


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

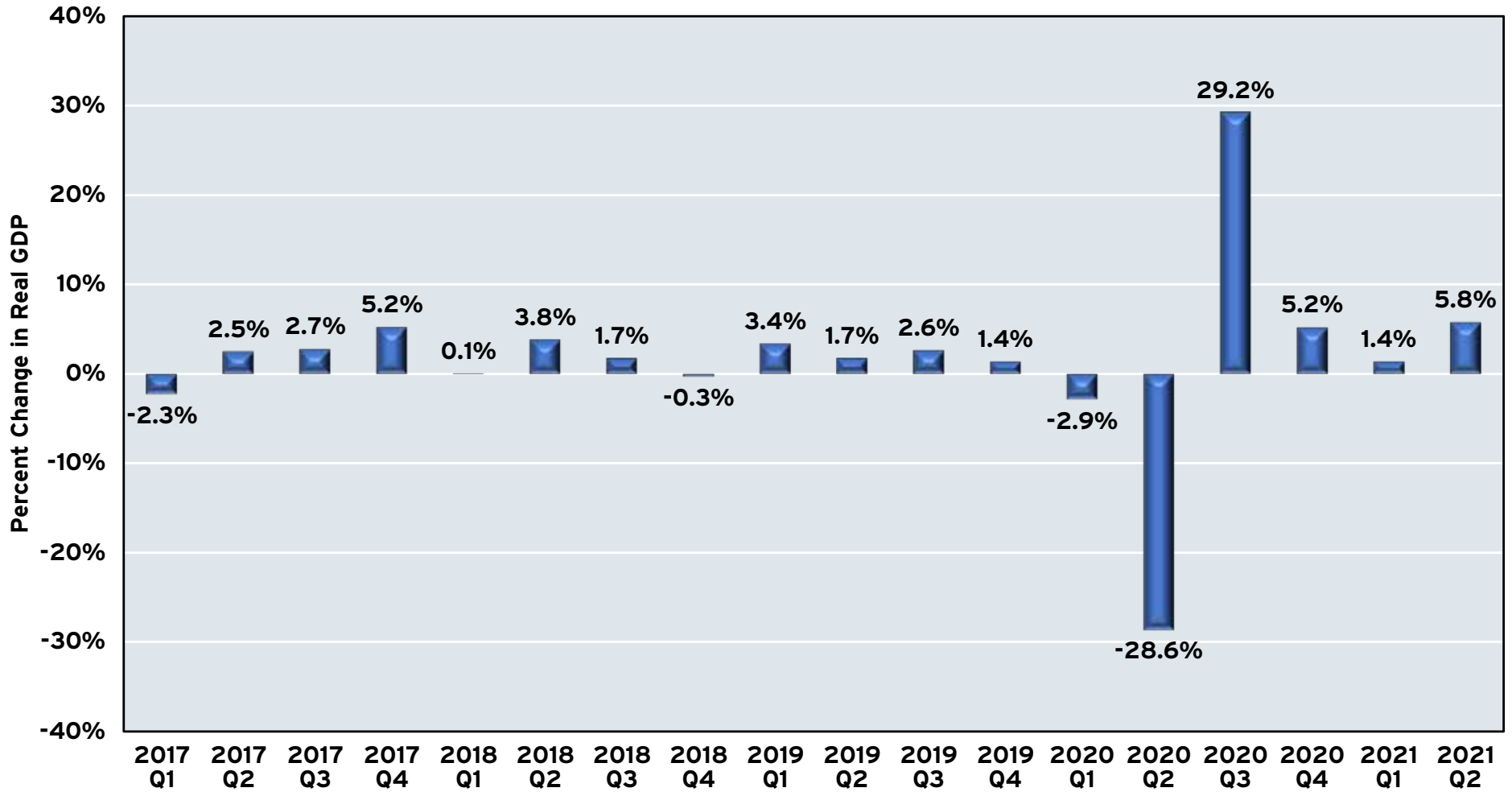
**QUARTERLY REAL GROSS DOMESTIC PRODUCT:
VIRGINIA AND THE UNITED STATES, 2019 Q1-2021 Q4
(MILLIONS OF DOLLARS)**

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.

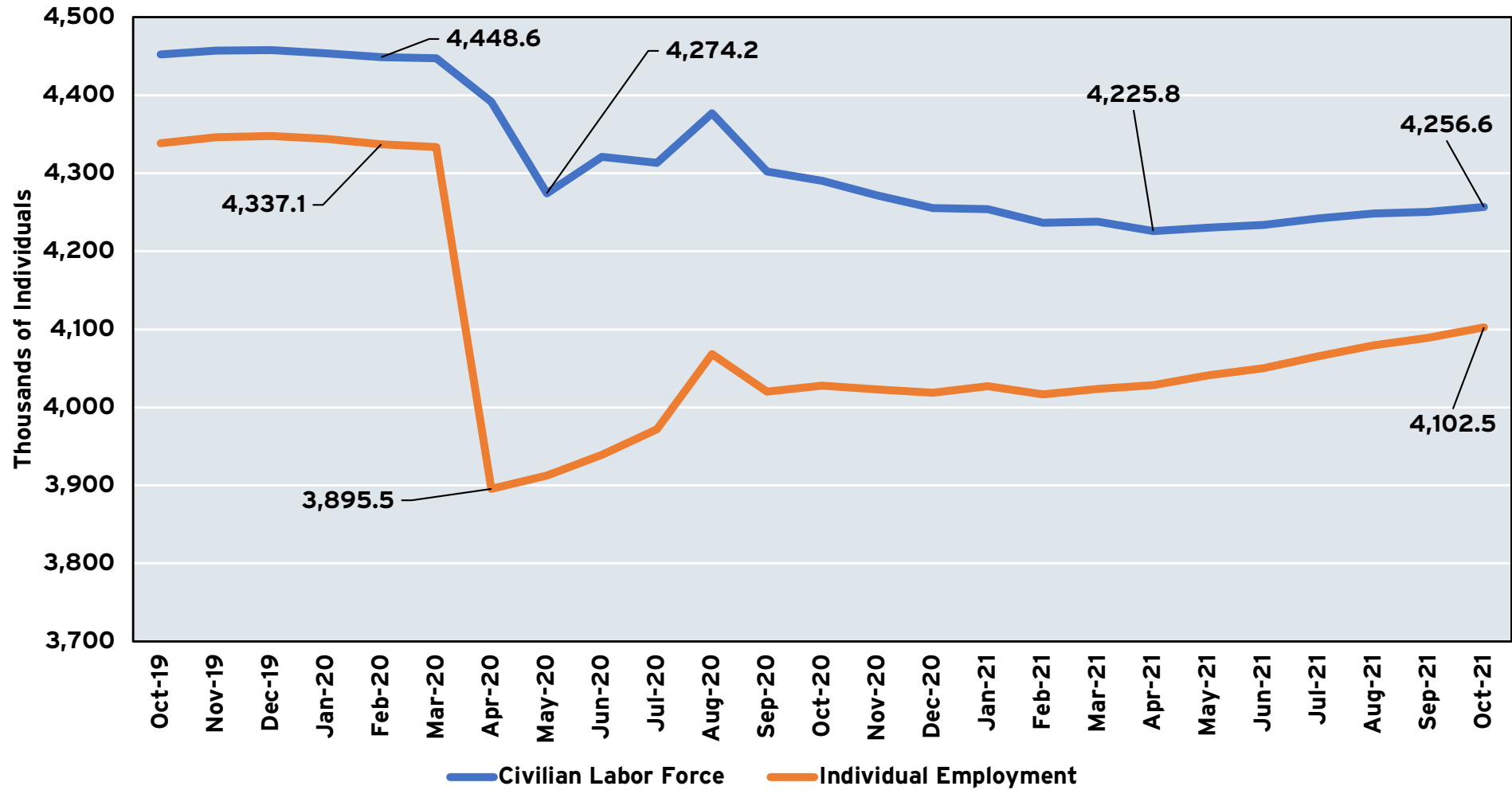
While pundits and politicians prefer simple explanations of why the labor force has declined in Virginia (and the United States) when compared to the start of the pandemic, the reasons are more nuanced. Surveys suggest that child care availability, pandemic-related health concerns and transitions to 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

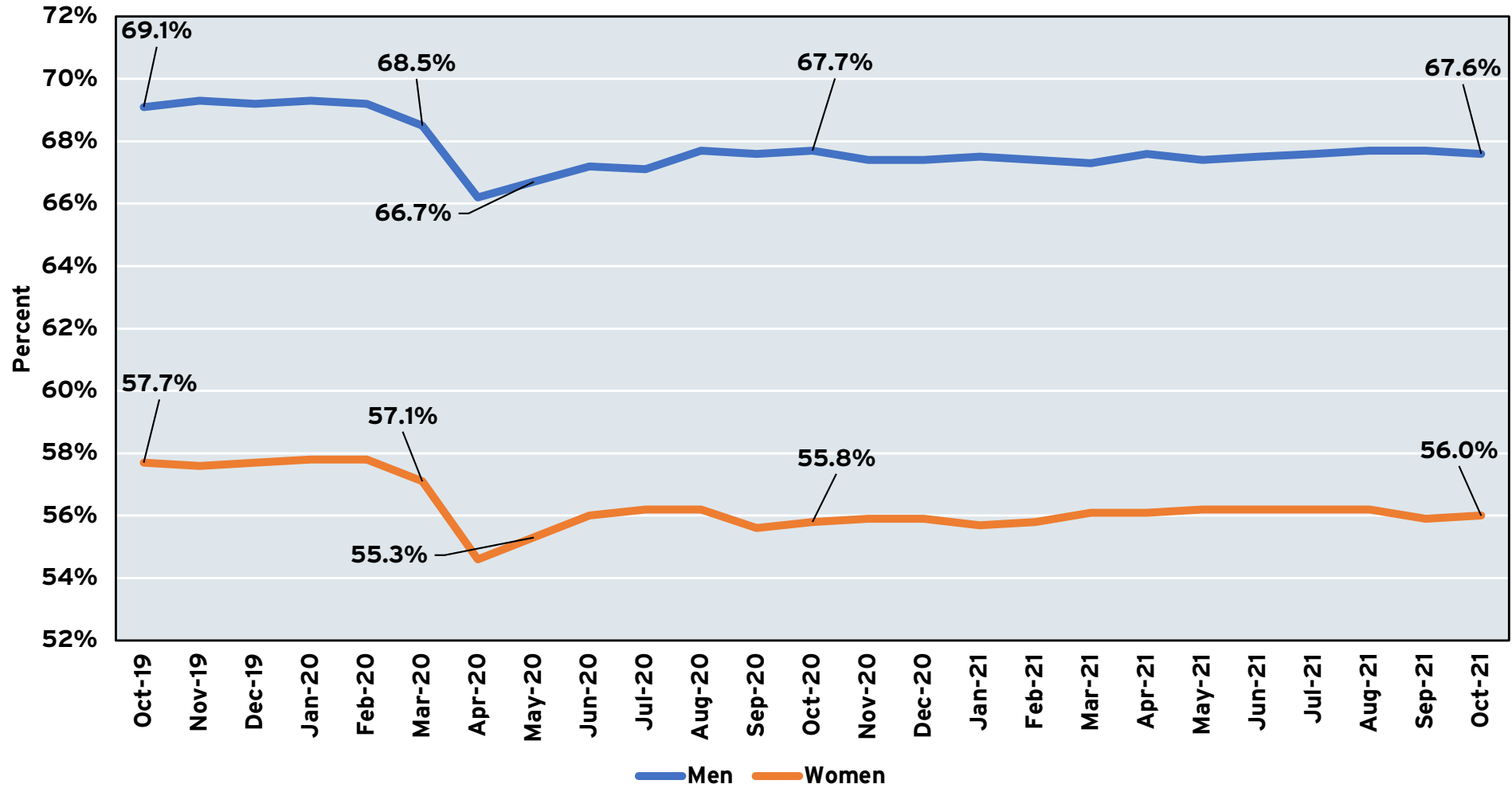
**CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT:
VIRGINIA, OCTOBER 2019-OCTOBER 2021**



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.

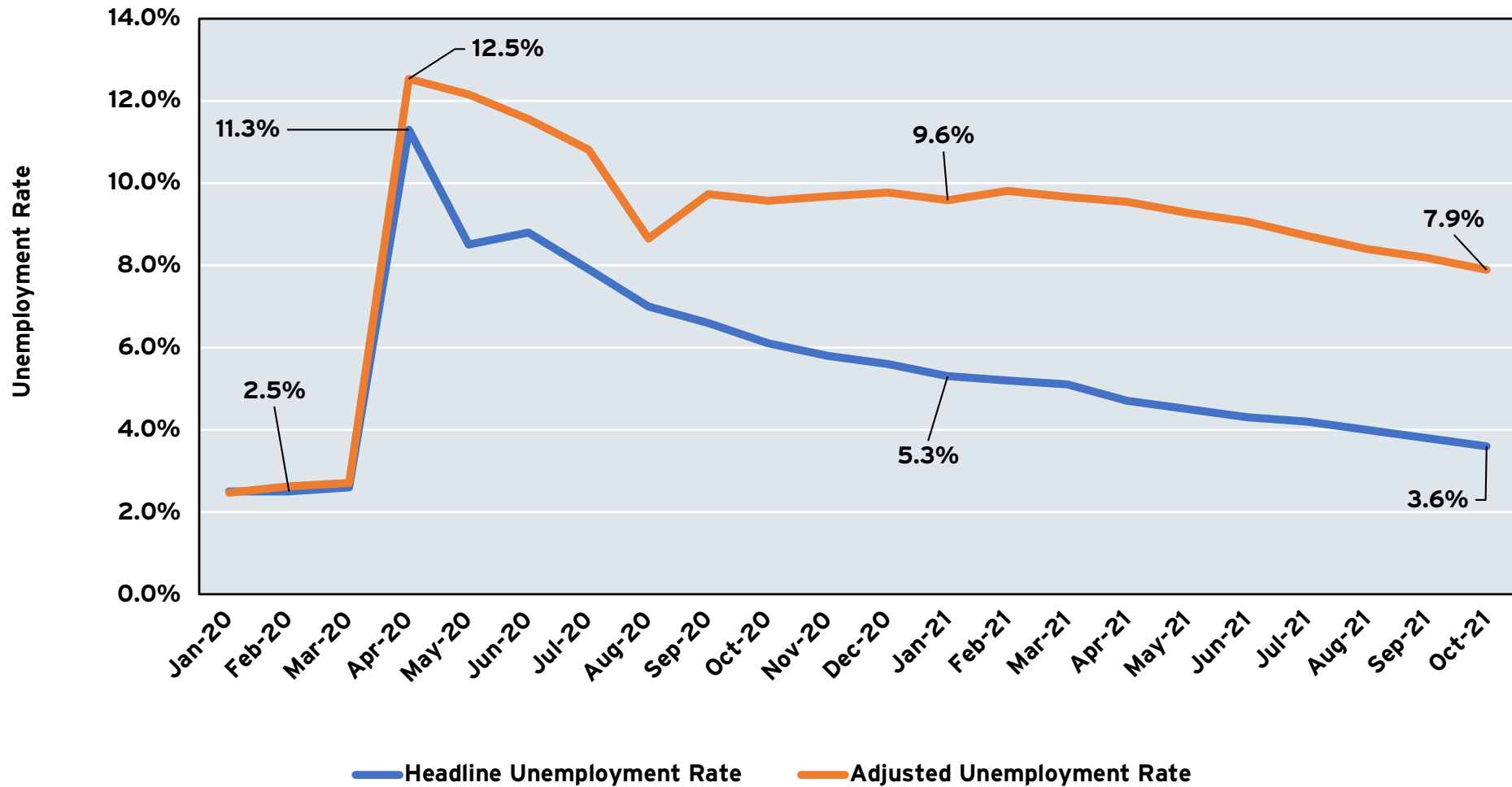
In Graph 4 we also suggest an alternative measure of unemployment that provides insight into this phenomenon. We treat those who exit the labor force as unemployed individuals instead of removing them from the labor force entirely. While we understand that some departures from the labor force may be 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-fknwenabozevbojmlgtiqrlqja-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.

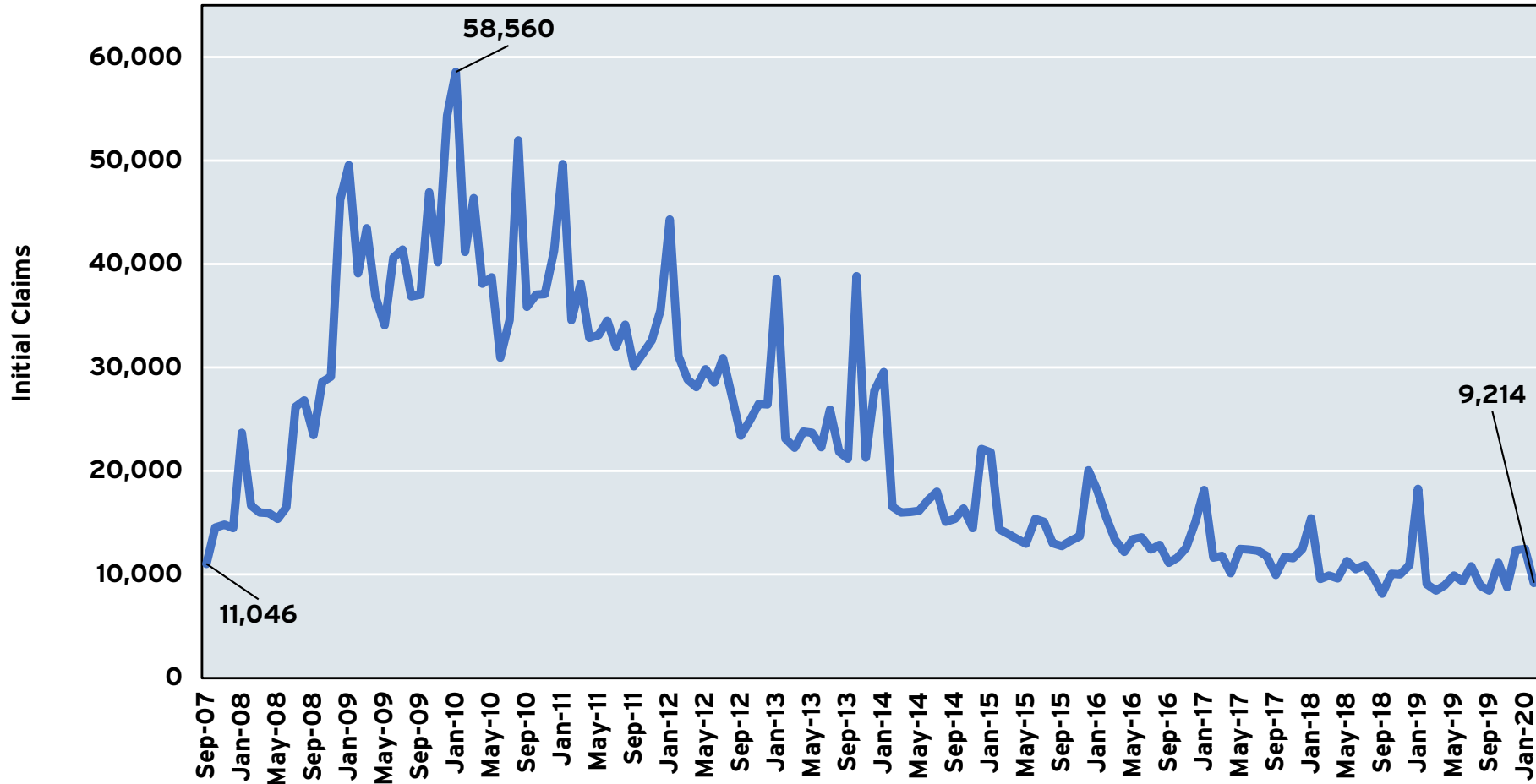
Graph 5 provides context for the pandemic's economic shock. Immediately prior to the Great Recession of 2007-09, slightly more than 11,000 Virginians filed an initial claim for unemployment benefits in September 2007. Initial unemployment claims in the Commonwealth peaked after the recession was officially 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

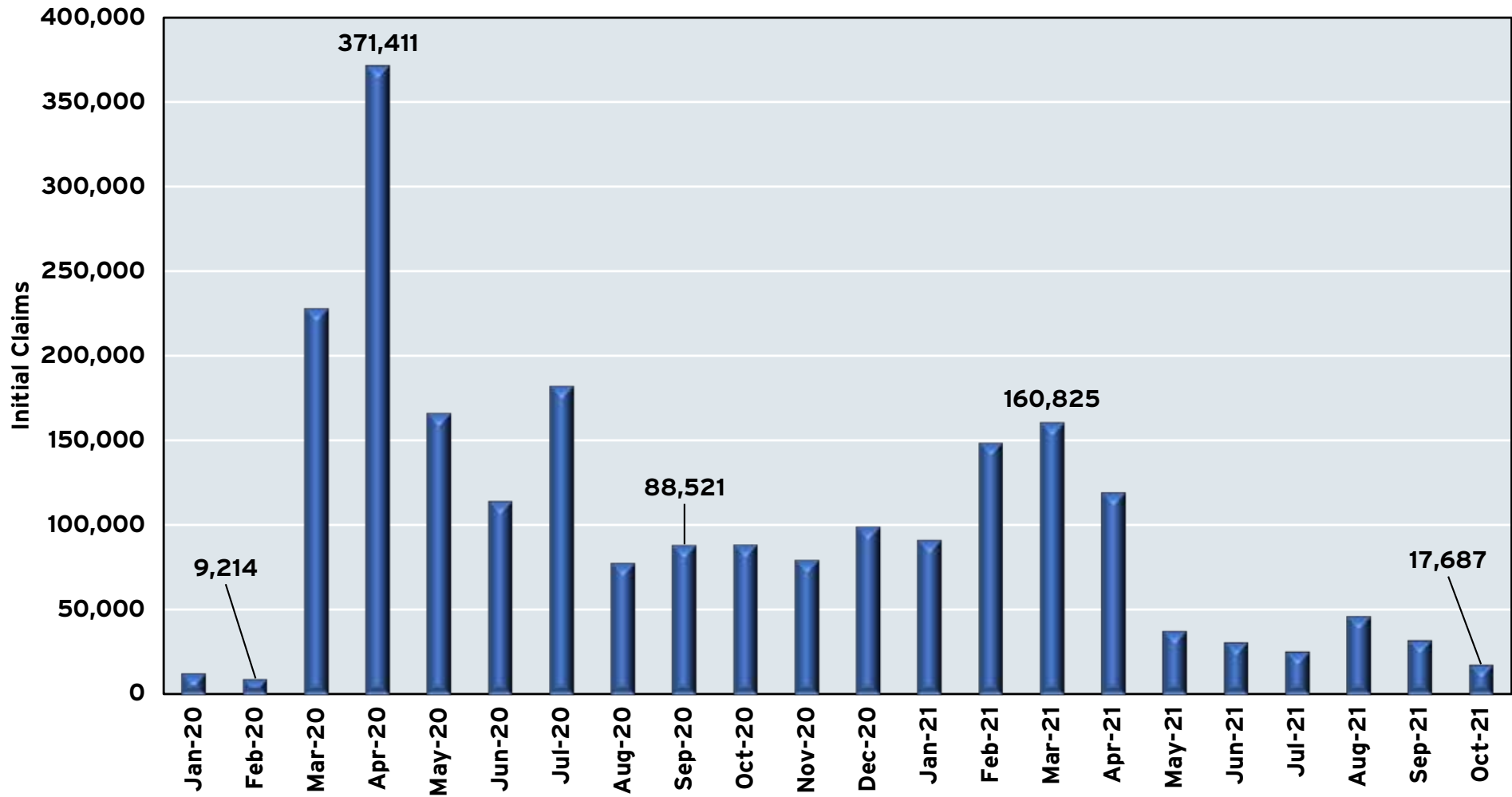
**MONTHLY INITIAL UNEMPLOYMENT CLAIMS:
VIRGINIA, SEPTEMBER 2007-FEBRUARY 2020**



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.

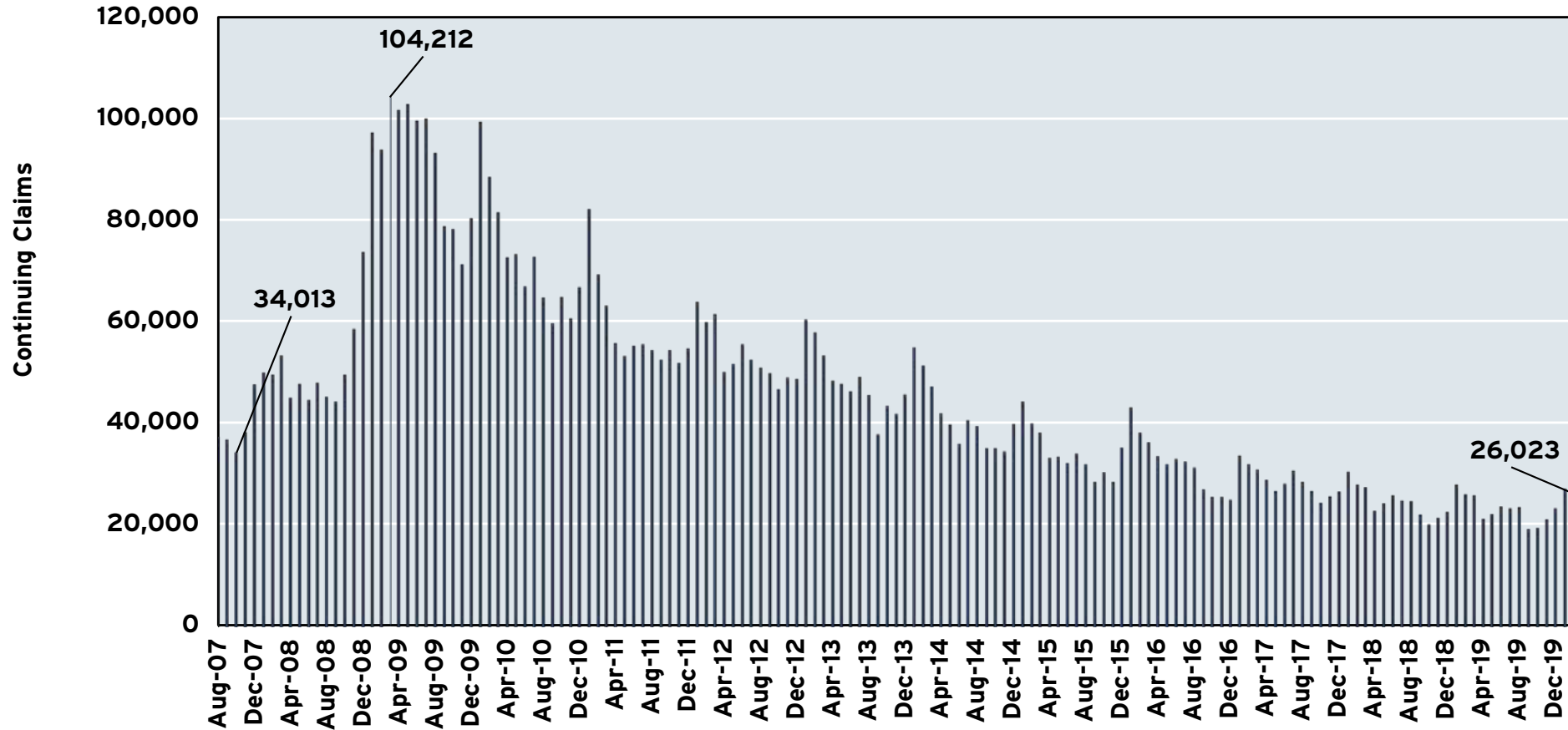
Continued unemployment claims in Virginia increased 39-fold from the week ending March 14, 2020, to the week ending July 11, 2020. Adjectives fail to describe the magnitude of this increase. More than 1 in 6 Virginia workers received some form of unemployment benefits at the peak of the COVID-19 shock. 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

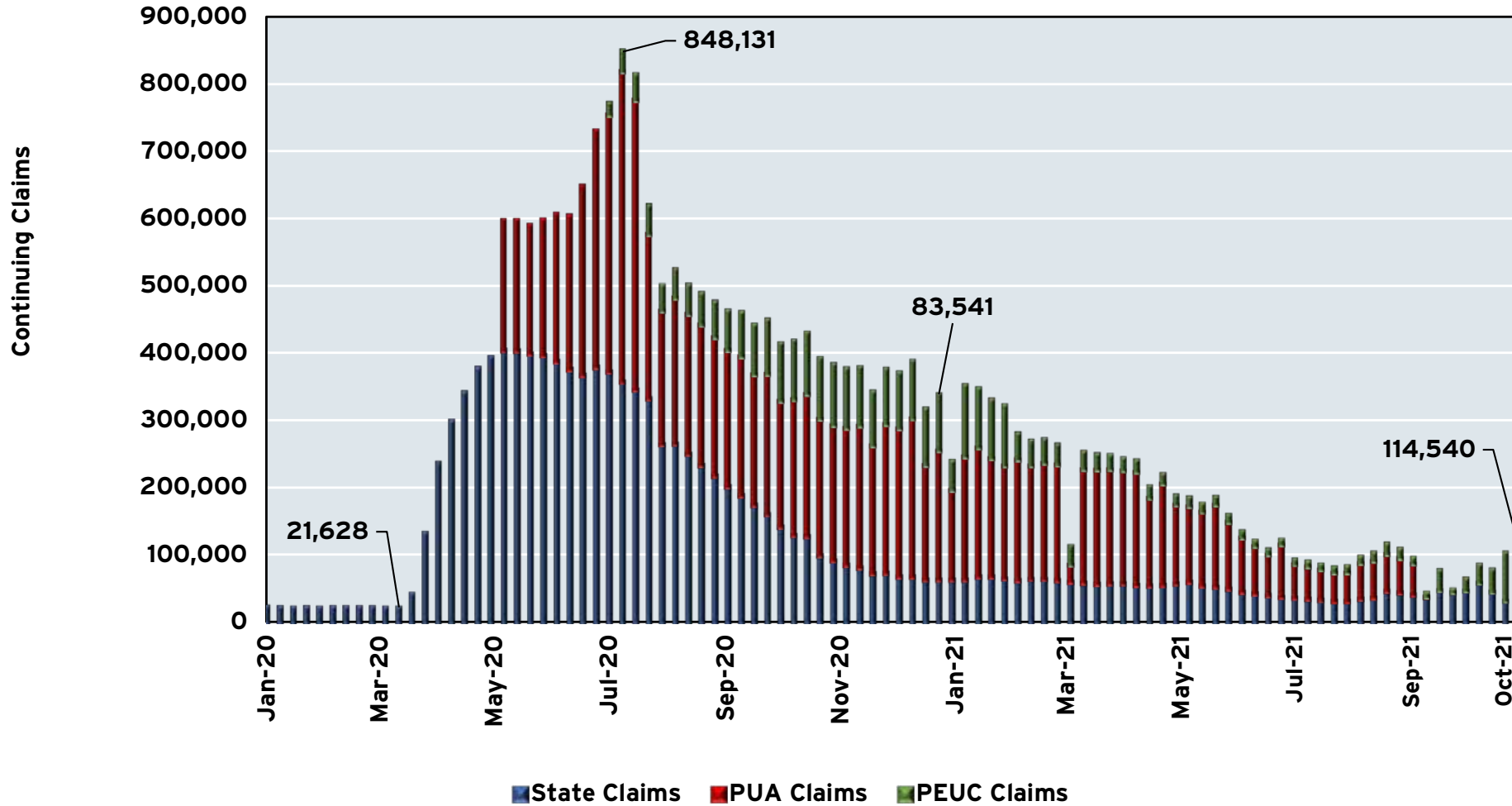
**MONTHLY REGULAR CONTINUING UNEMPLOYMENT CLAIMS:
VIRGINIA, AUGUST 2007-FEBRUARY 2020**



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.

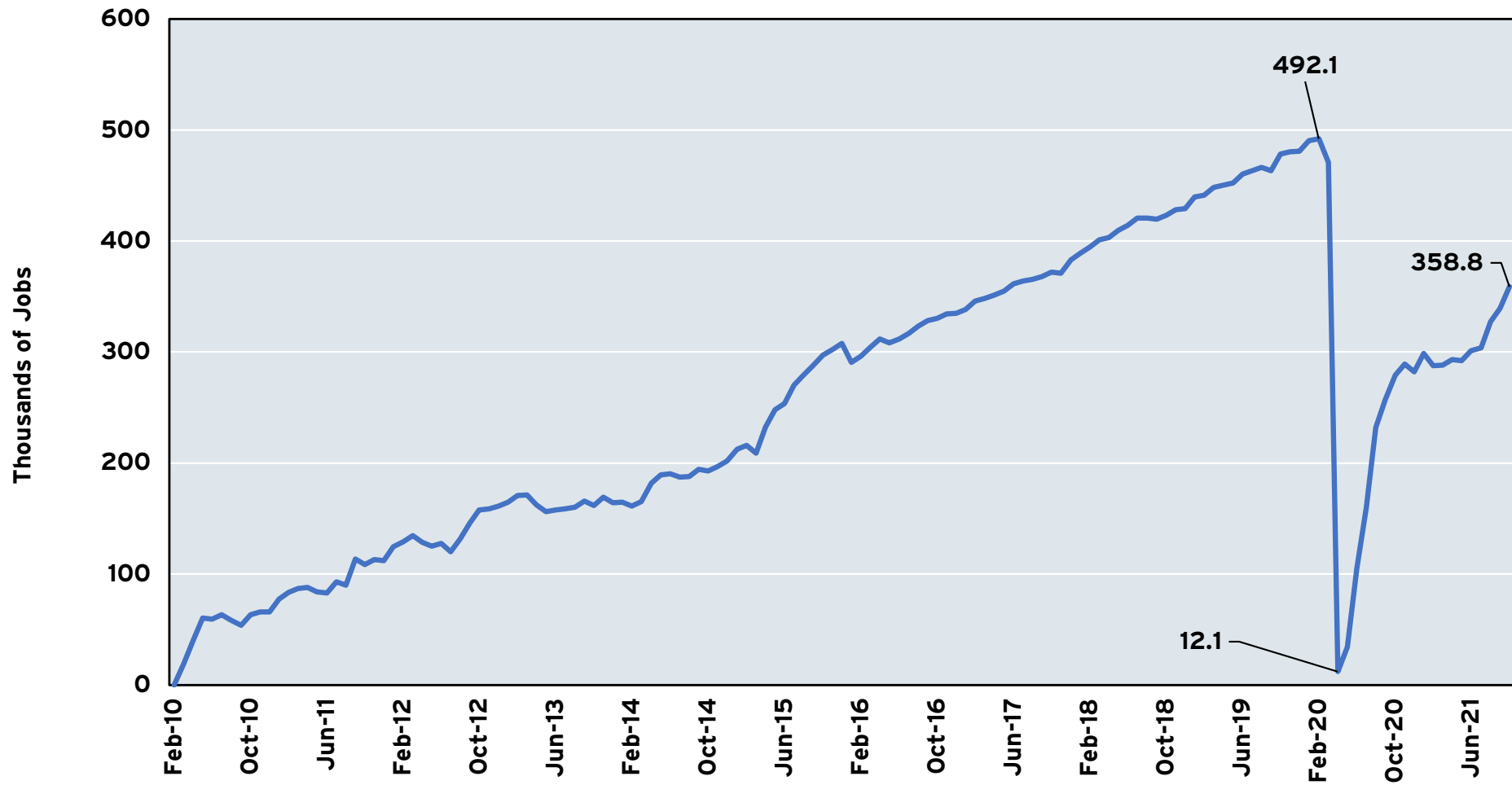
The decline in job quits in the spring of 2020 was short-lived. As economic activity picked up in the Commonwealth, job quits surged, peaking at 127,000 in April 2021. Workers in Virginia quit 3.3% of all jobs in April 2021. Through the fall of 2021, job quits have remained near record levels. In September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

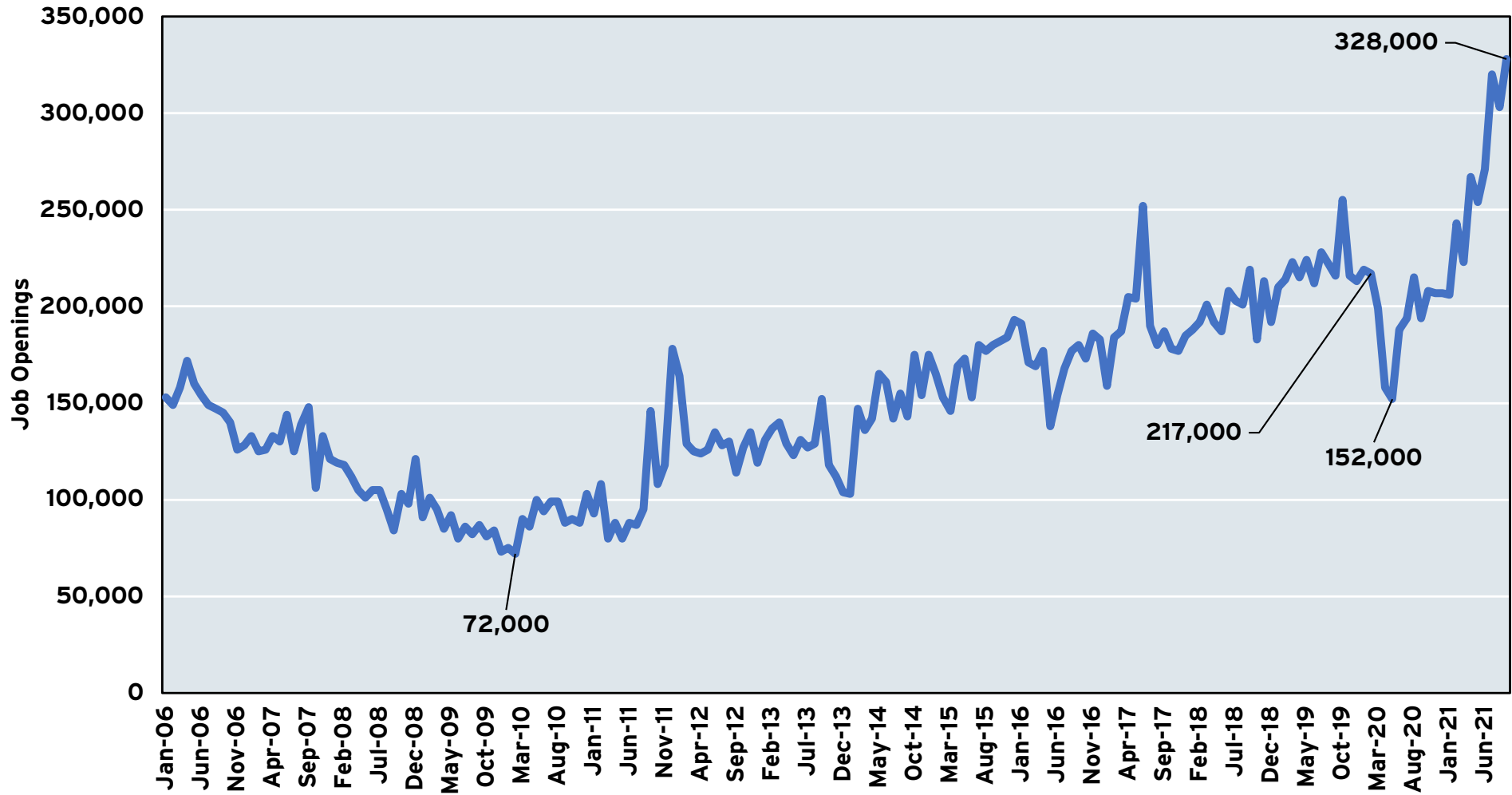
GRAPH 9

**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.

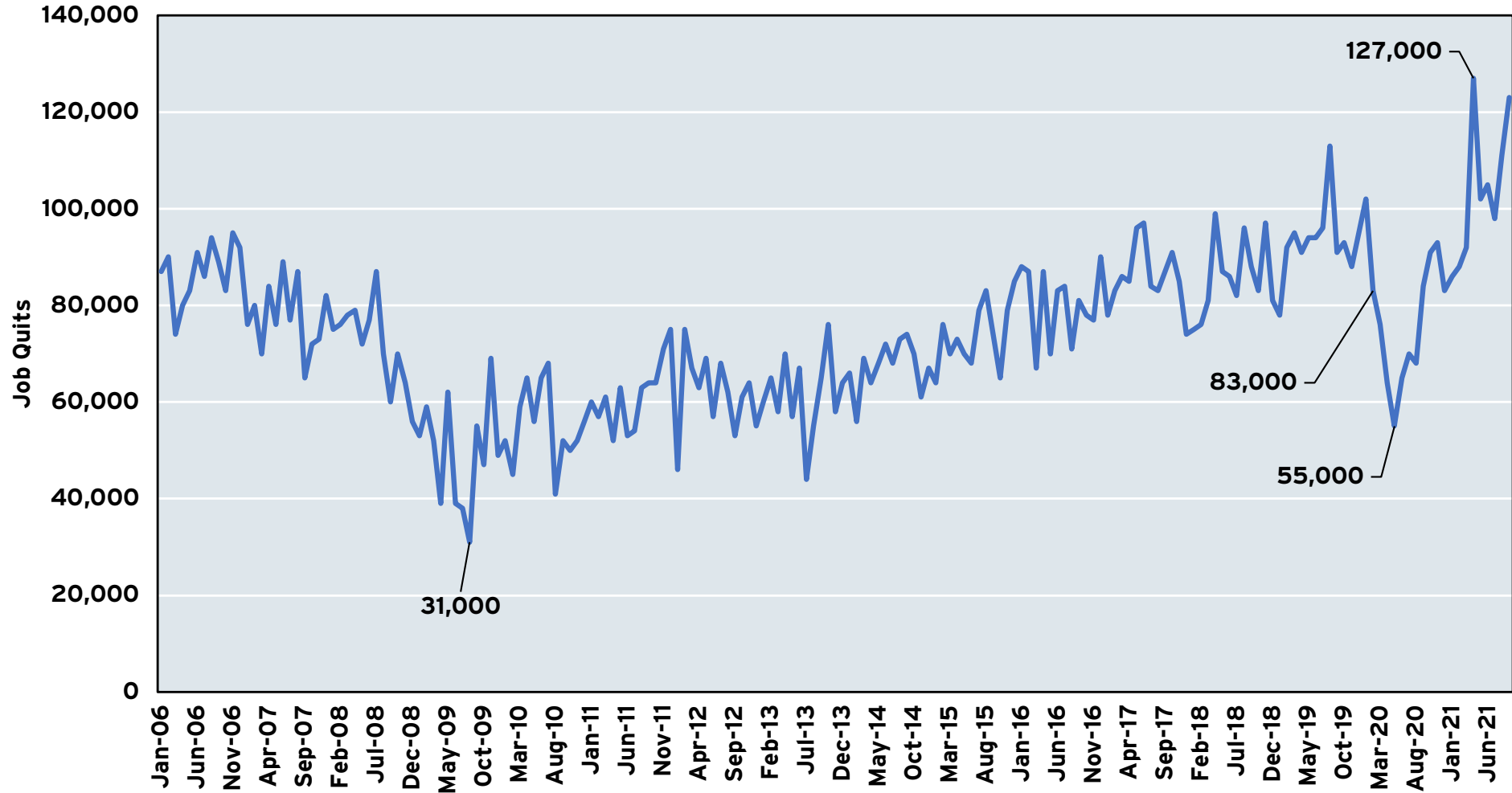
GRAPH 10
JOB OPENINGS:
VIRGINIA, JANUARY 2006-SEPTEMBER 2021



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 QUILTS:
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.

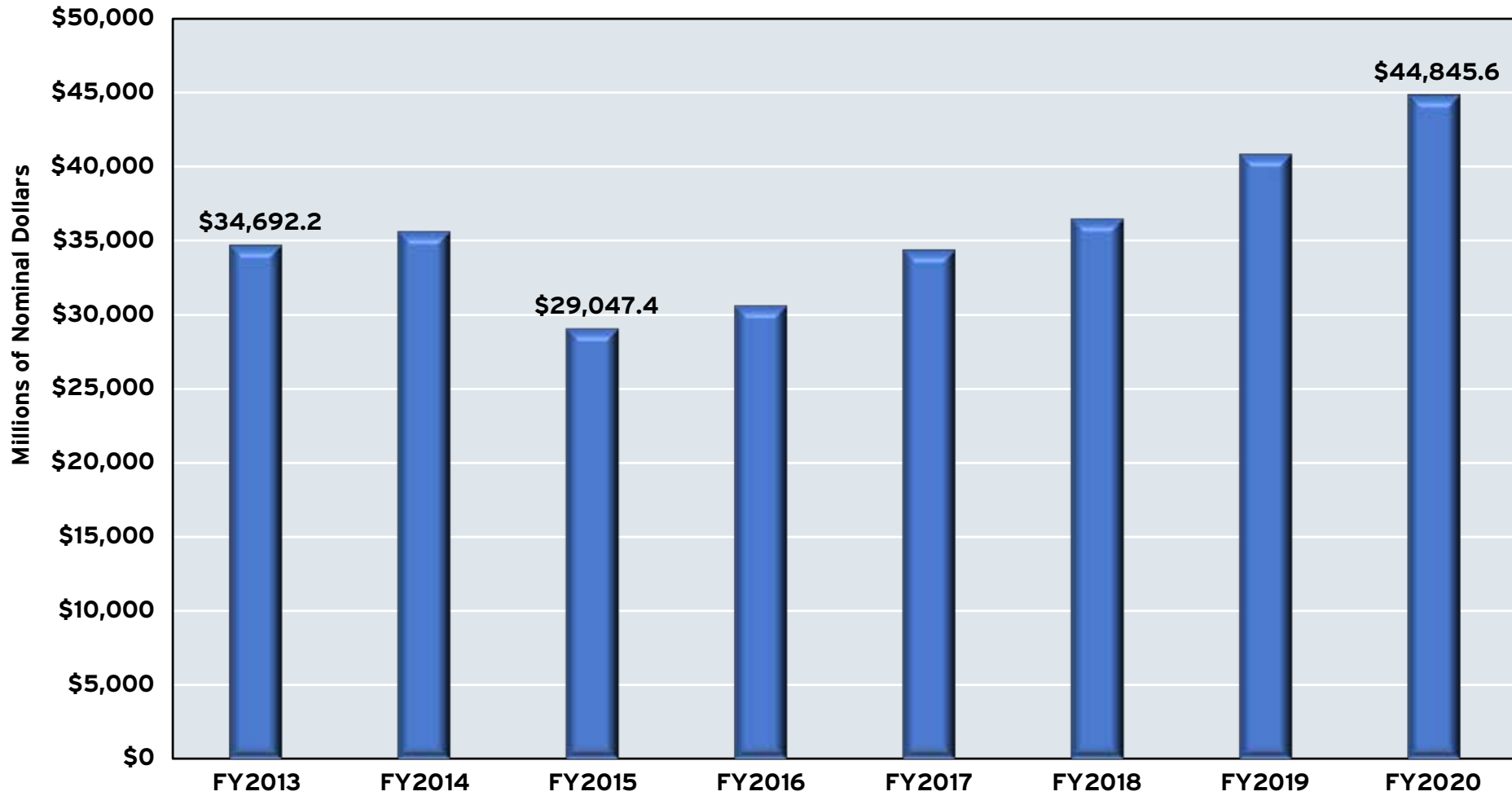
Even relatively modest increases in the DOD budget in the coming years could well be constrained by the unbridled spending habits of Congress and the president. The last time the federal government ran a surplus was FY 2001, and that was quickly undone by tax cuts in 2001 and 2003, as well as the fiscal 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

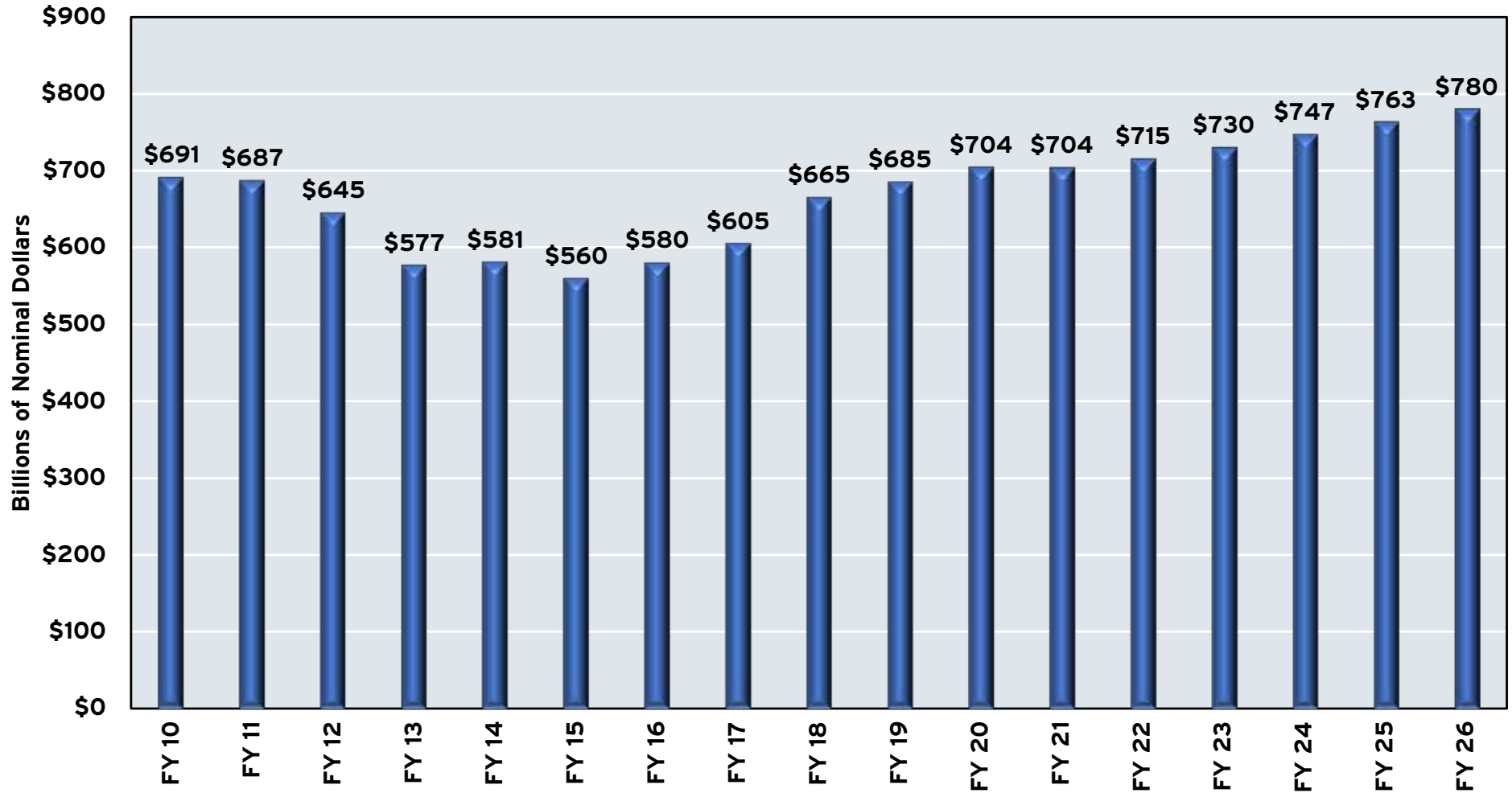
**DOD CONTRACT DEFENSE SPENDING:
VIRGINIA, FY 2013-FY 2020**



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

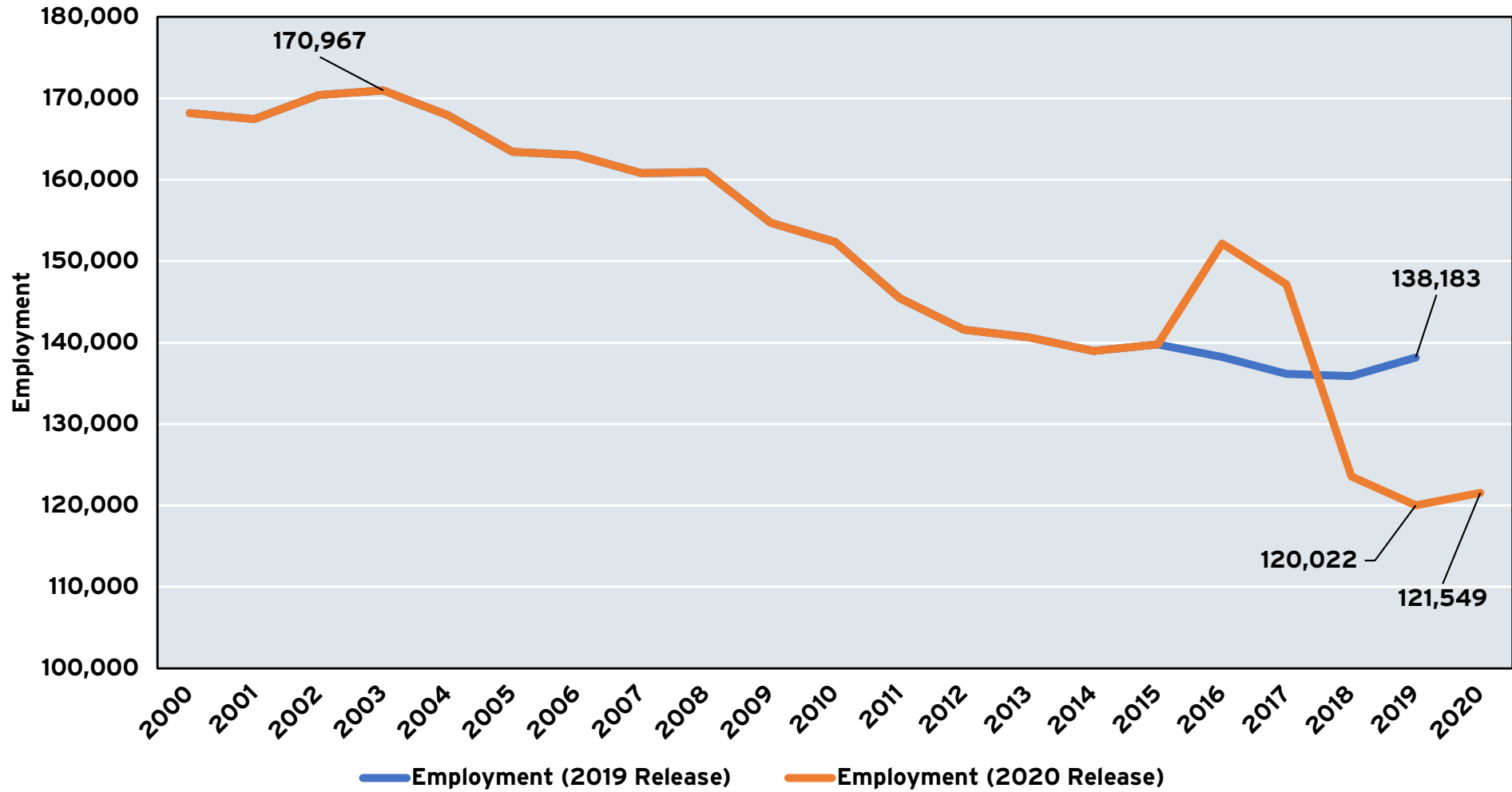
GRAPH 13

**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.

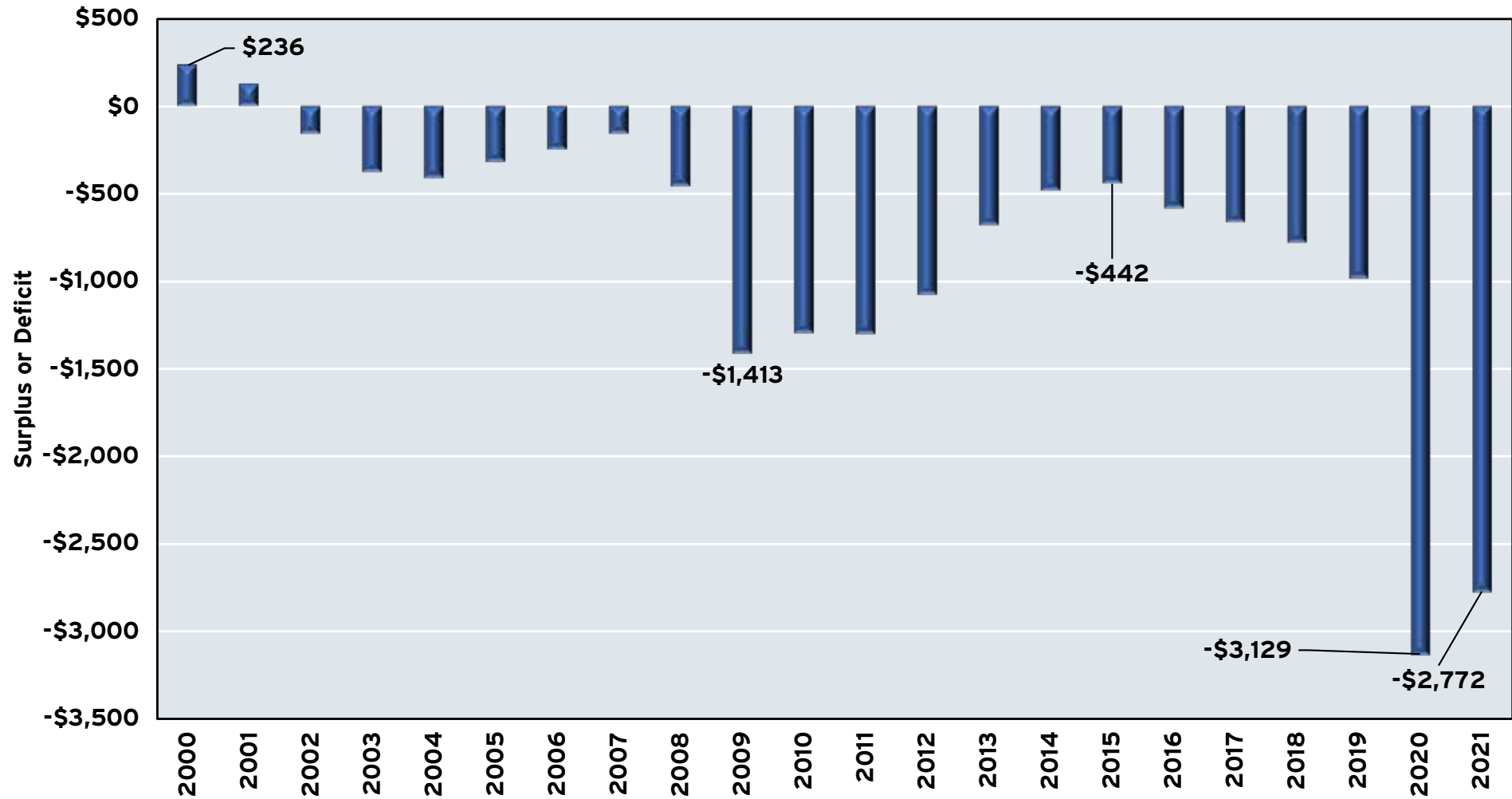
GRAPH 14
TOTAL FULL-TIME AND PART-TIME MILITARY JOBS IN VIRGINIA,
2000-2020



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.

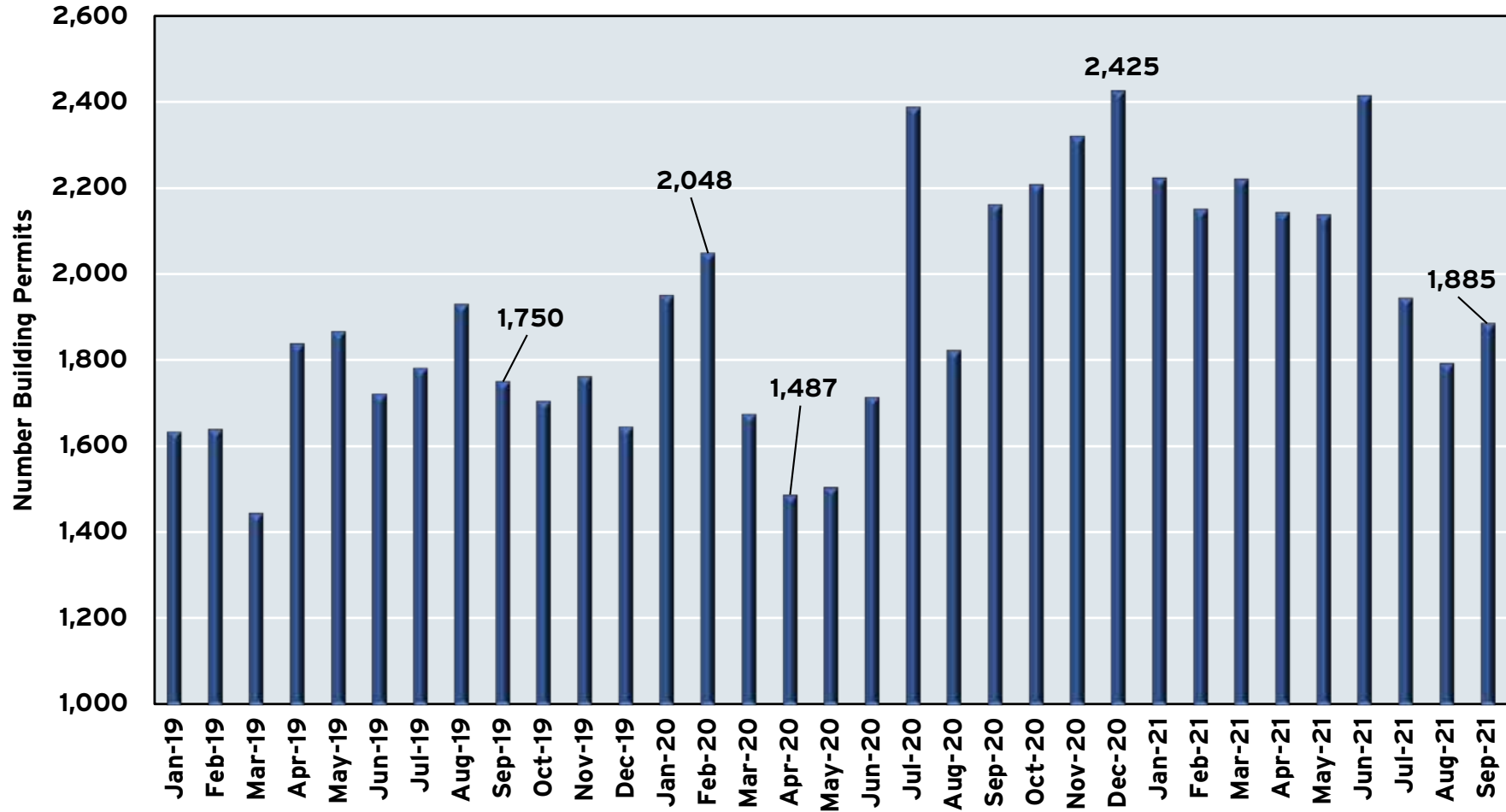
As illustrated in Graph 16, the number of building permits fell in the spring of 2020 but rebounded throughout the summer of 2020. By December 2020, building permits issued in Virginia rose to 2,425, the highest level in a decade. The level of single-family housing permits declined from a record high 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.



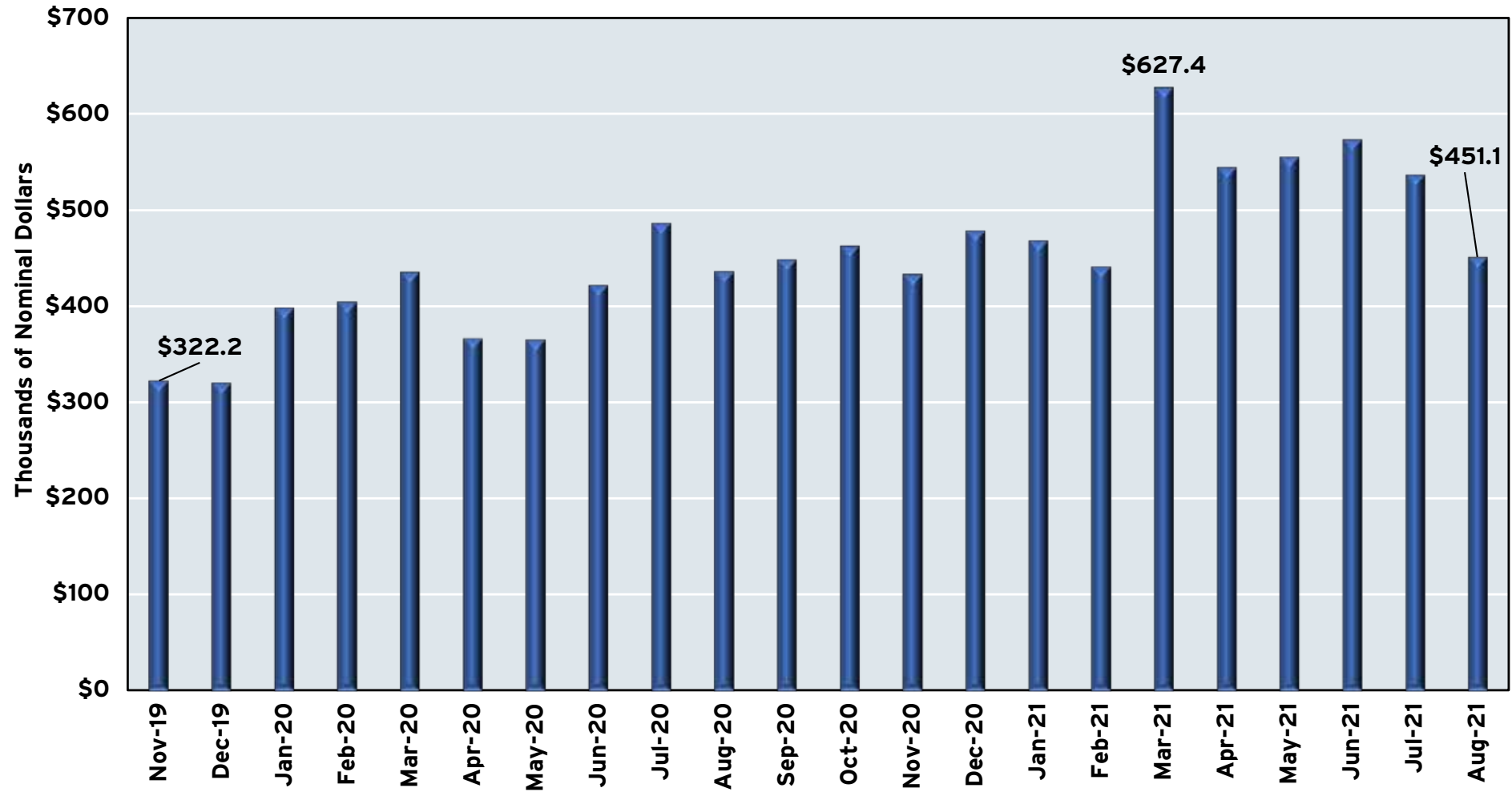
GRAPH 16

**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 [VABPIFHSA], retrieved from FRED, Federal Reserve Bank of St. Louis. Data are seasonally adjusted.

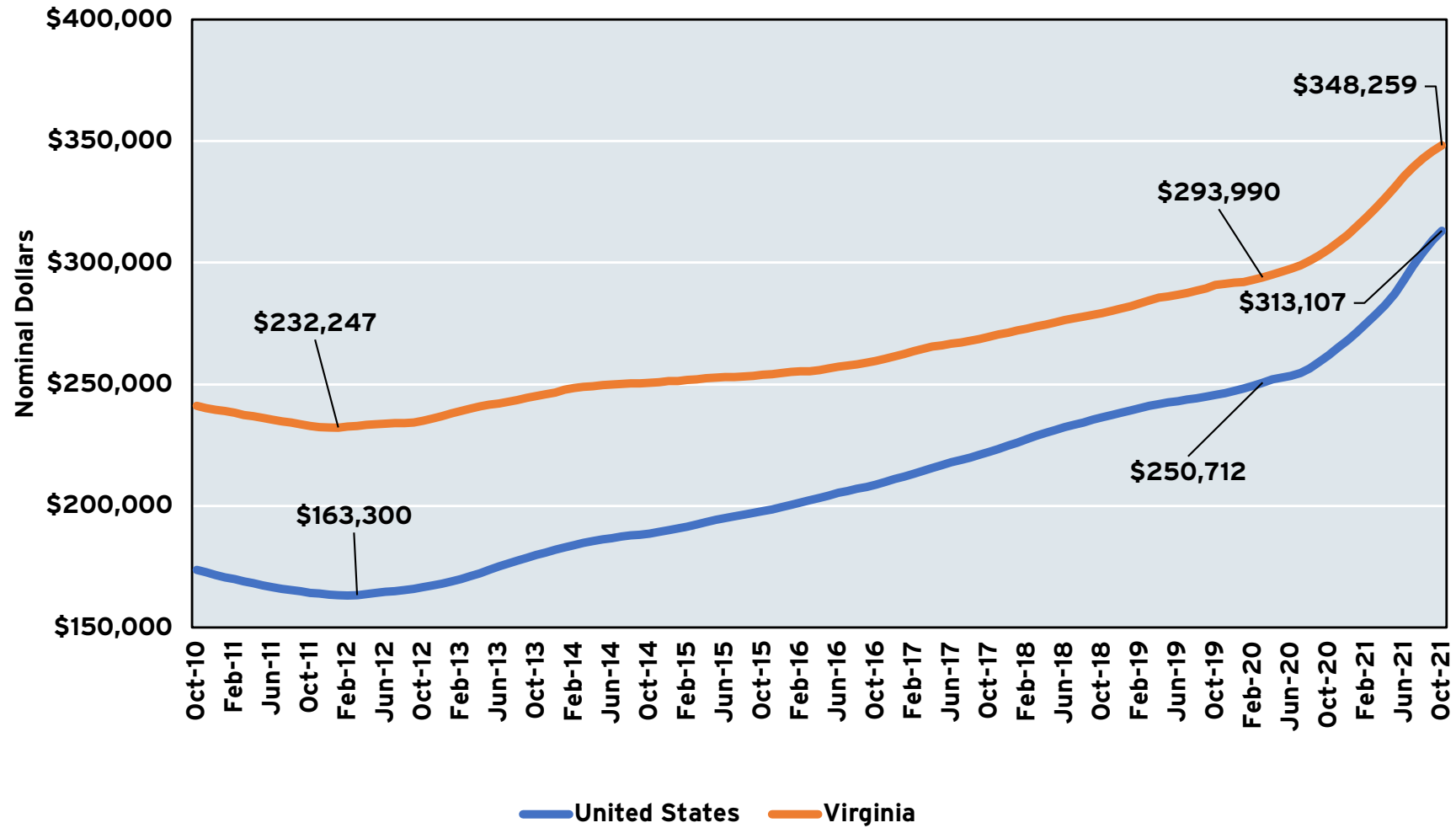
GRAPH 17
VALUE OF SINGLE-FAMILY BUILDING PERMITS:
VIRGINIA,
NOVEMBER 2019-AUGUST 2021



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%).

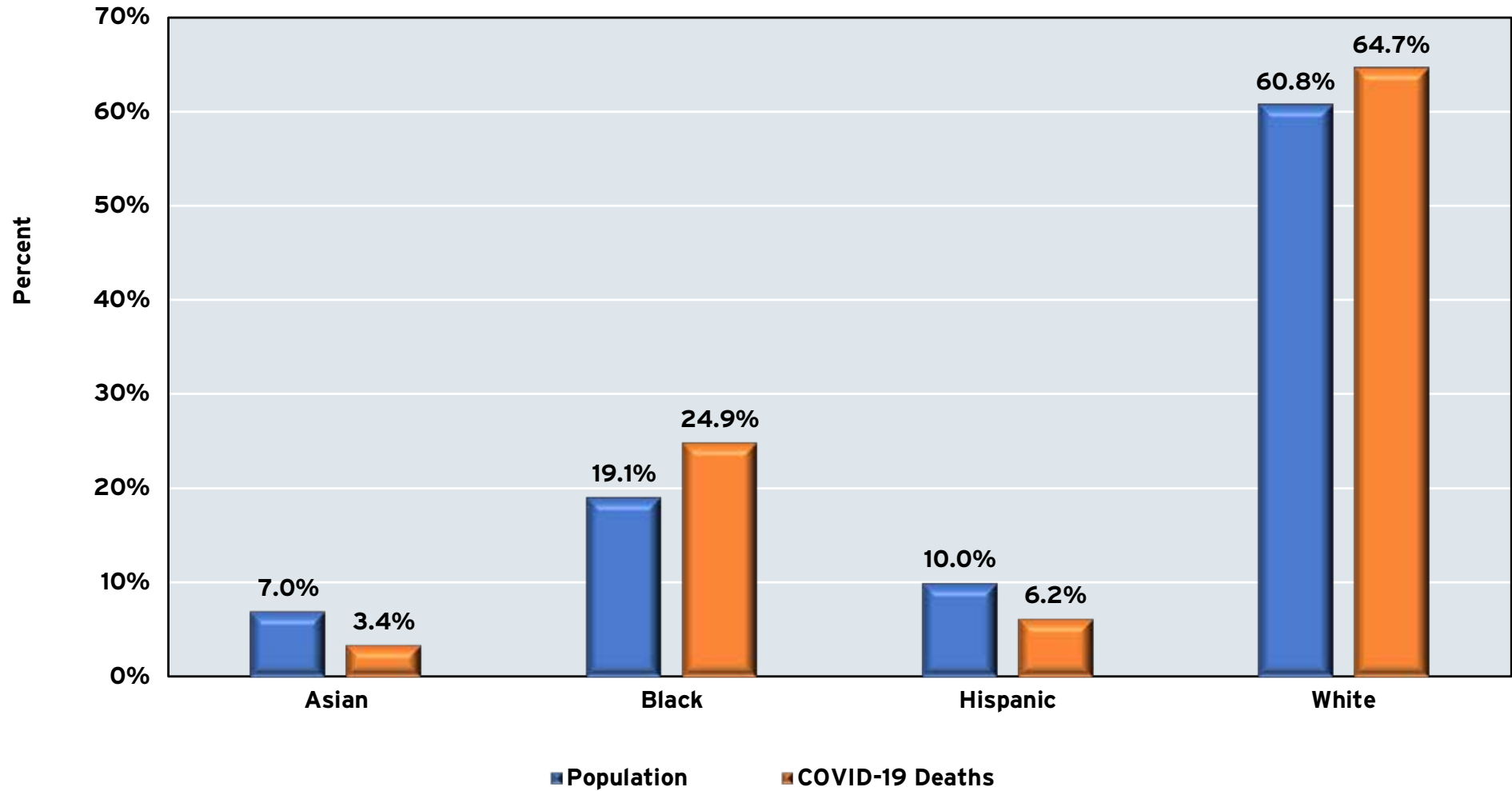
If we examine continuing unemployment claims by gender, the disparities in both the initial pandemic impact period and recent recovery are apparent. Women comprised 50.8% of the total population in 2020 and accounted for 49.3% of all continuing claims in October 2019. The share of continuing claims filed 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

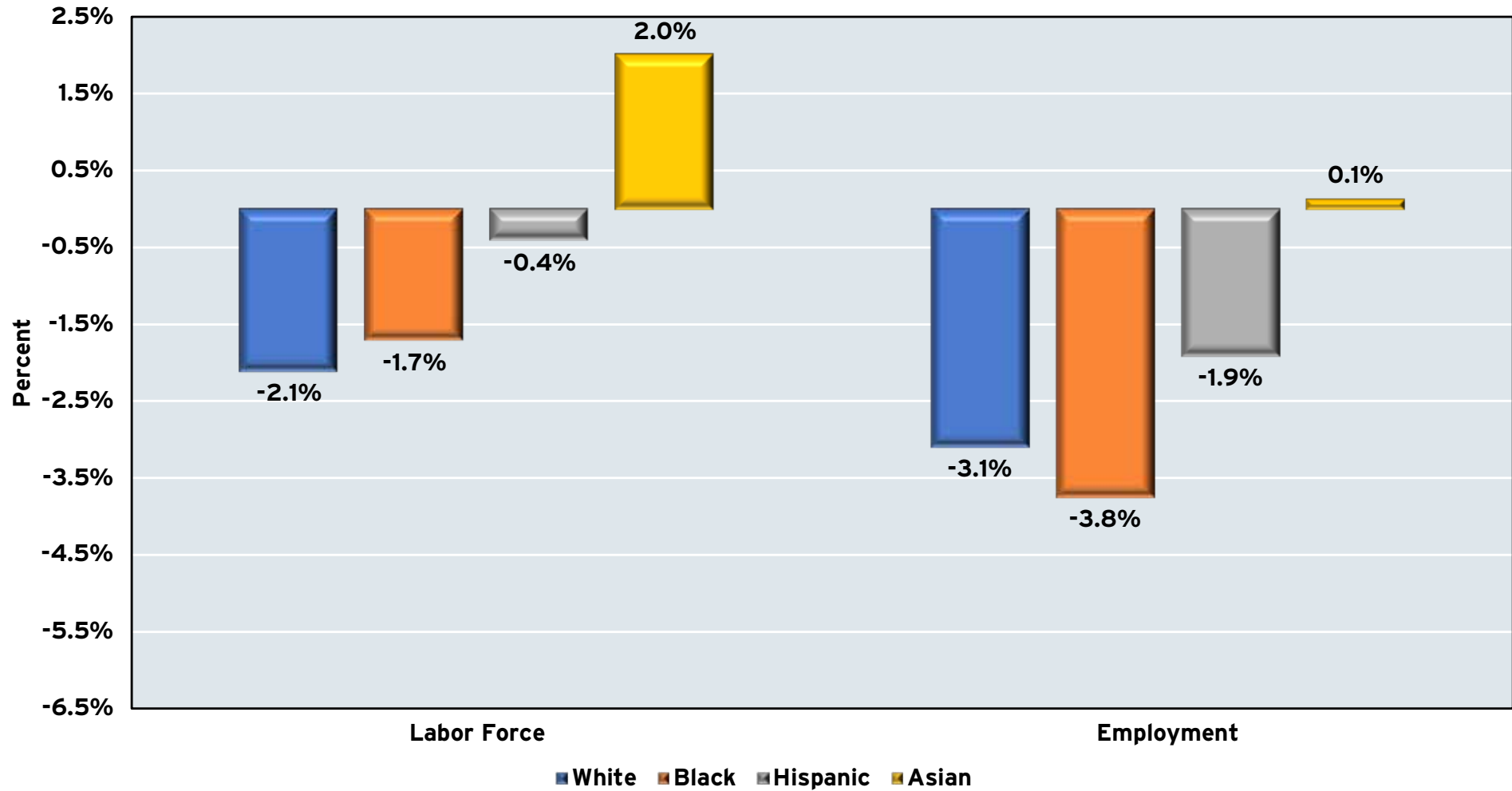
SARS-COV-2 (COVID-19) DEATHS BY RACE:
VIRGINIA, JAN. 1, 2020-NOV. 13, 2021



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

GRAPH 20

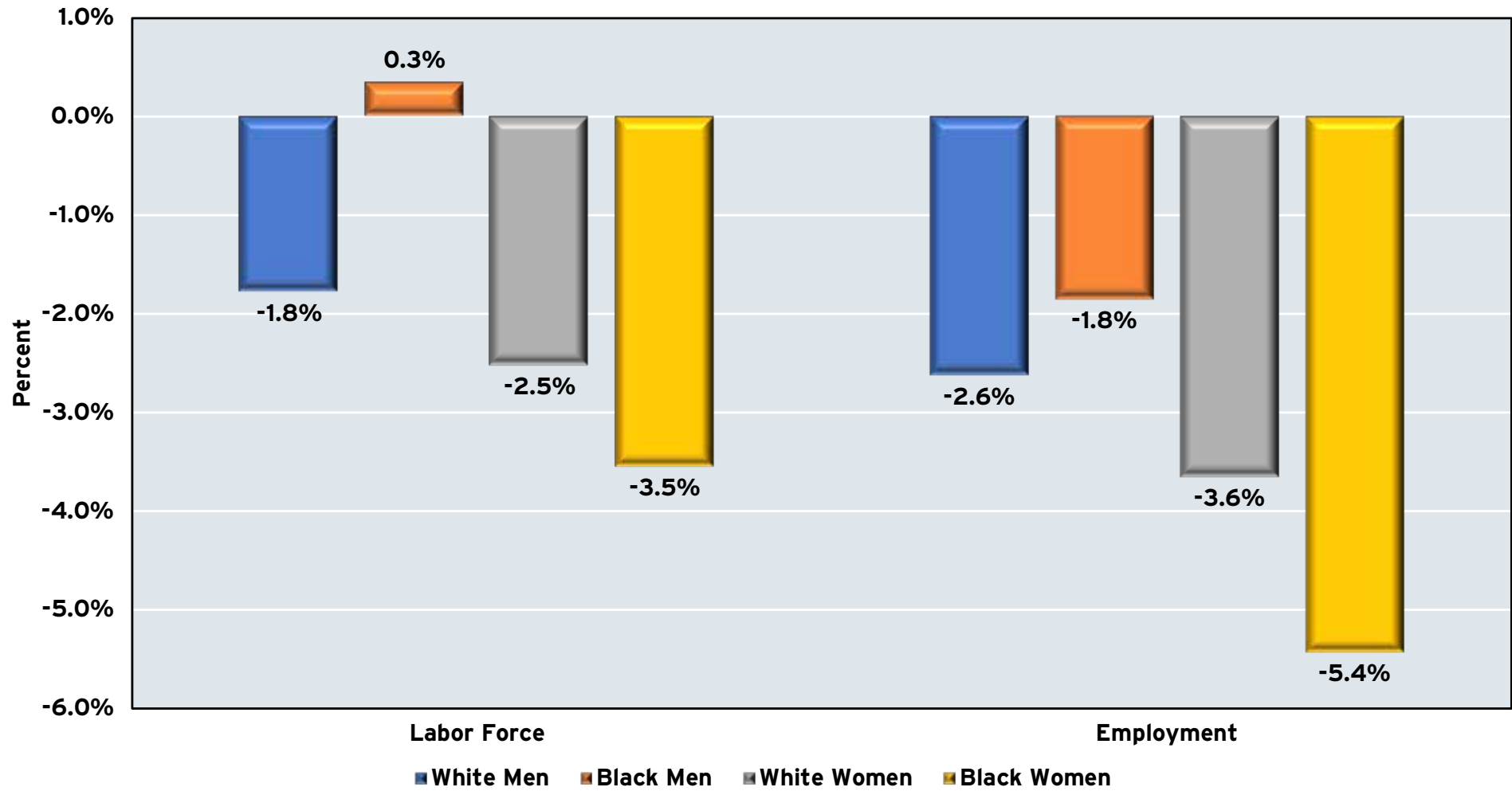
**CHANGE IN CIVILIAN LABOR FORCE AND EMPLOYMENT BY RACE:
UNITED STATES, FEBRUARY 2020-OCTOBER 2021**



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.

