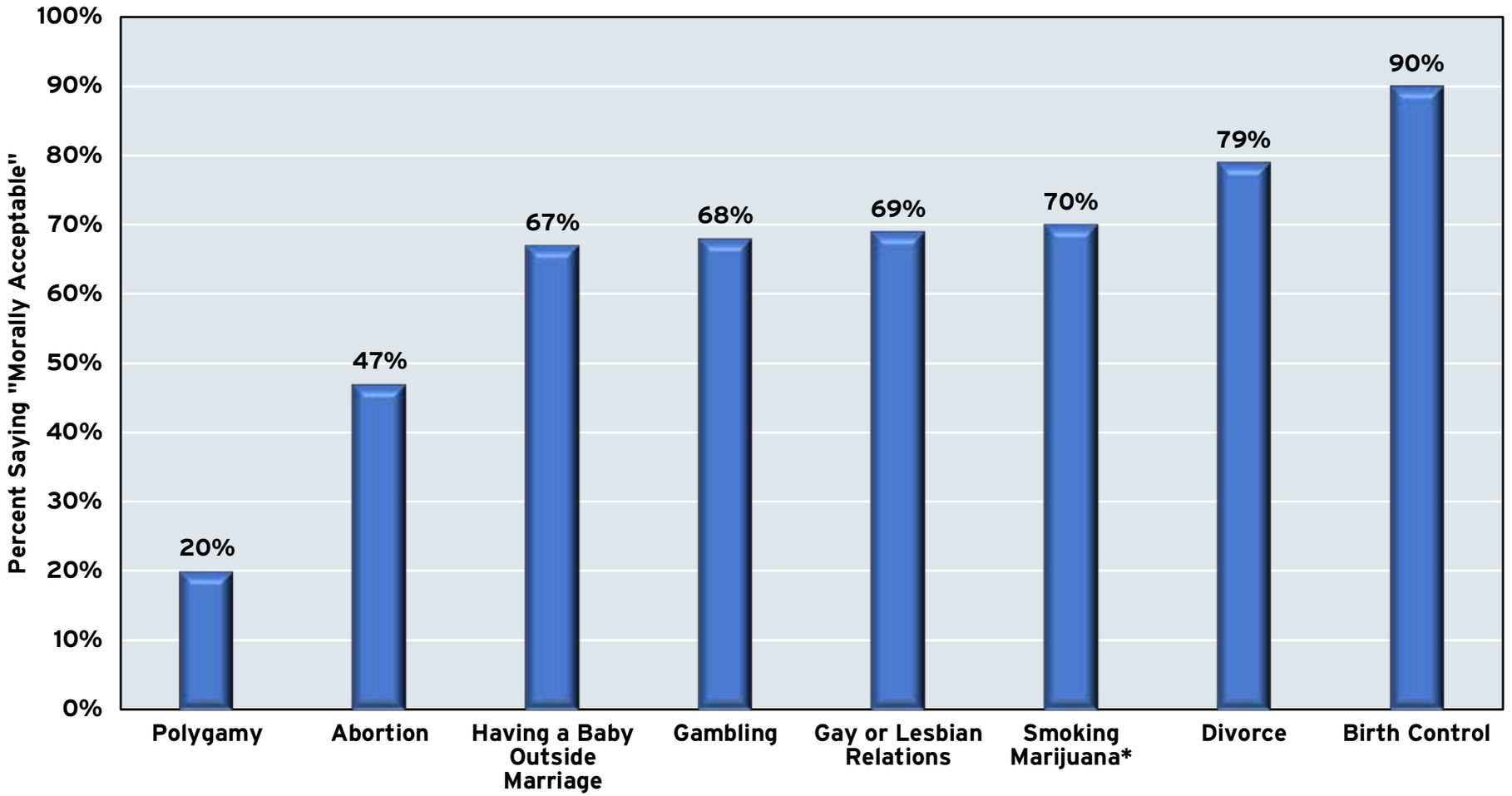
The push to expand commercial gambling in the Commonwealth over the last decade is a reflection of a continuing shift in public attitudes toward gambling as well as the search by state and local legislators for additional sources of revenue outside of raising taxes. In the 2021 Gallup survey of American moral values, 68% of respondents replied that gambling was "morally acceptable" (Graph 1). This represented an 8% increase from when the question was first asked in 2003. This gradual shift may also reflect the increasing ubiquity of gambling across the United States. In other words, as there are more opportunities to gamble legally, Americans view it in a more favorable light.

As legal gambling expands in Virginia, the question remains: Who benefits and who pays? Is it wise for the state and localities to become increasingly dependent on gambling revenue instead of making hard choices with respect to reforming the antiquated tax system in the Commonwealth? While we project that localities with new casinos will see increases in jobs and tax revenues, the net economic impacts of the casinos are closely correlated with how many patrons come from outside the state. While the casinos in Bristol and Danville are likely to attract a majority of their customers from outside Virginia, the same cannot be said about the casinos in Norfolk and Portsmouth. We also note that new forms of gambling, especially online gambling, pose a threat to the future revenue potential of the commercial casinos. Lastly, with an ever-expanding slate of gambling alternatives, we argue that Virginia needs to prepare for the increasing social toll of gambling.

In this chapter, we examine the evolution of gambling in the United States and the Commonwealth, and estimate the impact of introducing four new casinos in Bristol, Danville, Norfolk and Portsmouth. We also discuss how displacement may alter the projected economic impacts of these new venues. We conclude with a look at the social costs of gambling and pay particular attention to gambling addiction.

GRAPH 1

2021 GALLUP POLL ON MORAL ISSUES, PERCENT OF RESPONDENTS STATING AN ISSUE IS MORALLY ACCEPTABLE



Source: Gallup (2021), "Moral Issues," available at: https://news.gallup.com/poll/1681/Moral-Issues.aspx

*Smoking Marijuana question was not included in the 2021 survey. Estimate reflects the 2020 Gallup survey.

Rolling With The Times: Gambling Goes Mainstream

When one hears the word "gambling," thoughts of casinos and horse tracks may come to mind. The casino, with its blackjack tables, roulette wheels and slot-style machines, has occupied a place in the American consciousness for decades. In the United States, casino gambling was legal only in Nevada until New Jersey voters approved casino gambling for Atlantic City in 1976. Over the next three decades, other states approved commercial casinos, and tribal casinos also opened throughout the country. As illustrated in Graph 2, the number of commercial casinos peaked at 524 in 2016, before falling sharply the following year. The number of casinos in operation in 2020 was roughly equivalent to the level seen in 2006.

State and local lotteries have grown considerably over the last three decades. In the late 1970s, state and local lottery revenue amounted to less than $1 billion. By 2019, revenue approached $29 billion.[2] Growth in some states, however, slowed (if not declined outright) as consumer fatigue set in and competition from other sources of gambling intensified over the last decade. In Virginia, the launch of the online lottery and larger jackpots lifted lottery revenue to $1.43 billion and profits to $350 million (a record) in just the second half of 2020.[3]

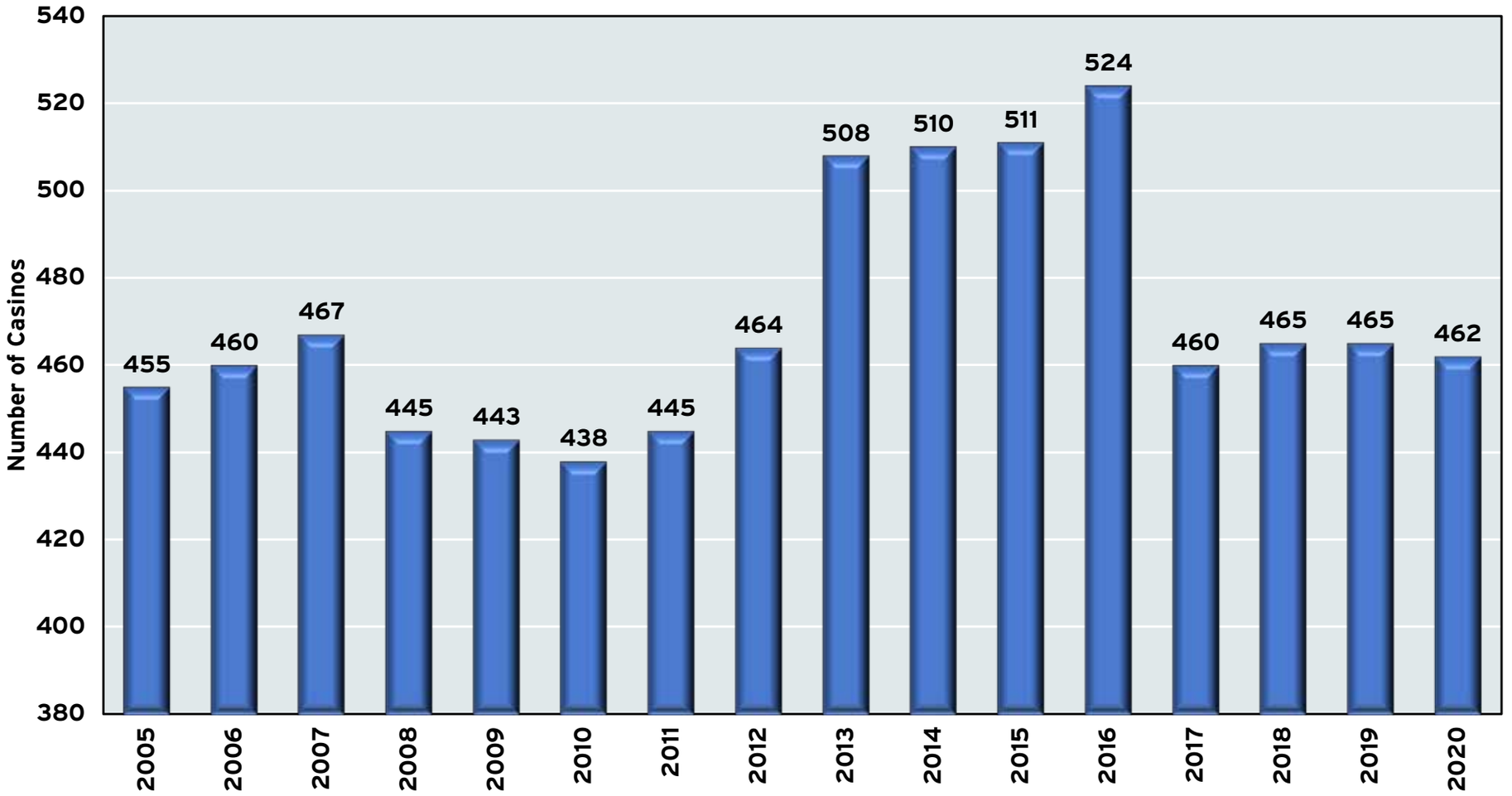
Competition is likely to only increase for casinos and lotteries in the coming years. In May 2018, the U.S. Supreme Court ruled that the Professional and Amateur Sports Protection Act of 1992, which effectively granted Nevada a monopoly on legal sports betting, was unconstitutional. The historic decision legalized sports betting nationwide. A number of states, including Virginia, rapidly moved to create the legal and regulatory frameworks necessary for residents to place sports bets via computer or their phone. Sports betting with full or limited mobile-betting options is now offered in 17 states and the District of Columbia, and has been approved in another three states.[4] While some states require in-person registration for mobile betting, this requirement appears to limit revenue growth and is likely to fall by the wayside.

In 2018, total sports betting revenue in the United States amounted to $560 million. A year later it nearly doubled, jumping to $1.1 billion. Sports betting revenue is likely to top $2 billion in 2021 and approach $8 billion by 2025.[5] Sports betting became legal in Virginia in January 2021 and by July, the state had collected over $9.6 million in taxes.[6] Every dollar wagered online is one less dollar that could have been spent in a historical horse racing parlor or commercial casino. The open question is whether physical gambling establishments will face the same disruption that many brick-and-mortar retailers experienced (and continue to experience) from online shopping.

2 Statista, E. Duffin (2021), "State and local lottery revenue in the United States from 1977 to 2019," at https://www.statista.com/statistics/249128/us-state-and-local-lottery-revenue/.
3 https://richmond.com/news/state-and-regional/govt-and-politics/big-jackpots-online-gambling-lift-virginia-lottery-revenue-37-in-late-2020/article_98743ed5-de36-567a-90e6-22b7fd4033d8.html.
4 https://www.actionnetwork.com/news/legal-sports-betting-united-states-projections.
5 Statista, S. Lock (2021), "Sports betting revenue in the United States in 2018 and 2019, with a forecast to 2028," at https://www.statista.com/statistics/1117369/sports-betting-revenue-forecast-us.
6 https://www.sportsbettingdime.com/virginia/sports-betting-revenue/.

GRAPH 2

NUMBER OF COMMERCIAL CASINOS IN THE UNITED STATES, 2005-2020



Source: Statista, S. Lock (2021), "Number of commercial casinos in the United States from 2005 to 2020," at https://www.statista.com/statistics/187972/number-of-us-commercial-casinos-since-2005/

Virginia Rolls The Dice

Over the last five years, there has been a rapid shift in public policy toward gambling in Virginia. In 2015, legal gambling consisted primarily of the Virginia Lottery, historical horse racing and games associated with charitable giving. By 2021, Virginians could gamble via online lotteries, wager bets with mobile sportsbooks, visit expanded historical horse racing sites and look forward to frequenting commercial casinos in the near future. Table 1 provides descriptions of the types of gambling that are currently legal in Virginia.

One might argue that the demarcation line for this change in public policy was drawn in March 2019 when Gov. Ralph Northam signed Senate Bill 1126, establishing a broad framework for expanding commercial casinos and authorizing casino gaming to be regulated by the Virginia Lottery Board. The bill included a reenactment clause, which meant it would need to be passed again for it to take effect. The clause directed the Joint Legislative Audit and Review Commission (JLARC) to conduct a review of gaming laws in other states and approximate what would occur in Virginia if casino gambling were authorized in the Commonwealth. The findings from JLARC's report prompted the re-signing of the bill in 2020.

The bill authorized casinos in five cities – Bristol, Danville, Norfolk, Portsmouth and Richmond – but only if citizens approved the casinos. Residents in Bristol (71.1%), Danville (68.7%), Norfolk (65.1%) and Portsmouth (66.8%) resoundingly voted in favor of having a commercial casino in their cities. In November 2021, however, Richmond voters narrowly rejected (51%) a proposal to build and operate a commercial casino in south Richmond.

TABLE 1

GAMBLING BY TYPE IN VIRGINIA, 2021

Type	Definition
Casino gaming	Table games (such as craps, roulette, baccarat, poker, etc.) and wagering played with cards and electronic gaming devices where players wager money. Video lottery machines (slot machines) have become one of the most popular forms of gambling in casinos.
Charitable gaming	Bingo, charity game tickets, raffles and charity fundraising permitted by the Office of Charitable and Regulatory Programs throughout Virginia. There were 211 registered gaming activities in Virginia as of November 2021.*
Fantasy sports betting	Players create a fantasy sports team and compete against other teams to win money. Virginia introduced legal fantasy sports betting regulation in 2016.
Gray machines and games of skill	Games of skill are slot-like machines that appeared in restaurants, bars and convenience stores. The outcome of these games is determined by a player's mental or physical skills rather than by chance. These machines operated in a gray area of the law until they were banned in 2020 but were then granted a reprieve in return for tax collections. Skill games were banned again on July 1, 2021.
Historical horse racing machines	Electronic gambling system that allows players to bet on the outcome of horse races that have already been run. These machines appear similar to a traditional slot machine. Users can select their horse "winners" with each wager or use an auto cap feature for random horse selection.
Live horse race betting	Individuals place in-person bets on the outcome of a live horse race.
Lottery (scratchers, state lottery)	Prize drawings where entrants pay for a chance to win a large jackpot or instant prizes by scratch "reveal" tickets.
Online horse race betting	Individuals place bets on live horse races via an online website or a smartphone app from the comfort of their own home.
Sports betting	Placing bets on a particular outcome or winner of a domestic or international sports event (including straight, total line, money line, parlay and teaser bets).
Sweepstakes sites	A contest in which participants enter for a chance to win a range of prizes (from houses to cars to money), and winners are drawn at random.

Source: Dragas Center for Economic Analysis and Policy, Old Dominion University
*Online Directory of Bingo Sessions in Virginia, https://www.vdacs.virginia.gov/pdf/bingo_events.pdf

The Rise Of Mobile Betting

When Virginia launched, it was our most successful launch to date, with more users on the first weekend than any state before it.[7]

– Kevin Hennessy, FanDuel
Director of Publicity

The bet on casinos by Bristol, Danville, Norfolk and Portsmouth is being made at a time when the gambling industry is experiencing a period of profound change. Two decades ago, the thought of sitting on your couch and placing real-time bets via a mobile device on whether the next football pass will be completed, a basketball game beats the over/under or an MMA fighter lands more punches than an opponent in a particular round was just a glimmer in the eyes of entrepreneurs. Today, not only does this technology exist, but also consumers are embracing it enthusiastically. While the number of casinos remains relatively stable and lottery revenue growth has slowed, sports betting revenue nationally is projected to increase from $2.1 billion in 2021 to $7.9 billion in 2025.

Virginia legalized sports betting in April 2020 with the passage of Senate Bill 384, which allows for up to 12 online sports-betting providers in the Commonwealth.[8] Table 2 lists the online and mobile sportsbook applications that have already launched or will launch in Virginia. FanDuel was the first, followed quickly by DraftKings, BetRivers, BetMGM and Caesars Sportsbook. Currently, 10 providers are either operating or have been approved to operate a mobile sportsbook in the state. Physical sportsbook locations are anticipated to open in spring 2022. JLARC estimates that the mobile sports-betting market will generate between $22 million and $55 million annually in tax revenue for the Commonwealth.[9]

TABLE 2

ONLINE AND MOBILE SPORTSBOOK APPS IN VIRGINIA

Online Sportsbooks	Launch Dates	Partner Casinos/ Organizations	Probable Physical Sportsbook Locations
FanDuel Sportsbook	January 21, 2021	Washington Football Team	TBD
DraftKings Sportsbook	January 24, 2021	Stand-Alone License	TBD
BetRivers	January 27, 2021	Rush Street Gaming	Portsmouth
BetMGM	January 27, 2021	Stand-Alone License	TBD
Caesars Sportsbook (formerly William Hill)	February 3, 2021	Caesars	Danville
WynnBET	March 11, 2021	NASCAR	Martinsville, Richmond
Unibet	April 28, 2021	Stand-Alone License	TBD
Golden Nugget	October 13, 2021	Stand-Alone License	TBD
PointsBet	TBD	TBD	TBD
bet365	TBD	Hard Rock	Bristol

Source: Sports Handle, https://sportshandle.com/virginia/, updated as of Nov. 1, 2021

7 https://www.13newsnow.com/article/news/local/mycity/norfolk/virginia-leading-the-way-for-popular-sports-betting-platform-fanduel/291-888e7fff-3a1a-4433-8c6c-0920e4951d89.
8 https://www.americangaming.org/wp-content/uploads/2021/03/AGAGamingRegulatoryFactSheet_Virginia-2021.pdf.
9 JLARC, "Gaming in the Commonwealth 2019," http://jlarc.virginia.gov/pdfs/reports/Rpt527.pdf.

Games Of Skill Or Games Of Chance?

While Virginia was debating whether to approve commercial casinos, gaming machines (often referred to as "gray machines") began appearing in restaurants, bars, convenience stores and truck stops throughout the state. These "machines" were electronic, computerized terminals featuring games that were played by inserting money in hopes of winning a cash prize. On the outside, there appeared to be no fundamental difference between a virtual slot machine and these games; however, operators argued that these machines required skill, rather than chance, to win.

The distinction between skill and chance is important from a legal perspective. If the outcome of a game is determined by the player's ability, then it is not a random event. A popular game of skill mimics the Simon memory game, whereby a player must remember color combinations of increasing complexity. Another version requires a player to identify patterns among nine different pictures, much like a pictorial tic-tac-toe game, but with time limits and "wild cards." These games of skill differ considerably from a slot machine, where the player's only input is a bet and the push of a button to start the gamble.

Games of skill occupied what one could consider an ill-defined legal space. The machines were not taxed or regulated and, while some were skill-based, others appeared to cross the line into games of chance. Virginia planned to ban these games in 2020, even though many small-business owners argued that the revenue from these machines allowed them to make capital investments and expand staff.

As the COVID-19 pandemic rolled across Virginia in spring 2020, however, social distancing and restrictions on economic activity threatened to overwhelm many of these same businesses. Legislators, fearing a significant downturn in state revenues, decided to allow these machines to operate legally in the Commonwealth and to use the tax revenues and license fees for COVID-19 relief, problem gambling and local community support. The tax was $1,200 per machine every month it operated, and game distributors were subject to the tax. With over 10,000 machines and $198.4 million in wagers placed in May 2021 alone, many small-business owners and their patrons welcomed the legalization of these machines (Table 3). The state collected over $100 million in taxes during the time the machines were legal here.[10]

Even though the machines produced a boon for the state and business owners, the Commonwealth banned these games of skill on July 1, 2021. One argument was that the games bring gambling and its associated social costs into local neighborhoods, though, curiously, the same argument could be made about lotteries and mobile betting. In all likelihood, the primary rationale was the fear that these machines competed with lottery sales and also posed a threat to the state's nascent casino industry. A 2019 presentation by the Virginia Lottery Board attributed slowing growth in lottery sales to the prevalence of gray machines.[11] However, in a December 2020 presentation to the Virginia House Appropriations Committee, Dan Timberlake, director of the Virginia Department of Planning and Budget, noted that gray machine revenue had fallen short of expectations. When asked why, he replied: "One reason we believe the gray machine revenue is not what was originally forecasted is because people weren't going into the stores (to play them). But what they were doing, to our surprise, is that they were buying lottery tickets. The lottery is not seeing the loss of revenue from the fact that the gray machines are still out there."[12] On Dec. 6, 2021, a preliminary injunction placed the ban on games of skill on hold until full arguments on the constitutionality of the ban could be heard in court.

If the state reaped revenue from both games of skill and lottery sales, it should have been indifferent to where the money originated. The short-lived experiment with games of skill generated revenue for businesses and the Commonwealth and was obviously welcomed by many Virginians. Arguments that one form of gambling displaces another should fall on deaf ears, as it should not be the responsibility of the Commonwealth to choose winners and losers.

10 https://www.fox5dc.com/news/some-va-business-owners-fight-against-ban-on-skill-games.
11 Virginia Lottery briefing for House Appropriations and Senate Finance committees, September 2019, https://ihodvirginiageneralassembly.s3.amazonaws.com/agenda_block_docs/attaches/000/000/428/original/III_-_Lottery.pdf?1568640091.
12 https://www.playvirginia.com/virginia-gray-machines-lottery-sales/.

TABLE 3

MONTHLY REPORT OF SKILL GAME MACHINES IN THE COMMONWEALTH, MAY 2021

Region	Total Wagered	Total Awarded	In Play	Warehoused	Total Machines
Region 1 (Roanoke)	$20,697,585	$15,240,639	1,065	13	1,078
Region 2 (Lynchburg)	$32,046,065	$26,841,343	1,056	47	1,103
Region 3 (Staunton)	$10,660,184	$8,177,235	557	8	565
Region 4 (Alexandria)	$24,862,133	$19,137,080	994	38	1,032
Region 5 (Fredericksburg)	$10,708,016	$7,877,868	542	27	569
Region 6 (Richmond)	$40,456,679	$32,056,971	1,666	104	1,770
Region 7 (Hampton)	$21,251,730	$17,414,045	922	38	960
Region 8 (Chesapeake)	$29,829,243	$22,337,921	1,539	36	1,575
Region 9 (Charlottesville)	$7,889,460	$5,936,468	369	11	380
Other*	$0	$0	18	1,163	1,181
Grand Total	**$198,401,095**	**$155,019,571**	**8,728**	**1,485**	**10,213**

Source: https://rga.lis.virginia.gov/Published/2021/RD274/PDF
*Eighteen machines were improperly reported by the distributors as being warehoused, but according to ABC's records they were still subject to the monthly tax.

Bright Lights, Big Gamble? New Casinos In Virginia

To understand the potential economic impact of the new casinos in Virginia, we briefly examine each of the projects, including projected levels of employment and revenue. We note that the availability of data varies significantly from project to project. In some cases, cities have prepared economic analyses that examine the composition of jobs and visitors to the new casinos. In other cases, press releases and developer presentations are all one can readily find on the projected benefits and costs of the new casinos. **Given the hundreds of millions of dollars of proposed spending on their construction, the lack of publicly available information from objective sources on the size, scope and potential impacts of these enterprises is, to put it mildly, surprising. It will be much harder to hold public officials accountable if there is a lack of specifics regarding these casinos prior to their construction.**

HARD ROCK HOTEL & CASINO IN BRISTOL

In the 2020 general election, Bristol became one of five Virginia cities to authorize a casino in the state. With a 71% approval rating by voters, initial plans called for the new Hard Rock Hotel & Casino to start construction in 2021, with a hopeful opening in early 2022. In the meantime, a temporary gaming facility was to open, which would allow access to a limited number of slot machines and table games while the main casino was being built.

However, delays and regulations have postponed the opening of both the temporary and main casino. Although state legislation allows for a temporary gaming facility to operate during the construction of a casino, a vetting and licensing process is still required. In May 2021, the Virginia Lottery Board announced it was highly unlikely the vetting and licensing process would be finished in time for the temporary gaming facility to open in 2021. As of October 2021, the temporary casino was slated to open by the end of the first quarter in 2022.

The plans for Bristol's main casino have seen multiple setbacks as well. The $400 million venue was originally scheduled to open in late 2022, but construction cannot start until the Virginia Lottery Board approves a license. In the board's latest public announcement, a license is expected to be awarded in April 2022, after which construction can begin. Although this may seem promising, construction is still expected to last at least 18 months, so Bristol's casino will not open until late 2023, assuming no more delays or postponements.

According to publicly available data, the Hard Rock Hotel & Casino Bristol will consist of a 100,000-square-foot casino with 2,700 slot machines, 100 table games and a sportsbook; a hotel with 750 rooms; retail space for up to 50 stores; and a spa, concert venue, sports simulators and go-kart track. Although multiple estimates have been cited in local media, the most recent estimates state that the casino is expected to generate $130 million in annual net gaming revenue[13] and $106 million in nongaming revenue.[14] The Hard Rock Hotel & Casino will offer over 1,000 construction jobs and employ approximately 2,000 permanent workers with an average annual wage of $46,500.[15]

13 https://heraldcourier.com/news/local/watch-now-with-the-bristol-casino-s-fate-in-voters-hands-a-deeper-look-into/article_70a97273-6b1f-5ab4-9566-d3edd2df078c.html.
14 The Bristol casino's nongaming revenue of $106 million is the projected amount for the first year of operation. https://www.casino.org/news/bristol-virginia-casino-developers-donate-310000-to-state-political-campaigns/.
15 Hard Rock Hotel & Casino Bristol, https://www.playvirginia.com/bristol/.

CAESARS VIRGINIA IN DANVILLE

About 200 miles to the east of Bristol, the city of Danville is going through a similar process. Prior to the November 2020 referendum approval by Danville's residents, the Danville City Council chose Caesars Entertainment as its preferred casino partner. As is the case with the Bristol enterprise, the construction process is being postponed by the Virginia Lottery. While the casino awaits licensing approval, demolition and site cleanup have already begun at the 85-acre site. The planned $500 million casino is set to be located at the former Dan River Mills Schoolfield complex on West Main Street. This site was rezoned in June 2021 from industrial manufacturing to casino entertainment. Construction of Caesars Virginia is expected to begin in winter 2021 with the opening anticipated in fall 2023.

The casino will include 1,400 slot machines and table games, a sportsbook, a poker room, a hotel with 500 rooms, restaurants and a live entertainment theater.[16] Danville is projecting annual gaming tax revenue will reach $22 million with an additional $4 million in property, meal and hotel occupancy tax revenue. The project is estimated to create 1,300 full-time jobs with annual salaries ranging between $35,000 and $47,000.[17]

HEADWATERS RESORT AND CASINO IN NORFOLK

In September 2019, Norfolk City Council initially authorized a land deal with the Pamunkey Indian Tribe that included a hotel, restaurants and an entertainment venue.[18] The proposal would have designated the land

as sovereign to the Pamunkey, not subject to taxation, and outside the jurisdiction of Norfolk. In November 2019, after complaints of a lack of transparency, doubts about the benefits of the deal and a signature petition that forced the council to schedule public hearings, a new vote was scheduled on the proposal. Two months later, Norfolk Mayor Kenny Alexander announced the Pamunkey Tribe would go through the Commonwealth of Virginia. This change reduced the initial investment plans from approximately $700 million to about $500 million, although these estimates continue to evolve. Tennessee billionaire and casino-gaming mogul Jon Yarbrough teamed up with Golden Eagle, the tribe's development partner, on the project.

16 https://cardinalnews.org/2021/09/27/how-big-will-danvilles-casino-be-this-big/.
17 https://pokernewsdesk.com/caesars-virginia-to-hear-public-enter-for-on-line-casino-at-former-textile-mill-website/.
18 The Pamunkey were the first Virginia tribe to receive official sanction from the U.S. Bureau of Indian Affairs in July 2015. The reservation is located near the Chesapeake Bay on the north side of the James River, approximately 90 miles northwest of downtown Norfolk. It is one of two original reservation lands assigned from a treaty with the English colonial government.

In 2020, the city of Norfolk and the Pamunkey Indian Tribe came to a final agreement, and the tribe signed a deal to purchase land to build the resort casino. The new deal ensures the land will not become sovereign land and Norfolk will receive tax revenue. The tribe has also been confirmed as a preferred casino partner and will construct the HeadWaters Resort and Casino near Harbor Park, home of the Norfolk Tides minor league baseball team.

As of May 2021, the HeadWaters Resort and Casino was projected to have 3,000 slot machines, 150 table games and a sportsbook. Additionally, it is expected to have 300 hotel rooms, live music and entertainment venues, bars and restaurants, indoor and outdoor pools, and a spa and fitness center. The casino is estimated to create over 2,000 construction jobs and approximately 2,500 permanent jobs.[19] City officials project total annual revenue to be between $415 million and $485 million on a stabilized basis, with annual gaming revenue estimated to be between $350 million and $400 million. Nongaming revenue, which includes profits from the hotel, food and beverage, and other amenities, is estimated to be between $65 million and $85 million on a stabilized basis. Payments to the city of Norfolk in the form of direct payments and taxes are projected to be between $26 million and $31 million annually.[20] Press releases from Capital Results, the firm that handles media relations for the Pamunkey Indian Tribe, suggest the opening could occur as early as 2022.

RIVERS CASINO IN PORTSMOUTH

On Nov. 3, 2020, Portsmouth residents resoundingly voted in favor of a casino – a proposal state Sen. Louise Lucas has supported for more than 20 years. The hotel-casino will be built by Chicago-based Rush Street Gaming, just off Victory Boulevard near Tidewater Community College, and eventually grow to include restaurants, a sportsbook and other entertainment amenities. "For Portsmouth, this means $16.3 million in tax generation ... [where] $16.3 million is an additional 7% to our GDP," said Robert Moore, director of economic development for the city of

Portsmouth. In addition to tax generation, the casino promises to create over 1,400 temporary construction jobs and over 1,200 permanent jobs.[21]

Before work can begin on either the Norfolk or Portsmouth casino, licensing must be obtained through the Commonwealth of Virginia, as well as the Virginia Lottery Board. Once licenses have been granted, construction can begin. Originally, the timeline called for shovels to break ground in November 2021 with the Portsmouth casino opening scheduled for sometime in 2023. More recently, however, a spokesperson for the casino said the plans have been pushed forward. Construction, including site clearance, is expected to last 18 to 24 months, with the venue opening its doors in late 2022.

19 Source: https://www.allinnorfolk.com/sites/default/files/media/2020-09/General.pdf
20 Projections assume stabilized operations in year three of the project, as well as the third year of operation of all planned properties in the competitive market, https://www.norfolk.gov/DocumentCenter/View/61651/ Criteria-For-Selection-of-Gaming-Operator.
21 https://www.krem.com/article/news/local/casinos-are-on-their-way-to-norfolk-portsmouth-heres-when-theyll-be-completed/291-58cfae8e-aa50-4617-a1ab-728901d33cad.

It's All Good – Until It Isn't

We caution that survivorship bias tends to cloud the perceptions of casino projects. We often hear of success stories but rarely learn about casinos that fail to meet expectations or failed entirely. Presentations to city councils and state governments highlight jobs and tax revenue, leading one to believe that a casino (or most any gambling venture) is a sure bet. Experience has shown (repeatedly), however, that as the novelty wears off, gambling revenue plateaus, if not declines outright. Graph 3 illustrates how, after accounting for inflation, casino revenue in Detroit shrank from a peak in 2006 ($1.65 billion) to a prepandemic low in 2019 ($1.41 billion). Locally, we need only point to the performance of the Virginia Lottery at the end of the most recent decade, and its push to introduce mobile betting as a means of addressing the stagnation in sales, to highlight how consumer fatigue can lead to an ever-widening search for gambling options to sustain revenues.

To gauge the potential economic impact of casinos on Virginia's economy, we first need to ask from whence casino patrons will come. The more customers who come from outside the region, the greater the potential economic impact of the casinos. Much like tourists visiting the Oceanfront who "inject" money into the regional economy, nonresidents traveling to Hampton Roads to gamble at the casinos will bring "new money" with them, adding to the impact of the gambling establishments.

Graph 4 illustrates JLARC's 2019 estimates of the percentage of net gaming revenue that will derive from spending by out-of-state customers. The casinos in Danville and Bristol are estimated to generate approximately three-quarters of their gaming revenue from nonresidents. The threat to these casinos, however, is competition brought about by potential casino development in neighboring states. If Tennessee or northcentral North Carolina were to build casinos in their areas, Danville and Bristol's annual net gaming revenue is estimated to decrease by 36% and 13%, respectively.

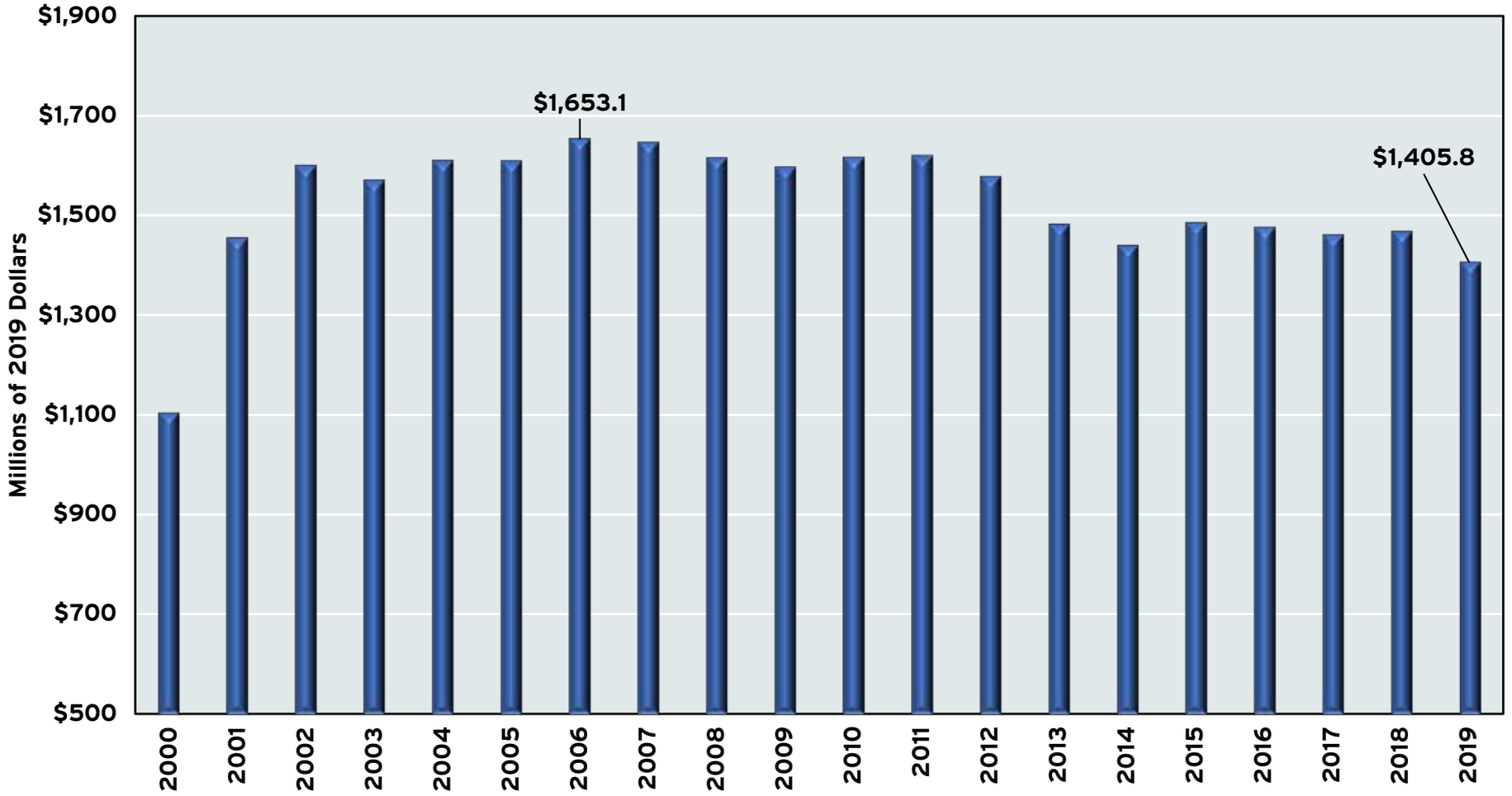
These estimates also suggest that the Hampton Roads casinos are unlikely to generate a significant amount of revenue from out-of-state visitors. However, the defeat of the proposed casino in Richmond directly benefits the casinos in Norfolk and Portsmouth. The proposed Richmond casino would have occupied a geographical blocking position for travelers from Northern Virginia to Hampton Roads, lowering the likelihood of repatriated spending. The Richmond casino's market also would have extended south, constraining the reach of the Norfolk and Portsmouth casinos. The defeat of the Richmond referendum presents an opportunity for the Hampton Roads region to market itself as a vacation *and* entertainment destination; however, it remains to be seen whether the localities in the region can cooperate sufficiently to take advantage of the decision of Richmond voters.

When considering the economic impact of a policy, economists focus on two broad effects: additionality and displacement. Additionality occurs when a policy change causes economic agents to engage in behavior that they would not have taken in absence of the policy. If a new advertising campaign, for example, influences a family from Pennsylvania to come to Virginia Beach for a vacation that they otherwise would not have taken, then the expenditures associated with the visit and the consequent economic activity are additional stimulus to the economy.

Displacement, on the other hand, occurs when a policy change causes economic agents to shift their behavior such that they reduce spending in one area to increase spending in another area. The additional spending as a result of the updated policy must be balanced against the reduction in spending elsewhere to determine the economic impact. For example, if a couple shifts spending from going to a movie theater instead of a concert, they are merely "moving" spending from one form of entertainment to another.

GRAPH 3

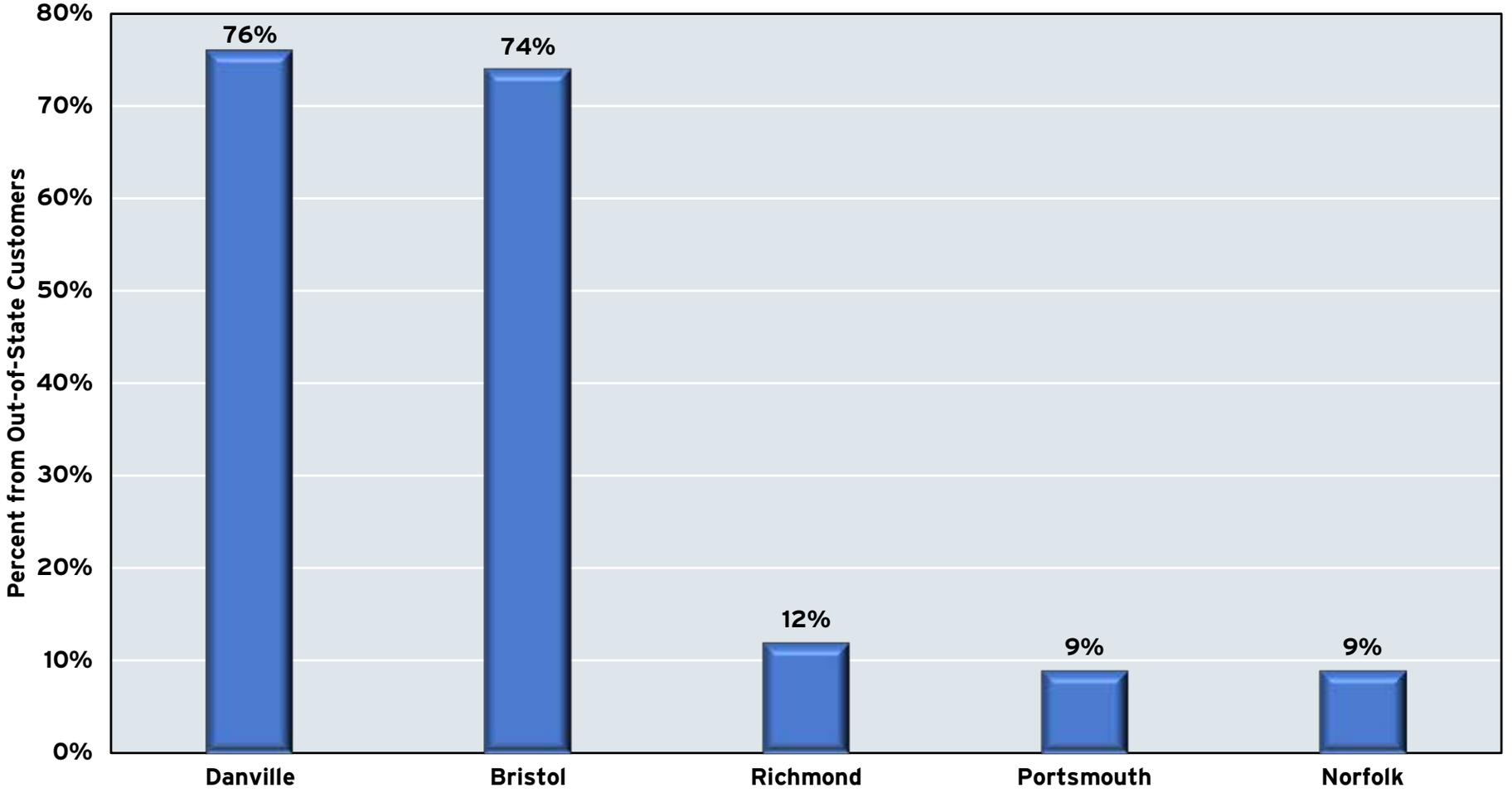
REAL (INFLATION-ADJUSTED) DETROIT CASINO REVENUE, 2000-2019



Source: Michigan Gaming Control Board, Revenues and Wagering Tax Information (2021)

GRAPH 4

PROJECTED PERCENTAGE OF NET GAMING REVENUE FROM OUT-OF-STATE CUSTOMERS, VIRGINIA CASINOS



Source: 2019 JLARC casinos report, http://jlarc.virginia.gov/pdfs/reports/Rpt527-5.pdf. We note that voters rejected the Richmond casino referendum in November 2021.

Estimating The Economic Impact Of Casinos In Virginia

To estimate the economic impact of each casino, we use projections of two economic inputs: capital investment (buildings, furnishings, equipment and so on) and annual casino revenue (Table 4). Of course, our estimates depend on the accuracy of the projections of these economic inputs. Given the continued evolution of the scale and scope of the casinos across Virginia, our estimates should be viewed as informative rather than authoritative. For these expenditures, we draw upon JLARC's analysis, news reports and staff analyses (where these are publicly available) to estimate aggregate economic impact.

TABLE 4

ECONOMIC IMPACT ANALYSIS ASSUMPTIONS, VIRGINIA CASINOS

	Capital Investment	Gambling Revenues
Bristol	$400 million	$130 million
Danville	$500 million	$190 million
Norfolk	$500 million	$350 million
Portsmouth	$300 million	$150 million

Sources: WTOP.com (2021), "Here's a look at Caesar's plans for Danville, Va. Casino"; city of Norfolk (2020), "Staff Report – Impacts of a Casino Hotel on the City of Norfolk"; and WAVY.com (2021), "Portsmouth Casino Developer Commits to Building Hotel, but Won't Say When"

Analysts' estimates of economic impact can often seem confusing. We explain below some of the more common terms they use:

- **Compensation** – the total payroll cost of employees, including wages, salaries and all benefits.
- **Employment** – the annual average of full-time, part-time and seasonal employment in an industry or region.
- **Output** – the measure of the total value of goods produced in an industry. However, output from one industry utilizes output from other industries, so the measure overstates the contribution of an industry to GDP.
- **Value Added** – the total market value of all final goods and services produced in a region in a given period of time. Value added is the measure of the increase or decrease in GDP.

Estimated Impacts Of Casino Construction

Unlike some other recent projects in Virginia, the construction of the casinos will not receive any state or local government tax incentives or grants. Instead, private funds will be used to fund construction. The injection of new capital into each region for the building of the casinos and associated properties will temporarily boost jobs and output. However, one must also recognize that not all the expenditures on these projects will stay in the region. Some building supplies, furnishings, machines and services will be sourced from vendors outside each metropolitan area, thus it is not appropriate to assume all construction dollars will be spent entirely within each region. We conservatively estimate that 40% of capital investment expenditures will remain in each region. For the casino in Danville, for example, total projected construction outlays are $500 million, of which $200 million will occur in the Danville region. We also note that we do not have specific information on when expenditures will occur, thus we model the impact of a lump-sum increase in construction spending. The reader should interpret these numbers as the estimated impact across the construction timeline for each project.

We present the economic impact estimates for casino construction spending in Table 5. Undoubtedly, the construction will boost jobs in each of the cities. The injection of construction spending will also increase local economic activity. These jobs and increases in GDP are transitory; that is, once the construction is complete, the jobs and increases in output will largely dissipate. We also note that, relative to the size of the local economies, these boosts in activity are small. The projected increase in local GDP for Norfolk is approximately $139 million, which is roughly equivalent to 0.5% of 2019 GDP (assuming that all the construction spending occurs in one year).

TABLE 5

ECONOMIC IMPACT: PROPOSED INVESTMENTS IN VIRGINIA CASINOS, 2021 DOLLARS

	Local Direct Construction Spending	Employment	Output (Millions)	Value Added (Millions)
Bristol	$160 million	2,155	$210.5	$93.5
Danville	$200 million	2,694	$263.1	$116.9
Norfolk	$200 million	2,120	$270.7	$139.0
Portsmouth	$120 million	1,176	$151.3	$80.3

Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University, and IMPLAN Group. Estimates reflect the sum of direct, indirect and induced effects. We use 2019 data to avoid the impact of COVID-19 on our estimates. Projected economic impacts for each city assume 40% of construction spending occurs within city limits.

Impact Of Sustained Operations

To estimate the annual economic impact of the fully operational casinos, we must first consider the question of displacement. If, as noted by JLARC and the consulting firm TIG (The Innovation Group), the casinos in Norfolk and Portsmouth generate about 10% of net gaming revenue from out-of-state customers, then the pool from which the casinos draw will be limited compared to the casinos in Bristol and Danville. Furthermore, the literature and practice show that casinos tend to attract customers predominantly from their local market area. If this occurs, then the Norfolk and Portsmouth casinos will merely "recycle" money within the local economies, moving it from established businesses to the casinos. On the other hand, if casinos are able to attract visitors from other states or regions, then spending at these venues is equivalent to the injection of new money into the local economy. While one might quibble about the extent of displacement, it will clearly occur, and will invariably reduce the overall impact of the casinos on regional economic activity.

Graphs 5 and 6 illustrate the projected annual economic impact of spending in the Virginia casinos. If one completely ignores displacement and assumes (unrealistically) that all spending in the casinos comes from outside the regions in which the casinos are located, then the new casinos would add over $600 million annually to Virginia's GDP and generate about 11,000 new jobs. In this rosy scenario, the new casino in Norfolk would add $294.3 million annually in economic activity, while the Bristol casino would add about $89 million to local GDP.

We cannot ignore displacement, of course, and studies that shrug displacement effects off or provide estimates of economic impact based on industry output alone should be viewed with a healthy dose of skepticism.[22] For example, if a casino generated $300 million annually in gambling revenue, but 50% of that revenue originated from outside the casino's local area, then only the impact of the "new" spending ($150 million) should be considered. To do otherwise ignores the impact of patrons shifting money away from local restaurants, bars, movie theaters and other establishments to spend it on gambling, rooms, and food and drink in the casinos.

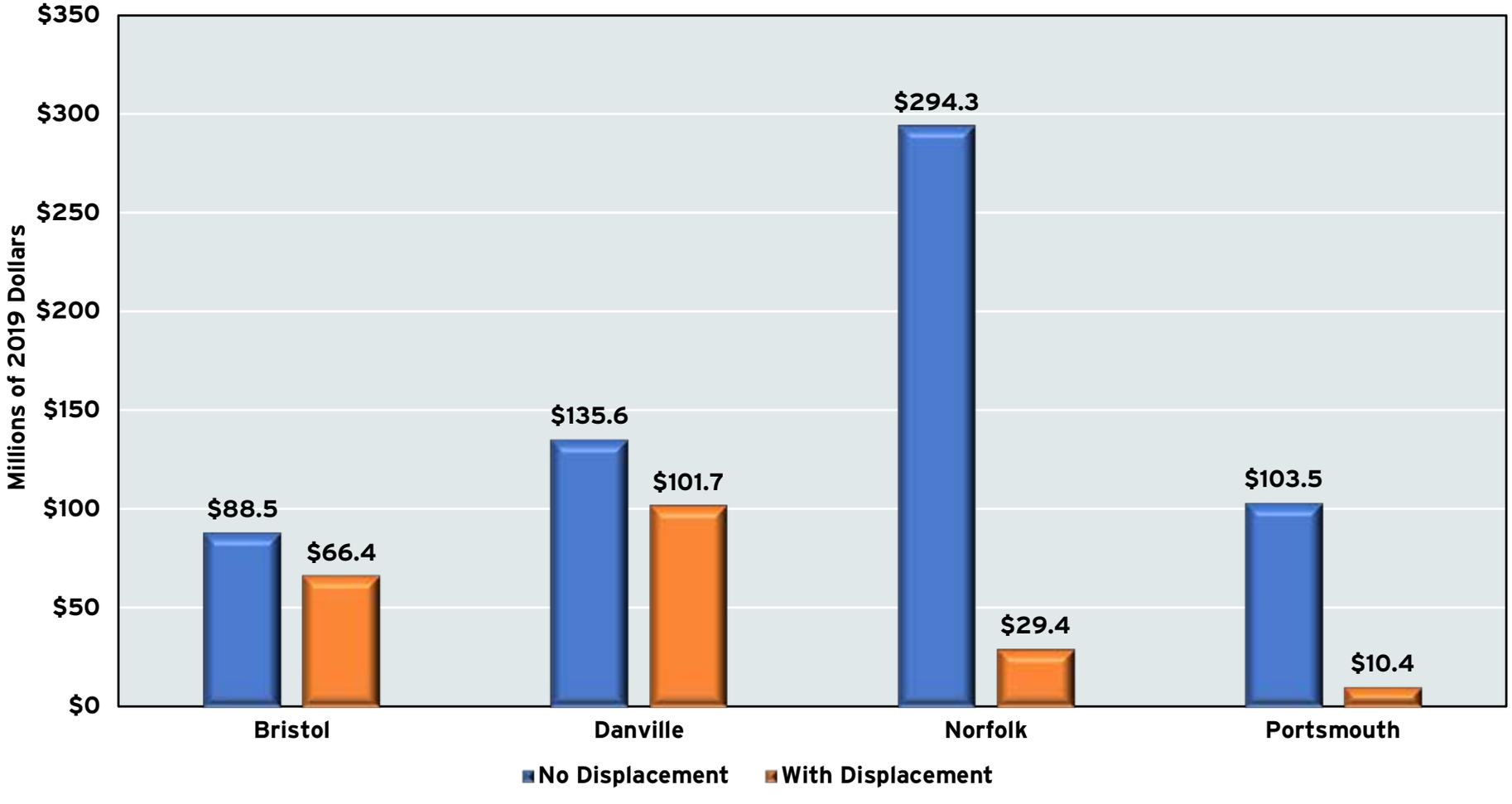
Accounting for displacement changes the picture. The casinos in Bristol and Danville are likely to have a higher proportion of out-of-state visitors than the casinos in Norfolk and Portsmouth. As such, the difference between the gross and net of displacement is much smaller for the casinos in Bristol and Danville. We project the Bristol casino will add about $67 million to GDP, while Danville's casino will lift GDP by over $100 million. For the Norfolk and Portsmouth casinos, on the other hand, the relatively high levels of displacement mean that the net economic impacts in these cities will be much smaller than the impacts without allowing for displacement. We would be happy to be proven wrong on the attraction of out-of-state visitors to the Hampton Roads casinos, but we must highlight the need to account for the impact of displacement on projections of net economic impact.

The fiscal impact of the Virginia casinos depends on one's perspective. The cities of Bristol, Danville, Norfolk and Portsmouth will all observe increases in GDP from gambling revenue. The question is whether their revenue arises because of "new money" being injected into the local economy or "old money" being recycled. As displacement rises, the revenue of neighboring cities and counties will be negatively affected as people choose to spend some of their money in the casinos. If nothing else, our analysis highlights the need to have a high level of discernment when considering the net economic impacts of casinos.

22 Where displacement occurs and the magnitude of displacement remain matters of debate in the economics literature. Leven and Phares (1998) estimated that about half of casino revenues in Missouri were the result of displacement spending. Siegel and Anders (1999) found that casino spending displaced other forms of entertainment spending in 11 Missouri counties. D. Chhabra (2007) estimated that about 30% of Iowa gamblers would have participated in other entertainment activities if casinos were not locally available. Wiley and Walker (2009), on the other hand, found a complementary effect between casinos and retail property values in the Detroit urban area.

GRAPH 5

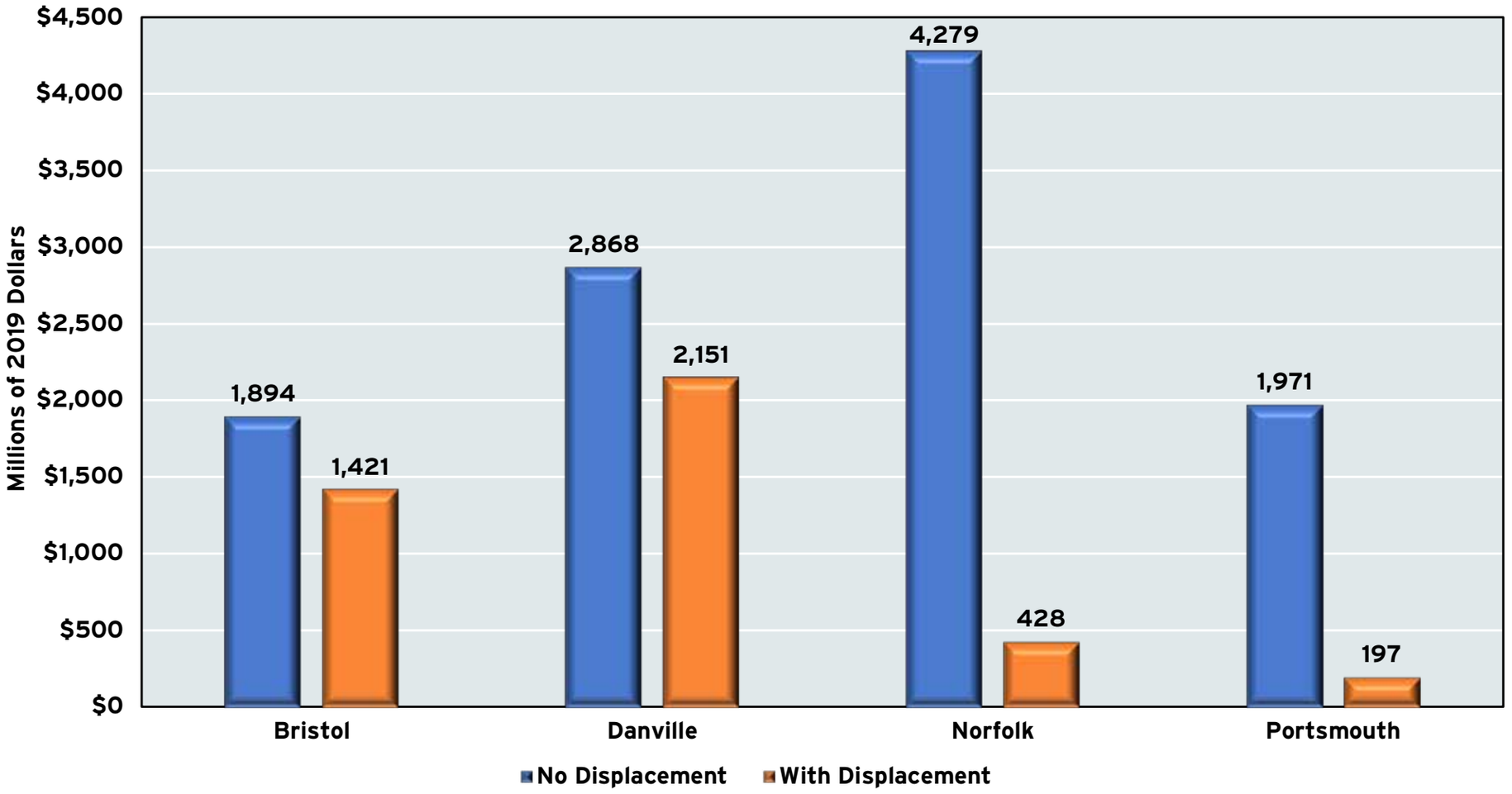
ESTIMATED ANNUAL ECONOMIC IMPACT OF VIRGINIA CASINOS ON LOCAL GROSS DOMESTIC PRODUCT



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University, and IMPLAN Group

GRAPH 6

ESTIMATED ANNUAL ECONOMIC IMPACT OF VIRGINIA CASINOS ON EMPLOYMENT



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University, and IMPLAN Group. Estimates may not sum due to rounding.

Problem Gambling

When it comes to gambling, it's all about winners and losers. Success, whether in the lottery or at a gaming establishment, is often celebrated in the media, while gambling losses and costs to society are rarely mentioned. In December 2020, a Dumfries resident won a jackpot of $800,000 in a Virginia Lottery Pick 4 drawing.[23] In January 2021, a Newport News man hit the highest historical horse racing jackpot in the United States at Rosie's Gaming Emporium in Hampton, a tremendous win totaling $914,530.90.[24] A September 2021 Virginia Lottery headline heralded "Dinwiddie County Man Wins $185,285 While Sitting at Home Watching TV" because the winner was playing Virginia Lottery games on his personal device from his living room.[25] We learned about these lucky individuals from TV and newspaper stories.

One is much harder pressed, however, to hear and read stories about residents who lose money gambling, who suffer from gambling addiction or who are victims of crime due to increased gambling activities. The Virginia Council on Problem Gambling reports that the Virginia Problem Gambling Helpline has seen a significant increase, around 77%, in the number of calls it has received in 2021. Callers largely originated from Hampton Roads with Northern Virginia and Central Virginia close behind. [26]

According to The Recovery Village Drug and Alcohol Rehab treatment facility, an estimated 10 million Americans struggle with gambling addiction in the United States. The social costs attributed to gambling vary, depending on the type of gambler. Gambling addiction can affect anyone of any age or gender, and it impacts not only the individual with the problem but also close family and friends. This addiction is more common among adults than adolescents, but the exposure to and participation in gambling at a younger age increases the risk of developing a gambling problem later in life. Approximately 1 in 20 college students are said to exhibit signs of compulsive gambling, a rate that is higher than that for the overall adult population.[27] Table 6 lists local programs that specialize in treating gambling addiction.

For many people, gambling addiction isn't an isolated problem. Individuals who are most at risk of developing gambling problems typically have preexisting addictions or disorders. A correlational link exists between gambling and depression, and one study found suicidal ideation in nearly half of its respondents.[28] Substance abuse is also prevalent among these individuals, with the connection to alcoholism being most common. A 2016 survey conducted by the Association of Problem Gambling Service Administrators estimated the percentage of Virginia adults with a gambling problem to be 2.2%.[29] Previous estimates of the general public afflicted with a gambling disorder range from approximately 0.5% to 2%. U.S. Census 2020 figures show that with Virginia's population of approximately 8.6 million people, there may be between 43,000 and 189,000 problem gamblers in the Commonwealth. Yet, with the advent of the mobile lottery, online sportsbooks and games of skill, the argument that casinos will be the primary source for problem gambling seems to have lost some steam. The challenge for Virginia will likely be meeting the rising demand for mental health services due to the increasing range of gambling choices available to the public. It may be appropriate to allocate more funds to behavioral health services in order to address this demand.

23 https://whatsupwoodbridge.com/dumfries-resident-wins-virginia-lottery/.
24 https://www.nbc12.com/2021/01/13/newport-news-man-wins-nearly-m-hampton-rosies/.
25 https://www.valottery.com/winnersnews/latestwinners.
26 https://www.einnews.com/pr_news/550780336/virginia-problem-gambling-helpline-sees-spike-in-2021-call-volume-amid-industry-s-expansion.
27 The Recovery Village, Gambling Addiction Facts and Statistics, https://www.therecoveryvillage.com/process-addiction/compulsive-gambling/related/gambling-statistics/, and the National Center for Responsible Gaming, https://www.icrg.org/sites/default/files/oec/pdfs/ncrg_fact_sheet_gambling_disorders.pdf.
28 https://preventionlane.org/gambling-vulnerable-populations.
29 2016 Survey of Problem Gambling Services in the United States, https://www.apgsa.org/wp-content/uploads/2018/01/2016_Survey_of_PGS_USA.pdf.

TABLE 6

SELECTED GAMBLING ADDICTION TREATMENT PROVIDERS: VIRGINIA, 2019

Name	Location
A Richards Counseling and Psychotherapy	720 Rodman Ave. Portsmouth, VA 23707
Agape Counseling and Therapeutic	106 West 5th Ave. Franklin, VA 23851
Colonial Behavioral Health	3804 George Washington Memorial Highway Yorktown, VA 23692
Hampton Veterans Affairs Medical Center/Mental Health SATP	100 Emancipation Drive, Unit 116-A Hampton, VA 23667
Lighthouse Counseling of Fredericksburg, PLC	420 Hudgins Road, Suite 201 Fredericksburg, VA 22408
Mental Wellness Now, LLC	1363 North Main St. Harrisonburg, VA 22802
New River Valley Community Services	700 University City Blvd. Blacksburg, VA 24060
Sentara Norfolk General Hospital Gambling Addiction Treatment	600 Gresham Drive Norfolk, VA 23507
Williamsville Wellness	10515 Cabaniss Lane Hanover, VA 23069
Winchester Addiction Services, PLC	3042 Valley Ave., Suite 110 Winchester, VA 22601

Source: List of Virginia Gambling Addiction Treatment Centers, https://www.alltreatment.com/va/gambling-addiction-treatment/

Final Thoughts

Over the last decade, Virginia has doubled down on its bet on legalized gambling. Today, residents can place a bet through an online or mobile sportsbook, buy a physical or virtual lottery ticket, visit a historical horse racing establishment and look forward to gambling at a state casino in the near future. This is a marked change from a little over three decades ago, when the Commonwealth did not even have a state lottery.

With this in mind, we offer some final observations about the expansion of gambling and the opening of casinos across the Commonwealth.

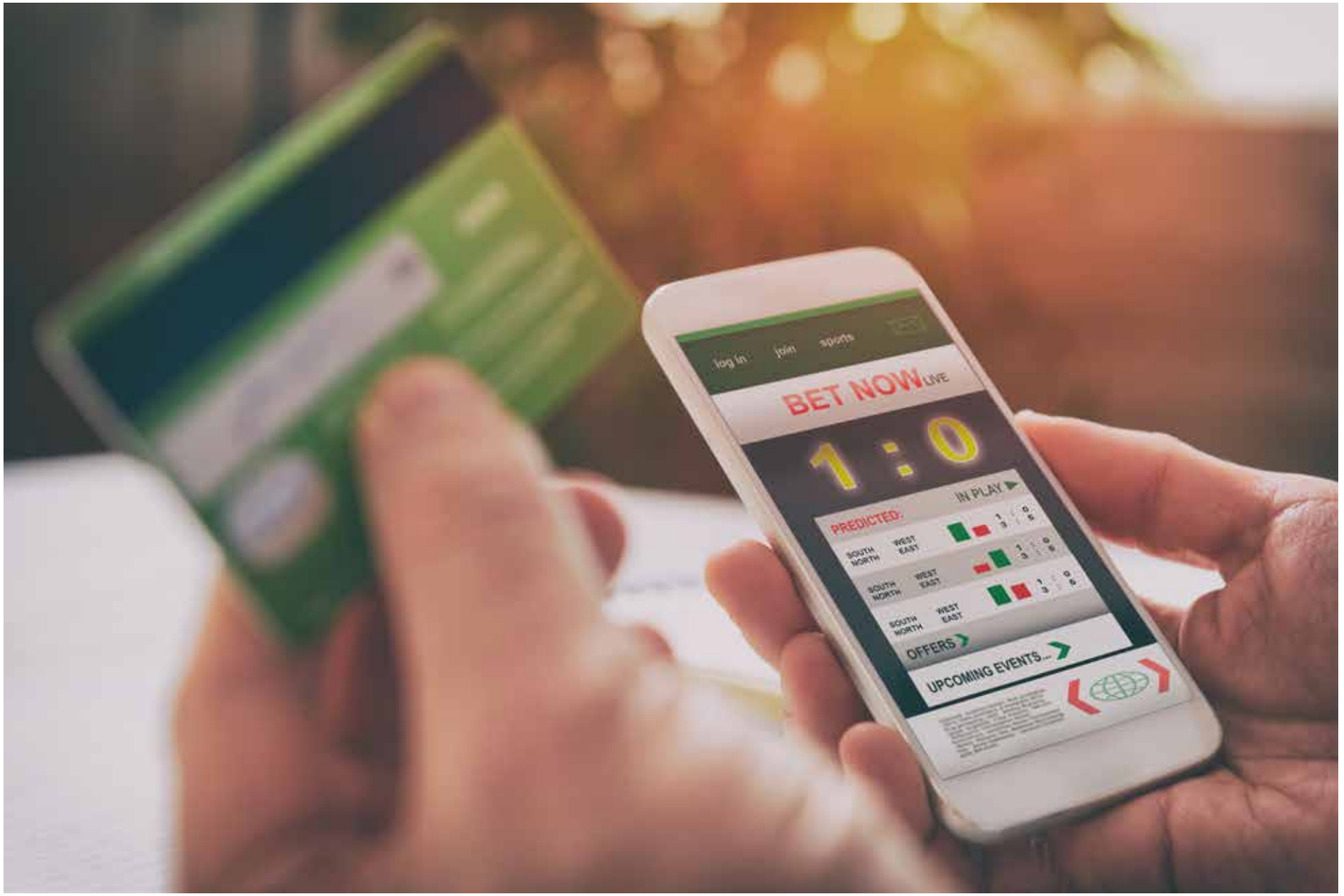
Local governments in Virginia are increasing their reliance on taxes that are more sensitive to economic conditions. Proponents of casinos and other forms of gambling invariably point to the contributions to local and state budgets to support these projects. While we do not deny that gambling will enhance the bottom lines of the cities where they are located, we also note that casinos are sensitive to changes in economic conditions. Casinos are not a "sure bet" and local governments should be aware of how survivorship bias may cloud presentations on the benefits of casinos. A healthy dose of skepticism is warranted to rationally discuss how casinos can help (and hinder) economic development.

While the Virginia casinos will create jobs and increase economic output, the impact is likely to be small. An increase in the number of jobs in the Hampton Roads region would be welcome news, especially given the relatively anemic job growth over the decade prior to the COVID-19 pandemic. However, these jobs are likely to be concentrated in the leisure and hospitality sector, which continues to struggle to attract workers in the aftermath of the pandemic. Experience in the gambling industry shows that, after the novelty has worn off, casino revenue tends to plateau, if not outright decline. We caution readers to view promises of sustained, fulsome impacts over time with a wary, informed eye.

Displacement effects should not be cast aside in the conversation about casinos. There are likely to be positive spillovers across the region in terms of spending and employment. The Virginia cities where the proportion of out-of-state visitors is expected to be higher will perform better than those with few out-of-area visitors. All these cities need as many visitors as possible who expend new dollars rather than substitute casino patronage for other forms of leisure activity. One dollar cannot be spent at the same time in different places.

Gambling is here in the Commonwealth; thus, we should plan accordingly for the social costs. We know that problem gambling and criminal activity are likely to occur at higher rates as gambling opportunities increase, so we should act now. Enhancing investment in behavioral and mental health services is not only a wise course of action to help residents cope with gambling addiction, but also to address other economic and social shocks. Investing more in policing, including community-based approaches to nonviolent crime, appears to be a sensible response to the reality of casinos in our midst. It's time to hedge our bets.

All these cities need as many visitors as possible who expend new dollars rather than substitute casino patronage for other forms of leisure activity. The recent injunction allowing games of skill back into restaurants, bars and other establishments only highlights the increasing competition for entertainment dollars. One dollar cannot be spent at the same time in different places.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SOUTH
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UPCOMING EVENTS...

VIEWED THROUGH A DIFFERENT LENS: EVALUATING VIRGINIA HIGHER EDUCATION

People say I have a distorted lens. I think I see things as they really are.

– Nikki Sixx, Musician and Songwriter

It may seem odd to some that we begin this analysis of Virginia higher education with a quote from Nikki Sixx, who plays a very loud bass for the heavy metal band Mötley Crüe. But his observation is pertinent to our task. This chapter looks at Virginia higher education through a different lens – one that gives minimal attention to highly publicized ranking systems, such as that conducted annually by U.S. News & World Report, and instead focuses on what could be termed higher education bread-and-butter issues.

Whether a resident of Loudoun County or Wise County, the representative Virginian wants to know if she can afford higher education and whether she will need to take on debt to earn a bachelor's degree. And, if she does earn that degree, will it serve as an economic springboard that vaults her upward in society?

These are questions that most institutions choose not to answer up front. Virtually every Virginia college and university has produced a carefully nurtured institutional narrative that is filled with smiling undergraduates, supplemented by grateful alumni who sing the praises of their alma mater. It isn't that these presentations are false per se, but rather that they are incomplete and omit answering the questions we have just posed. When, for example, is the last time an institutional video included a segment addressing the financial challenges faced by a 35-year-old single mother of two who is struggling to earn her degree?

Major media outlets focus intently on U.S. News & World Report's annual rankings of the country's colleges and universities. We are told, for example, that Virginia's Washington and Lee University is rated the ninth best liberal arts institution in the nation (in 2021). We can and should laud W&L's achievement even as we note that, unfortunately, it is substantially irrelevant to the higher education issues that face ordinary Virginians. W&L, after all, enrolls only about .5% of Virginia's college students[1] and 79% come from outside the state.[2] Opportunity Insights, a nonpartisan research and policy institute, estimates that 81.3% of students at W&L are from households whose incomes place them in the top income quintile nationally, while only 1.12% are from households in the bottom income quintile.[3]

Our focus in this chapter is not upon national rankings and accompanying media pizazz but rather on the questions that matter most to everyday Virginians: Can they afford to attend college? Will they have to go into debt to do so? How likely is it that they will be able to earn a degree? Will a degree enable them to improve their economic circumstances?

Affordability And Student Debt

It is critical to understand that there usually is a substantial difference between the official "sticker price" that colleges and universities publish on their websites and the average net price that students actually end up paying after grants and scholarships have been taken into account. Readers who have ever purchased a new automobile are familiar with this world. The sticker price on the window of a new car seldom is the price a customer actually pays. Instead, it is a starting point for negotiations between seller and buyer.

And so it is in American higher education. On some campuses, virtually all students receive some form of discount that enables them to pay a net price that is less than the posted sticker price. The discount may come in the form of scholarships that allow them and their parents to brag a bit. The data in columns 2-4 of Table 1 tell us that the average net price paid by in-state students at a four-year public college or university in Virginia was only 63.2% of the sticker price in 2018-19. In the independent college sector, the average campus discount was much larger; the net price there constituted only 49.8% of the sticker price.

The salient point is that posted sticker prices border on irrelevancy for those students who can demonstrate financial need, or who possess talents that the institution wants to capture (an excellent student, a superb athlete, etc.). Scholastic Aptitude Test (SAT) scores and high school grade point averages often are important determinants of the size of the discount a student receives, but a variety of other factors also can come into play, including the student's home town, academic major, gender and race.

Thus, for the typical student, it is the average net price in column 3 of Table 1 that is most important unless the student comes from a lower-income household. What constitutes a low income? The lowest income category reported by the U.S. Department of Education's College Navigator website is for students who come from households with annual incomes of $30,000 and below. Column 5 reports the average net price paid by individuals in this lowest household income category.

William & Mary's modest academic year net price of only $4,711 for its lowest-income students is an attention grabber and W&L's $1,612 price seems amazingly low. These figures make it appear as if the two institutions have made strong commitments to helping significant numbers of lower-income students matriculate on their campuses. Not so. The reality is that neither institution enrolls very many students who come from $0 to $30,000 annual income homes – in 2018-19, the number was only 1.35% of the undergraduate student body at W&M and it was an even smaller 1.12% at W&L.

1 U.S. Department of Education, the Integrated Postsecondary Education Data System, https://nces.ed.gov/ipeds. Hereafter, IPEDS.
2 U.S. Department of Education, College Navigator, https://nces.ed.gov/collegenavigator/. Hereafter, College Navigator.
3 Opportunity Insights, https://opportunityinsights.org/data. Hereafter, Opportunity Insights.

Except for the Commonwealth's historically black colleges and universities (HBCUs) and the University of Virginia's College at Wise, no public four-year institution in Virginia enrolls a high percentage of low-income students. Indeed, the average public four-year campus in the Commonwealth enrolls only 6.34% from the lowest-income quintile, while 45.69% of the undergraduate student body are from the highest-income quintile. When external observers lament that higher education is becoming the province of the wealthy, they have Virginia data to back up their assertions.

A perusal of Table 1, however, reveals that substantial variations exist in both the public and independent sectors regarding average net prices. In the public sector, these prices range from Norfolk State University's low of $12,645 to Christopher Newport University's twice-as-high $25,443. In the independent realm, the lowest average net price is Regent University's $15,062, while the high value is Hampden-Sydney College's $34,853. It is fair to say that the higher education market for undergraduates is highly differentiated in Virginia. Many enrollment and pricing models exist.

Independent institutions such as the University of Richmond and W&L enroll high proportions of their undergraduate student bodies from higher-income households (74.23% of UR undergraduates come from the highest-income quintile and it is a highest-in-the-nation 81.34% at W&L). However, Table 1 reveals that four of Virginia's public institutions (University of Mary Washington, UVA, James Madison University and W&M) draw at least 64% of their student bodies from the upper 20%.

Indeed, contrary to the expectations of some, the entire public sector in Virginia is more heavily tilted toward the highest-income quintile than is true at the Commonwealth's independent institutions. Of the undergraduate student bodies at Virginia's public four-year institutions, 45.69% are drawn from the highest-income quintile, whereas Virginia's independent institutions average only 42.49% in this regard. One reason for this is that several independent institutions that draw their students regionally or locally are situated in rural areas within Virginia where earned incomes are lower. Averett University, Ferrum College and Mary Baldwin University provide examples. If we set aside the Commonwealth's two public HBCUs, then the remaining dozen public institutions draw an average of more than 51% of their undergraduate student bodies from the highest 20% of the national income distribution. A recent op-ed in The Washington Post argued, "College isn't the solution for the racial wealth gap. It's part of the problem."[4] The author might have had Virginia in mind.

The data in Table 1 also tell several other interesting stories, one of which relates to the extent to which institutions "discount" the tuition and fees and other revenues they receive from students. Put bluntly, most campuses imitate many businesses by putting some or all of their products "on sale." They discount their sticker prices by offering grants and scholarships. Column 4 tells us that the typical public four-year institution in Virginia retains only 63.2% of the full-price revenue it collects per student. That is, it discounts (gives away) 36.8% of its sticker price revenue in grants and scholarships. Independent-sector discounting is even more dramatic – private institutions collectively retain only 49.8% of their sticker price revenue.

Revenue discounting has risen in recent years as institutions have scrambled to maintain enrollments or to "improve" the makeup of their student bodies. At W&M, for example, the real (price-adjusted) revenue the institution earns per full-time equivalent student declined from 53.1% of its sticker price in FY 2009 to 47.3% in FY 2019. At Virginia Union University, the comparable decline was more dramatic, going from 87.5% in FY 2009 to 68.3% in FY 2019.[5] To some extent these proportionately larger price concessions reflect enrollment realities. Headcount college enrollments nationally have fallen nine years in a row[6] and it does not appear as if conditions are going to improve anytime soon. Between 2019 and 2036, the number of public high school graduates in Virginia is forecast to decline by 22%.[7]

4 Dorothy A. Brown, "College isn't the solution for the racial wealth gap. It's part of the problem," *The Washington Post* (April 9, 2021), www.washingtonpost.com/outlook/2021/04/09/student-loans-black-wealth-gap.
5 IPEDS.
6 National Student Clearing House, www.studentclearinghouse.org.
7 Western Interstate Commission for Higher Education, "Knocking at the College Door," (December 2020), Table 2, www.wiche.edu/wp-content/uploads/2020/12/Knocking-pdf-for-website.pdf.

The larger proportionate price concessions being made by colleges and universities may seem to be good news for Virginia college students, but reality is that in absolute terms, even after adjusting for price inflation, the net prices paid by Virginia college students have risen steadily. Increases at some institutions have been stratospheric. At CNU, price-adjusted tuition and fees for in-state students rose 55.6% between fall 2009 and fall 2019, yielding an annual compound rate of increase of 4.5%.[8] Lest someone mistake what this means, this is the rate of increase in excess of the increase recorded by the consumer price index.

The pricing story differs substantially in the Virginia Community College System (VCCS), where much lower prices prevail. The average VCCS institution sticker price is only about one-fifth (22.3%) of that advertised by independent-sector institutions and only about three-eighths (37.9%) of that published by the average Virginia public-sector institution. These numbers have importance because sticker prices usually are the first financial number most prospective students encounter when they begin to shop higher education institutions.

The average net prices ultimately paid by students, of course, are substantially lower. In Virginia, the average net price paid by a community college student in 2018-19 was $7,132,[9] compared to $18,350 at a representative four-year public institution and $24,567 at a representative independent-sector institution. Thus, a year's study at a Virginia community college is less than half the cost of the same year at the typical Virginia four-year public institution and less than a third of doing the same year of study on a typical Virginia independent-sector campus.

Students sort themselves out accordingly. Table 2 reveals that 16.1% of students on Virginia's community college campuses came from households in the lowest-income quintile.[10] Compare this to 6.34% at the four-year publics and 5.55% at the independent-sector institutions (Table 1). At the other end of the spectrum, 15.4% of community college students come from the highest-income quintile, compared to 45.69% at the four-year public institutions and 42.49% on independent-sector campuses.

Tidewater Community College has for many years advertised (accurately), "From here, go anywhere." Among the many well-known individuals who started their college careers at a community college are astronaut Eileen Collins, Walt Disney, Morgan Freeman, Tom Hanks, Steve Jobs and Ross Perot. Opportunities abound for the ambitious student at a Virginia community college. However, the Commonwealth's current system of funding higher education institutions, its practice of allowing each institution freedom to set its own tuition and fees and its inadequate funding of financial aid, taken together, effectively restricts the choices that many Virginians realistically can make at community colleges or any other institution.

It is readily apparent that today's Virginia college students are distributed across the institutional continuum substantially based upon their household incomes. One might accord little importance to this phenomenon were it not for three factors. First, the probability of a given student eventually earning a baccalaureate degree is higher if she enters a four-year institution rather than a community college. Second, substantially more money is being spent per student at the four-year institutions than in the community college system. Third, the subsequent employment and earnings prospects of students typically are enhanced (though not always) if they start out traveling the four-year college route.

The policy dilemma for Virginia is not that the preceding three conditions exist but instead the degrees to which they exist[11] and the extent to which household incomes dictate student choices. In a democratic, opportunity-oriented society, family incomes should not decide all issues, especially those relating to education. Societal cohesion will diminish and even break down if household income levels preordain the opportunities available to talented and ambitious citizens.

8 *Chronicle of Higher Education*, "Tuition and Fees, 1998-99 Through 2018-2019," https://www.chronicle.com/article/tuition-and-fees-1998-99-through-2018-19.
9 This is the net price paid by a community college student who is living with a family.
10 The members of these households might be unsupported by parents or guardians.
11 We would expect, for example, a program in engineering to be more expensive than a program in sociology and for the typical graduate program to be more expensive than the typical undergraduate program. The salient question is not about such differentials but instead who gains access to the various programs.

TABLE 1

STICKER PRICES, NET PRICES AND STUDENT INCOME PERCENTILES: VIRGINIA COLLEGES AND UNIVERSITIES, 2018-19

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution	Sticker Price on Campus, 2018-19	Average Net Price, All Students, 2018-19	Ratio of (3) to (2)	Average Net Price, Students from $0-$30,000 Households, 2018-19	Ratio of (5) to (3)	Percent of Student Body Coming from Lowest Income Quintile Households, 2015	Percent of Student Body Coming from Highest Income Quintile Households, 2015
PUBLIC INSTITUTIONS							
Christopher Newport University	$31,102	$25,443	.818	$16,529	.650	4.97%	33.82%
College of William & Mary	$39,221	$18,551	.473	$4,711	.254	1.35%	69.82%
George Mason University	$30,284	$20,157	.666	$16,204	.804	6.15%	47.92%
James Madison University	$27,356	$18,708	.684	$14,196	.759	1.85%	64.48%
Longwood University	$27,330	$19,636	.718	$14,704	.749	3.10%	46.59%
Norfolk State University	$24,995	$12,645	.506	$11,277	.892	20.61%	10.04%
Old Dominion University	$26,456	$16,681	.631	$12,017	.720	8.46%	29.33%
Radford University	$24,088	$14,981	.622	$12,071	.806	4.40%	43.10%
University of Mary Washington	$28,250	$21,640	.766	$12,988	.600	1.27%	65.29%
University of Virginia	$33,493	$17,579	.525	$8,882	.505	2.82%	68.40%
Virginia Commonwealth University	$32,041	$20,968	.654	$16,768	.800	7.08%	36.92%
Virginia Military Institute	$31,494	$13,428	.426	$8,789	.655	4.60%	53.08%
Virginia Tech	$26,834	$18,449	.688	$11,138	.604	2.84%	57.72%
Virginia State University	$23,239	$18,034	.776	$15,586	.864	19.24%	13.08%
Averages	*$29,014*	*$18,350*	*.632*	*$12,561*	*.690*	*6.34%*	*45.69%*
INDEPENDENT INSTITUTIONS							
Averett University	$47,918	$24,013	.501	$21,385	.891	8.18%	21.13%
Bridgewater College	$51,310	$18,727	.365	$14,220	.759	5.96%	32.01%
Eastern Mennonite University	$51,500	$24,936	.484	$22,935	.920	5.22%	35.31%
Ferrum College	$48,530	$23,010	.474	$19,806	.861	11.28%	23.61%
Hampden-Sydney College	$62,304	$34,853	.559	$23,836	.684	1.64%	64.78%

TABLE 1

STICKER PRICES, NET PRICES AND STUDENT INCOME PERCENTILES: VIRGINIA COLLEGES AND UNIVERSITIES, 2018-19

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution	Sticker Price on Campus, 2018-19	Average Net Price, All Students, 2018-19	Ratio of (3) to (2)	Average Net Price, Students from $0-$30,000 Households, 2018-19	Ratio of (5) to (3)	Percent of Student Body Coming from Lowest Income Quintile Households, 2015	Percent of Student Body Coming from Highest Income Quintile Households, 2015
Hampton University	$42,380	$27,441	.647	$29,650	1.080	7.96%	31.60%
Hollins University	$55,555	$20,457	.368	$15,824	.774	4.69%	49.95%
Liberty University	$40,075	$28,881	.721	$27,896	.966	N.A.	N.A.
Mary Baldwin University	$43,525	$17,879	.441	$15,218	.851	7.33%	27.31%
Marymount University	$50,766	$27,843	.548	$22,212	.798	9.58%	39.17%
Randolph-Macon College	$55,860	$27,429	.491	$23,012	.839	2.47%	56.20%
Randolph College	$57,365	$26,802	.467	$16,205	.605	6.26%	44.54%
Regent University	$29,763	$15,062	.506	$15,584	1.035	N.A.	N.A.
Roanoke College	$61,095	$27,180	.445	$17,473	.643	2.91%	51.46%
Shenandoah University	$47,000	$29,311	.624	$25,891	.883	4.81%	42.03%
Southern Virginia University	$28,261	$20,816	.737	$16,192	.778	7.66%	40.92%
Sweet Briar College	$38,100	$25,859	.679	$20,529	.794	3.09%	49.19%
University of Lynchburg	$53,650	$24,987	.466	$19,128	.766	N.A.	N.A.
University of Richmond	$67,020	$25,282	.377	$9,112	.360	1.74%	74.23%
Virginia Wesleyan University	$50,517	$25,000	.495	$20,816	.833	8.10%	37.17%
Virginia Union University	$31,358	$21,417	.683	$20,636	.964	N.A.	N.A.
Washington and Lee University	$70,500	$23,301	.331	$1,612	.069	1.12%	81.34%
Averages	*$49,289*	*$24,567*	*.498*	*$19,053*	*.780*	*5.55%*	*42.49%*

Sources: College Navigator for sticker prices and average net prices; Opportunity Insights for student income percentiles

TABLE 2

STICKER PRICES, NET PRICES AND STUDENT INCOME PERCENTILES: VIRGINIA COMMUNITY COLLEGES, 2018-19

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution	Sticker Price at Home, 2018-19	Average Net Price, All Students, 2018-19	Ratio of (3) to (2)	Average Net Price, Students from $0-$30,000 Households, 2018-19	Ratio of (5) to (3)	Percent of Student Body Coming from Lowest Income Quintile Households, 2015	Percent of Student Body Coming from Highest Income Quintile Households, 2015
Blue Ridge Community College	$13,912	$10,534	.757	$9,611	.912	10.35%	20.51%
Central Virginia Community College	$9,012	$5,436	.603	$4,679	.861	10.96%	16.52%
Dabney S. Lancaster Community College	$10,325	$5,951	.576	$4,958	.833	13.80%	9.23%
Danville Community College	$11,110	$7,955	.716	$6,995	.879	16.67%	10.27%
Eastern Shore Community College	$10,300	$6,117	.594	$5,530	.904	37.02%	5.48%
Germanna Community College	$10,523	$7,271	.691	$5,919	.814	7.30%	26.41%
J. Sargeant Reynolds Community College	$9,998	$6,106	.611	$5,107	.836	12.68%	23.12%
John Tyler Community College	$10,410	$6,573	.631	$5,442	.828	9.31%	26.31%
Lord Fairfax Community College	$10,349	$6,580	.636	$5,517	.838	8.25%	21.36%
Mountain Empire Community College	$11,510	$6,427	.558	$5,832	.907	26.34%	5.71%
New River Community College	$11,117	$6,907	.621	$5,728	.829	11.66%	19.18%
Northern Virginia Community College	$14,370	$9,440	.657	$8,175	.866	9.69%	35.87%
Patrick & Henry Community College	$11,400	N.A.	N.A	N.A.	N.A	19.33%	6.35%
Paul D. Camp Community College	$8,472	$5,071	.599	$3,601	.710	24.56%	11.01%
Piedmont Virginia Community College	$11,190	$6,913	.618	$5,950	.861	10.42%	22.51%
Rappahannock Community College	$11,120	$7,740	.696	$6,749	.872	17.20%	12.93%
Richard Bland College	$12,300	$12,203	.992	$11,081	.908	6.17%	22.41%
Southside Virginia Community College	$12,042	$7,736	.642	$7,203	.931	28.64%	5.24%
Southwest Virginia Community College	$13,803	$8,326	.603	$8,137	.977	27.23%	5.73%
Thomas Nelson Community College	$10,266	$6,879	.670	$5,696	.828	13.86%	15.15%

TABLE 2

STICKER PRICES, NET PRICES AND STUDENT INCOME PERCENTILES: VIRGINIA COMMUNITY COLLEGES, 2018-19

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Institution	Sticker Price at Home, 2018-19	Average Net Price, All Students, 2018-19	Ratio of (3) to (2)	Average Net Price, Students from $0-$30,000 Households, 2018-19	Ratio of (5) to (3)	Percent of Student Body Coming from Lowest Income Quintile Households, 2015	Percent of Student Body Coming from Highest Income Quintile Households, 2015
Tidewater Community College	$10,829	$7,943	.733	$6,721	.846	14.85%	16.24%
Virginia Highlands Community College	$11,110	$6,493	.584	$5,944	.915	19.29%	8.62%
Virginia Western Community College	$10,941	$6,663	.609	$6,179	.927	11.62%	17.26%
Wytheville Community College	$7,225	$2,761	.382	$2,057	.745	18.62%	6.09%
Averages	*$10,985*	*$7,132*	*.649*	*$6,209*	*.871*	*16.08%*	*15.40%*

Sources: College Navigator for sticker prices and average net prices; Opportunity Insights for student income percentiles

STUDENT DEBT

The rising real price of higher education simultaneously has reduced college enrollments and forced students and families to go into debt. It has been widely publicized that the student loan debt to the federal government now exceeds $1.58 trillion, up from $.81 trillion 10 years previously.[12] Unfortunately, student debt does not stop there. In addition, households borrowed an estimated $132 billion from private lenders.[13] Further, on top of all this, 14% of parents borrowed an additional $100 billion through the federal government's Parent PLUS loan program. These loans averaged a hardly insignificant $37,000 per borrower.[14]

Nationally, 69% of the graduating class of 2019 took out student loans, which averaged $29,900.[15] In Virginia, SCHEV tells us that the average level of student debt in 2020 exceeded $30,000.[16]

Students who graduate with debt are less likely to buy a car or purchase a home, but more likely live at home with their parents, and less likely to get married.[17] An estimated 12% of public college attendees who take out student loans default on those loans, although creative labeling has disguised the reality that perhaps three times as many student debtors now are not servicing their debts as required. Ultimately, this behavior leads to tragedy. Since student loan debt ordinarily is not dischargeable in a bankruptcy proceeding, default on a student loan results in a black mark on one's financial records that will trail her the remainder of her life.

12 Center for Microeconomic Data, Federal Reserve Bank of New York, "Household Debt and Credit Report," third quarter, 2021, www.newyorkfed.org/microeconomics/hhdc.
13 Student Loan Hero, "A Look at Shocking Student Loan Debt Statistics for 2021," https://studentloanhero.com/student-loan-debt-statistics/#:~:text=88%25%20of%20graduates%20from%20for,class%20of%202018%20was%20private.
14 Student Loan Hero.
15 Student Loan Hero.
16 State Council of Higher Education for Virginia, "Student Loans: All Institutions," https://research.schev.edu//studentdebt/DebtProfile_SL021.asp.
17 See James V. Koch, *The Impoverishment of the American College Student* (Washington, DC: The Brookings Institution, 2019), 64-65, for a discussion of the effects of student debt on economic behavior.

There is an additional, more subtle problem with federal student loans that often is overlooked. Evidence exists that the flow of federal student loan money into institutions results in their charging higher tuition and fees.[18] This is an example of what economists label a "moral hazard" problem. If the federal government is going to pay for some portion of every tuition and fee increase, then there is an incentive for an institution to make larger increases in these prices than they would have made otherwise.

We will note the obvious: High levels of student debt are bad economic news for the individuals who incur this debt, for businesses that hope to sell to them and for governments. Thus, public policies aimed at restraining college cost increases and/or increasing the availability of student financial aid often make good sense.[19] Virginia, however, generally has soft-pedaled the former and underfunded the latter. The Commonwealth's romance with college ratings, plus centuries of tradition, has militated against change. Only very recently has this scenario begun to change, primarily because of the ascension of women and Black legislators into leadership positions. Their sensitivity to the issues we have outlined has begun to influence how public institutions are funded and how financial aid dollars are allocated.

First-Time, Full-Time Six-Year Graduation Rates

One of the most commonly cited measures of an institution's productivity is its graduation rate, and the most commonly cited graduation rate is the one that measures the percentage of first-time, full-time students who earn a baccalaureate degree in six or fewer years. Despite many acknowledged deficiencies, graduation rates continue to be widely used and cited. Thus, like it or not, they become part of the discussion.

The major problem with the six-year graduation rate for first-time, full-time freshmen is that it's not clear it is a good descriptor of a modern institution of higher education. The Association of American Colleges & Universities reports that 37% of all undergraduate students transferred at least once between 2008 and 2014.[20] How does one assign credit or blame to the institutions in question? Further, in fall 2020, 35.3% of students at public four-year institutions were enrolled part time.[21] In addition, more than 40% of students attending public institutions today are age 25 or older.[22]

The upshot is that the first-time, full-time graduation rates are a performance measure that focuses on what happens to individuals who enter college as full-time students after receiving their high school diplomas. This is interesting information to have available, but hardly definitive. First-time, full-time six-year graduation rates don't include approximately half of all undergraduate students today.

And yet the U.S. Department of Education's highly touted College Navigator website reports first-time, full-time six-year graduation rates without commenting on, or compensating for, their problematic nature. Further, the "What are we really measuring here?" status of these rates has not discouraged widely cited institutional rating systems, such as the rankings published annually by U.S. News & World Report, from using them as an input in their calculations.

18 James V. Koch, 51-68.
19 Free college for all, however, probably is not among the best solutions.
20 Association of American Colleges & Universities, "Transfer and Mobility: A National View of Student Movements" (August 2015), www.aacu.org.
21 College Navigator, National Center for Education Statistics, "Total Fall Enrollment in Degree-Granting Postsecondary Institutions," Table 303.40, https://nces.ed.gov/programs/digest/d19/tables/dt19_303.40.asp.
22 College Navigator, Table 303.40.

These reservations notwithstanding, six-year graduation rates for first-time, full-time freshmen are frequently cited and we cannot change this practice. We can, however, provide context for those rates here. We will sensitize our interpretation of them by recognizing the most important factors that influence them. We take six factors into account:

HHINC = Median household income of students at the institution *(higher incomes ordinarily mean higher graduation rates)*

SAT = Midpoint summary SAT score of an institution's students *(higher SAT scores usually mean higher graduation rates)*

NETPRICE = Average net price of attendance after grants and scholarships have been taken into account *(higher net prices discourage attendance and reduce graduation rates)*

PCTFT = Percentage of students who are full time *(when more students attend full time, graduation rates are likely to rise)*

PCTTRANS = Percentage of undergraduate students who transferred to an institution from a community college *(transfer students can lose both academic credits and a sense of belonging, which results in lower graduation rates)*

IND = Whether the institution is public or private/independent *(private institutions do not receive much, if any, state funding and by itself this bodes to decrease graduation rates)*

Using a statistical technique known as multiple linear regression, we generate estimated graduation rates for each institution based upon these six factors. The estimated graduation rates tell us what we should expect from a college or university in terms of graduation rates if it operates similarly to other four-year institutions in Virginia. We have 36 four-year Commonwealth campuses in our sample (14 public, 22 independent) and our analysis sifts the data from each.

Our analysis enables us to determine how specific variables influence graduation rates. Consider the role that household incomes play. In our Virginia sample, every one percentile upward movement by the student body in the national income distribution increases an institution's expected graduation rate by .75% (holding other things constant). This makes sense because students coming from upper-income households have a greater ability to pay for higher education. Thus, if a student body becomes wealthier (as indicated by the incomes of students' home households rising) and collectively moves up 10 percentiles in the national income distribution (say, from the 50th percentile to the 60th percentile), then we predict a 7.5% increase in that school's graduation rate.

Analogously, a 100-point increase in the midpoint SAT average on a campus translates to a 5.7% increase in that campus's graduation rate. We also can predict that a 5% absolute increase in the number of community college transfers coming to a four-year institution will reduce that campus's graduation rate by 1.69%.

It should come as no surprise that just two factors (SAT and HHINC) by themselves explain about three-quarters of the variability in graduation rates at Virginia's four-year colleges and universities. Put differently, if we know the average academic preparation of students as a group, and we also know the annual income level of the average student household, then we can explain about 75% of the ups and downs in graduation rates for first-time, full-time students within six years after they initially matriculated. The tendency for this to hold true has caused some to argue that American higher education no longer is a vehicle that reduces inequality within our society, but rather has shifted to become a mechanism by which inequalities are accentuated.[23]

Table 3 presents data showing the actual graduation rates of Virginia colleges and universities and in parentheses any difference between that rate and our predicted rate. Thus, for Virginia Commonwealth University, its actual graduation rate (67%) and our predicted rate are identical.

One should not make too much of small differences between our predicted graduation rates and the institutions' actual graduation rates. However, Southern Virginia University, an independent institution located in Buena Vista that enrolls about 1,000 students, reports a graduation rate

23 Among many, see Jillian Berman, "Higher education essentially preserves intergenerational racial and class inequality: How coronavirus could make it worse," MarketWatch (June 12, 2020), www.marketwatch.com/story/how-the-coronavirus-pandemic-could-create-a-ticking-time-bomb-that-worsens-racial-and-income-inequality-in-higher-education-2020-06-11.

of 31%, a massive 25% below the value we predict based on the incomes and SAT scores of its students, its proportion of full-time students, etc. Quite simply, by our metric, SVU is underperforming and should investigate why this is true. Mary Washington's -13% and Ferrum's -11% underperformances also should be matters of concern to those campuses.

In Mary Washington's case, a substantial 29% of each entering class transfers out of the institution (the highest rate among the public institutions in our sample).[24] It behooves UMW to find out why. Students entering UMW emanate from households whose incomes rank on average in the 79.6th percentile nationally[25] and their SAT midpoint score was a very respectable 1,174 in 2018-19.[26] Ordinarily, such data translate to much higher graduation rates. If we knew nothing other than the income percentile and SAT midpoint score for UMW, already we predict a graduation rate of 72 for it, rather than its actual 65.

At the other end of the spectrum, Regent University's +11% performance, Virginia Tech's +10% showing, Longwood University's +9% performance and Marymount University's +8% achievement should prompt other schools to attempt to ascertain what these institutions are doing right. Not all "best practices" are transferable from one campus to another, but many are.

Regent University provides an interesting and probably distinct example. The institution's student body does not reflect either especially high household incomes or lofty SAT scores. Four things stand out at Regent, however. First, it is an inexpensive institution whose net cost of attendance is the second lowest among accredited four-year independent institutions in Virginia. Second, 61% of its undergraduate enrollees are 25 or older; the average in our 36-institution sample is only 10.9%. Presumably these more mature individuals have made firm life choices and also have the ability to pay for college. Third, Regent advertises that it is a "Christ-centered" institution.[27] Those who do not find this congenial likely do not enroll at Regent. Those who do are more likely to have firm career plans in mind and might choose to pursue, for example, a B.A. degree in Christian ministry or a degree in a discipline such as psychology or government that is tailored to enable them to exercise their faith. Regent students are motivated toward a goal. Fourth, Regent has made a strong commitment to distance learning. This helps students who otherwise might choose to drop out for family reasons to continue through to graduation.

Finally, let us focus our attention on the four HBCUs in our sample: Hampton University, Norfolk State University, Virginia State University and Virginia Union University. Though the average graduation rate at NSU, VSU and VUU collectively is only 34.3%, none of their performances can be labeled as disappointing given the six factors previously outlined. Indeed, VUU exceeds its expected graduation rate by 5%.

Hampton University represents a different situation. Along with HBCUs such as Howard University, Morehouse University and Spelman University, HU is considered among the HBCU elite. Its 66% graduation rate, which compares favorably to Virginia's non-HBCU institutions, signals one of the reasons why. HU, however, also enjoys a $280 million endowment thanks to the fundraising prowess of its soon to retire president, William Harvey.[28] By itself, this places HU in a different class from all but a few other HBCUs in terms of the resources available to it.

Beyond higher incomes and SAT scores, there does not appear to be a magic elixir that consistently generates high graduation rates. There is modest evidence that institutions that spend proportionately more on instruction enjoy higher graduation rates and also that Black students in particular benefit from having Black role models on their campuses. Increased levels of state appropriations per full-time equivalent student do not appear to be related to graduation rates. Higher levels of expenditures on intercollegiate athletics act as a drag on graduation rates, as do increasing proportions of expenditures on student services.[29]

24 College Navigator.
25 Opportunity Insights.
26 College Scorecard.
27 www.regent.edu.
28 National Association of College and University Business Officers, "2020 NACUBO-TIAA Study of Endowments" (April 22, 2021), 2020 NACUBO-TIAA Study of Endowments.
29 This evidence is summarized and extended in James V. Koch and Omari H. Swinton, *Pulling Back the Veil: Assessing the Performance of Historically Black Colleges and Universities* (Johns Hopkins University Press, forthcoming).

TABLE 3

ACTUAL AND PREDICTED FIRST-TIME, FULL-TIME SIX-YEAR GRADUATION RATES FOR 36 VIRGINIA COLLEGES AND UNIVERSITIES, 2019

Public Institutions	2018-19 First-Time, Full-Time Six-Year Graduation Rate (Over/Underperform Predicted Value)	Independent Institutions	2018-19 First-Time, Full-Time Six-Year Graduation Rate (Over/Underperform Predicted Value)
Christopher Newport University	78 (+5)	Averett University	42 (-4)
College of William & Mary	90 (-5)	Bridgewater College	59 (+7)
George Mason University	71 (+0)	Eastern Mennonite University	58 (+1)
James Madison University	84 (+3)	Ferrum College	29 (-11)
Longwood University	75 (+9)	Hampden-Sydney College	68 (-4)
Norfolk State University	36 (-1)	Hampton University	66 (+2)
Old Dominion University	53 (-5)	Hollins University	66 (+2)
Radford University	55 (-5)	Liberty University	47 (-5)
University of Mary Washington	65 (-13)	Mary Baldwin University	38 (-5)
University of Virginia	95 (+1)	Marymount University	58 (+8)
Virginia Commonwealth University	67 (0)	Randolph-Macon College	68 (+1)
Virginia Military Institute	79 (+2)	Randolph College	51 (-6)
Virginia Tech	86 (+10)	Regent University	57 (+11)
Virginia State University	38 (-1)	Roanoke College	70 (+5)
		Shenandoah University	60 (+2)
		Southern Virginia University	31 (-25)
		Sweet Briar College	65 (+3)
		University of Lynchburg	58 (-1)
		University of Richmond	89 (-1)
		Virginia Wesleyan University	48 (-5)
		Virginia Union University	29 (+5)
		Washington and Lee University	94 (+2)

Notes: Because these are six-year graduation rates for 2019, this means that the students being measured began their studies as first-time, full-time students in fall 2013. UVA Wise is not included because data were not available. First-time, full-time graduation rates come from the U.S. Department of Education's College Navigator. The data for the predictive model come from the College Navigator (percent full-time and average net price), Opportunity Insights (household incomes), the U.S. Department of Education's College Scorecard (SAT scores) and the State Council of Higher Education for Virginia (community college transfer rates).

Economic Mobility

Institutions of higher education have long prided themselves on the vital roles they play in increasing the economic and social mobility of their students. Metaphorically, colleges and universities are said to open doors of opportunity and enable their graduates to climb the ladder of success. Valid or not, these notions have become important building blocks that help define how most Americans believe this segment of their society should operate.

Historically, there has been more than fluff attached to these metaphors. The City College of New York alone, for example, can boast such esteemed graduates as Colin Powell, Jonas Salk, Woody Allen, Henry Kissinger, Felix Frankfurter, Andy Grove, Ed Koch, Eli Wallach, Alfred Stieglitz, Faith Ringgold, Edward G. Robinson, Bernard Baruch, Ira Gershwin, Upton Sinclair, Kenneth Arrow, Abraham Maslow, A. Philip Randolph and Alan Dershowitz.

A single flagship state university, the University of California, Berkeley, boasts 29 Nobel Prize winners among its alumni, who include Steve Wozniak, Earl Warren, Gregory Peck, Jerry Brown, Daniel Kahneman, Robert McNamara, Jack London, Betty Friedan and Michio Kaku.

America's HBCUs have served as a wellspring for many individuals who have helped shape society. HBCU graduates include Martin Luther King Jr., Thurgood Marshall, Oprah Winfrey, Spike Lee, Toni Morrison, Alice Walker, Samuel L. Jackson, Marion Wright Edelman, Langston Hughes, Ralph Ellison and Booker T. Washington.

These are impressive lists, but the individuals on them are either old or deceased. Thus, it is legitimate to ask: Do institutions of higher education still provide the means to move upward in society? Are some institutions better at this than others? How do Virginia colleges and universities fare in this regard?

Opportunity Insights, which we mentioned earlier, has assembled an impressive database that tracks the earnings of individuals who attended most colleges and universities in the United States. It is, however, limited to those born in the years 1980, 1981 and 1982, who subsequently attended college (presumably beginning about 1998 and extending through 2013). The focus is on the income such individuals earned in 2014. The earnings of any other persons in these individuals' households are not counted.[30]

PUBLIC FOUR-YEAR INSTITUTIONS

Let's begin by examining the economic mobility performances of Virginia's four-year public institutions. Opportunity Insights uses the terminology "kids" to refer to former students in order to distinguish them from their parents. We will follow suit even though many hardly qualify as kids.

Column 2 of Table 4 displays the income percentiles in 2014 of kids who were born in 1980, 1981 and 1982. They may or may not have graduated and they may have earned subsequent academic degrees. They are assigned to the institution where they were registered the greatest number of years. One can see that the income percentiles range from 56.7 at NSU to 78.0 at Virginia Military Institute. The median value is the 64.5th percentile ranking for Old Dominion University and Radford University. Thus, by 2014, departing students at these two institutions had ensconced themselves within the fourth income quintile and had average individual incomes exceeding 64.5% of households.

However, as column 4 in Table 4 reveals, in only 6 of 15 possible cases was the income percentile of the kids higher than that of their parents when they entered college. NSU's 1.304 bulge of kids' incomes over parents' incomes means that by 2014, former NSU students were earning 30.4% more (in real terms) than their parents were earning years earlier when the students entered the university. VSU, with a kids/parents ratio of 1.249, also stands out in this regard.

The data in Table 4 appropriately might be construed as an advertisement for the transformative economic prowess of HBCUs. Both Norfolk State and Virginia State exhibit considerably more effectiveness in raising the relative economic status of their students than does the typical PWI (predominantly white institution) in the remainder of the population. The two HBCUs may indeed be doing a very good job in this regard; however,

30 Opportunity Insights.

when incomes are scaled 0 to 100 as we have done, it is a much easier task to achieve relative success if one starts at the lower end of that scale. Mathematically, it is difficult for W&M (where the parental income percentile was 81.4) to achieve large proportional gains.

Nevertheless, excepting VMI, the largest relative upward movements in the income distribution are found at the somewhat less selective institutions rather than at those institutions ranked among U.S. News & World Report's elite.

There is a racial context to this circumstance. Enrollment of minority students, especially Blacks, is far higher at the somewhat less selective institutions than at the elite. In 2018-19, the percentages of Black undergraduate students at W&M, UVA and Virginia Tech were 7%, 7% and 4%, respectively. At George Mason University, ODU and VCU, the respective percentages were 11%, 32% and 28%.[31] Thus, far more Black students achieve their relative income gains at the somewhat less selective institutions.[32]

The policy moral to this story is that the relative contributions of somewhat less selective institutions to the economic mobility of their former students usually are higher than those from more selective institutions. Further, since the less selective institutions admit far more students from lower-income households than the selective institutions, their total impact on economic mobility far exceeds that of the more selective institutions. The more selective institutions may do wonders for a small number of lower-income and some minority students, but as column 3 of Table 4 reveals, the representative undergraduate at these institutions comes to campus from an upper-income household. Contrast the 80.9th household income percentile of UVA students to the 61.4th income percentile of ODU students. This difference between the two is an entire income quintile and its impact is readily evident when one steps foot on these campuses and observes the students as they walk to and from classes.

An additional way to frame the economic mobility analysis is to ask what happens to students who come to Virginia institutions from households in the bottom quintile (lowest 20%) of the income distribution. Where do they end up? Column 5 of Table 4 relies on Opportunity Insights data to supply the answer for students attending Virginia's public four-year institutions. At JMU, for example, students who come from the lowest 20% of the income distribution ended up in 2014 in the 64.8th percentile of the income distribution. At UMW, the leader in this regard, the comparable metric was 70.2%. These would be entirely praiseworthy performances if they applied to very many students on these campuses. In fact, a mere 1.27% of UMW's undergraduates come from the bottom quintile of the income distribution, while it is 1.85% at JMU.[33] Thus, few students actually benefit from these institutions' proficiency in moving them upward. By contrast, 7.1% of undergraduates at VCU emanated from the lowest 20% of the income distribution, while the number was 20.65% at NSU.[34] This means that the overall impact of institutions such as VCU and NSU on economic mobility is much larger than that at either UMW or JMU.

INDEPENDENT INSTITUTIONS

How do private (independent) institutions of higher education in Virginia fit into this picture? Table 5 tackles this issue by means of a sample that consists of 19 not-for-profit institutions and four for-profit private institutions.

Where the not-for-profit independents are concerned, in general the students come from families that have less income than those attending the publics (the 63rd percentile of the income distribution for the publics, but only the 56th percentile for the independents). This is a reality contrary to the expectations of casual observers.

Years later, students who attended Virginia's four-year public institutions were earning incomes that placed them in the 66.5th percentile nationally versus only the 62.7th percentile for the not-for-profit independents. The

31 College Navigator.
32 In absolute terms, however, their 2014 salary may be higher if they attended a more selective institution.
33 College Navigator.
34 College Navigator.

differences are starker with respect to the for-profit institutions; their students subsequently earned incomes that placed them only in the 48.6th percentile. A representative four-year public institution, then, is more effective in providing an economic lift to its students than the typical independent institution, and the gap between the two is especially large when the comparison is with for-profit campuses.

To the extent that a sample of four for-profit institutions allows us to make any useful generalizations, we note that they tend to enroll lower-income students who subsequently do not rise as far upward in the income distribution as students attending either a public or an independent four-year institution. We will defer any discussions of federal student loan policies concerning for-profit institutions to another day.

COMMUNITY COLLEGES

Opportunity Insights publishes comparable data for community colleges, although the income connection between community colleges and their students is less firm because large numbers of these students ultimately transfer to four-year institutions. This means that either community college students end up being counted at the four-year institution, or the impacts of the four-year institution and the "transfer from" institution are mixed together. Hence, we have a lower level of confidence in the data reported in Table 6 than the data found in Tables 4 and 5.

Community colleges offer a badly needed low-cost alternative to the four-year institutions we have just profiled. Community colleges appeal to the income segments that most four-year institutions downplay or ignore. This is, however, a relative consideration. The average income percentile of the households of students attending Virginia's community colleges is 50.7 – in other words, the middle of the income distribution. The comparable percentile for the four-year public institutions is 67.9, while it is 68.9 for the not-for-profit institutions. These percentile rankings underscore the fact that Virginia higher education leans in the direction of servicing those better off financially than those on the lower end of the scale.

Note that 16.1% of the student body of the representative Virginia community college come from households in the lowest quintile of the income distribution, while another 19.5% emanate from the second income quintile. If there are citizens who are neglected or left out in American society, it is likely that these individuals are among them. It is at community colleges where the rubber meets the road in terms of society providing hope and opportunity. And, it is precisely such lower-income students who are being largely ignored by Virginia's most prestigious institutions.

Even so, the community college alternative is not perfect. Community college students on average do not end up with earned incomes comparable to those enjoyed by students from the four-year institutions. Further, if they came to their community college campus from a household in the lowest 20% of the income distribution, their incomes do not increase to the same level as would be true at either the four-year public or independent colleges and universities.

TABLE 4

MEASURING THE INCOME MOBILITY PROVIDED BY PUBLIC FOUR-YEAR COLLEGES AND UNIVERSITIES IN VIRGINIA: OPPORTUNITY INSIGHTS DATA, 1980-2014

(1)	(2)	(3)	(4)	(5)
Institution	**Kids' Income Percentile**	**Parents' Income Percentile**	**Kids' Percentile Divided by Parents' Percentile**	**Kids' Percentile if Parents Were in the Lowest-Income Quintile**
Christopher Newport University	61.8	66.6	.928	55.9
College of William & Mary	72.1	81.8	.881	66.9
George Mason University	69.4	69.4	1.000	68.4
James Madison University	70.5	79.5	.886	64.8
Longwood University	62.6	71.6	.875	59.8
Norfolk State University	56.7	43.5	1.304	54.3
Old Dominion University	64.5	61.4	1.050	62.7
Radford University	64.5	69.4	.929	59.1
University of Mary Washington	67.4	79.6	.846	70.2
University of Virginia	75.7	80.9	.936	69.5
University of Virginia's College at Wise	62.2	54.4	1.143	57.2
Virginia Commonwealth University	61.0	64.7	.942	58.9
Virginia Military Institute	78.0	74.1	1.053	67.4
Virginia Tech	73.2	76.4	.959	69.6
Virginia State University	57.2	45.8	1.249	53.6
Averages	*66.5*	*67.9*	*.999*	*62.6*

Sources: Opportunity Insights and author calculations

TABLE 5

MEASURING THE INCOME MOBILITY PROVIDED BY INDEPENDENT FOUR-YEAR COLLEGES AND UNIVERSITIES IN VIRGINIA: OPPORTUNITY INSIGHTS DATA, 1980-2014

(1)	(2)	(3)	(4)	(5)
Institution	Kids' Income Percentile	Parents' Income Percentile	Kids' Percentile Divided by Parents' Percentile	Kids' Percentile if Parents Were in the Lowest-Income Quintile
NOT-FOR-PROFIT				
Averett University	58.5	54.4	1.07	54.9
Bridgewater College	64.1	65.4	.98	52.2
Eastern Mennonite University	60.1	66.1	.91	44.8
Emory and Henry College	62.1	62.5	.99	52.3
Ferrum College	59.1	56.9	1.04	51.1
Hampden-Sydney College	72.8	79.4	.92	68.2
Hampton University	65.3	61.6	1.06	60.6
Hollins University	56.7	71.1	.80	59.2
Mary Baldwin University	57.8	61.0	.95	57.0
Marymount University	64.0	64.0	1.00	56.8
Randolph-Macon College	68.9	78.0	.88	58.9
Randolph College	58.7	69.2	.85	48.8
Roanoke College	64.6	73.9	.88	65.2
Shenandoah University	60.5	68.8	.88	54.7
Southern Virginia University	45.9	65.1	.71	40.9
Sweet Briar College	60.2	72.6	.83	65.1
University of Richmond	75.3	84.6	.89	56.9

TABLE 5

MEASURING THE INCOME MOBILITY PROVIDED BY INDEPENDENT FOUR-YEAR COLLEGES AND UNIVERSITIES IN VIRGINIA: OPPORTUNITY INSIGHTS DATA, 1980-2014

(1)	(2)	(3)	(4)	(5)
Institution	Kids' Income Percentile	Parents' Income Percentile	Kids' Percentile Divided by Parents' Percentile	Kids' Percentile if Parents Were in the Lowest-Income Quintile
Virginia Wesleyan University	59.8	64.9	.92	56.8
Washington and Lee University	76.9	88.8	.87	60.2
Averages	*62.7*	*68.9*	*.92*	*56.0*
FOR-PROFIT				
American National University	39.5	37.0	1.07	37.4
ECPI University	52.7	46.3	1.14	48.1
Sanford-Brown College	47.6	41.6	1.15	44.0
Strayer University	54.4	48.0	1.16	50.7
Averages	*48.6*	*43.2*	*1.13*	*45.0*

Sources: Opportunity Insights and author calculations

TABLE 6

MEASURING THE INCOME MOBILITY PROVIDED BY VIRGINIA COMMUNITY COLLEGES: OPPORTUNITY INSIGHTS DATA, 1980-2014

(1)	(2)	(3)	(4)	(5)
Institution	Kids' Income Percentile	Parents' Income Percentile	Kids' Income Percentile Divided by Parents' Income Percentile	Kids' Income Percentile if Parents Were in Lowest-Income Quintile
Blue Ridge Community College	52.5	56.3	.932	51.1
Central Virginia Community College	51.3	54.5	.942	50.0
Dabney S. Lancaster Community College	52.8	50.2	1.053	54.0
Danville Community College	50.4	47.8	1.055	48.5

TABLE 6

MEASURING THE INCOME MOBILITY PROVIDED BY VIRGINIA COMMUNITY COLLEGES: OPPORTUNITY INSIGHTS DATA, 1980-2014

(1)	(2)	(3)	(4)	(5)
Institution	Kids' Income Percentile	Parents' Income Percentile	Kids' Income Percentile Divided by Parents' Income Percentile	Kids' Income Percentile if Parents Were in Lowest-Income Quintile
Eastern Shore Community College	47.0	33.8	1.388	47.4
Germanna Community College	54.0	62.1	.869	52.4
J. Sargeant Reynolds Community College	51.1	55.5	.921	48.9
John Tyler Community College	52.1	59.4	.876	49.0
Lord Fairfax Community College	54.0	57.9	.932	51.6
Mountain Empire Community College	42.2	39.7	1.065	42.2
New River Community College	51.2	55.3	.925	46.9
Northern Virginia Community College	57.5	62.1	.926	56.3
Patrick & Henry Community College	46.7	42.9	1.093	44.0
Paul D. Camp Community College	48.5	46.3	1.047	48.9
Piedmont Virginia Community College	52.3	55.8	.936	50.7
Rappahannock Community College	51.0	49.0	1.041	50.8
Richard Bland College	53.7	62.9	.853	54.6
Southside Virginia Community College	46.2	37.9	1.219	44.0
Southwest Virginia Community College	45.1	40.1	1.124	43.9
Thomas Nelson Community College	50.1	52.1	.962	48.6
Tidewater Community College	51.0	52.2	.976	49.5
Virginia Highlands Community College	47.1	45.2	1.043	46.3
Virginia Western Community College	49.7	54.0	.921	48.7
Wytheville Community College	47.9	44.6	1.075	42.4
Averages	*50.2*	*50.7*	*1.01*	*48.8*

Sources: Opportunity Insights and author calculations

Policy Considerations

Disparities among the institutions outlined in this chapter have caused more than a few observers to conclude that American higher education in general and its elite institutions are now the source of "the problem" rather than part of the solution. The problem we highlight here is one that involves increased economic inequality and reduced economic mobility. Georgetown University's oft-cited Center on Education and the Workforce labels the failure of some to understand what has been going on in higher education as the "Merit Myth" and presents data to argue that today "our colleges favor the rich and divide America."[35] While we agree with this general critique, a less strident reading of the evidence is that most highly ranked campuses today gradually have become more economically and racially segregated due to a combination of federal and state policies, coupled with certain societal changes.

With respect to state policies, in states such as Virginia the existence of independent governing boards for each public institution of higher education has allowed these institutions to go their own way with respect to admission policies, financial aid, the self-describing narrative they present to the public and, sometimes, even their mission. This has resulted in some campuses becoming substantially segregated in terms of student income levels and race. This evolution elicited a harsh critique in a recent report by the Education Reform Now think tank.[36]

By way of illustration, the Education Reform Now report noted that five of the 15 public universities in the United States with the lowest percentage enrollments of Pell Grant students are located in Virginia – JMU, VMI, CNU, UVA and W&M. On the other hand, in terms of the percentage of students who come from households in the highest-income quintile, W&L leads the nation at 81.34%. W&M has the highest percentage of any four-year public institution, at 69.82%. UVA is second among the publics at 68.39%, while UMW ranks third at 65.29% and JMU is fourth at 64.48%.[37] Virginia is distinctive among the states for the economic (and often racial) stratification it has allowed to occur in its public system of higher education.

Whatever the causes of this stratification nationally and in Virginia, the traditional higher education task of providing opportunities for economic mobility has been largely forfeited by the elite and now falls substantially within the provinces of the community colleges and larger public urban institutions (GMU, ODU and VCU fill this bill in the Commonwealth). It is they who effectively now carry the economic mobility torch. If Virginia hopes to skirt destructive class and racial conflicts in the future, then it will be its community colleges and large urban institutions that will have to carry the proverbial ball forward. This does not preclude changes in behavior on the part of other institutions, but most have exhibited only marginal interest in doing so.

But what if the Commonwealth of Virginia dispensed state appropriations more visibly based on which institutions are at the forefront of fighting economic inequality? What if SCHEV annually published data showing both the relative and absolute contributions to reducing economic inequality made by each institution? What if the current batch of remarkably amorphous portions of the Code of Virginia that are supposed to guide Virginia's colleges and universities were amended to make the restoration of economic mobility an identified higher education priority? What if boards of visitors then began to evaluate and compensate presidents at least partially on the basis of their success in mobilizing their campuses to be part of the emerging solution instead of a recurrent source of the problem? Rather than something new and daring, properly interpreted, these developments would constitute a clear-headed return to once cherished values.

It is time we view Virginia higher education through a different, more discerning lens.

35 Anthony P. Carnevale, Peter Schmidt and Jeff Strohl, *The Merit Myth: How Our Colleges Favor the Rich and Divide America* (New York: The New Press), 2020.
36 Michael Dannenberg, "De Facto Segregation in Virginia Higher Ed," Education Reform Now (April 12, 2021), https://edreformnow.org/blog/de-facto-segregation-in-virginias-higher-ed-system.
37 Opportunity Insights.

THE WINCHESTER METROPOLITAN AREA OUTPERFORMS THE COMMONWEALTH

Well I was born in a small town
And I can breathe in a small town
Gonna die in this small town
And that's probably where they'll bury me

– John Mellencamp, American musician, "Small Town"

Conversations about growth in Virginia often center on the larger metropolitan areas of Northern Virginia, Richmond and Hampton Roads. Yet, there is another story to be told about Virginia, a story about its smaller, more rural, metropolitan areas. Some Virginians are choosing to trade the hustle and bustle of the big urban-centered metros by moving to more rural regions in search of a higher quality of life. Many of these new residents commute to work in another region. The phenomenon is not unique to the Commonwealth, as we are witnessing the rise of exurban (outside a city's suburbs) regions in the United States.

The Winchester, Virginia-West Virginia Metropolitan Statistical Area (MSA), hereafter referred to as the Winchester metro area, appears poised to benefit from the continued growth of the Northern Virginia economy. Over the past decade, the influx of new residents from Northern Virginia has proven to be a boon (sparking growth in incomes and jobs) to the regional economy. On the flip side, however, it also has been somewhat of a bane (in terms of increasing traffic, population density and demand for public services).

The Winchester metro area, which encompasses the city of Winchester, Frederick County, Virginia, and Hampshire County, West Virginia, had a total population of over

142,000 in 2020.[1] The principal city in the metro area, Winchester, is also the oldest Virginia city west of the Blue Ridge Mountains.[2] Located at the northern entrance of the Shenandoah Valley, the city's population reached 27,700 in 2020. Other notable Virginia cities and towns within the metro area are Lake Holiday, Middleton and Stephens City. In West Virginia, only the small town of Springfield is part of the metro area. The remainder of the Winchester MSA consists of census-designated areas and unincorporated areas in Virginia and West Virginia.

CITY OF WINCHESTER, VIRGINIA

In broad strokes, residents of the Winchester metro area are slightly older, less educated, whiter and travel farther for work when compared to fellow Virginians (Table 1). In 2019, the median age in the Winchester MSA was 41.3 years, 2.8 years older than Virginia and the United States. The region was predominately white, with 82% of its residents identifying as such in 2019, 21 percentage points higher than the Commonwealth average. Almost 9 in 10 residents held a high school degree or higher in 2019, slightly less than Virginia and the nation. On the other hand, only 26.7% of Winchester residents had earned a bachelor's degree or higher in 2019, less than Virginia or the United States. Median household income in 2019 was approximately the same in the Winchester region and the Commonwealth and almost $11,000 higher than the nation. This may be explained, in part, by the fact that average commuting times were higher for the residents of the Winchester metro area, as some residents live in the region and work in Northern Virginia.

TABLE 1

SELECTED CHARACTERISTICS: WINCHESTER MSA, VIRGINIA AND THE UNITED STATES, 2019

Category	Winchester, VA-WV	Virginia	United States
AGE			
Median Age	41.3	38.5	38.5
Under 18	22%	22%	22%
18 to 64	60%	62%	61%
65 and Over	18%	16%	16%
RACE/ETHNICITY			
White	82%	61%	60%
Black or African American	5%	19%	12%
Asian	1%	7%	6%
Hispanic	9%	10%	18%
EDUCATIONAL ATTAINMENT			
High School Degree or Higher	88.1%	90%	88.6%
Bachelor's Degree or Higher	26.7%	39.6%	33.1%
ECONOMICS			
Median Household Income	$76,583	$76,456	$65,712
Persons Below Poverty Line	8.6%	9.9%	12.3%
Travel Time to Work (minutes)	31.8	29.1	27.6

Sources: Census Reporter and U.S. Census Bureau (2019) American Community Survey 1-year estimates. Data for Winchester MSA race categories are ACS 2019 5-year data. Hispanic includes respondents of any race. Other race categories are non-Hispanic.

1 We use the U.S. Census Bureau's 2020 vintage population estimates, which were based on the 2010 Census. New population estimates based on the 2020 decennial census will become available in 2022.
2 Col. James Wood Sr., lieutenant in the Royal Navy, colonel in the Frederick County (Virginia) Militia and Oxford University alumnus, founded Winchester in 1744 on an acquired tract of land and named it after his hometown: Winchester, Hampshire, England.

Winchester may be small, but it has outperformed many of the larger metropolitan areas in the Commonwealth during the COVID-19 pandemic. While Hampton Roads struggles to regain the jobs it lost in 2020, the Winchester region has not only regained the jobs lost there in 2020, but it has also added new jobs. Median housing prices continue to increase in the Winchester metro area as median household incomes have risen sharply over the last decade. Winchester may be tied to the fortunes of the Washington, D.C., metro area, but it has also managed to attract and retain new employers. Winchester packs a proverbial economic punch well above its weight class.

In this chapter, we delve into economic conditions in the Winchester metro area. We first discuss how the MSA's population has changed over time and how commuting has contributed to population growth. We examine how the Winchester region moved from an area that was relatively poor when compared to Virginia and the nation to one that is equal in income to the Commonwealth and richer than the U.S. We also dive into the question of housing values and how rising values may affect the quality of life of residents. Lastly, we discuss the impact of COVID-19 on the labor force, employment and jobs in the region. We conclude with a discussion of the challenges facing the Winchester metro area over the coming decade, including whether it can retain its character while welcoming an increasing number of expatriates from the Washington, D.C., metro area.

Population Growth Powers Change In Winchester

To understand where Winchester may go in the coming decade, we must understand where it has been. Whether population growth has been positive or negative is more than just an academic curiosity. A region that is losing residents will, inevitably, lose businesses as residents "vote with their feet" in reaction to economic conditions. On the other hand, a region that is growing will attract businesses and spur job creation. Let's look at how Winchester has fared in growing its population.

From 2000 to 2020, the Winchester metro area added more than 38,000 new residents (Graph 1), an estimated annual average increase of 1.6%.[3] Examining the largest localities within the region, we find that population growth was driven by Frederick County, Virginia, for which Winchester is the county seat. From 2000 to 2020, the population of Frederick County grew from 59,639 to 91,119, an annual average increase of 2.1% (Table 2). The population growth rate in the county eclipsed that of the city of Winchester (0.8%) and Hampshire County, West Virginia (0.7%). Given that Winchester's annual average population growth rate was not even half that of the metropolitan area of which it is a part, it is apparent that Frederick County's population growth was driven largely by the smaller towns and unincorporated areas in the county.

Graph 2 displays the components of population change in the Winchester metro area from 2010 to 2020. Over this span, the natural increase in the population (births minus deaths) was positive. While there were only an estimated 17 net international migrants into the region in 2010, by 2016 net international migration peaked at 353 individuals. Net international migration then fell from its 2016 peak to an estimated 171 arrivals in 2020. An influx of international migrants is typically a signal of improving economic prospects in a region. While international migration in 2020 was less than in 2016, it was markedly better than at the start of the decade, even amid the COVID-19 pandemic.

3 The compound annual growth rate is equal to (end value/beginning value)^(1/number of periods)-1.

TABLE 2

POPULATION GROWTH: WINCHESTER METROPOLITAN STATISTICAL AREA AND LARGEST LOCALITIES IN THE MSA, 2000-2020

Area	Population 2000	Population 2020	Compound Annual Growth Rate
Winchester MSA, VA-WV	103,626	142,009	1.6%
Winchester, VA	23,699	27,700	0.8%
Frederick County, VA	59,639	91,119	2.1%
Hampshire County, WV	20,288	23,190	0.7%

Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau's Annual Intercensal Resident Population Estimates: 2000-2009; and Metropolitan and Micropolitan Statistical Area Totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

People come, and people go. Where they come from and where they go is revealing, as we tend to vote with our feet. Whether it is for jobs, quality of life or affordability, migration implicitly reveals the attractiveness of a region. By far, the largest component of population change for the Winchester metro area from 2010 to 2020 was net domestic migration (arrivals minus departures). In 2010, in the aftermath of the Great Recession, net domestic migration was estimated to be only 81 individuals. Net domestic migration peaked at 1,689 in 2017 and was 985 in 2020. Clearly, Winchester has been attracting new residents from other parts of the Commonwealth and the nation in recent years.

Comparing the Winchester metro area's average annual population growth from 2000 to 2020 with that of the other metropolitan areas in Virginia yields an interesting observation: Population growth in the Winchester region was higher than any other metropolitan area in the Commonwealth this century (Table 3). Of course, it may be harder for larger metros to grow faster, but we can compare the Winchester metro with Virginia's smaller metro areas. Here, Winchester grew by 1.1 percentage points faster than the Blacksburg-Christiansburg metro, 0.8 points faster than Roanoke, 0.7 points faster than Lynchburg, 0.5 points faster than Harrisonburg and 0.4 points faster than Charlottesville. As we shall see in the next section, one of the major reasons for Winchester's more rapid growth is the influx of commuters from the Washington, D.C., metropolitan region.

TABLE 3

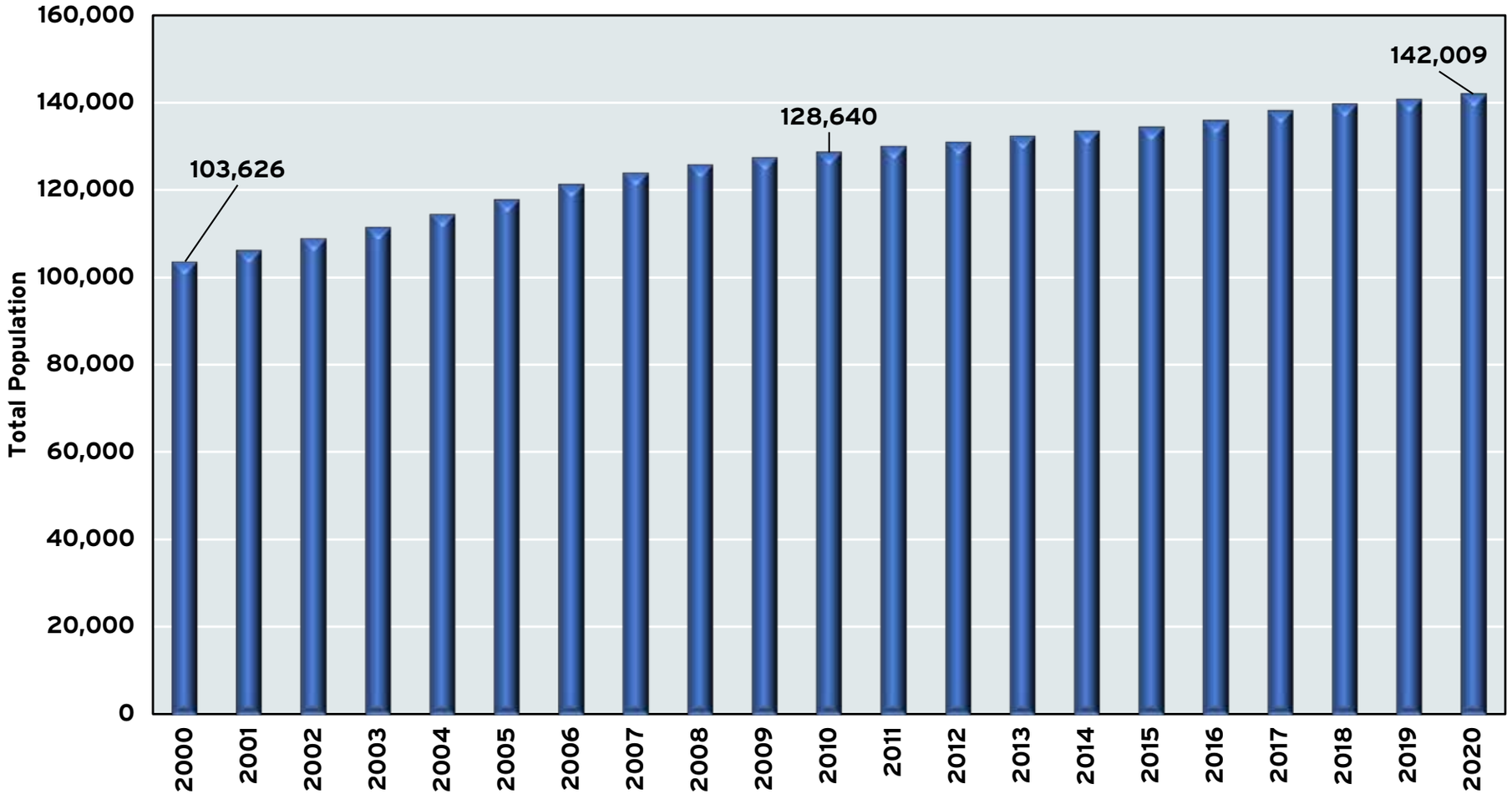
POPULATION GROWTH IN VIRGINIA'S METROPOLITAN AREAS, 2000-2020

Metro Area	Total Population 2000	Total Population 2020	Compound Annual Growth Rate
Winchester	103,626	142,009	1.60%
Washington-Arlington-Alexandria	4,875,923	6,324,629	1.30%
Charlottesville	174,979	219,910	1.20%
Harrisonburg	108,414	135,550	1.10%
Richmond	1,043,450	1,303,469	1.10%
Lynchburg	222,430	264,386	0.90%
Roanoke	288,699	313,784	0.80%
Staunton	109,129	124,475	0.70%
Blacksburg-Christiansburg	151,553	167,244	0.50%
Hampton Roads	1,617,490	1,779,824	0.50%

Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau's Annual Intercensal Resident Population Estimates: 2000-2009; and Metropolitan and Micropolitan Statistical Area Totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

GRAPH 1

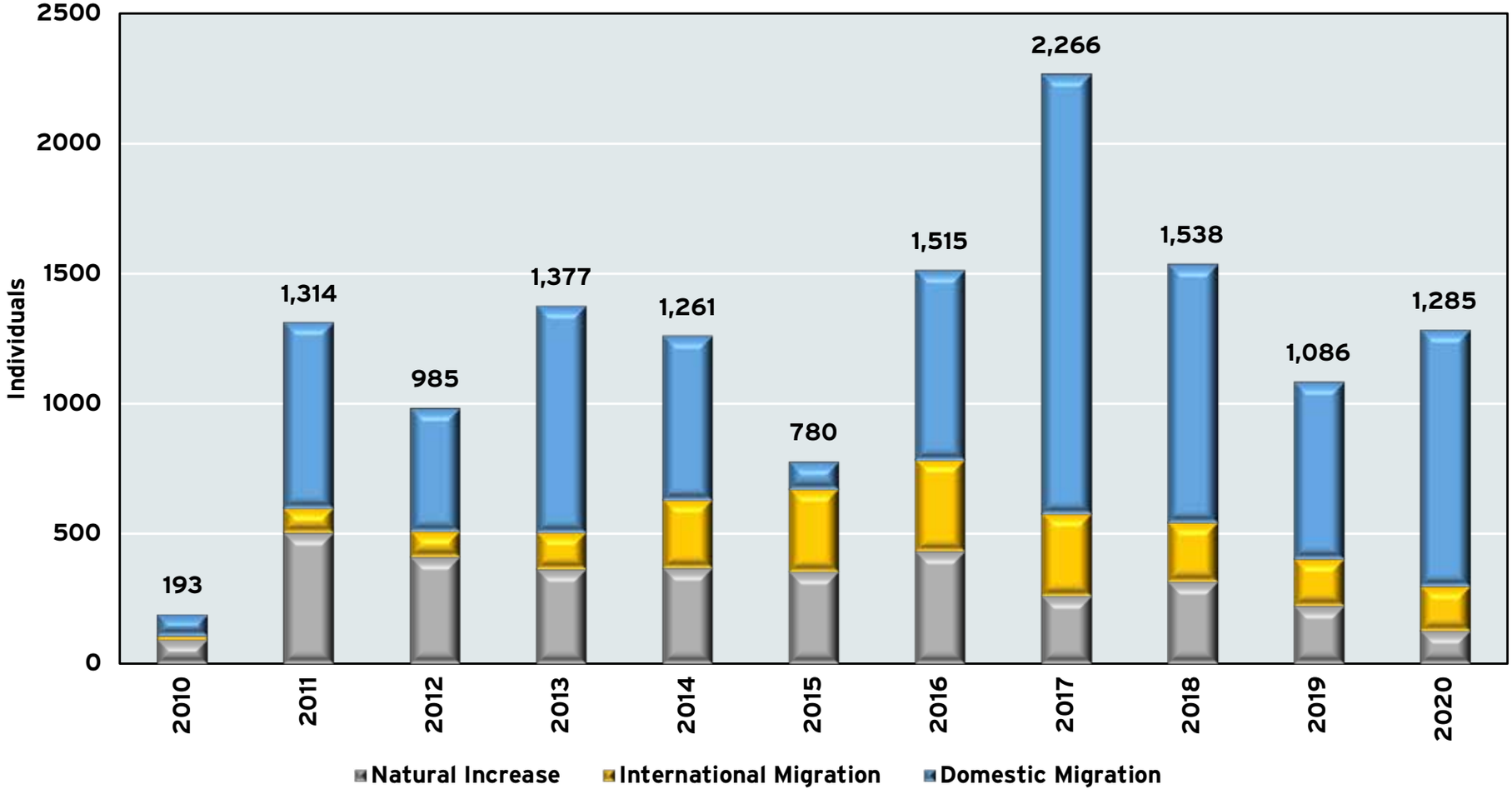
TOTAL POPULATION:
WINCHESTER, VA-WV METROPOLITAN STATISTICAL AREA, 2000-2020



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau's Annual Intercensal Resident Population Estimates: 2000-2009; and Metropolitan and Micropolitan Statistical Area Totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

GRAPH 2

**COMPONENTS OF POPULATION CHANGE:
WINCHESTER METROPOLITAN STATISTICAL AREA,
2010-2020**



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau; and Metropolitan and Micropolitan Statistical Area Totals: 2010-2020. Vintage 2020 estimates are based on the 2010 Census and were created without incorporation or consideration of the 2020 Census results.

On The Road Again: Commuters And The Winchester Metro Area

The Winchester metro area defies the stereotypical perception of a small town that award-winning young-adult fiction author Courtney Summers once described as "a place that's only good for leaving." Instead of residents leaving, Winchester has attracted new residents, drawn in by a lower cost of living and a perceived higher quality of life. Given the geographical proximity of Winchester to Washington, D.C. (75 miles by car), it should be no surprise that some residents of the D.C. metro area have traded the hustle and bustle (and traffic) for the lower population density of the Winchester region.

The 2015-2019 American Community Survey (ACS) estimates from the U.S. Census Bureau provide insight into who is coming to and who is leaving from the Winchester metro area. As illustrated in Table 4, the largest flows were from the Washington, D.C., metro area. While 1,610 residents of the Winchester area departed for the Washington, D.C., area during this period, 3,614 residents flowed in the opposite direction. Net migration flows from the Washington, D.C., region into the Winchester metro area were almost eight times larger than the next highest region, Hampton Roads.

Some regions have migration flows in their favor. Net migration to the Hagerstown, Maryland, metro area was 409 individuals from Winchester in the most recent data. Richmond was the next highest in terms of net outmigration, gaining 154 individuals. However, it should be clear from the data that the net movement of people into Winchester was positive and contributed to the overall population gain in the region.

Where people go to work has changed over time. In 2002, 39.3% of employed individuals who lived in the Winchester metro area worked in another metro area (Graph 3). By 2019, the latest data available, 50.7% of employed individuals lived in Winchester but worked in another metro area. Most of Winchester's commuters were bound for one destination: the Washington, D.C., metro area. In 2019, 59.9% of residents who worked outside the Winchester metro area did so in the Washington, D.C., metro area.

TABLE 4

TOP AND BOTTOM FIVE CONTRIBUTORS OF NET MIGRATION TO WINCHESTER, VA-WV: ACS FIVE-YEAR ESTIMATES, 2015-2019

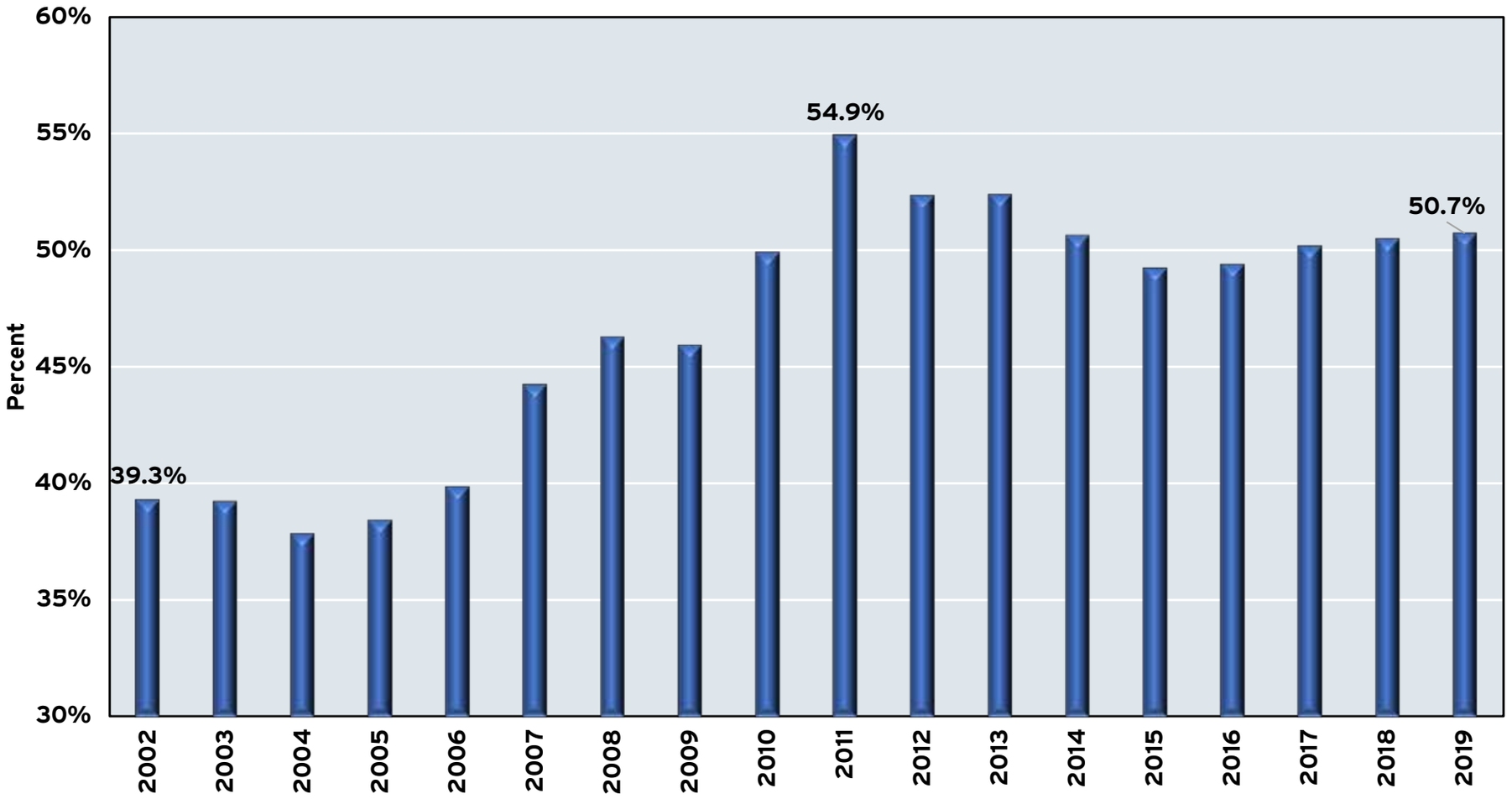
MSA	Inflow	Outflow	Net Migration
TOP 5			
Washington-Arlington-Alexandria	3,614	1,610	2,004
Virginia Beach-Norfolk-Newport News	511	249	262
Nonmetropolitan Areas within U.S. or Puerto Rico	1,016	774	242
Johnson City, Tennessee	140	0	140
Harrisonburg, Virginia	170	69	101
BOTTOM 5			
Hagerstown-Martinsburg, Maryland-West Virginia	352	761	-409
Richmond, Virginia	57	211	-154
Phoenix-Mesa-Chandler, Arizona	0	100	-100
Greenville-Anderson, South Carolina	1	83	-82
Atlanta-Sandy Springs-Alpharetta, Georgia	0	75	-75

Sources: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates, and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Among Virginia's metropolitan areas, Winchester had the largest percentage of residents who worked outside the metro area in 2019 (Graph 4). As the share of workers has risen over time, the economic linkages between the Winchester and Washington, D.C., metro areas have deepened as well. As we discuss in the next section, one visible impact of this synergistic relationship has been the remarkable rise in median household income in the Winchester metro area over the past decade.

GRAPH 3

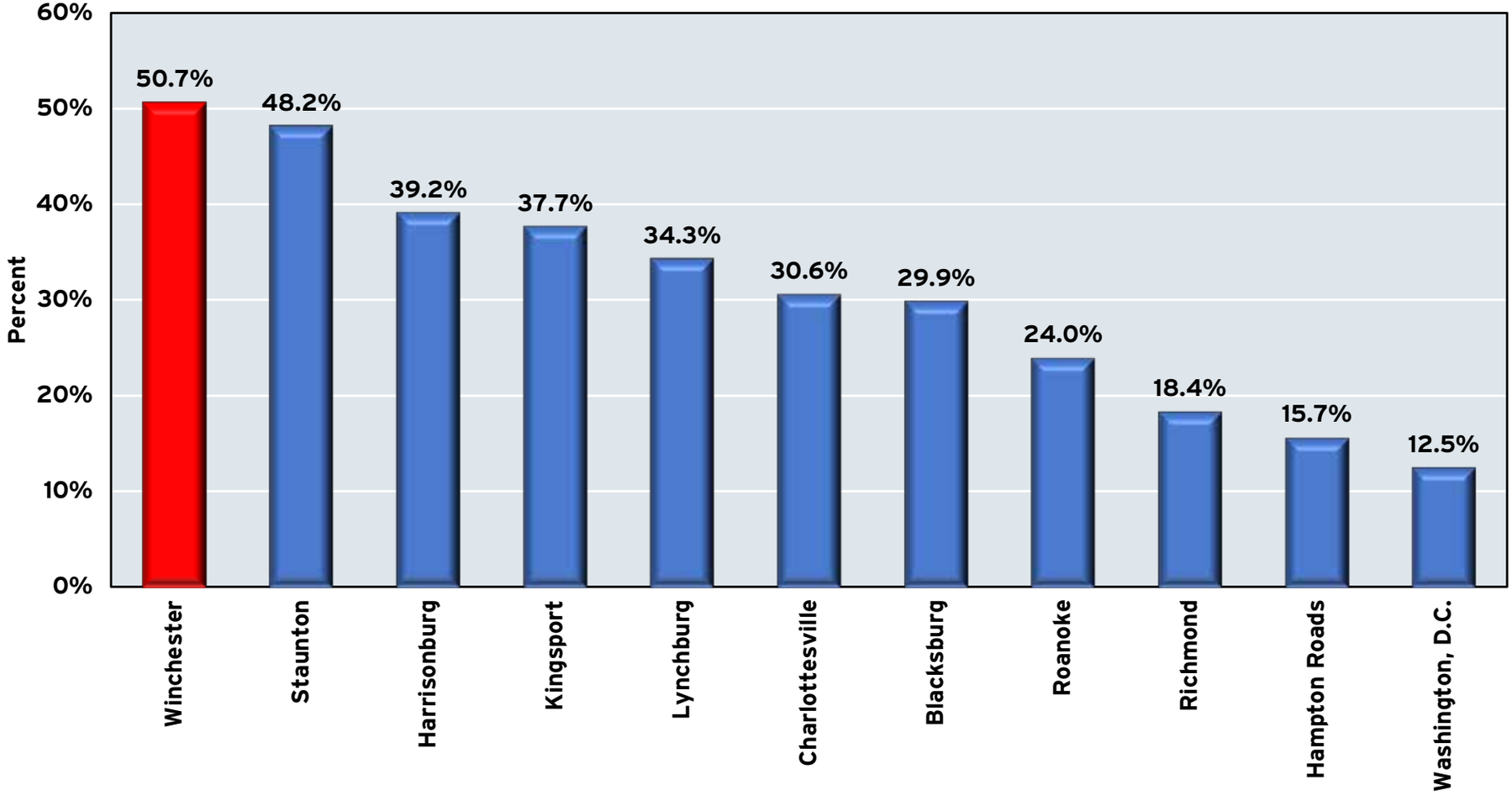
PERCENTAGE OF WORKERS EMPLOYED OUTSIDE THE WINCHESTER METROPOLITAN STATISTICAL AREA, 2002-2019



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau; and OnTheMap, Work Destination Analysis by Metropolitan/Micropolitan Areas, 2021. Data are for all public- and private-sector jobs in the Winchester metropolitan statistical area.

GRAPH 4

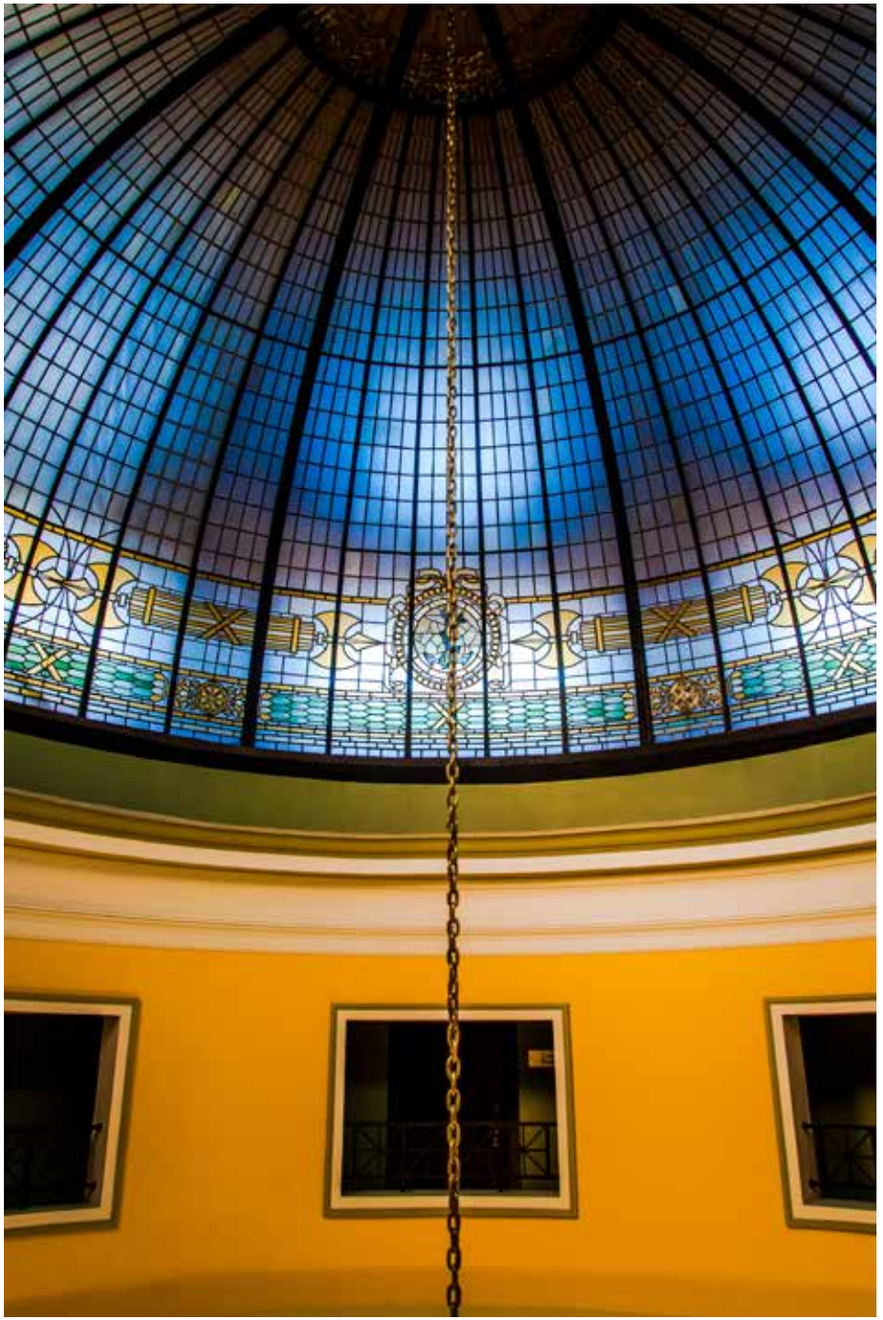
PERCENTAGE OF WORKERS EMPLOYED OUTSIDE THE METROPOLITAN STATISTICAL AREAS
VIRGINIA METROPOLITAN STATISTICAL AREAS, 2019



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University; U.S. Census Bureau; and OnTheMap, Work Destination Analysis by Metropolitan/Micropolitan Areas, 2021. Data are for all public- and private-sector jobs in each metropolitan statistical area.

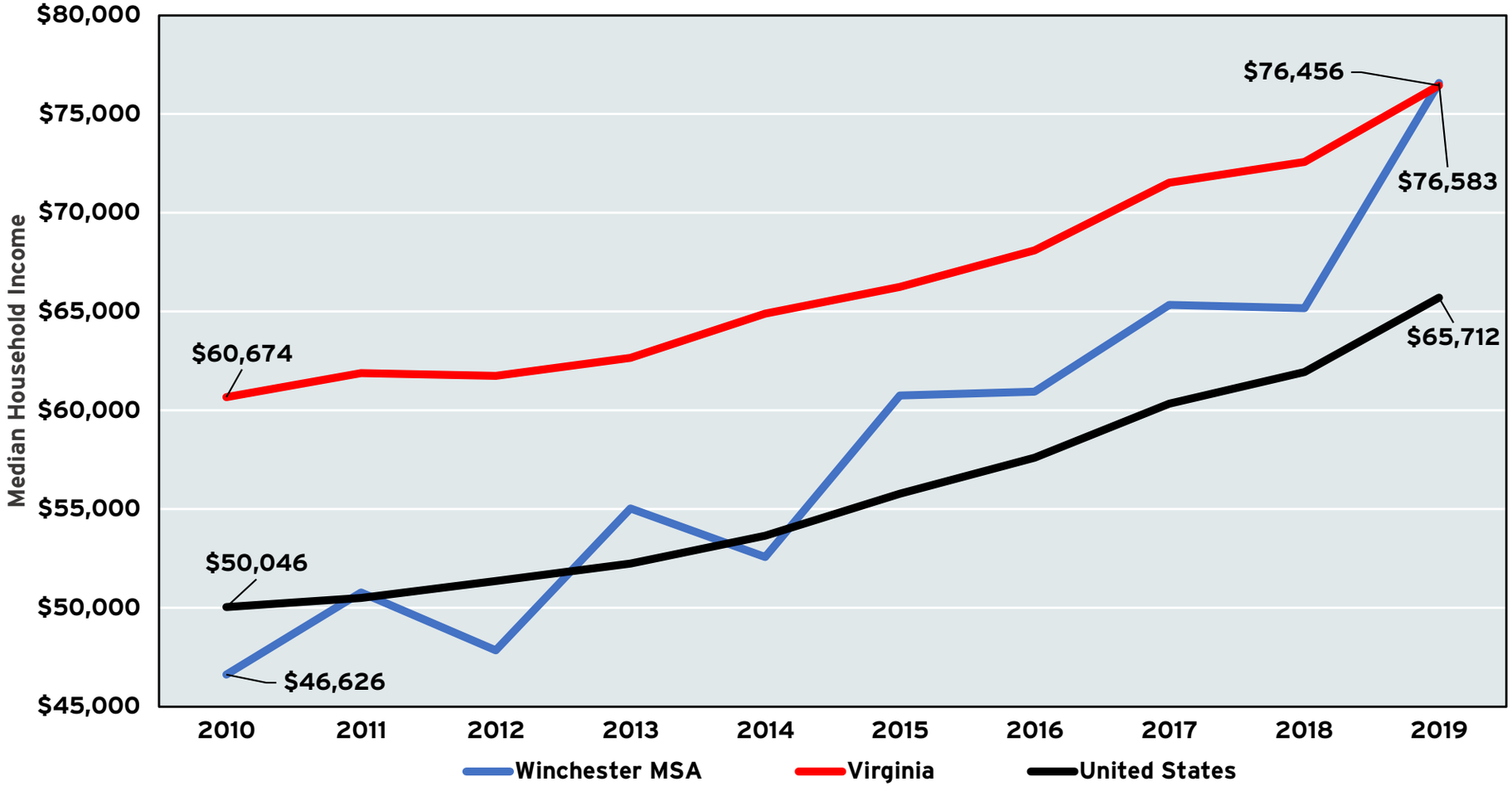
Median Household Income Rises In Winchester

In 2010, median (50th percentile) household income in the Winchester metro area was $46,626, approximately 6.8% lower than the nation and 23.2% lower than the Commonwealth (Graph 5). Since 2010, median household income has grown more rapidly in the Winchester metro area than Virginia or the United States. By 2015, median household income in the Winchester region eclipsed that of the nation. By 2019, median household income in Winchester and Virginia was about equal and 14.2% higher than the nation.



GRAPH 5

**MEDIAN HOUSEHOLD INCOME IN NOMINAL DOLLARS:
WINCHESTER MSA, VIRGINIA AND THE UNITED STATES, 2010-2019**



Sources: U.S. Census Bureau, ACS 1-year estimates (2010 to 2019), and the Dragas Center for Economic Analysis and Policy, Old Dominion University

Prices And Housing In Winchester

Regional price parities (RPPs) are regional price levels expressed as a percentage of the national price level for a given year. Estimated by the U.S. Bureau of Economic Analysis (BEA), the RPPs provide insight into whether a metropolitan area is cheaper or more expensive than the national average. As illustrated in Graph 6, the average price level in Winchester is approximately 7.5% cheaper than the national average, while the average price level in the Washington, D.C., metro area is 17.4% higher. Incentives matter, and some people, facing higher prices in the D.C. area, have traded distance for affordability.

While the cost of living in the Winchester metro area is cheaper than the national average, a combination of population growth, higher incomes and low interest rates have pushed median housing values higher in the region. As illustrated in Graph 7, the estimated median housing value increased from $119,031 in January 2000 to a prerecessionary peak of $275,166 in May 2006, an increase of 131.2%. The Great Recession of 2007-2009 did not leave the Winchester region untouched, with the estimated median housing value falling to $188,881 in November 2011. The 31.3% decline in median housing values was not long lasting, as prices started to recover in 2012.

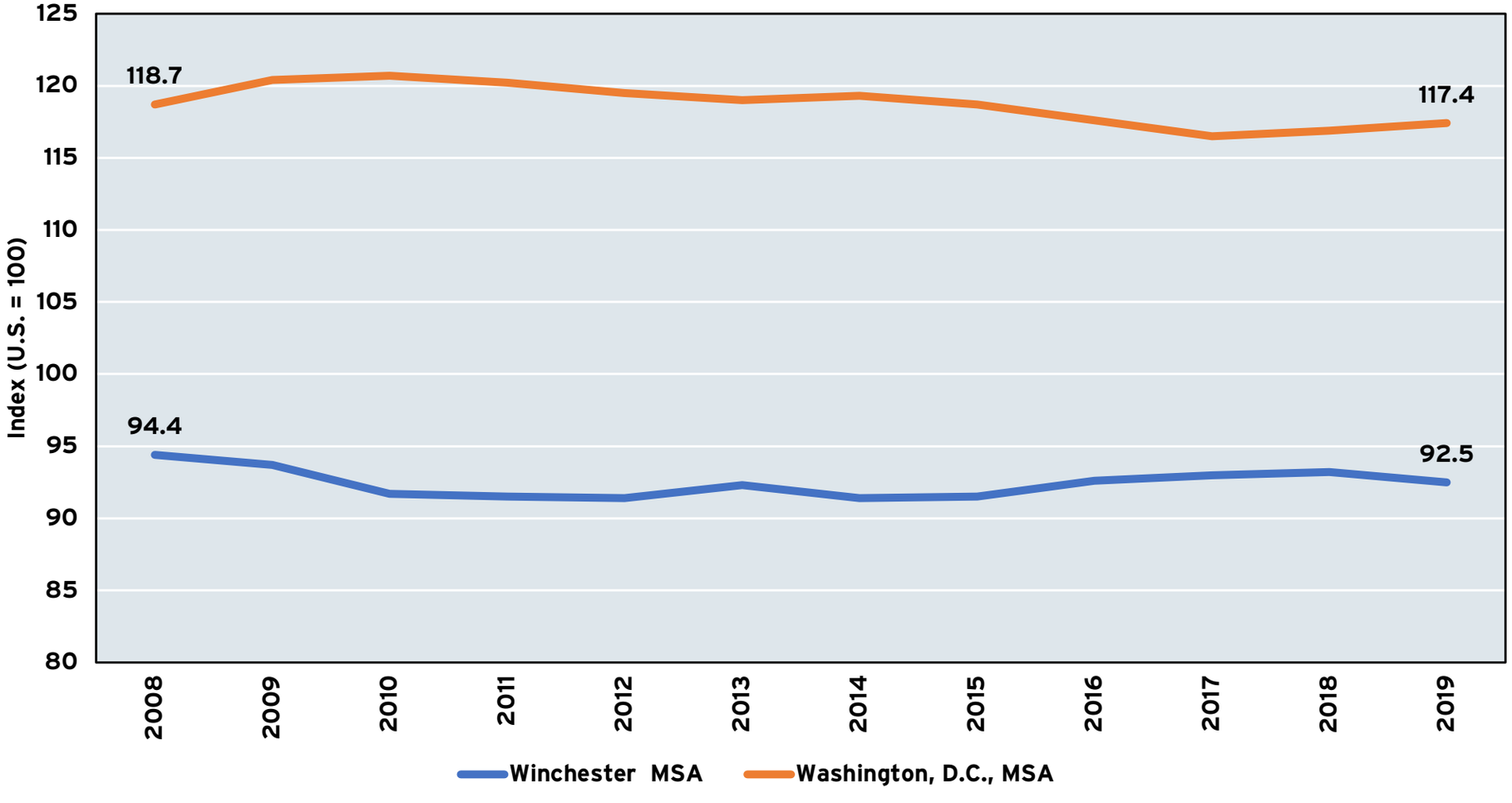
From the trough in November 2011 to February 2020, the median housing value in the Winchester metro area rose by 31.2% to $247,871. The COVID-19 pandemic did not dampen the housing market in the region, with prices climbing another 23.5% by October 2021. During that month, the median housing value in the Winchester region was $306,084. In the Washington, D.C., metro area, the median housing value in October 2021 was $547,223, approximately 1.8 times higher than the Winchester area. This is not surprising, given that a majority of those who work outside the Winchester metro area do so in the Washington, D.C., metro area. Many federal employees and employees whose jobs support the federal government transitioned to remote work and were largely unaffected by the turbulence in labor markets.

If we examine how housing values have changed over time, we can observe how the two housing markets are tightly correlated. In Graph 8, we index housing prices in each region so that January 2000 is equal to 100. Housing prices in both regions peaked prior to the Great Recession and have steadily climbed over the last eight years. The recent acceleration in housing values is readily apparent, as prices in October 2021 were 2.7 and 2.5 times higher than in January 2000 in Washington, D.C., and Winchester, respectively.

Rising home values and lower inventories of single-family residences are creating price pressures in the multifamily housing market. As housing values and rents increase, the lack of affordable housing in the Winchester metro area has become a significant issue of concern. Shawn Hershberger, Development Services Director for the city of Winchester, illustrates the burdens of a tight residential housing market. "A recent situation that occurred, as an example, was where a storm caused significant damage to a multifamily development, causing several families to be displaced. Despite their ability to pay reasonable rents, nonprofits working on relocation have had no success in finding them housing. Today (September 2021), they are still living in a hotel; this is a direct result of the extremely tight housing market in our region." Hershberger contends that housing production in the city is not only an issue now, but also one for the foreseeable future.

GRAPH 6

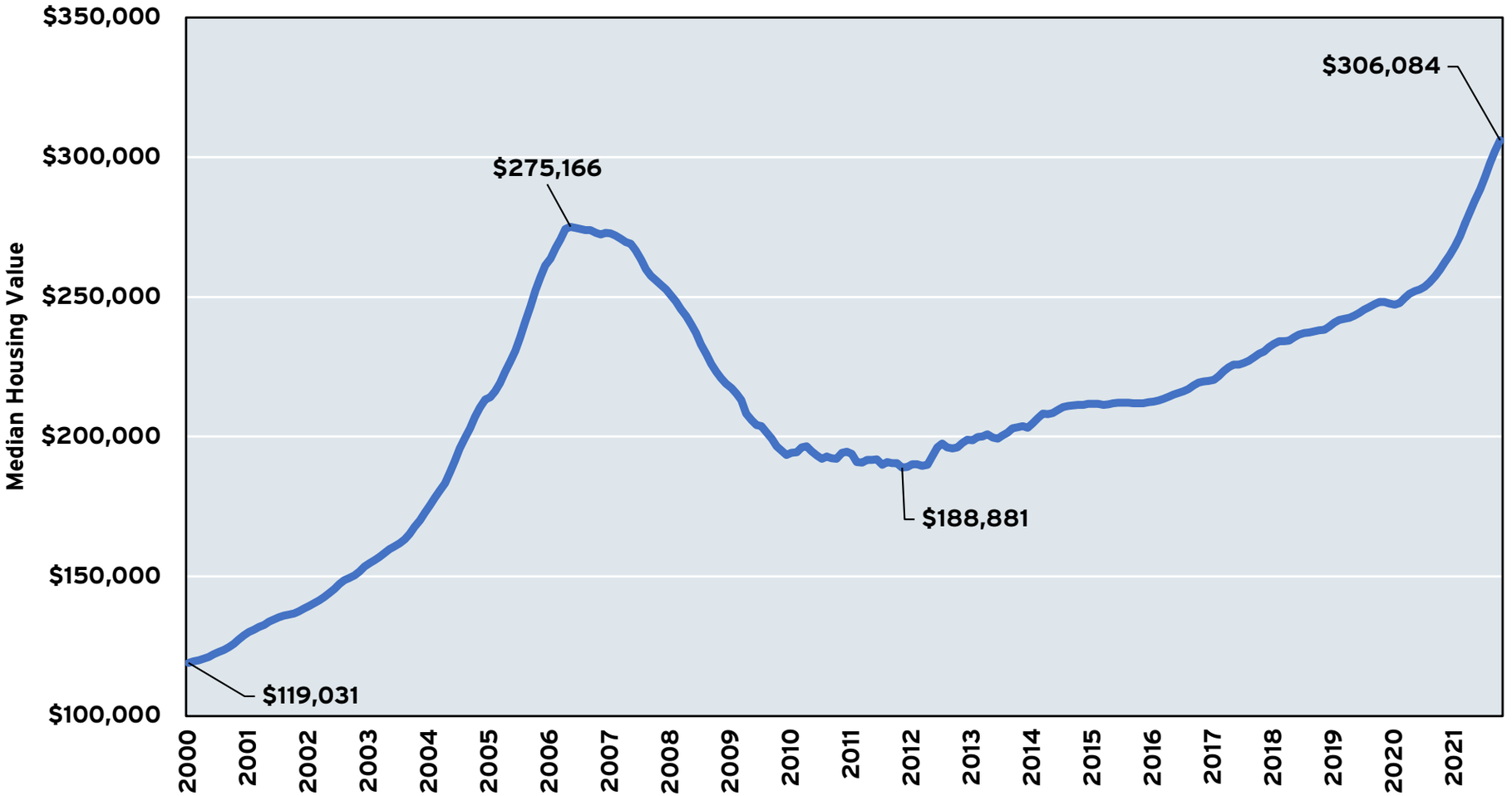
REGIONAL PRICE PARITIES FOR ALL ITEMS:
WINCHESTER AND WASHINGTON, D.C., METROPOLITAN STATISTICAL AREAS, 2008-2019



Sources: Dragas Center for Economic Analysis and Policy, Old Dominion University and Bureau of Economic Analysis

GRAPH 7

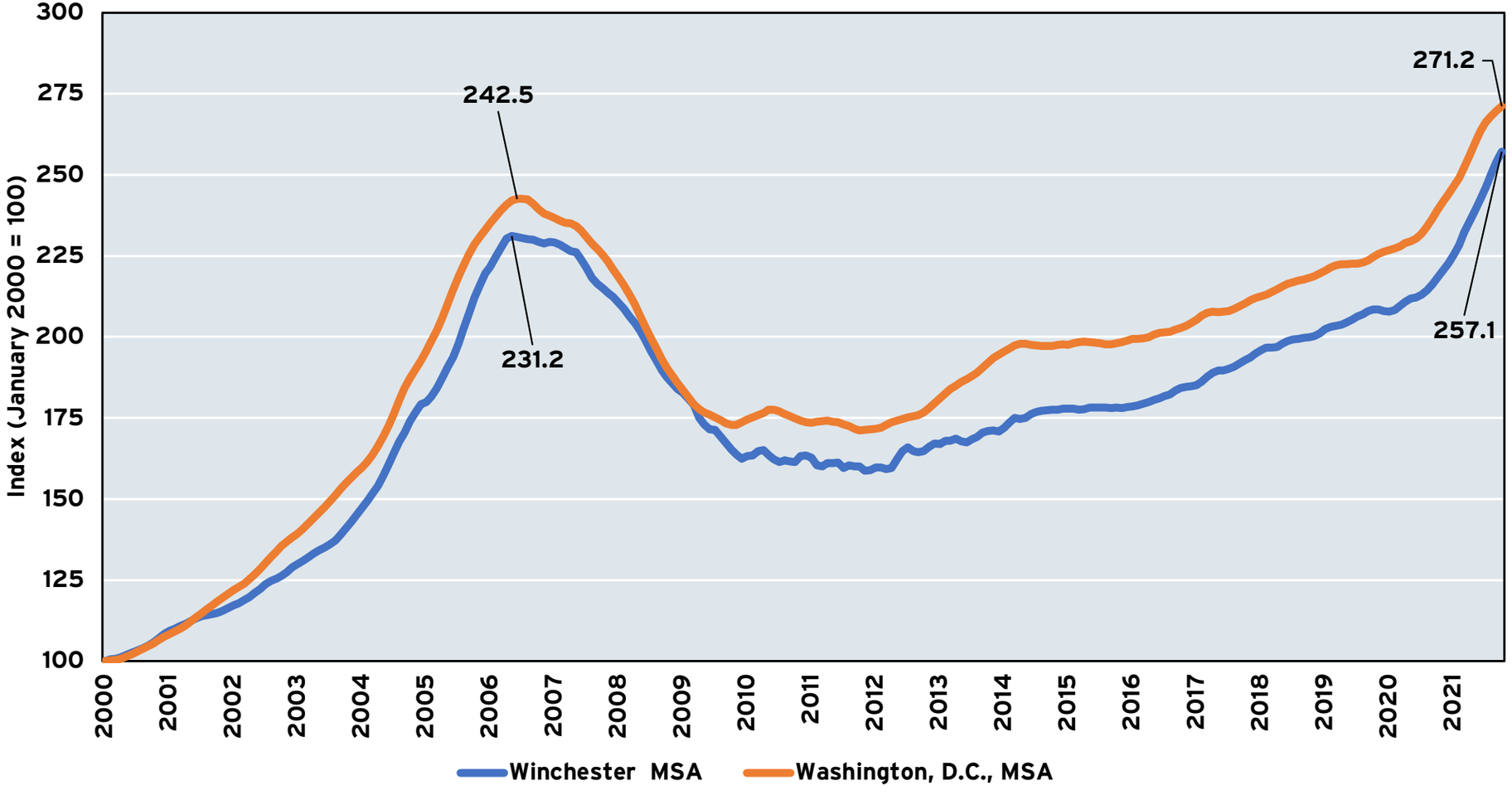
ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES: WINCHESTER MSA, JANUARY 2000-OCTOBER 2021



Source: Zillow Home Value Index. Data are seasonally adjusted and reflect the typical home values in the 35th to 65th percentile range.

GRAPH 8

INDEX OF ZILLOW MEDIAN HOUSING VALUES FOR SINGLE-FAMILY RESIDENTIAL HOMES: WINCHESTER AND WASHINGTON, D.C., METROPOLITAN STATISTICAL AREAS, JANUARY 2000-OCTOBER 2021



Source: Zillow Home Value Index. Data are seasonally adjusted and reflect the typical home values in the 35th to 65th percentile range.

Labor Force And Employment Weather The COVID-19 Shock

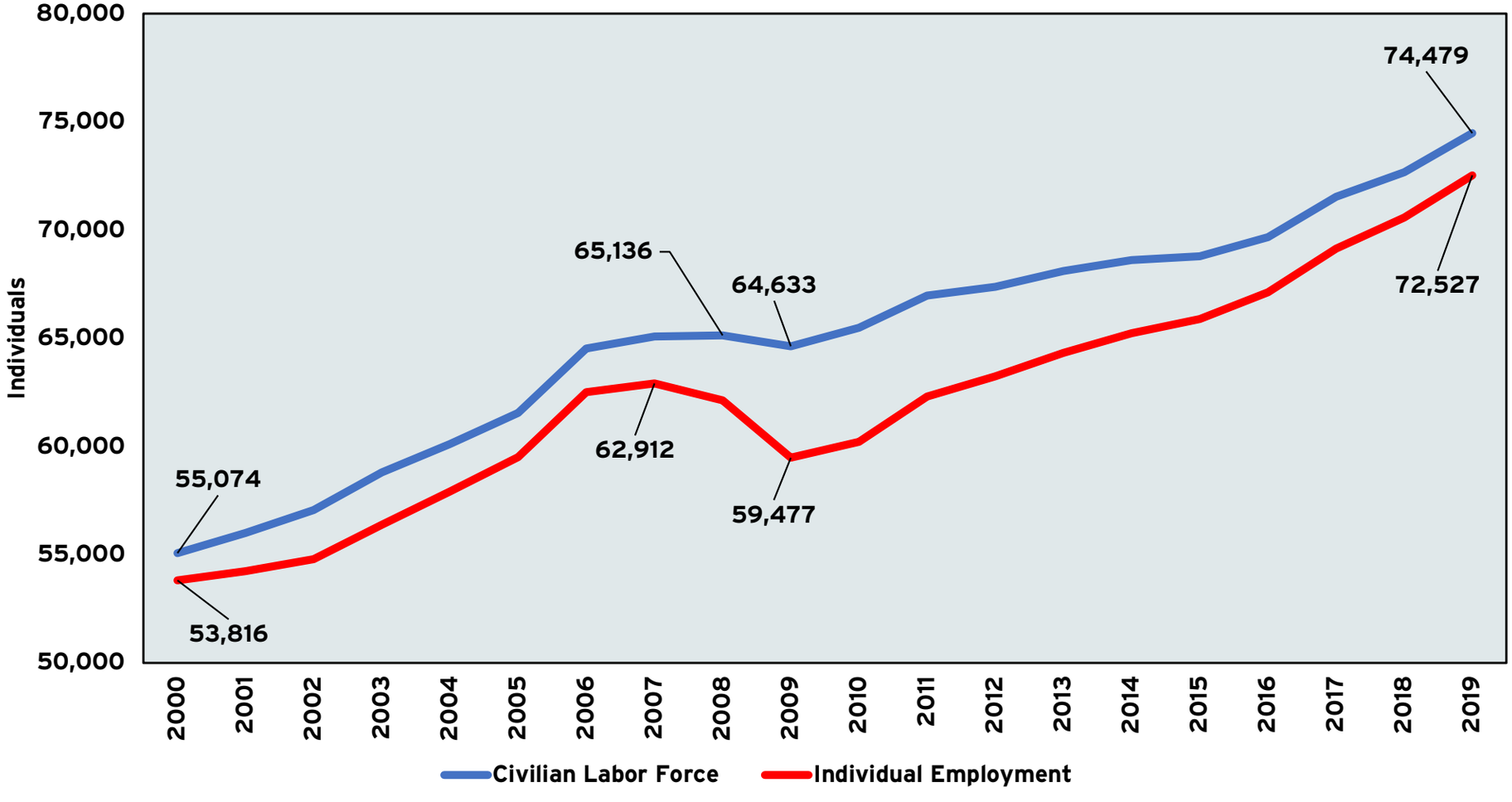
The civilian labor force comprises those working (full time and part time) and those actively seeking work. Individual employment reflects those who are working in the civilian labor force. The gap between the civilian labor force and individual employment represents the level of unemployment in a geographical area. As illustrated in Graph 9, the civilian labor force in the Winchester metro area increased from 55,074 in 2000 to a prerecessionary peak of 65,136 in 2008. After a slight decline in 2009, the civilian labor force continued to expand, reaching an annual average of 74,479 in 2019.

While the civilian labor force was largely unaffected by the Great Recession of 2007-2009, individual employment declined from an average of 62,912 in 2007 to 59,477 in 2009. As a result, the annual average unemployment rate in the Winchester metro area increased from a prerecession low of 3.1% in 2006 to a postrecession peak of 8% in 2009 and 2010 (Graph 10). Individual employment rebounded from its lows in 2010 and surpassed the pre-Great Recession peak in 2012. By 2019, individual employment reached an annual average of 72,527, and the average unemployment rate in the Winchester region had declined to 2.6%.

Graph 11 illustrates the shock of the COVID-19 pandemic on the civilian labor force and individual employment in the Winchester metro area. As with the Commonwealth, the emergence of the pandemic and associated social distancing measures led to a contraction in the number of people working or looking for work in March and April 2020. Individual employment fell sharply as well, declining by almost 7,700 individuals from February 2020 to April 2020. Since the depths of the pandemic shock in April 2020, however, Winchester's labor force not only rebounded, but it exceeded the prepandemic peak in October 2021. Individual employment, for all intents and purposes, recovered as well, with the employment level in October 2021 almost equaling the level observed in February 2020.

GRAPH 9

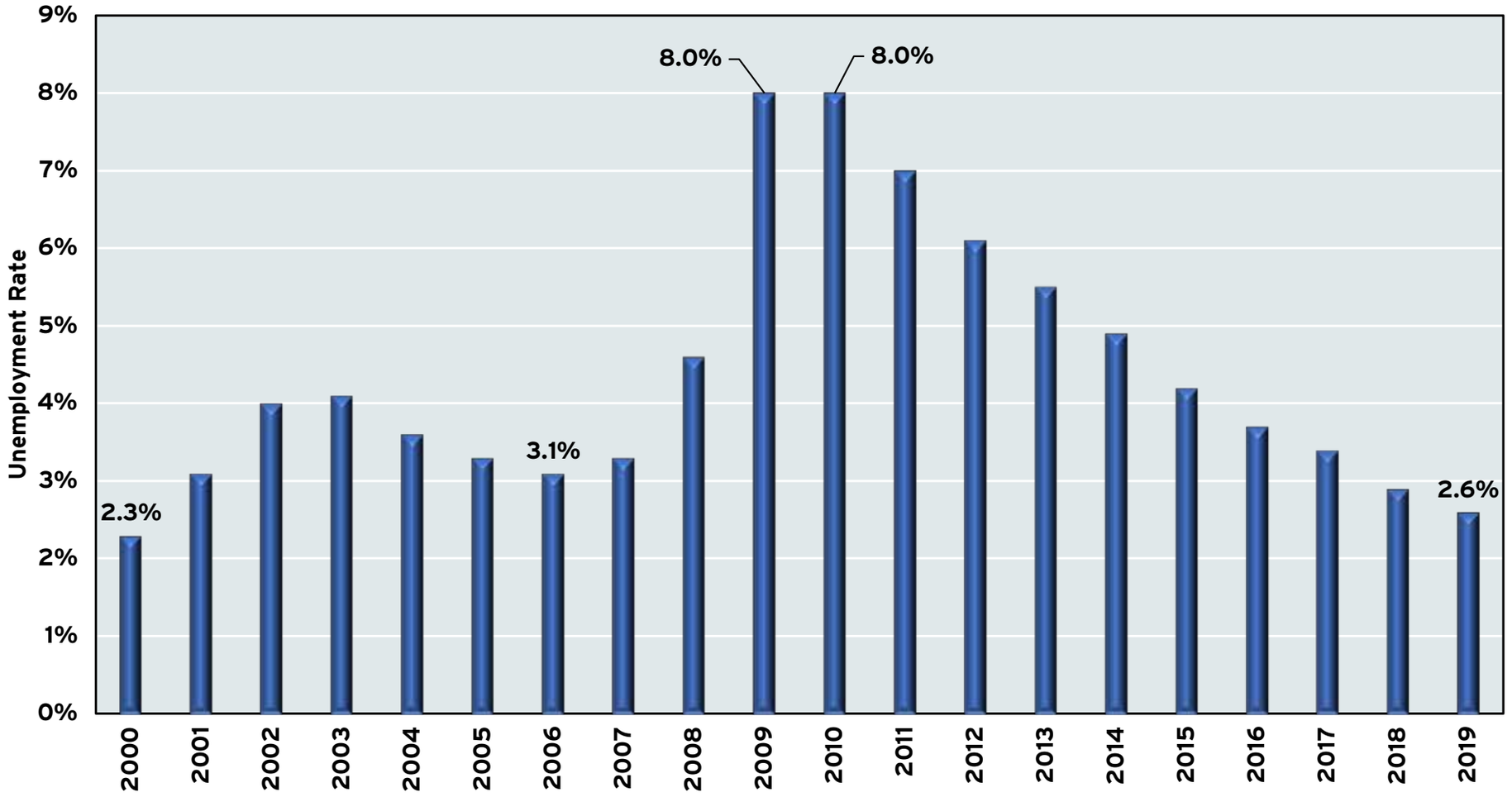
ANNUAL AVERAGE CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT: WINCHESTER METROPOLITAN STATISTICAL AREA, 2000-2019



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages of seasonally adjusted data.

GRAPH 10

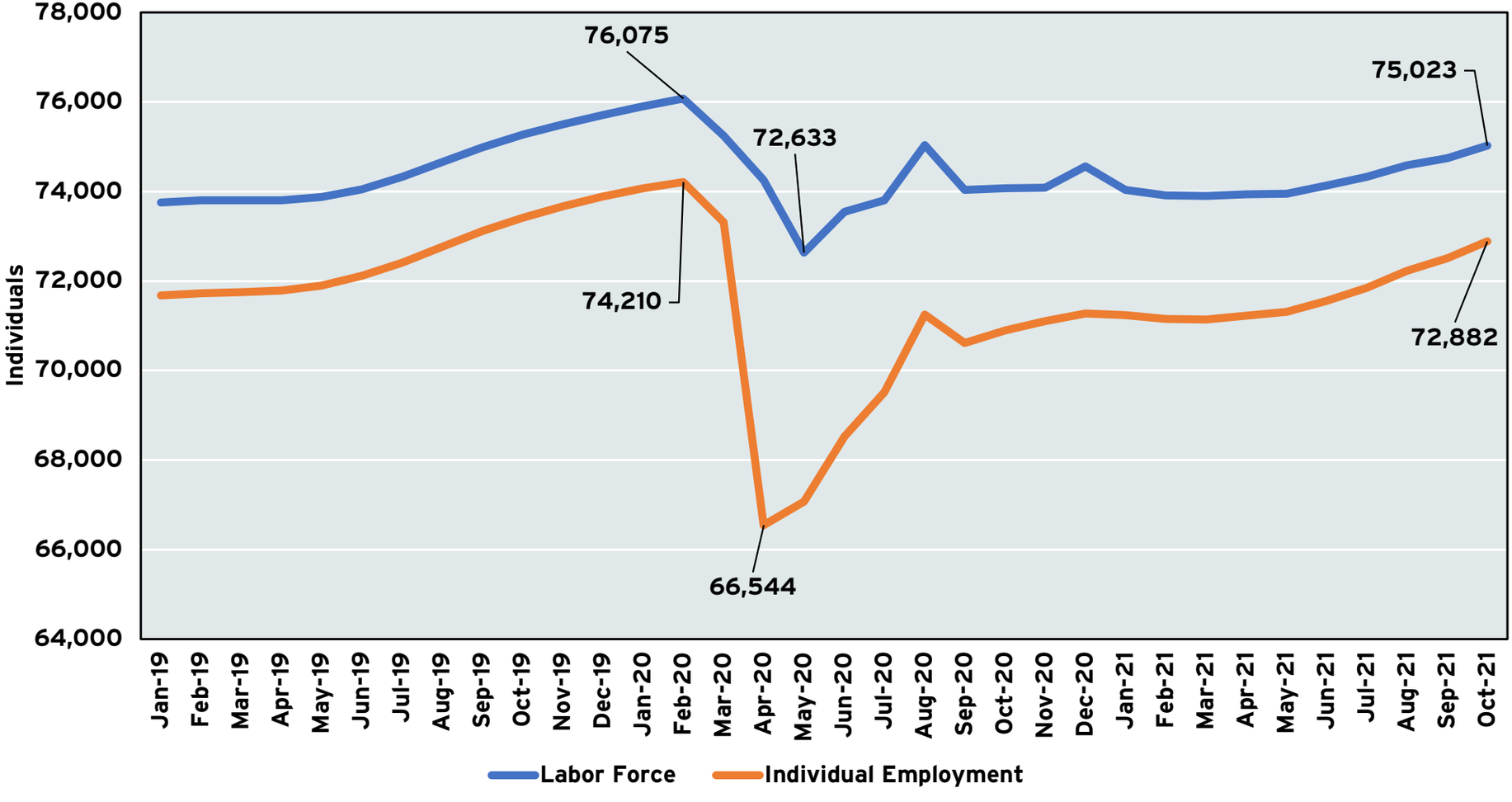
ANNUAL AVERAGE UNEMPLOYMENT RATE:
WINCHESTER METROPOLITAN STATISTICAL AREA, 2000-2019



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University

GRAPH 11

**CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT:
WINCHESTER METROPOLITAN STATISTICAL AREA, JANUARY 2019-OCTOBER 2021**



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

Where Are The Jobs In Winchester?

Winchester has become an appealing location for businesses. In 2019, for example, more than half of all jobs in the Winchester metro area were in three major industries: trade, transportation and utilities (22.1%); education and health services (17.5%); and manufacturing (11.9%) (Graph 12). It should be no surprise that these sectors accounted for the majority of job growth in the region in the previous decade.

Amazon's distribution center in Frederick County accounts for more than 1,000 employees and is the fourth-largest employment provider in the Winchester metro area.[4] Walmart and Home Depot employ more than 500 people each in Winchester.

Valley Health System, a regional health care network, employs well over 1,000 people and serves as the largest source of jobs in the region. Frederick County Public Schools is the second-largest employer in Winchester. With more than 13,000 students, the school system has approximately 1,000 employees to help facilitate their education. It should come as no surprise that nearly 1 in 6 jobs in the Winchester region is from health services and education.

With large amounts of plastic, rubber and food being produced in Winchester, employers such as Trex Co., Rubbermaid, HP Hood and Kraft Heinz Co. employ hundreds of people each. Trex, the world's largest manufacturer of wood-alternative decking products, purchased eight acres of land in Winchester in June 2021 for its new global headquarters.[5] Winchester is more than a bedroom community; private-sector job growth has also contributed to the increasing vitality of the region.

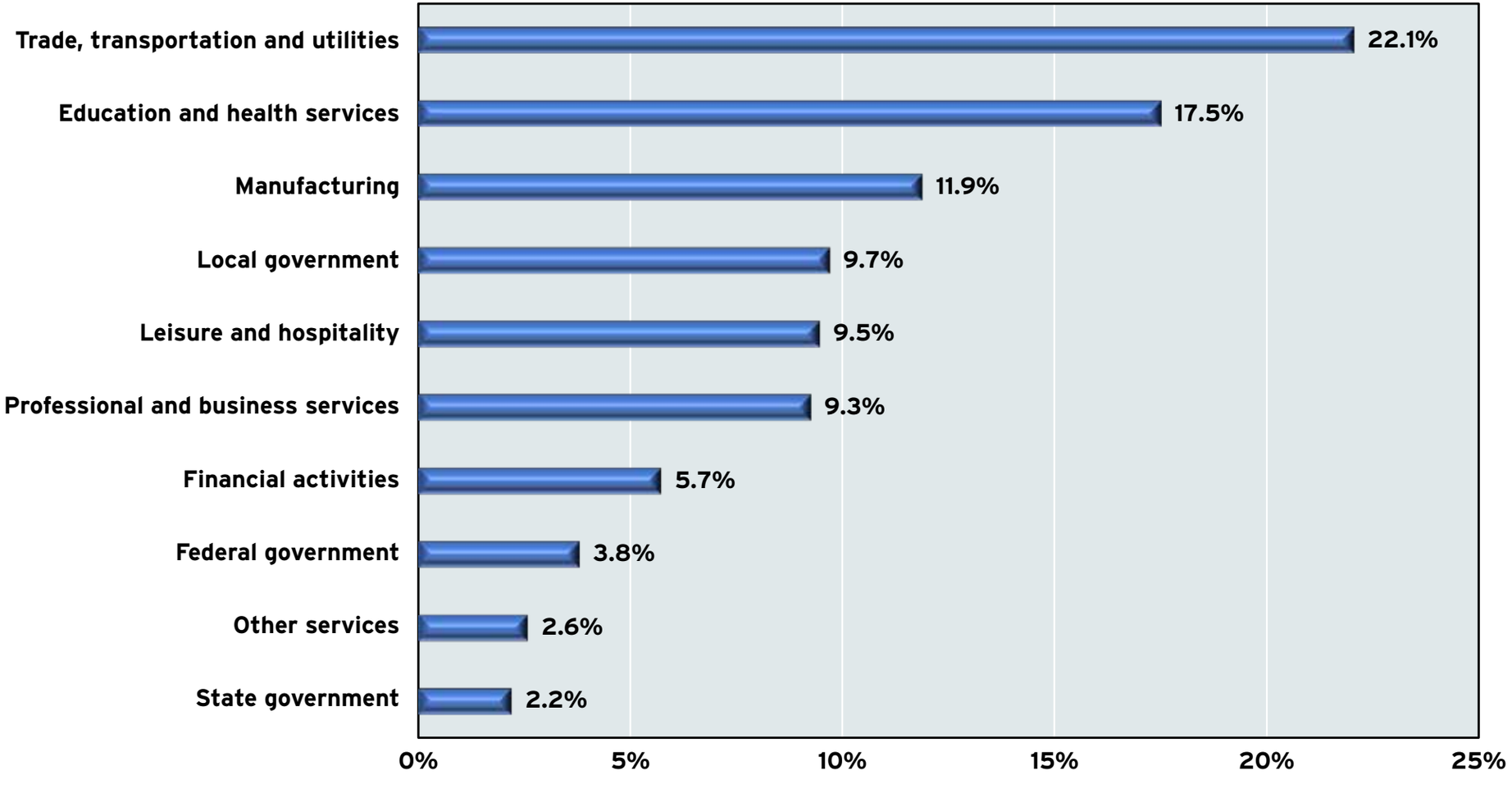
TREX CO.'S NEW WINCHESTER CAMPUS

4 "Amazon distribution center opens, seeks more employees," *The Winchester Star*, June 30, 2018, https://www.winchesterstar.com/news/frederick/amazon-distribution-center-opens-seeks-more-employees/article_6b4dd206-6873-50de-92a8-8c959e7cc2ca.html.

5 "Trex buys land in Winchester for new global headquarters," *The Winchester Star*, June 12, 2021, https://www.winchesterstar.com/winchester_star/trex-buys-land-in-winchester-for-new-global-headquarters/article_b7f78e4f-b593-5e40-b32d-57a1436f8197.html.

GRAPH 12

INDUSTRY SHARE OF AVERAGE ANNUAL EMPLOYMENT: WINCHESTER METROPOLITAN STATISTICAL AREA, 2019



Sources: Virginia Employment Commission; Bureau of Labor Statistics, Quarterly Census of Employment and Wages; and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Excludes four North American Industry Classification sectors that constitute less than 1% of total covered employment.

Jobs In Winchester Rebound During The Pandemic

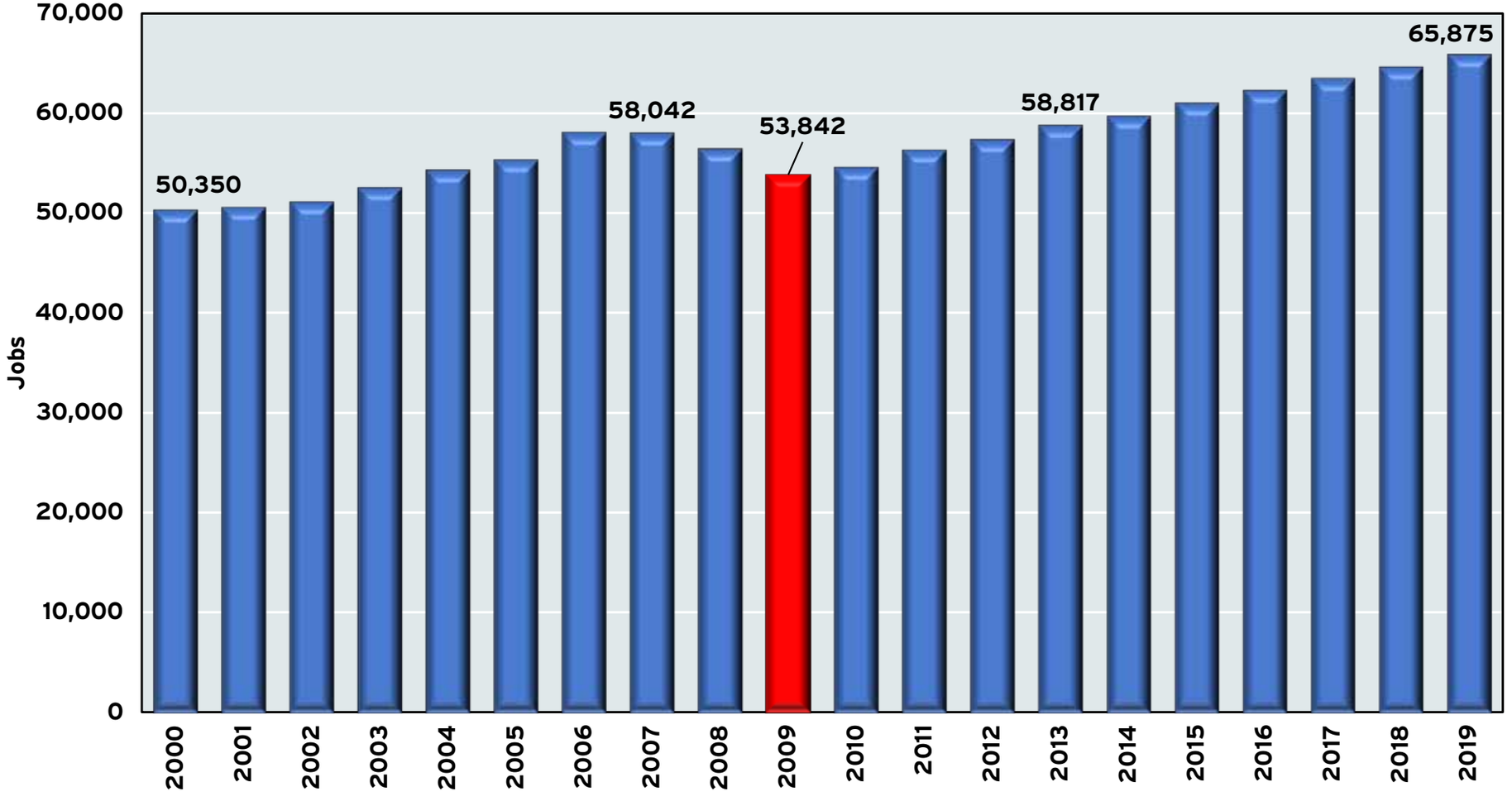
Graph 13 illustrates the growth in nonfarm payrolls (jobs) in the Winchester metro area from 2000 to 2019. As with individual employment, the economic impact of the Great Recession took a toll on the number of jobs in the region, with average annual payrolls declining from 58,042 in 2007 to 53,842 in 2009. By 2013, the number of jobs in the metro area had exceeded the prerecession peak. In 2019, there were approximately 65,875 jobs in the Winchester region.

In Graph 14, we compare the growth in jobs for the Winchester metro area with Virginia and the United States. We select February 2010, the trough of nonfarm payrolls in the United States and Virginia following the Great Recession, as the starting point for our comparison. Job growth in the Winchester region outpaced that of the Commonwealth and the nation over the decade. By February 2020, the number of jobs in the region had increased by 25.7%, 8.1 percentage points more than the United States, and a full 12 percentage points higher than the Commonwealth. Unlike many other metropolitan areas in the Commonwealth, Winchester had a job creation record worth highlighting.

Graph 15 illustrates the impact of the COVID-19 pandemic on nonfarm payrolls in the Winchester metro area, Virginia and United States. We index job levels to February 2020, the prepandemic peak for jobs in each of the geographical areas. Here again, we witness a familiar story. While jobs fell 10% by April 2020 in Winchester, this decline was not as steep as Virginia or the United States. Furthermore, Winchester has recovered its jobs quicker than the Commonwealth or nation. By October 2021, nonfarm payrolls were 0.7% higher than the prepandemic record in the Winchester metro area. Simply put, the COVID-19 pandemic was shallower in the Winchester area, and it recovered more quickly than Virginia or the nation.

GRAPH 13

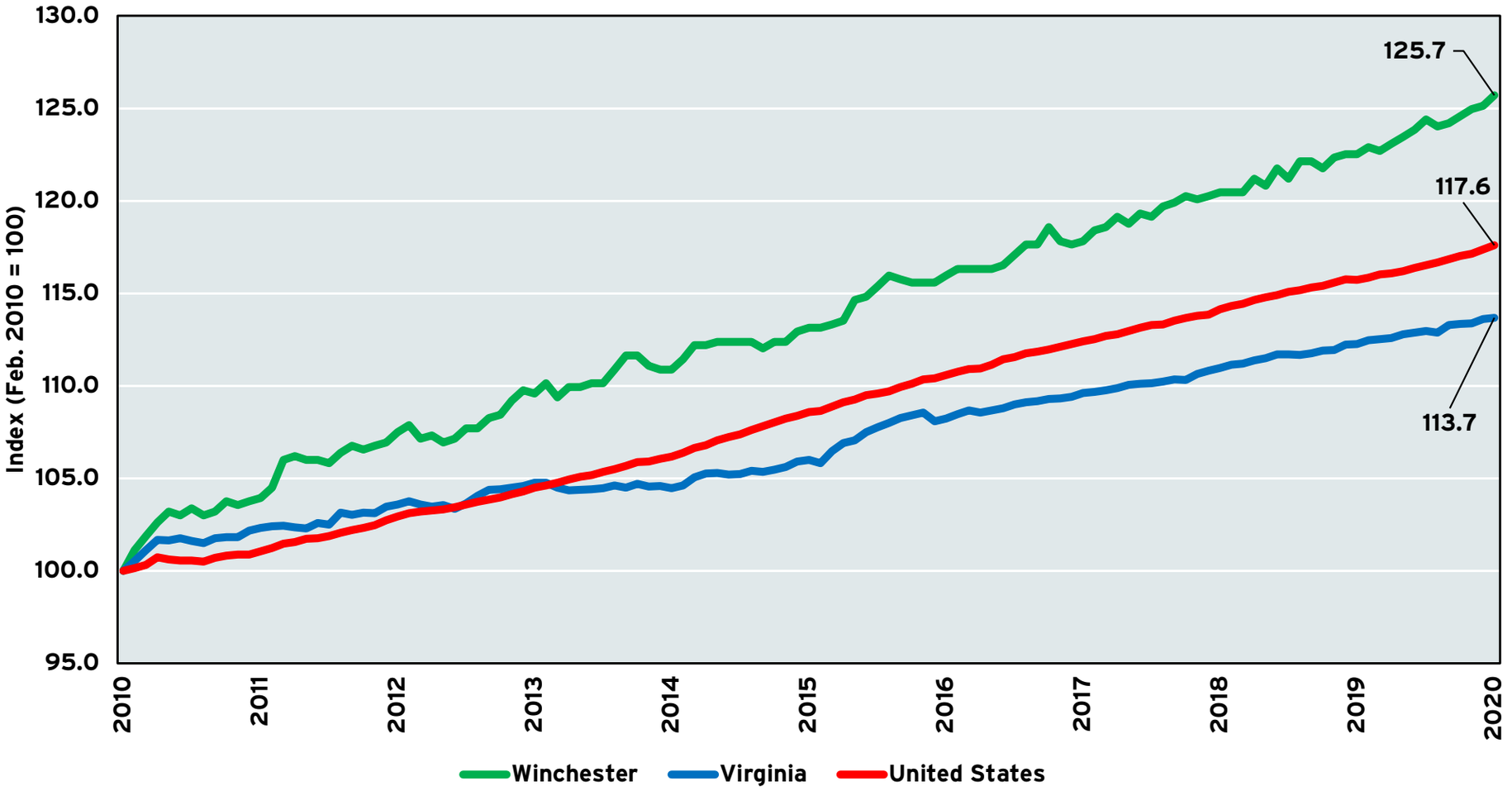
AVERAGE NONFARM PAYROLLS (JOBS):
WINCHESTER METROPOLITAN STATISTICAL AREA, 2000-2019



Sources: Bureau of Labor Statistics and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Annual averages of seasonally adjusted data.

GRAPH 14

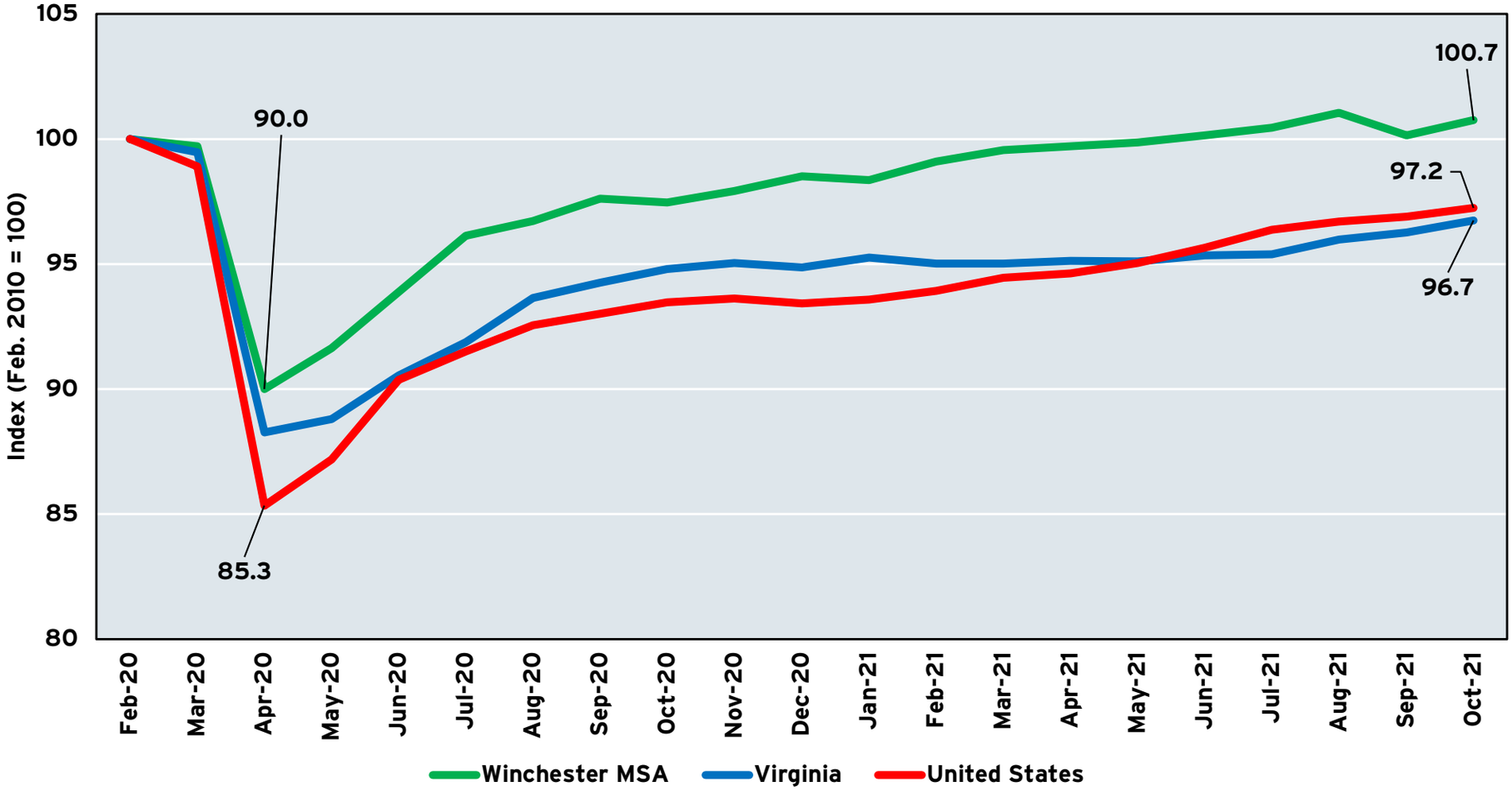
CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS): WINCHESTER MSA, VIRGINIA AND THE UNITED STATES, FEBRUARY 2010-FEBRUARY 2020



Source: Bureau of Labor Statistics, seasonally adjusted data. February 2010 was the trough of nonfarm payrolls for the United States and Virginia.

GRAPH 15

CUMULATIVE GROWTH IN NONFARM PAYROLLS (JOBS): WINCHESTER MSA, VIRGINIA AND THE UNITED STATES, FEBRUARY 2020-OCTOBER 2021



Source: Bureau of Labor Statistics, seasonally adjusted data

Final Thoughts

The Winchester metropolitan area may be relatively small when compared to the Richmond or Hampton Roads regions (let alone the Washington, D.C., metro area), but its story is worth telling. Over the past decade, the Winchester region outpaced both the state and nation in terms of job growth. Median household income rose more rapidly in the Winchester metro area than any other metropolitan region in the Commonwealth and the nation as a whole. While Winchester may be thought of as an exurban region of the Washington, D.C., metropolitan area, it has experienced private-sector growth in retail trade, transportation and warehousing, manufacturing, and education and health services.

We would be remiss, however, if we did not note that the region's growth has also created challenges. In recent years, housing values have increased as rapidly as those in the Washington, D.C., metro area. There are numerous reports that multifamily housing demand is outstripping supply (in part due to increasing single-family housing prices) and thus rents are rising rapidly as well. Winchester needs to look west to the exurban areas outside Houston, Los Angeles, San Francisco and Seattle to see one possibility for its future. The exurban areas of these metropolitan regions have been largely transformed from agricultural communities with relatively low population density into bedroom communities. As incomes and population have increased, so has the demand for public services, affordable housing and a reasonable cost of living. Whether the quality of life has improved or not remains a matter of fierce debate.

Given its geographical proximity to and interdependence with the Washington, D.C., region, it is safe to assume that inflows into the Winchester metro area will continue over the coming years. Now is the time for the region to engage in discussions of expanding public infrastructure, planning for increases in housing stock and thinking about how to continue its historical performance in terms of job creation. None of these challenges has an easy solution, but a number of other regions in the Commonwealth might gladly trade for these circumstances, given their relatively poor records of job creation and population growth since the Great Recession.

Cover: Defense.gov

Page 24: Defense.gov

Page 101: Hard Rock Casino

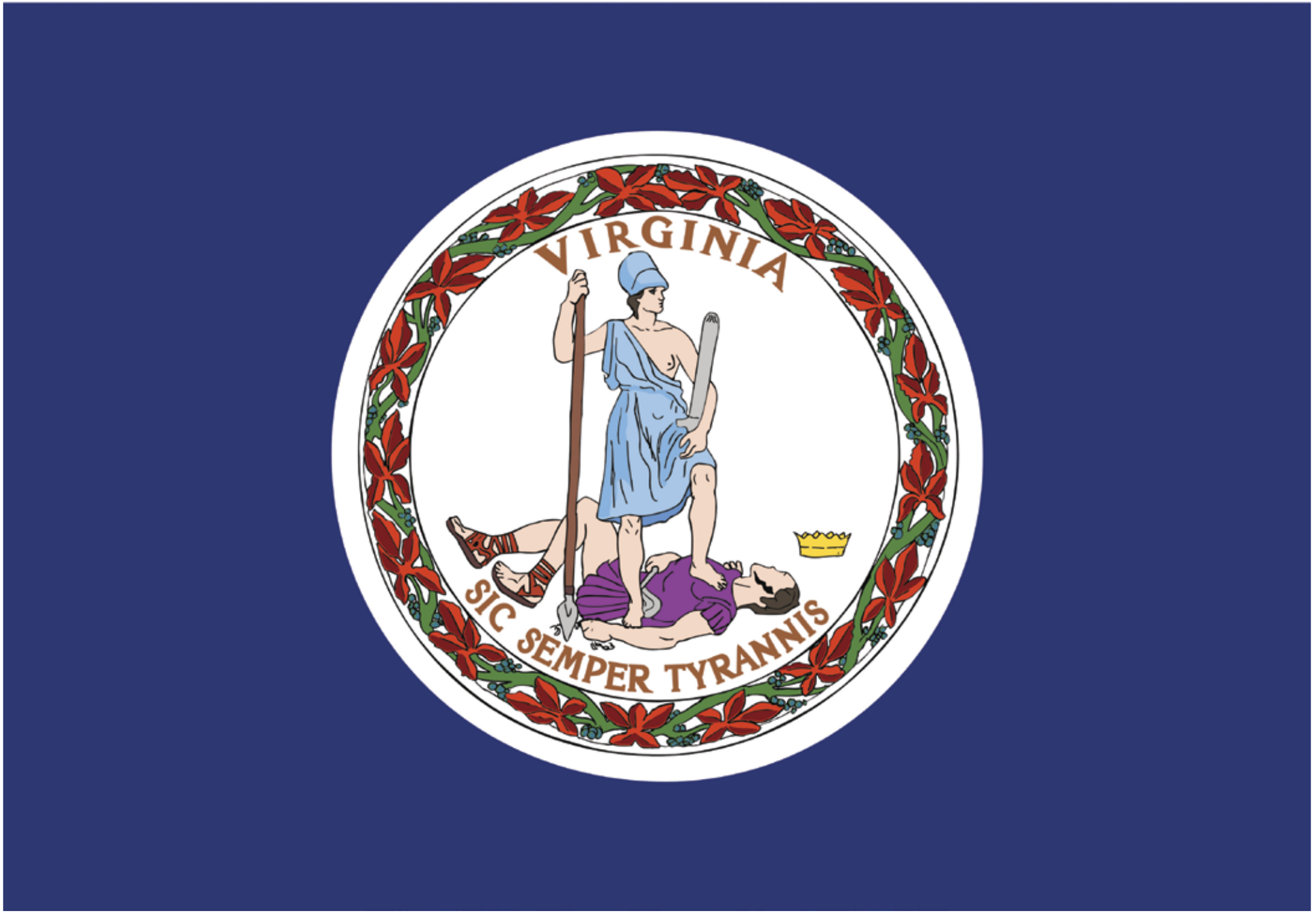
Page 102: Caesar's and Pamunkey Indian Tribe

Page 103: Rivers Casino

Page 140: City of Winchester, Virginia

Page 159: The Winchester Star

Sunset on the James River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