2024 State of the Commonwealth Report

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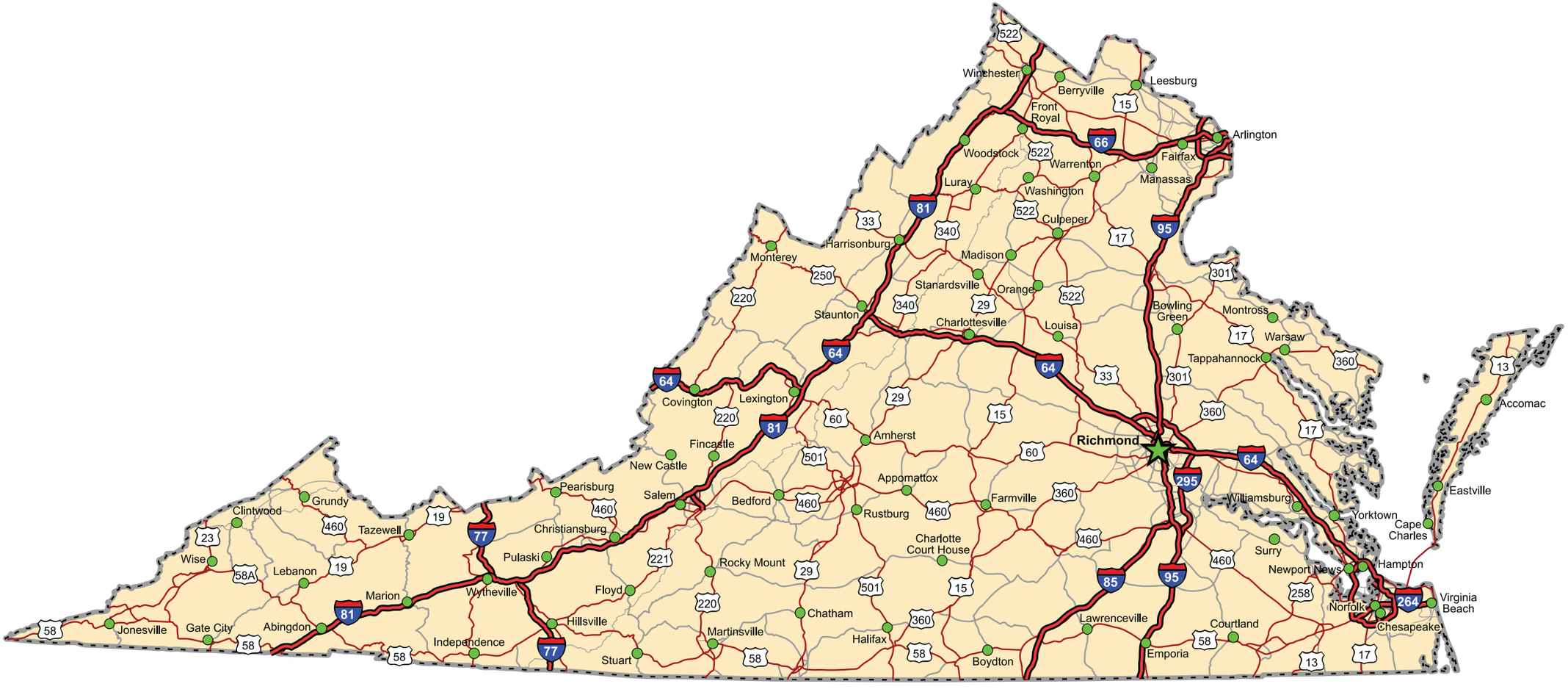
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December 2024

Dear Reader:

This is Old Dominion University's 10th 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 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.

Our work seeks to contribute to the conversation about how Virginia can foster growth across the Commonwealth without glossing over the challenges we face. We want to encourage difficult conversations to improve economic outcomes for all of Virginia's residents. There is plenty of good news to share, and now is the time to have the hard discussions about where Virginia goes over the next decade.

The 2024 State of the Commonwealth Report is divided into five parts:

Virginia's Economy Grows, Will Consumers Remain Unhappy?
By many measures, Virginia will set several records in 2024. Economic activity across the state will surpass that observed in 2023 and will represent the fourth consecutive year of economic growth. More Virginians will have been at work or looking for work than in any other year. Yet, if one asks Virginians about the state of the economy, their views are decidedly more pessimistic.

Virginia's Metropolitan Areas: Growth, Challenges, and the Road Ahead
In this chapter, we survey the performance of Virginia's metropolitan areas this decade. We first discuss population trends and the demographic challenges facing metro areas. We then delve into measures of economic activity, including taxable sales and Gross Domestic Product (GDP). We also discuss labor markets in each metro area. We conclude with thoughts about how Virginia can foster growth across its metropolitan areas.

Does It Still Pay to Attend College in Virginia?
In 2022, more than 1 in 5 college graduates across the United States found themselves earning less than the national median income for high school graduates in the same graduating class year. In the same year, on average, 19.9% of graduates from four-year Virginia institutions of higher education earned less than the typical high school graduate 10 years after entry into college or university. In this chapter, we ask whether attending college is a 'good deal' for many Virginians.

Rising Disability Rates (or Not): A Sign That We Care or An Epidemic Problem In the Commonwealth?
In this chapter, we examine one particular corner of a much larger disability story --- those individuals who have a work history and subsequently seek to receive income from the Social Security Administration because of that disability. Contrary to what many people believe, both the number of applications for worker disability and rates of approval of those applications have trended downward in recent years. We examine how worker disability rates have changed over time across the nation and Commonwealth.

An Older Commonwealth, A Better Commonwealth?
In this chapter, we examine how the population of Virginia has changed over time, with a specific focus on the resident population aged 65 and above. We break down the population aged 65 and above by sex and race and ask how these differences may impact the Commonwealth over time. We explore the characteristics of this population and discuss how Virginia is aging compared to its neighbors. We conclude with thoughts on how the 'graying' of Virginia may influence the demand for public goods and services 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.

We would like to thank our donors for their historic and current investments in the work of the Dragas Center for Economic Analysis and Policy.

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The following individuals were instrumental in the writing, editing, design and dissemination of the report:

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Mohamed Rahoui
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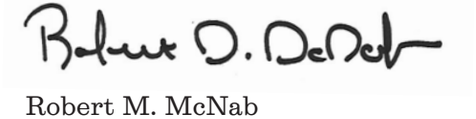
All 10 State of the Commonwealth Reports are available at www.ceapodu.com.

If you have comments or suggestions, please email us at dragascenter@odu.edu.

Sincerely,



Robert M. McNab
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Chair and Professor of Economics, Department of Economics
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VIRGINIA'S ECONOMY GROWS, WILL CONSUMERS REMAIN UNHAPPY?

"A happy customer tells a friend;
an unhappy customer tells the world."

– Anonymous

By many measures, the Commonwealth of Virginia will set several records in 2024. Economic activity across the state will surpass that observed in 2023 and will represent the fourth consecutive year of economic growth. More Virginians will have been at work or looking for work than in any other year, and the state unemployment rate will approach the record low. Inflation decelerated through the first nine months of 2024, and the Federal Reserve Bank pivoted to a more accommodative monetary policy in September 2024. For homeowners, gains in real estate values were a boon to calculations of net worth. The state government will likely receive a record level of tax revenues in the fiscal year starting July 1, 2024, and CNBC recently ranked Virginia as the top state in which to do business.[1] If one were an optimist, there was much in the way of good news to be gleaned from Virginia's economic data in 2024.

Yet, if one asks Virginians about the state of the economy, their views are decidedly more pessimistic. Roanoke College's survey of consumer sentiment measures how Virginians perceive the current state of the economy and their expectations about the future.[2] In the August 2024 survey, the index improved to 74.2. While this was an improvement relative to the low of 58.2

1 CNBC, "America's Top States for Business 2024," https://www.cnbc.com/americas-top-states-for-business/

2 Roanoke College, "Virginia Consumer Sentiment and Inflation Expectations Report for August 2024." August 22, 2024. Available at: https://roanoke.edu/news/rc_poll_cs_aug_2024

observed in May 2022, it was still 23 points below February 2020. In other words, while consumers were more optimistic in August 2024 than May 2022, they were more pessimistic when compared to pre-COVID sentiment levels.

Virginians' sentiment mirrors behaviors observed across the United States. Even though inflation has decelerated and, in many states, the growth in average wages has outpaced headline inflation, many consumers feel the economy is worse than it was prior to the COVID-19 pandemic. Higher prices for food, housing, restaurants, and everyday services continue to batter consumers. Inflation is not only a monetary phenomenon,[3] but also impacts consumer behavior and perceptions about the state of the economy.

Now, as the Commonwealth prepares to enter 2025, is the time to objectively assess the state of our economy and to ask how we can build upon our recent economic successes to foster growth in 2025 and beyond. We should not merely congratulate ourselves about what has gone well as there is much to be done to ensure that all Virginians share in the increasing wealth of the state. Even though Virginia continues to be ranked among the top states in which to do business (depending on one's subjective valuation of what is 'best for business'), there is still work to be done to modernize the Commonwealth's antiquated tax system (which, some argue, influences higher income households to leave the state).

There are more than enough open questions for policymakers to address over the coming year. How should Virginia invest its state government budget surpluses to foster growth? Pushing ahead with the I-87 interstate corridor connecting Hampton Roads with Raleigh and improving East-West transit corridors are two ideas that are mentioned, but can we move discussion to action? Can we improve the resilience of communities who will find themselves subject to rising sea levels or threatened by changing weather patterns? Can we foster investments in areas of the state that have fallen behind this century?

These are fundamental questions that need serious discussions, else we will find ourselves a decade later looking wistfully at a bevy of missed opportunities. The time is now for the Commonwealth to put aside our sometimes childish discussions of 'hot topic' issues that have little to do with the lives of everyday Virginians. We must recognize that social media often rewards the outrageous and highlights invective over rational discussion. The hard work of crafting policy remains attention to detail and patience, two virtues that are absent from much of our public discourse. While we might be accused of being naive, we believe that Virginians will reward those who place the needs of the Commonwealth first, regardless of political affiliation.

This chapter reviews the performance of the Virginia economy this decade and identifies challenges to growth in 2025 and beyond. In the next section, we examine consumer sentiment in Virginia and the United States. We then turn to the question of how Virginia's economy has performed and whether the economic expansion will continue in 2025. We examine the performance of Virginia's labor market and discuss housing in Virginia. Finally, we conclude with thoughts on how the Commonwealth can spark growth in the coming years.

3 We paraphrase Milton Friedman here who once observed, "Inflation is always and everywhere a monetary phenomenon, in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output."

Inflation, Interest Rates, and Consumer Sentiment

To say that the Virginian and American consumer has been subject to economic uncertainty this decade would be characterized by some as an understatement. A global pandemic led to a historic collapse in employment in the spring of 2020. Employment declines, coupled with supply-chain disruptions, led to shortages of basic goods (toilet paper and plywood, for example). While employment rebounded in the latter half of 2020, many K-12 public schools remained closed to in-person instruction going into 2021. Even when supply chains recovered, the injection of trillions of dollars of monetary and fiscal stimulus across the world's largest economies sparked higher rates of inflation in the latter half of 2021 and through 2022. Central banks, in response, increased interest rates to quell price pressures. Even though these efforts appear to have been successful, many consumers still must brace themselves for a trip to the grocery store.

The Bureau of Labor Statistics (BLS) produces the Consumer Price Index (CPI) by surveying consumer prices across the nation. Each month, the BLS surveys more than 20,000 retail establishments as well as about 50,000 rental housing units to gather price data. The BLS uses housing rent data to form estimates of the cost of owner-occupied housing. The calculation of the CPI captures substitution effects (the tendency of consumers to shift away from more expensive goods and services to cheaper alternatives) and changes in quality. More importantly, the weighting of specific categories in the CPI is dependent upon recent consumer spending patterns. In other words, weights are proportional to consumer spending on goods and services. In 2023, the BLS announced that it would revise the weights annually to ensure the CPI reflected changes in consumer spending patterns.

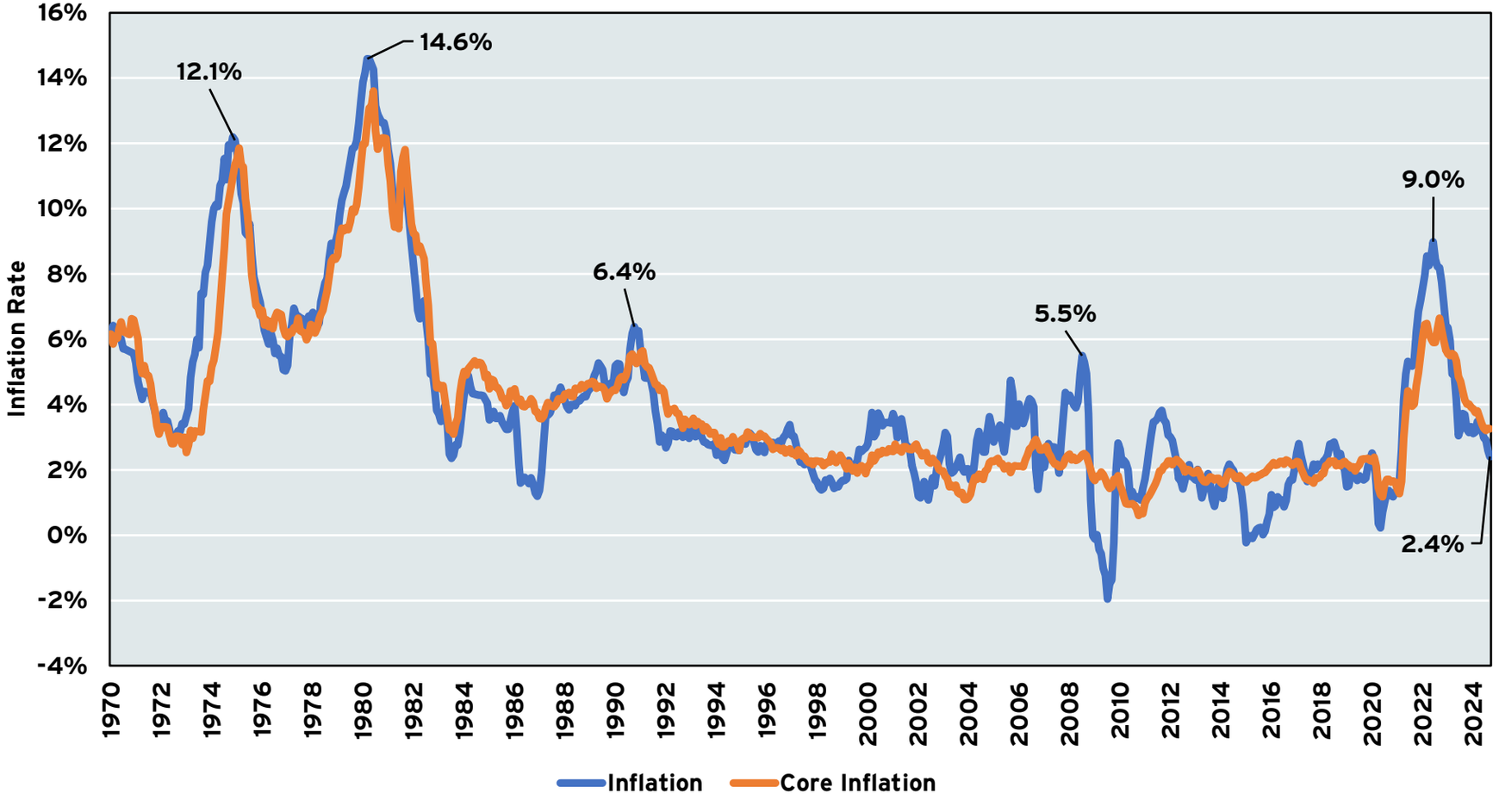
In Graph 1, we present the monthly rates of inflation and core inflation (inflation less food and energy prices) for the United States from January 1970 to September 2024. Taking the longer view provides us insight into the success or failures of the Federal Reserve in combatting inflation over much (but not all) of the last five decades. We can make two immediate observations: inflation was significantly higher during the latter half of the 1970s and into the early 1980s than the recent past. Second, inflation was stable during the decade prior to the COVID-19 pandemic, and this stability partially explains why consumers are disgruntled about the current state of the economy.

Graph 2 illustrates our point regarding price stability in the United States. From January 2010 to December 2019, the average rate of inflation was 1.8%, with a minimum of -0.2% and a maximum of 3.8%. The standard deviation of the headline inflation rate, which is a measure of dispersion, was 0.9%.[4] From January 2020 to September 2024, the headline inflation rate varied from a minimum of 0.2% to a high of 9.0% and averaged 4.3%. Over this period, the standard deviation was 2.5%, more than double than that of the previous decade. In other words, inflation was two times more 'dispersed' this decade relative to the previous decade. To consumers and businesses accustomed to stable prices, the recent bout of inflation has been an unsettling experience.

4 The standard deviation is a measure of how dispersed the data of a series relative to the mean of the series. The higher the standard deviation, the more dispersed the data are relative to the mean.

GRAPH 1

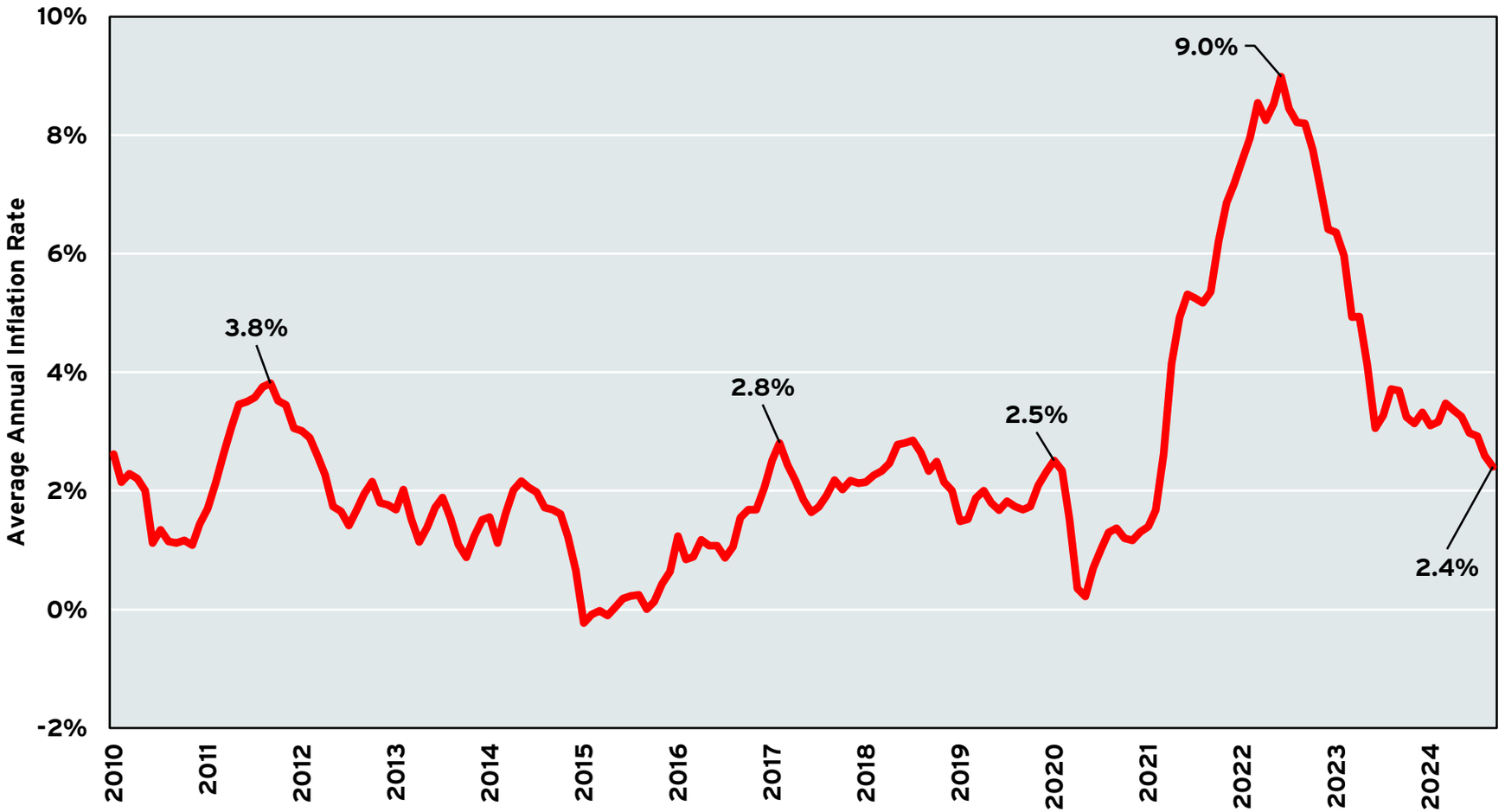
INFLATION AND CORE INFLATION, UNITED STATES
JANUARY 1970 – SEPTEMBER 2024



Source: Bureau of Labor Statistics (2024). Inflation is the year-over-year change in the Consumer Price Index for All Urban Consumers (CPI-U) while Core Inflation is the year-over-year change in CPI-U less food and energy. Seasonally adjusted data.

GRAPH 2

INFLATION RATE, UNITED STATES
JANUARY 2010 - SEPTEMBER 2024



Source: Bureau of Labor Statistics (2024). Inflation is the year-over-year change in CPI-U. Seasonally adjusted data.

Graph 3 highlights how the Federal Reserve raised and lowered (and raised again) the primary discount rate from January 2010 to October 2024. After raising the discount rate from 0.50% to 0.75% on February 19, 2010, the Federal Reserve did not raise the rate again until December 17, 2015 (1.0%). It was another year before the primary discount rate was raised to 1.25% on December 15, 2016. By December 20, 2018, the discount rate was 3.0%, however, the Federal Reserve then loosened monetary policy. On October 31, 2019, the rate stood at 2.25%.

With the COVID-19 pandemic taking hold, the Federal Reserve lowered the primary discount rate two times in March 2020, from 2.25% to 1.75% on March 4th and then again to 0.25% on March 16th. For two years, the discount rate remained at 0.25% until inflationary pressures had increased to the point the Federal Reserve decided to act. The Federal Reserve raised the discount rate seven times in 2022, from 0.25% to 4.50% and four more times in 2023, from 4.50% to 5.50%. At the same time, the Federal Reserve worked to 'claw back' some of the money supply it had injected into the financial system. As inflation and job growth slowed in the summer of 2024, the Federal Reserve changed its policy stance, cutting the discount rate to 5.00% on September 19th and signaling it would be open to further rate cuts into 2025 if inflation continued to decelerate.

Why did the Federal Reserve quickly increase the discount rate in 2022 and 2023? Graph 4 compares the inflation rate in the United States from January 1973 to December 1979 and July 2020 to September 2024. The similarities at the beginning of each cycle are apparent. Inflation accelerates to a peak and then declines as interest rates rise. The lesson from the 1970s, however, is not to reduce interest rates until one is sure that inflationary expectations and pressures have been ameliorated. One can be sure that if inflation reverses its current deceleration, the Federal Reserve will quickly backtrack on easing interest rates.

Graph 5 presents the University of Michigan's Consumer Sentiment Index from January 1970 to September 2024. As one might expect, consumer sentiment declines during periods of economic turmoil and increases during periods of economic recovery and expansion. The index is equal to 100 when sentiment is equivalent to the first quarter of 1966. One can think of the measure as a 'snapshot' about how consumers perceive economic conditions. During the 1980 – 1981 recession, for example, the consumer sentiment index bottomed out at 51.7. We observe a similar (but not as significant decline) during the recession of 1990 – 1991. During the Great Recession of 2007 – 2009, the consumer sentiment index fell to a low of 55.3 in November 2008. As the national economy recovered from the Great Recession and entered the longest peacetime expansion in recorded U.S. history, the index climbed upwards. In February 2020, the consumer sentiment index was equal to 101.0. By April 2020, the index had fallen to 71.8 but then rebounded as restrictions on personal and business activity were lifted across the nation.

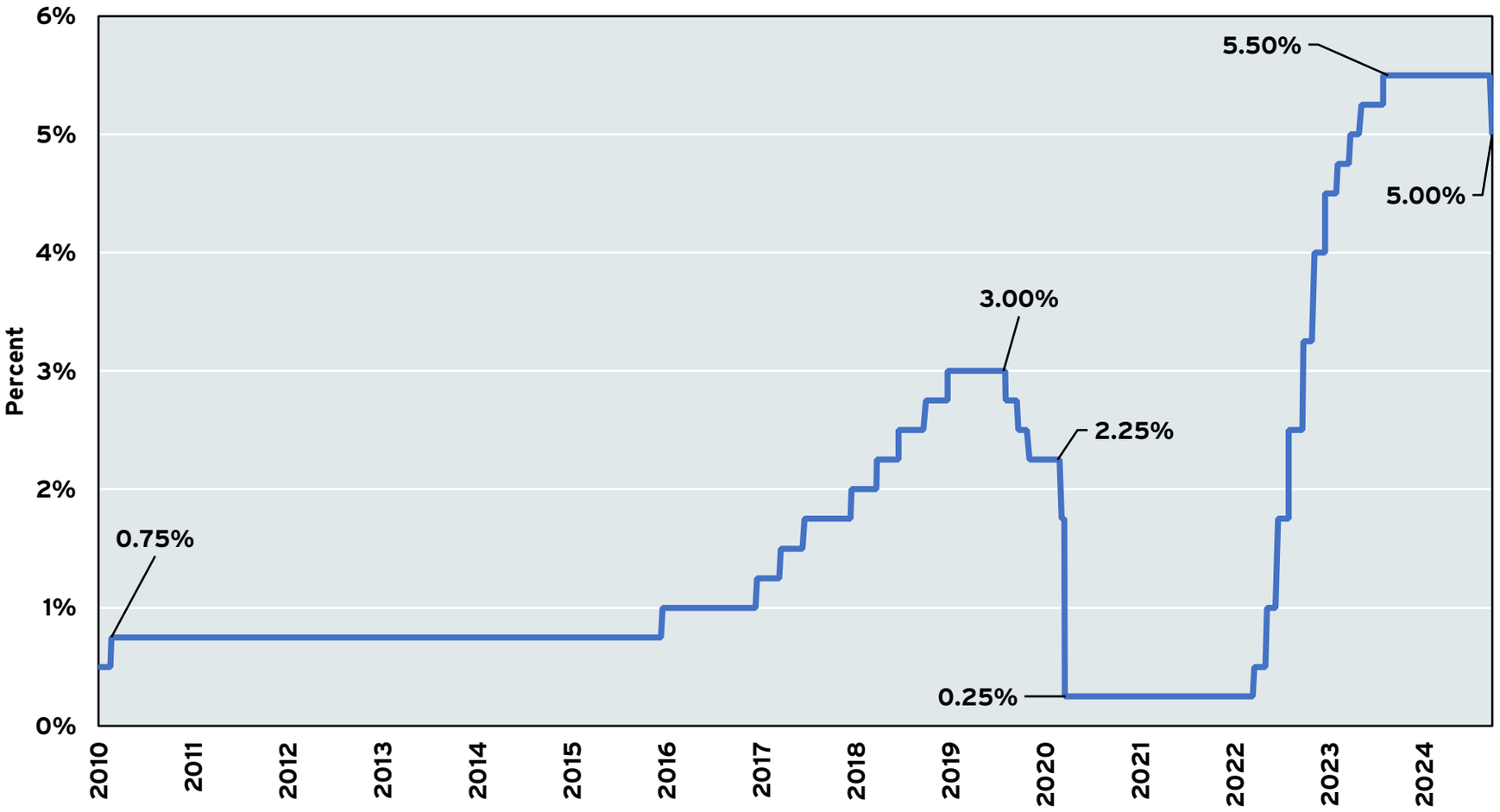
In 2022, as inflation peaked, consumer sentiment fell to a five-decade low, even though economic conditions, for most objective measures, were nowhere near those experienced during the 1980 – 1981 recession or the Great Recession of 2007 - 2009. In other words, consumers felt worse about the economy in 2022 than at any time during the last five decades. This decline in sentiment occurred even though inflation was lower than the 1980 – 1981 recession, unemployment was lower than either the 1980 – 1981 or 2007 – 2009 recession, job growth was positive, and equity prices were rising.

Graph 6 presents the Virginia Index of Consumer Sentiment from the Institute of Policy and Opinion Research (IPOR) at Roanoke College.[5] IPOR conducts a quarterly survey of Virginians' sentiment and expectations regarding economic conditions across the Commonwealth. The resulting indices are comparable with the University of Michigan's national level estimates. Not surprisingly, Virginians reacted in a similar fashion to the spike in inflation. In February 2020, the Virginia Index of Consumer Sentiment was 97.2. By May 2022, the index had fallen to 58.2. While the index has rebounded off the lows observed in 2022, its most recent value of 74.2 remains well below pre-COVID levels.

5 More information about IPOR is available at: https://www.roanoke.edu/ipor. The first publicly reported survey is for November 2011.

GRAPH 3

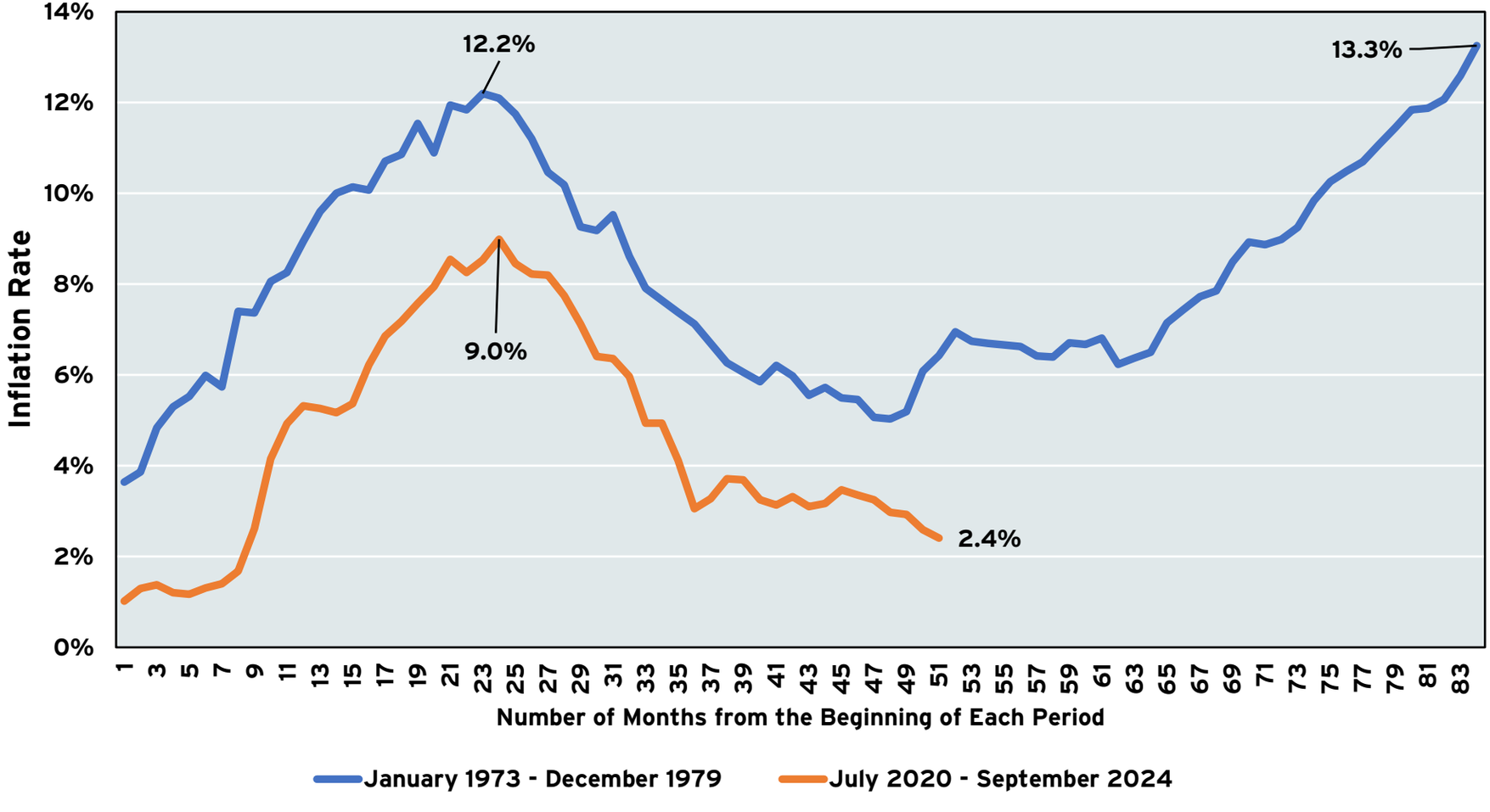
DISCOUNT WINDOW PRIMARY CREDIT RATE
JANUARY 1, 2010 – OCTOBER 11, 2024



Source: Board of Governors of the Federal Reserve System (2024).

GRAPH 4

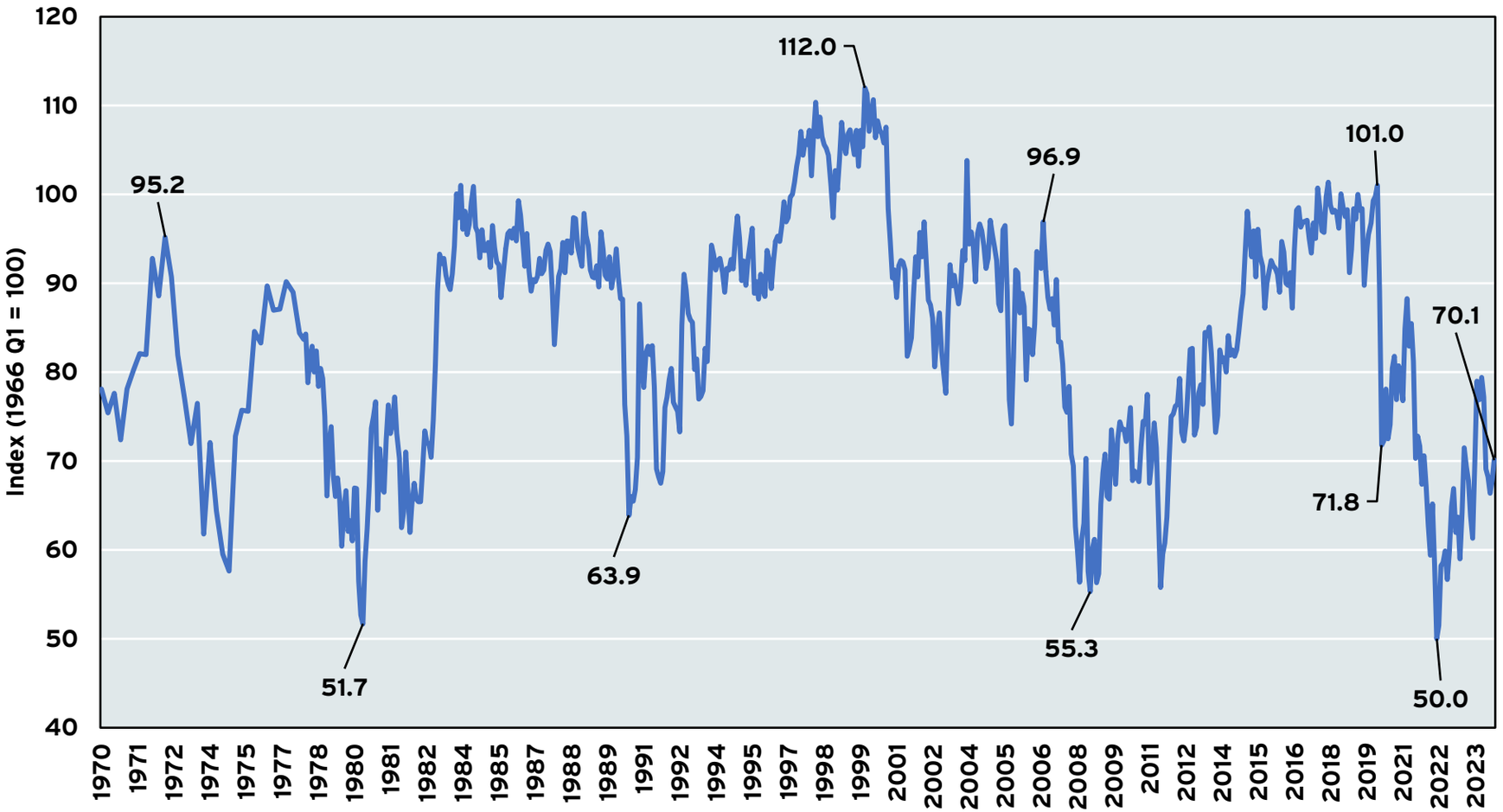
INFLATION RATE, UNITED STATES
JANUARY 1973 – DECEMBER 1979 AND JULY 2020 – SEPTEMBER 2024



Source: Bureau of Labor Statistics (2024). Inflation is the year-over-year change in CPI-U. Data are seasonally adjusted.

GRAPH 5

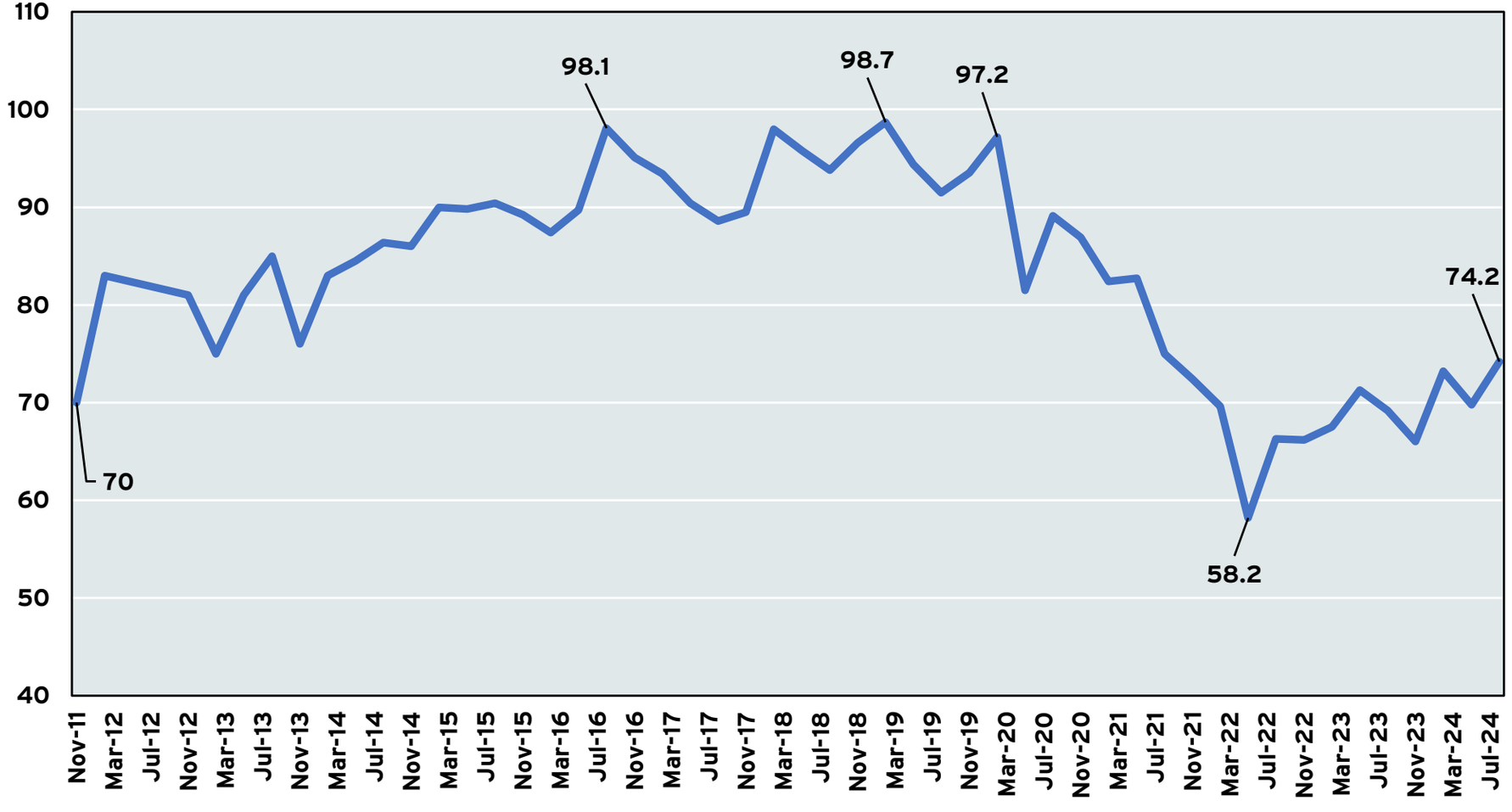
UNIVERSITY OF MICHIGAN, CONSUMER SENTIMENT
UNITED STATES, JANUARY 1970 – SEPTEMBER 2024



Source: University of Michigan, Survey of Consumers.

GRAPH 6

ROANOKE COLLEGE, VIRGINIA INDEX OF CONSUMER SENTIMENT
NOVEMBER 2011 - AUGUST 2024



Source: Institute for Policy Opinion and Research (IPOR), Roanoke College.

The decline in the Virginian Index of Consumer Sentiment may appear puzzling when we examine the performance of the Commonwealth's economy. These declines have occurred even though (as we discuss later in this chapter) Virginia has experienced strong economic growth, a robust labor market, and gains in incomes since the COVID-19-related recession in the spring of 2020. Are we observing a structural decline in consumer sentiment in the Commonwealth and nationally, or are there factors in play that can explain why Virginians and Americans are so sour on the state of the economy?

One explanation is that even though inflation was lower in 2023 and 2024, slowing inflation does not mean that prices have begun to decline to pre-pandemic levels. In Graph 7, we present the monthly headline inflation rate from January 2019 to August 2024 and the cumulative percentage change in the Consumer Price Index for All Urban Consumers (CPI-U) over the same period.[6] Average prices were approximately 16.8% higher in June 2022 (when monthly inflation peaked at 9.0%) than January 2019. Inflation decelerated in the second half of 2022, 2023, and through the first half of 2024.

However, a lower inflation rate does not mean that prices are falling, only that prices are growing at a slower pace. By September 2024, the monthly headline inflation rate had fallen to 2.4%, and the Federal Reserve had moved to a more accommodative monetary policy stance. The average price level, however, in August 2024 was 24.6% higher than January 2019. From this perspective, consumers did not find much joy in headlines trumpeting lower inflation because their experience was couched in absolute prices, not the deceleration of the growth in prices.

We can also gain insight into consumer sentiment by turning to the concepts of relative deprivation and salience. Relative deprivation, from an economic perspective, is the idea that individual satisfaction (utility) may depend on consumption subject to absolute income constraints and prices but also relative income.[7] In other words, relative deprivation suggests that a consumer's overall level of utility depends not only on what they consume and earn but also on their consumption and income relative to other consumers. If consumers suffer dissatisfaction (disutility) because others experience higher income gains, they may reallocate consumption to 'positional goods.'[8] Positional goods 'signal' success and may include expensive cars or trucks, fashionable clothing, and upscale housing, among other goods and services. The neighbor with the brand-new truck that is used to drive back and forth to work may be attempting to signal that they are successful, even though they are barely making the monthly payments.

From this perspective, inflation not only increases the prices of goods and services, but it also induces households to move consumption towards positional goods to maintain perceived status. Lower-income and middle-income households experience more 'pain' because they are less able to cope with price increases, and maintaining consumption of positional goods may require less savings, more debt, or reduced consumption of more basic goods. Even if these households earned more income after accounting for inflation, they perceived they were 'falling behind' and thus felt economic conditions were worse than prior to the recent rise (and decline) in inflation.

A second concept in economics (also borrowed from psychology) is salience. A stimulus is salient when it "attracts the decision maker's attention bottom up, that is, automatically and involuntarily."[9] A growing dog in our path not only attracts our attention but goads us into action to avoid a potentially aggressive animal. Bottom-up attention is automatically driven if the stimuli are 'contrasting, surprising, or prominent.' In 2024, a trip to the grocery store may fulfill all three stimuli conditions. Consumers who are experiencing higher prices are likely to contrast those prices with those experienced prior to the COVID-19 pandemic. When consumers experience price increases (or declines in quantity or quality for price being held constant), these rises are surprising.

6 The cumulative percentage change in a variable is equal to the (current value – value in January 2019)/(value in January 2019). It represents the percentage increase in the variable in each month relative to January 2019.
7 For a review of the literature, see Smith, H. J., Pettigrew, T. F., Pippin, G. M., & Bialosiewicz, S. (2012). Relative Deprivation: A Theoretical and Meta-Analytic Review. *Personality and Social Psychology Review*, 16(3), 203-232. https://doi.org/10.1177/1088868311430825
8 Hirsch, F. (1976), *Social Limits to Growth, Cambridge: Harvard University Press. For a review of positional goods, see Schneider, M. (2007). The Nature, History and Significance of the Concept of Positional Goods. History of Economics Review*, 45(1), 60–81. https://doi.org/10.1080/18386318.2007.11681237
9 Bordalo, P., Gennaioli, N. and Schleifer, A. (2022). "Salience." *Annual Review of Economics* 14, 521-544. DOI: 10.1146/annurev-economics-051520-011616

Lastly, we must examine the frequency of consumption. Shopping for basic staples increases the prominence of higher prices because consumers 'contact' these prices more frequently. One only needs to walk the aisle of the grocery store observing higher prices to understand how salience may induce consumers to change behavior.

We can also apply the concept of salience to how much workers earn and how much prices change over time. In Graph 8, we present the cumulative percentage change in the CPI and average hourly earnings for private sector production and nonsupervisory employees from January 2019 to September 2024.[10] Over this period, the CPI increased by 24.6%, but average hourly earnings increased by 31.1%. In other words, average hourly earnings, after accounting for the impact of inflation, increased by 6.5% from January 2019 to August 2024. While average changes in the price level and wages may not reflect individual circumstances, the data suggest that, even when taking inflation into account, private sector nonsupervisory workers, on average, earned more in September 2024 than January 2019. However, we must also account for the fact that these real wage gains may not impact sentiment as much as prices.

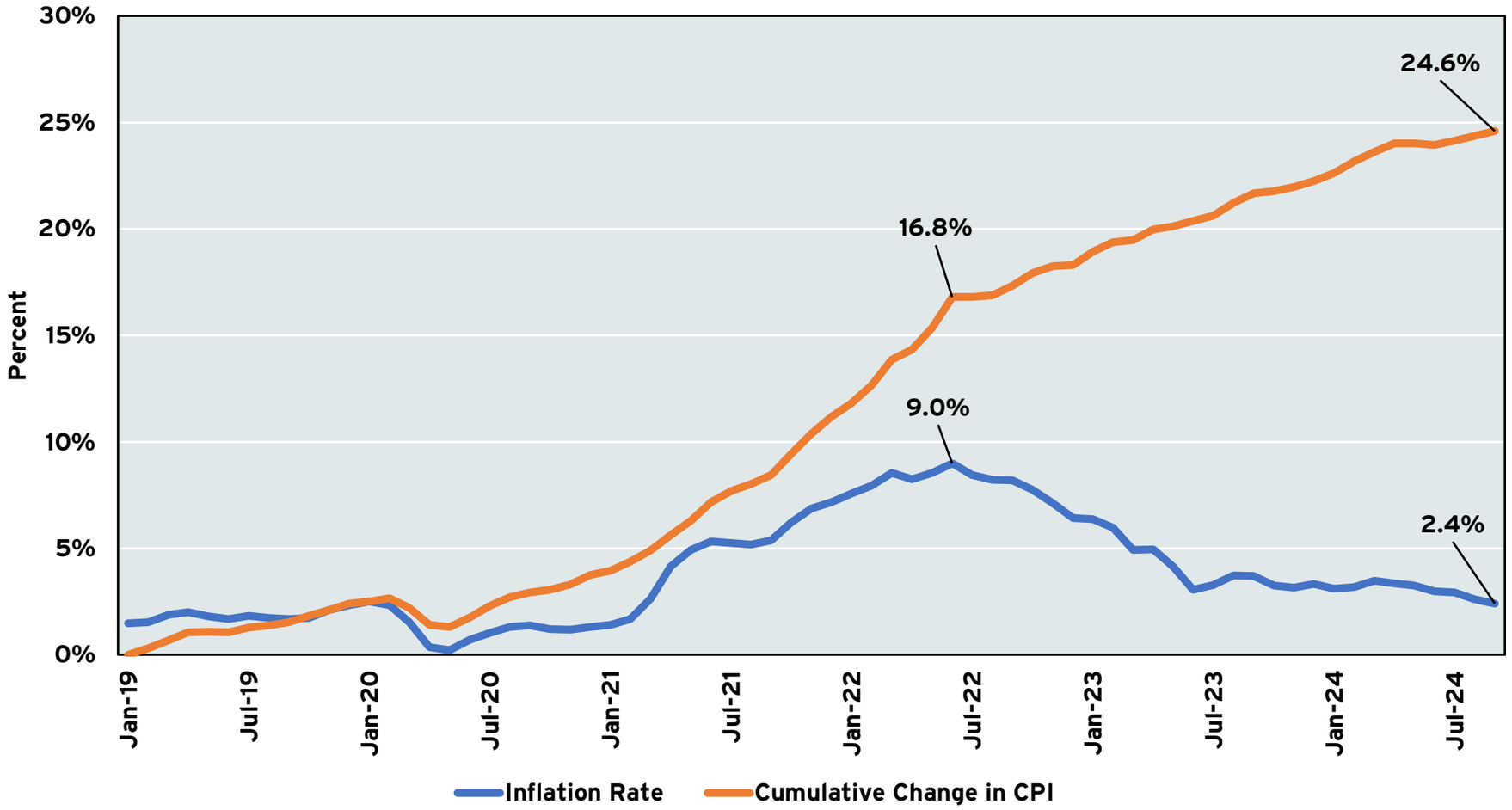
We opine that increases in prices are more prominent to consumers than increases in wages. In other words, the relative salience of prices and wages results in prices influencing sentiment more than wages. The rationale for this argument is straightforward: consumers interact with prices more frequently than wages. A trip to the grocery store, a stop at the gas pump, a visit to a fast-food establishment for lunch, and many other transactions occur on a daily or weekly basis. On the other hand, many Americans are paid biweekly, semimonthly, or monthly (Graph 9). These workers also may focus on take-home pay which further reduces the visibility of any pay increases. Visibility is also reduced because many workers now have their paychecks directly deposited into their bank accounts. Wages are just not as prominent as prices and this relative salience may be reflected in consumer sentiment.

We can now, at least partially, explain why consumer sentiment was lower in 2022 (and remains low in 2024) than previous recessions. Price stability prior to 2020 and price instability afterwards increased economic uncertainty. At the same time, some consumers reallocated consumption to positional goods to signal economic success; these goods were also increasing in price, thereby reducing overall consumption. In this environment, consumers also contrasted prices in 2024 with pre-pandemic prices and experienced sticker shock when shopping for a new car or taking a trip to the grocery store. Lastly, even though workers may have seen their real wages increase, these increases were less prominent than rises in prices, and so prices can have a more significant influence on consumer behavior and sentiment.

10 According to the BLS, private production and nonsupervisory employees are employees in the mining and logging and manufacturing industry, construction industry, and nonsupervisory employees in service-providing industries. These groups account for approximately four-fifths of the total employment on private nonfarm payrolls. As such, the average weekly wages metric is a reasonable approximation of 'rank-and-file' employment.

GRAPH 7

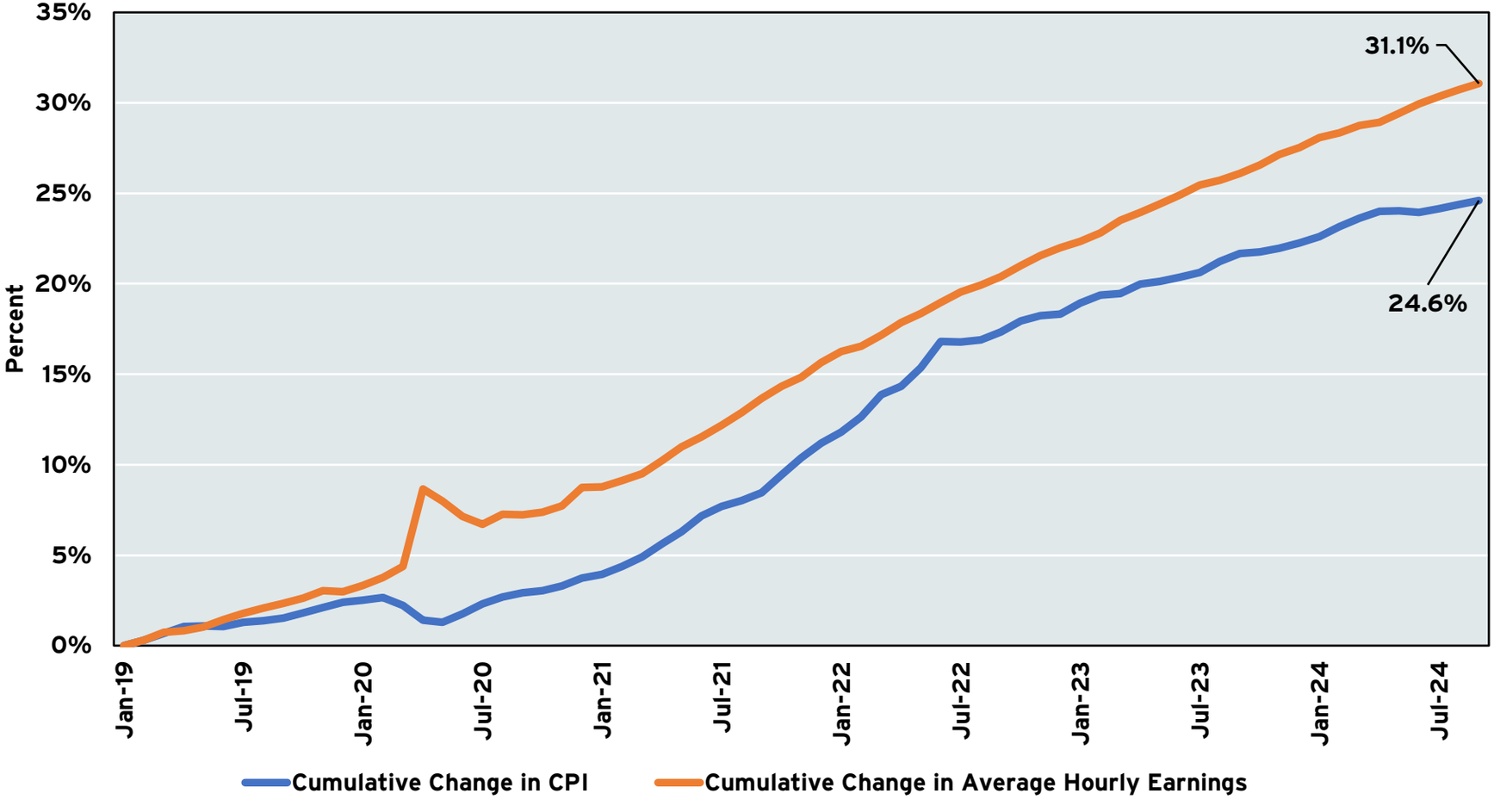
INFLATION RATE AND CUMULATIVE PERCENTAGE CHANGE IN THE CONSUMER PRICE INDEX
UNITED STATES, JANUARY 2019 – AUGUST 2024



Source: Bureau of Labor Statistics (2024). Inflation is the year-over-year change in CPI-U. The cumulative change in the CPI is equal to the percentage change in the CPI relative to January 2019. Data are seasonally adjusted.

GRAPH 8

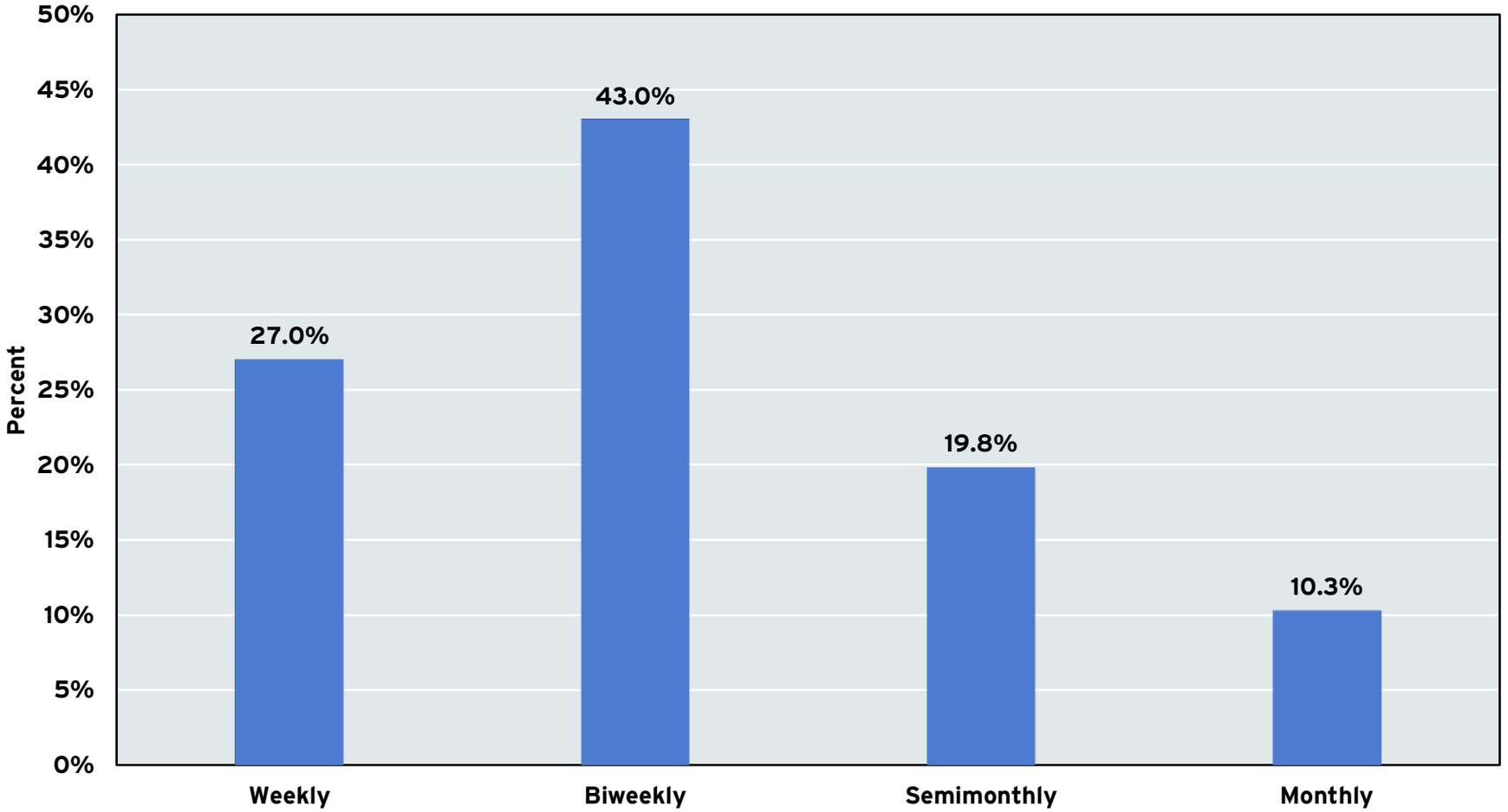
CUMULATIVE PERCENTAGE CHANGE IN THE CONSUMER PRICE INDEX AND AVERAGE HOURLY EARNINGS UNITED STATES, JANUARY 2019 – SEPTEMBER 2024



Source: Bureau of Labor Statistics (2024). Inflation is the year-over-year change in CPI-U. Average hourly earnings measures the average hourly earnings of private sector production and nonsupervisory employees. The cumulative change is equal to the percentage change in each series relative to the value of the series in January 2019.

GRAPH 9

FREQUENCY OF PAY PERIOD IN THE CURRENT EMPLOYMENT STATISTICS SURVEY
UNITED STATES, FEBRUARY 2023



Source: Bureau of Labor Statistics, Current Employment Statistics survey, February 2023.

Virginia's Economic Growth Continues

Gross domestic product (GDP) is one of the headline measures of economic performance, as it estimates the dollar value of final goods and services produced in an area during a given period. GDP is an imperfect measure in that it does not capture nonmarket transactions such as barter, 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 noisy (the data tend to have greater variation than annual data) and are subject to revisions.

The Bureau of Economic Analysis (BEA) produces regular estimates of economic activity at the national, state, and local levels. On occasion, the BEA will release new 'benchmark' estimates of GDP using new methodologies and updated data to arrive at more precise estimates. In the past, the BEA would release national level benchmark revisions, followed by state and local areas, leading to a period during which national estimates of GDP reflected one methodology and state and local areas reflected an outdated approach to measure economic activity. In 2023, the BEA produced its benchmark updates of GDP for the nation, states, and local areas within the same period, resolving this timing issue. However, gaps remain in the data. Annual data, using newer methodology for states, are now available from 1997 to 2023 while quarterly data are available from the first quarter of 2018 to the first quarter of 2024. Quarterly data before 2018 will be published at an undetermined date in the future.

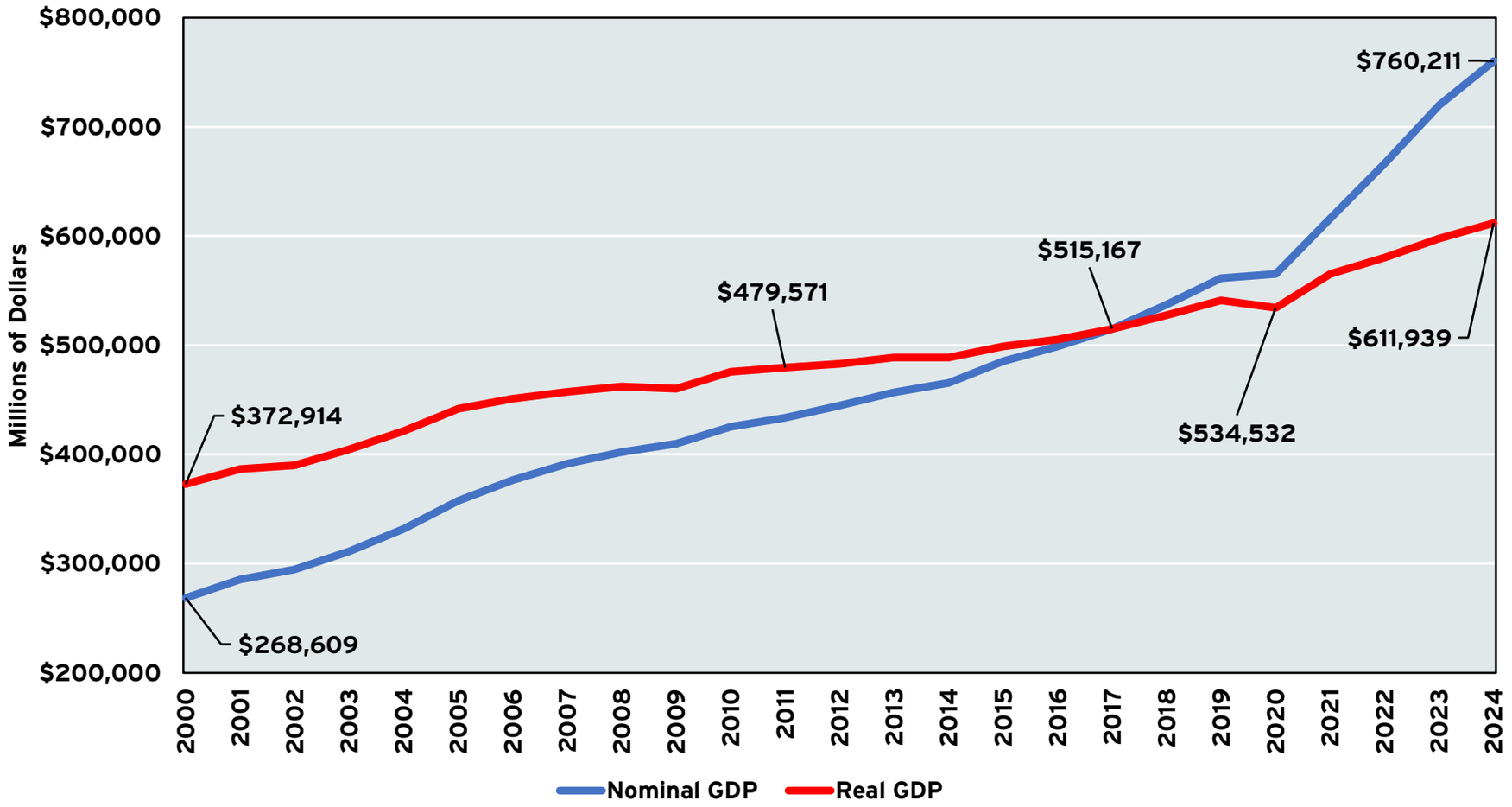
In Graph 10 and Table 1, we present data for nominal and real (inflation-adjusted) GDP for Virginia from 2000 to 2024. We focus on real GDP expressed in 2017 constant dollars. Here, we can see that in 2017, Virginia's real GDP was approximately $515.2 billion. By 2019, the Commonwealth's real GDP had reached $541.0 billion before dipping to $534.5 billion in 2020. The recovery from the short-lived recession of 2020 occurred quickly with the state's real GDP reaching $565.5 billion in 2021 and continuing to expand in 2022 and 2023. In 2023, the BEA estimated that Virginia's real GDP was $597.6 billion, and we forecast that it will reach approximately $612.0 billion in 2024.

In Graph 11, we highlight the more recent performance of the Virginia economy. During the first five years of the previous decade (2010 – 2014), the real GDP growth rate of the Commonwealth economy averaged 1.2%. In the second half of the previous decade, however, the real GDP growth in Virginia averaged 2.0%. How has Virginia fared this decade? To answer this question, we exclude 2020 and 2021 as we can argue the COVID-19 pandemic influenced the growth rates in these years. If we focus on 2022 to 2024, the answer is clear: Virginia has grown faster (so far) this decade than the last, and its recent growth approaches that of the first decade of the century (2.7%).

In Graph 12, we focus on the quarterly data for Virginia's real GDP from the first quarter of 2021 to second quarter of 2024. We do this because economic activity contracted at an annualized rate of 4.2% in the first quarter of 2020 and then again by 22.5% in the second quarter of 2020. The third quarter of 2020 saw Virginia's real GDP increase at an annualized rate of 27.0%. The contraction and expansion of Virginia's real GDP in the second and third quarters of 2020 was historic and overwhelmed the presentation of more recent economic data. Graph 12 highlights that the state economy grew in nine consecutive quarters from the second quarter of 2022 to the second quarter of 2024. We expect that as more data become available, it will show that Virginia's economy continued to exhibit growth through the remainder of 2024.

GRAPH 10

NOMINAL AND REAL GROSS DOMESTIC PRODUCT
VIRGINIA, 2000 - 2024*



Source: Bureau of Economic Analysis (2024). Real GDP is measured in millions of chained 2017 dollars. *2024 represents our forecast.

TABLE 1

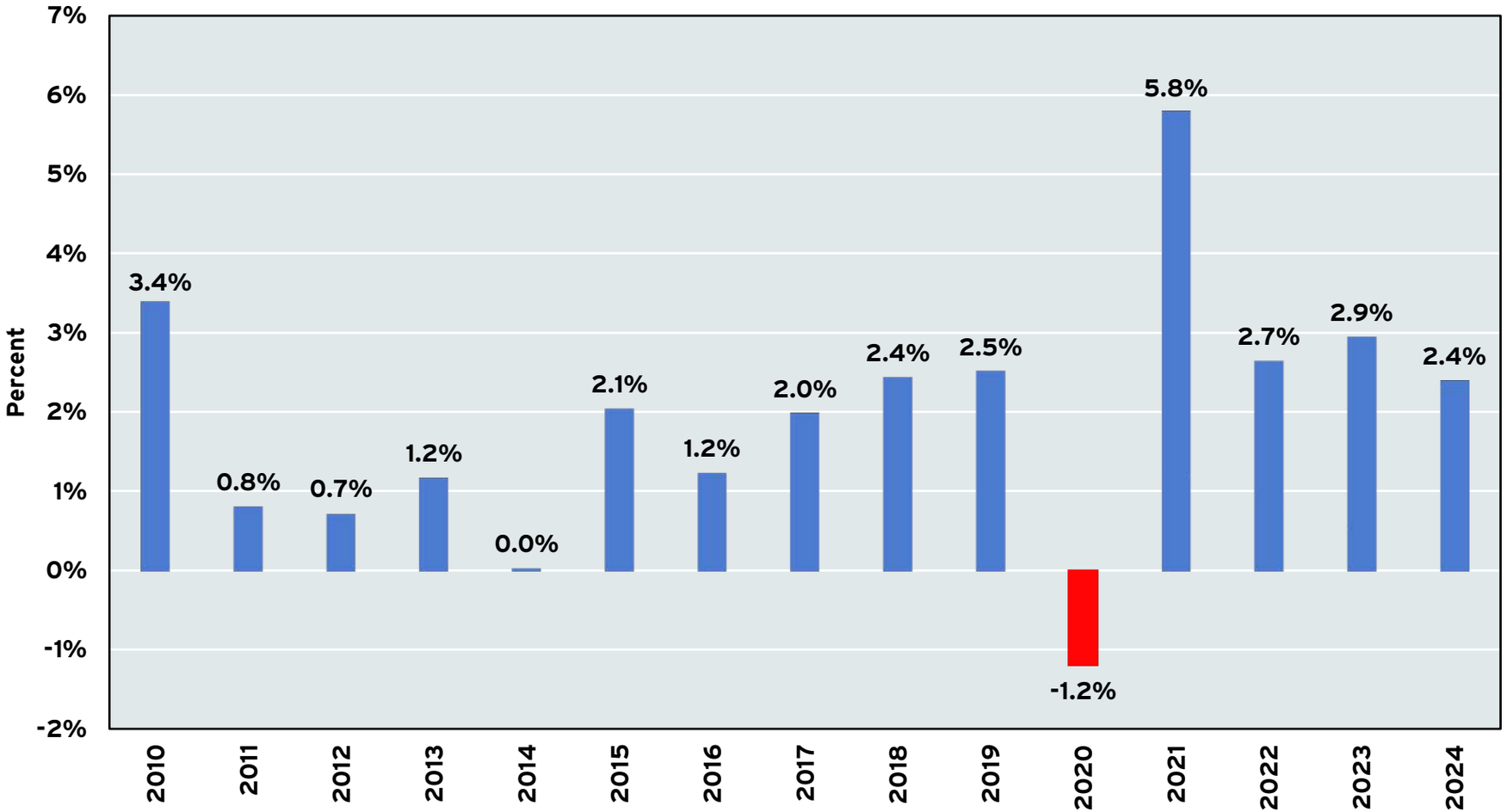
NOMINAL AND REAL GROSS DOMESTIC PRODUCT
VIRGINIA, 2000 - 2024*

Year	Nominal GDP (Millions)	Nominal GDP Growth	Real GDP (Millions)	Real GDP Growth
2000	$268,609	7.4%	$372,914	4.6%
2001	$285,663	6.3%	$386,445	3.6%
2002	$294,929	3.2%	$390,242	1.0%
2003	$311,093	5.5%	$404,522	3.7%
2004	$331,816	6.7%	$421,744	4.3%
2005	$357,427	7.7%	$442,090	4.8%
2006	$376,429	5.3%	$451,263	2.1%
2007	$391,596	4.0%	$457,569	1.4%
2008	$402,158	2.7%	$462,035	1.0%
2009	$409,935	1.9%	$460,075	-0.4%
2010	$425,491	3.8%	$475,699	3.4%
2011	$433,684	1.9%	$479,571	0.8%
2012	$445,009	2.6%	$483,041	0.7%
2013	$456,912	2.7%	$488,741	1.2%
2014	$465,602	1.9%	$488,919	0.0%
2015	$485,541	4.3%	$498,944	2.1%
2016	$499,032	2.8%	$505,108	1.2%
2017	$515,167	3.2%	$515,167	2.0%
2018	$537,158	4.3%	$527,768	2.4%
2019	$561,702	4.6%	$541,028	2.5%
2020	$565,467	0.7%	$534,532	-1.2%
2021	$615,985	8.9%	$565,471	5.8%
2022	$666,682	8.2%	$580,475	2.7%
2023	$719,897	8.0%	$597,597	2.9%
2024*	$760,211	5.6%	$611,939	2.4%

Source: Bureau of Economic Analysis (2024). Real GDP is measured in millions of chained 2017 dollars. *2024 represents our forecast.

GRAPH 11

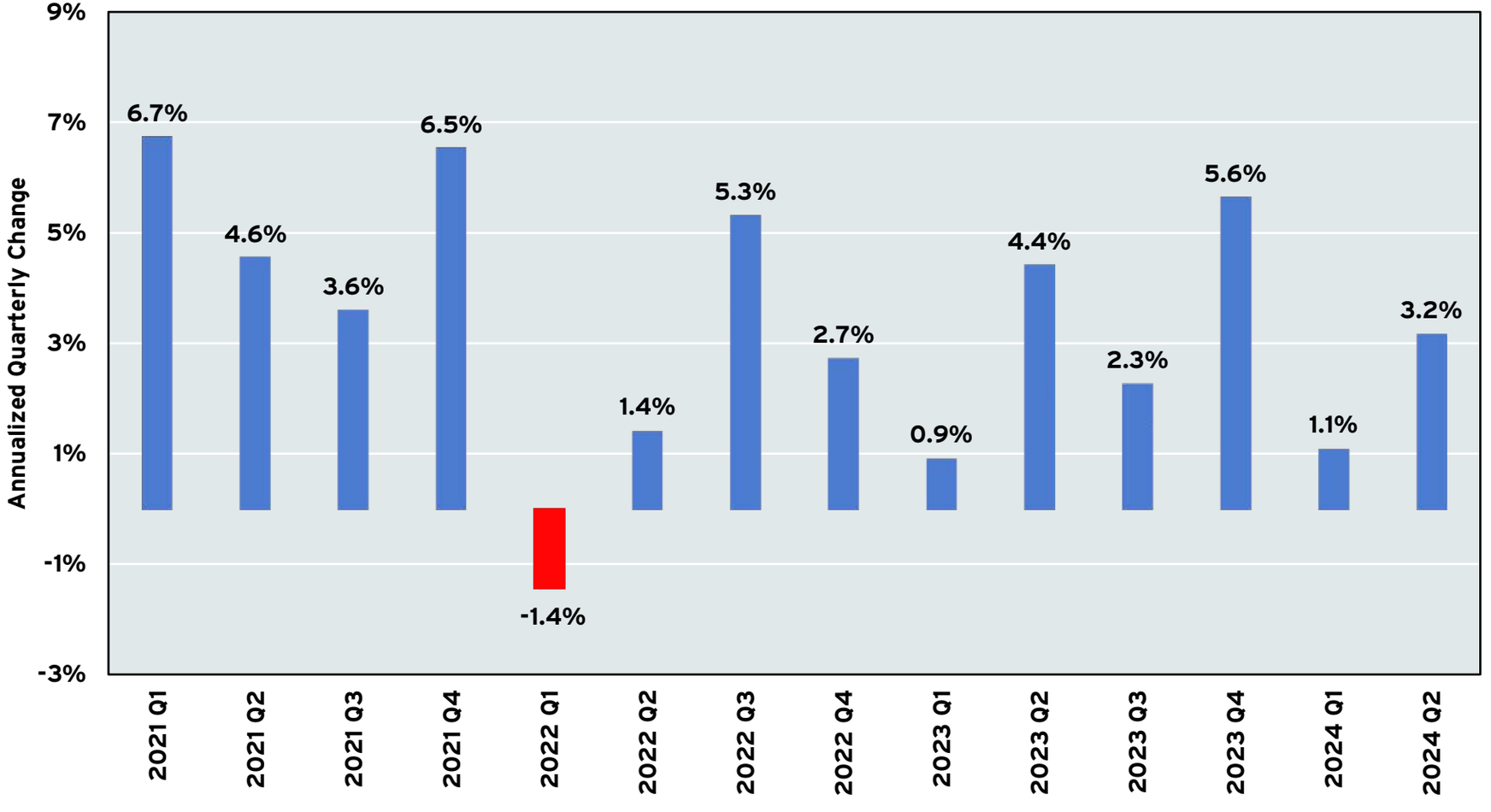
PERCENT CHANGE IN REAL ANNUAL GROSS DOMESTIC PRODUCT
VIRGINIA, 2010 - 2024*



Sources: Bureau of Economic Analysis (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SQGDP9, real GDP by state. *2024 represents our forecast for Virginia's real GDP and national inflation rate.

GRAPH 12

ANNUALIZED PERCENTAGE CHANGE IN QUARTERLY REAL GROSS DOMESTIC PRODUCT
VIRGINIA, Q1 2021 TO Q2 2024



Sources: Bureau of Economic Analysis (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Table SQGDP9, real GDP by state. Annualized change in seasonally adjusted real GDP in millions of chained 2017 dollars.

Graph 13 compares the performance of the Virginia economy with that of the nation from 2000 to 2024. From 2000 to 2007, the Commonwealth outperformed the nation. Over this period, Virginia's real GDP grew by 22.7% compared to 18.9% for the nation. In the aftermath of the Great Recession of 2007 – 2009, the Commonwealth's performance lagged that of the nation. From 2000 to 2015, Virginia's real GDP increased by 33.8% while real GDP for the nation grew by 33.4%. In 2016, the United States edged ahead of the Commonwealth. Post-pandemic, however, real GDP growth has been the same for the nation and the state. We project that Virginia's economy will be 64.1% larger in 2024 than 2000 and that the national economy will be 64.7% larger in 2024 than 2000. What does this mean? The data suggest that Virginia and the United States have recently followed similar growth profiles.

What might 2025 hold for the Commonwealth? Here, the question depends on a number of federal government policies. If we assume there are no significant changes in tariffs, immigration policy, and the number and location of federal departments and agencies, our forecast is significantly higher than if there are significant changes to these policies. Under the no significant change assumption, we project that real GDP growth in Virginia will average 2.0% for 2025 as inflation continues to moderate, interest rates decline, and job growth continues but at a slower rate. On the other hand, if there are significant increases in tariffs, large-scale changes to immigration policy, or dramatic shifts in the number (or location) of federal departments and agencies, the resulting increases in economic uncertainty could have significant impacts on inflation, employment, and real GDP growth.

A tariff is a tax levied on the importation of a good into a country. The importer, not the exporting country, pays the tariff at the port of entry. A tariff raises the price of the imported good, lowering domestic demand for the imported good in question. The tariff, while generating revenue for the government, also causes a loss in economic efficiency (economists refer to this as deadweight loss) for consumers and producers. How much of the tariffs is passed onto consumers depends on the elasticity of demand for (responsiveness) the good to changes in the after-tax price. Goods that are sensitive to changes in price will see producers bear more of the tariff. Goods that are less sensitive to changes in price will see more of the tariff passed onto consumers. We must also recognize that domestic producers (if there are any) will raise their prices as domestic demand increases. If domestic suppliers are few and far between, transportation costs will increase as importers will attempt to circumvent the tariff by rerouting shipments to obscure its point of origin. In other words, broad tariffs increase domestic prices, lower overall consumption, and increase economic inefficiency.

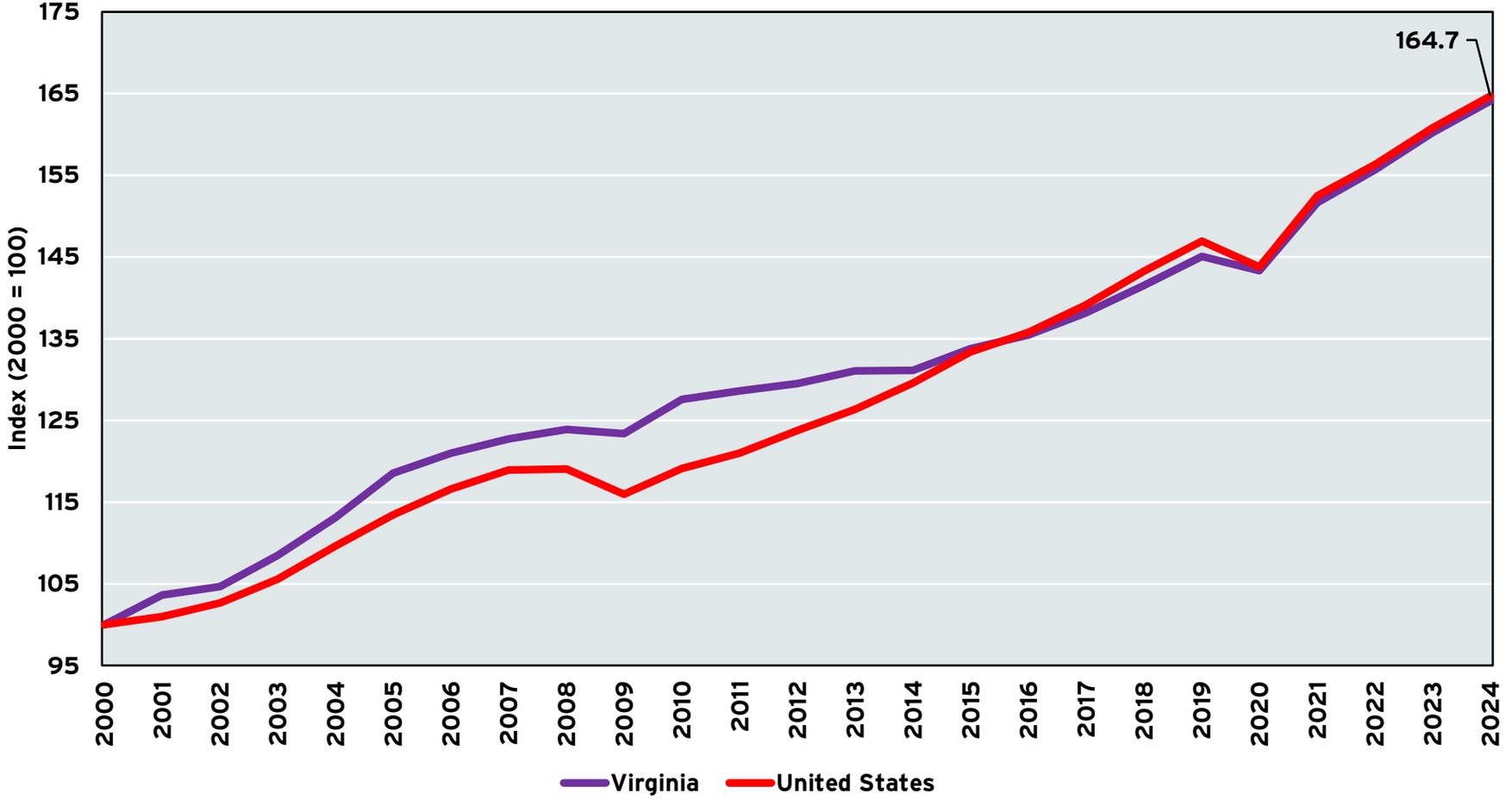
Even in the absence of tariffs, there remains significant uncertainty about what new immigration policies may take place in 2025. Removing those convicted of crimes and existing removal orders will, if it occurs in an orderly manner, likely have little significant impact on economic activity. A broader targeting of immigrant communities, on the other hand, could disrupt construction, agriculture, and other industries. At this point, we must admit there is much uncertainty about the impact of these enforcement actions.

For Virginia, attempts to reduce or relocate the federal workforce are likely to have significant negative consequences of employment, incomes, and real GDP growth if these efforts occur in a short period of time. Average federal employee compensation is higher than private-sector employee compensation. If thousands of federal employees faced elimination of their positions, there would not be a corresponding number of open private-sector position offering similar compensation. Moving these jobs out-of-state would have a similar impact: a reduction in Virginia's GDP, concentrated in Northern Virginia.

These policy uncertainties made it difficult to prognosticate about the state of Virginia economy in 2025. The state may observe another year of real GDP growth or may experience a deep recession due to new tariffs, restrictions on immigration, and changes in federal civilian employment. The picture will become clearer as we progress into 2025, however, we just do not know what picture will be revealed by the end of next year..

GRAPH 13

INDEX OF REAL GROSS DOMESTIC PRODUCT
VIRGINIA AND THE UNITED STATES, 2000 - 2024*



Sources: Bureau of Economic Analysis (2024) 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. State data from Table SQGDP9, real GDP by state. *2024 represents our forecast.

Median Household Income: Recovering from Inflation

If GDP is a measure of the value added in an economy, then median household income estimates the income of the household in the 'middle' of the income distribution for a city, county, state, or nation. According to the U.S. Census Bureau, median household income includes the income of the householder and all other individuals 15 years and older in the household. For households and families, the median income is measured based on the distribution of the total number of households and families, including those with no income.[11]

Graph 14 displays nominal and real (inflation-adjusted) median household income for Virginia from 2010 to 2023.[12] Nominal median household income in Virginia was $60,674 in 2010 and $76,456 in 2019. Nominal median household income has continued to rise this decade and reached $89,931 in 2023. While rising nominal incomes are typically good news, we must take inflation into account and, when we do so, the story becomes decidedly less rosy.

In 2010, real median household income in the Commonwealth was $68,358 in 2017 constant dollars. From 2010 to 2019, real median household income rose by 7.2% in Virginia (over the same period, nominal median household income rose 26.0%). From 2019 to 2021, real median household income in the Commonwealth fell by 0.3%. As inflation rose, real median household income in Virginia fell by 1.9% in 2022 to $71,703 in 2017 constant dollars. In 2023, real median household income increased by 0.6% to $72,117, still approximately 1.6% below the previous peak in 2019.

A similar story emerges when we compare real median household income in Virginia and the United States from 2010 to 2023 (Graph 15). Our first observation is that Virginia's real median household income has remained absolutely higher than the nation. Our second observation is that real median household income in 2023 was 1.1% lower for the nation and 1.6% lower for the Commonwealth when compared to the 2019 peak. Our third observation, as illustrated in Graph 16, is that real median household income increased more rapidly for the United States than Virginia from 2010 to 2019 (11.7% versus 7.2%). Relative to 2010, real median household income in 2023 was 10.5% higher for the nation and 5.5% higher for the Commonwealth.

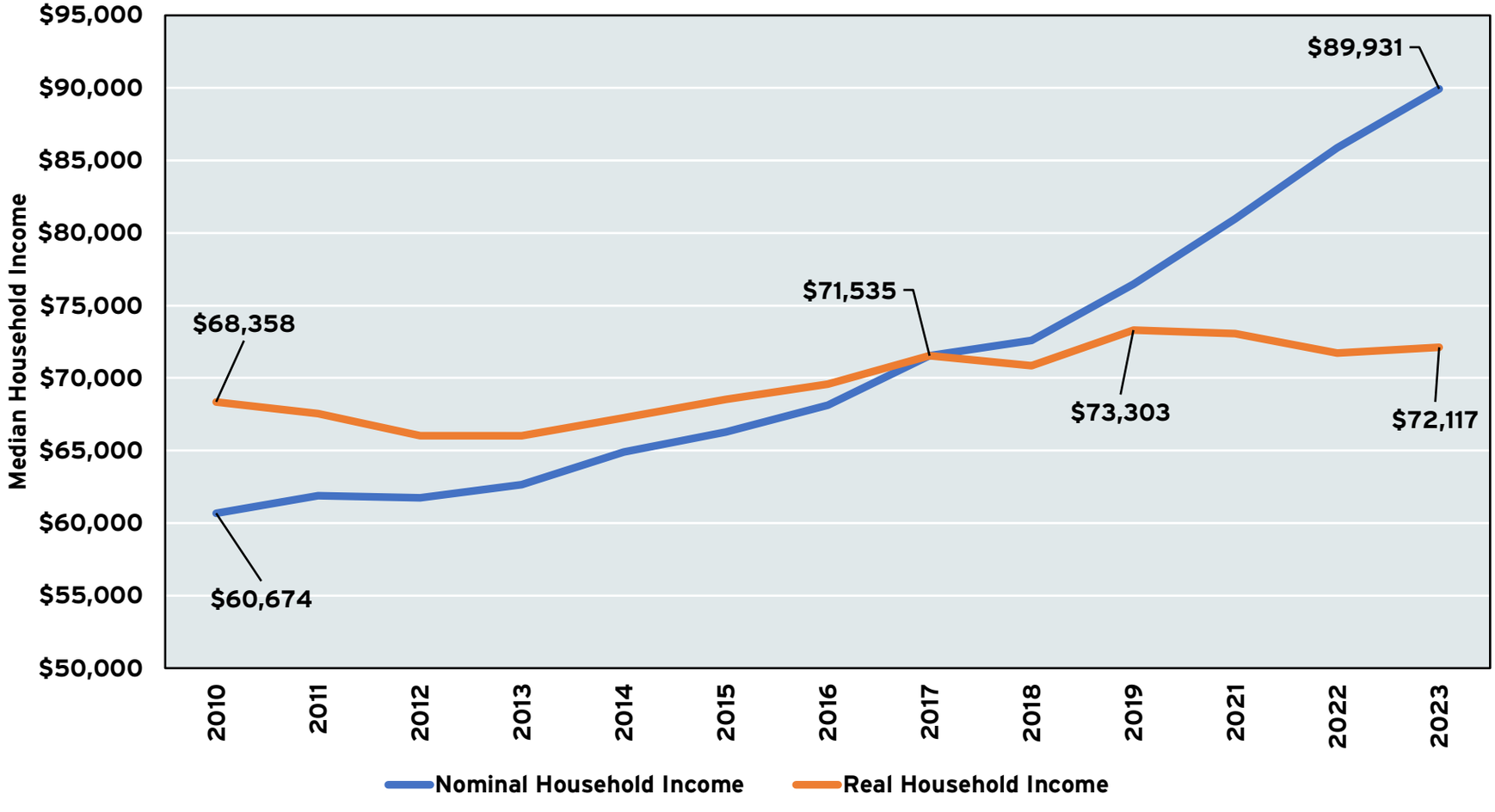
What lessons can be drawn from these data? First, Virginia's economic performance last decade lagged the nation, and this performance is not only reflected in measures of GDP but also in measures of median household income. Second, the impact of inflation was not limited to 2022 as real median household incomes remained below their pre-pandemic peaks. Third, given the deceleration of inflation in 2024, real median household incomes should grow in 2024 and, likely, will exceed pre-pandemic highs.

11 For more information, including the standard distribution from which households are organized to estimate median household income, see U.S. Census Bureau (2024), "American Community Survey and Puerto Rico Community Survey, 2023 Subject Definitions," Available at: https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2023_ACSSubjectDefinitions.pdf

12 Due to the impact of COVID-19, the 2020 1-Year ACS estimates were deemed "experimental" and should not be compared with 1-year ACS estimates for different periods. We exclude the 2020 estimates from our analysis. For more information, see https://www.census.gov/programs-surveys/acs/data/experimental-data.html

GRAPH 14

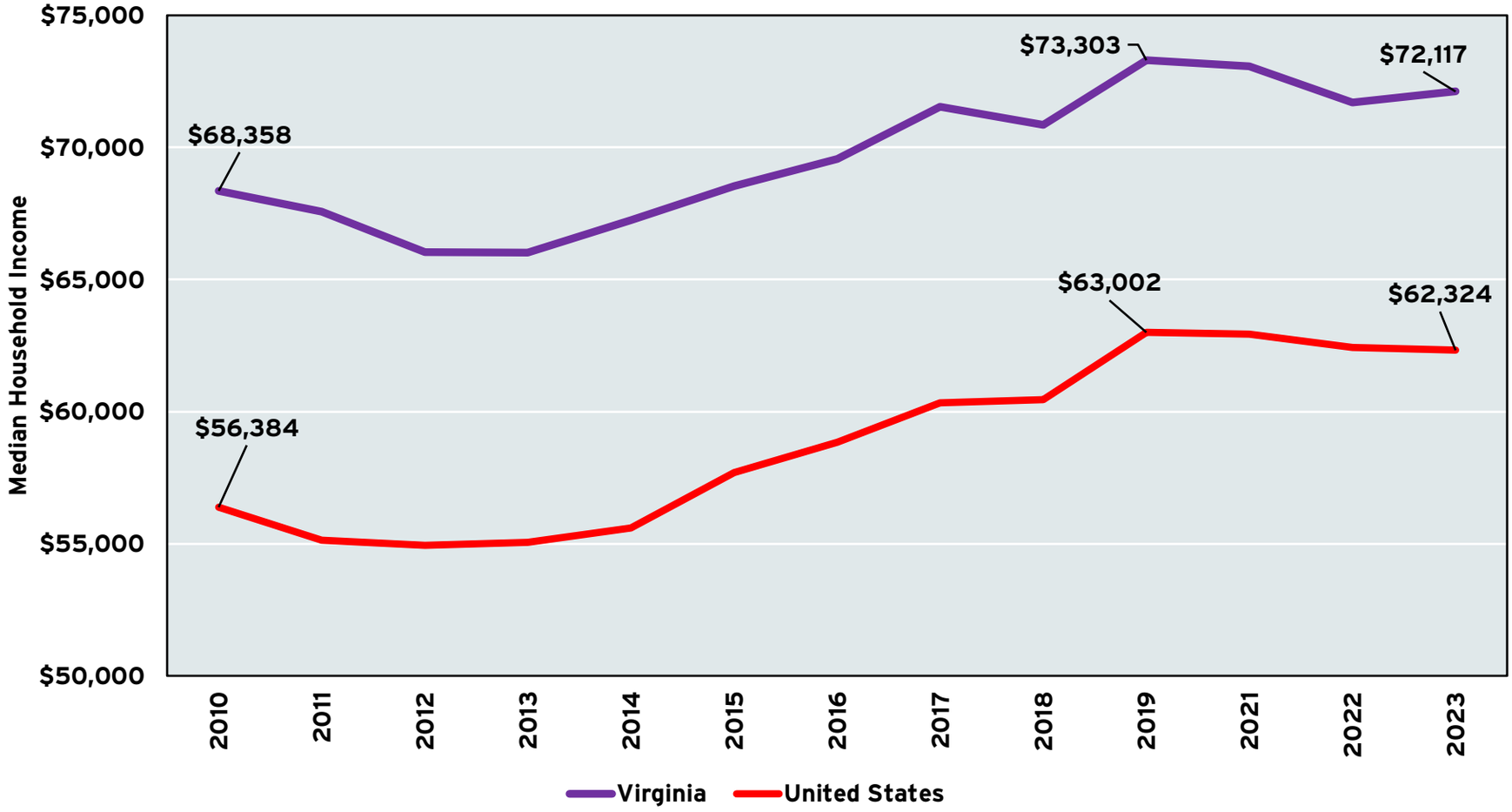
NOMINAL AND REAL MEDIAN HOUSEHOLD INCOME
VIRGINIA, 2010 - 2023*



Source: United States Census Bureau, American Community Survey 2023, 1-Year Estimates and the Dragas Center for Economic Analysis and Policy. *Due to the impact of COVID-19, 2020 ACS estimates are experimental and should not be compared to other ACS estimates. We exclude the 2020 estimates from our analysis. 2017 constant dollars estimated using the Bureau of Labor Statistics Consumer Price Index research series (CPI-U-RS).

GRAPH 15

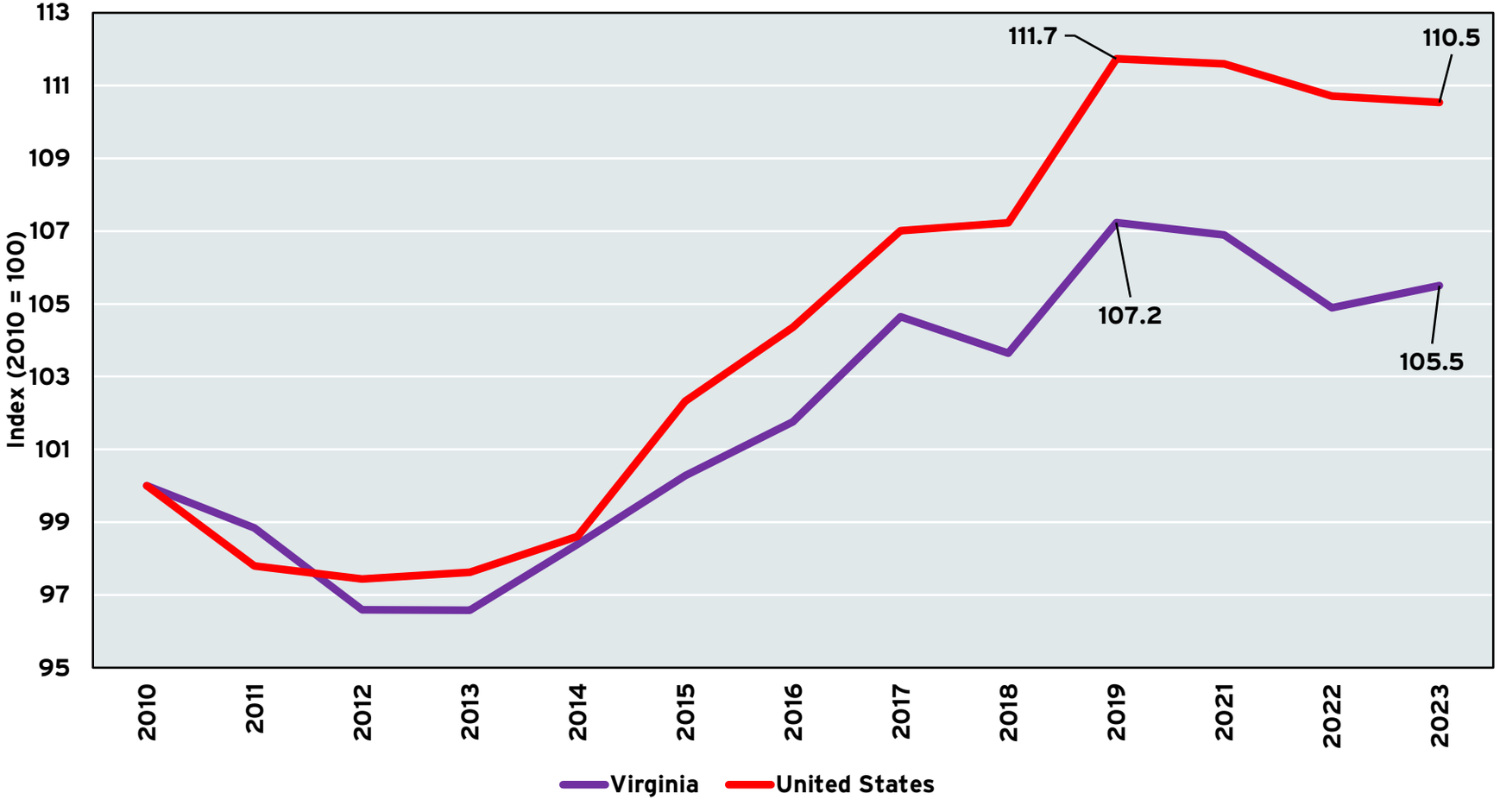
REAL MEDIAN HOUSEHOLD INCOME
VIRGINIA AND THE UNITED STATES, 2010 – 2023*



Source: United States Census Bureau, American Community Survey 2023, 1-Year Estimates and the Dragas Center for Economic Analysis and Policy. *Due to the impact of COVID-19, 2020 ACS estimates are experimental and should not be compared to other ACS estimates. We exclude the 2020 estimates from our analysis. 2017 constant dollars estimated using the Bureau of Labor Statistics Consumer Price Index research series (CPI-U-RS).

GRAPH 16

INDEX OF REAL MEDIAN HOUSEHOLD INCOME
VIRGINIA AND THE UNITED STATES, 2010 – 2023*



Source: United States Census Bureau, American Community Survey 2023, 1-Year Estimates and the Dragas Center for Economic Analysis and Policy. *Due to the impact of COVID-19, 2020 ACS estimates are experimental and should not be compared to other ACS estimates. We exclude the 2020 estimates from our analysis. 2017 constant dollars estimated using the Bureau of Labor Statistics Consumer Price Index research series (CPI-U-RS).

Virginia's Civilian Labor Force and Individual Employment

After the Great Recession of 2007 – 2009, Virginia's civilian labor force declined to a post-recession low of approximately 4.1 million individuals in October 2009. Individual employment reached its post-recession nadir of 3.8 million individuals in December 2009. Graph 17 presents data for Virginia's civilian labor force and individual employment from January 2010 to August 2024. In November 2019, individual employment peaked at 4.3 million Virginians, followed by the civilian labor force reaching a record 4.4 million Virginians in December 2019. After a sharp decline in the first half of 2020, individual employment recovered more quickly than the civilian labor force. In 2024, the civilian labor force peaked in February at almost 4.6 million Virginians while individual employment reached a record of approximately 4.5 million Virginians in April 2024. In late summer 2024, both the civilian labor force and individual employment declined from their summer peaks.

The headline unemployment rate measures the ratio of unemployed individuals to the civilian labor force. In January 2010, as shown in Graph 18, the headline unemployment rate in the Commonwealth was 7.6%. Over the next decade, the unemployment rate declined steadily and reached a low of 2.5% in the summer months of 2019. After increasing slightly during the fall of 2019 and winter of 2020, the unemployment rate jumped from 3.2% in March 2020 to 12.0% in April 2020.

The recovery in the unemployment rate was swift when compared to the period after the Great Recession of 2007 to 2009. By December 2020, the unemployment rate in Virginia had fallen to 5.0%. A year later, in December 2021, the unemployment rate stood at 2.9%. In 2022, 2023, and for the first half of 2024, the unemployment rate vacillated between 2.5% and 3.1%. In the winter months, the unemployment rate in the Commonwealth hovered around 3.1% and has typically declined 0.1 to 0.3 percentage points by the summer months. In 2024, for example, the unemployment rate was 3.0% in January, 2.7% in May, and increased slightly to 2.8% in August 2024.

In Graph 19, we compare the growth in the civilian labor force of Virginia with Maryland, North Carolina, West Virginia, and the United States. The civilian labor force of Maryland was 4.2% smaller in August 2024 when compared to the size of the labor force in February 2020. In West Virginia, the civilian labor force was 1.0% lower in August 2024 relative to February 2020. Nationally, the civilian labor force was 2.5% higher in August 2024 than February 2020. Relative to Maryland, West Virginia, and the United States, the Commonwealth has experienced a higher rate of labor force growth (3.1%) from February 2020 to August 2024. North Carolina (4.9%) also saw its labor force grow faster than the nation and Virginia over the same period.

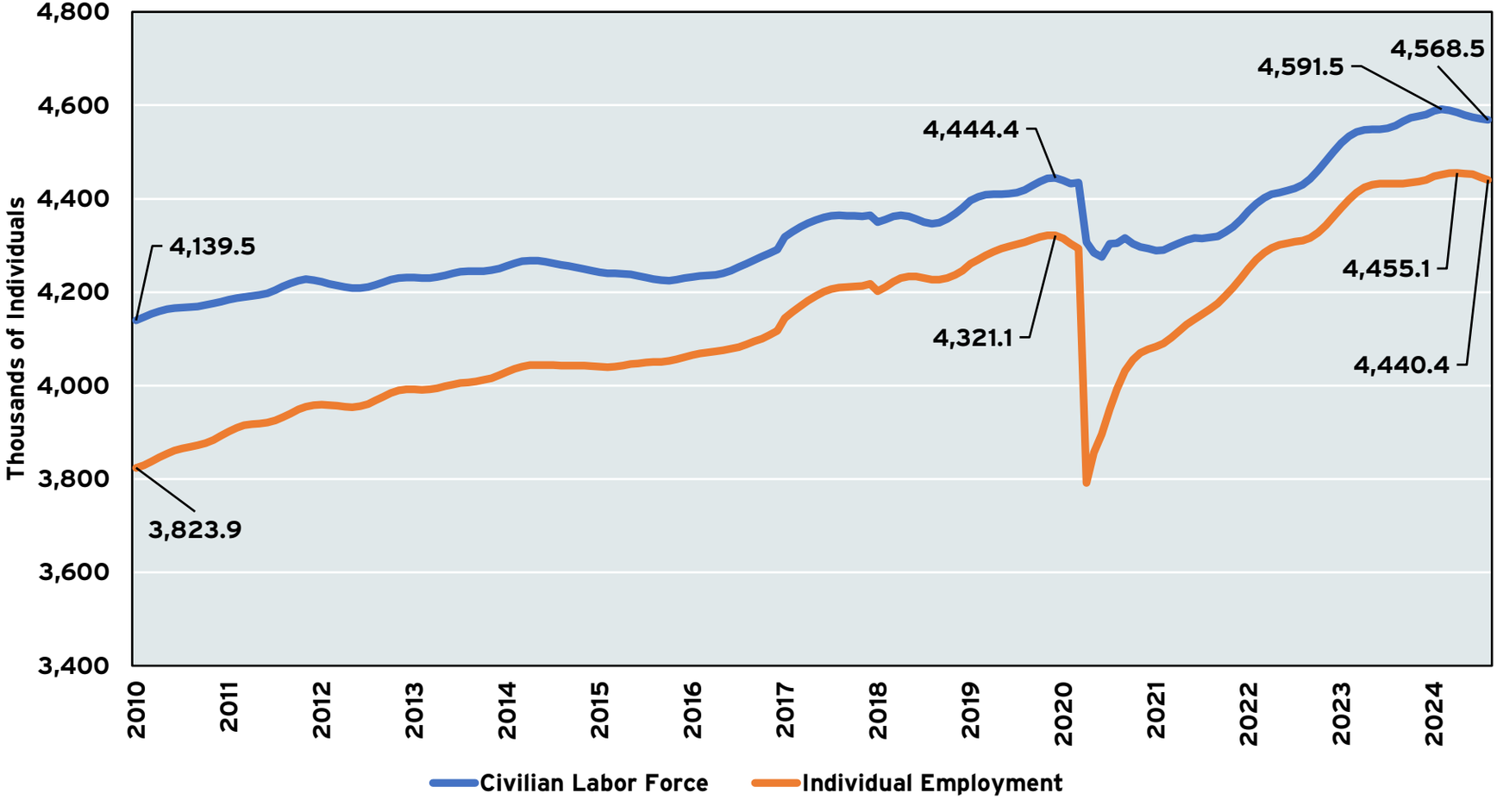
The labor force participation rate is equal to the number of individuals in the labor force as a percent of the civilian noninstitutional population and represents the percentage of the population that is either working or actively looking for work.[13] Graph 20 presents the labor force participation rate for Virginia from January 2010 to August 2024. Prior to the onset of the COVID-19 pandemic, the labor force participation rate reached 65.9% in October through December 2019 before falling to 63.4% in June 2020.

The good news is that Virginia's labor force participation rate recovered completely by January 2023. The labor force participation rate continued to rise relative to the pandemic low and reached a high of 66.6% in January and February 2024. We do note that the civilian labor force reached a record 4.455 million Virginians in April 2024 and declined steadily to 4.440 million through August 2024. In other words, the civilian labor force was 0.3% smaller in August 2024 than April 2024, which accounts, in part, for the 0.4 percentage point decline in the labor force participation rate from April 2024 to August 2024. We must note that, even with the decline in the labor force participation rate over this period, it was slightly higher in August 2024 (66.0%) than the peak immediately prior to the pandemic in December 2019 (65.9%).

13 The civilian noninstitutional population age 16 or older excludes active-duty members of the U.S. Armed Forces, people confined to, or living in, institutions or facilities such as prisons, jails, and residential care facilities, to include skilled nursing homes.

GRAPH 17

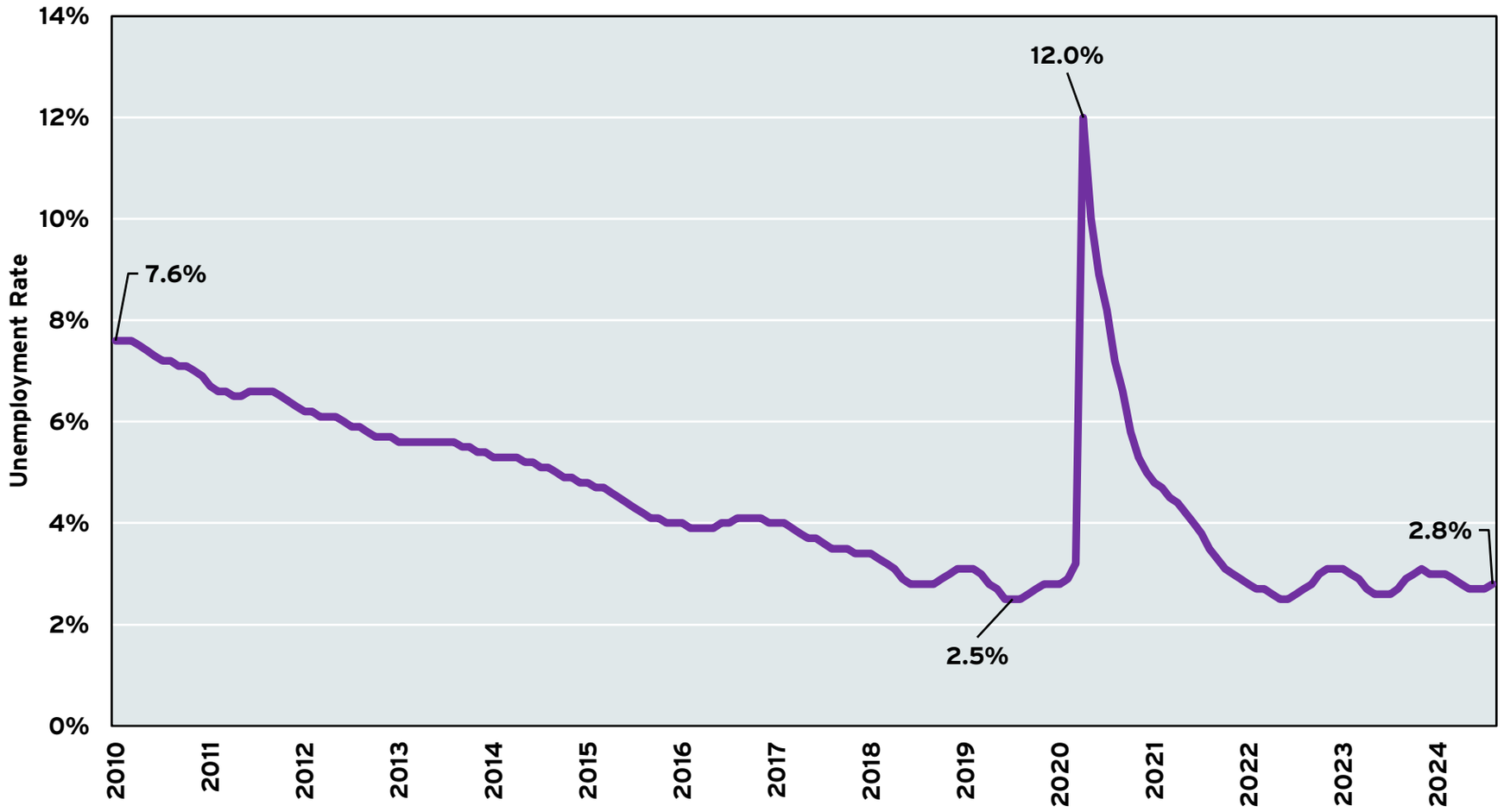
CIVILIAN LABOR FORCE AND INDIVIDUAL EMPLOYMENT
VIRGINIA, JANUARY 2010 - AUGUST 2024



Sources: Bureau of Labor Statistics (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 18

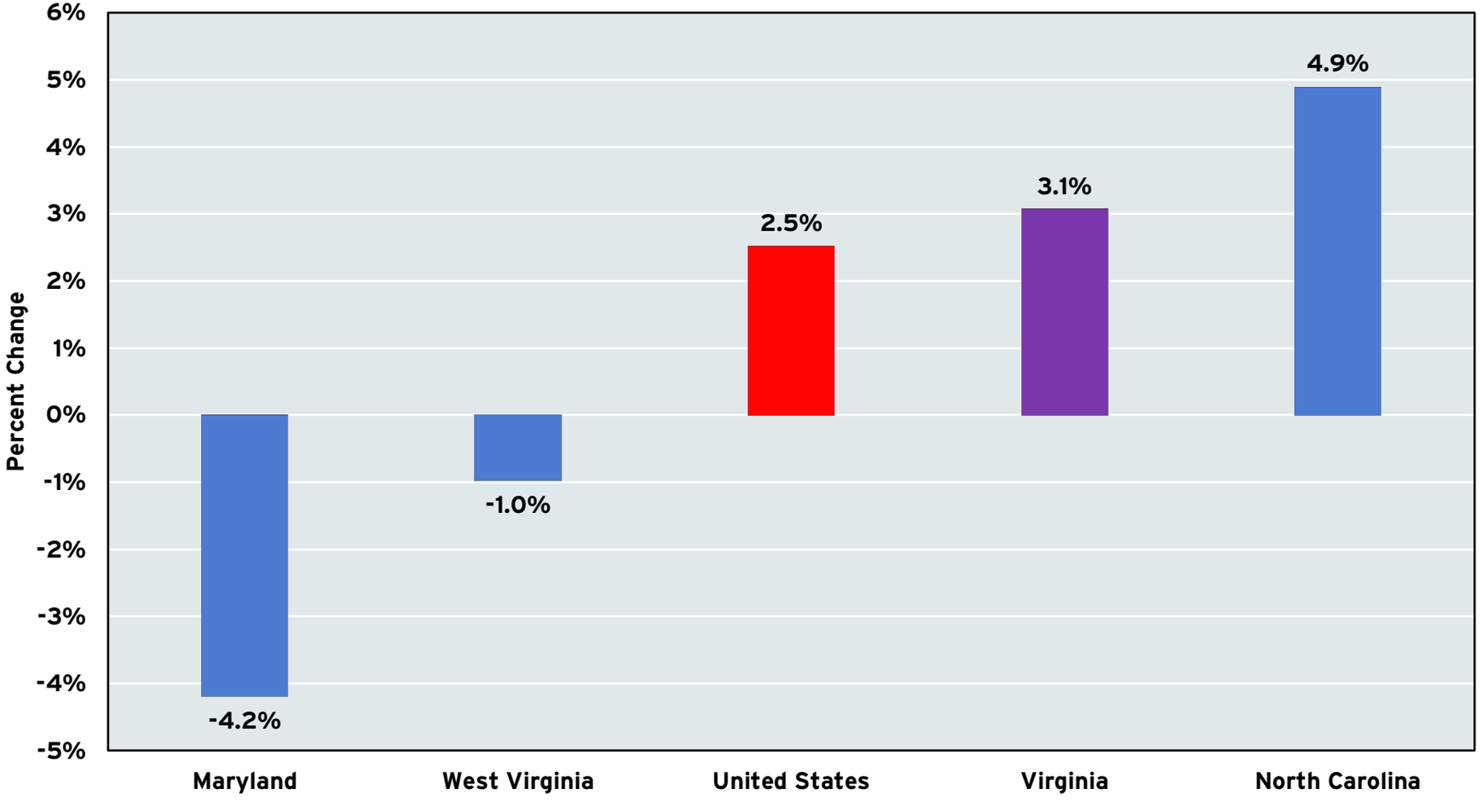
HEADLINE UNEMPLOYMENT RATE (U3)
VIRGINIA, JANUARY 2010 - AUGUST 2024



Sources: Bureau of Labor Statistics (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 19

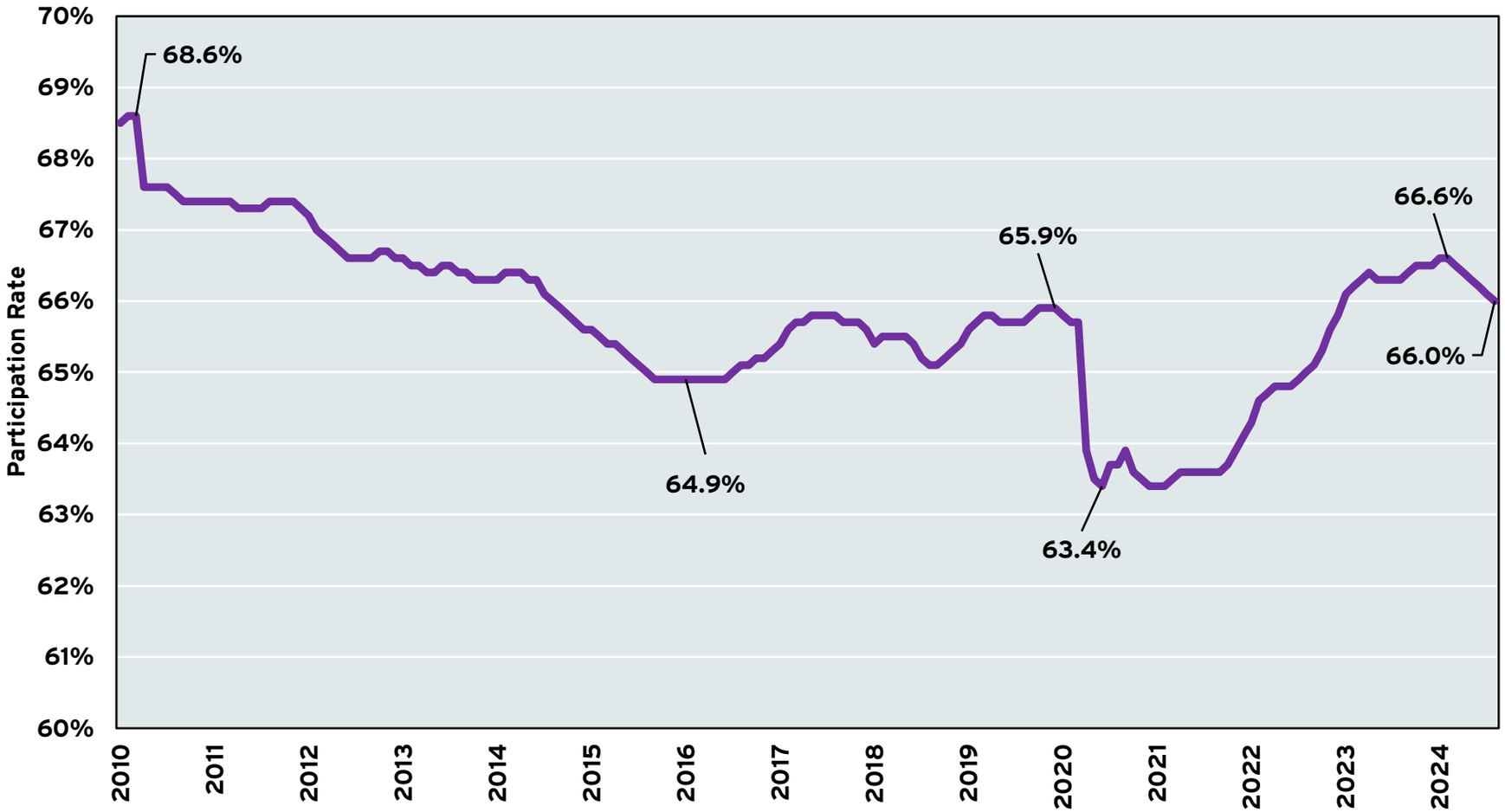
PERCENT CHANGE IN CIVILIAN LABOR FORCE
VIRGINIA, SELECTED STATES, AND THE UNITED STATES
FEBRUARY 2020 TO AUGUST 2024



Sources: Bureau of Labor Statistics (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 20

LABOR FORCE PARTICIPATION RATE
VIRGINIA, JANUARY 2010 – AUGUST 2024



Sources: Bureau of Labor Statistics (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

Virginia Adds More Jobs, but Growth Slows

Graph 21 displays nonfarm payrolls (jobs) for the Commonwealth of Virginia from January 2010 to August 2024. Following the Great Recession of 2007 – 2009, the number of jobs in Virginia fell to a low of 3,598 thousand in February 2010. From February 2010 to January 2020 (the pre-pandemic peak), Virginia added approximately 492,700 jobs, an approximate 13.7% increase in the number of jobs across the Commonwealth. By April 2020, employers had shed 478,700 jobs. The recovery, however, was swift. In August 2022, employers had not only brought the number of jobs back to the pre-pandemic high, but they also started to add new jobs to the Virginia economy. Nonfarm payrolls continued to climb through 2023 and into the first half of 2024. In June 2024, employers in Virginia reported a record 4,251 thousand jobs. In August 2024, there were 4,241 thousand jobs across the state, a decline of 0.2%.

Graph 22 compares the performance of the Virginia and national economies in terms of creating jobs. If we benchmark ourselves to the trough in jobs in February 2010, we find that the Virginia economy had 13.7% more jobs in January 2020 than it did in February 2010. For the United States, the index peaked in February 2020, when the national economy had 17.4% more jobs than February 2010. In August 2024, the nation had 22.4% more jobs than February 2010. For Virginia, there were 17.9% more jobs in August 2024 than February 2010. For Virginia, this is a mixture of good and bad economic news. First, Virginia has recovered all the jobs lost during the pandemic and set a record for nonfarm payrolls in 2024. Second, when compared to the nation, the Commonwealth has not generated the same level of job growth since 2010. Virginia is running the race but falling behind the nation in terms of job growth.

Job Openings and Job Quits in Virginia

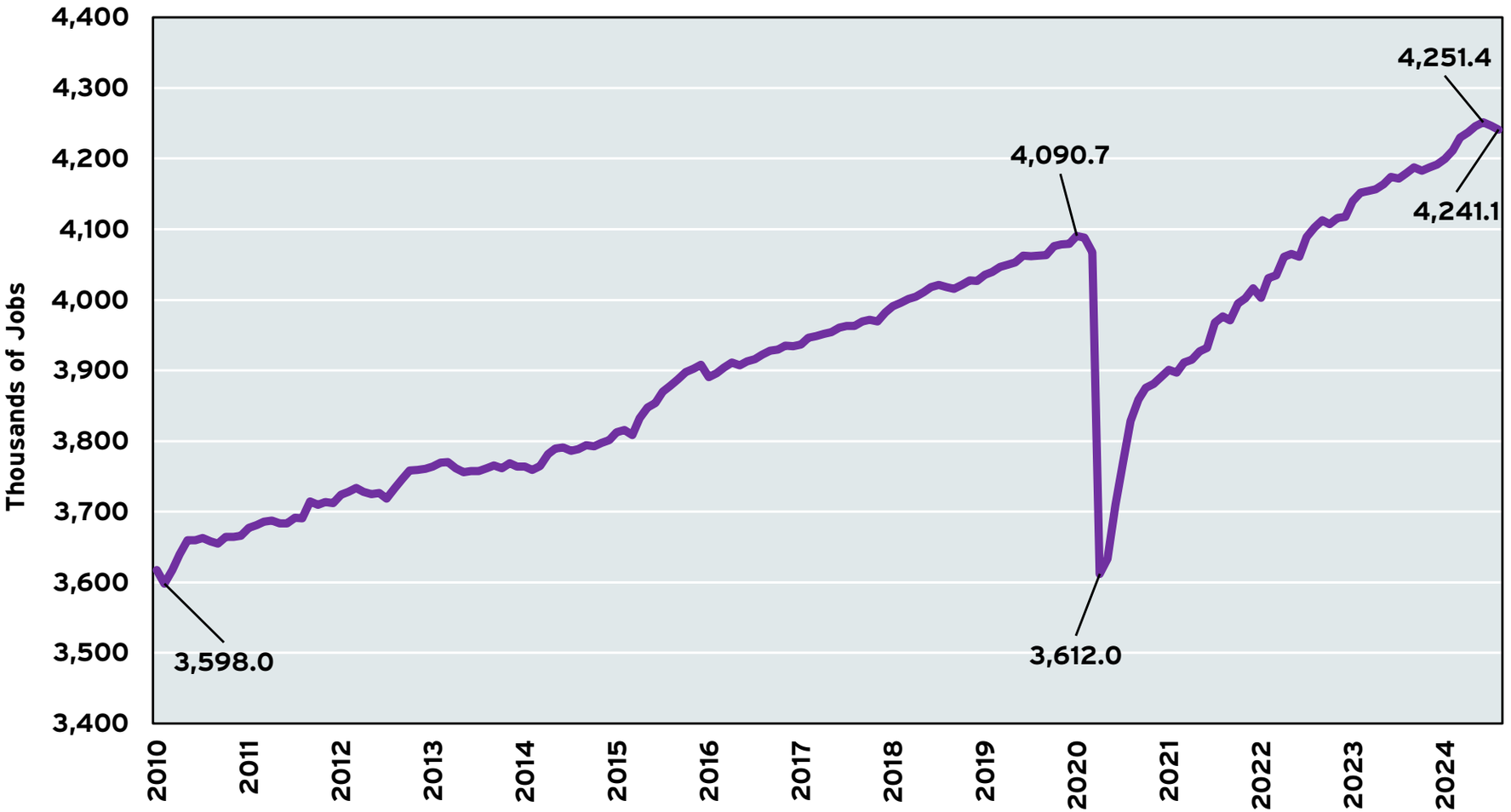
Graph 23 illustrates the average monthly job openings and job quits for Virginia by year from 2010 to 2024. The data illustrate the demand of employers for employees (job openings) and the willingness of employees to depart from their current workplace (job quits). It should be no surprise that in 2010, in the aftermath of the Great Recession, employees were reluctant to quit their jobs and thus job quits were few.

From 2010 to 2019, the average annual number of monthly job openings in Virginia increased at a higher pace than job quits. At the same time, the number of unemployed individuals in the Commonwealth declined, so employers found themselves with fewer applicants (on average) for each open position. After the economic shock of 2020, both employers and employees demonstrated a willingness to hire and to quit, as average monthly job openings increased to 323,800 and average monthly job quits reached a record of 109,500 in 2022. More recently, the number of job openings has declined, reaching a monthly average of 260,700 for the first seven months of 2024. Job quits have also declined, falling from a monthly average of 107,900 in 2023 to 98,300 for the first seven months of 2024.

While the data in Graph 23 suggests that employer demand for labor has recently fallen in Virginia, we need to place the data in context. First, while the number of job openings has declined in 2023 and into 2024, this decline is relative to the post-pandemic peak in 2022. The average number of monthly job openings in 2023 and 2024 was still higher than the pre-pandemic record observed in 2019. Second, Graph 24 shows that the average monthly job openings for the first seven months of 2024 was 260,714. For the first seven months of 2019, the average number of monthly job openings was 217,571. There were fewer job openings in 2024 relative to 2022 and 2023, but there were still more job openings in 2024 than 2019.

GRAPH 21

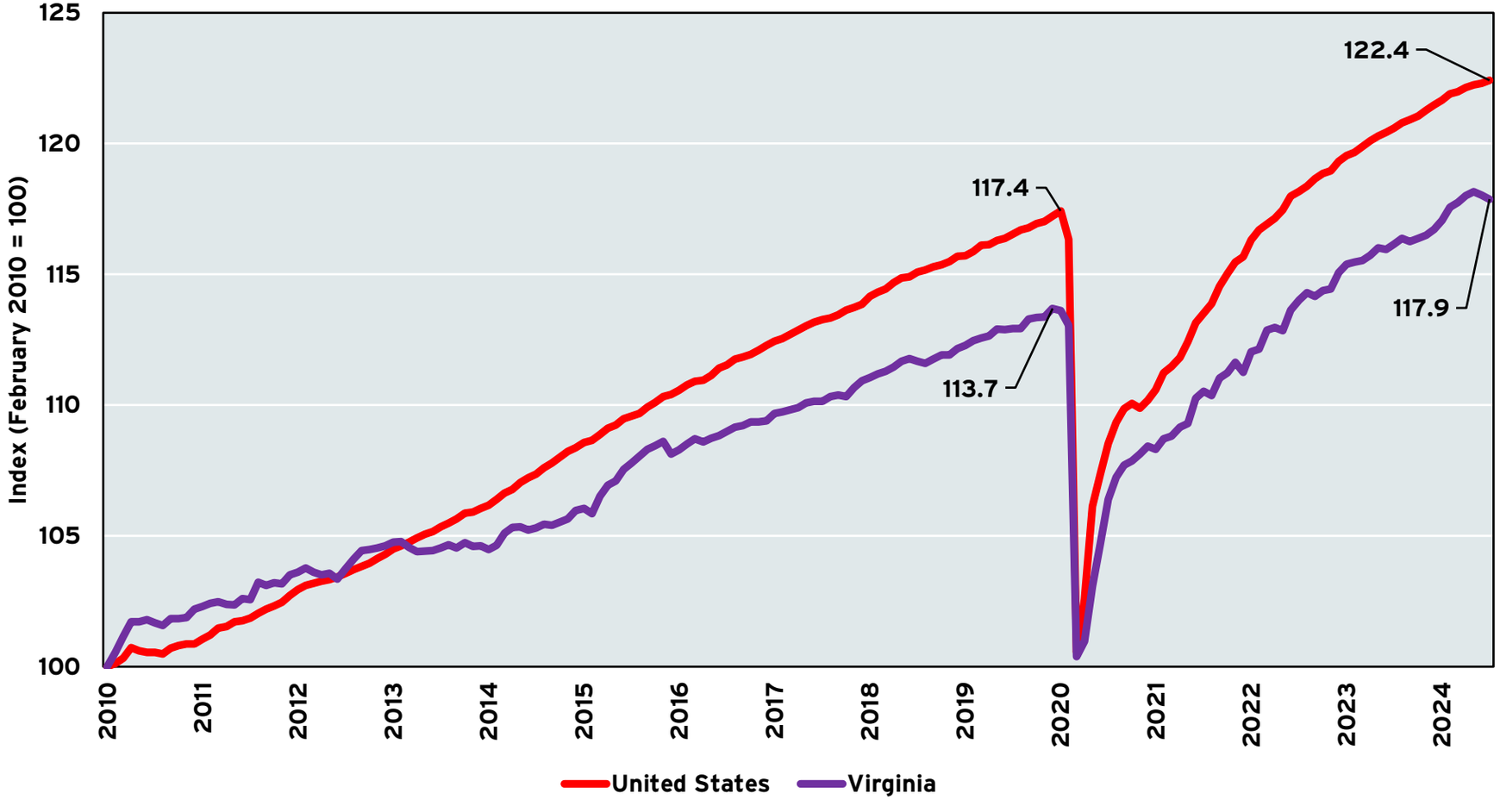
NONFARM PAYROLLS (JOBS)
VIRGINIA, JANUARY 2010 - AUGUST 2024



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

GRAPH 22

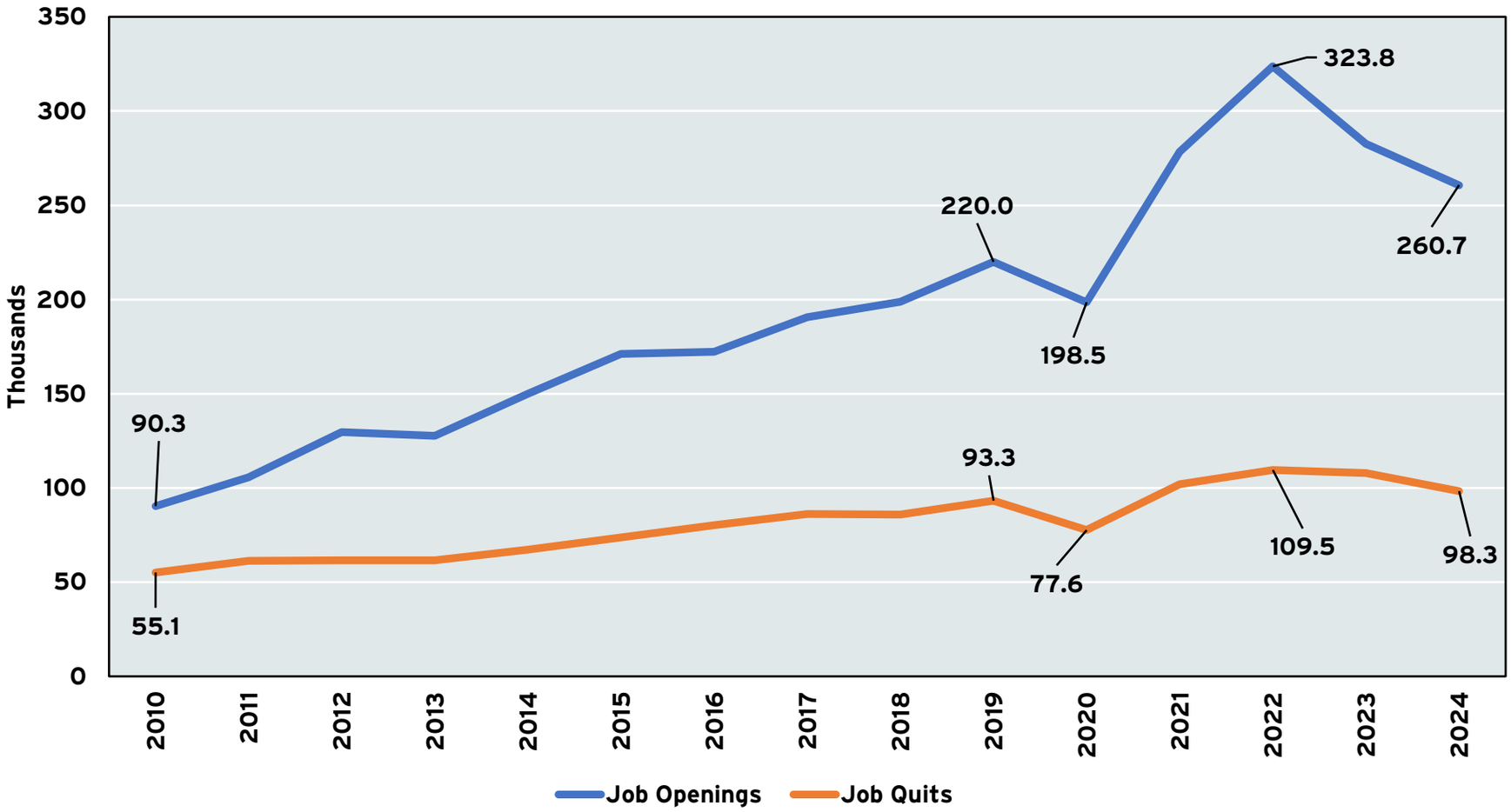
INDEX OF NONFARM PAYROLLS (JOBS)
VIRGINIA AND THE UNITED STATES, FEBRUARY 2010 - AUGUST 2024



Sources: Bureau of Labor Statistics (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Data are seasonally adjusted.

GRAPH 23

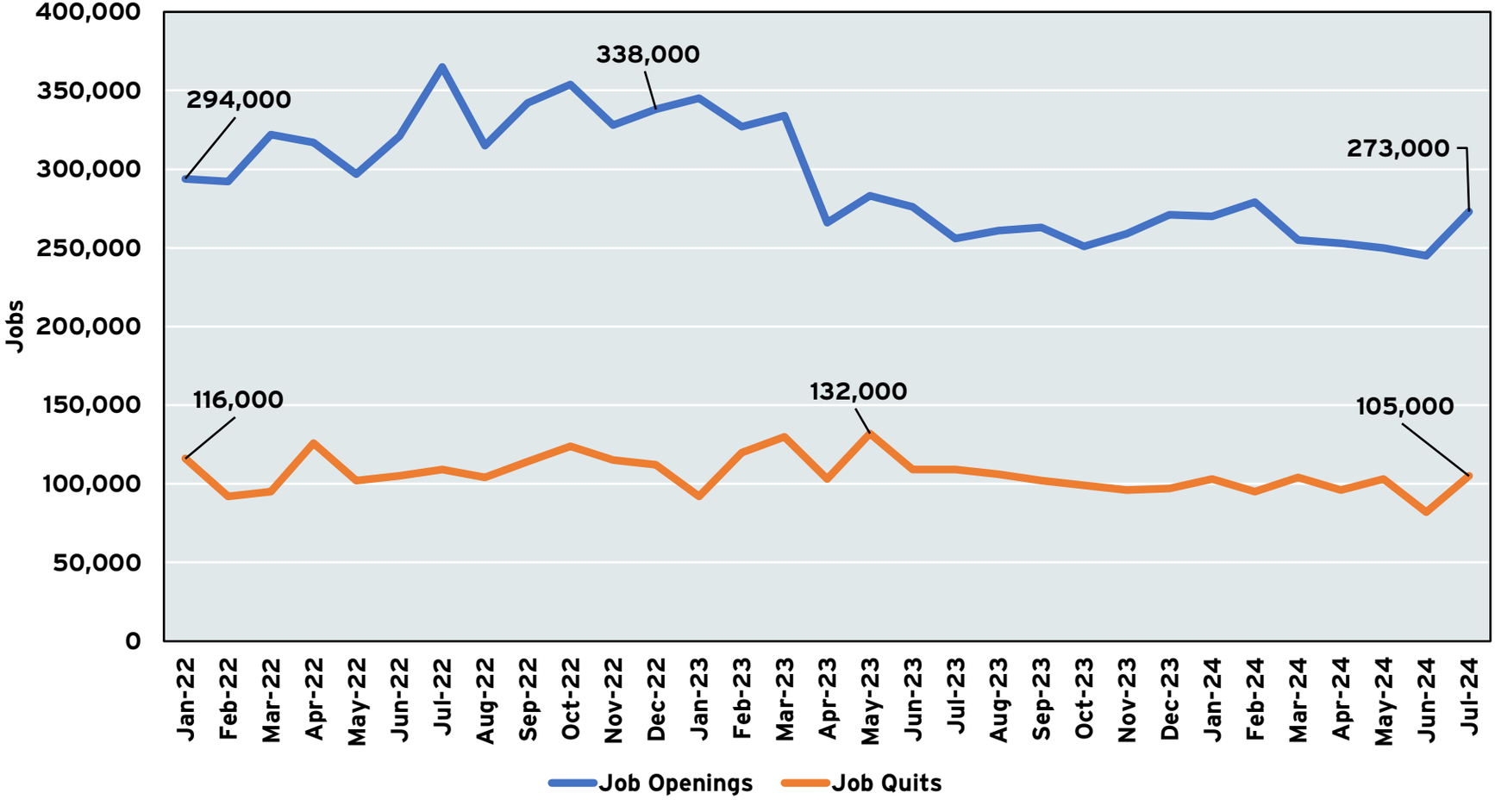
AVERAGE MONTHLY JOB OPENINGS AND JOB QUITS BY YEAR
VIRGINIA, 2010 - 2024*



Sources: Bureau of Labor Statistics (2024). Data are seasonally adjusted. *Data for 2024 are the average of monthly data from January to August 2024.

GRAPH 24

JOB OPENINGS AND JOB QUITS
VIRGINIA, JANUARY 2022 - JULY 2024



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover (JOLTS) Survey (2024). Job openings for total nonfarm payrolls. Quits include employees who left voluntarily, with the exception of retirements. Data are seasonally adjusted.

Real Estate Prices: What Can Be Done?

Graph 25 illustrates the issuance of new privately-owned single-family housing unit permits for the United States from January 2000 to August 2024. Single-family permits climbed before the onset of the Great Recession of 2007 – 2009, reaching a peak of approximately 1.8 million units in September 2005.[14] By January 2009, single-family permits had fallen to approximately 337,000 units, a decline of 81.3%. What followed this trough was an incomplete recovery, as permits only exceeded 1.0 million in the aftermath of the COVID-19 pandemic. Even this recovery was short-lived as single-family permits fell again when the Federal Reserve began to tighten monetary policy in 2022 in response to rising inflation.

While single-family housing permits never fully recovered from the Great Recession of 2007 – 2009, the same cannot be said about multifamily housing permits. Graph 26 shows that multifamily permits declined in 2008 and 2009 but then recovered to pre-recession levels by the middle of the next decade. Multifamily permits increased in late 2020 and continued to rise through early 2023. While multifamily permits declined in the second half of 2023 and into 2024, the number of issued permits were still higher than prior to the Great Recession. The increase in multifamily permits, however, did not make up for the shortfall in single-family permits, so the country is producing fewer total housing units than two decades ago.

Graph 27 illustrates the homeowner and rental vacancy rates for the United States from the first quarter of 2000 to the second quarter of 2024. The rental vacancy rate peaked at 11.1% during the Great Recession and declined to 5.6% in the fourth quarter of 2021. The homeowner vacancy rate also climbed during the Great Recession, reaching 2.9% in the fourth quarter of 2008. The homeowner vacancy rate also fell during the longest peacetime expansion in U.S. history. Except for one quarter, the homeowner vacancy rate has hovered around 1% this decade. In other words, for the entire current decade, an average of 1 in 100 homes has been vacant, illustrating the relative tightness of the single-family market. While the rental vacancy rate has rebounded slightly off its recent lows, the homeowner vacancy rate was 0.9% in the second quarter of 2024.

Graph 28 illustrates annual averages of monthly one-unit single-family residential permits issued in Virginia from 2000 through the first eight months of 2024. Prior to the Great Recession of 2007 – 2009, average residential permits peaked at 4,151 a month in 2005. By 2011, this had fallen to 1,283 a month. Typically, as economic activity rebounded from recession, building permits (a signal of future building activity) would increase, but this did not occur. The highest average level of monthly permits in the previous decade was 1,965 in 2017, a decline of 52.7% from the peak in 2005. In 2021, with interest rates low, the number of permits increased to 2,070, but this was still less than half that observed in the years prior to the Great Recession. Through the first eight months of 2024, an average of 1,899 private 1-unit structure permits were issued monthly throughout Virginia.

Graph 29 illustrates the estimated vacancy rates for Virginia from 1990 to 2023 for rental and single-family housing. The single-family residential vacancy rate remained at a three-decade low in 2023. Fewer homes for sale meant that Virginians who would otherwise buy homes were, in effect, 'stuck' in multi-family housing. This, in turn, contributed to a decline in the multi-family vacancy rate. In 2023, slightly more than 1 in 200 single-family residences were vacant and approximately 1 in 20 rental units were vacant. To say that the housing market was 'tight' would be considered an understatement by many Virginians.

14 The U.S. Census reports data on new residential permits, construction, and sales on a seasonally adjusted annual basis. For more information, see https://www.census.gov/construction/nrc/index.html.

With fewer single-family homes entering the market, what happened to housing values in Virginia and the nation? Housing values reflect the interaction between housing supply and demand. For this purpose, we use the Zillow Single-Family Home Value Index (ZHVI) to measure housing values presented in Graph 30.[15] In January 2010, the estimated housing value in Virginia was $223,983. By January 2020, the typical house was worth $282,984, an increase of 26.3%. Over the same period, the national home value index increased by 43.8%.

From January 2020 to January 2021, the estimated housing value in Virginia increased by 9.9% and then another 10.9% from January 2021 to January 2022. The price growth for a typical house slowed in 2023 in that it only increased by 6.6% in January 2023 relative to January 2022. In January 2024, the price of the typical home, according to Zillow, was 5.3% higher than January 2023. Of note, that while the nation's price growth outpaced the Commonwealth (January to January) in 2021 (10.6%), 2022 (16.0%), and 2023 (8.0%), it was slightly lower in January 2024 (3.2%) compared to Virginia. From January 2020 to August 2024, the price of a typical house increased by 41.4% and 45.8% for Virginia and the United States, respectively.

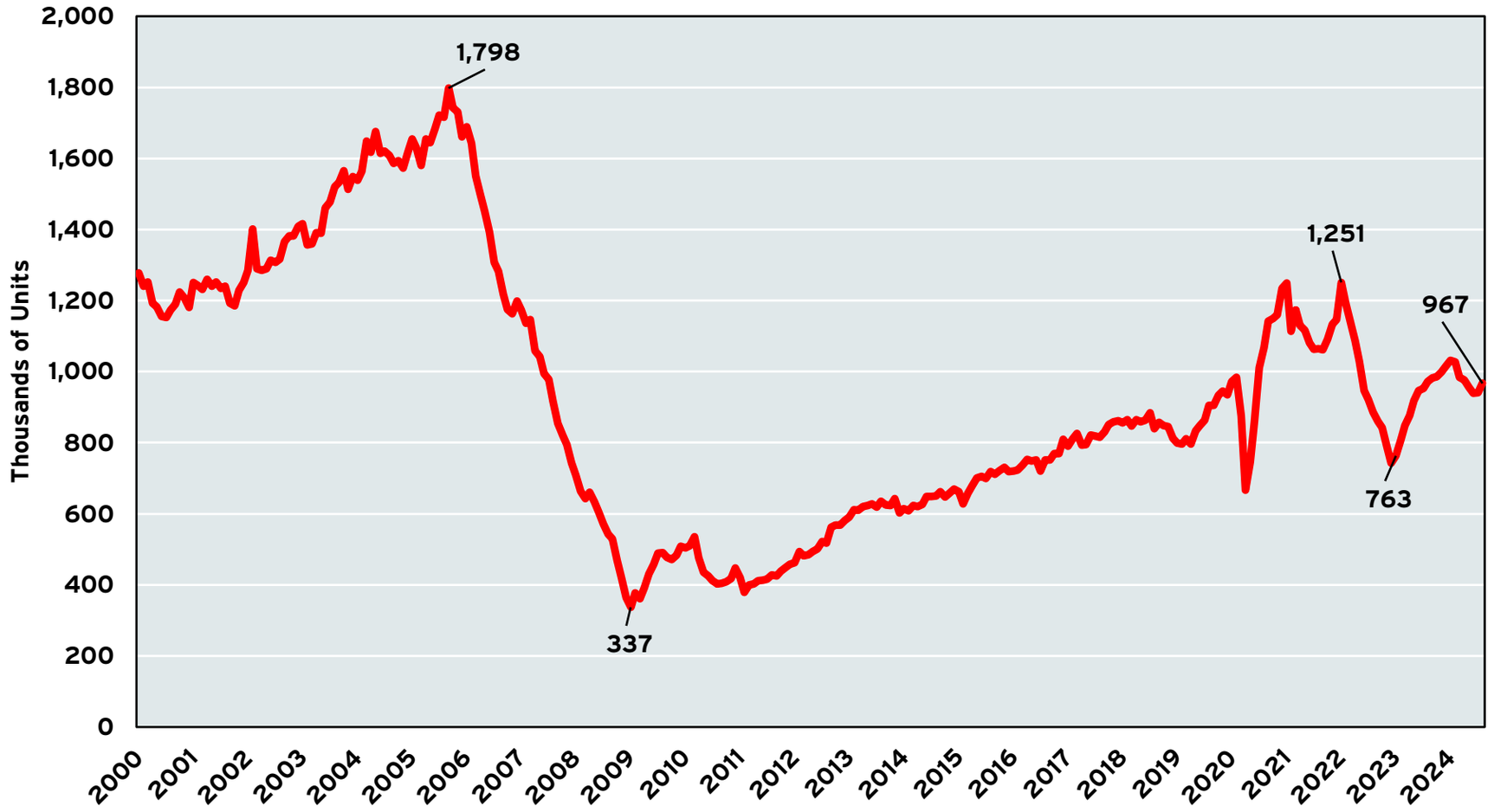
Graph 31 illustrates how the rise in typical home values was reflected in the median mortgage value for Virginia from 2010 to 2023. From 2010 to 2012, the median mortgage value declined from $271,500 to $257,400, a drop of 5.2%. From 2013 to 2019, the median mortgage value in the Commonwealth, however, increased by 19.5%. Over the decade, the average annual growth rate in the median mortgage was 1.6%.

This decade has, not surprisingly, seen median mortgage values jump significantly. By 2022, the median mortgage in Virginia was $390,400. In 2023, the U.S. Census reported that the median mortgage in Virginia was $410,500. In other words, from 2019 to 2023, the median mortgage in the state has increased at an average annual rate of 9.4%. Even though interest rates increased in 2022 and 2023, the declining supply of single-family homes resulted in higher prices and mortgages. With the median mortgage in Virginia over $400,000, it is no wonder that many prospective first-time homebuyers feel that finding a home is an insurmountable task. What then can be done?

15 According to Zillow, the Zillow Home Value Index is "A smoothed, seasonally adjusted measure of the typical home value and market changes across a given region and housing type. It reflects the typical value for homes in the 35th to 65th percentile range." We refer to this index as the "typical housing value" instead of the "median housing value."

GRAPH 25

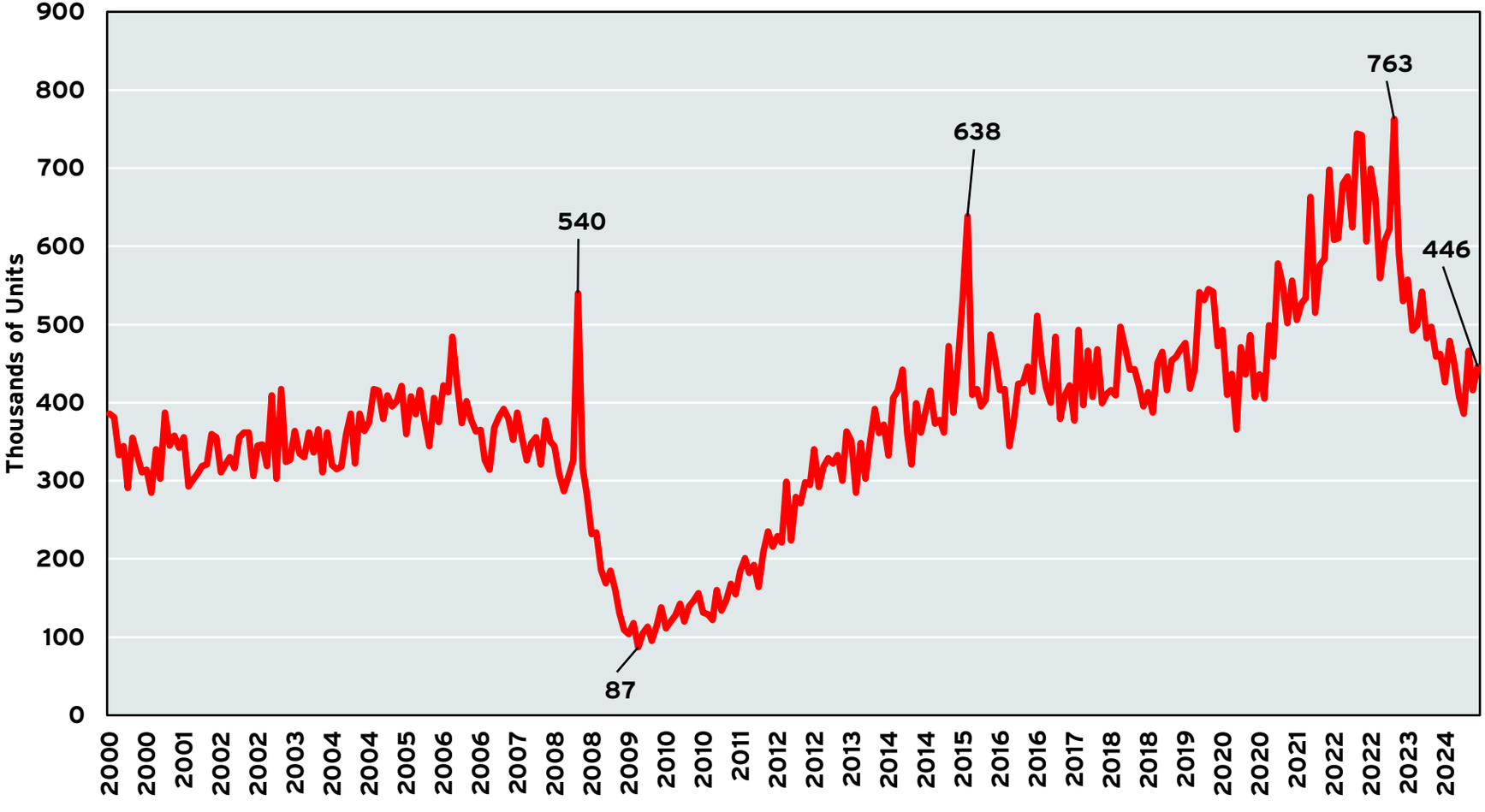
NEW PRIVATELY-OWNED HOUSING UNITS AUTHORIZED IN PERMIT-ISSUING PLACES
SINGLE-FAMILY UNITS, UNITED STATES, JANUARY 2000 - AUGUST 2024



Source: U.S. Census Bureau and U.S. Department of Housing and Urban Development, New Residential Construction (2024). Seasonally adjusted data at annual rate.

GRAPH 26

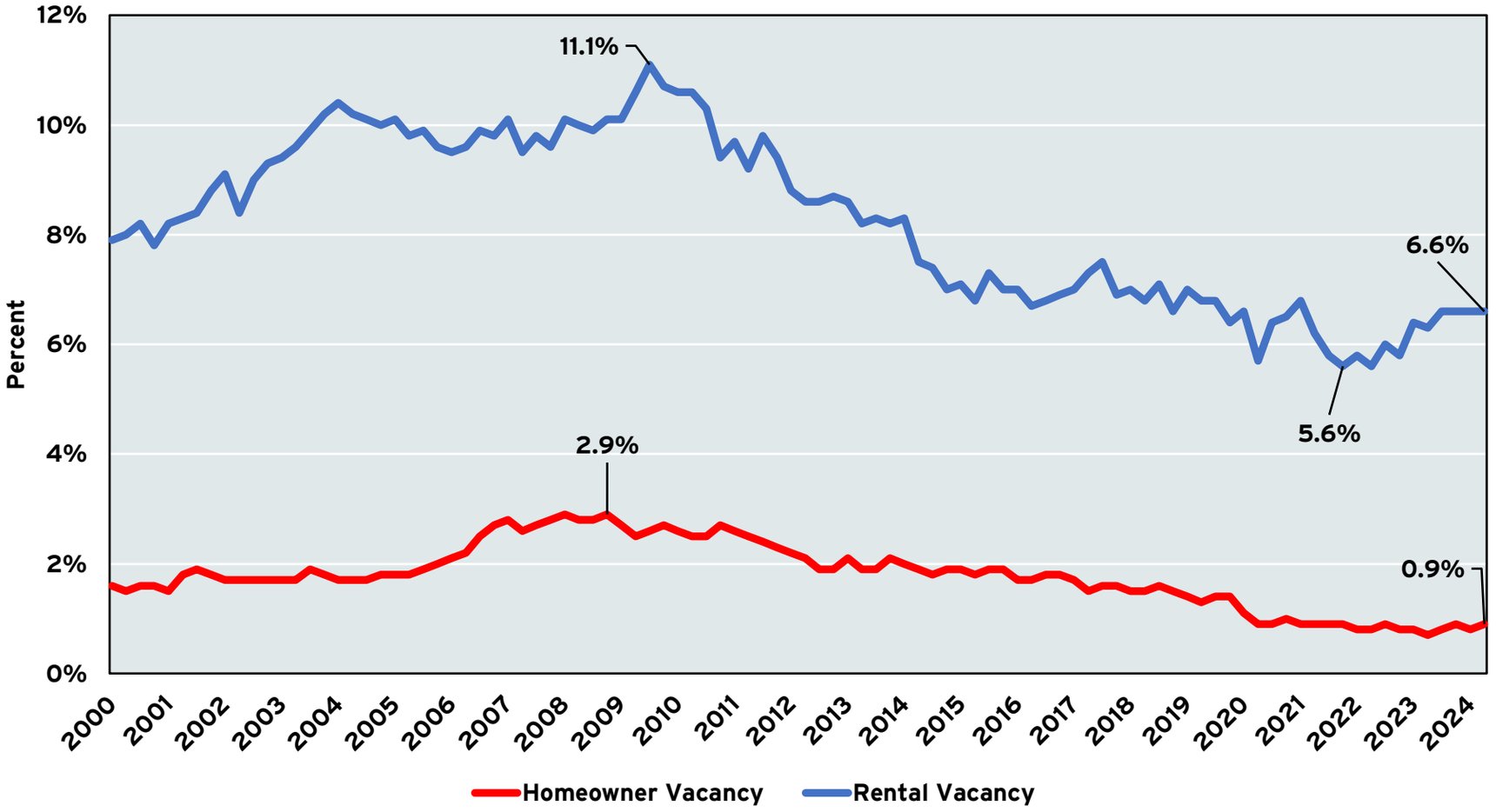
NEW PRIVATELY-OWNED HOUSING UNITS AUTHORIZED IN PERMIT-ISSUING PLACES FIVE OR MORE UNITS, UNITED STATES, JANUARY 2000 – AUGUST 2024



Source: U.S. Census Bureau and U.S. Department of Housing and Urban Development, New Residential Construction (2024). Seasonally adjusted data at annual rate.

GRAPH 27

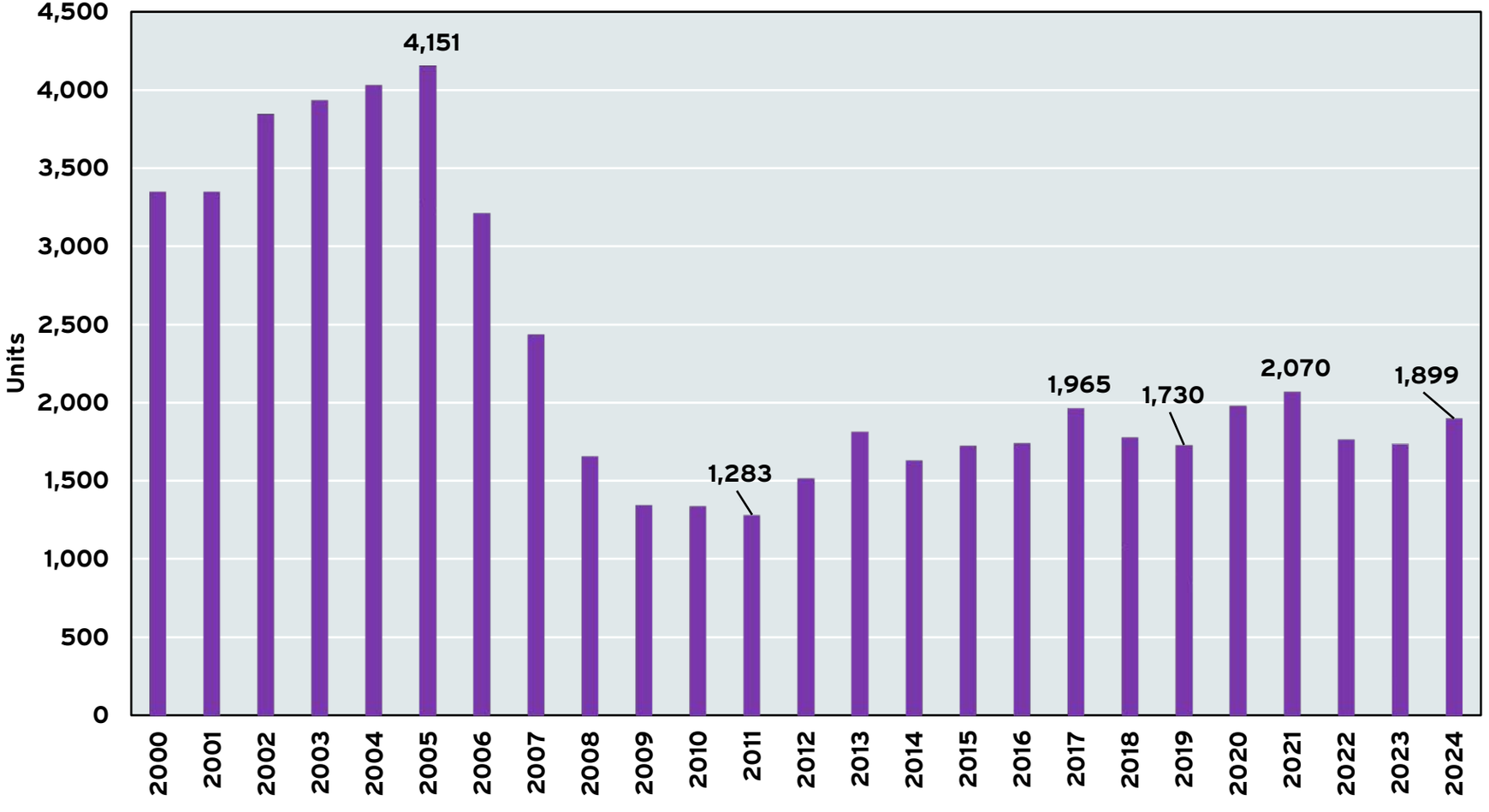
HOMEOWNER VACANCY RATE AND RENTAL VACANCY RATE
UNITED STATES, Q1 2000 - Q2 2024



Source: U.S. Census Bureau, Residential Vacancies and Homeownership Annual Statistics (2024), not seasonally adjusted data. The rental vacancy rate is the proportion of the rental inventory that is vacant for rent. The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant for sale.

GRAPH 28

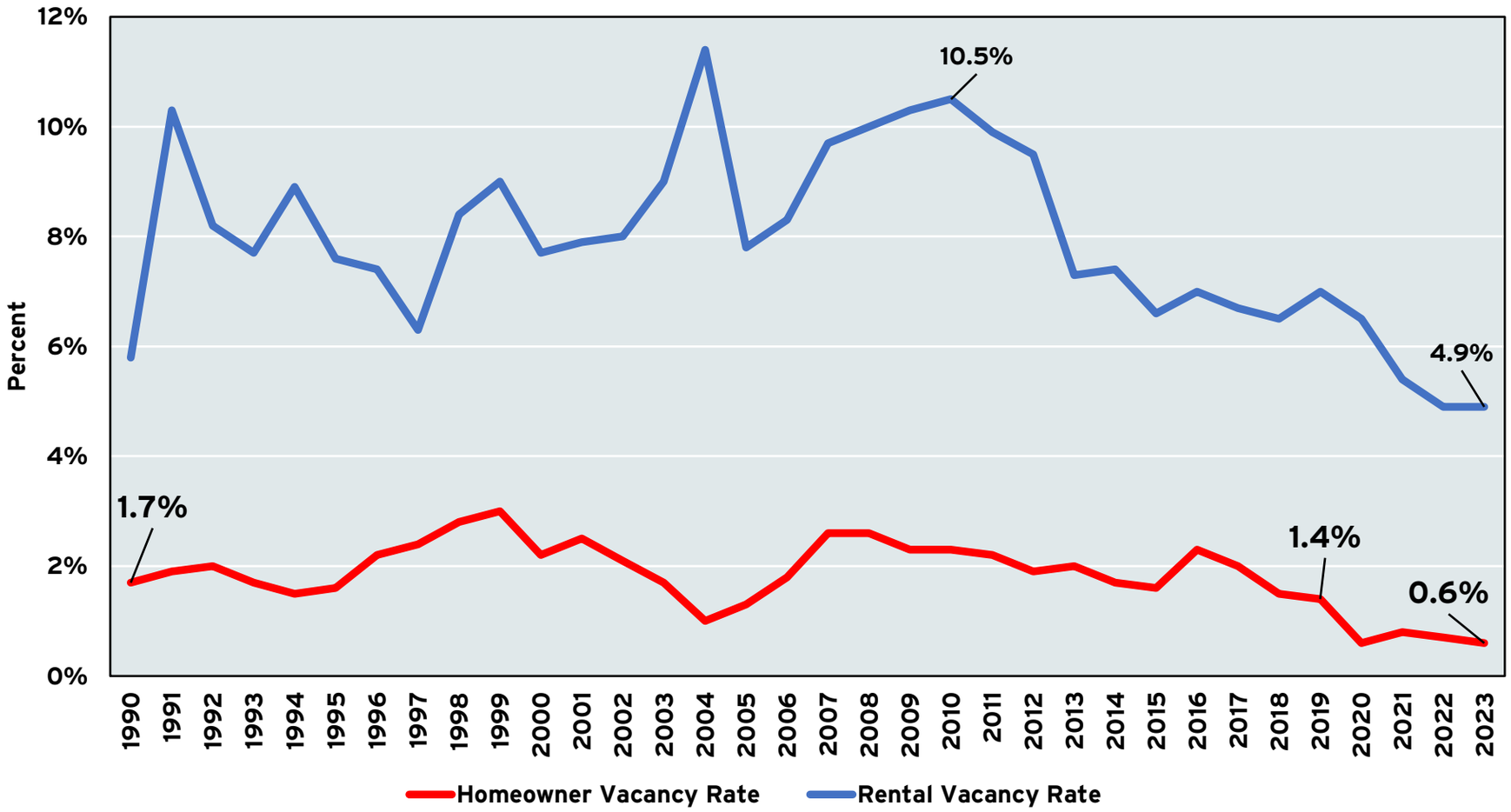
AVERAGE MONTHLY ONE-UNIT SINGLE-FAMILY RESIDENTIAL BUILDING PERMITS
VIRGINIA, 2000 – 2024*



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. *2024 represents the average number of permits through August 2024.

GRAPH 29

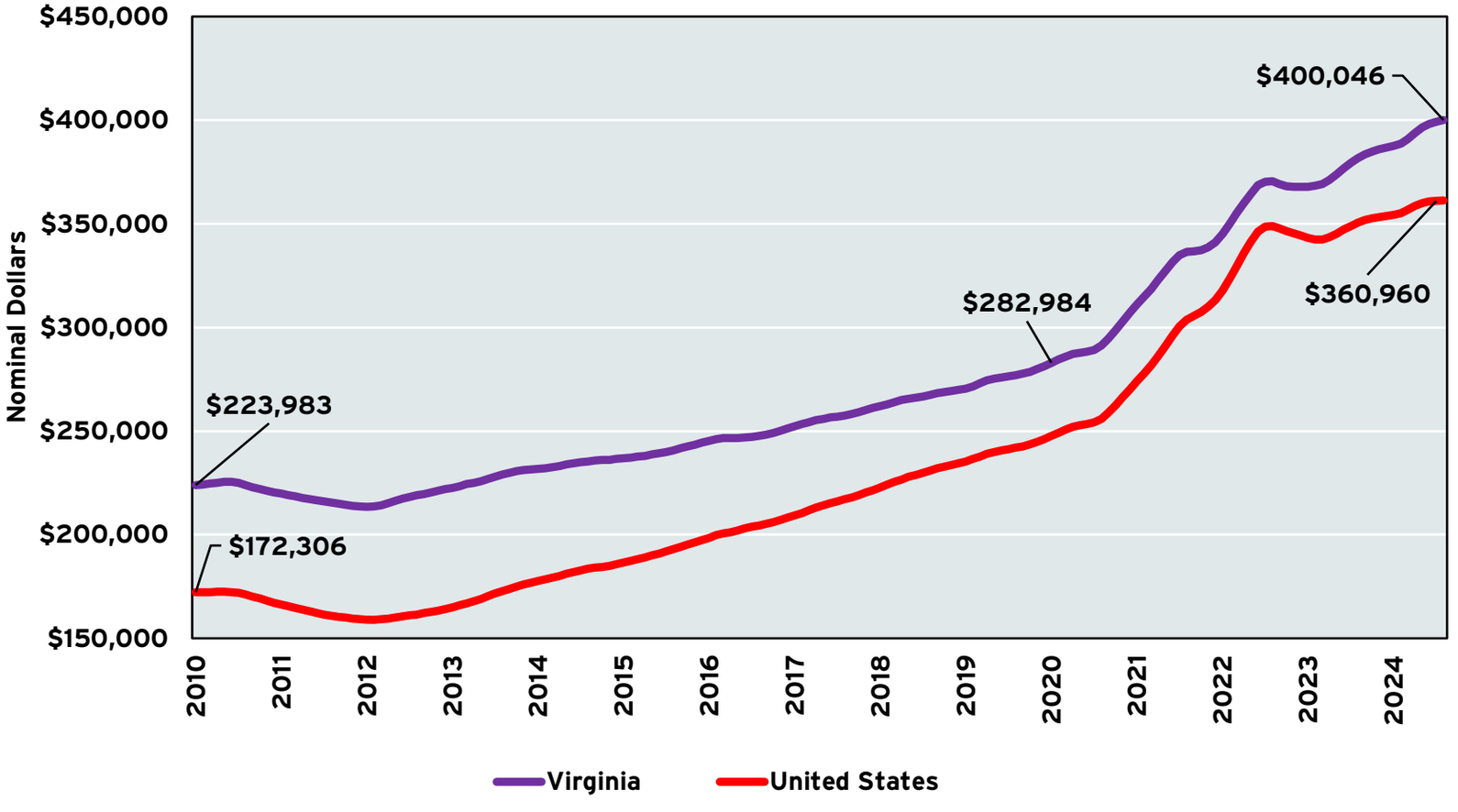
SINGLE-FAMILY HOMEOWNER AND RENTAL VACANCY RATES
VIRGINIA, 1990 - 2023



Source: U.S. Census Bureau (2024) and Dragas Center for Economic Analysis and Policy. The rental vacancy rate is the proportion of the rental inventory which is vacant for rent. The homeowner vacancy rate is the proportion of the homeowner inventory which is vacant for sale.

GRAPH 30

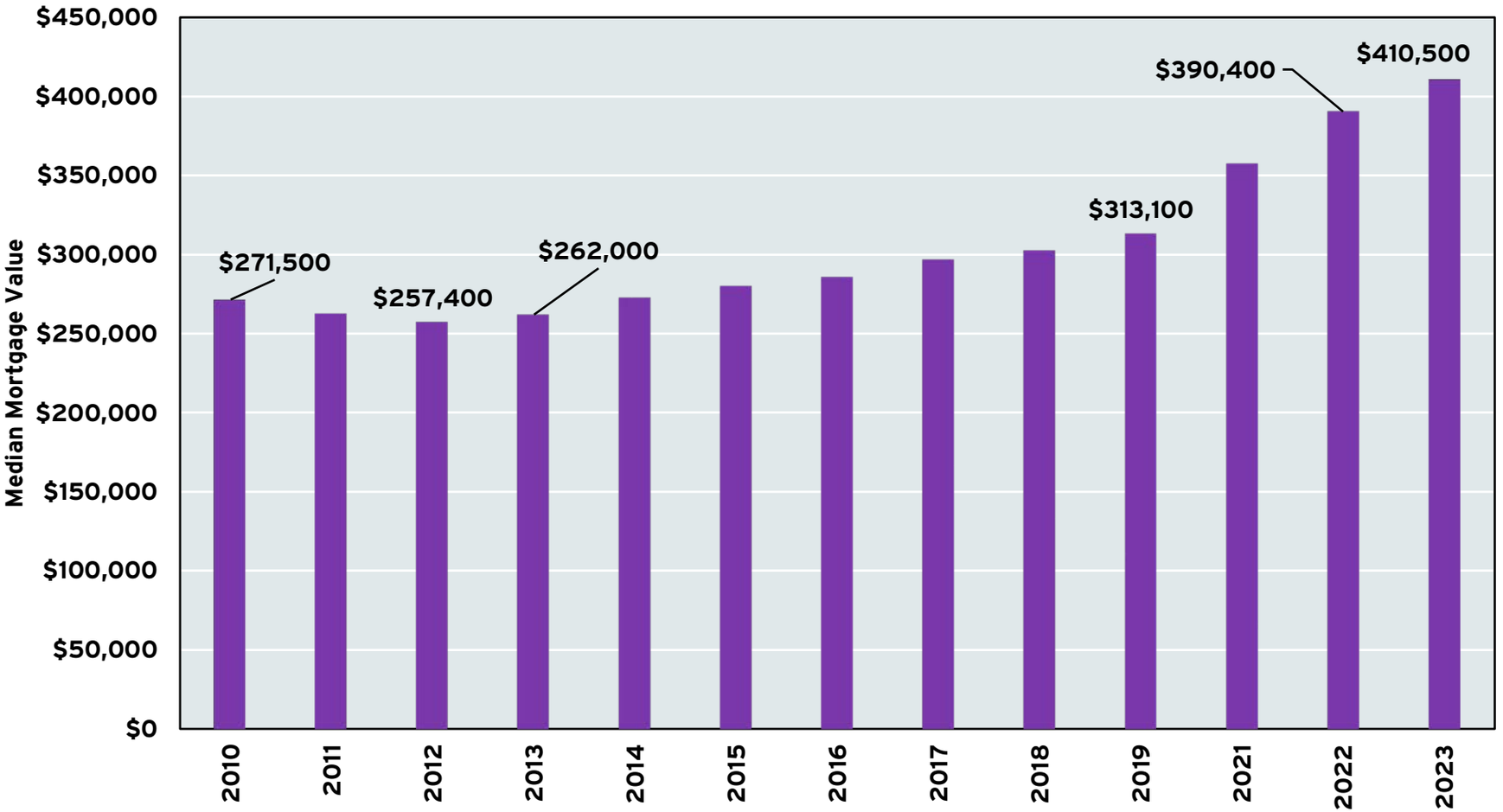
ZILLOW HOME VALUE INDEX OF SINGLE-FAMILY RESIDENTIAL HOMES (ZHVI)
VIRGINIA AND THE UNITED STATES JANUARY 2010 TO AUGUST 2024



Source: Zillow (2024) and the Dragas Center for Economic Analysis and Policy, Old Dominion University. Zillow Home Value Index (ZHVI) for single-family residence. Data are not seasonally adjusted. For more information about the Zillow Home Value Index, see https://www.zillow.com/research/zhvi-methodology/

GRAPH 31

MEDIAN MORTGAGE VALUE FOR OWNER-OCCUPIED UNITS WITH A MORTGAGE
VIRGINIA, 2010 - 2023*



Source: United States Census Bureau, American Community Survey 2023 1-Year estimates, various years. *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

How Does Regulation Influence Supply?

The persistent and large increases in home prices and rents over the last few years empirically prove the imbalance of supply and demand, but if we need more evidence, we do not have to look far. Viriginia is not alone – reports from the National Association of Realtors,[16] Freddie Mac,[17] and the National Low Income Housing Coalition[18] estimate the nationwide housing shortage at between 3.8 and 7.3 million housing units. In a 2021 report on Affordable Housing in Virginia, the Joint Legislative Audit & Review Commission (JLARC) found that the Commonwealth has a shortage of at least 200,000 affordable rental units.[19] As prices and rents have continued to rise and home production has fallen,[20] we can be confident that the shortage has grown more dire in the intervening three years.

The regulatory environment is certainly a major driver of the supply shortfall, and that is getting worse. The Wharton School of Business at the University of Pennsylvania surveyed local residential land use regulatory regimes for over 2,450 primarily suburban communities across the United States in both 2006 and 2018. Using these surveys, the National Bureau of Economic Research reports that in 2018, the share of communities requiring land use approval from one or two different regulatory entities dropped by 10 percentage points, and communities requiring approval from three regulatory entities increased by 19 percentage points (Graph 32).

To explain its impact the report states "In terms of the regulatory process, the number of entities needed to approve projects requiring a zoning variance is increasing in the typical place. This makes the process more cumbersome and increases the potential for projects to be vetoed." Furthermore, 84% of communities mandated minimum lot size restrictions in at least one neighborhood in 2006, and by 2018 that share grew to 94%, or omnipresent across the country.[21] Unfortunately, municipalities are increasing regulatory hurdles, not clearing a path for increased housing production.

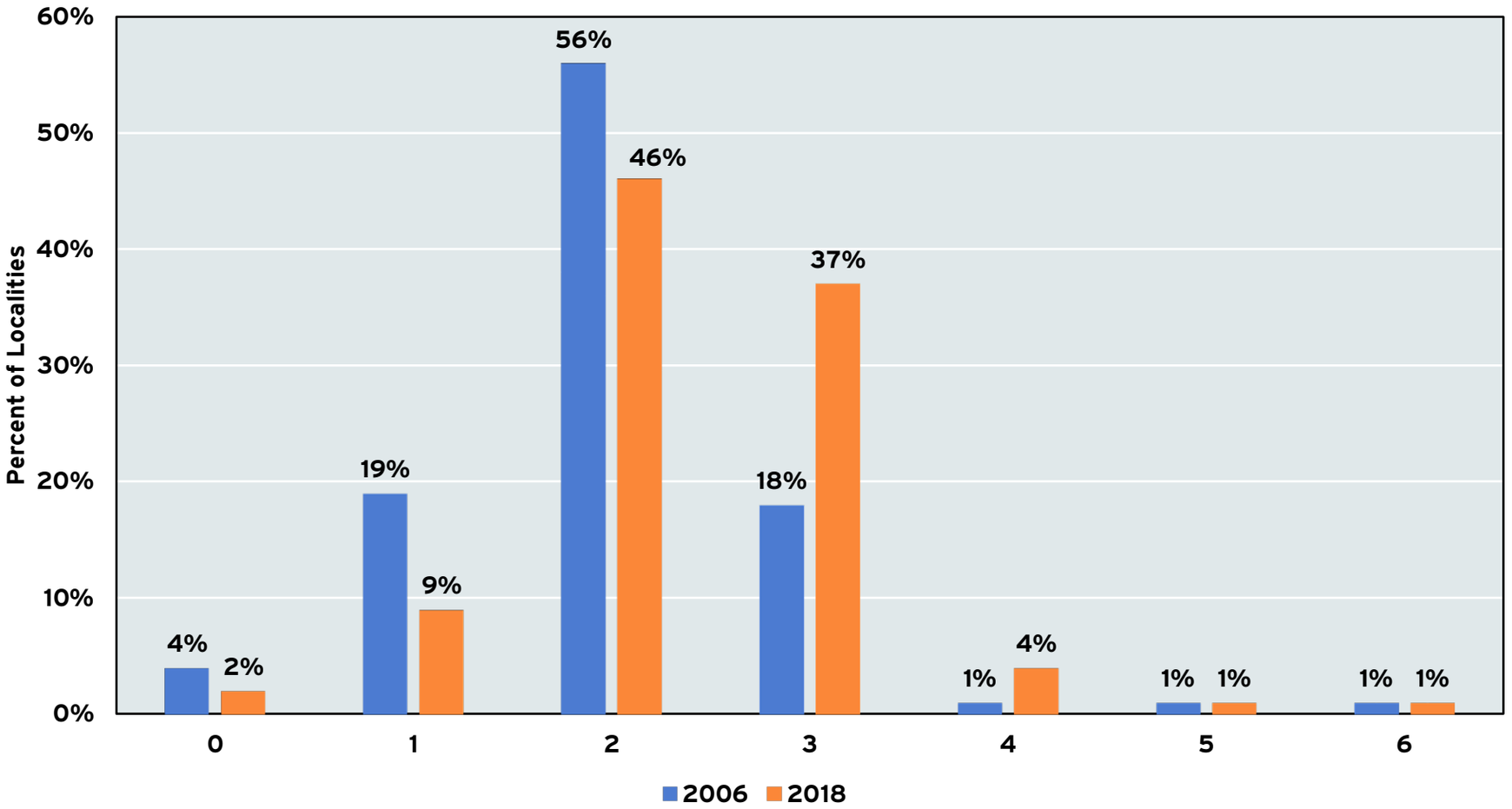
Regulations are necessary, of course, but overregulation has economic consequences. In a 2021 update of their national study on the cost of regulation in housing, The National Association of Home Builders (NAHB) found that regulation accounts for $93,870 of the cost of the average $394,300 new single family home price, or 23.8%.[22] For multifamily, an April 2022 survey conducted by the National Multifamily Housing Council (NMHC) and NAHB found that regulations at all levels of government account for an average of 40.6% of the cost to build an apartment community.[23] We recognize that not all regulations are 'bad,' but good intentions may result in the accumulation of regulations (and roadblocks) over time.

Research has also found that stricter project-level land-use regulation causes the average project size to shrink, which then causes building firm size to shrink. These smaller firms must pursue fewer projects and are thus less efficient, which makes building costs in the United States much higher compared to other countries. This same study finds that construction sector efficiency declined sharply over the last 50 years after it peaked in the early 1970s, coinciding with a marked increase in land-use regulation over the same period.[24] A comprehensive review and recalibration of the regulatory framework around housing could drive efficiency and lower the cost to build more houses. Simply put, we must choose to build more homes, a choice that many localities across the Commonwealth have yet to purposefully make.

16 Rosen Consulting Group, "Housing is Critical Infrastructure: Social and Economic Benefits of Building More Housing," June 2021.
17 Freddie Mac, "Economic & Housing Research Note," May 2021.
18 National Low Income Housing Coalition, "The Gap, A Shortage of Affordable Homes," March 2024.
19 Virginia Joint Legislative Audit and Review Commission (JLARC), "Affordable Housing in Virginia, 2021," December 13, 2021.
20 Real Estate Information Network (REIN) and Old Dominion University Economic Forecasting Project.
21 National Bureau of Economic Research, "The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence From A New Wharton Index," December 2019. Working Paper 26573 http://www.nber.org/papers/w26573.
22 National Association of Home Builders, "Government Regulation in the Price of a New Home: 2021," May 5, 2021. See https://www.nahb.org/-/media/NAHB/news-and-economics/docs/housing-economics-plus/special-studies/2021/special-study-government-regulation-in-the-price-of-a-new-home-may-2021.pdf.
23 National Multifamily Housing Council and the National Association of Home Builders, "Regulation: 40.6 Percent of the Cost of Multifamily Development," April 2022. See https://www.nmhc.org/globalassets/research--insight/research-reports/cost-of-regulations/2022-nahb-nmhc-cost-of-regulations-report.pdf.
24 D'Amico, Glaser et al, "Why Has Construction Productivity Stagnated? The Role of Land-Use Regulation," Research performed at a Federal Statistical Research Data Center under FSRDC Project Number 2396, December 30, 2023.

GRAPH 32

NUMBER OF APPROVALS FOR PROJECTS REQUIRING REZONING
SELECTED SUBURBAN COMMUNITIES IN THE UNITED STATES, 2006 AND 2018



Source: National Bureau of Economic Research (2019). "The Local Residential Land Use Regulatory Environment Across U.S. Housing Markets: Evidence From A New Wharton Index."

Final Thoughts

We set aside the fact that there will be a new President and administration in 2025 and instead ask how to spur growth across Virginia. As we have argued in previous reports, the Commonwealth should continue embracing fiscal discipline. State surpluses can become deficits if there is a notable change in federal tax, trade, or immigration policy. If there is a desire to spend surpluses, we recommend focusing on public infrastructure projects. Improving East-West transportation corridors would be one such project. Another would be putting public funds towards the construction of the I-87 corridor. Both efforts would not only be a boon for Virginians traveling around the Commonwealth, but they would also promote traffic through the Port of Virginia. Continuing efforts to improve the Port, especially given its recent successes, is certainly an action worth recommending.

If there is a desire to expand public services, we recommend focusing on mental health services for all Virginians. We know that pandemic-associated learning losses continue, and K-12 teachers have been asked to do much more for too long. It is too much to ask to remove public education from the frontlines of the culture wars, but there is a real cost to Virginia when political battles drive teachers from the profession. As we have seen in other states, the mirage of school choice has led to significant increases in state government spending without corresponding increases in learning and access to education. Arizona, for example, faced a $1.4 billion budget shortfall this year, mainly due to higher than projected spending on school vouchers.[25] Virginia would be well advised to invest in its public schools, both K-12 and institutions of higher education, to educate a workforce that is attractive to current and future employers.

In previous reports, we have opined that the Commonwealth should improve its tax and regulatory climate. Instead of looking at piecemeal improvements to the tax system, we need to look at the bigger picture. Tax reform may increase the incidence of one tax and decrease the incidence of another. We need to examine tax burdens across all taxes instead of pointing out winners and losers for one part of any tax reform proposal.

Lastly, if Virginia is to grow in the future, it must rethink its policies towards housing. We need a ground-up approach to housing (no pun intended). We have sufficient empirical evidence from communities across the nation who have intentionally leaned into policies to increase the supply of housing. In some communities, decision-making favored increasing multi-family housing. In other communities, barriers were removed to improve the ability of developers to build more single-family homes. One core lesson holds: increasing housing supply at any point along the spectrum of housing types influences the entire market. If a community builds more multi-family units, not surprisingly, rent growth slows, homelessness declines, and single-family price pressures alleviate also. If a community builds more upscale single-family residences, the movement of families from lower price residences to upscale residences has an impact on the availability of housing at lower prices as well. We know that we need to build more housing; now is the time is look at our tax structure and regulations and foster a climate that rewards housing developments rather than increases the burden on developers.

The ‘ask’ for leaders across Virginia is big, but now is not the time to shy away from the hard work that needs to be done to improve the lives of all Virginians. Too often, we fall into the temptation of arguing for the sake of argument instead of attempting to find the common ground upon which policy is built. Yes, this may involve compromise and each side not getting everything they want, but if we dare nothing, we gain nothing.

25 https://www.propublica.org/article/arizona-school-vouchers-budget-meltdown

VIRGINIA'S METROPOLITAN AREAS: GROWTH, CHALLENGES, AND THE ROAD AHEAD

"The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails."

– William Arthur Ward

The Commonwealth of Virginia has specific economic advantages given its geographic location and structural aspects of the United States economy. While economic growth in Virginia has not been as dynamic recently when compared to other states, its relative stability might be viewed favorably compared to the 'boom and bust' cycle of states that, for example, are more dependent on natural resource extraction. Virginia, however, is not a monolithic state. The metropolitan areas of the state differ in character and in the composition (and pace) of economic activity. Southwestern Virginia, which has lower population density and greater historical reliance on the coal industry, has elevated structural unemployment due to a decreased use of coal combined with less labor-intensive methods of production.[1] While the 'urban crescent' comprised of Hampton Roads, Northern Virginia, and the Richmond metro area may account for over 70% of Virginia's annual economic output, congestion and relatively high housing values are impediments to future growth. The Blacksburg, Charlottesville, and Lynchburg metropolitan areas enjoy the presence of large institutions of higher education but often see graduates leave for economic opportunities elsewhere.

1 As well as other ongoing issues, see State of the Commonwealth chapters on opioid use from the 2017 and 2020 reports.

The recent gains in economic activity across many of the state's metropolitan areas have highlighted the need for skilled workers in Science, Technology, Engineering, and Mathematics (STEM) related fields. Population growth across the state has been largely driven by the three metropolitan areas in the urban crescent and, within the urban crescent, along the I-95 corridor. However, gains at the state level mask regions where population growth has largely stalled, either due to a decline in births relative to deaths or the outmigration of residents to other areas of the Commonwealth or outside Virginia entirely. Even in the face of these challenges, the economic data suggest that much of the state has experienced gains in jobs and economic activity this decade.

If opportunity and challenge are two sides of the same coin, then we must recognize that each metropolitan area is distinct but there are common issues across metro areas. Federal government spending accounts for a disproportionate share of economic activity in Hampton Roads and Northern Virginia and, to a lesser extent, the Richmond metropolitan area. Increasing economic diversification in each of these metro areas would make the state economy more resilient to changes in fiscal policy and boost growth. The dependence on federal spending also highlights the increasing concentration of economic activity in these three metropolitan areas and the need to actively invest in other areas of the state. Virginia is not as 'connected' relative to neighboring states as it lacks robust East-West transportation corridors. Anyone who has needed to travel from Blacksburg to Virginia Beach understands the dynamics of having to travel North to go East in Virginia.

In this chapter, we survey the performance of Virginia's metropolitan areas this decade. We first discuss population trends and the demographic challenges facing metro areas. We then delve into measures of economic activity, including taxable sales and Gross Domestic Product (GDP). We also discuss labor markets in each metro area. We conclude with an examination of housing prices and thoughts about how Virginia can foster growth across its metropolitan areas.

A Short Primer on Metropolitan Statistical Areas

The Office of Management and Budget (OMB) defines a Core-Based Statistical Area (CBSA) as a geographical region anchored by an urban center of at least 10,000 residents plus adjacent counties that have socioeconomically integrated with the urban center through commuting ties. The OMB has two categories of CBSAs: Metropolitan Statistical Areas and Micropolitan Statistical Areas. Metropolitan Statistical Areas (MSAs) have at least one urbanized area with a population of 50,000 or more residents.

One difficulty in comparing MSAs is that different government agencies and departments use different definitions for these areas. For the Bureau of Labor Statistics, for example, data are available for Northern Virginia, which is the Virginia portion of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA. Other data are only available for the entire Washington-Arlington-Alexandria MSA. The Bureau of Economic Analysis (BEA) provides economic data on the performance of MSAs. However, the BLS, BEA, and the Census Bureau may use a different basis to define which counties and independent cities are in specific MSAs. The reader should be aware of these geographical differences and exercise care when examining data from various sources.

In 2018, the Office of Management and Budget (OMB) added Camden County, North Carolina, and Southampton County and Franklin City in Virginia, to the Virginia Beach – Norfolk – Newport News MSA.[2] In July 2023, the OMB revised the delineations for the nation's MSAs.[3] As part of this revision, the Virginia Beach – Norfolk – Newport News MSA became the Virginia Beach – Chesapeake – Norfolk MSA. The OMB also removed Franklin city and Southampton County, Virginia, from the metro area and added Surry County, Virginia, to the metro area. For this chapter, we use the current delineation of each metro area when possible.

2 https://www.whitehouse.gov/wp-content/uploads/2018/09/Bulletin-18-04.pdf
3 https://www.whitehouse.gov/wp-content/uploads/2023/07/OMB-Bulletin-23-01.pdfvi

Population Increases (For Most Metros)

To estimate how the population has changed over time, we rely on the United States Census Bureau's Population Estimates Program which uses data on births, deaths, domestic and international migration to estimate population change since the most recent decennial census. These annual estimates of total population and the components of population change start with the most recent decennial census and extend to the most recent year. However, each decennial census 'resets' the population estimates. The estimates are consistent from the decennial census to the year before the next decennial census but may have statistical artifacts if compared across periods. Our discussion focuses on the population of Virginia's metropolitan areas this decade.

Table 1 presents the population estimates for each of Virginia's metro areas, Virginia, and the nation from July 1, 2020 to June 30, 2023. Graph 1 highlights the percentage change in the population over this period. From 2020 to 2023, the resident population of the Commonwealth increased by 0.9%, 0.1 percentage points lower than that of the nation. There was substantial variation across Virginia's metropolitan areas over this period, with two metro areas losing population and seven metro areas growing faster than the state and nation.

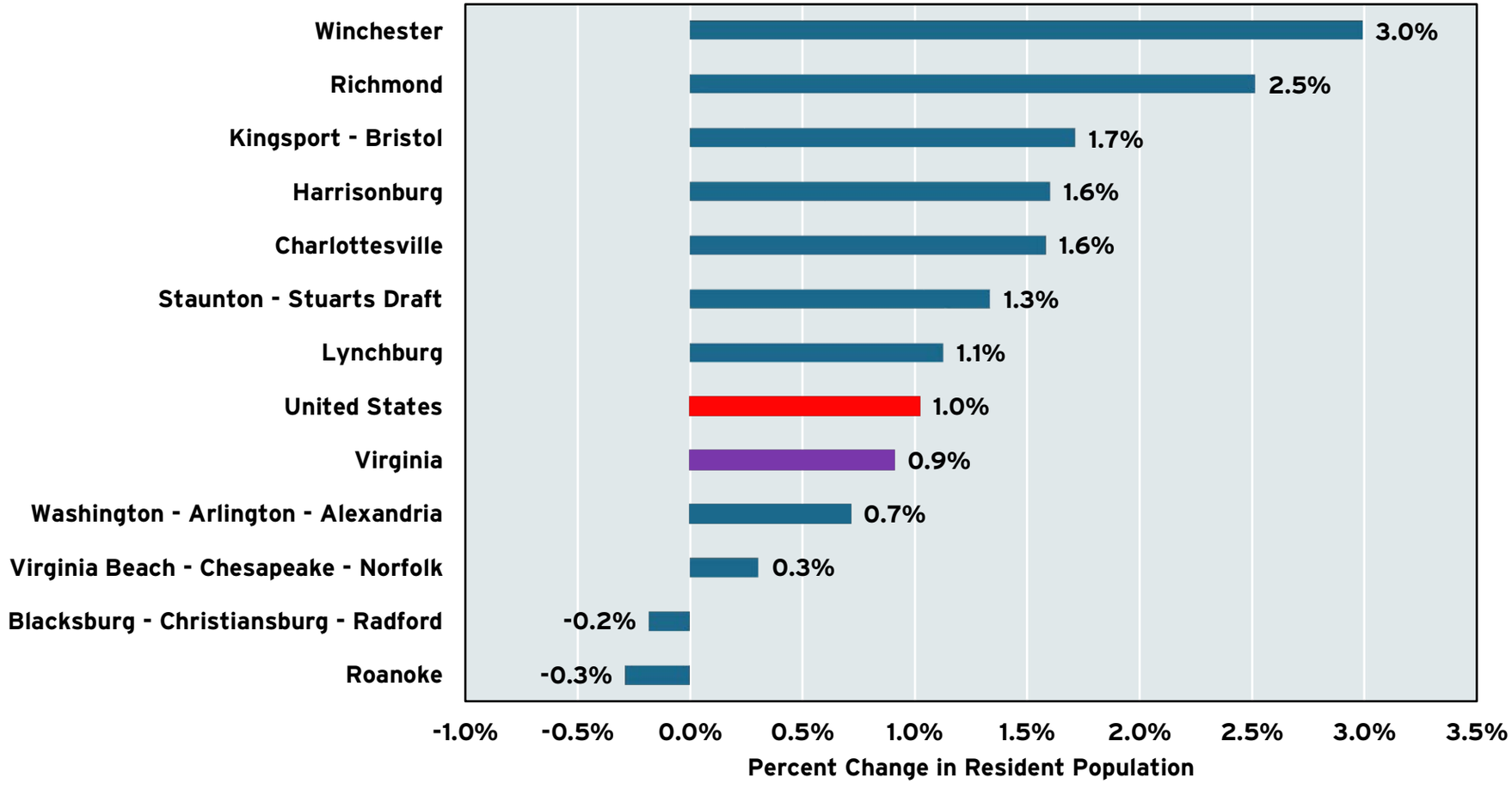
In 2020, the U.S. Census Bureau estimated that the population of the Roanoke MSA was 315,217. The Roanoke metro area's resident population declined in 2021 and 2022 and then increased slightly to 314,314 in 2023. Similarly, resident population of the Blacksburg – Christiansburg-Radford metro area was 181,756 in 2020 and 181,428 in 2023. The absolute declines in the population are small, 903 individuals for the Roanoke MSA (-0.3%) and 328 individuals for the Blacksburg – Christiansburg - Radford MSA (-0.2%).

Two of the largest metropolitan areas experienced population growth below the state and national average from 2020 to 2023. The resident population of the Virginia Beach – Chesapeake - Norfolk MSA increased by 0.3% from 2020 to 2023. Over the same period, the resident population of the Washington – Arlington – Alexandria MSA increased by 0.7%. As we discuss in the next section, domestic outmigration slowed population growth in both metros as residents moved elsewhere in Virginia or out of the state entirely.

Seven metro areas observed resident population growth rates above 1% from July 1, 2020 to June 30, 2023. Kingsport – Bristol's resident population grew by 1.7%, followed by Charlottesville (1.6%), Harrisonburg (1.6%), Staunton – Stuarts Draft (1.3%), and the Lynchburg MSA at 1.1%. Two metro areas, Richmond (2.5%) and Winchester (3.0%), saw their respective populations grow at rates that outstripped the state and the nation. These metropolitan areas were responsible for Virginia's population growth being almost equal to that of the nation.

GRAPH 1

POPULATION CHANGE
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES
JULY 1, 2020 – JUNE 30, 2023



Source: U.S. Census Bureau, (2024). Population Estimates Program, 2023 Vintage Estimates.

TABLE 1

CHANGE IN RESIDENT POPULATION
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES
JULY 1, 2020 TO JUNE 30, 2023

Area	2020	2021	2022	2023	Percent Change from July 1, 2020 to June 30, 2023
Blacksburg - Christiansburg - Radford	181,756	181,213	181,283	181,428	-0.2%
Charlottesville	221,620	223,267	223,996	225,127	1.6%
Harrisonburg	135,480	136,015	136,564	137,650	1.6%
Kingsport - Bristol	307,750	308,690	311,040	313,025	1.7%
Lynchburg	261,643	262,483	263,209	264,590	1.1%
Richmond	1,316,646	1,326,307	1,338,238	1,349,732	2.5%
Roanoke	315,217	314,688	314,150	314,314	-0.3%
Staunton - Stuarts Draft	125,665	126,059	126,678	127,344	1.3%
Virginia Beach - Chesapeake - Norfolk	1,781,712	1,785,531	1,785,390	1,787,169	0.3%
Washington - Arlington - Alexandria	6,260,311	6,258,549	6,265,891	6,304,975	0.7%
Winchester	142,984	145,411	146,126	147,260	3.0%
Virginia	**8,637,193**	**8,657,348**	**8,679,099**	**8,715,698**	**0.9%**
United States	**331,526,933**	**332,048,977**	**333,271,411**	**334,914,895**	**1.0%**

Source: U.S. Census Bureau, (2024). Population Estimates Program, 2023 Vintage Estimates.

Components of Population Change

Population change is driven by three components: the natural increase in the population (births minus deaths), net domestic migration (domestic arrivals minus domestic departures), and net international migration (international arrivals minus international departures). Table 2, which follows Graphs 2, 3, and 4, provides estimates of the components of population change for Virginia's metropolitan areas, the Commonwealth, and the nation from July 1, 2020 to June 30, 2023. In six metropolitan areas, the number of deaths was greater than the number of births over this period. Each of Virginia's metropolitan areas had more international arrivals than international departures. Four metro areas had more domestic departures than arrivals

Graph 2 highlights the natural increase of the resident population of the Kingsport – Bristol metropolitan area from July 1, 2020 to June 30, 2023. Over this period, the natural increase of the resident population was -7,106, that is, there were 7,106 more deaths than births in the metro area from 2020 to 2023. From July 1, 2020 to June 30, 2021, there were 2,571 more deaths than births. From July 1, 2021 to June 30, 2022, there were 2,580 more deaths than births, and, from July 1, 2022 to June 30, 2023, there were 1,955 more deaths than births.

While there were more deaths than births, the resident population increased in the Kingsport – Bristol MSA as domestic migration was positive and larger than the natural decrease in the population. From July 1, 2020 to June 30, 2023, 12,217 more individuals moved into the Kingsport – Bristol metropolitan area from domestic locations than moved out of the metro area to other domestic locations. International migration has almost no impact on the resident population of the Kingsport – Bristol MSA over this period as there were only 63 more international arrivals than departures over the period. Adding these components and the residual together yields an increase in the resident population of 5,275 individuals from 2020 to 2023.

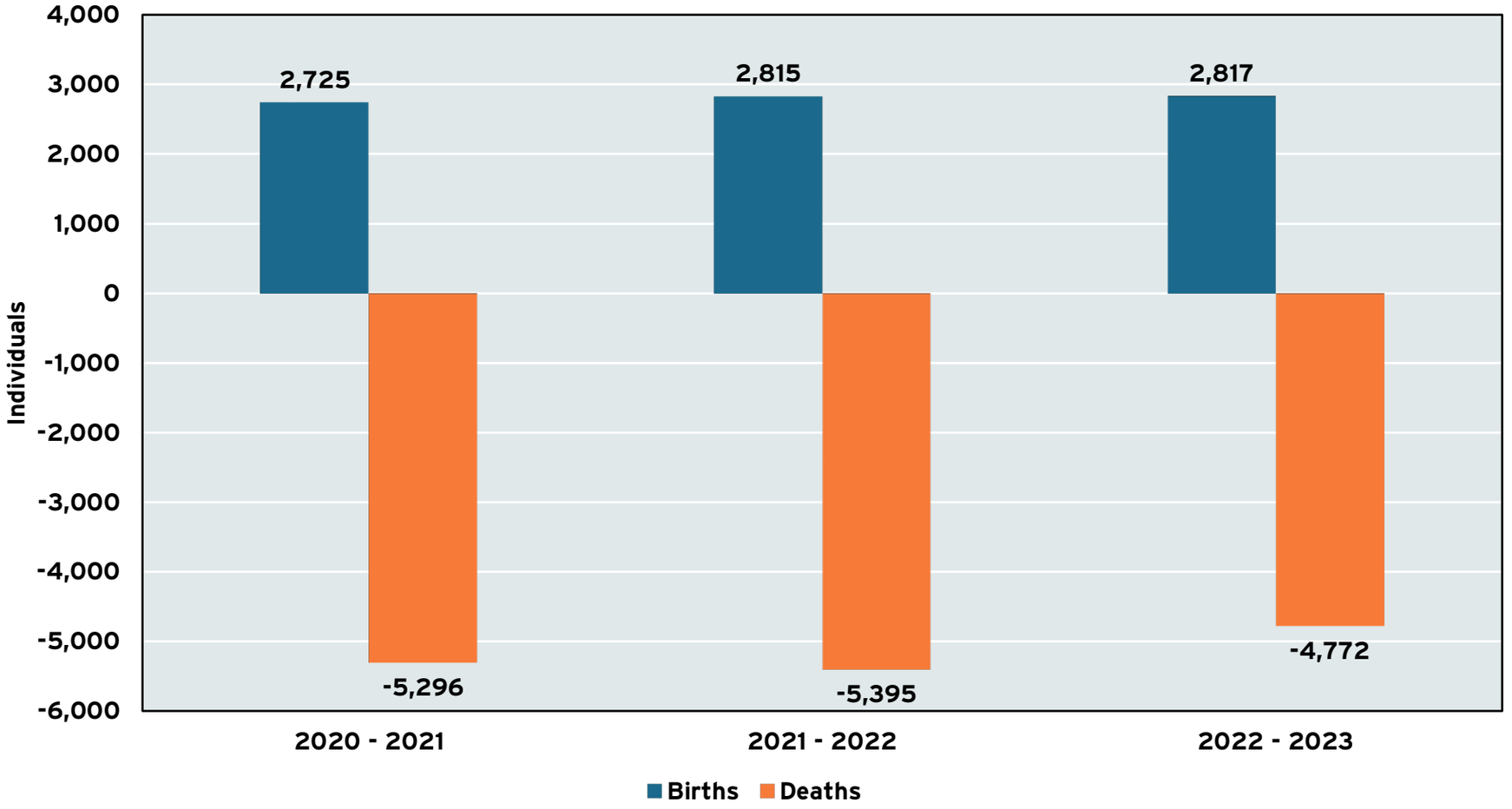
Graph 3 calls out the components of population change for the Richmond metropolitan area from July 1, 2020 to June 30, 2023. Each of the components of population change were positive for the Richmond metro over this period, with population growth being largely fueled by domestic migration and international migration. Over the period, there were 3,025 more births than deaths, 9,360 more international arrivals than departures, and 20,664 more domestic arrivals than departures. Adding these components and the population residual yields an increase of the resident population of 33,086 from July 1, 2020 to June 30, 2023.

We contrast the Kingsport – Bristol and Richmond metropolitan areas with the Virginia Beach – Chesapeake – Norfolk ('Hampton Roads') metropolitan area in Graph 4. From July 1, 2020 to June 30, 2023, there were 9,348 more births than deaths in the Hampton Roads region. Over this period, there were also 8,447 more international arrivals than departures. The gains from these components, however, were muted, in part, due to the continued outmigration of residents of Hampton Roads to other domestic locations in the United States. From July 1, 2020 to June 30, 2021, there were 784 more domestic departures than arrivals. From July 1, 2021 to June 30, 2022, there were 6,487 more domestic departures than arrivals. From July 1, 2022 to June 30, 2023, there were 5,206 more domestic departures than arrivals.

The Washington, D.C., and Hampton Roads metro areas both observed more domestic departures than arrivals this decade. An examination of the Internal Revenue Service's Statistics of Income data suggests that both regions are experiencing an outflow of higher-income households. Why are these households leaving? While economic growth in the Washington, D.C., metro area has not exactly been stellar, the cost of living may contribute to an outflow of higher-income households. In the case of Hampton Roads, it appears that households are not moving to exurban regions but either to different parts of the state or out of the state entirely.

GRAPH 2

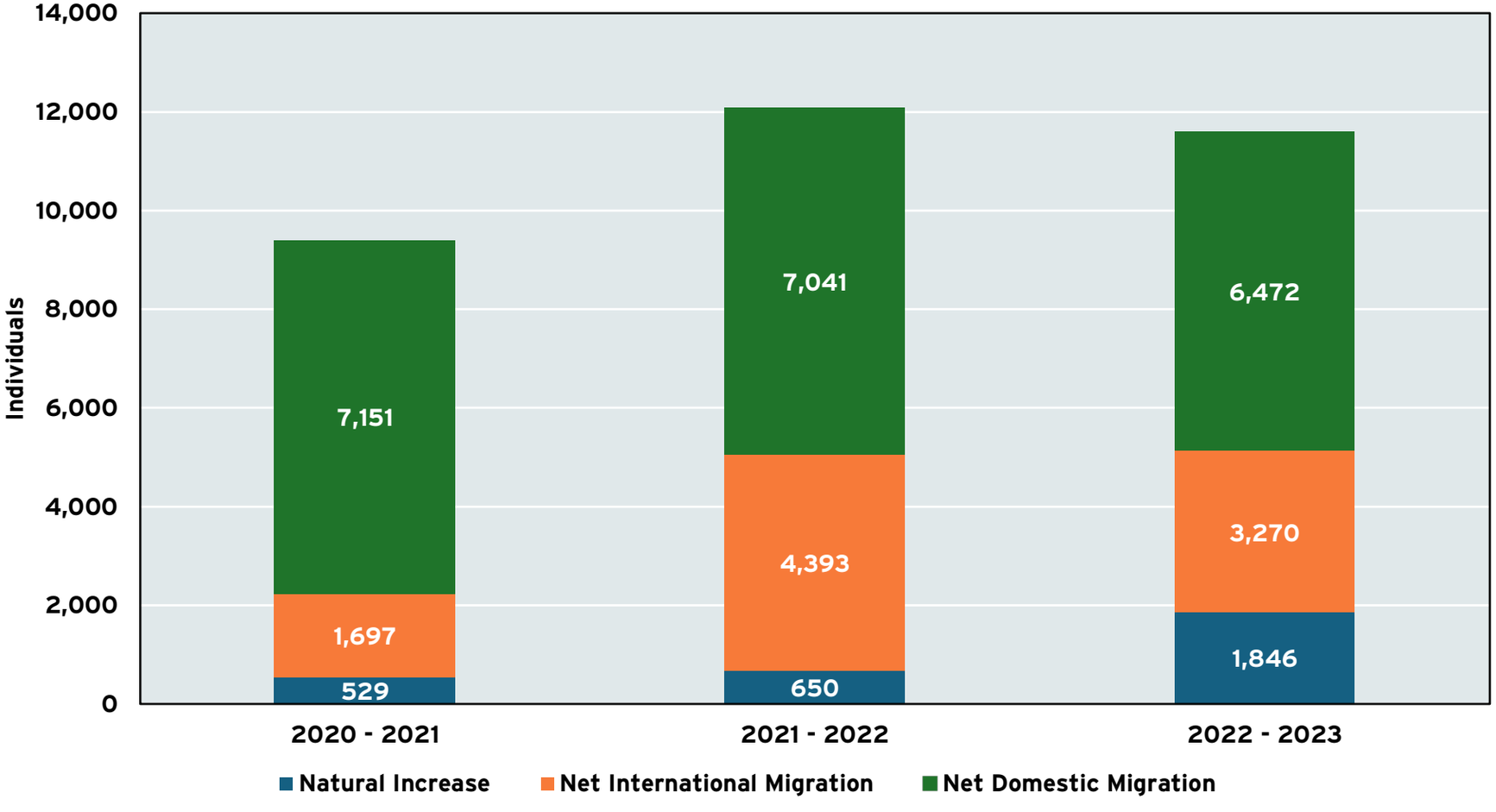
BIRTHS AND DEATHS
KINGSPORT – BRISTOL METROPOLITAN STATISTICAL AREA
JULY 1, 2020 TO JUNE 30, 2023



Source: U.S. Census Bureau, Population Estimates Program, Vintage 2023 estimates.

GRAPH 3

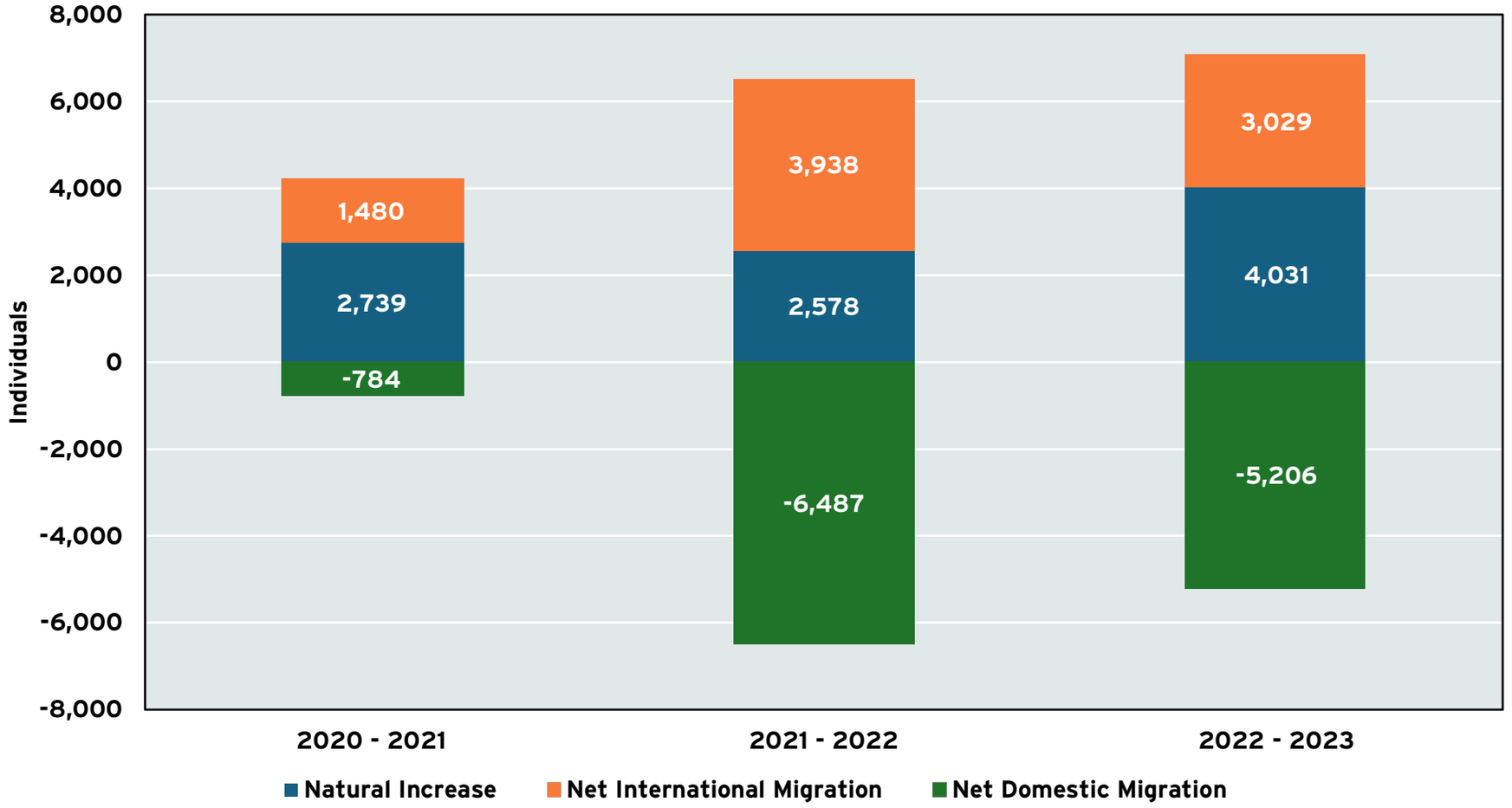
COMPONENTS OF POPULATION CHANGE
RICHMOND METROPOLITAN STATISTICAL AREA
JULY 1, 2020 TO JUNE 30, 2023



Source: U.S. Census Bureau, Population Estimates Program, Vintage 2023 estimates.

GRAPH 4

COMPONENTS OF POPULATION CHANGE
VIRGINIA BEACH – CHESAPEAKE – NORFOLK METROPOLITAN STATISTICAL AREA
FROM JULY 1, 2020 TO JUNE 30, 2023



Source: U.S. Census Bureau, Population Estimates Program, Vintage 2023 estimates.

TABLE 2

COMPONENTS OF POPULATION CHANGE
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES
JULY 1, 2020 TO JUNE 30, 2023

Area	Natural Change	International Migration	Domestic Migration	Residual	Population Change from July 1, 2020 to June 30, 2023
Blacksburg-Christiansburg - Radford	-1,960	1,684	-48	-4	-328
Charlottesville	705	1,850	1,037	-85	3,507
Harrisonburg	540	1,633	-45	42	2,170
Kingsport - Bristol	-7,106	63	12,217	101	5,275
Lynchburg	-2,115	639	4,422	1	2,947
Richmond	3,025	9,360	20,664	37	33,086
Roanoke	-3,931	1,353	1,713	-38	-903
Staunton - Stuarts Draft	-1,200	354	2,505	20	1,679
Virginia Beach - Chesapeake - Norfolk	9,348	8,447	-12,477	139	5,457
Washington - Arlington - Alexandria	92,580	109,336	-157,731	479	44,664
Winchester	-472	546	4,290	-88	4,276
Virginia	**35,890**	**79,857**	**-37,383**	**141**	**78,505**
United States	**873,698**	**2,514,264**	**0**	**0**	**3,387,962**

Source: U.S. Census Bureau, (2024). Population Estimates Program, 2023 Vintage Estimates. The components of population change do not account for all the variation in the annual population estimates and the residual ensures that the components and population estimates are equal. Metropolitan area totals will not equal Virginia estimates as some metropolitan areas contain localities in other states.

Gross Domestic Product: Informative but Lagged

The Bureau of Economic Analysis (BEA) produces regular estimates of economic activity at the national, state, and local levels. On occasion, the BEA will release new 'benchmark' estimates of Gross Domestic Product (GDP) that use new methodologies and updated data to arrive at more precise estimates. In the past, the BEA would release national level benchmark revisions, followed by state and local areas, leading to a period during which national estimates of GDP reflected one methodology, and state and local areas reflected an outdated approach to measure economic activity. In 2023, the BEA produced its benchmark updates of GDP for the nation, states, and local areas within the same timeframe, resolving this timing issue. For metropolitan statistical areas, the BEA released benchmark estimates in December 2023 that estimated nominal and real (inflation-adjusted) GDP from 2017 to 2022. Revised estimates prior to 2017 were released recently in November 2024. In December 2024, the BEA released advance estimates for 2023.

As our focus is on the most recent measures of economic performance, we only present the most recent, revised measures of regional GDP. We present real GDP and the annual percentage change in real GDP from 2018 to 2023 in Tables 3 and 4. We urge the reader, to view these estimates with an abundance of caution. The BEA released the 'advance' estimates for 2023 metropolitan statistical area GDP and revised estimates for earlier years in December 2024 and will provide revised GDP estimates for 2023 and earlier years in December 2025. Subsequent years may further revise these estimates of economic activity. We opine that it is best to examine trends in economic performance, that is, is economic activity increasing or decreasing over time versus a specific estimate in time. In the next section, we discuss a timelier measure of economic activity, taxable sales, which is positively correlated with regional economic activity and available monthly.

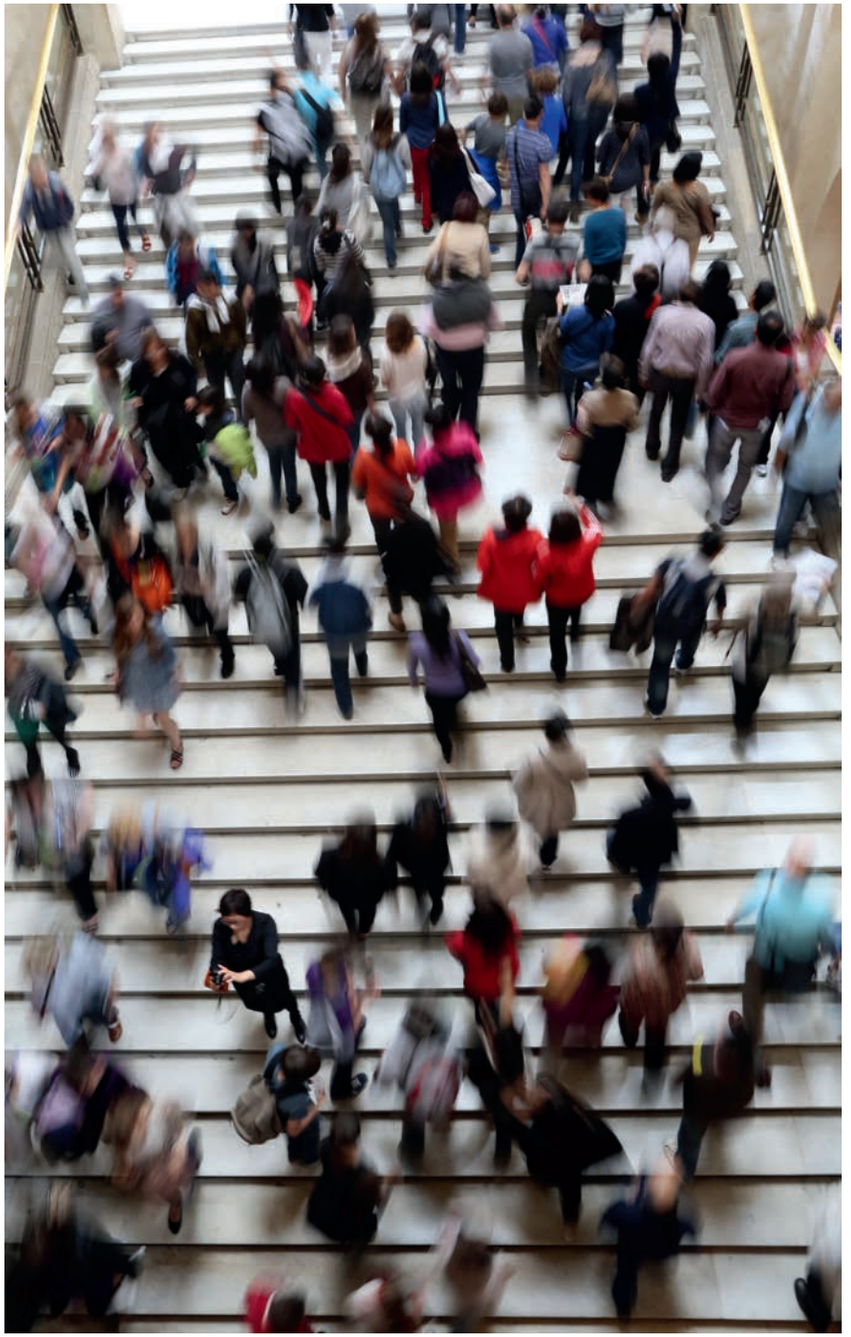


TABLE 3

REAL GROSS DOMESTIC PRODUCT
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES
MILLIONS OF 2017 DOLLARS

Area	2018	2019	2020	2021	2022	2023
Blacksburg - Christiansburg - Radford	$7,365	$7,291	$7,108	$7,724	$8,032	$8,332
Charlottesville	$13,679	$13,718	$13,194	$14,349	$14,884	$15,506
Harrisonburg	$7,860	$7,987	$7,596	$8,284	$8,627	$8,287
Kingsport - Bristol	$13,680	$13,294	$13,332	$14,259	$14,691	$14,763
Lynchburg	$10,501	$10,456	$10,042	$10,488	$10,505	$10,718
Richmond	$86,528	$88,622	$87,174	$91,759	$93,887	$94,823
Roanoke	$16,184	$16,068	$15,751	$16,723	$16,950	$17,446
Staunton - Stuarts Draft	$5,135	$5,142	$4,928	$5,168	$5,373	$5,337
Virginia Beach - Chesapeake - Norfolk	$93,852	$94,944	$94,260	$99,011	$100,855	$104,035
Washington - Arlington - Alexandria	$542,396	$551,942	$543,360	$571,125	$584,191	$600,169
Winchester	$7,003	$7,191	$7,285	$7,737	$7,673	$7,845
Virginia	**$527,768**	**$541,028**	**$534,532**	**$565,471**	**$580,475**	**$597,597**
United States	**$20,193,896**	**$20,715,671**	**$20,267,585**	**$21,494,798**	**$22,034,828**	**$22,671,096**

Source: U.S Bureau of Economic Analysis, 2024. All industry total includes all private industries and government. Real GDP by metropolitan area is equal to nominal GDP for the area adjusted by national prices for goods and services produced within the metropolitan area.

TABLE 4
CHANGE IN REAL GROSS DOMESTIC PRODUCT
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES

Area	2018	2019	2020	2021	2022	2023
Blacksburg - Christiansburg - Radford	5.0%	-1.0%	-2.5%	8.7%	4.0%	3.7%
Charlottesville	2.0%	0.3%	-3.8%	8.8%	3.7%	4.2%
Harrisonburg	2.5%	1.6%	-4.9%	9.1%	4.2%	-3.9%
Kingsport - Bristol	2.9%	-2.8%	0.3%	6.9%	3.0%	0.5%
Lynchburg	4.4%	-0.4%	-4.0%	4.4%	0.2%	2.0%
Richmond	2.4%	2.4%	-1.6%	5.3%	2.3%	1.0%
Roanoke	1.7%	-0.7%	-2.0%	6.2%	1.4%	2.9%
Staunton - Stuarts Draft	1.4%	0.1%	-4.2%	4.9%	4.0%	-0.7%
Virginia Beach - Chesapeake - Norfolk	-1.2%	1.2%	-0.7%	5.0%	1.9%	3.2%
Washington - Arlington - Alexandria	2.5%	1.8%	-1.6%	5.1%	2.3%	2.7%
Winchester	2.0%	2.7%	1.3%	6.2%	-0.8%	2.2%
Virginia	**2.4%**	**2.5%**	**-1.2%**	**5.8%**	**2.7%**	**2.9%**
United States	**3.0%**	**2.6%**	**-2.2%**	**6.1%**	**2.5%**	**2.9%**

Source: U.S Bureau of Economic Analysis, 2024. All industry total includes all private industries and government. Real GDP by metropolitan area is equal to nominal GDP for the area adjusted by national prices for goods and services produced within the metropolitan area.

Taxable Sales Provides Insight Into Recent Economic Activity

Taxable sales reflect payments for sales made by establishments during a period, tax payments based on audit settlements for sales occurring in previous periods, and the transfer of revenues between localities to correct errors in the filing of tax returns.[4] Firms must report taxable sales for any given month by the 20th of the following month and then totals are subsequently posted around the 10th of the following month. For example, for taxable sales occurring in August, businesses would need to report those to the Commonwealth by the 20th of September and generally by the 10th of October, they would be released to the cities and counties. The taxable sales data are available by locality on a monthly basis.

While the estimates of real GDP presented in the previous section capture the final value of goods and services produced in a given metropolitan area in a year, the estimates are, as noted, significantly lagged and subject to revision. The taxable sales data presented in this section do not capture the final value of goods and services produced in a metro area, instead, the taxable sales data are a measure of consumption activity. In Virginia tangible personal property generally counts as taxable sales while many services are exempted from the base of the sales and use tax.[5] We argue that the taxable sales measure, while not a perfect measure of GDP, provides an approximation of economic activity in a region. Given the taxable sales data are also of higher frequency that the regional GDP data, they provide insight into more recent trends in economic activity and thus complements the labor market information presented in this chapter.

Graph 5 presents the Compound Annual Growth Rate (CAGR) for real (inflation-adjusted) taxable sales for a selection of Virginia's metropolitan areas from 2019 to 2023.[6] On average, real taxable sales in the Commonwealth grew 2.9% a year from 2019 to 2023. The Northern Virginia counties of the Washington, D.C. – Arlington – Alexandria metro observed the slowest average growth in real taxable sales over this period (1.8%). This is notable as Northern Virginia accounted for 38.3% of all taxable sales revenues in Virginia in 2023. Slower taxable sales among these counties translates to slower taxable sales growth for the entire state.

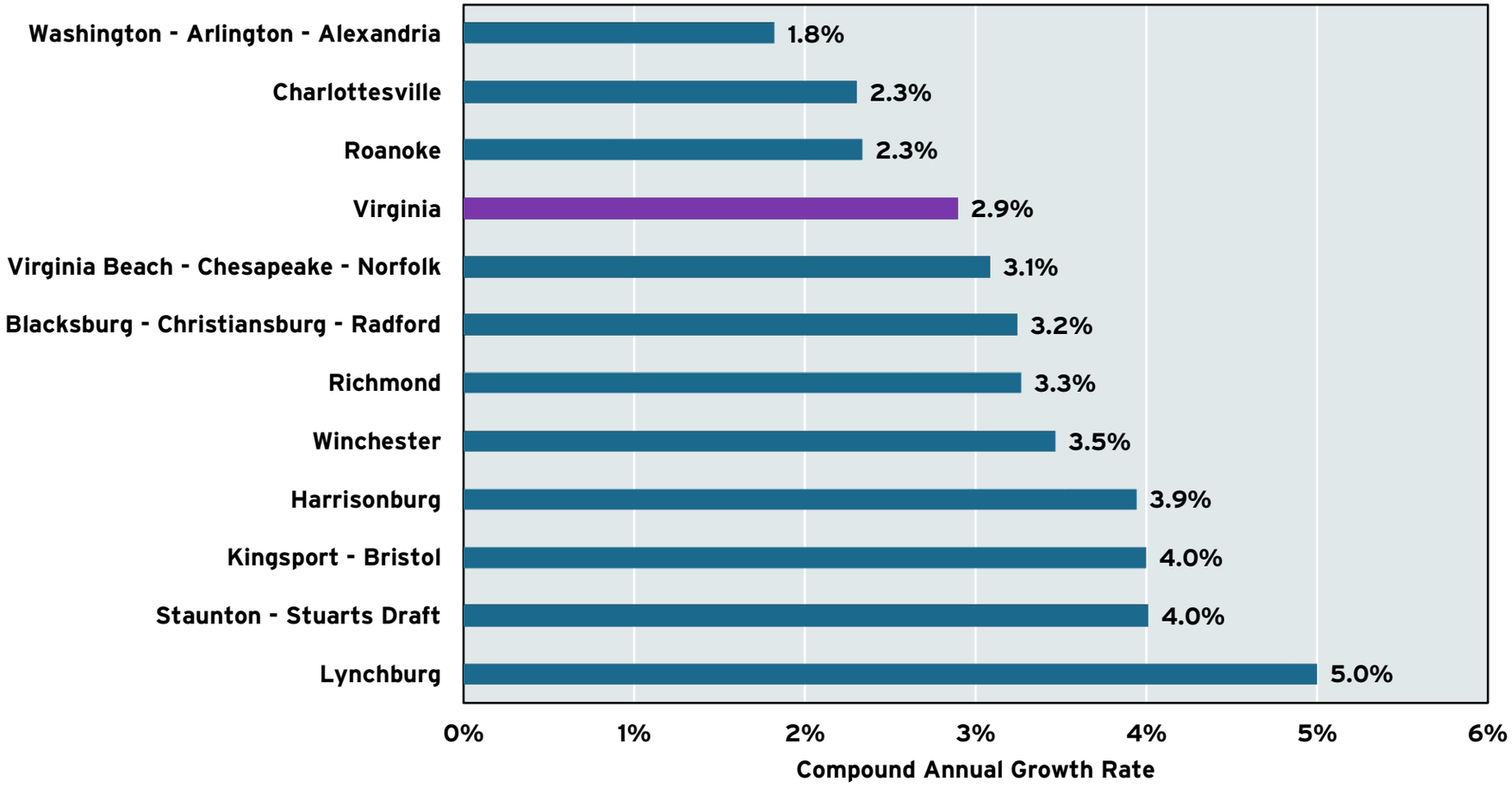
The average annual growth of taxable sales was higher than the state average for a number of metro areas. Lynchburg's taxable sales revenues grew at the highest average rate, 5.0% annually, from 2019 to 2023, followed by Staunton – Stuarts Draft and Kingsport-Bristol (4.0% annually), and Harrisonburg (3.9% annually). The Virginia counties of the Winchester MSA (3.5% annually), the Richmond metro area (3.3% annually), the Blacksburg-Christiansburg-Radford metro area (3.2% annually), and the Virginia counties of the Virginia Beach – Chesapeake – Norfolk metro area (3.1% annually) all experienced average growth rates higher than the state average.

We can now take advantage of the higher frequency of the taxable sales data by examining the percentage change in real taxable sales from the second quarter of 2023 to the second quarter of 2024 (Graph 6). Here we observe a much different story than that painted by the average annual rates of growth exhibited in Graph 5. Taxable sales increased across Virginia by 1.7% from 2023 Q2 to 2024 Q2. Taxable sales revenues increased by 3.8% in the Harrisonburg region, followed by 2.7% for the Virginia cities and counties in the Virginia Beach – Chesapeake – Norfolk metro area. The northern Virginia cities and counties in the Washington, D.C. – Arlington – Alexandria metro area also saw taxable sales revenues increase by 2.7% from 2023 Q2 to 2024 Q2, followed by the Blacksburg – Christiansburg – Radford metro area at 2.6%. At the other end of the spectrum, taxable sales revenues declined by 4.3% in the Lynchburg metro area, 3.4% in the Staunton – Stuarts Draft region, and 1.8% in the Roanoke MSA. If the growth in taxable sales are positively correlated with economic activity, we should observe softer labor markets in these regions. We explore this possibility in the next section.

4 See, for example, Weldon Cooper Center for Public Service, "Taxable Sales Data by Locality." Available at: https://www.coopercenter.org/taxable-sales
5 https://www.tax.virginia.gov/sales-and-use-tax
6 The Compound Annual Growth Rate (CAGR) is the average growth of a series over a defined period of time and is equal to (Final Value/Beginning Value) ^(1/number of periods) -1.

GRAPH 5

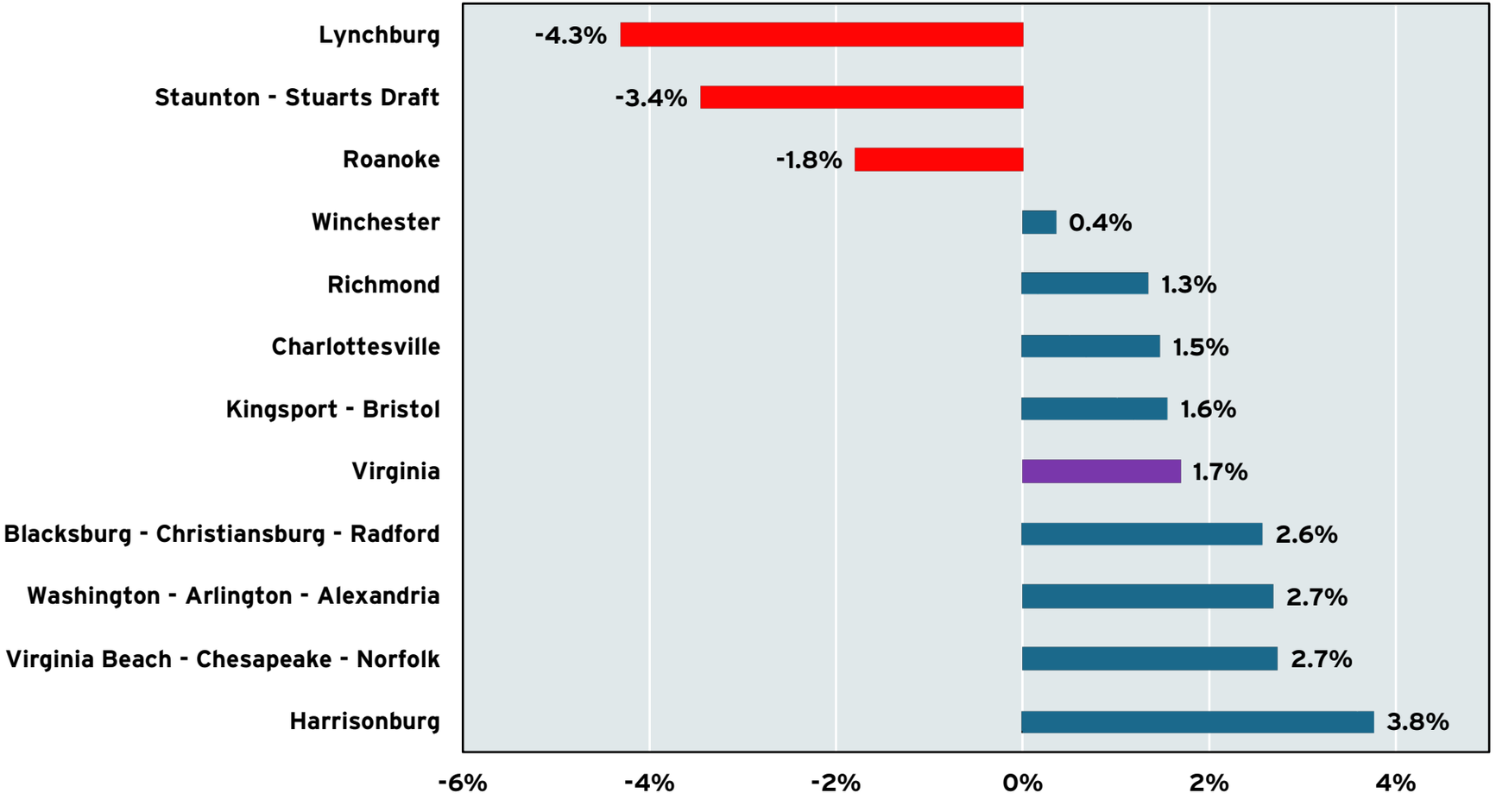
COMPOUND ANNUAL GROWTH RATE OF REAL TAXABLE SALES METROPOLITAN AREAS IN VIRGINIA AND VIRGINIA, 2019 - 2023



Source: Virginia Tax and the Weldon Cooper Center for Public Service, 2024. Northern Virginia represents the Virginia counties of the Washington, D.C. – Arlington – Alexandria MSA. Hampton Roads represents the Virginia counties of the Virginia Beach – Chesapeake – Norfolk MSA. The Winchester and Kingsport – Bristol MSAs includes Virginia counties only. Taxable sales are adjusted for inflation using the Consumer Price Index for All Urban Consumers.

GRAPH 6

PERCENT CHANGE IN REAL TAXABLE SALES
METROPOLITAN AREAS IN VIRGINIA AND VIRGINIA, 2023 Q2 TO 2024 Q2



Source: Virginia Tax and the Weldon Cooper Center for Public Service, 2024. Northern Virginia represents the Virginia counties of the Washington, D.C. – Arlington – Alexandria MSA. Hampton Roads represents the Virginia counties of the Virginia Beach – Chesapeake – Norfolk MSA. The Winchester and Kingsport – Bristol MSAs include Virginia counties only.

Labor Force: Continued, But Uneven Growth

The civilian labor force consists of all individuals aged 16 and older who are either employed or unemployed. With that said, there are some specific individuals not considered part of those groups particularly relevant for Virginia. Specifically, active-duty military personnel are not included in the labor force. Broadly speaking, the civilian labor force measures individuals actively seeking work but not at work (unemployed) and individuals actively engaged at work (employed) in a given month.

Table 5 contains the estimates of the civilian labor force for Virginia's metropolitan statistical areas and the Commonwealth for February 2020 and September 2024. Over this period, the civilian labor force in Virginia increased by 3.1%. Three metropolitan areas, Lynchburg (-0.6%), Washington-Arlington-Alexandria (-0.5%), and Kingsport-Bristol (-0.4%), had a smaller labor force in September 2024 than February 2020. At the other end of the spectrum, the civilian labor force increased by 7.6% in the Blacksburg-Christiansburg-Radford MSA, 6.9% in the Winchester metro area, and 5.0% in the Richmond region over the same period.

While Table 5 allows one to ask whether or not a metropolitan area has fully recovered from the COVID-19 shock of 2020 with respect to its civilian labor force, it does not provide sufficient information about the more recent performance of each metro area. In Graph 7, we present the percent change in the civilian labor force for Virginia's metropolitan areas and the state from September 2023 to September 2024. Over this period, the civilian labor force in the Commonwealth increased by 0.1%, a sign of slowing economic growth relative to the state's performance from 2021 to 2023 when the labor force grew by approximately 2.8% each year.

From September 2023 to September 2024, the civilian labor force declined in three metros: Staunton – Stuarts Draft (-0.8%), Winchester (-0.4%), and Harrisonburg (-0.2%). Each of these metro areas has fully recovered from the 2020 economic shock, however, the most recent quarterly real taxable sales data also suggests a slowdown in economic activity in Staunton – Stuarts Draft and slowing economic growth in the Winchester metropolitan area. Harrisonburg's recent decline in real taxable sales has yet to materialize in the civilian labor force data.

Each of the three metro areas in Table 5 that had smaller labor forces in September 2024 than February 2020 exhibited growth in labor force from September 2023 to September 2024. Lynchburg's civilian labor force grew by 0.1% while Kingsport-Bristol and Washington-Arlington-Alexandria's labor forces grew by 0.4%, respectively. The growth in these areas, however, lagged considerably behind that observed by the Charlottesville region where the civilian labor force was 2.1% larger in September 2024 than September 2023.

TABLE 5

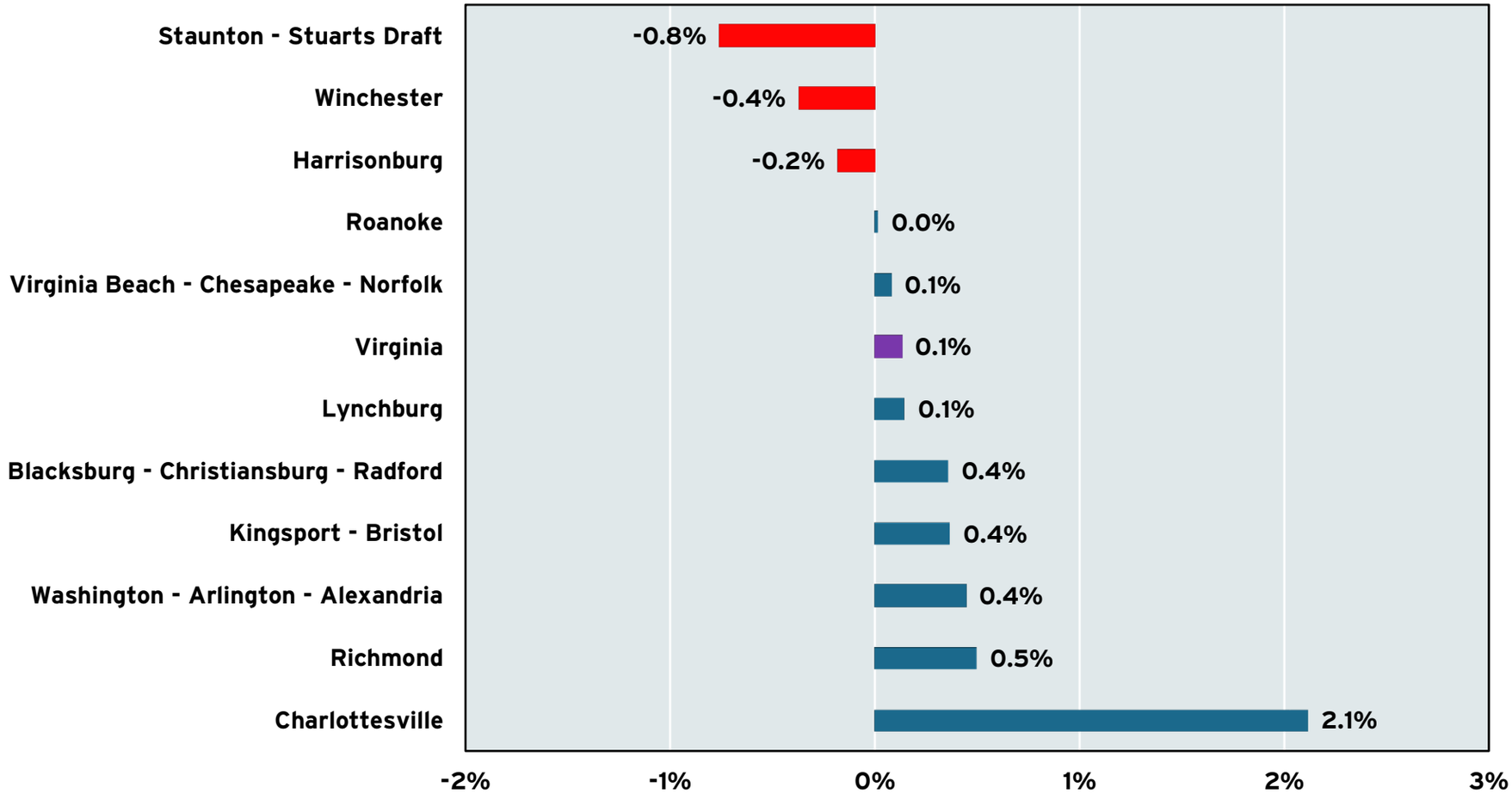
CIVILIAN LABOR FORCE IN VIRGINIA'S METROPOLITAN AREAS AND VIRGINIA FEBRUARY 2020 AND SEPTEMBER 2024

Area	Civilian Labor Force February 2020	Civilian Labor Force September 2024	Percent Change in Civilian Labor Force
Blacksburg - Christiansburg - Radford	91,807	98,811	7.6%
Charlottesville	125,109	129,427	3.5%
Harrisonburg	68,339	69,878	2.3%
Kingsport - Bristol	137,538	137,038	-0.4%
Lynchburg	124,692	123,987	-0.6%
Richmond	692,780	727,422	5.0%
Roanoke	158,709	163,208	2.8%
Staunton - Stuarts Draft	61,134	63,188	3.4%
Virginia Beach - Chesapeake - Norfolk	867,222	885,827	2.1%
Washington - Arlington - Alexandria	3,531,592	3,512,433	-0.5%
Winchester	75,132	80,289	6.9%
Virginia	4,432,603	4,571,505	3.1%

Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Metropolitan areas may include counties in other states.

GRAPH 7

PERCENT CHANGE IN THE CIVILIAN LABOR FORCE
VIRGINIA'S METROPOLITAN AREAS AND VIRGINIA, SEPTEMBER 2023 TO SEPTEMBER 2024



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Metropolitan areas may include counties in other states.

Unemployment Rates Signal Tight Labor Markets

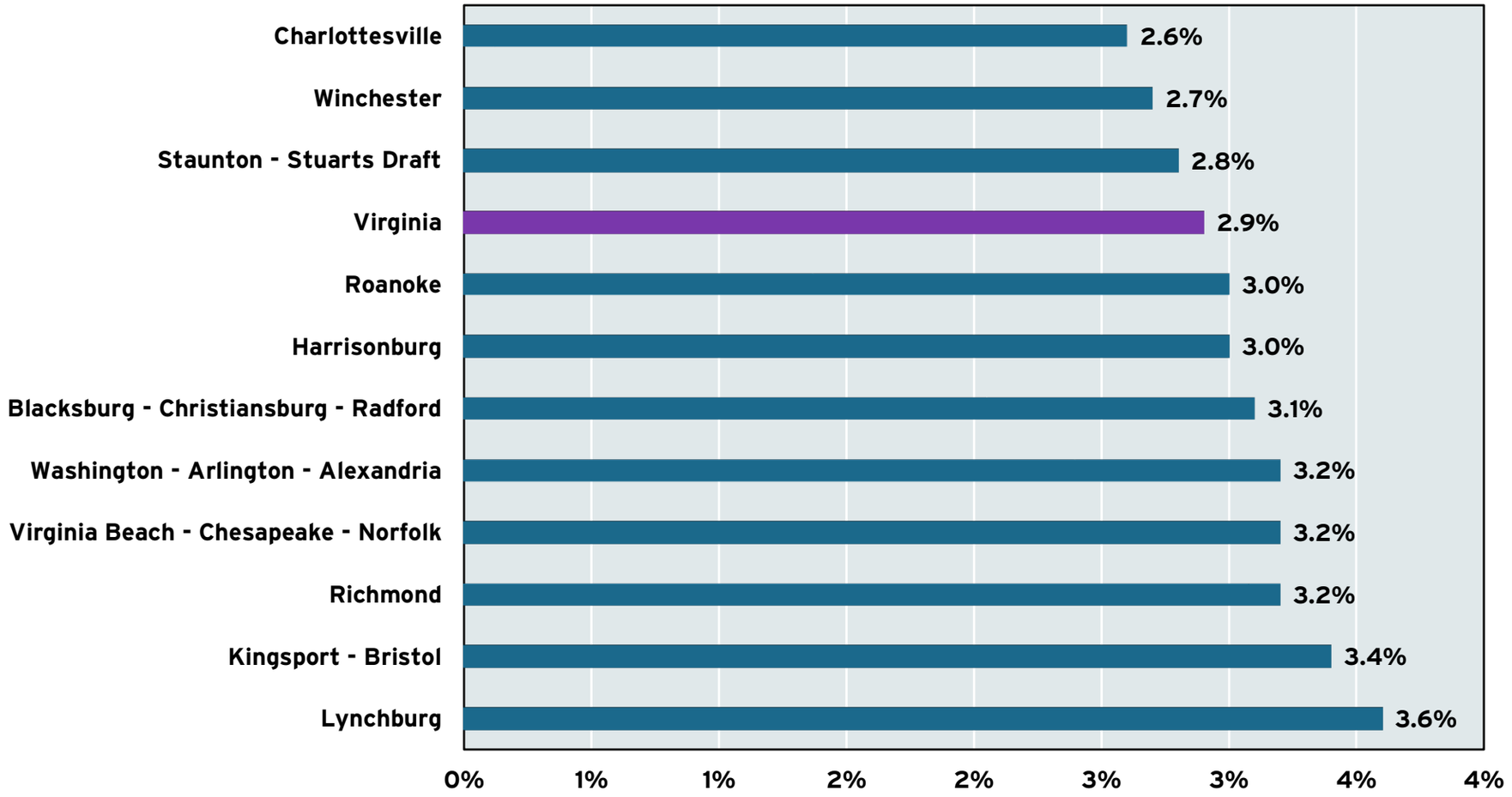
The headline unemployment rate is equal to the ratio of the number of unemployed individuals to the civilian labor force in a given month. Graph 8 displays regional unemployment rate estimates for Virginia's regions and Virginia for September 2024. In September 2024, the statewide unemployment rate was 2.9%, well below the nation's reported unemployment rate of 4.1%. Lynchburg, which had the highest reported unemployment rate among Virginia's metros at 3.6% in September 2024, was still 0.5 percentage points below the national average. Three metro areas: Charlottesville (2.6%), Winchester (2.7%), and the Staunton – Stuarts Draft MSA (2.8%) each reported unemployment rates below 3.0%.

To put this in perspective, an unemployment rate of 5% was historically thought of as the "natural rate of unemployment," or the rate of unemployment attainable before inflationary pressure would start to build given possible tightness in the labor market.[7] After the Great Recession of 2007 – 2009, unemployment rates within Virginia and nationally remained below 4% for an extended period without sparking inflation. Some economists have argued that the 'new' natural rate of unemployment should be 4% instead of 5%.[8] What is clear, regardless if one believes in a natural rate of unemployment or not, post-COVID unemployment rates have, on average, been below pre-COVID unemployment rates. In many metro areas, an absence of 'slack' in labor markets may have diminished the ability of employers to fill open positions, leading to lower rates of job growth than would have otherwise occurred if there were sufficient individuals willing and able to work at prevailing wages.

7 https://www.stlouisfed.org/publications/page-one-economics/2016/02/01/making-sense-of-unemployment-data
8 Stansbury, A. and Summers, L.H. (2020). The Declining Worker Power Hypothesis: An Explanation for the Recent Evolution of the American Economy. Brookings Papers on Economic Activity.

GRAPH 8

UNEMPLOYMENT RATE (U3)
VIRGINIA'S METROPOLITAN AREAS AND VIRGINIA, SEPTEMBER 2024



Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Metropolitan areas may include counties in other states.

Nonfarm Payrolls (Jobs) Rise for Most Metros

Table 6 presents nonfarm payrolls (jobs) for Virginia's metropolitan statistical areas and the state for February 2020 and September 2024. Table 6 also illustrates the percent change in jobs over this period. For context, from February 2020 to September 2024, nonfarm payrolls increased by 4.0% across the Commonwealth and 4.4% nationally. This, of course, raises the question, what areas in Virginia grew so slowly that the state lagged the nation in terms of job growth?

While Lynchburg was the only area, according to the BLS, that had fewer jobs in September 2024 than February 2020, we must express a note of caution about this finding. The establishment survey from which the nonfarm payrolls data are estimated does not capture employment at Liberty University. For example, Chmura Economics estimated that the four-quarter moving average of employment for the Lynchburg MSA was 111,589 in 2024 Q1, higher than the similar estimate from the BLS. However, Chmura Economics' data also suggest that the Lynchburg MSA has yet to fully cover all the jobs lost due to the COVID-19-related economic shock.

Using the reported data from Chmura Economics on JobsEQ, we note there were 113,272 jobs, on average, in 2020 Q1 and 111,589 jobs, on average, in 2024 Q1 in the Lynchburg MSA. In other words, there were 1.5% fewer jobs in 2024 Q1 than 2020 Q1. If we examine the number of jobs, the Chmura Economics data are more 'favorable' than those from the BLS as the jobs estimates are higher. If we examine the percent change in jobs, the data are less 'favorable' as the percent decline in jobs is higher with the Chmura data compared to BLS data. We thus, as always, caution the reader to draw upon multiple sources of information to examine whether there is a common trend about economic activity in a region.[9]

The nonfarm payrolls data complement the previously reported data on taxable sales, civilian labor force, and unemployment rates. The Blacksburg-Christiansburg-Radford MSA continued to outperform the state and nation, observing a 9.2% increase in jobs from February 2020 to September 2024. The Richmond MSA (5.6%) and Charlottesville MSA (5.0%) also experienced job growth well above the state and national averages. Two of the larger metro areas experienced lower rates of job growth, which, in turn, lowered the state's overall performance. Job growth over the period was 3.0% for the Virginia Beach – Chesapeake – Norfolk region and only 0.1% for the Washington, D.C. – Arlington – Alexandria metro. Richmond, which initially struggled to regain jobs in 2021 and 2022, had 5.6% more jobs in September 2024 than February 2020.

9 For more information, see JobsEQ from Chmura Economics.

TABLE 6

NONFARM PAYROLLS (JOBS) IN VIRGINIA'S METROPOLITAN AREAS AND VIRGINIA FEBRUARY 2020 AND SEPTEMBER 2024

Area	Nonfarm Payrolls February 2020	Nonfarm Payrolls September 2024	Percent Change in Nonfarm Payrolls
Blacksburg - Christiansburg - Radford	78,500	85,700	9.2%
Charlottesville	122,900	129,000	5.0%
Harrisonburg	70,300	71,700	2.0%
Kingsport - Bristol	121,400	125,000	3.0%
Lynchburg	106,100	105,800	-0.3%
Richmond	691,900	730,700	5.6%
Roanoke	163,800	168,800	3.1%
Staunton - Stuarts Draft	51,850	54,106	4.4%
Virginia Beach - Chesapeake - Norfolk	801,500	825,800	3.0%
Washington - Arlington - Alexandria	3,383,800	3,388,800	0.1%
Winchester	66,900	73,100	9.3%
Virginia	4,087,700	4,250,900	4.0%

Source: Bureau of Labor Statistics, Current Population Survey and Local Area Unemployment Statistics, seasonally adjusted data. Metropolitan areas may include counties in other states.

Personal Incomes Rise (Slowly) Across the Commonwealth

Personal income measures the income that residents of a geographical area get from paychecks, employer-provided benefits such as insurance, business ownership, rental properties, Social Security and other public benefits, interest and dividends.[10] At the state and metropolitan region 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.

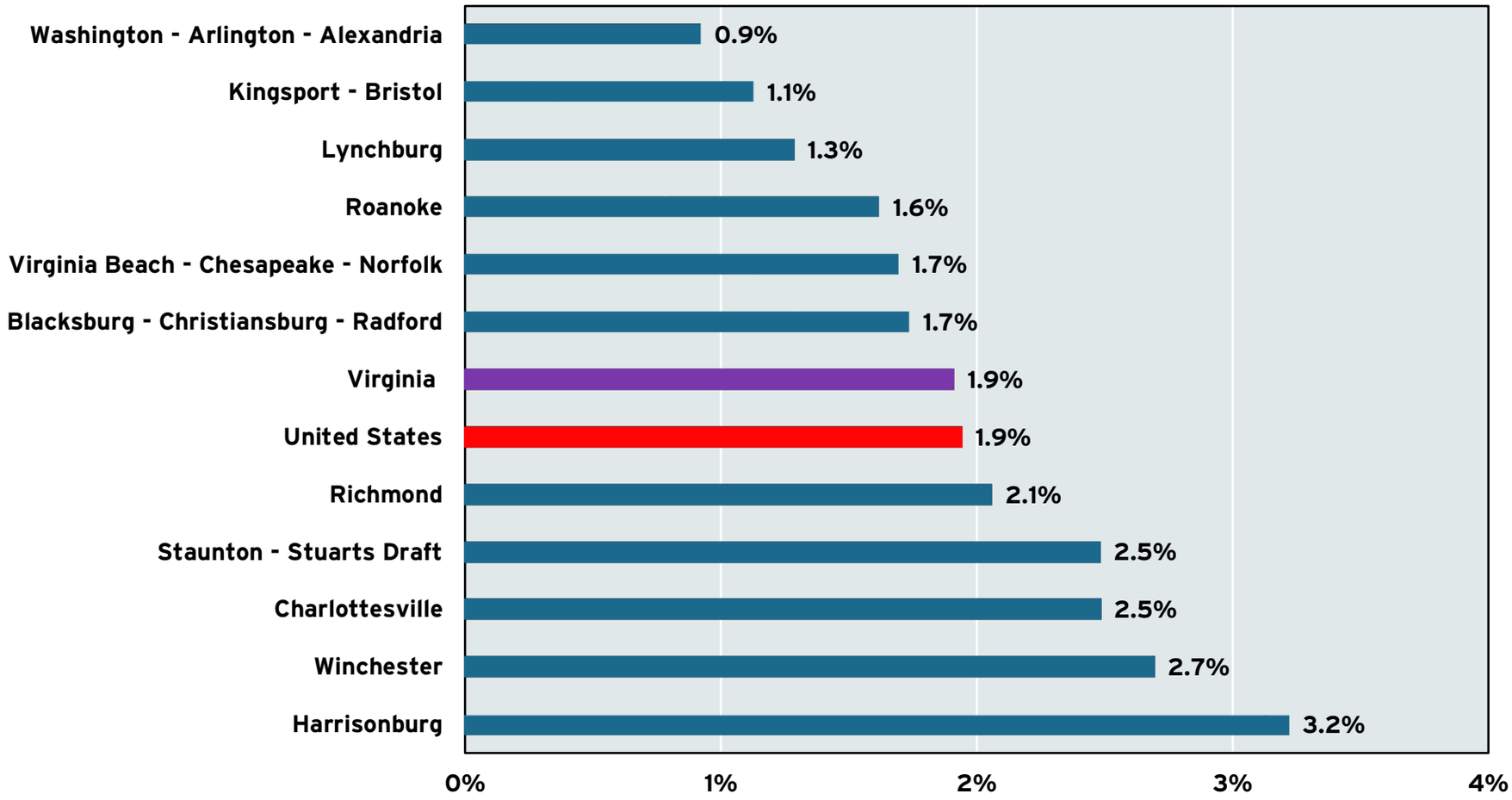
Graph 9 presents Compound Annual Growth Rate (CAGR) of real (inflation-adjusted) personal income per capita that is also adjusted for regional price differences for the metropolitan areas of the Commonwealth, Virginia, and the United States from 2018 to 2022. Over this period, real personal income per capita grew at an annual average of 1.9% in both the United States and the Commonwealth. Among Virginia's metro areas, Harrisonburg had the highest annual average growth rate (3.2%). Winchester (2.7%), Charlottesville (2.5%), Staunton - Stuarts Draft (2.5%), and Richmond (2.1%) had a higher annual average rate of growth than the nation or the state. Washington - Arlington-Alexandria had the smallest annual growth rate at 0.9%. Virginia's second largest region, Virginia Beach - Chesapeake - Norfolk (1.7%) also had a smaller growth rate than the state (1.9%) or the nation (1.9%). Virginia's slow growth rate for personal per capita income can be easily explained by a much slower growth observed in its largest metro area.

Table 7 shows real personal per capita income for all Virginia's metros for 2018 to 2022. Residents of Virginia had a higher per capita income than the levels observed for the nation. Charlottesville had the highest per capita income followed by the Washington - Arlington - Alexandria and Richmond metros; residents in these three metros enjoyed a higher real per capita income than Virginians on average. On the other extreme, residents of Blacksburg - Christiansburg - Radford, Lynchburg, and Harrisonburg had the lowest real per capita incomes.

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

GRAPH 9

COMPOUND ANNUAL GROWTH RATE OF REAL PERSONAL INCOME PER CAPITA METROPOLITAN AREAS IN VIRGINIA, VIRGINIA, AND THE UNITED STATES, 2018 - 2022



Source: U.S Bureau of Economic Analysis and Dragas Center for Economic Analysis and Policy. Real personal income is personal income divided by regional price parities and the national Personal Consumption Expenditures (PCE) price index. Real personal income per capita is equal to total real personal income divided by total midyear population, expressed in chained 2017 dollars.

TABLE 7

REAL PERSONAL PER CAPITA INCOME
VIRGINIA'S METROPOLITAN AREAS, VIRGINIA, AND THE UNITED STATES, 2018 - 2022

	2018	2019	2020	2021	2022
Blacksburg - Christiansburg - Radford	$40,145	$40,925	$43,089	$44,720	$43,009
Charlottesville	$64,959	$68,415	$66,931	$71,925	$71,659
Harrisonburg	$41,227	$42,390	$45,960	$47,050	$46,803
Kingsport - Bristol	$45,440	$45,479	$49,779	$50,422	$47,528
Lynchburg	$43,532	$44,664	$48,115	$47,966	$45,817
Richmond	$55,588	$58,781	$61,293	$61,914	$60,312
Roanoke	$48,453	$49,424	$52,898	$52,574	$51,670
Staunton - Stuarts Draft	$45,292	$48,420	$51,978	$50,792	$49,962
Virginia Beach - Chesapeake - Norfolk	$47,714	$49,807	$52,480	$53,320	$51,034
Washington - Arlington - Alexandria	$62,093	$63,798	$64,681	$66,987	$64,419
Winchester	$48,313	$50,942	$53,999	$54,581	$53,734
Virginia	**$54,030**	**$56,432**	**$58,311**	**$60,057**	**$58,281**
United States	**$52,240**	**$53,662**	**$56,533**	**$59,110**	**$56,419**

Source: U.S Bureau of Economic Analysis and Dragas Center for Economic Analysis and Policy. Real personal income is personal income divided by regional price parities and the national Personal Consumption Expenditures (PCE) price index. Real personal income per capita is equal to total real personal income divided by total midyear population, expressed in chained 2017 dollars.

Final thoughts

Virginia's economy is showing growth, but there is variation across regions that have their own unique opportunities and challenges. While the Commonwealth has historically enjoyed relative economic stability, certain regions face issues that require policy responses specific to their local conditions. One of the clear aspects are the disparities in performance across regions. Southwestern Virginia, once largely reliant on mining, has experienced structural unemployment with its decline. Efforts to aid in transition toward emerging energy options are underway although remain behind in their implementation relative to coastal Virginia. Near the coast, pressures remain regarding rising sea levels and resilience which have potential to affect economic activity and property values. The coast's reliance on tourism and defense spending leave it exposed to two specific industries when there are fluctuations in economic activity. The I-95 corridor between Richmond and Washington D.C., has experienced rapid growth in recent years in terms of both population and jobs. This corridor faces potential shortages of workers in general and especially for skilled workers in technology and manufacturing, as seen in the low unemployment rates relative to historical levels. Infrastructure strain and affordable housing could exacerbate difficulties in finding workers in this corridor.

Northern Virginia and Hampton Roads remain heavily reliant on government spending, which has historically been a stabilizing force. The other side of the coin is that excessive reliance can limit growth and create long-term vulnerability. As we have mentioned in prior publications, the federal fiscal situation in the long-term is a risk for Virginia and more specifically for Northern Virginia and Hampton Roads. To lessen this risk exposure, Virginia and its regions should continue to actively work to diversify their economic base and thus reduce reliance on government spending. The Commonwealth has a diverse landscape and numerous resources, but strategic investment, planning, and support are essential. There are programs in motion toward that end, and those should be strengthened.

Infrastructure also plays a crucial role, and specifically in urban areas, transportation networks face strain. Traffic congestion, aging infrastructure, and limited public transport can hinder activity and growth, increase costs, and lessen quality of life. Education and workforce development are additional areas of need for public investment. Wide differences in access exist simultaneously, and there are varying needs by region.

DOES IT STILL PAY TO ATTEND COLLEGE IN VIRGINIA?

"The great source of national wealth is the ability of individuals to develop their talents through education and the division of labor."

– Adam Smith

"Be curious, not judgmental."

– Walt Whitman

Several years ago, with a minimum of fanfare, the United States Department of Education (DOE) began to utilize its College Scorecard website to publish a new and very interesting data set that compares the incomes earned by college graduates with the incomes earned by high school graduates.[1] Most individuals are aware that the average college graduate earns a higher income than the average high school graduate. Georgetown University's Center on Education and the Workforce recently pegged this income differential at $1.2 million over a typical person's lifetime.[2]

But averages are averages. Does the earnings premium hold true for all college graduates? The answer to this question, according to the College Scorecard, is a definitive "no" when we compare the earnings of college graduates 10 years after entry into college with those of the median high school graduate. To make this comparison, we focus on public and private institutions of higher education in Virginia that focus primarily on granting bachelor's degrees.

In 2022, more than 1 in 5 college graduates across the United States found themselves earning less than the national median income for high school graduates in the same graduating class year.

1 United States Department of Education, College Scorecard, College Scorecard | College Scorecard (ed.gov).
2 Georgetown University Center on Education and the Workforce.

Across public and private not-for-profit colleges and universities in Virginia, the reported performance for this metric was slightly higher than the national average and median. In 2022, on average, 19.9% of graduates from four-year Virginia institutions of higher education earned less than the typical high school graduate 10 years after entry into college or university. While Virginia outperformed the nation by 2.6 percentage points, this performance is certainly not much to crow about.

As we will see, much depends upon the colleges that students attended and the major courses of study they pursued. According to the PayScale 2024 College Salary Report, the median mid-career income earned by graduates at the Massachusetts Institute of Technology was $196,900 in 2023, while the comparable mid-career income of liberal arts graduates of Fort Lewis College in Colorado was $98,000.[3] The bottom of PayScale's list, on the other hand, is populated with schools with median mid-career pay estimates below $70,000.

When we focus on Virginia, a similar story emerges about mid-career salaries. Washington & Lee University tops PayScale's 2024 College Salary Report with a median mid-career earnings estimate of $164,400, followed by the University of Virginia's main campus ($153,900), the Virginia Military Institute ($149,500), Virginia Polytechnic Institute and State University (Virginia Tech) at $139,600, and Hampden-Sydney College ($139,100). At the other end of the spectrum are Regent University ($89,800), Liberty University ($88,300), Bluefield University ($87,800), Mary Baldwin University ($82,000), and Virginia Union University ($74,200). For comparison, the United States Census Bureau estimated that median household income in Virginia in 2023 was $89,931.[4]

We should also note that the PayScale mid-career earnings estimates do not reflect any debt that college students have assumed to earn their degrees. The College Board reported that 51% of bachelor's degree recipients in 2021 took out student loans, with the average debt totaling $29,400.[5] Further, the PayScale estimates only include college graduates, whose earnings are typically higher than students who start but do not complete their undergraduate degrees.

A significant proportion of U.S. college graduates across academic majors end up earning incomes less than the median income earned by a high school graduate. The reasons for this vary and might include family responsibilities, the collapse of a firm or an entire industry, local economic conditions, being place-bound, having a strong desire to recreate, battles with illness, and criminal problems. Some individuals may simply have a personal aversion to work.

Whatever the reasons why some college graduates do not fare as well in terms of earned income as the median high school graduate, this phenomenon ('falling short of high school') is more common than many may believe. In succeeding sections, we will document these circumstances and focus on how well specific Virginia four-year colleges and universities fare in this regard. The data we present will provoke intriguing questions. Do some campuses do a superior job preparing their students for job markets? Or do some colleges simply enroll talented students from upper-income households who arrive with high test scores and earned Advanced Placement credits? These students may be starting their college careers already stationed on the academic/economic equivalent of first base.

3 PayScale, (2024). *College Salary Report (2024).* Available at: https://www.payscale.com/college-salary-report/bachelors
4 U.S. Census Bureau, 2023 American Community Survey, 1 Year estimates.
5 The College Board, *Trends in College Pricing and Student Aid 2023*, https://research.collegeboard.org/media/pdf/Trends%20Report%202023%20Updated.pdf, p. 4.

The College Scorecard data present a wealth of data about higher education institutions in the United States; however, care must be taken when working with the data. The default of the College Scorecard data is to present the latest available data for all variables. As data are published at different times during the year, the latest available income data may not come from the same year as other variables. Thus, the reported data are indicative of an institution's performance but also remain estimates of performance and outcomes. The data may also not be available for all institutions at all times, that is, the reported data often represent a selection of available institutions at a particular point in time. The data are informative but should be considered illustrative rather than authoritative with regard to the performance of colleges and universities.

For this chapter, we use the College Scorecard to obtain data for institutions of higher education whose primary function is undergraduate education.[6] We first obtain data for the United States and then focus our attention on institutions in the Commonwealth. We filter out for-profit institutions of higher education as well as colleges and universities that primarily offer two-year degrees or graduate degrees. We also remove institutions of higher education for whom data are not available. For this reason, the selection of institutions may vary as we present different data from the College Scorecard.

'Better than High School' – The Data

College Scorecard data tell us the percent of college graduates who, 10 years after entry into college or university, are earning at least as much as the national median for high school graduates.[7] Table 1 reports these data for a selection (n = 42) of Virginia's four-year, accredited, not-for-profit colleges and universities. The group of institutions includes all 15 of the Commonwealth's four-year public institutions and 27 private, not-for-profit, regionally accredited independent colleges whose home base is in Virginia. Private, for-profit institutions are not included in Table 1. Institutions for whom no data are reported are also excluded from Table 1.

The numbers in Table 1 may come as a shock to those who are not familiar with today's job markets. In the 2020 – 2021 Academic Year (AY), the 'better than high school' average for Virginia institutions of higher education was 80.1% while the median was 81.8%. The Virginia campus average and median were higher than the corresponding national average (77.5%) and median (79.7%). While some may laud this as a sign of success, the estimates also highlight a starting fact: about 1 in 5 bachelor's degree recipients earned less than the median American high school graduate 10 years after both graduated from high school.

6 For more information about the College Scorecard API, see https://collegescorecard.ed.gov/data/api-documentation.

7 The 'entry' cohort consists of students that began their studies at the institution at the same time. Median earnings are measured by who received federal aid and who are employed and not currently enrolled. Earnings are defined as the sum of wages and deferred compensation from all non-duplicative W-2 forms for each individual and positive self-employment earnings. Threshold earnings are estimated to provide the share of former undergraduate students who earned more than the median wage of workers ages 25 to 34 that self-identified as a high school graduate by indicating that high school was their highest level of education. For more information, see *Technical Documentation: College Scorecard Institution-Level Data (2024).*

TABLE 1

PERCENT OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY
VIRGINIA, 2020 – 2021 ACADEMIC YEAR

Institution	Share of Students Earning More than a High School Graduate – 10 Years After Entry	Institution	Share of Students Earning More than a High School Graduate – 10 Years After Entry
University of Virginia	91.8%	Old Dominion University	81.7%
Virginia Military Institute	91.7%	University of Lynchburg	81.5%
Virginia Tech	90.3%	Hampton University	80.6%
Washington and Lee University	89.5%	Shenandoah University	80.1%
James Madison University	89.4%	Bluefield University	79.0%
Sentara College of Health Sciences	89.3%	Randolph College	78.2%
University of Richmond	89.0%	Virginia Wesleyan University	77.8%
Bon Secours Memorial College of Nursing	88.9%	Sweet Briar College	77.7%
William & Mary	88.4%	UVA - College at Wise	77.0%
Hampden-Sydney College	87.9%	Averett University	77.0%
Roanoke College	87.1%	Emory & Henry College	76.2%
Christopher Newport University	86.2%	Ferrum College	73.6%
George Mason University	86.1%	Southern Virginia University	72.1%
Randolph-Macon College	84.2%	Virginia State University	71.6%
Bridgewater College	83.6%	Mary Baldwin University	71.3%
Marymount University	83.2%	Norfolk State University	70.5%
Radford University	83.1%	Liberty University	69.3%
Longwood University	83.0%	Regent University	68.0%
University of Mary Washington	82.9%	Virginia Union University	67.0%
Virginia Commonwealth University	82.2%	Hollins University	66.1%
Eastern Mennonite University	82.0%	Virginia University of Lynchburg	47.9%
United States Campus Median	**79.7%**	**Virginia Campus Median**	**81.8%**

Source: U.S. Department of Education, (2024). College Scorecard. Medians for the United States and Virginia only include institutions for which sufficient data were available. 2020-2021 estimates adjusted for inflation to 2022 dollars. Predominantly bachelor's degree-granting institutions. Public and private not-for-profit institutions only.

Graph 1 highlights the share of students earning more than the typical high school graduate 10 years after entry for Virginia's public institutions of higher education. More than 9 in 10 graduates of the University of Virginia main campus (91.8%) earned more than the typical high school graduate 10 years after entry, followed by Virginia Military Institute (91.7%), and Virginia Tech (90.3%). Twelve out of the 15 public institutions outperformed the national median in the latest available data. Three institutions, University of Virginia's College at Wise (77.0%), Virginia State University (71.6%) and Norfolk State University (70.5%) reported shares less than the national median.

Graph 2 focuses on private, not-for-profit institutions of higher education in the Commonwealth. In the latest data available for the 2020 – 2021 AY, Washington and Lee University had the highest share of graduates (89.5%) that earned more than a high school graduate 10 years after entry. The Sentara College of Health Sciences, which focuses on nursing education, was next, with 89.3% of its graduates earning more than the typical high school student 10 years after entry. The University of Richmond (89.0%), Bon Secours Memorial College of Nursing (88.9%), and Hampden-Sydney College (87.9%) rounded out the top five. At the other end of the distribution were Liberty University (69.3%), Regent University (68.0%), Virginia Union University (67.0%), Hollins University (66.1%), and Virginia University of Lynchburg (47.9%).

The presentation in Table 1 and Graphs 1 and 2 is subtly biased in favor of public and private, not-for-profit institutions of higher education because it does not include any for-profit institutions. We compare the performance of the eight reporting private for-profit institutions in Virginia whose primary function is undergraduate education. Seven of these eight for-profit institutions lag the median performance of Virginia's public and not-for-profit private institutions of higher education in the 2020 – 2021 AY.

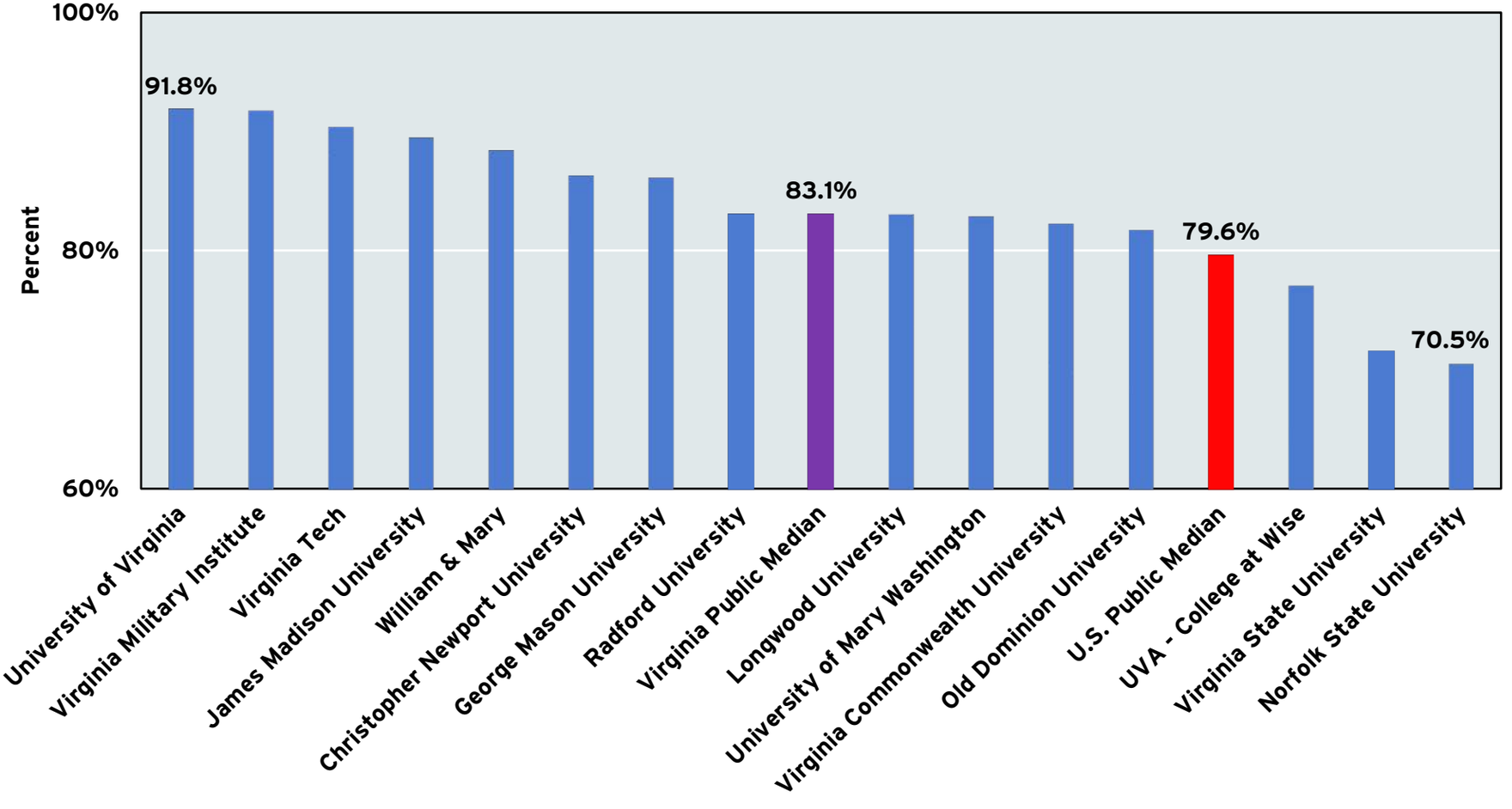
Graduation rates for private, for-profit colleges and universities are also, on average, lower than their public and private, not-for-profit counterparts. If we were to include these institutions in our analysis in Table 1, it would paint a much bleaker picture of the performance of Virginia's institutions of higher education. We thus focus our discussion on public and private, not-for-profit institutions in the Commonwealth.

The Obama Administration recognized this and issued a "Gainful Employment" GE rule aimed at the for-profits though its eventual application ended up causing problems for other segments of higher education such as Historically Black Colleges and Universities (HBCUs). The rule denied access to federal student loans to students who were enrolled at colleges that graduated large proportions of individuals who could not find jobs related to their studies and after graduation were left stranded with substantial debt.[8] The Trump Administration subsequently reversed much of this ruling, but then it was partially reinstated by the Biden Administration. A reasonable expectation for 2025 is a reversion of the Biden Administration policy back to what was the standard during the first Trump Administration.

8 Erica L. Green, "DeVos Repeals Obama-Era Rule Cracking Down on For-Profit Colleges," *The New York Times (June 28, 2019)*, www.nytimes.com/2019/06/28/us/politics/betsy-devos-for-profit-colleges.html#:~:text=The%20so-called%20gainful%20employment%20rule%20was%20issued%20by%20the,with%20debt%20and%20worthless%20degrees.

GRAPH 1

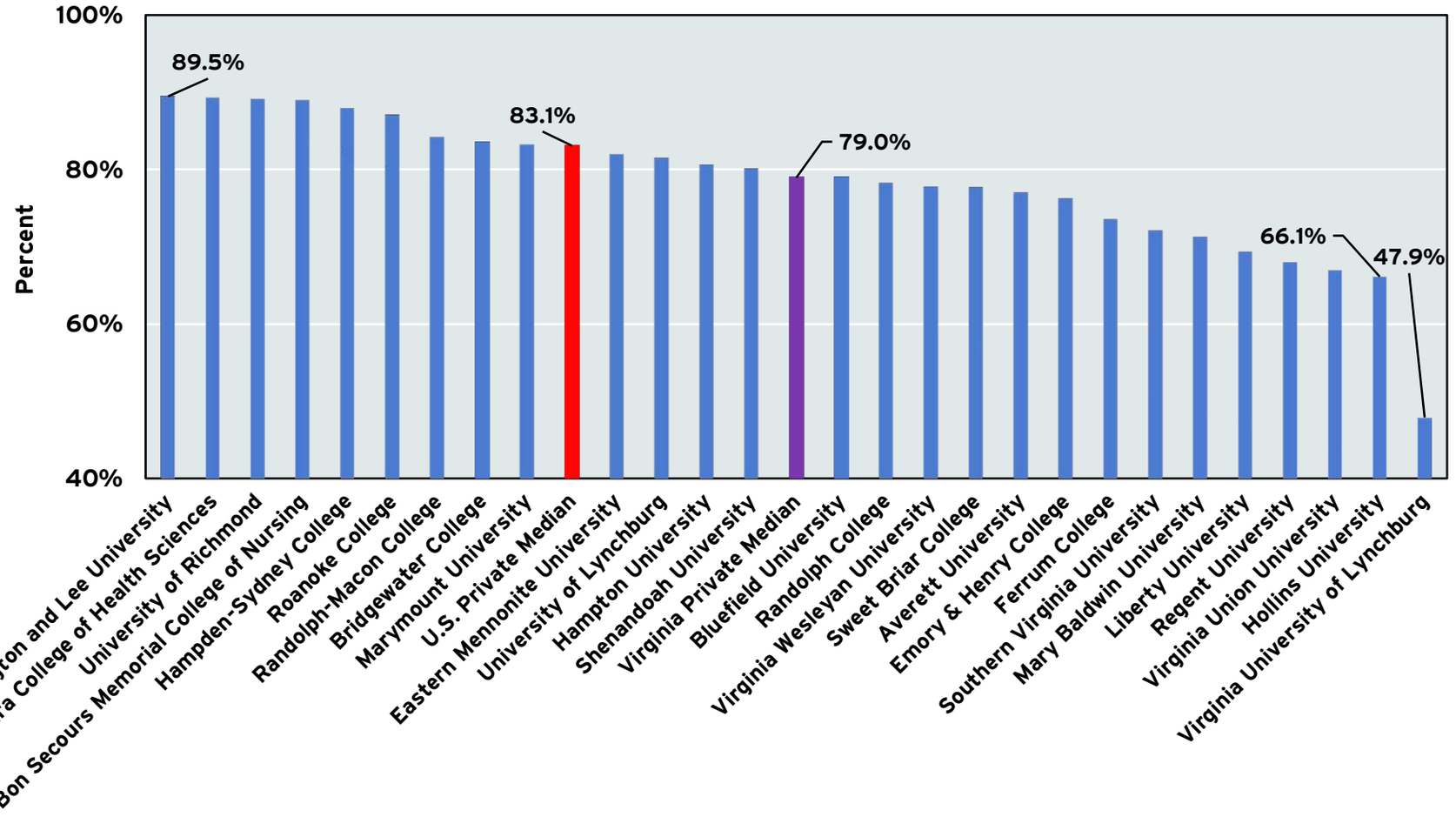
SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY
VIRGINIA PUBLIC INSTITUTIONS OF HIGHER EDUCATION, 2020 - 2021 AY



Source: U.S. Department of Education, (2024). College Scorecard. Medians for the United States and Virginia only include institutions for which sufficient data were available. 2020-2021 estimates adjusted for inflation to 2022 dollars. Predominantly bachelor's degree-granting institutions.

GRAPH 2

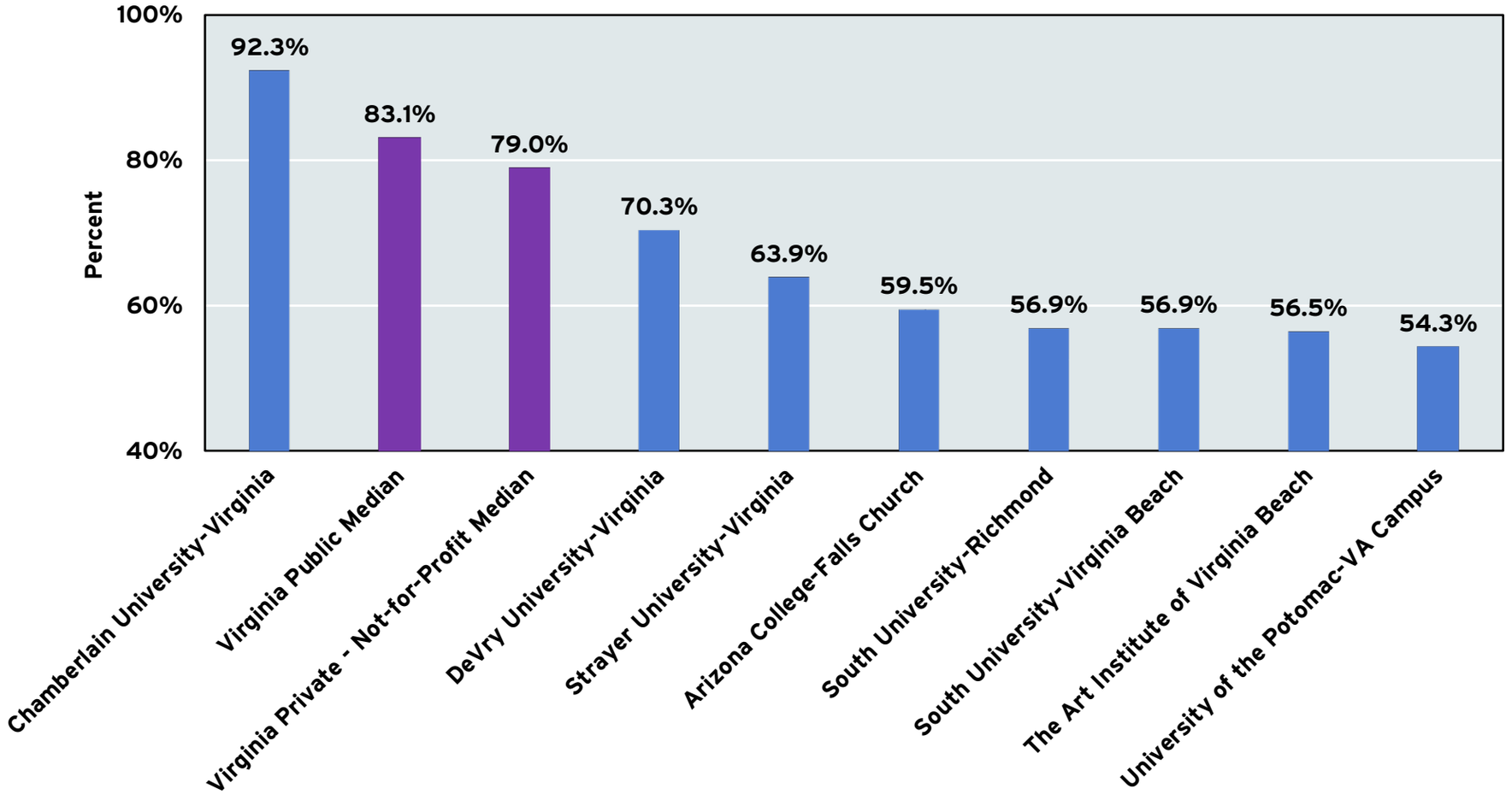
SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY
VIRGINIA PRIVATE, NOT-FOR-PROFIT INSTITUTIONS OF HIGHER EDUCATION, 2020 - 2021 AY



Source: U.S. Department of Education, (2024). College Scorecard. Medians for the United States and Virginia only include institutions for which sufficient data were available. 2020-2021 estimates adjusted for inflation to 2022 dollars. Predominantly bachelor's degree-granting institutions.

GRAPH 3

SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY
VIRGINIA PRIVATE, FOR-PROFIT INSTITUTIONS OF HIGHER EDUCATION, 2020 - 2021 AY



Source: U.S. Department of Education, (2024). College Scorecard. Medians for the United States and Virginia only include institutions for which sufficient data were available. 2020-2021 estimates adjusted for inflation to 2022 dollars. Predominantly bachelor's degree-granting institutions.

What Constitutes a Good Performance?

In Table 1, we reported the share of students who, 10 years after entry to college or university, earned more than the typical high school graduate. We noted the variation among institutions of higher education across the Commonwealth, ranging from, for example, 89.0% of University of Richmond graduates to about 68.0% of Regent University graduates earning more than the typical high school student 10 years after entry in 2022. However, the data presented in Table 1 is without context; that is, do institutional, student, and environmental factors influence average earnings of college graduates 10 years after entry?

A reasonable argument might be that campuses which enroll students with superior academic backgrounds (as evidenced by admitted students' average SAT scores or more selective admissions) to have higher graduation rates and higher shares of students earning more than the typical high school graduate 10 years after entry. Campuses that enroll students from households with higher levels of median household incomes are also likely to produce graduates that earn more after graduation than campuses, all else being equal, that enroll students from households with lower incomes. Students arriving from higher-income households are likely to have advantages that students from lower-income households do not. These higher-income household students face less pressure to work while pursuing their studies and may also be under less financial stress than students who arrive from lower-income households.

Of course, there are a myriad of factors that may influence the share of college students that earn more than the typical high school graduate 10 years after entry. An institution's location, whether it is ranked as a high or very high research activity university, the age of its students, and the proportion of students that received a Pell Grant, among other factors, may influence the earnings of its graduates. While we could add every potential factor to our analysis, we also must be parsimonious. In other words, we should add enough, but not too much, to our analysis.

Table 2 presents the results of our empirical analysis. We first, using data on a sample of institutions of higher education across the nation, estimate how the selected causal factors influence the share of students that earn more than the median high school graduate 10 years after entry. We then use the estimates of the influence of causal factors to generate predicted share of students' earnings. While we may not perfectly explain all the variation in the share of students' earnings, we find a number of factors that significantly explain how it varies across institutions.[9]

We then calculate the difference between the actual share of students' earnings and our predicted share of students' earnings. This difference is indicative of whether or not a college or university is performing above or below expectations, given its characteristics. Of course, we must also note that our analysis is subject to a degree of statistical error (i.e., we are not perfect), and the following discussion regarding an institution's performance should be considered illustrative rather than authoritative.

9 For a sample of 1,016 colleges and universities, we have 1,002 degrees of freedom. The adjusted R-squared is equal to 0.5494 and the reported F-statistic is 96.2 with 13 and 1,002 degrees of freedom. We include each of the hypothesized variables in the estimation and prediction equations. We note that we use the latest available data from the College Scorecard.

TABLE 2

SHARE OF STUDENTS AND PREDICTED SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA

Virginia Campus	Share of Students Earning More than a High School Graduate - 10 Years After Entry	Predicted Share of Students Earning More than a High School Graduate – 10 Years After Entry	Difference Between Actual and Predicted
Virginia State University	71.6%	66.4%	5.2%
Virginia Military Institute	91.7%	86.5%	5.2%
Bluefield University	79.0%	74.8%	4.2%
Norfolk State University	70.5%	66.5%	4.0%
Roanoke College	87.1%	83.4%	3.7%
Hampden-Sydney College	87.9%	84.3%	3.6%
Hampton University	80.6%	77.2%	3.3%
Bridgewater College	83.6%	80.3%	3.3%
Radford University	83.1%	80.3%	2.8%
Eastern Mennonite University	82.0%	79.9%	2.1%
Virginia Tech	90.3%	88.4%	1.9%
James Madison University	89.4%	87.6%	1.8%
Old Dominion University	81.7%	80.0%	1.7%
University of Virginia-Main Campus	91.8%	90.1%	1.7%
University of Richmond	89.0%	87.3%	1.7%
Longwood University	83.0%	81.6%	1.5%
UVA - College at Wise	77.0%	75.8%	1.2%
Christopher Newport University	86.2%	85.9%	0.3%
Randolph College	78.2%	78.2%	0.1%
Averett University	77.0%	77.0%	0.0%
Washington and Lee University	89.5%	89.5%	-0.1%
Randolph-Macon College	84.2%	85.0%	-0.9%
Virginia Union University	67.0%	67.9%	-1.0%
Emory & Henry College	76.2%	77.3%	-1.0%
Virginia Commonwealth University	82.2%	83.5%	-1.2%

TABLE 2

SHARE OF STUDENTS AND PREDICTED SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA

Virginia Campus	Share of Students Earning More than a High School Graduate - 10 Years After Entry	Predicted Share of Students Earning More than a High School Graduate – 10 Years After Entry	Difference Between Actual and Predicted
Ferrum College	73.6%	75.2%	-1.6%
William & Mary	88.4%	89.9%	-1.6%
Sweet Briar College	77.7%	79.8%	-2.1%
University of Mary Washington	82.9%	85.0%	-2.1%
University of Lynchburg	81.5%	83.7%	-2.2%
George Mason University	86.1%	88.4%	-2.3%
Southern Virginia University	72.1%	75.4%	-3.3%
Mary Baldwin University	71.3%	75.1%	-3.8%
Marymount University	83.2%	87.2%	-4.0%
Virginia Wesleyan University	77.8%	81.8%	-4.0%
Regent University	68.0%	73.7%	-5.7%
Shenandoah University	80.1%	85.9%	-5.8%
Liberty University	69.3%	77.5%	-8.2%
Hollins University	66.1%	77.7%	-11.6%
Virginia University of Lynchburg	47.9%	61.8%	-13.9%
Virginia Campus Median	**81.6%**	**80.3%**	**---**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Predicted values obtained using coefficients from a linear regression of threshold earnings on average SAT score, median household income, percent female, percent Black undergraduates, share of undergraduate students that are part-time, percent of students receiving a Pell Grant, log of instructional expenses, percent of students over the age of 23, and dummy variables for Carnegie R1 classification, Historical Black College or University, public university, and whether the institution had a religious affiliation. A sample of 1,016 colleges and universities across the United States were used for the linear regression. Some Virginia institutions not included were due to lack of data. Full estimates available upon request. Latest available data from College Scorecard.

In the middle of Table 2 is Averett University. In the latest available data for the 2020 – 2021 AY, 77.0% of Averett graduates earned more than the median high school graduate 10 years after entry. If we merely compare Averett's share with that of Virginia State University (VSU), we conclude that Averett University 'outperformed' VSU with regard to this measure. However, if we control for factors that influence this measure, Averett University's performance was in line with our prediction. In fact, there was no discernable difference between Averett University's actual performance and its predicted performance. While Averett University performed as expected, it would appear that VSU 'did more with less.'

Finally, consider the case of Liberty University. In the latest College Scorecard data, 69.3% of Liberty graduates earned more than the median high school graduate 10 years after entry into Liberty University. Our statistical model, on the other hand, predicted that 77.5% of graduates from Liberty University would earn more 10 years after entry than the typical high school graduate. This 8.2 percentage-point difference suggests that Liberty University underperforms with respect to our 'better than high school' metric. One possible reason is that Liberty enrolls a high percentage of students who take all their coursework online. This may, in turn, reflect differences in family responsibilities, reduced geographic mobility, family incomes, and other factors. These differences may then lower future earnings which lowers Liberty's share of students that earn more than the typical high school graduate 10 years after entry.

Do campuses that exceed our statistical expectations possess a 'secret sauce' that they employ to do well? This is doubtful. However, over time, these institutions may nurture distinctive campus cultures that promote success on the part of their graduates, and this allows their graduates to capitalize on strengths and overcome difficulties. Admittedly, we speak here of concepts that are somewhat nebulous, but it is apparent that campuses that otherwise seem identical often generate rather different results. Campus leadership and resource allocation appear to count, as do campus expectations and traditions. Hence, an activity that is commonplace on one campus (such as internships and cooperative experiences) may be rare on another campus even though they have demonstrated positive connectivity to employment offers and starting salaries.[10]

But let us insert a caution. Our data report the earnings performances of institutions' alumni – that is, students who have graduated. What about collegiate dropouts? They are not reflected in the College Scorecard data. Were we to take the dropout phenomenon into account, it could shake up our ratings. This does not mean that the College Scorecard data concerning post-college earnings are not useful; they are, but they must be interpreted with care. If we weighted our results by each institution's graduation rate, then (to cite a specific example) Virginia State University's stellar performance would be reduced as its reported graduation rate (47.4%) is below the Virginia and national averages.[11] Institutions where the graduation rate was above the state and national averages would likely see their estimated performance increase. As with everything, understanding what is included (and excluded) from the analysis is crucial to interpreting the results.

Graph 4 highlights the relationship between the graduation rate and the share of students earning more than the median high school graduate 10 years after entry. We use the broadest measure of the graduation rate, that is, the percent of first-time, full-time undergraduates that typically complete their degree in eight years. It should not be a surprise that the correlation between these two variables is 0.78, that is, there is a strong, positive association between the broadest measure of academic graduation and the share of students who, 10 years after entry, earn more than the median high school graduate.[12]

10 Moss-Pech, C. The Career Conveyor Belt: How Internships Lead to Unequal Labor Market Outcomes among College Graduates. Qual Sociol 44, 77–102 (2021). https://doi.org/10.1007/s11133-020-09471-y
11 This reported graduation rate is the completion rate for first-time, full-time bachelor's-degree-seeking students at four-year institutions (200% of expected time to completion).
12 Of course, correlation does not imply causation but there is sufficient evidence to suggest that graduation rates and earnings are tightly correlated.

One might quibble in a variety of ways with the model we have used to generate expected earnings performances by the graduates of the institutions in our sample, but the import of the actual earnings data presented in Table 2 are inescapable. For many distinct reasons, substantial proportions of college graduates end up earning less than the members of their high school graduating classes who did not attend college. They have invested their time and money in an endeavor (going to college) that in financial terms turned out to be unproductive.

This is hardly a trivial consideration for the individuals so affected.

The 'better than high school earnings' statistic used so far in the chapter sets a low bar for institutional performance. The measure gives no weight to whether a college graduate earns $1 more or $1 million more than the median high school graduate. Imagine a hypothetical school where every graduate, 10 years after entry, earned $5 more than the median high school graduate. Would we consider this school's performance 'better' than a school where 8 out of 10 graduates made $100,000 more than the typical high school graduate? The 'better than high school earnings' metric is useful, but we must again (as with every measure), ensure that we understand its strengths and limitations.

In Table 3, we present a selection of public and private not-for-profit higher education institutions in Virginia. While the 'better than high school earnings' measure is well known, we also present a second measure, the median earnings of students who received federal aid during their undergraduate education.[13] The median cohort earnings data are available for each year starting six years after entry and continuing until 10 years after entry. As with all measures, the median earnings data are estimates and provide an illustration of the earning potential of students. As with the share of students earning more than a high school graduate data, these data can be influenced by other factors and provide one dimension of the overall performance of an institution. One potential factor is that the median earnings for entrants include students who dropped out of their studies, an action that would likely lower the median earnings estimate.

To illustrate this point, we compare the median cohort earnings six years after entry into higher education with median cohort earnings five years after exit.[14] Whether or not students complete their education appears to have a significant impact on median earnings. Washington and Lee University, for example, reported a graduation rate of 93.4% for the 2022 – 2023 AY, that is, 6.6% of students who entered the university did not complete their undergraduate degree within eight years of entry. The median cohort earnings six years after entry (which includes graduates and those who did not complete their course of study) were $76,516 in 2022 dollars. The median cohort earnings five years after exit (i.e. those who completed their course of study and received a degree) was $94,782 in 2022 dollars. Assuming these estimates of entry and exit median earnings are roughly comparable, the 'penalty' for not completing the degree is at least $18,266 and likely higher given the entry cohort includes many individuals who graduated from Washington and Lee University.

13 We note that variation among majors within an institution is likely to be greater than variation across institutions. We also note that the data only capture Title-IV receiving students and so the estimates may not be representative for institutions with relatively low proportions of Title IV-receiving students. As we discuss later in the chapter, the differences across Virginia institutions are significant.

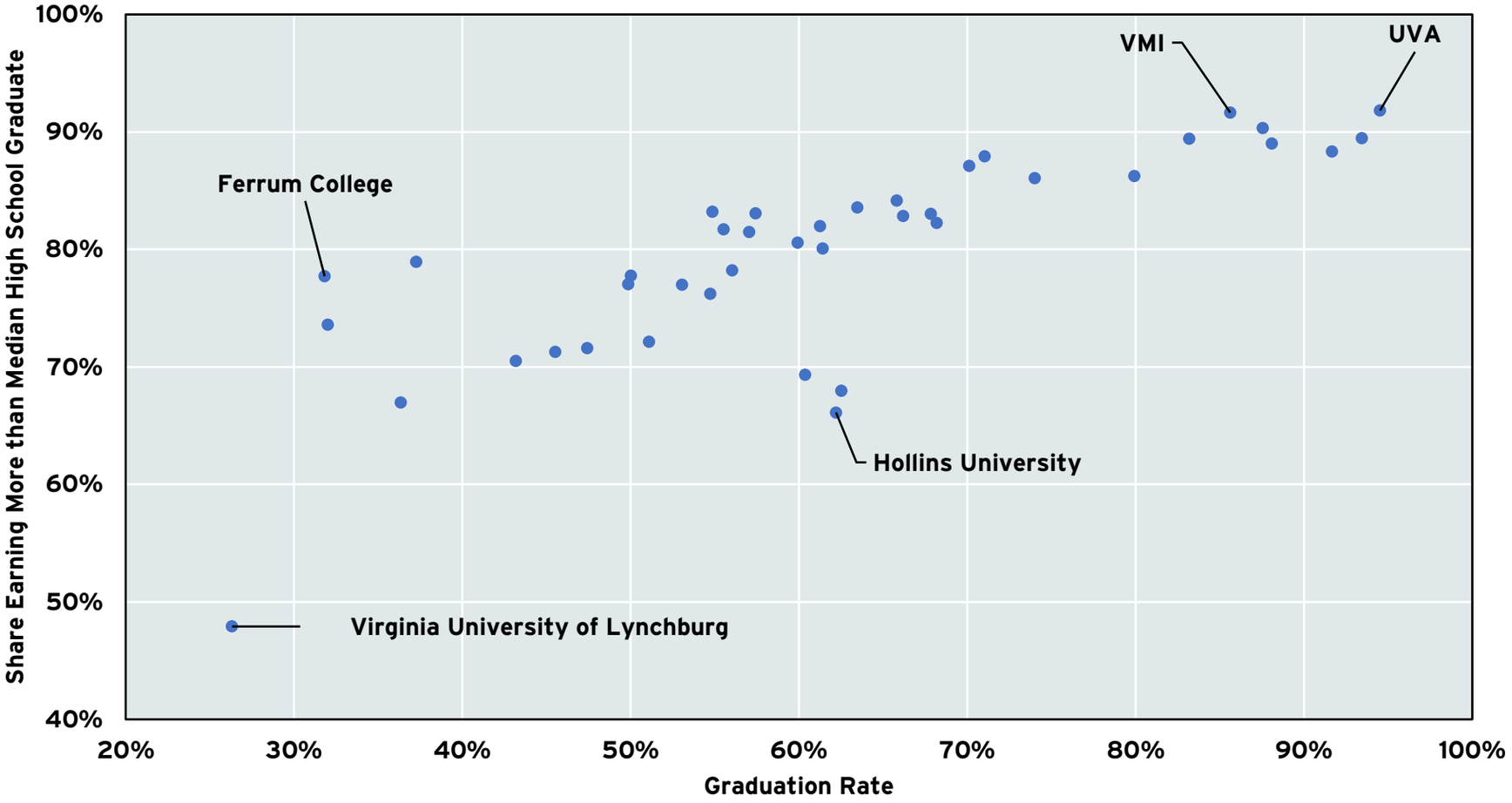
14 We change from 10 years after entry as the latest estimates for cohort exit earnings is five years after exit. We opine the median earnings six years after entry and five years after exit are sufficiently comparable for discussion purposes.

Let's contrast Emory & Henry College with Bridgewater College. Both colleges are located in very small towns considered to be part of a metropolitan area – Emory & Henry College is located within the Tri-Cities Bristol metropolitan region, while Bridgewater College is located in the somewhat smaller Harrisonburg metropolitan area. Emory & Henry College enrolls about 1,000 full-time equivalent (FTE) undergraduates, while Bridgewater College enrolls about 1,650 undergraduate FTE. Both institutions report average first-year SAT scores of about 1075. Students at Emory & Henry College come from households ranked in the 62.5th income percentile nationally, while those at Bridgewater College on average emanate from a 65.0th income percentile household.

Based on the major characteristics of each, we predict that 77.3% of Emory & Henry College graduates will earn more than the median income of same-year high school graduates 10 years later; however, only 76.2% do so. At Bridgewater College, we predict 80.3% will earn more income than same-year high school graduates, but 83.6% do so. Emory & Henry College 'underperforms' by 1.1 percentage points, while Bridgewater College 'overperforms' by 3.3 percentage points. How should one account for this? Apart from the possibility of differing campus cultures, Bridgewater College's six-year graduation rate is about 10% higher than that of Emory & Henry College, though the 'better than high school' measure focuses only on those who graduate. Bridgewater College's nearness to the nation's capital (146 miles) might make a difference. Other factors that we have not considered (perhaps not quantifiable) likely are responsible.

GRAPH 4

SHARE OF STUDENTS EARNING MORE THAN A HIGH SCHOOL GRADUATE, 10 YEARS AFTER ENTRY AND COMPLETION RATES WITHIN 200% OF EXPECTED TIME OF COMPLETION VIRGINIA PUBLIC AND PRIVATE, NOT-FOR-PROFIT INSTITUTIONS OF HIGHER EDUCATION, LATEST DATA



Source: U.S. Department of Education, (2024). College Scorecard. Medians for the United States and Virginia only include institutions for which sufficient data were available. 2020-2021 estimates adjusted for inflation to 2022 dollars. Predominantly bachelor's degree-granting institutions. The 200% completion rate for full-time, first-time bachelor's degree-seeking undergraduates is typically eight years and represents the broadest reported measure of completion.

TABLE 3

MEDIAN COHORT EARNINGS SIX YEARS AFTER ENTRY AND 5 YEARS AFTER EXIT
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA

Virginia Campus	Median Cohort Earnings Six Years After Entry	Median Cohort Earnings Five Years After Exit
Averett University	$46,273	$55,647
Bluefield University	$41,923	$47,950
Bon Secours Memorial College of Nursing	$75,150	$76,486
Bridgewater College	$45,620	$50,477
Christopher Newport University	$51,931	$58,935
Eastern Mennonite University	$48,158	$54,110
Emory & Henry College	$39,448	$45,479
Ferrum College	$36,418	$46,432
George Mason University	$60,536	$75,373
Hampden-Sydney College	$55,846	$69,617
Hampton University	$42,721	$59,105
Hollins University	$29,863	$40,175
James Madison University	$57,438	$69,066
Liberty University	$39,707	$52,144
Longwood University	$46,058	$51,897
Mary Baldwin University	$39,075	$46,096
Marymount University	$57,801	$73,014
Norfolk State University	$33,412	$51,016
Old Dominion University	$46,732	$57,859
Radford University	$44,830	$55,291
Randolph College	$39,122	$47,139
Randolph-Macon College	$48,067	$57,369
Regent University	$42,066	$49,687
Roanoke College	$45,330	$57,142
Sentara College of Health Sciences	$78,992	$70,918
Shenandoah University	$48,167	$60,910
Southern Virginia University	$36,988	$45,312

TABLE 3

MEDIAN COHORT EARNINGS SIX YEARS AFTER ENTRY AND 5 YEARS AFTER EXIT
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA

Virginia Campus	Median Cohort Earnings Six Years After Entry	Median Cohort Earnings Five Years After Exit
Sweet Briar College	$35,533	$50,944
University of Lynchburg	$44,261	$55,700
University of Mary Washington	$49,411	$58,080
University of Richmond	$67,927	$79,784
University of Virginia-Main Campus	$72,359	$85,639
UVA - College at Wise	$39,725	$46,382
Virginia Commonwealth University	$47,161	$61,414
Virginia Military Institute	$63,545	$79,378
Virginia Tech	$67,377	$80,730
Virginia State University	$33,630	$49,774
Virginia Union University	$27,977	$45,004
Virginia University of Lynchburg	$24,718	$37,460
Virginia Wesleyan University	$39,200	$48,912
Washington and Lee University	$76,516	$94,782
William & Mary	$62,959	$71,273
Virginia Median	**$45,839**	**$55,674**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data. 2020 – 2021 estimates in 2022 dollars.

College Attendance and the PayScale Data

If we are interested in the impact of higher education on earnings, we can turn to estimates from PayScale. PayScale is a well-known firm that among other things, keeps track of the salaries paid to American workers. It publishes data that show both 'early career' and 'mid-career' median salaries earned by graduates of a large number of colleges and universities.[15]

Early career for PayScale means 10 years after graduation, but this is not the same 10 years as defined by the College Scorecard we just evaluated. PayScale's 10 years means a decade after an individual's college graduation, whereas the College Scorecard's 10 years means a decade after an individual's entry into a college or university. Thus, the College Scorecard measure usually translates to someone who is 27, 28, or 29 years of age, while PayScale's metric implies someone who ordinarily is at least 31 to 33 years old, but often means someone who is much older than this. While both measures rely upon the term '10 years,' the reader should take note of the differences between the two measures.

PayScale's 'mid-career' individuals likely are at least 40 years old, but often will be several years older than this, depending on the age at which they earned their bachelor's degrees and if and when they started working full-time. PayScale's 2024 College Salary Report says that this compilation reflects alumni salary data for 3.1 million respondents who graduated from more than 2,400 colleges and universities across the United States.[16] The 2024 report includes 1,702 of the 2,182 eligible bachelor's degree-granting institutions. Only graduates who were employed full-time are included in PayScale's report, and active-duty military are excluded from its samples.[17] We present the PayScale 2023 estimates for predominantly bachelor's degree-granting public and private not-for-profit institutions in Virginia in Table 4.

However, earnings are only one side of the coin when discussing the cost of attending college or university. In Table 5, we present two measures of cost. The first measure is the average annual total cost of attendance, including tuition and fees, books and supplies, and living expenses for full-time, first-time undergraduates who receive federal aid. The second measure is the average total cost of attendance minus average grant and scholarship aid. The first measure is a measure of the total cost of attendance while the second measure is an estimate of the net cost of attendance. These costs are measured for the 2022 – 2023 AY.

The average annual net cost estimate is likely a lower bound on the annual cost of attending a college or university. The estimate does not take account of transportation costs to and from the campuses, entertainment, and recreation expenses, among others. This estimate also assumes that students will earn their degrees in four years when we know that significant proportions take longer than this to do so. Even more important, it does not include the opportunity cost of the earned income college students forgo while they are studying --- the dollars, for example, they might have earned had they been working full-time. Nevertheless, the average annual net cost estimate does provide information about relative (rather than absolute) campus cost magnitudes that are reasonable, though lower bound, approximations of the actual cost of attending college.

15 The use of median salaries is preferable to mean (average) salaries because mean salaries could be affected visibly by a few earning very large salaries, for example, one coming from a multi-millionaire.
16 "College Salary Report Methodology," PayScale (2024), www.payscale.com/college-salary-report/methodology.
17 This is a potential source of bias because some institutions have larger proportions of graduates who are part-time workers than do other institutions. This circumstance also might prevail at single-sex institutions.

TABLE 4

PAYSCALE MID-CAREER MEDIAN SALARY ESTIMATES
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA, 2023

Virginia Campus	PayScale Mid-Career Median Salary Estimate	Virginia Campus	PayScale Mid-Career Median Salary Estimate
Averett University	$89,900	Randolph College	$110,200
Bluefield University	$87,800	Randolph-Macon College	$101,800
Bridgewater College	$110,600	Regent University	$89,800
Christopher Newport University	$105,400	Roanoke College	$100,500
Eastern Mennonite University	$91,100	Shenandoah University	$99,800
Emory & Henry College	$97,600	Sweet Briar College	$100,100
Ferrum College	$104,300	University of Lynchburg	$108,800
George Mason University	$131,400	University of Mary Washington	$120,300
Hampden-Sydney College	$139,100	University of Richmond	$133,400
Hampton University	$112,900	University of Virginia-Main Campus	$153,900
Hollins University	$92,600	University of Virginia's College at Wise	$97,400
James Madison University	$129,100	Virginia Commonwealth University	$107,500
Liberty University	$88,300	Virginia Military Institute	$149,500
Longwood University	$106,700	Virginia Polytechnic Institute and State University	$139,600
Mary Baldwin University	$82,000	Virginia State University	$97,200
Marymount University	$110,800	Virginia Union University	$74,200
Norfolk State University	$91,500	Virginia Wesleyan University	$96,000
Old Dominion University	$108,300	Washington and Lee University	$164,400
Radford University	$100,100	William & Mary	$136,300
Virginia Median		**$104,850**	

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data. Estimates in 2023 dollars for bachelor's degree graduates.

TABLE 5

AVERAGE TOTAL AND NET COST OF ATTENDANCE
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 – 2023 ACADEMIC YEAR

Virginia Campus	Average Annual Total Cost of Attendance	Average Annual Net Cost of Attendance
Averett University	$50,240	$26,542
Bluefield University	$41,528	$22,701
Bridgewater College	$53,800	$18,897
Christopher Newport University	$31,162	$22,609
Eastern Mennonite University	$53,834	$23,206
Emory & Henry College	$52,559	$21,555
Ferrum College	$52,268	$43,803
George Mason University	$26,268	$17,385
Hampden-Sydney College	$66,868	$25,214
Hampton University	$46,123	$40,511
Hollins University	$56,698	$22,078
James Madison University	$29,043	$22,465
Liberty University	$41,963	$29,882
Longwood University	$31,501	$20,679
Mary Baldwin University	$43,096	$18,390
Marymount University	$50,922	$23,659
Norfolk State University	$26,039	$15,577
Old Dominion University	$26,060	$15,415
Radford University	$25,873	$16,310
Randolph College	$42,574	$22,428
Randolph-Macon College	$59,197	$27,462
Regent University	$29,448	$17,220
Roanoke College	$65,345	$27,780
Shenandoah University	$49,610	$28,295
Sweet Briar College	$40,846	$27,635
University of Lynchburg	$47,371	$22,104

TABLE 5

AVERAGE TOTAL AND NET COST OF ATTENDANCE
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 - 2023 ACADEMIC YEAR

Virginia Campus	Average Annual Total Cost of Attendance	Average Annual Net Cost of Attendance
University of Mary Washington	$29,268	$22,066
University of Richmond	$74,354	$28,649
University of Virginia-Main Campus	$36,314	$23,101
University of Virginia's College at Wise	$23,546	$9,536
Virginia Commonwealth University	$33,388	$20,405
Virginia Military Institute	$33,182	$21,215
Virginia Polytechnic Institute and State University	$28,064	$20,292
Virginia State University	$23,673	$14,164
Virginia Union University	$29,361	$22,242
Virginia Wesleyan University	$50,638	$22,807
Washington and Lee University	$80,300	$29,479
William & Mary	$40,624	$19,442
Virginia Median	**$41,746**	**$22,335**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data.

We can now form a rough estimate of the income-to-cost ratio for each of the selected colleges and universities in Virginia. We do this by dividing the PayScale mid-career salary estimate by the average net cost of attendance multiplied by four (which provides an approximation of the total average net cost of attendance for four years). For the University of Virginia's College at Wise, the PayScale mid-career median salary estimate was $97,400 in 2023. The four-year average net cost of attendance was $38,144 in the 2022 – 2023 AY. Dividing the PayScale salary estimate by the four-year average net cost of attendance yields an income-to-cost ratio of 2.55.

The income-to-cost measure, while by no means perfect, provides a guide for students (and parents) considering attending a specific college or university. The income-to-cost ratio also lends strength to the argument that the longer a student takes to complete their degree program, the lower the immediate benefits to an undergraduate degree (on average, of course). Consider our previous example of the University of Virginia's College at Wise. If a student takes five years to graduate, the income-to-cost ratio drops to 2.04. At six years, the income-to-cost ratio declines to 1.70. We must also note that as the length of attendance increases, there is an increasing likelihood that a student will fail to finish their course of study.

What does the income-to-cost ratio tell us? First, it's an approximation of the return-on-investment for graduating from the institution in question. A higher income-to-cost ratio suggests a better 'return' on attendance and graduation. Second, the income-to-cost ratio is also a relative measure of performance. Institutions that score above the median for Virginia (122.9%) are 'outperforming' those institutions who score below the median. The University of Virginia's College at Wise appears to be relatively attractive due to its lower net cost, even though graduates may earn less absolutely when compared to the flagship campus.

TABLE 6

PAYSCALE MID-CAREER MEDIAN SALARY ESTIMATES, AVERAGE FOUR-YEAR NET COST, AND INCOME-TO-COST RATIO SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA, 2023

Virginia Campus	PayScale Mid-Career Median Salary Estimate	Average Four-Year Net Cost of Attendance	Income-to-Cost Ratio
University of Virginia's College at Wise	$97,400	$38,144	2.55
George Mason University	$131,400	$69,540	1.89
Virginia Military Institute	$149,500	$84,860	1.76
Old Dominion University	$108,300	$61,660	1.76
William & Mary	$136,300	$77,768	1.75
Virginia Tech	$139,600	$81,168	1.72
Virginia State University	$97,200	$56,656	1.72
University of Virginia-Main Campus	$153,900	$92,404	1.67
Radford University	$100,100	$65,240	1.53
Norfolk State University	$91,500	$62,308	1.47
Bridgewater College	$110,600	$75,588	1.46
James Madison University	$129,100	$89,860	1.44
Washington and Lee University	$164,400	$117,916	1.39
Hampden-Sydney College	$139,100	$100,856	1.38
University of Mary Washington	$120,300	$88,264	1.36
Virginia Commonwealth University	$107,500	$81,620	1.32
Regent University	$89,800	$68,880	1.30
Longwood University	$106,700	$82,716	1.29
University of Lynchburg	$108,800	$88,416	1.23
Randolph College	$110,200	$89,712	1.23
Marymount University	$110,800	$94,636	1.17
Christopher Newport University	$105,400	$90,436	1.17
University of Richmond	$133,400	$114,596	1.16
Emory & Henry College	$97,600	$86,220	1.13
Mary Baldwin University	$82,000	$73,560	1.11
Virginia Wesleyan University	$96,000	$91,228	1.05

TABLE 6

PAYSCALE MID-CAREER MEDIAN SALARY ESTIMATES, AVERAGE FOUR-YEAR NET COST, AND INCOME-TO-COST RATIO SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES IN VIRGINIA, 2023

Virginia Campus	PayScale Mid-Career Median Salary Estimate	Average Four-Year Net Cost of Attendance	Income-to-Cost Ratio
Hollins University	$92,600	$88,312	1.05
Eastern Mennonite University	$91,100	$92,824	0.98
Bluefield University	$87,800	$90,804	0.97
Randolph-Macon College	$101,800	$109,848	0.93
Sweet Briar College	$100,100	$110,540	0.91
Roanoke College	$100,500	$111,120	0.90
Shenandoah University	$99,800	$113,180	0.88
Averett University	$89,900	$106,168	0.85
Virginia Union University	$74,200	$88,968	0.83
Liberty University	$88,300	$119,528	0.74
Hampton University	$112,900	$162,044	0.70
Ferrum College	$104,300	$175,212	0.60
Virginia Median	**$104,850**	**$89,340**	**1.23**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data. Estimates in 2023 dollars for bachelor's degree graduates.

Sticker Prices and Net Prices

Ideally, if we want to know if a college education is an attractive investment, we would (to use economics terminology) find the present value of the sum of the future stream of earnings associated with a specific degree minus all the cost of earning that degree. But this is a rather complicated process that requires data we do not have (nor do most analysts have), and often also requires that one make some powerful assumptions concerning factors such as how often someone is unemployed, how hard they will work, what they will be paid, and how many years they will work. Significant differences exist in these behaviors across occupations, genders, races, and locations. Hence, we need to be satisfied with the unpolished income versus cost ratios that one sees in Table 6.

As noted previously, the advertised sticker prices of attendance are not the net prices actually paid by a typical student. Table 7 presents the average annual total cost of attendance, or the 'sticker price,' as well as the average annual net cost of attendance.[18] Table 7 also presents the average net cost of attendance for undergraduates with family incomes between $0 and $30,000. At first glance, Table 7 illustrates the point that there are often marked differences between the 'sticker price' of college and universities and the net prices that provide the lower bound of the costs of attending for an undergraduate education.

Washington and Lee University provides an informative example of the difference between 'sticker' and 'net' prices. The average annual 'sticker price' cost of attendance for the 2022 – 2023 AY was reported to be $80,300. Undergraduate first-time, full-time students who received federal financial assistance, however, had an average annual net cost of only $29,479. For these students, this represented a 63.3% reduction relative to the 'sticker price' for Washington and Lee University.

What about undergraduate students from lower-income households? The average net cost for students from households where family income was between $0 and $30,000 was -$533 in the 2022 – 2023 AY. In other words, the average net cost of attendance for Washington and Lee University for students from these low-income households was essentially $0, a discount of 100% off the reported 'sticker price.'

Given that the median discount in Table 7 is 41.2% off the 'sticker price,' one possible explanation is that institutions have higher public-facing prices so they can then award scholarships and grants as a means of attracting students to their campus. However, there is more to this financial story.

Table 8 presents data for the 2022 – 2023 AY on the percentage of students receiving federal loans and the percentage of students receiving Pell Grants. Here we focus on the share of first-time, full-time degree or certificate-seeking undergraduates. These undergraduates are more likely to be recent graduates from high school and, given they are attending full time, less likely to be working full time as well.

18 We remind the reader that the average annual net price that a student who receives federal financial aid pays to cover expenses (e.g., tuition, living expenses) to attend a school. Net price is the school's cost of attendance minus any grants and scholarships received. For public schools, this is only the average cost for in-state students.

TABLE 7

AVERAGE ANNUAL TOTAL AND NET COSTS OF ATTENDANCE
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 - 2023 ACADEMIC YEAR

Virginia Campus	Average Annual 'Sticker Price' Cost of Attendance	Average Annual Net Cost of Attendance	Discount	Average Annual Net Cost of Attendance with family income between $0 and $30,000	Discount
Averett University	$50,240	$26,542	-47.2%	$26,413	-47.4%
Bluefield University	$41,528	$22,701	-45.3%	$21,462	-48.3%
Bridgewater College	$53,800	$18,897	-64.9%	$14,605	-72.9%
Christopher Newport University	$31,162	$22,609	-27.4%	$10,562	-66.1%
Eastern Mennonite University	$53,834	$23,206	-56.9%	$19,373	-64.0%
Emory & Henry College	$52,559	$21,555	-59.0%	$21,732	-58.7%
Ferrum College	$52,268	$43,803	-16.2%	$41,042	-21.5%
George Mason University	$26,268	$17,385	-33.8%	$12,235	-53.4%
Hampden-Sydney College	$66,868	$25,214	-62.3%	$15,654	-76.6%
Hampton University	$46,123	$40,511	-12.2%	$39,953	-13.4%
Hollins University	$56,698	$22,078	-61.1%	$19,530	-65.6%
James Madison University	$29,043	$22,465	-22.6%	$13,170	-54.7%
Liberty University	$41,963	$29,882	-28.8%	$30,398	-27.6%
Longwood University	$31,501	$20,679	-34.4%	$13,115	-58.4%
Mary Baldwin University	$43,096	$18,390	-57.3%	$16,914	-60.8%
Marymount University	$50,922	$23,659	-53.5%	$21,926	-56.9%
Norfolk State University	$26,039	$15,577	-40.2%	$15,660	-39.9%
Old Dominion University	$26,060	$15,415	-40.8%	$12,004	-53.9%
Radford University	$25,873	$16,310	-37.0%	$11,263	-56.5%
Randolph College	$42,574	$22,428	-47.3%	$18,185	-57.3%
Randolph-Macon College	$59,197	$27,462	-53.6%	$21,359	-63.9%
Regent University	$29,448	$17,220	-41.5%	$16,086	-45.4%
Roanoke College	$65,345	$27,780	-57.5%	$21,184	-67.6%
Shenandoah University	$49,610	$28,295	-43.0%	$20,893	-57.9%

TABLE 7

AVERAGE ANNUAL TOTAL AND NET COSTS OF ATTENDANCE
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 - 2023 ACADEMIC YEAR

Virginia Campus	Average Annual 'Sticker Price' Cost of Attendance	Average Annual Net Cost of Attendance	Discount	Average Annual Net Cost of Attendance with family income between $0 and $30,000	Discount
Southern Virginia University	$31,394	$21,145	-32.6%	$18,862	-39.9%
Sweet Briar College	$40,846	$27,635	-32.3%	$22,705	-44.4%
University of Lynchburg	$47,371	$22,104	-53.3%	$18,808	-60.3%
University of Mary Washington	$29,268	$22,066	-24.6%	$11,946	-59.2%
University of Richmond	$74,354	$28,649	-61.5%	$10,711	-85.6%
University of Virginia-Main Campus	$36,314	$23,101	-36.4%	$11,273	-69.0%
University of Virginia's College at Wise	$23,546	$9,536	-59.5%	$9,044	-61.6%
Virginia Commonwealth University	$33,388	$20,405	-38.9%	$14,188	-57.5%
Virginia Military Institute	$33,182	$21,215	-36.1%	$10,812	-67.4%
Virginia Polytechnic Institute and State University	$28,064	$20,292	-27.7%	$10,947	-61.0%
Virginia State University	$23,673	$14,164	-40.2%	$12,078	-49.0%
Virginia Union University	$29,361	$22,242	-24.2%	$21,642	-26.3%
Virginia University of Lynchburg	$24,613	$18,131	-26.3%	$18,426	-25.1%
Virginia Wesleyan University	$50,638	$22,807	-55.0%	$25,357	-49.9%
Washington and Lee University	$80,300	$29,479	-63.3%	$(553)	-100.7%
William & Mary	$40,624	$19,442	-52.1%	$2,580	-93.6%
Virginia Median	**$41,187**	**$22,173**	**-41.2%**	**$16,500**	**-57.7%**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data. Estimates only for students that receive federal financial assistance. The discount percentage is equal to (discount price – sticker price)/sticker price and represents an estimate of the average reduction in cost for an undergraduate student receiving federal aid.

TABLE 8

PERCENT OF UNDERGRADUATE STUDENTS RECEIVING FEDERAL LOANS AND PELL GRANTS
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 - 2023 ACADEMIC YEAR

Virginia Campus	Percent of First-Time, Full-Time Undergraduates Receiving Federal Loans	Percent of First-Time, Full-Time Undergraduates Receiving Pell Grants
Averett University	72.3%	43.6%
Bluefield University	74.8%	51.3%
Bridgewater College	64.6%	29.7%
Christopher Newport University	38.2%	15.3%
Eastern Mennonite University	64.7%	39.1%
Emory & Henry College	63.9%	42.1%
Ferrum College	72.2%	47.7%
George Mason University	40.0%	28.4%
Hampden-Sydney College	48.7%	22.5%
Hampton University	67.1%	44.5%
Hollins University	61.9%	41.6%
James Madison University	32.7%	14.5%
Liberty University	52.6%	28.5%
Longwood University	54.7%	27.8%
Mary Baldwin University	78.4%	56.4%
Marymount University	44.5%	32.8%
Norfolk State University	61.4%	68.5%
Old Dominion University	51.9%	45.6%
Radford University	63.6%	39.8%
Randolph College	65.9%	47.8%
Randolph-Macon College	61.2%	19.2%
Regent University	50.5%	41.4%
Roanoke College	69.0%	27.3%
Shenandoah University	93.5%	19.5%
Southern Virginia University	46.5%	35.8%
Sweet Briar College	48.6%	37.3%

TABLE 8

PERCENT OF UNDERGRADUATE STUDENTS RECEIVING FEDERAL LOANS AND PELL GRANTS
SELECTED PUBLIC AND PRIVATE, NOT-FOR-PROFIT COLLEGES AND UNIVERSITIES
VIRGINIA, 2022 - 2023 ACADEMIC YEAR

Virginia Campus	Percent of First-Time, Full-Time Undergraduates Receiving Federal Loans	Percent of First-Time, Full-Time Undergraduates Receiving Pell Grants
University of Lynchburg	63.4%	28.6%
University of Mary Washington	31.8%	16.9%
University of Richmond	31.0%	16.7%
University of Virginia-Main Campus	21.3%	11.4%
University of Virginia's College at Wise	30.2%	51.6%
Virginia Commonwealth University	45.1%	32.4%
Virginia Military Institute	74.4%	19.3%
Virginia Polytechnic Institute and State University	41.2%	16.2%
Virginia State University	89.9%	66.9%
Virginia Union University	78.4%	64.9%
Virginia University of Lynchburg	79.5%	72.7%
Virginia Wesleyan University	63.6%	34.0%
Washington and Lee University	15.7%	12.2%
William & Mary	25.4%	11.8%
Virginia Median	**61.3%**	**33.4%**

Source: U.S. Department of Education, (2024). College Scorecard. Predominantly bachelor's degree-granting public and private, not-for-profit institutions. Some Virginia institutions not reported due to lack of data. Estimates only for students that receive federal financial assistance.

Let's return to our example of Washington and Lee University. In the 2022 – 2023 AY, only 15.7% of first-time, full-time undergraduates received a federal loan and only 12.2% of first-time, full-time undergraduates received a Pell Grant. This is markedly different than Virginia Commonwealth University, where the shares of students receiving a federal loan or Pell Grant were 45.1% and 32.4%, respectively, for first-time, full-time undergraduates. At Virginia State University in the 2022 – 2023 AY, 89.9% of first-time, full-time undergraduates received a federal loan and 66.9% of first-time, full-time undergraduates received a Pell Grant. While Washington and Lee provided significant discounts (on average, up to 100%) to students from lower-income families, it would appear that it also enrolled a much lower percentage of students in need of financial assistance if one uses the estimates in Table 8 as a measure of financial need.

The 12.2% Pell Grant statistic for Washington and Lee stands out nationally, and it reflects the reality that the Washington and Lee's average student comes from a household whose annual income ranked in the 88.8th percentile nationally in 2015.[19] This placed Washington and Lee in the upper 1% of institutions nationally in this regard. The comparable metric at the University of Richmond was the 84.6th percentile,[20] while the national campus average was just below the 60th percentile. Why was the national average not the 50th percentile? Because American higher education enrollees as a group tend to come from upper-income households.

Hence, for many Virginians, cost is an unavoidable major decision variable when they contemplate attending college. However, as we already have seen, the costs of attending college incurred by students and families are not nearly as well identified as they might initially seem. The process of selecting a college bears some similarities to the purchase of a new automobile. One can see the 'sticker price' that usually is taped to the driver's side window, but that sticker serves as a starting point for negotiations over what the final price (the 'transactions price') one eventually will pay for the vehicle. So also, it often is on the campuses of most Virginia colleges or universities.

This means that the preoccupation of the media (and some parents) with posted/advertised collegiate sticker prices often is misguided. Yes, these sticker prices likely have been approved by each institution's responsible board of trustees, but these are prices that seldom are applied to all students, or even a majority of them.

It is ironic that campus governing boards, the media, and the public often moan about cost increases, and on occasion, students sometimes protest tuition and fee increases. Reality, however, is that the same governing boards also grant the institution's president and administrators virtual carte blanche discretion to change (lower) those prices. These discretionary administrative price reductions seldom ever come to the attention of a governing board unless a financial crisis develops. More than a few governing board members do not understand this process, but it is a scenario that exists on virtually every campus in the nation.

Campus sticker prices therefore often have only a limited connection to the actual transaction prices that students pay – prices that usually are referred to as 'net' prices. Administrative price discretion usually reigns supreme in determining the net price that a specific student ends up paying. Most administrators are not shy about using that discretion. Discounting percentages have crept upward in recent years as the competition for a declining pool of prospective students has intensified. The truth is that on a majority of campuses, the pressure to attract and retain students trumps nearly any other consideration.

19 Opportunity Insights. (2023). "Data: Mobility Report Cards," Data | Opportunity Insights.
20 Opportunity Insights.

What One Studies in College Makes a Difference

Alas, reliable data that tell us how much students who major in a specific subject earn at a specific university are not easy to obtain. The United States Department of Education's College Scorecard website contains some such data, but many institutions are not included, and sample sizes often are small. A better, more detailed source is the United States Census's Post-Secondary Employment Outcomes (PSEO) data set,[21] but fewer than one-half of all states are currently included in these PSEO data. Fortunately, Virginia is one of those states.

For the reporting institutions in Virginia, the average earnings were $39,407 (1-year post-graduation), $56,413 (5-year post-graduation), and $70,544 (10-year post-graduation). However, these averages hide significant variation among the earnings outcomes across degree programs. Graph 5 provides an illustration for three general types of undergraduate degrees in Virginia: business, liberal arts, and engineering. The annual earnings of degree holders are shown at the 1-year, 5-year, and 10-year post-graduation mark in 2021 dollars. On average, for example, engineering degree holders earned almost twice as much as degree holders in liberal arts and sciences, general studies, and humanities. In other words, the variation across degree programs is likely greater than the variation observed across institutions with either data from College Navigator or PayScale.

Let's use Virginia Tech as an example and focus on reported earnings for degree holders at 10 years after their respective graduations. Graph 6 reports the average annual earnings for degree holders from Virginia Tech in 2021 dollars, 10 years after graduation. Degree holders in business and engineering appear to hold a significant advantage in earnings relative to degree holders in education and English. This is ready evidence that post-college earnings are highly sensitive to the major courses of study chosen by students.

But it also makes a difference where one studies these subjects. Graph 7 contains analogous earnings data for Old Dominion University (ODU). An ODU business graduate earned approximately $30,000 less 10 years post graduation when compared to a degree holder from Virginia Tech. For those holding a degree in physical sciences, annual earnings were about $14,000 less than Virginia Tech. For engineering degree holders, the difference was about $12,000.

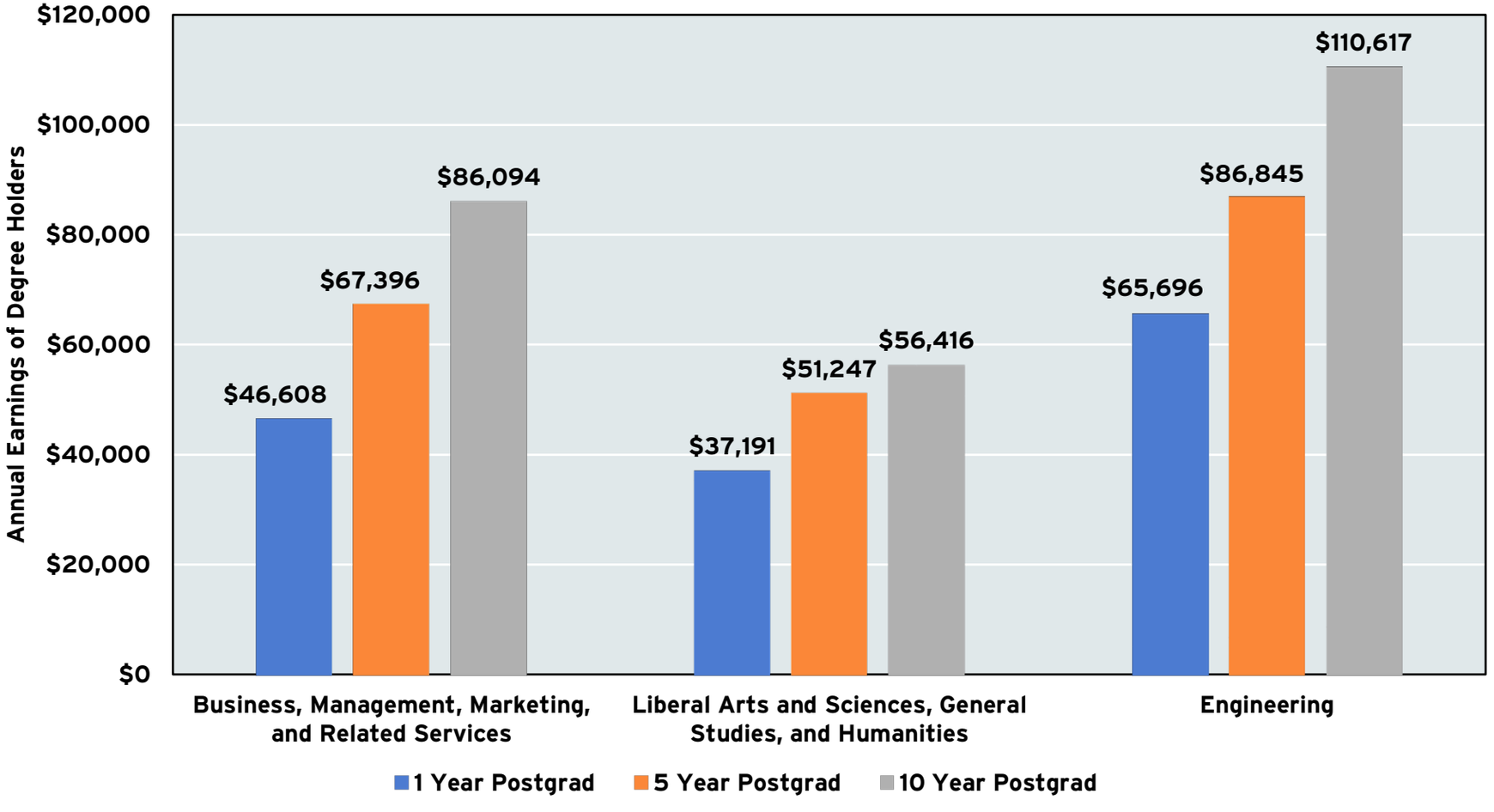
Nevertheless, as we have pointed out several times previously, it would not be appropriate to attribute the entirety of this earnings deficit to ODU as an institution because (when comparing it to Virginia Tech) the two campuses have very different missions and curricula, attract and admit substantially different students, differ in terms of their access to revenues, charge different prices, and have different locations.

The moral of this portion of our story is straightforward: simple average incomes, not weighted or controlled for other influences, often are not very informative or useful because they disguise truly significant differences between institutions and (as we have just seen) inside institutions.

21 United States Census, Post-Secondary Employment Outcomes, https://lehd.ces.census.gov/applications/pseo. According to the U.S. Census, "The Post-Secondary Employment Outcomes (PSEO) is an experimental data product from the US Census Bureau containing **earnings** outcomes and employment **flows** for recent graduates of partner colleges and universities. These statistics are generated by matching university transcript data with a national database of jobs. Only graduates who earn at least the annual equivalent of full-time work at the prevailing federal minimum wage and work three or more quarters in a calendar year are included."

GRAPH 5

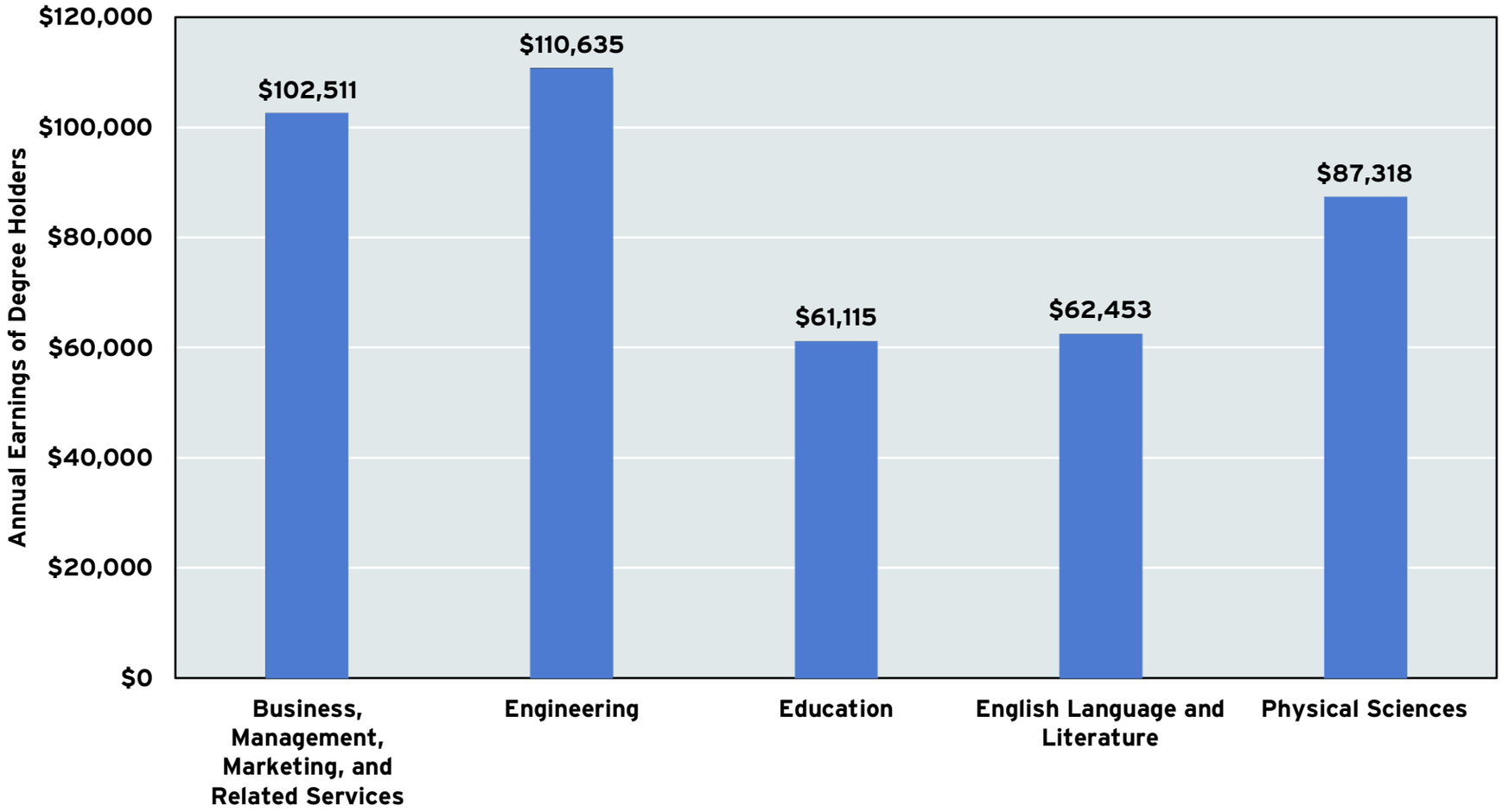
ANNUAL EARNINGS OF DEGREE HOLDERS IN 2021 DOLLARS
1-YEAR, 5-YEAR, AND 10-YEAR POST-GRADUATION, VIRGINIA



Source: U.S. Census Bureau, 2024. Post-Secondary Employment Outcomes Explorer. Annual earnings in 2021 dollars.

GRAPH 6

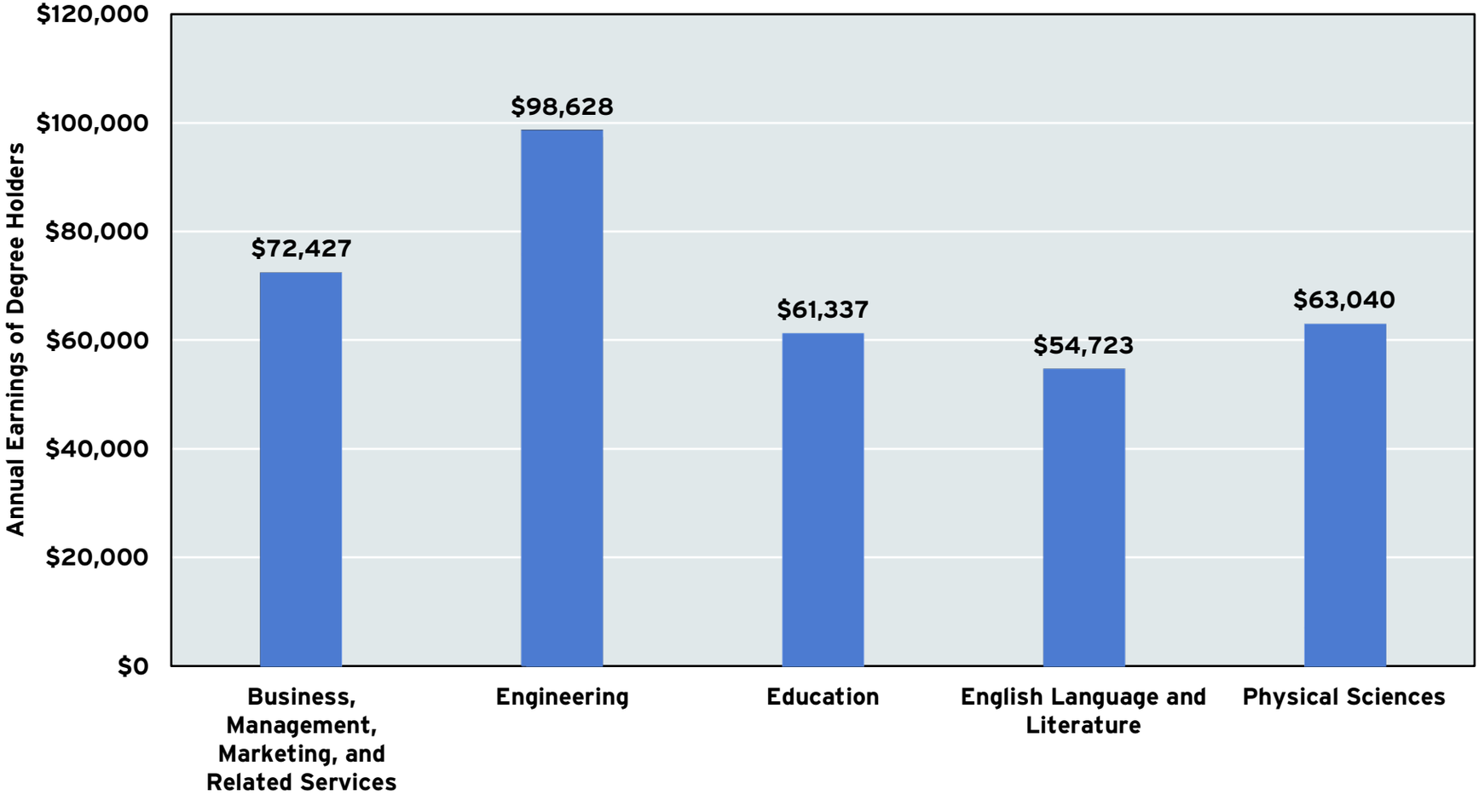
ANNUAL EARNINGS OF DEGREE HOLDERS IN 2021 DOLLARS
VIRGINIA TECH, 10 YEARS POST-GRADUATION



Source: U.S. Census Bureau, 2024. Post-Secondary Employment Outcomes Explorer. Annual earnings in 2021 dollars.

GRAPH 7

ANNUAL EARNINGS OF DEGREE HOLDERS IN 2021 DOLLARS
OLD DOMINION UNIVERSITY, 10 YEARS POST-GRADUATION



Source: U.S. Census Bureau, 2024. Post-Secondary Employment Outcomes Explorer. Annual earnings in 2021 dollars.

Summing It Up

As we have seen, the answer to the question, "Is a college education a good financial investment?" depends upon many different factors – one's personal goals, the nature of the institution one attends, the academic major one chooses, etc. If earning income is not one's priority, and instead intellectual growth, enrichment, and enjoyment are one's focus, then most of the analyses of higher education that appear today are substantially irrelevant. Thus, if someone's goal is to learn and better appreciate French Impressionist painters or to master the Japanese language so that one can converse with one's relatives, then most of the analyses we have presented in this chapter may be interesting but are largely irrelevant.

However, when discussions today focus on the worth of a college education, nearly always these considerations devolve into a recitation of the costs of obtaining a college education and the income one can expect to earn. And here the overall judgment of the American public has been clear and unmistakable – despite continued growth in the nation's population, the absolute number of college students fell by 2.8 million between Fall 2011 and Fall 2022.[22] Americans have been voting with their feet on this issue, and their collective judgment is that the value of a college education has declined.

Nevertheless, as we noted earlier, reliable data tell us that the average college bachelor's degree recipient earns about $1.2 million more over their lifetime than a high school graduate.[23] Still, whether this turns out to be true for a specific individual depends upon a variety of factors – what college the individual attends, what subjects they emphasize in their studies, and where the college is located. Further, this answer may change over time.

What promised to be a good investment of time and money this year may not hold true five or 10 years from today. Dynamic labor markets may change the financial viability of an educational investment in surprisingly rapid fashion. Consider that Bureau of Labor Statistics (BLS) data tell us that the average individual born between 1957 and 1964 held an average of 12.7 different jobs between the ages of 18 and 56.[24] The notion that one will work at the same job for the same employer for the entirety of one's working life is no longer valid. The Bureau of Labor Statistics data do tell us that acquiring additional education ordinarily reduces job turnover and that a college education may impart intellectual flexibility (or at least be associated with such) that enables (perhaps causes) individuals to switch jobs more often.

The graduates of some institutions earn substantially higher incomes after graduation than do the graduates of other institutions. But it is not always clear why this is so. Do the institutions themselves contribute a distinctive value-added that is independent of the native abilities of their students, the family backgrounds and incomes of the students, the physical location of the institution, how much money is spent, and what the students choose to study? Do colleges function primarily as signaling devices that identify and gather talented, motivated individuals in an environment where they can be more easily accessed and evaluated by employers who then will teach them what they need to know to do their jobs? It seems likely that both possibilities have empirical validity – colleges have some value-added but also function as signalers who cull the population and identify promising prospects who are intelligent, ambitious, and reasonably civilized. Of course, there are numerous examples of individuals who were wildly successful without graduating from college. Bill Gates, Harper Lee, Oprah Winfrey, and Mark Zuckerberg may be outliers, but their success lends credence to the argument that individual drive, motivation (and luck) is a significant determinant of individual success, regardless of whether one holds a college degree. Colleges contribute, but how much is not always clear.

Thus, in response to the major question that frames this chapter, "Does it still pay to attend college in Virginia?" The answer is, "It depends."

22 A variety of annual reports from the National Student Clearinghouse Research Center, https://bscresearchcenter.org provide these data, which are cited in James V. Koch and Omari H. Swinton, *Vital and Valuable* (New York: Columbia University Press, 2023).

23 https://www.aplu.org/our-work/4-policy-and-advocacy/publicuvalues/employment-earnings/

24 Bureau of Labor Statistics, "Number of Jobs, Labor Market Experience, Marital Status, and Health for those Born 1957-1964" (August 23, 2023), www.bls.gov/news.release/nlsoy.nr0.htm#:~:text=On%20average%2C%20men%20held%2012.5%20jobs%20and%20women,in%20successive%20age%20groups%20was%20similar%20for%20women.

RISING DISABILITY RATES (OR NOT): A SIGN THAT WE CARE OR AN EPIDEMIC PROBLEM IN THE COMMONWEALTH?

"In the past three decades, the number of Americans who are on disability has skyrocketed."

– Chana Joffe-Walt, National Public Radio (2013)[1]

"Social Security turns down most disability claims at the application stage."

– AARP (2023)[2]

Most individuals of goodwill subscribe to some form of the notion that those who are better off financially in society should extend help to those who are less fortunate. Persons coping with disabilities usually are included among those deserving of assistance. Thus, in 2013, when National Public Radio's well-regarded ***Planet Money*** program aired what many considered an exposé of governmental disability programs, this broadcast rattled many symbolic cages. In this presentation, Chana Joffe-Walt of National Public Radio used phrases such as "The Disability-Industrial Complex" to describe a series of profit-motivated parties whose goals, she argued, were to "push more people on to disability."[3] The indicted parties in this regard were lawyers, physicians, and key personnel in local and state governmental units – the latter realizing that an individual constituent on disability costs their governmental unit little or nothing because the federal government picks up the cost, while the same individual on welfare imposes a variety of costs on their surrounding populations and governmental jurisdictions.

1 Chana Joffe-Walt, "Unfit for Work: The startling rise of disability in America," National Public Radio *Planet Money* (2013), Unfit for Work: The startling rise of disability in America | Planet Money (npr.org),
2 AARP, "What happens at a Social Security disability hearing?" www.aarp.org/retirement/social-security/questions-answers/what-happens-at-a-social-security-disability-hearing.
3 Chana Joffe-Walt.

In this chapter, we examine one particular corner of a much larger disability story – those individuals who have a work history and subsequently seek to receive income from the Social Security Administration because of that disability. Contrary to what many people believe, both the number of applications for worker disability and rates of approval of those applications have trended downward in recent years. One reason for this is that the previous decade was part of the longest ever post-World War II economic expansion, the one that lasted from June 2009 to February 2020, and came to a halt when the COVID pandemic hit.[4] In 2023, according to the Bureau of Labor Statistics, Virginia's unemployment rate averaged 2.9%, only 0.1 percentage points higher than the record low (this century) of 2.8% in 2019. This 'full employment' situation caused a decline in economic adversity that, in turn, led to a reduction in the number of requests received by the Social Security Administration for worker disability income. But, as we will see, significant differences continue to exist in this regard across the independent cities and counties of the Commonwealth.

What Is a Disability?

President George H.W. Bush signed the Americans with Disabilities Act (ADA) in 1990, and it prohibits discrimination against individuals with disabilities in many areas of public life. Among other things, the ADA requires employers with 15 or more employees to make 'reasonable accommodations' to qualified candidates for employment so that they can hold jobs.[5]

Section 12102 of the ADA provides an exceedingly general definition of what constitutes a disability:

- A physical or mental impairment that substantially limits one or more major life activities of such individual; or
- A record of such impairment; or
- Being regarded as having such an impairment.[6]

It has been left to other federal government agencies to give concrete meaning to these broad definitions. In the area of employment, the Equal Employment Opportunity Commission (EEOC) usually holds sway, while in the area of disability income, it is the Social Security Administration (SSA) that provides specificity. State and local governments largely are reactive agents in this process. As we will see, state government agencies do make the initial screening recommendations with respect to who will receive disability income (usually referred to as Social Security Disability Insurance or SSDI) from the federal government which makes the final decisions. One reason for this is that the federal government provides the budgetary dollars that support these state agencies, so it is a case of 'those that have the money make the rules.'

4 According to the National Bureau of Economic Research, the Great Recession lasted from December 2007 to June 2009. U.S. nonfarm payrolls reached a low in February 2010 and expanded through February 2020. Regardless of measure, the 2010s were, for all intents and purposes, a decade of economic expansion.
5 ADA.gov. United States Department of Justice, "Americans with Disabilities Act of 1990, As Amended," www.ada.gov/law-and-regs/ada/.
6 ADA.gov.

How Do We Know Who is Disabled?

In 2021, the Centers for Disease Control and Prevention (CDC) reported that 27.2% of adults in the United States cope with some type of disability, a prevalence that was slightly higher than the Commonwealth of Virginia (24.4%) (Graph 1). Males appeared to experience disabilities at a lower rate than females and, as one might expect, individuals aged 18 to 44 experienced lower disabilities rates than those aged 45 to 64. Nationally, in 2021, 43.8% of those aged 65 and older experienced a disability compared to 39.0% of Virginians.

Graph 2 illustrates the types of disabilities prevalent amongst those with a disability. We note that many individuals have one or more disabilities and therefore must deal with the consequences of those multiple disabilities on a daily basis. Approximately 12.8% of Americans and 11.7% of Virginians have a cognitive disability. Of those with a disability, 12.1% nationally and 10.9% of Virginians have a mobility disability.

Merely having what might be termed a 'disability condition' is not sufficient to guarantee the approval of an individual's disability claim. First, one must demonstrate eligibility, and there are two fundamental routes that one travels to pursue a claim. Based upon age, work history, and medical condition, one might be eligible either for a Supplemental Security Income (SSI) payment, which is not related to any work history, or for a Social Security Administration Disability Insurance (SSDI) payment, which depends upon the applicant having a verifiable work history.

With respect to work history, the Social Security Administration usually requires that an individual must have worked five out of the past 10 years in order to be eligible for work-based SSDI payments. In contrast to SSDI payments, SSI payments are not based upon work histories and are limited to individuals 65 years or older, adults who are disabled or blind, or children who are disabled or blind. Of the approximately 11 million individuals receiving some form of disability payment from the SSA in December 2022, about 62.0% (6.8 million) received benefits from the SSI program only, 29.0% (3.2 million) received benefits from the SSDI program only, and 9.0% (1.0 million) received benefits from the SSI and SSDI programs concurrently.[7] Individuals receiving concurrent payments not only met one of the SSI disability criteria such as age or blindness, but also had a work history.

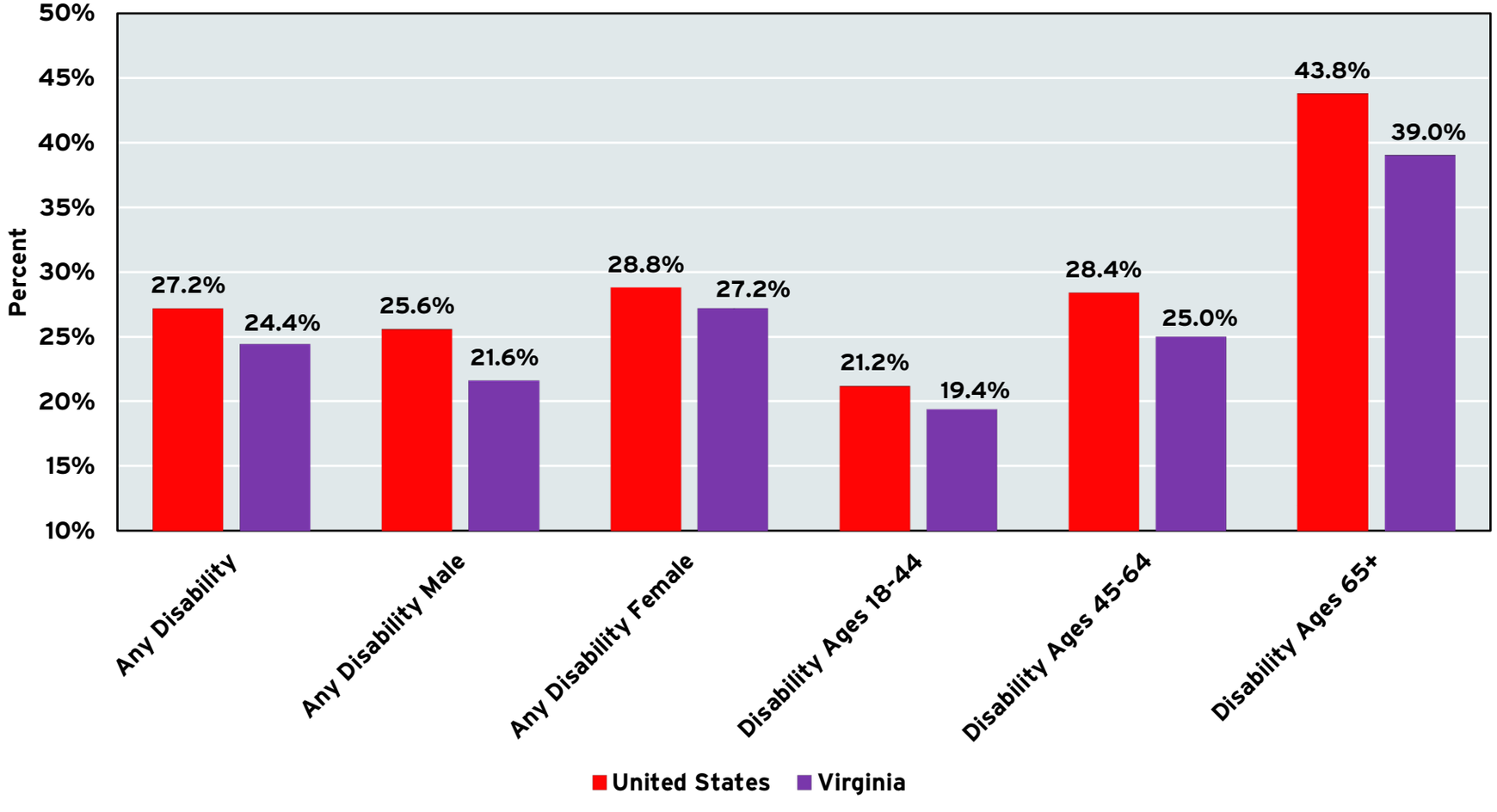
Graph 3 illustrates who received disability insurance payments from the SSA for the United States from December 31, 2000 to December 31, 2022. On December 31, 2000, approximately 5.0 million workers and 930,000 spouses and children received an SSDI payment. The number of workers on disability insurance peaked in 2014 at 8,954,518, while the number of children and spouses reached a high of 1,386,890 in 2020. On December 31, 2022, 7,604,098 workers and 1,351,076 spouses and children received a disability income payment.

Graph 4 illustrates that the percent of disabled workers receiving SSDI payments has recently declined as a percent of the resident population. In 2004, about 6.20 million individuals nationally received SSDI payments (2.1% of the resident population), rising to a peak of 8.95 million (2.8% of the resident population) in 2014. The number of SSDI recipients nationally fell in every subsequent year, reaching 7.37 million (2.2% of the resident population) in 2023. While the proportion of disabled workers receiving SSDI in 2004 was about the same nationally and in Virginia, the share of disabled workers relative to the resident population did not rise as quickly for the Commonwealth, peaking at 2.6% of Virginia's population in 2012. Since then, the share of disabled workers in Virginia has declined, reaching 2.1% of Virginia's population in 2023. Interestingly, the number of applications for disability status received by Social Security Field Offices also declined during this period, as did the incremental number of awards (an award means the individual begins to receive a check from the government).

7 Social Security Administration, *Annual Statistical Report on the Social Security Disability Insurance Program, 2022*, Table 66.

GRAPH 1

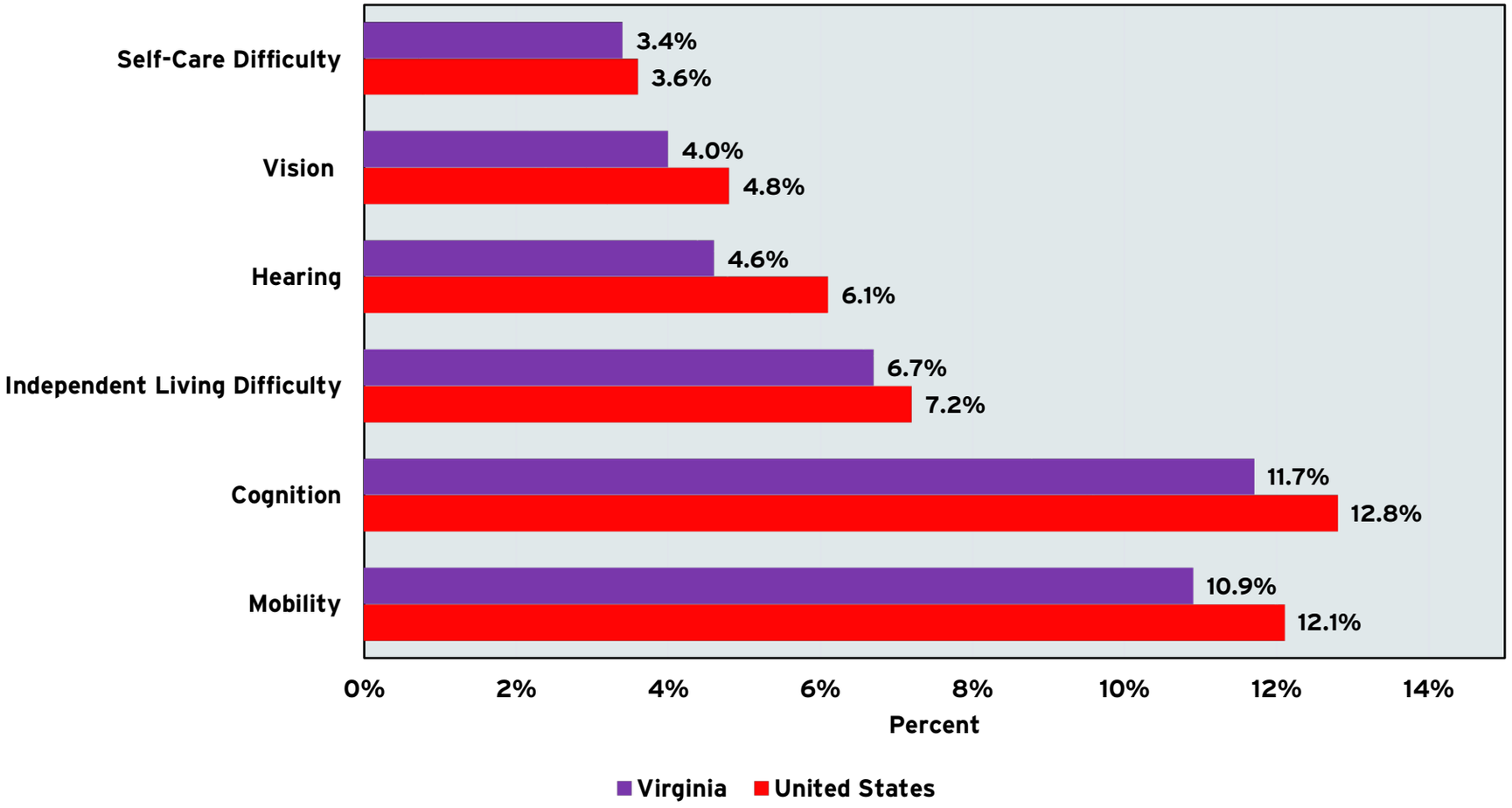
DISABILITY STATUS AMONG ADULTS AGED 18 YEARS AND OLDER
UNITED STATES AND VIRGINIA, 2021



Sources: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Human Development and Disability. Disability and Health Data System (DHDS), https://dhds.cdc.gov. Estimates do not include the state of Florida.

GRAPH 2

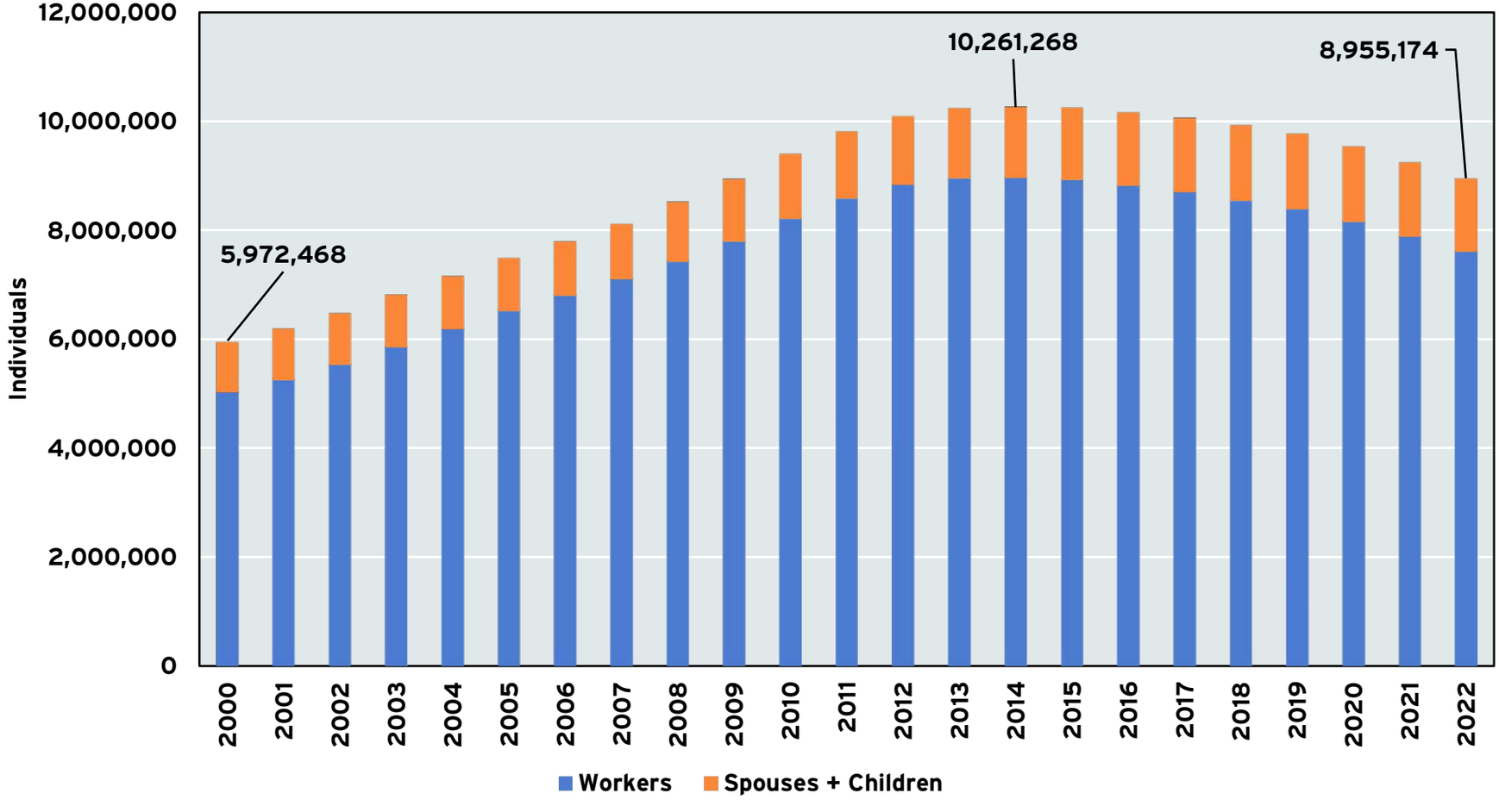
TYPES OF DISABILITIES AMONG ADULTS AGED 18 YEARS AND OLDER
UNITED STATES AND VIRGINIA, 2021



Sources: Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, Division of Human Development and Disability. Disability and Health Data System (DHDS), https://dhds.cdc.gov. Estimates do not include the state of Florida.

GRAPH 3

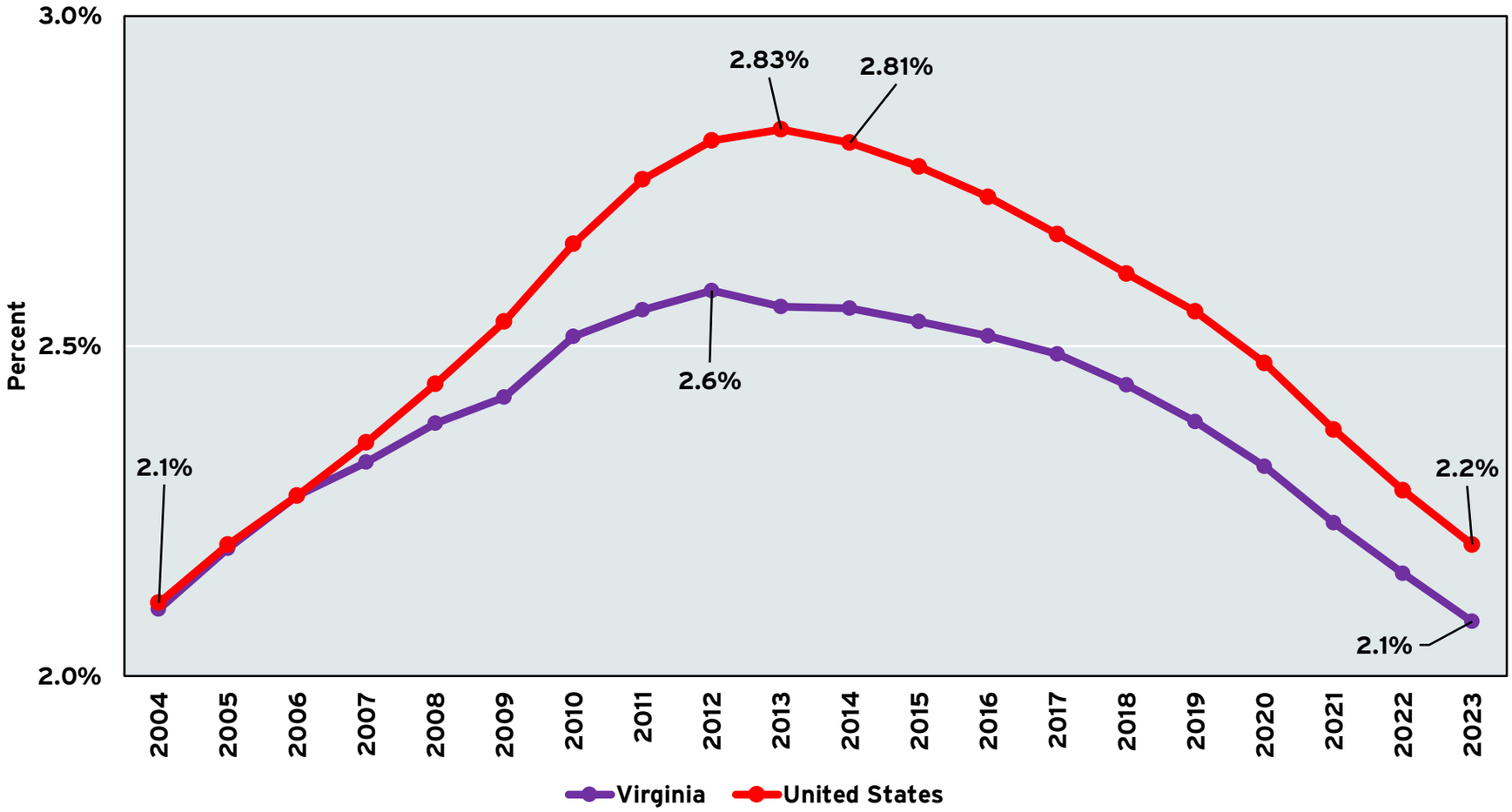
SOCIAL SECURITY DISABILITY INSURANCE RECIPIENTS
UNITED STATES, 2000 - 2022



Source: Social Security Administration (2023), Annual Statistical Report on the Social Security Disability Insurance Program, 2022.

GRAPH 4

DISABLED WORKERS RECEIVING SSDI PAYMENTS AS A PERCENT OF THE RESIDENT POPULATION UNITED STATES AND VIRGINIA, 2004 - 2023



Source: Social Security Administration (2023), "Disabled worker beneficiary statistics by calendar year, quarter, and month." Social Security Administration (2024), "OASDI Beneficiaries by State and County, 2022." United States Census Bureau (2024), vintage 2023 Population Estimates Program.

How Does the SSDI Application Process Work?

'No application, no aid' – one must apply in order to receive disability income. The process for doing so involves multiple admittedly bureaucratic steps and usually begins with an individual applying to his/her state's Disability Determination Services (DDS) office for an initial request hearing. This is the first of many steps. We present these steps below so that readers will understand that gaining SSDI income ordinarily is a multi-step, drawn-out process requiring time and effort.

Virginia's Disability Determination Services (DDS) office is a division within the Commonwealth's Department for Aging and Rehabilitative Services (DARS), and it works in partnership with the Social Security Administration and the Virginia Department of Social Services to make decisions on disability claims for benefits under the Social Security Disability Insurance, Supplemental Security Income, and Medicaid Programs. Following rather extensive federal regulations, the DDS attempts to make accurate and prompt disability recommendations based on medical and psychological evidence. DDS also considers school information and vocational criteria as appropriate. Ultimately, relying heavily on state units such as Virginia's DDS, the Social Security Administration decides on an individual's application for disability status and support. Virginia's DDS denies more than one-half of the first-round requests it receives.

Below are the things that an applicant ordinarily must do to receive SSDI income, and most often, these must be done in the order described.[8] During any or all of these steps, both the applicant and the Commonwealth's DDS office, which supervises the evaluation of an application, may utilize experts and advocates who provide opinions and evidence.

A SIX-STEP SEQUENTIAL EVALUATION PROCESS[9]

The Social Security Administration (SSA) offers prolific information[10] that tells individuals how to apply for benefits, ways to maximize one's possibility of success, and even how to appeal adverse decisions. We summarize the SSA's process below.

Step 1: Virginia's DDS considers the applicant's work activity, if such exists. If the applicant is performing substantial gainful activity (often referred to as SGA), then the applicant will be found to be not disabled and the process ends. If the applicant is not performing SGA (essentially not working), then DDS continues to Step 2. In economic terms, this requirement constitutes a disincentive for applicants to work.

Step 2: The DDS considers the medical severity of the applicant's impairment(s). These impairments must interfere with basic work-related activities for the claim to be considered. If they do not, then DDS will find the applicant is not disabled, and the process ends. If the conditions do interfere with basic work-related activities, DDS continues to Step 3. Applicants often introduce advocates and/or their evidence at this stage.

Step 3: DDS considers the medical severity of the applicant's impairment(s) from Step 2. For each of the major body systems, DDS maintains a list of medical conditions so severe that they automatically mean that the applicant is disabled. If that is the case, then the process ends, and the applicant now qualifies for disability benefits. However, if the applicant's condition is not on the list, DDS must decide if the condition is of equal severity to a medical condition that is on the list. If the impairment(s) meets or equals the requirements of one of its Listings of Impairment and also meets the duration requirement (expected to last at least 12 months or until death), then the SSA will find the applicant disabled. The process then ends, and the applicant now qualifies for disability benefits. If the impairment does not meet or equal a listing, DDS continues to Step 4.

8 Office of the State Inspector General (February 2018). Department for Aging and Rehabilitative Services: Disability Determination Services Program: Performance Audit. Available at: https://www.osig.virginia.gov/media/governorvirginiagov/office-of-the-state-inspector-general/pdf/performance-audits/dars-disability-determination-services-performance-audit.pdfsocia

9 The DDS and the SSA advertise only five steps; however, since both agencies reject high percentages of the applications they receive, there is an effective sixth step, and that is an appeal.

10 Social Security Administration, "Disability Benefits: How You Apply" Available at: https://www.ssa.gov/disability

Step 4: If the applicant's condition is severe but not at the same or equal level of severity as a medical condition on the list in Step 3, then DDS will render a judgment whether the condition interferes with the applicant's ability to do the work he/she did previously ("past relevant work"). DDS assesses the abilities retained by the applicant despite his/her disabilities. When the applicant remains able to do their past relevant work, then the SSA will find the applicant is not disabled and the process ends. If the applicant cannot perform his/her past relevant work, then the DDS continues to Step 5.

Step 5: The SSA now decides if the applicant is able to adjust to perform other work in the national economy. It considers the applicant's medical condition(s), age, education, past work experience, any transferable skills he/she may have, and evidence provided by the applicant's advocates. The SSA may utilize its own panel of experts. If the applicant cannot adjust to perform other work, the claim will be approved. The process ends, and the applicant now qualifies for disability benefits (though this does not mean he/she will always receive them!). If the applicant can adjust to other work, the claim will be denied, and the process ends.

The previous five steps have been identified by the SSA. More than one-half of all original applications for disability status and payments are rejected somewhere along the line described above. What the SSA does not immediately reveal is that more than one-half of applications are rejected, and so there is often a sixth step --- appeal.

Step 6: Applicants can appeal for reconsideration by their state's DDS; they can request a hearing before an administrative law judge; they can request a hearing before an SSA Appeals Council; and they can appeal to a federal district court. Some applicants who are denied utilize all these avenues.

Disability Applications and Award Rates Are Falling

Individuals applying for disabled-worker benefits may file applications at Social Security Field Offices, teleservice centers, and online. Graph 5 illustrates the number of these applications and the amount forwarded to state Disability Determination Services (DDS), Federal Disability Units, Disability Processing Branches, and Extended Service Team Sites. Graph 5 also reveals that the number of applications and those forwarded for an initial determination of whether a claimant's disability meets the standards set forth in the Social Security Act and federal regulations peaked at almost 3 million applications in 2010.

The 2013 National Public Radio segment on disability lent the impression that disability approval processes may be lax. While this could be the case in some states and likely at some locations inside states, this does not seem to hold true generally. In 2001, 83.7% of field office receipts were forwarded for an initial determination. By 2010, this forwarding rate had fallen to 65.6%. Since 2010, the forwarding rate has vacillated between 63 and 66%. Either more applicants were not qualified, standards were more stringent, or a combination of both factors were possibly at play over this period.

An application for disabled-worker benefits is by no means a guarantee of a disability determination and award. Graph 6 illustrates the ratio of awards to Field Office receipts and the ratio of awards to initial DDS receipts. Given that Field Office receipts include applications for which the applicant is not qualified for work benefits, it should be no surprise that the awards ratio is lower. In 2001, approximately 46.1% of applications received by a Field Office ultimately resulted in an award. By 2010, only 35.9% of applications received an award. In 2023, only 3 in 10 applicants to a Field Office received an award.

We observe a similar decline in award rates when we examine the ratio of awards to initial DDS receipts. In 2001, more than half (55.1%) of applications received by DDS offices received an award. From 2001 to 2013, this ratio remained at or above 50% before falling to 49.6% in 2014 and then rising above 50% from 2015 to 2020. This decade, the awards to initial DDS receipts rate has declined from 47.2% in 2021 to 45.0% in 2023. Even though state DDS offices received more applications for SSDI in 2023 than any other year this century, they approved with a lower percentage of those applications for awards.

Turning to Virginia, Graph 7 discloses the average initial claims approval rate and reconsideration allowance rate from 2000 to 2023. On average, Virginia's DDS gave initial approval to 44% of applications over this period, ranging from 43.0% (2011) to 54.5% (2005). More recently, Virginia's approval rate has hovered in a smaller range, between 44.5% (2023) and 48.6% (2021).

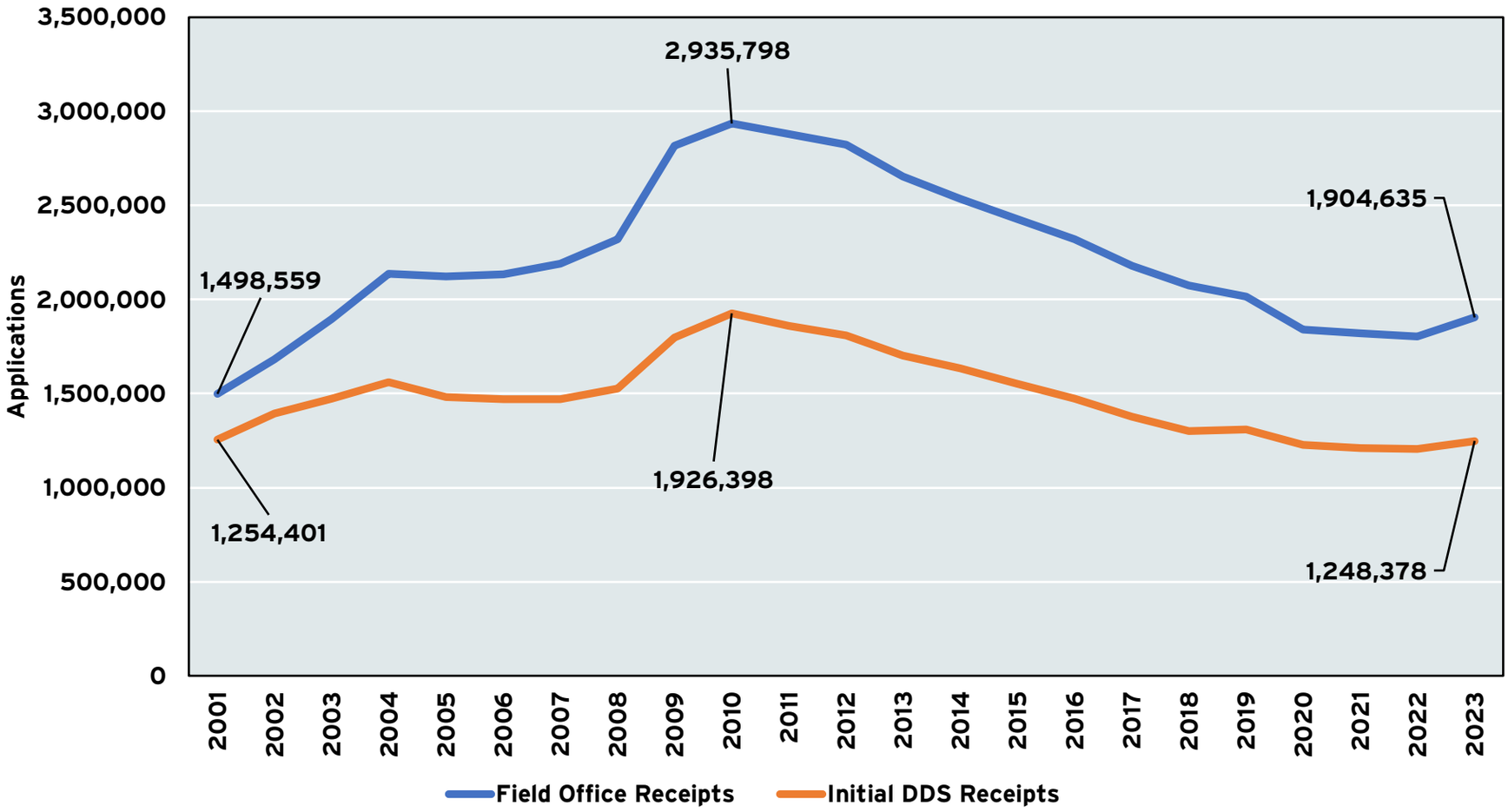
Meanwhile, over the same period, but involving SSDI only claims, Virginia's DDS appears to be more stringent with regard to reconsideration approvals.[11] The annual reconsideration approval rate varied between a low of 14.2% (2015) and a peak of 20.2% (2012). More recently, it has varied between 15.6% (2021), 18.3% (2022) and fallen to 17.4% in 2023. Thus, on a consistent basis, more than one-half of all applications for SSDI-only support are not approved in the Commonwealth.

Some observations about the preceding discussion. First, even though the flow of applicants peaked in 2010 and since has declined, there continues to be a large annual flow of applications for disability. Second, these numbers do not account for terminations of disability benefits that occur because a recipient's circumstances have changed (improvement in an applicant's condition or death, for example). These are not insignificant in number. Third, reality is that large proportions of applicants are rejected, and this propels them to appeal that rejection. Persistence can pay off. From an economic standpoint, the appeals process seems biased in favor of applicants who have the resources to hire lawyers, physicians, and other appropriate personnel to advocate for them. Fourth, appeals hearings before administrative law judges (usually the final step) have the reputation of generating more favorable results for appellants than hearings before DDS and SSA tribunals. Alas, we have no evidence to contribute here.

11 The two approval rates (initial action and reconsideration) cannot be added together because they involve different applicants.

GRAPH 5

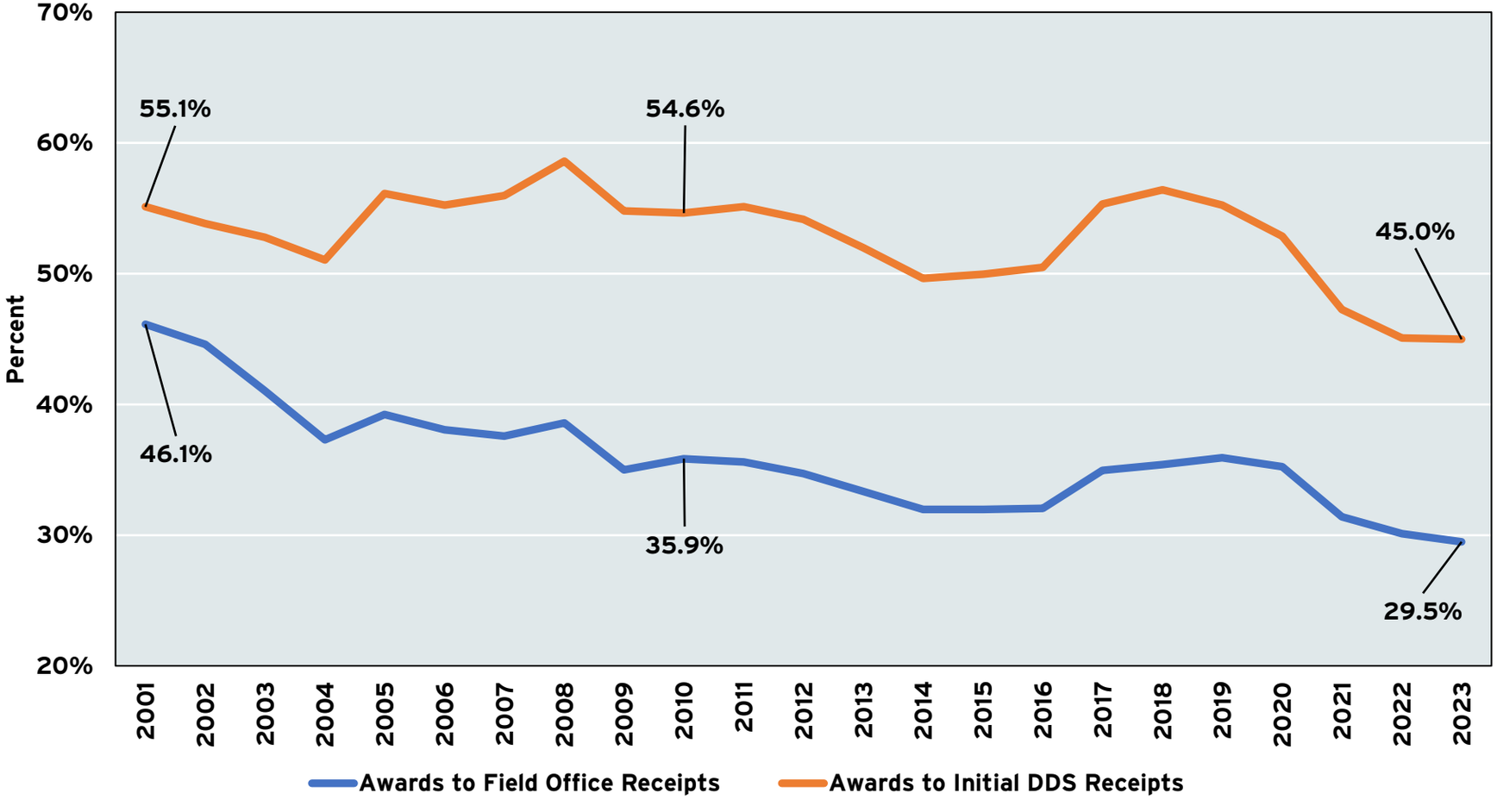
NUMBER OF APPLICATIONS FOR DISABLED-WORKER BENEFITS
UNITED STATES, 2001 - 2023



Source: Office of the Chief Actuary, Social Security Administration (2024), "Applications for disability benefits and number awarded." Field office receipts include applications from workers who are not insured for disability benefits and are counted as denied as these workers are not considered eligible for benefits.

GRAPH 6

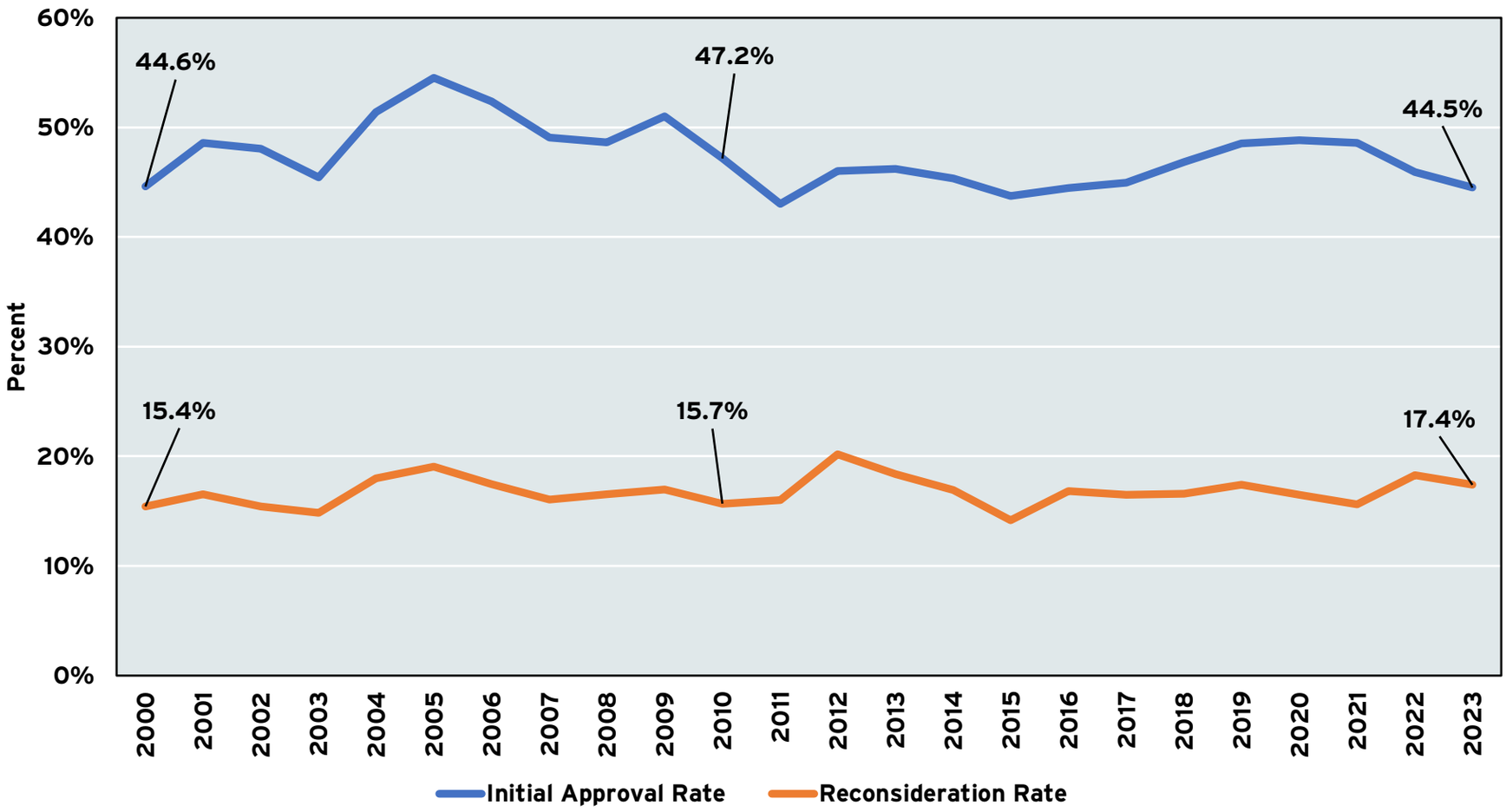
PERCENT OF AWARDS TO FIELD OFFICE RECEIPTS AND INITIAL DDS RECEIPTS
UNITED STATES, 2001 - 2023



Source: Office of the Chief Actuary, Social Security Administration (2024), "Applications for disability benefits and number awarded." Field office receipts include applications from workers who are not insured for disability benefits and are counted as denied as these workers are not considered eligible for benefits.

GRAPH 7

SSDI ONLY INITIAL CLAIMS AND RECONSIDERATION ALLOWANCE RATES
VIRGINIA, 2000 - 2023*



Source: Social Security Administration, SSA State Agency Monthly Workload Data (2024), www.ssa.gov/disability/data/ssa-sa-mowl.htm. *Data for 2020 is from October 2020 to December 2020 only. Annual averages.

Disability Rates Vary Significantly Among Cities and States

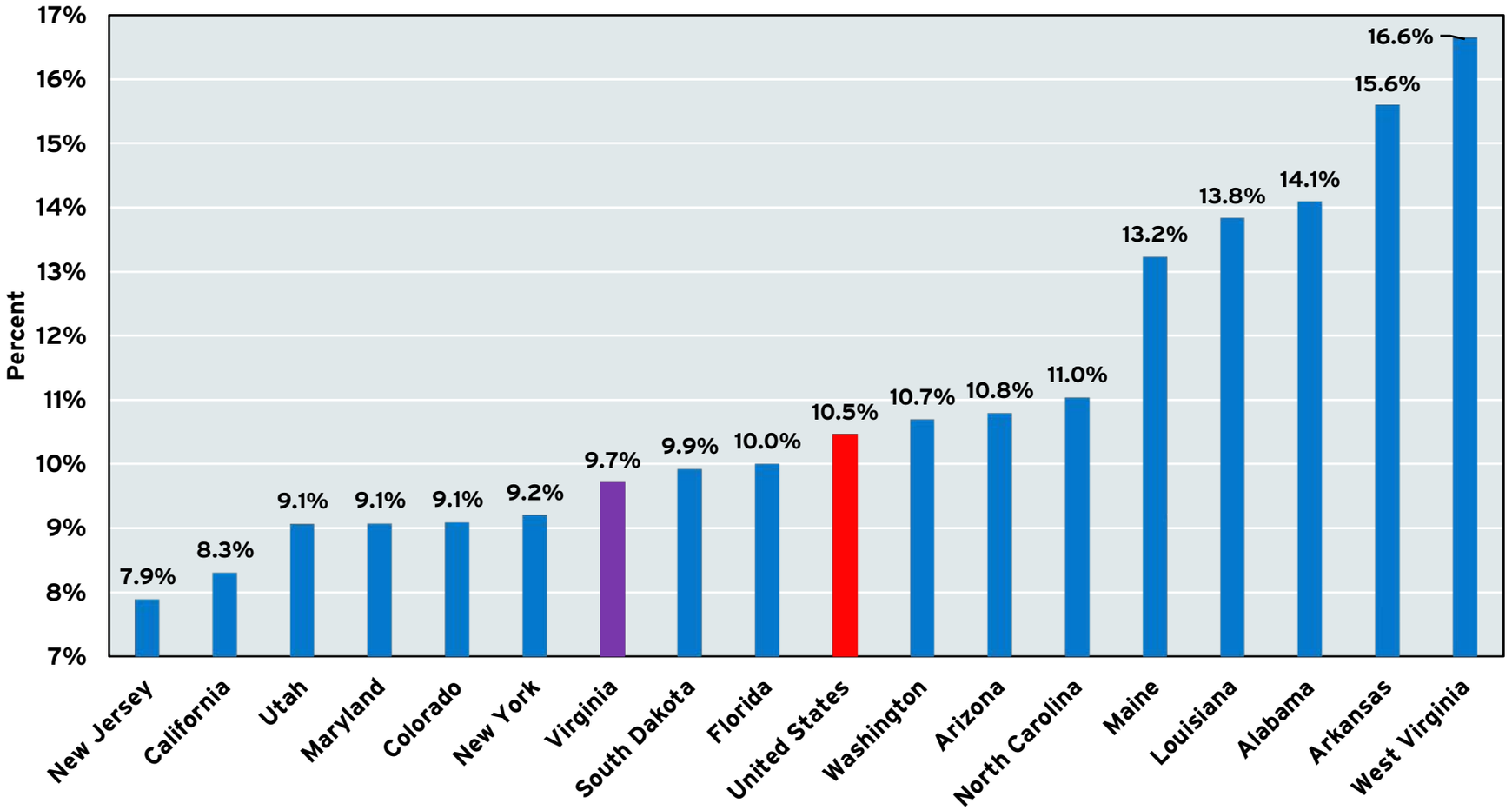
Obviously, one first must be disabled in order to receive SSDI income payments. However, reported disability rates vary substantially from one state to another and from one city or county to another. Here, we rely on estimates from the U.S. Census Bureau American Community Survey (ACS) 5-Year which asks respondents to identify whether they have one or more specific disabilities.[12] Graph 8 illustrates this variability among the United States, Virginia, and selected states. In this regard, Arkansas and West Virginia have rates that approximately double those of California, Colorado, and Utah.

But in Virginia who, by virtue of being disabled, is eligible to receive such payments? Table 1 reports the percentage of individuals in a number of selected Virginia independent cities and counties who have self-identified as having a disability to the U.S. Census Bureau. These individuals may or may not receive disability payments from the SSA as identifying as disabled does not mean one has applied for and received SSDI. Two Southwest Virginia counties, Buchanan and Dickenson, have self-reported disability rates that are equal to approximately 1-in-3 working age adults. On the other end of the spectrum is Arlington County, with an 18-to-64 disability rate of 4.4%. In a moment, we will probe why this is so.

12 The 2019 – 2023 ACS 5-year estimates were scheduled to be released on December 12, 2024 and unavailable at the time of writing.

GRAPH 8

PERCENT OF POPULATION AGED 18 TO 64 WITH A DISABILITY
UNITED STATES, VIRGINIA, AND SELECTED STATES, 2018 – 2022



Source: United States Census Bureau, American Community Survey, 2018 – 2022, 5-Year Estimates (2023).

TABLE 1

POPULATION AND DISABLED POPULATION AGED 18 TO 64 YEARS
UNITED STATES, VIRGINIA, AND SELECTED CITIES AND COUNTIES, 2018 - 2022

Locality	Population 2022	Population Aged 18 to 64	Percent of Population Reported as Disabled Aged 64 Years and Younger	Percent of Population Reported as Disabled Aged 18 to 64
Accomack	32,858	17,860	10.2%	12.5%
Arlington	231,023	162,406	4.0%	4.4%
Buchanan	19,318	11,507	28.5%	32.7%
Dickenson	13,626	7,773	29.4%	34.4%
Fairfax	1,130,306	705,030	4.7%	5.3%
Loudoun	418,514	262,151	4.2%	4.9%
Pulaski	32,718	19,285	13.9%	16.8%
Tazewell	39,103	22,157	13.6%	16.3%
Chesapeake city	237,016	143,313	8.3%	9.5%
Danville city	41,315	23,698	15.2%	18.8%
Fredericksburg city	28,089	19,037	9.6%	9.9%
Hampton city	130,075	79,406	11.9%	14.0%
Lynchburg city	77,289	52,076	9.9%	11.7%
Newport News city	174,829	107,827	10.9%	12.5%
Norfolk city	209,694	133,325	11.3%	13.2%
Portsmouth city	91,700	55,047	10.4%	13.3%
Richmond city	224,604	155,157	11.1%	12.2%
Roanoke city	97,799	59,417	8.4%	10.3%
Suffolk city	91,679	55,504	8.6%	10.0%
Virginia Beach city	433,386	265,105	8.4%	9.7%
Virginia	8,398,580	5,173,831	8.3%	9.7%
United States	326,147,510	199,665,876	8.9%	10.5%

Source: United States Census Bureau, 2018 – 2022 American Community Survey 5-year Estimates (2023).

What Determines SSDI Percentages?

Why do some states (such as West Virginia) have reported rates of citizen disability and subsequent SSDI support rates that are substantially higher than those of other states (such as California)? Inside Virginia, why do some cities and counties (such as Buchanan County) exhibit disability rates and subsequent SSDI rates that are many multiples higher than those such as Arlington County?

Our answer to the 'Why?' question should not come as a major surprise – two economic factors dominate the ups and downs in SSDI rates.[13] The riskiness of a job and an individual's economic circumstances in general call the tune. Jobs, such as coal mining, that carry with them heightened risks of injury are a prime determinant of the flow of applications for SSDI coverage in any community. Specific jobs (say, working as a carpenter building new homes) carry the risks that are readily obvious. Mining in general is riskier physically, and probably mentally, than working in an office as an accountant. We should therefore expect to find a larger flow of SSDI applications from mining workers than from accountants.

It also is reasonable to expect that the flow of SSDI applications will grow when economic conditions deteriorate, and poverty rates are elevated. Individuals facing such circumstances seek ways to keep their economic ships afloat, and SSDI not only offers that possibility but also could turn out to provide seemingly permanent income. However, we should not discount the impact of local culture on SSDI applications. Not holding or seeking a job may be acceptable behavior in some communities but not in others. Thus, two states or cities with roughly equivalent levels of job risk, incomes, and unemployment rates may exhibit quite different SSDI application rates.

Consider that median household income (2018-2022 estimates) in New York state was $81,400, while it was only $70,600 in Iowa. Further, New Yorkers aged 25 or older were more highly educated than the typical Iowan (38.8% in New York held a bachelor's degree or more compared to Iowa's 30.3%).[14] Yet, Iowa reported only 8.4% of its adult population as being disabled, while New York State reported a higher 9.8% disability rate.[15] Neither state is heavily devoted to mining or extraction activities, and Iowa's agricultural economic emphasis might be more conducive to on-the-job injuries that lead to disabilities. What is there about Iowans that causes them to eschew disability? Culture seems to provide part of the answer.

Addressing in detail the cultural roots of SSDI behavior is beyond the scope of this chapter, but we will return to the more easily understood economic explanations for the disability behaviors we observe. We begin by exploring the relationship in Virginia between median household income and the percent of each jurisdiction's population that is 18 to 64 years of age and receiving SSDI income. We remind the readers that the receipt of SSDI income requires verification of a disability that prevents gainful employment by the state DDS and SSA, and thus, these disability rates are typically much lower than the self-reported disability rates estimated by the U.S. Census Bureau that are contained in Table 1. Table 2 at the end of the chapter contains estimates for each of Virginia's independent cities and counties.

13 See, among many, Kalman Rupp and David Stapleton, "Determinants of the Growth in the Social Security Administration's Disability Programs --- An Overview," *Social Security Bulletin*, 58(Winter, 1995), 43, ff; Jahangiri Khan, Ulf-G. Gerdtham, and Bjarne Jansson, "Effects of Macroeconomic Trends on Social Security Spending Due to Sickness and Disability," American Journal of Public Health, 94 (November 2004), 2004-9.
14 https://www.census.gov/data.html
15 https://www.census.gov/data.html

Disability Population Proportions and Household Incomes

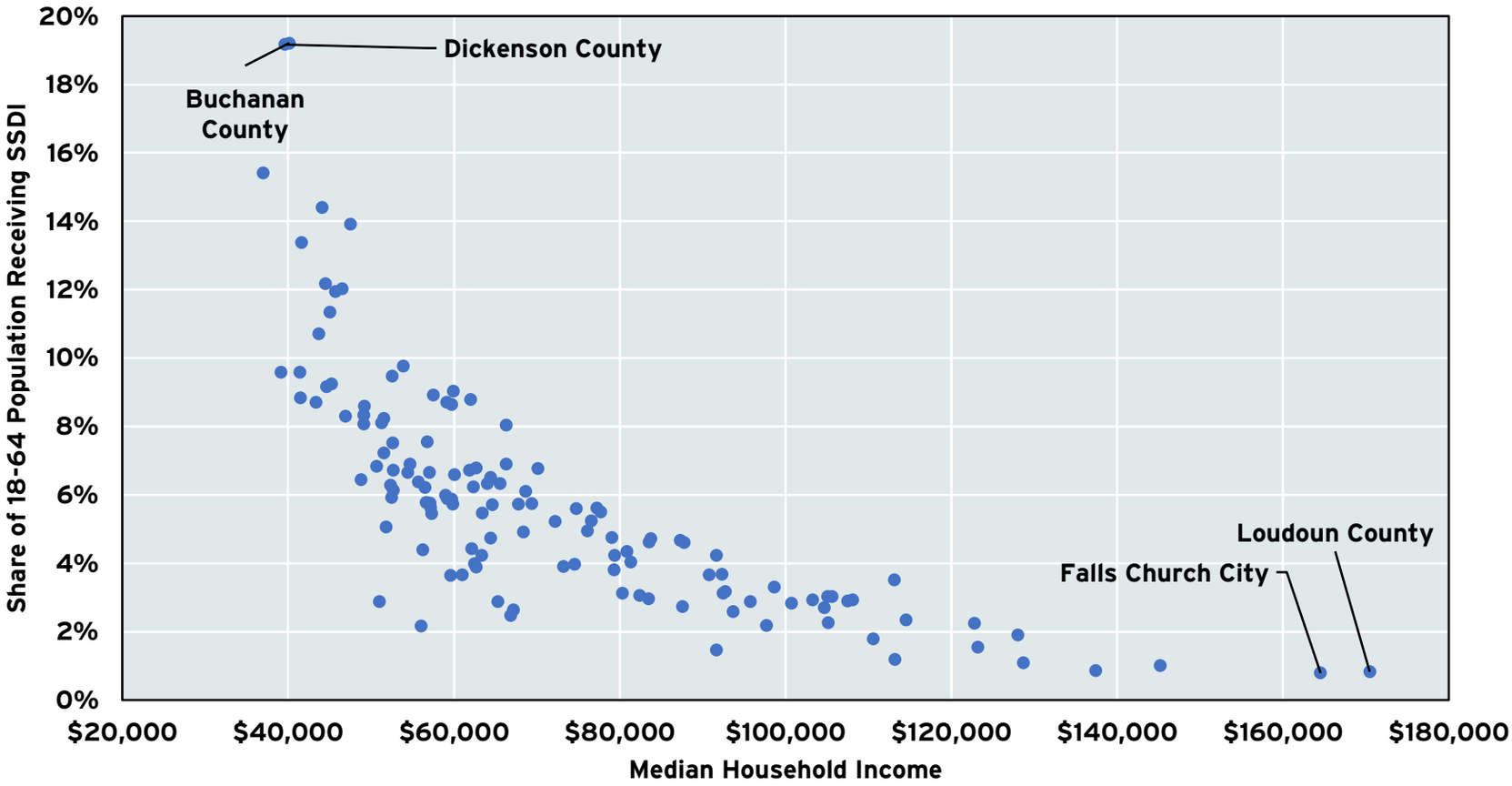
If one owns significant viable sources of income, then applying for disability is not a matter of life or death, or a necessary means to feed a hungry family. In Graph 9, we present the share of disabled workers among the population aged 18 to 64 who received SSDI income in 2022 and median household income from 2018 to 2022. The negative correlation of -0.74 that exists between the share of adults receiving SSDI in 2022 and median household income should be no surprise. Higher median household incomes are associated with lower rates of disability applications.

Dickenson County and Buchanan County had the highest SSDI rates in the Commonwealth at 19.2%. Loudoun County and Falls Church city had the lowest SSDI rate at 0.8% in 2022. Median household income from 2018 to 2022 was $39,591 in Buchanan County and $40,143 in Dickenson County. For the same period, median household income in Falls Church city was $164,536 and $170,463 in Loudoun County. In other words, median household income was more than 4 times higher in Loudoun County and Falls Church city when compared to Buchanan County and Dickenson County.

Household incomes influence behavior. Some low-income households may view disability as a long-run solution to their income problem, and it is a source less likely to expire unless, of course, their disability disappears, or they start earning significant income. This latter phenomenon --- losing disability because one goes to work --- disincentivizes work and results in strong criticism of social safety net programs such as those involving SSDI. The relevant question is how large those disincentives are. It is fair to say that the economic research in these areas has yielded contradictory results. There is little economic doubt that disability and guaranteed annual income payments introduce some disincentives, but what is not clear is how large this effect is.

GRAPH 9

MEDIAN HOUSEHOLD INCOME AND THE SHARE OF ADULTS RECEIVING SSDI PAYMENTS INDEPENDENT CITIES AND COUNTIES IN VIRGINIA, 2018 - 2022



Source: U.S. Census Bureau, American Community Survey 5-year Estimates, 2018 – 2022 for median household income and Population Estimates Program, 2022 Vintage, for population estimates. Social Security Administration (2023) for the number of SSDI recipients by city and county.

Disability Population Proportions and Educational Attainment

There are many different ways to measure the educational achievements and status of a population, but if one is interested in the connection of education to labor markets, then the percentage of adults who have received a high school diploma (or more) is a superb thermometer because it is closely connected to individuals' ability to find a job and retain it.

Graph 10 traces the relationship between the percent of individuals who have completed high school and the percent of adults aged 18 to 64 who received SSDI payments in 2022. The negative correlation of -0.58 that exists between the share of adults receiving SSDI in 2022 and the share of adults with a high school (or greater) education is, again, no surprise. We remind the reader that Table 2 at the end of the chapter contains estimates for each of the independent cities and counties.

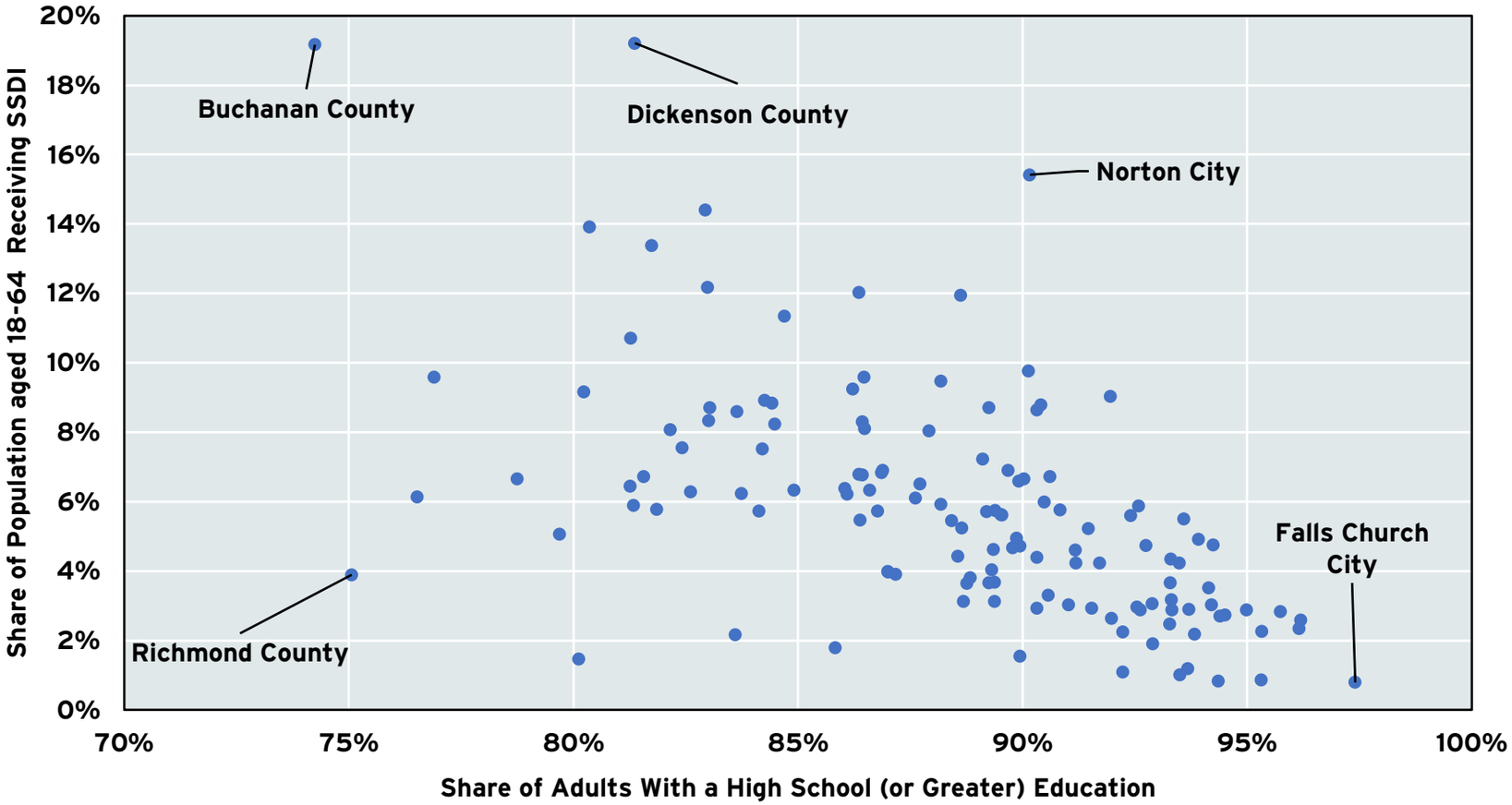
The contrast is evident between Northern Virginia's Arlington County and Falls Church city and Virginia's southwestern, rural Dickenson County and Buchanan County. The two northern Virginia localities have SSDI recipient rates of 0.8%, that is, less than 1-in-100 adults aged 18 to 64 received SSDI in 2022. In 2022, almost 1-in-5 adults aged 18 to 64 received SSDI in Dickenson County. While a variety of factors are responsible for this elevated rate, only 74.2% of adults aged 25 and older in Buchanan County had completed high school in 2022. Dickenson County fared better, with 81.4% of adults 25 and older completing high school in 2022. On the other hand, 95.3% of adults 25 and older had completed high school in Arlington County. For Falls Church city, this measure was 97.4% in 2022.

Education (or lack thereof) influences one's ability to find and maintain gainful employment and, if necessary, transition to another career. As coal mining and other extractive industries have declined, less well-educated residents of Virginia may have found it difficult to find gainful employment, especially in technology-intensive industries. It is not the case that a significant proportion of these individuals lack the ability to complete more education, but rather that they have not done so. Nevertheless, completing high school when one is 50 years old, newly unemployed, and not located near many alternative employers, presents a steep challenge to any individual so situated. Further, such individuals may be tied down and immobilized because they live in a home that might be difficult to sell except at a loss.

An alternative personal strategy pursued by some individuals (as the data in Graph 10 perhaps imply) is to apply for disability. But we must recognize that in the case of many former coal miners, such claims might well have legitimacy. Miners may fall victim to forms of pneumoconiosis and silicosis, both of which relate to the inhalation of dust particles or exposure to asbestos. Cancer is a frequent outcome of these maladies.

GRAPH 10

ADULTS WITH A HIGH SCHOOL EDUCATION AND ADULTS RECEIVING SSDI PAYMENTS INDEPENDENT CITIES AND COUNTIES IN VIRGINIA, 2018 - 2022



Source: U.S. Census Bureau, American Community Survey 5-year Estimates, 2018 – 2022 for the number of high school graduates aged 25 and older and Population Estimates Program, 2022 Vintage, for population estimates. Social Security Administration (2023) for the number of SSDI recipients by city and county.

Disability Application Rates and the Unemployment Rate

One can readily see in Graph 11 that an apparent relationship exists in the United States between the rate of unemployment and disability application rates for individuals under the age of 65. Higher unemployment rates are associated with higher request rates for disability as the correlation coefficient between the two series is 0.74. In Graph 11, field applications are those that come from individuals into state offices similar to Virginia's Disabilities Determination Services (DDS) office, whereas the DDS applications are those that go from the DDS along with its evidence and recommendations to the Social Security Administration (SSA), which usually is the final arbiter.

The respective volumes of field and DDS applications each might be considered to be thermometers that reflect economic conditions. It is fair to observe that some individuals appear to regard disability status as a type of permanent unemployment compensation --- but one that (fortuitously for them) does not disappear after a year or 18 months. When the economy sours, additional individuals have an economic incentive to explore disability-related payments as a source of income. This helps explain why there were approximately 1.7 million more DDS disability applications (requests) in 2010 (when the average unemployment rate was 9.6%) than in 2023 (when the average unemployment rate was 3.6%).

Disability Claims and Administrative Discretion

No formula exists that tells evaluators whether an applicant's claim for disability support should be approved. There exist the criteria and steps noted previously, but most of these criteria ultimately require the exercise of judgment. And it is human beings, often living in the same community or state, who undertake those judgments, sometimes impacting their neighbors.

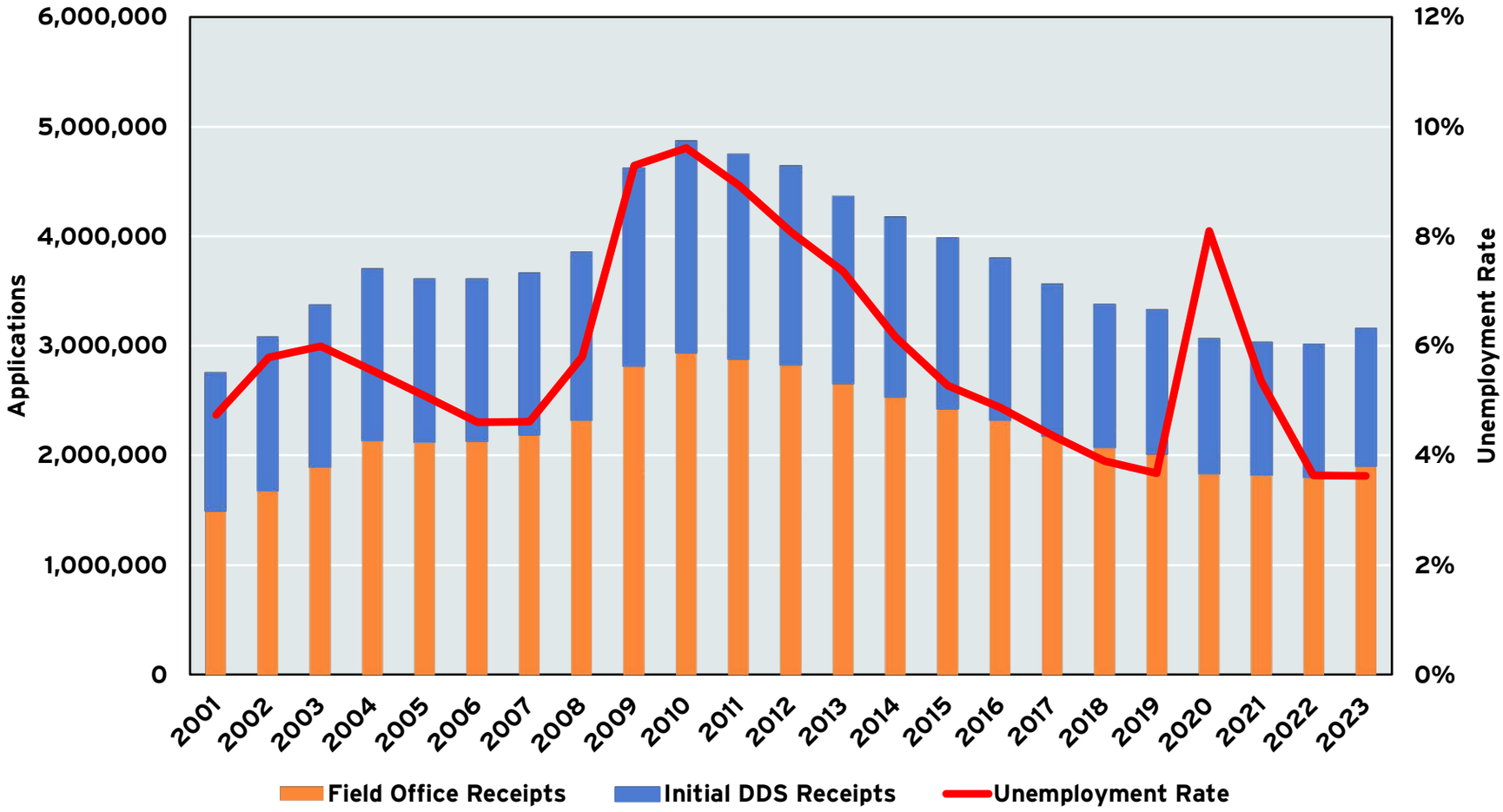
It will suffice to point out that not all evaluators appear to view their applicants and applications the same way. According to the SSA, in June 2023, state initial approval rates for SSDI applications varied between 33.2% and 65.4% with an average of 46.1 and a median of 44.8%.[16] Consider Graph 12, which provides a 'snapshot in time' view of the top-5 and bottom-5 state approval rates of applications for SSDI support in June 2023. It is difficult to discern a pattern to these numbers, except that some of the elevated approval rates tend to come from less populated and less urban states.

But the relevant point that one should take from Graph 12 is that the states exercise considerable discretion in terms of the standards they apply to the petitions for support they receive. The Social Security Administration irons out some (but not all) of these differences when it considers each state's recommendations. Ultimately, visible differences remain among the states and inside states in terms of the percentages of individuals whose applications for disability support have been approved. There is nothing nefarious about this because their situations and populations differ. However, it is a reminder that the system is run by human beings.

16 Social Security Administration, SSA State Agency Monthly Workload Data, Available at: https://www.ssa.gov/disability/data/ssa-sa-mowl.htm. There are four extended service team sites listed as EA, EO, EV and EM that are established in the states of Arkansas, Oklahoma, Virginia and Mississippi to create adjudicative capacity to assist other states which we exclude from the analysis. The District of Columbia and Puerto Rico are included in the analysis.

GRAPH 11

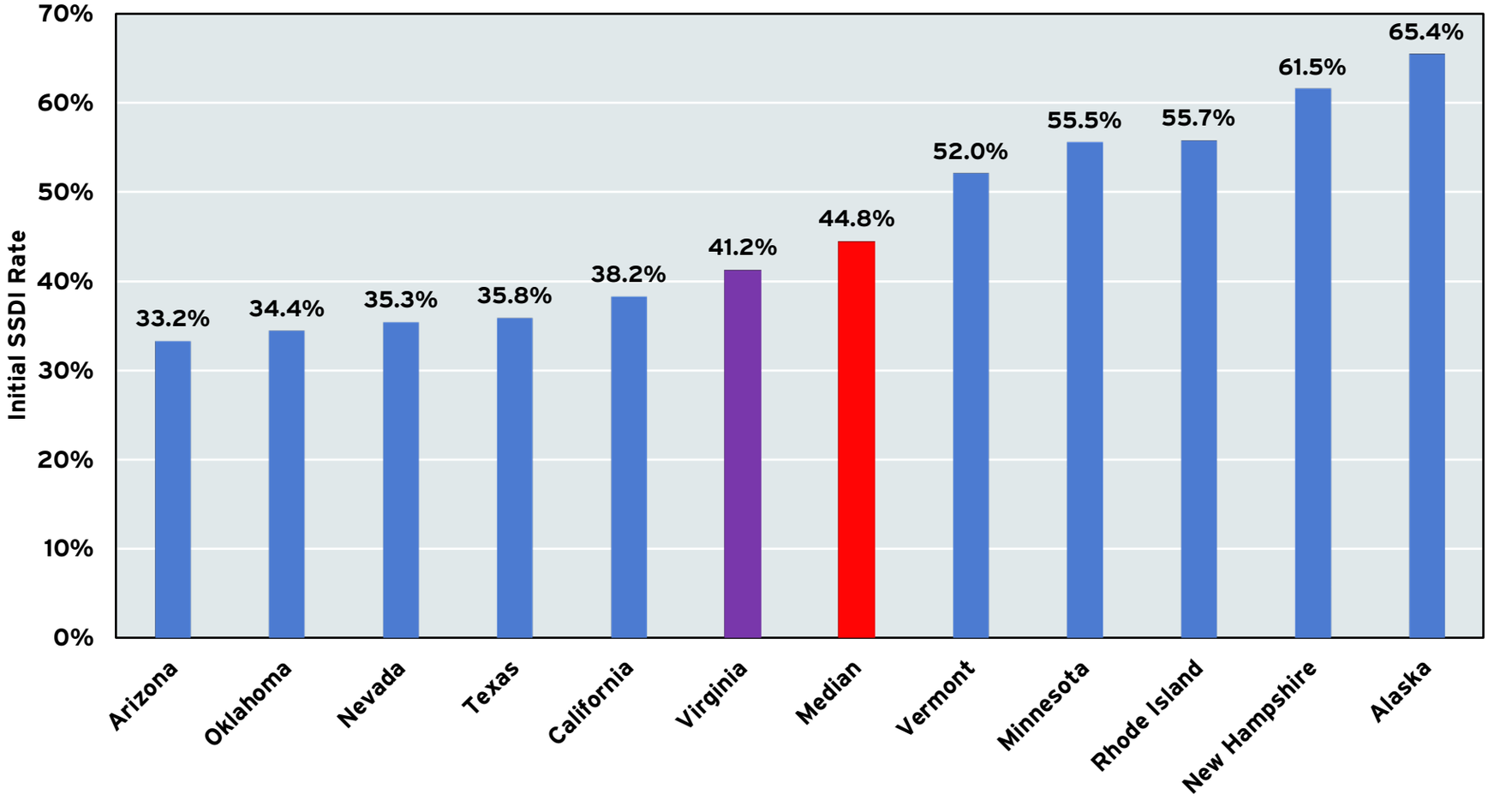
DISABILITY APPLICATIONS AND THE ANNUAL AVERAGE UNEMPLOYMENT RATE
UNITED STATES, 2001 - 2023



Sources: Social Security Administration, Disabled-worker statistics (ssa.gov) and the Federal Reserve Bank of St. Louis (FRED), Unemployment Rate (UNRATE) | FRED | St. Louis Fed (stlouisfed.org). Disabled workers under the age of 65.

GRAPH 12

PERCENTAGE OF INITIAL SSDI APPROVALS BY STATE
JUNE 2023



Source: Social Security Administration, State Agency Monthly Workload Data (2024).

Is There a 'Disability-Industrial Complex?'

Most individuals of goodwill subscribe to some form of the notion that those who are better off financially in society should extend help to those who are less fortunate. Persons coping with disabilities usually are included among those deserving of assistance. Thus, in 2013, when National Public Radio's well-regarded Planet Money program aired what many considered an exposé of governmental disability programs, this broadcast rattled many symbolic cages. In this presentation, Chana Joffe-Walt of National Public Radio (NPR) used phrases such as "The Disability-Industrial Complex" to describe a series of profit-motivated parties whose goals, she argued, were to "push more people on to disability." The indicted parties in this regard were lawyers, physicians, and key personnel in local and state governmental units --- the latter realizing that an individual constituent who is on disability costs their governmental unit little or nothing because the federal government picks up the cost, while the same individual on welfare imposes a variety of costs on their surrounding populations and governmental jurisdictions.

What can we say now about Joffe-Walt's assertion that a "Disability-Industrial Complex" exists that feeds on the disability system and the mechanisms it has developed for consideration and approval? A perusal of the many Internet websites that provide material relating to disability reveals one with a smiling face of an anonymous individual who identifies herself as "the lead Social Security Disability Benefits (SSDI) attorney." This smiling face informs viewers that it can see if an applicant qualifies for benefits in "less than 3 minutes." The website is up-front about its interest in your situation --- we work "for a share of the money you win (usually 15-33%) and charge nothing if you lose." Curiously, this firm does not list a physical address for itself on its website, though if one does search for it, one would find it has an office suite in Los Angeles. The firm in question has been in business only for about five years, but now manages hundreds of disability claim cases in a well-organized, syncopated fashion.

One needs to spend only a few minutes on the Internet to discover that dozens of similarly focused law firms exist in the United States. Our December 2023 internet search for Virginia law firms specializing in disability claims generated about 60 hits. No Virginians are more than a few miles away from a law firm that will represent them in their claim for disability financial support. The Social Security Administration, in 2021, reported $671.4 million in fee payments to the top 300 firms engaged in disability practice.[17]

We do not argue that these (or other) firms are engaged in any illegal or unethical activities. These groups of attorneys, as one might expect, have mastered the relevant laws, regulations, and procedures that relate to obtaining and maintaining disability status. However, this also results in these firms acquiring a direct financial interest in increasing the number of individuals who qualify for disability benefits. Thus, their successes (and even their failures) impose additional costs on society. Resources expended here might have been used elsewhere in the community to produce outputs and improve living standards. There is empirical evidence available that beyond certain levels, expenditures upon lawyers and legal services reduce economic growth rates.[18]

Without question, significant proportions of the individuals who pursue disability claims deserve positive responses to their meritorious requests. And those positive responses are a sign of a just and caring society that looks after the welfare of all its members. But not all claims are equally meritorious, and some are bogus. Ideally, the processes that sort out these matters should be legal, economically efficient, and equitable. However, the sheer size and expansion of the disability industry in certain locales suggest that these goals do not always translate to outcomes.

17 Social Security Administration, 2021 Top Firms and Reps by Payment (June 9, 2022).
18 A good summary of this research may be found in James V. Koch and Richard J. Cebula, "Do Lawyers Inhibit Economic Growth? New Evidence from the 50 U.S. States," *Journal of Economic Development*, 48(September 2023), 157-75.

Consider the role of physicians, the medical professionals who evaluate professionally the medical condition of applicants and infer the applicants' abilities to undertake work that might be available and for which they are qualified. Not surprisingly, two well-trained and equally well-intentioned physicians may end up assessing an applicant differently. What emerges is a world in which some physicians reputationally become known as 'friendly' to disability applicants. News of this spreads and these physicians gradually become magnets for disability applicants, who also learn which physicians to avoid. If they do not know the names of these physicians, then their law firm will tell them.

Much the same dynamic applies to rehabilitation consultants, who often file highly detailed reports in which they opine about the range of physical and mental activities that an individual reasonably can undertake. Such reports can be invaluable, but sometimes represent recycled information that adds little to decision-making. When an insurance company is involved, it may hire its own physicians and experts and, understandably, these individuals are more likely to cast a jaundiced eye on the claims of certain applicants.

By now, the reader should have gathered that whether or not the notion of a "Disability-Industrial Complex" is on target, the disability claims process is a several-act play in which many different actors perform at a variety of levels. Obviously, a major player is the Commonwealth's Disability Determination Services (DDS) office, which has a central office in Richmond, four regional centers, and about 450 employees.[19] In addition, there were 2,010 rehabilitation counselors employed in Virginia in 2022.[20] At least 60 law firms in Virginia tout specializations relating to disability claims cases. Each of these actors gets a piece of the action.

The point here is not that the resources used by these parties either are excessive or wasted. Rather, it is that processes such as these are costly. They are not free goods, and they reduce the funds available for governments and other parties to spend on alternatives that might include education, transportation, and law enforcement. Like most other governmental endeavors, disability claims processes over time tend to become institutionalized, meaning that they develop voluminous written procedures and workarounds. These processes nurture a set of sympathetic political advocates who make their case to the Governor and General Assembly. Over time, this usually means they acquire additional resources and employees.

Bowen's Law addresses this phenomenon, a seeming principle of human behavior that applies not just to governmental processes, but also to universities, symphony orchestras, churches, foundations, and interest groups of all kinds:

(1) The dominant goals of institutions are excellence, prestige, and influence

(2) There is virtually no limit to the amount of money that an institution can spend in pursuit of seemingly praiseworthy goals

(3) Each institution raises all the money it can

(4) Each institution spends all the money it raises

(5) The cumulative effect of (1) through (4) is toward ever-increasing expenditures.[21]

Bowen's Law may strike some as an excessively cynical approach to the examination of disability claims in Virginia. Perhaps, but the Law has the ring of truth to those who understand how governmental and non-profit organizations often operate.

19 Office of the State Inspector General, Audit of the Disability Determination Services Program, February 18, 2018).
20 Statistica, "Number of rehabilitation counselors employed in the United States in 2022, by state," www.statista.com/statistics/1303996/number-of-employed-rehabilitation-counselors-by-us-state.
21 Howard R. Bowen, *The Costs of Higher Education: How Much Do Colleges and Universities Spend and How Much Should They Spend?* San Francisco: Jossey-Bass, 1980.

Summing It Up

One way or another, families, businesses, governmental units, churches, civic groups, charities and individuals provide support for those members of society who are disabled. The Centers for Disease Control and Prevention (CDC) estimates that 36% of all health care expenditures for adults focus on those who are disabled.[22] Interestingly, these costs are split more or less equally among Medicare, Medicaid, and non-public sources. The CDC estimates that Virginia spent $18.4 billion in healthcare costs for disabled individuals in 2021.[23] But this is big business.

It does not appear in 2024 that society is witnessing a flood of new individuals who have successfully sought disability status and the income that accompanies it. Rejection rates that apply to requests for disability support remain credibly high. However, if we had addressed this situation 10 years ago, our answer would have been different because the United States witnessed an upsurge in disability claims and coverage between 2000 and roughly 2015.

This said, it is difficult to explain the elevated presence of disabilities in some Virginia independent cities and counties. Yes, coal and extractive industries generate environmental and work conditions that were (and are) replete with health risks. But in Dickenson County, more than one in every four individuals identified as having a disability. This metric reflects all individuals of all ages. Thus, it appears that disability programs are being used by some as a long-term form of unemployment compensation that ordinarily does not phase out.

The Census ACS 1-year estimates report that in 2023, 12.8% of Virginians identified as disabled in some fashion (compared to 13.6% nationally).[24] This is what one might expect given that Virginians' median household income was above the national median and they were better educated than the typical American.[25] As we have seen, higher median household incomes usually are associated with lower disability rates.

In 2023, disabled workers receiving SSDI payments were approximately 2.7% of the South Dakota population and 6.2% of West Virginia's population.[26] Even after one uses statistical analysis to take account of differences between these two states' economic and educational situations, an unexplained gap still exists between these states' disability rates. We conclude that culture and tradition (notions that resist quantification) play significant roles. What one citizen expects of another citizen still counts even in our more impersonal, disposable age. Behavior that provokes comment or even shame in one locale may hardly provoke any notice in another.

What especially matters in the realm of disability policy are long-term trends. Even though Virginia has proven to be a magnet for younger immigrants, its population is aging gradually, and we should expect to see the Commonwealth's disability rates drift upward over time because disability rates rise with age. Between 2010 and 2019, the number of Virginians 35 to 54 years of age declined by an estimated 64,000, while the rank of Virginians 65 years of age or older increased by an estimated 349,100.[27] These demographic changes were especially evident in the mostly rural areas of Virginia, and that is where disability rates are the highest. This tells us that we should not expect disability rates in these counties and independent cities to decline. Instead, they bode to increase.

22 Centers for Disease Control and Prevention, Disability and Health Care Cost Data, www.cdc.gov/ncbddd/disabilityandhealth/data-highlights.html.
23 Curiously, the CDC expressed these costs in 2017 dollars.
24 https://www.census.gov/data.html
25 https://www.census.gov/data.html
26 Social Security Administration, OASDI Beneficiaries by State and County, 2023, 2023, Table 3 and U.S. Census Bureau Population Estimates Program, 2023 Vintage
27 HB854 Housing Study, 12 Demographic Trends, Chapter 12 Demographic trends | HB854 Statewide Housing Study (virginia.gov).

At the end of the day, however, such trends are not costless. The CDC estimated that Virginia expended $18.4 billion in 2021 on its disabled residents, or $15,766 per disabled person.[28] Though the federal government picks up many of these costs, Virginians pay federal taxes and ultimately, therefore, these expenditures are not free. They necessarily reduce funding for other worthy activities and endeavors.

At the same time, the Commonwealth also would be wise to focus on identifying individuals who could work but choose not to do so. Sagging labor force participation rates tell us this might be a problem. However, in the absence of governments invoking Chinese-style tracking of individual citizens, it will not be easy to identify shirkers who in reality are not disabled (or minimally so) and could be holding a job. In any case, there would be resistance in some communities to any attempts to do so. Hence, in certain of its counties and independent cities, Virginia has tended to err in the direction of generosity rather than invoke regulations that might deny help to those truly in need.

Thus, Virginia's disability policies present a classic social quandary – abuses may exist, but the intent of the programs are admirable in the eyes of most, expenditures typically are skewed in favor of less fortunate counties and independent cities, and the dollar costs attached to rooting out the abuses might exceed the benefits. We do not sense a groundswell in favor of change.

28 Centers for Disease Control and Prevention, Disability and Health Promotion.

TABLE 2

ECONOMIC CHARACTERISTICS OF VIRGINIA AND VIRGINIA'S INDEPENDENT CITIES AND COUNTIES

	Total Population 2022	Population Aged 18 to 64 2022	Workers Receiving SSDI 2022	Ratio of Disabled Workers to Population Aged 18 to 64 2022	Poverty Rate 2018 - 2022	Percent of Population with a High School Diploma 2018 - 2022	Median Household Income 2018 - 2022
Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Accomack County	33,191	17,797	1,195	6.7%	15.9%	81.6%	$52,694
Albemarle County	114,534	68,806	1,495	2.2%	7.1%	93.8%	$97,708
Alleghany County	14,835	8,241	780	9.5%	13.7%	88.2%	$52,546
Amelia County	13,455	7,778	425	5.5%	11.1%	86.4%	$63,438
Amherst County	31,589	18,289	1,190	6.5%	11.3%	87.7%	$64,454
Appomattox County	16,748	9,551	630	6.6%	13.8%	89.9%	$60,041
Arlington County	234,000	163,712	1,405	0.9%	6.7%	95.3%	$137,387
Augusta County	78,064	46,047	2,275	4.9%	8.1%	89.9%	$76,124
Bath County	4,049	2,194	140	6.4%	23.7%	86.0%	$55,699
Bedford County	80,848	46,484	2,605	5.6%	9.1%	92.4%	$74,773
Bland County	6,148	3,709	335	9.0%	10.7%	92.0%	$59,901
Botetourt County	34,135	19,621	1,080	5.5%	7.2%	93.6%	$77,680
Brunswick County	15,921	9,790	600	6.1%	17.2%	76.5%	$52,678
Buchanan County	19,352	11,322	2,170	19.2%	25.3%	74.2%	$39,591
Buckingham County	16,982	10,549	605	5.7%	14.0%	84.1%	$59,894
Campbell County	55,141	32,571	1,950	6.0%	10.0%	90.5%	$59,022
Caroline County	31,957	19,278	890	4.6%	11.6%	89.4%	$83,562
Carroll County	29,147	16,434	1,370	8.3%	15.2%	83.0%	$49,113
Charles City County	6,605	3,867	245	6.3%	12.5%	84.9%	$65,573
Charlotte County	11,475	6,376	525	8.2%	20.3%	84.5%	$51,548
Chesterfield County	378,408	228,539	6,600	2.9%	6.7%	92.6%	$95,757

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Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Clarke County	15,266	8,804	255	2.9%	5.4%	93.7%	$107,475
Craig County	4,847	2,861	230	8.0%	10.9%	87.9%	$66,286
Culpeper County	54,381	31,693	1,165	3.7%	7.3%	89.4%	$92,359
Cumberland County	9,746	5,553	345	6.2%	7.9%	86.1%	$56,497
Dickenson County	13,725	7,729	1,485	19.2%	22.5%	81.4%	$40,143
Dinwiddie County	28,161	17,113	960	5.6%	11.0%	89.5%	$77,225
Essex County	10,630	6,208	390	6.3%	17.1%	82.6%	$52,335
Fairfax County	1,138,331	708,441	7,160	1.0%	6.0%	93.5%	$145,165
Fauquier County	74,664	44,319	995	2.2%	5.8%	92.2%	$122,785
Floyd County	15,619	8,848	510	5.8%	9.4%	90.8%	$57,146
Fluvanna County	28,159	16,646	610	3.7%	6.1%	93.3%	$90,766
Franklin County	55,074	31,180	2,150	6.9%	13.3%	89.7%	$66,275
Frederick County	95,051	55,610	1,735	3.1%	6.8%	88.7%	$92,443
Giles County	16,453	9,561	840	8.8%	9.7%	90.4%	$61,987
Gloucester County	39,493	23,390	1,105	4.7%	7.5%	89.9%	$83,750
Goochland County	26,109	15,375	465	3.0%	4.2%	94.2%	$105,600
Grayson County	15,343	8,893	775	8.7%	18.7%	83.0%	$43,348
Greene County	21,107	12,157	490	4.0%	11.1%	89.3%	$81,338
Greensville County	11,226	7,595	385	5.1%	12.9%	79.7%	$51,823
Halifax County	33,644	18,134	1,465	8.1%	14.7%	82.2%	$49,145
Hanover County	112,938	67,007	1,810	2.7%	5.2%	94.4%	$104,678
Henrico County	333,962	204,127	6,230	3.1%	8.4%	92.9%	$82,424

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Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Henry County	49,906	27,959	2,995	10.7%	16.1%	81.3%	$43,694
Highland County	2,301	1,128	75	6.6%	10.3%	90.0%	$57,070
Isle of Wight County	40,151	23,528	995	4.2%	9.8%	91.2%	$91,680
James City County	81,199	43,822	1,240	2.8%	7.3%	95.7%	$100,711
King and Queen County	6,718	3,913	265	6.8%	19.9%	86.4%	$70,147
King George County	27,856	17,046	500	2.9%	6.9%	90.3%	$103,264
King William County	18,492	11,207	475	4.2%	8.0%	93.5%	$79,398
Lancaster County	10,750	5,015	340	6.8%	14.0%	86.4%	$62,674
Lee County	21,982	12,776	1,710	13.4%	26.0%	81.7%	$41,619
Loudoun County	432,085	271,455	2,245	0.8%	3.8%	94.4%	$170,463
Louisa County	40,116	23,683	1,240	5.2%	10.9%	88.6%	$76,594
Lunenburg County	12,031	6,841	455	6.7%	13.0%	78.7%	$54,438
Madison County	14,000	7,935	315	4.0%	8.0%	87.0%	$74,586
Mathews County	8,490	4,425	210	4.7%	6.8%	94.3%	$79,054
Mecklenburg County	30,508	16,664	1,350	8.1%	18.8%	86.5%	$51,265
Middlesex County	10,943	5,567	320	5.7%	9.7%	89.4%	$69,389
Montgomery County	98,915	69,951	2,010	2.9%	24.9%	95.0%	$65,270

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Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Nelson County	14,652	7,819	495	6.3%	13.2%	86.6%	$64,028
New Kent County	24,986	15,538	545	3.5%	3.9%	94.1%	$113,120
Northampton County	11,900	6,227	430	6.9%	16.7%	86.9%	$54,693
Northumberland County	12,302	6,039	345	5.7%	14.8%	89.2%	$64,655
Nottoway County	15,559	9,636	600	6.2%	19.1%	83.8%	$62,366
Orange County	37,991	22,088	1,030	4.7%	13.0%	89.8%	$87,309
Page County	23,750	13,785	1,040	7.5%	10.0%	82.4%	$56,760
Patrick County	17,643	9,654	830	8.6%	11.4%	83.6%	$49,180
Pittsylvania County	59,952	34,354	2,585	7.5%	16.4%	84.2%	$52,619
Powhatan County	31,489	19,504	570	2.9%	4.5%	91.5%	$108,089
Prince Edward County	21,927	14,759	805	5.5%	18.1%	88.4%	$57,304
Prince George County	43,134	28,704	895	3.1%	8.3%	89.4%	$80,318
Prince William County	486,943	304,072	4,720	1.6%	6.0%	89.9%	$123,193
Pulaski County	33,706	19,832	1,715	8.6%	13.1%	90.3%	$59,740
Rappahannock County	7,502	4,090	135	3.3%	7.6%	90.6%	$98,663
Richmond County	9,080	5,525	215	3.9%	7.5%	75.1%	$62,708
Roanoke County	96,914	56,479	2,455	4.3%	7.1%	93.3%	$80,872

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Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Rockbridge County	22,593	12,495	840	6.7%	8.9%	90.6%	$61,903
Rockingham County	85,397	49,350	1,925	3.9%	8.8%	87.2%	$73,232
Russell County	25,448	14,583	2,100	14.4%	19.3%	82.9%	$44,088
Scott County	21,476	12,159	1,480	12.2%	17.0%	83.0%	$44,535
Shenandoah County	44,968	25,438	1,125	4.4%	12.6%	88.6%	$62,149
Smyth County	29,449	17,047	1,935	11.4%	18.8%	84.7%	$45,061
Southampton County	17,932	10,648	610	5.7%	8.4%	86.8%	$67,813
Spotsylvania County	146,688	88,817	2,690	3.0%	7.4%	91.0%	$105,068
Stafford County	163,380	102,136	1,945	1.9%	5.4%	92.9%	$128,036
Surry County	6,527	3,767	230	6.1%	13.3%	87.6%	$68,655
Sussex County	10,680	6,955	410	5.9%	12.7%	81.3%	$59,195
Tazewell County	39,821	22,728	2,735	12.0%	18.1%	86.4%	$46,508
Warren County	41,440	25,197	960	3.8%	12.0%	88.8%	$79,313
Washington County	53,958	31,100	2,710	8.7%	12.0%	89.2%	$59,116
Westmoreland County	18,712	10,223	590	5.8%	16.0%	81.9%	$56,647
Wise County	35,421	21,489	2,990	13.9%	19.9%	80.4%	$47,541
Wythe County	28,111	16,388	1,600	9.8%	17.2%	90.1%	$53,921
York County	71,341	42,228	955	2.3%	4.7%	95.3%	$105,154

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Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Alexandria city	155,525	107,075	1,265	1.2%	8.8%	93.7%	$113,179
Bristol city	16,975	9,689	895	9.2%	17.0%	86.2%	$45,250
Buena Vista city	6,591	3,960	255	6.4%	21.9%	81.3%	$48,783
Charlottesville city	45,373	31,758	835	2.6%	23.6%	92.0%	$67,177
Chesapeake city	252,488	155,484	4,925	3.2%	7.6%	93.3%	$92,703
Colonial Heights city	18,294	10,417	545	5.2%	10.2%	91.5%	$72,216
Covington city	5,679	3,266	390	11.9%	16.9%	88.6%	$45,737
Danville city	42,229	23,883	2,110	8.8%	25.3%	84.4%	$41,484
Emporia city	5,481	3,023	290	9.6%	17.3%	76.9%	$41,442
Fairfax city	24,835	15,057	165	1.1%	10.0%	92.2%	$128,708
Falls Church city	14,586	8,870	70	0.8%	2.3%	97.4%	$164,536
Franklin city	8,247	4,487	400	8.9%	18.7%	84.3%	$57,537
Fredericksburg city	28,757	19,369	575	3.0%	18.0%	92.5%	$83,445
Galax city	6,730	3,819	350	9.2%	22.4%	80.2%	$44,612
Hampton city	138,037	85,495	4,050	4.7%	13.5%	92.8%	$64,430
Harrisonburg city	51,158	37,280	805	2.2%	27.2%	83.6%	$56,050
Hopewell city	22,962	13,521	925	6.8%	21.3%	86.9%	$50,661
Lexington city	7,457	5,403	140	2.6%	16.6%	96.2%	$93,651
Lynchburg city	79,287	52,646	2,315	4.4%	17.5%	90.3%	$56,243
Manassas city	42,642	26,653	475	1.8%	4.7%	85.8%	$110,559
Manassas Park city	16,703	11,288	165	1.5%	5.1%	80.1%	$91,673

TABLE 2

ECONOMIC CHARACTERISTICS OF VIRGINIA AND VIRGINIA'S INDEPENDENT CITIES AND COUNTIES

	Total Population 2022	Population Aged 18 to 64 2022	Workers Receiving SSDI 2022	Ratio of Disabled Workers to Population Aged 18 to 64 2022	Poverty Rate 2018 - 2022	Percent of Population with a High School Diploma 2018 - 2022	Median Household Income 2018 - 2022
Virginia	**8,683,619**	**5,351,721**	**187,134**	**3.5%**	**10.0%**	**91.1%**	**$87,249**
Martinsville city	13,725	7,713	740	9.6%	24.6%	86.5%	$39,127
Newport News city	184,306	115,664	4,900	4.2%	14.7%	91.7%	$63,355
Norfolk city	232,995	155,711	5,705	3.7%	16.9%	89.3%	$60,998
Norton city	3,609	2,140	330	15.4%	29.1%	90.2%	$36,974
Petersburg city	33,394	19,798	1,645	8.3%	22.2%	86.4%	$46,930
Poquoson city	12,582	7,266	170	2.3%	4.5%	96.2%	$114,503
Portsmouth city	97,029	59,896	3,375	5.6%	17.4%	89.5%	$57,154
Radford city	16,738	13,044	375	2.9%	33.8%	93.3%	$51,039
Richmond city	229,395	157,022	5,715	3.6%	19.5%	88.8%	$59,606
Roanoke city	97,847	58,304	4,215	7.2%	19.1%	89.1%	$51,523
Salem city	25,523	15,650	770	4.9%	9.6%	93.9%	$68,402
Staunton city	25,904	15,383	905	5.9%	11.4%	92.6%	$59,731
Suffolk city	98,537	60,352	2,775	4.6%	9.4%	91.2%	$87,758
Virginia Beach city	455,618	283,688	7,775	2.7%	8.0%	94.5%	$87,544
Waynesboro city	22,808	13,415	795	5.9%	16.1%	88.2%	$52,519
Williamsburg city	15,909	11,350	280	2.5%	13.7%	93.3%	$66,815
Winchester city	27,936	16,915	675	4.0%	16.8%	87.0%	$62,495

Sources: United States Census Bureau, Population Estimates Program and 2018 – 2022 American Community Survey. Social Security Administration (2024).

AN OLDER COMMONWEALTH, A BETTER COMMONWEALTH?

"Beautiful young people are accidents of nature, but beautiful old people are works of art."

– Eleanor Roosevelt

In the tyranny of the now, we often lose perspective on how far we have come. We may bemoan a lost cell signal, a long line at the coffee shop, or how prices have changed this decade, but, if we draw back, we may find that we are much more fortunate than we realize. We are wealthier than our historical counterparts with access to technologies beyond the dreams of kings. We are safer from crime and war, less susceptible to common diseases, and no longer must toil to eke out a subsistence living.

In 1900, according to the Centers for Disease Control and Prevention (CDC), life expectancy at birth in the United States was 47.3 years. By 1970, life expectancy in the United States had increased to 70.8 years, largely due to improvements in medical care, public health, and changes in lifestyle. By 2019, life expectancy had climbed to 78.8 years, with male life expectancy at 76.3 years and female life expectancy at 81.4 years. Life expectancy, however, fell to 77.0 years in 2020 and, again, to 76.4 years in 2021. The decline in life expectancy reversed nearly three decades of progress. These declines were not sustained as life expectancy increased to 77.5 years in 2022. Even accounting for the impact of the COVID-19 pandemic in 2020 and 2021, we are living longer lives than our predecessors.

Living longer means that the median age in the United States and Commonwealth of Virginia has also increased over the last several decades. In 1960, according to the U.S. Census Bureau, the median age of the resident population of the United States and Virginia were 29.5 years and 27.1 years, respectively. By 2000, the median age of the nation and Virginia had increased to 35.3 years and 35.7 years, respectively. In 2023, the median age of the Commonwealth was 39.3 years while the nation was at 39.2 years. The U.S. Census Bureau projected the median age of the nation by 2100 will be 47.9 years. If there are significant limitations on immigration, however, the projection increases to 49.2 years.

As we age, our preferences and needs change. In Lynchburg, a senior living community recently announced an $80 million expansion to increase senior housing options.[1] In Buchanan County, funding was approved in 2023 for a new assisted living community with 53 suites and 61 beds.[2] In Falls Church, a 200-plus unit, 15-story senior living community was announced in 2023. Phill Barklow, president of Experience Senior Living, the developer of the Falls Church property, noted that "Our residents will have unprecedented access to our most distinguished brand in a thriving community environment with activated green space, retail and entertainment at their doorstep."[3] In Virginia Beach, a new retirement community, Aviva Pembroke, aims to serve increasing demand. Ramsay Smith, president of Pembroke Realty Group, who was hired as the development manager of the project stated, "We found that senior living communities were in higher demand than age-restricted apartments due to the aging population (demographics) and need for future services as they age." These and other properties will impact communities by increasing the demand for services oriented towards an older population.

Assessing how the population of the Commonwealth of Virginia has changed over time and will change over the coming decades is not merely an academic endeavor. As the state grapples with the question of how to increase private sector job growth and spur economic activity, the availability of labor is one factor that constrains the ability of employers to create and sustain jobs. Workforce housing may compete with the increasing demand for senior housing, and, as older households downsize, change the composition of housing as well. Where the population is aging across the Commonwealth may exacerbate existing inequities in income and growth and increase the shift of the state's population to urban areas.

In this chapter, we examine how the population of Virginia has changed over time, with a specific focus on the resident population aged 65 and above. We break down the population aged 65 and above by sex and race and ask how these differences may impact the Commonwealth over time. We explore the characteristics of this population and discuss how Virginia is aging compared to its neighbors. We conclude with thoughts on how the 'graying' of Virginia may influence the demand for public goods and services in the future.

1 "Senior living community to expand to Lynchburg," https://www.wsls.com/news/local/2024/03/07/senior-living-community-to-expand-to-lynchburg/
2 "New assisted living facility to create 17 new jobs in Buchanan County," https://www.bdtonline.com/news/new-assisted-living-facility-to-create-17-new-jobs-in-buchanan-county/article_ec23deb6-263f-11ee-822f-3fe4c29823d2.html
3 "Senior Living Community at West Falls Development Named The Reserve at Falls Church," https://patch.com/virginia/fallschurch/senior-living-community-west-falls-development-named

The U.S. Census Bureau conducts three American Community Survey (ACS) programs, the 1-year, 5-year, and annual supplements on special topics. We rely primarily on the ACS to glean insights about the population of the region, state, and nation. Unlike the decennial census, the ACS is conducted every month of every year and provides intercensal estimates of topics such as population, education, employment, health, and poverty.

The COVID-19 pandemic disrupted the collecting of survey data for the 1-year program in 2020. The variations in response rates and limitations on in-person surveys meant the ACS, in the words of the Census, "began to look less like a continual monthly survey stemming from a common design and more like 12 independent monthly surveys, each with its own data collection strategy."[4] The Census Bureau determined that the estimates generated by the 2020 surveys did not meet the statistical quality standards and should not be released to the public. Instead, a set of experimental results were made available only for the nation, all 50 states, and the District of Columbia. The absence of estimates for metropolitan areas and counties, along with the existing concerns about data quality, means that we do not report the 2020 ACS 1-year experimental estimates in this chapter. The Census Bureau did release the 2020 5-year estimates after adjusting the responses to account for non-response bias in 2020. For communities with a population of less than 65,000, we use the ACS 5-year estimates.

Virginia's Population Growth Slows

The United States Census Bureau's Population Estimates Program (PEP) provides estimates of the population for the nation, states, cities, counties, and towns. The PEP utilizes information on births, deaths, and migration to generate annual estimates of intercensal population change. The PEP's annual estimates begin with the most recent decennial census and extend to year prior to the next decennial census. Estimates are provided for July 1st of the corresponding year, except for the decennial census year, where estimates are provided on April 1st and July 1st. Each decennial census 'resets' the population estimates to the new population base. With this in mind, care must be taken when comparing population levels prior to and during a census year.

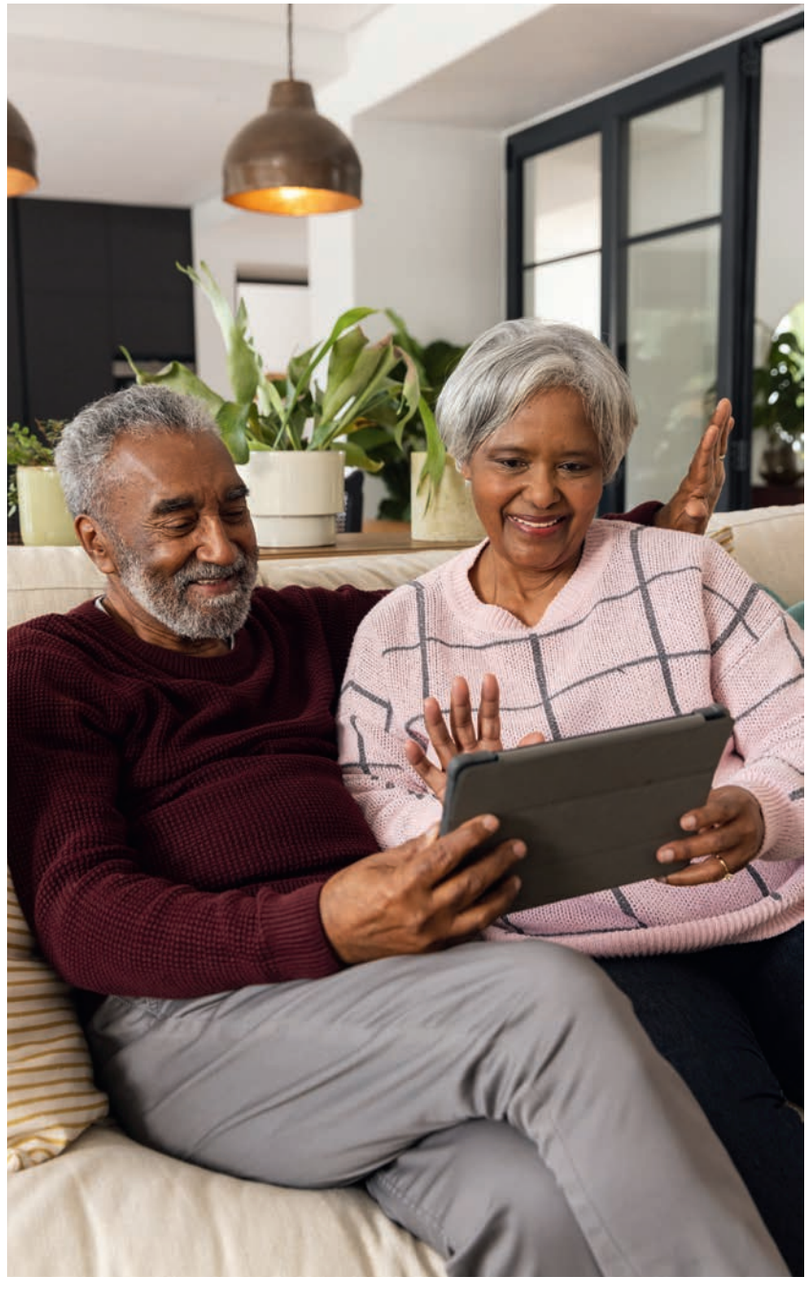
The U.S. Census Bureau estimated there were approximately 8,023,699 residents in the Commonwealth of Virginia on July 1, 2010 (Graph 1). By July 1, 2019, Virginia's population had increased by approximately 6.4% to 8,535,519 residents. The resident population climbed to 8,637,193 on July 1, 2020, however, we opine that a significant portion of the increase of 101,674 was due to the decennial census and not an influx of new residents to Virginia. Why? The largest yearly increase in the population over the decade was in 2012 (83,925). From 2015 to 2019, the average yearly increase in the population was 44,905. The evidence would suggest that much of the increase in the population from 2019 to 2020 was a result of the decennial Census and not a reversal of fortune.

More recently, population growth continued to slow relative to what was observed in the previous decade. From July 1, 2020 to June 30, 2021, the population of the state increased by 20,155 residents, followed by 21,571 in the subsequent year. On July 1, 2023, the estimated population of the Commonwealth was 8,715,698, an increase of 36,599 from the previous year. While this was an improvement from the two years immediately after the COVID-19 pandemic, it was also lower than all but one year in the previous decade.

4 "Pandemic Impact on 2020 American Community Survey 1-Year Data," https://www.census.gov/newsroom/blogs/random-samplings/2021/10/pandemic-impact-on-2020-acs-1-year-data.html

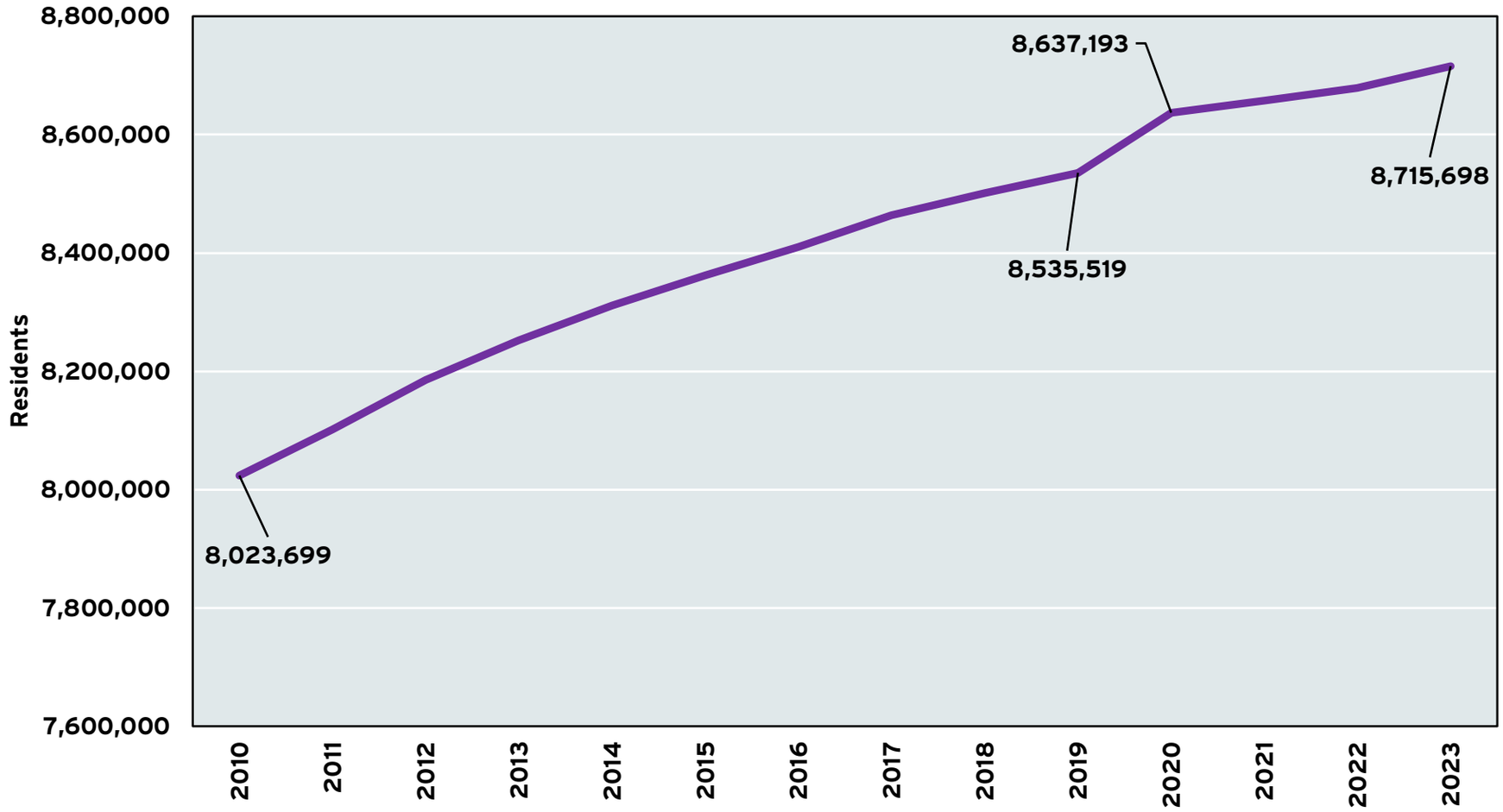
In Graph 2, we compare population growth for Virginia and the United States from 2010 to 2023. From July 1, 2010 to July 1, 2023, the resident population of the Commonwealth grew by 8.6%. Over the same period, the resident population of the nation increased by 8.3%. These estimates, however, may hide a more nuanced story. From July 1, 2010 to July 1, 2019, the population of the state and nation increased by 6.4% and 6.1%, respectively. If we focus on this decade, the population of Virginia increased by 0.9% from July 1, 2020 to July 1, 2023. Over the same period, the population of the nation increased by 1.0%. The resident population of the Commonwealth is now growing more slowly than that of the nation.

Graph 3 illustrates how Virginia has fared relative to the nation and a selection of neighboring states. From July 1, 2010 to July 1, 2019, South Carolina's resident population grew by 11.1%, followed by North Carolina (9.5%), and Virginia (6.4%). Maryland (4.4%) grew slower than the nation (6.1%) while West Virginia lost approximately 3.3% of its resident population from 2010 to 2019. This decade, South Carolina and North Carolina's resident population grew by 4.7% and 3.7% respectively, outpacing the nation (1.0%) and Virginia (0.9%). Maryland's resident population has barely changed (0.1%) while the resident population of West Virginia continued to fall this decade (-1.2%).



GRAPH 1

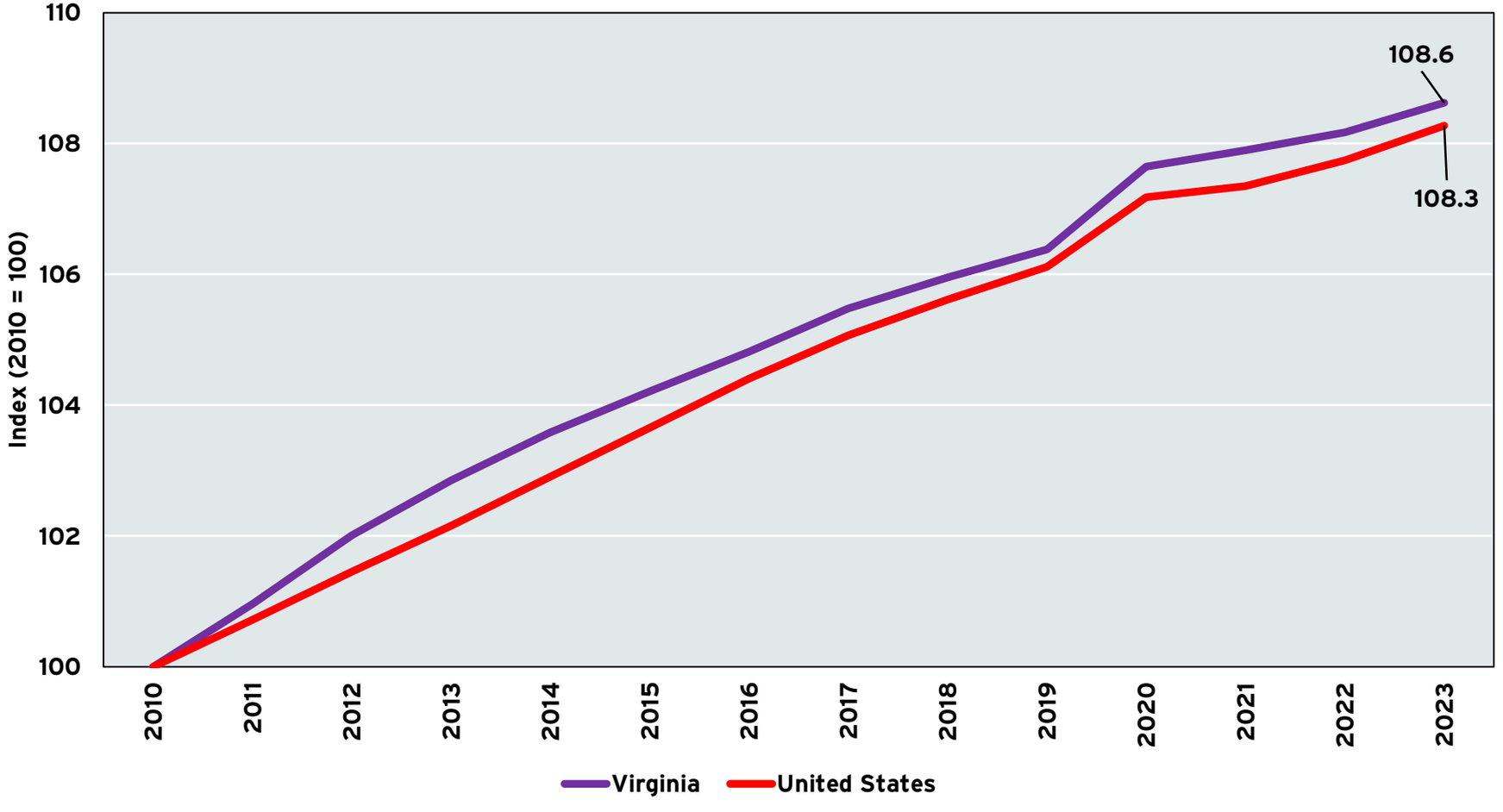
RESIDENT POPULATION
VIRGINIA, 2010 - 2023



Source: United States Census Bureau, 2019 and 2023 Population Estimates (2023). Population estimates as of July 1st of the corresponding year.

GRAPH 2

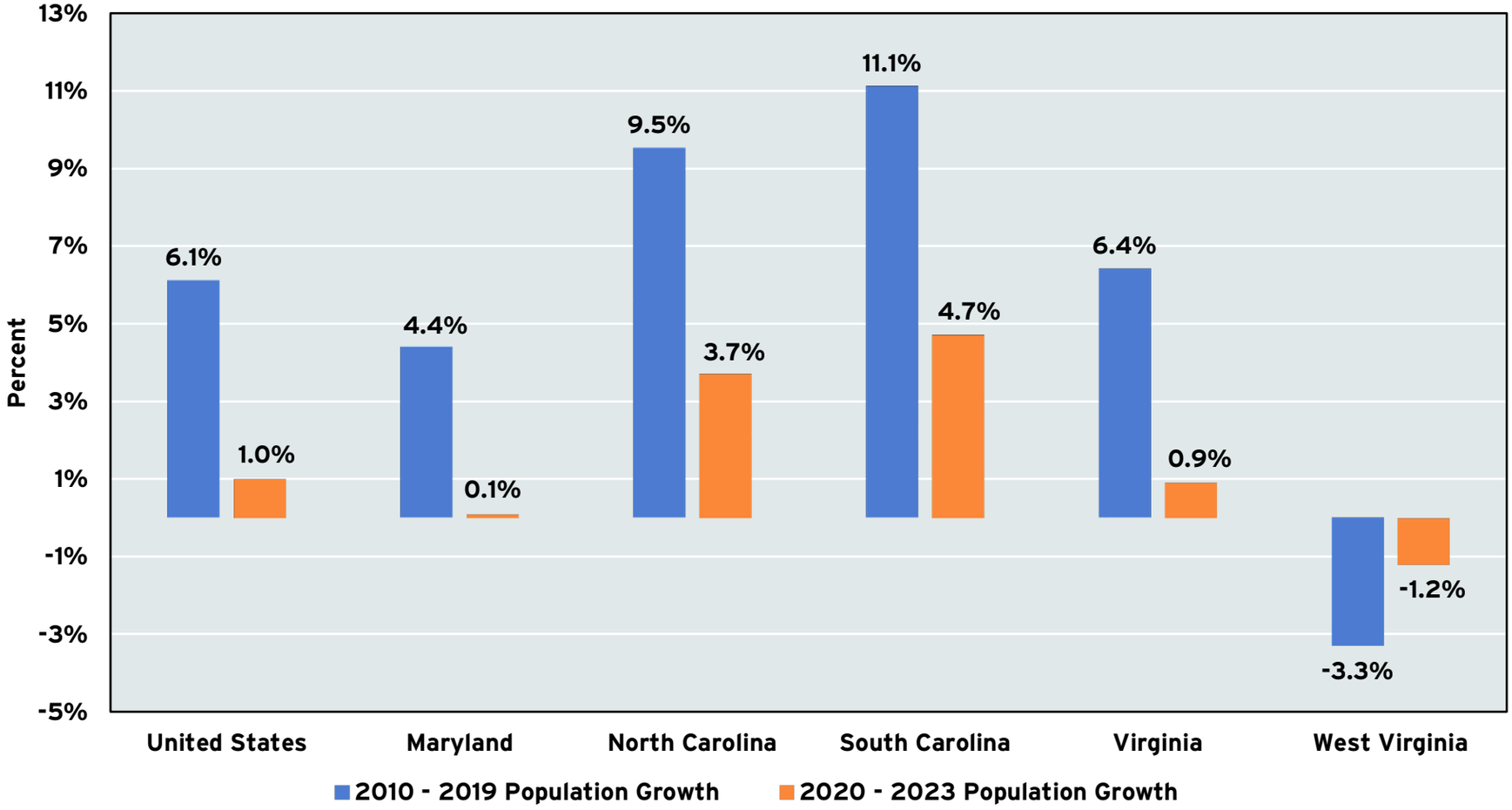
INDEX OF RESIDENT POPULATION
VIRGINIA AND THE UNITED STATES, 2010 - 2023



Source: United States Census Bureau, 2019 and 2023 Population Estimates (2023). Population estimates as of July 1st of the corresponding year.

GRAPH 3

CHANGE IN RESIDENT POPULATION
SELECTED STATES AND THE UNITED STATES, 2010 - 2019 AND 2020 - 2023



Source: United States Census Bureau, 2019 and 2023 Population Estimates (2023). Population estimates as of July 1st of the corresponding year.

Virginia's Median Age Increases

Graph 4 compares the median age of Virginia and the United States. In 2005, the median age of the resident population of the Commonwealth was 37.2 years, increasing to 39.3 years in 2023. In 2005, the median age of the resident population of the United States was 36.4 years, increasing by 2.8 years to 39.2 years in 2023. From 2005 to 2023, the median age of the state increased by 5.7% while the median age of the nation increased by 7.7%. Both Virginia and the nation are getting older, but Virginia has aged at a slower rate than the United States since 2005.

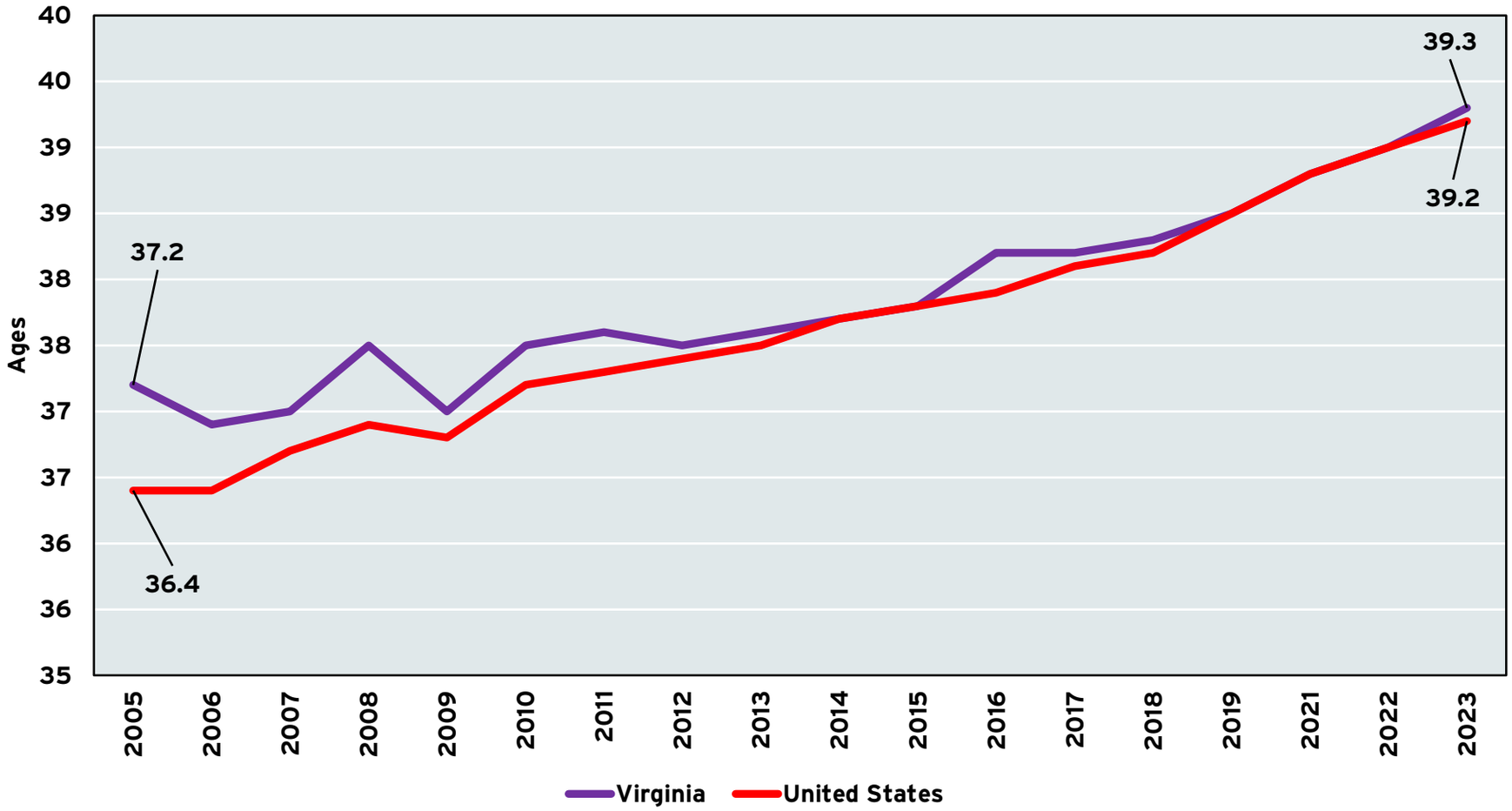
Graph 5 illustrates how the median age of the resident population has changed for Virginia, the nation, and a number of selected states from 2005 to 2023. In 2005, Virginia, with the median age of 37.2 years, was older than the nation (36.4 years), Maryland (37.1 years), North Carolina (36.2 years) and South Carolina (37.1 years) but younger than West Virginia (40.7 years). In 2023, Virginia remained older than the nation by 0.1 years and was younger than each of the selected states. Virginia's median age increased by 2.1 years from 2005 to 2023, an increase that was slower than Maryland (2.7 years), North Carolina (3.2 years), South Carolina (3.4 years), and the United States (2.8 years). The median age of the population in West Virginia and Virginia increased by 2.1 years from 2005 to 2023, but West Virginia started out older and remained older than the Commonwealth. We are aging as a population but not as swiftly as the nation or our neighbors.

Figure 1 presents median age estimates by independent cities and counties in Virginia from the U.S. Census Bureau's 2018 – 2022 ACS 5-year estimates.[5] Not surprisingly, the youngest localities in the Commonwealth tend to be the home of large colleges and universities. Lexington, which is the home of Washington and Lee University, had the lowest median age (22.7 years), followed by Radford (23.3 years) (home of Radford University), Williamsburg city (24.6 years) (home of William and Mary), Harrisonburg county (25.4 years) (home of James Madison University), Lynchburg city (28.4 years) (home of Liberty University), and Montgomery county (29.7 years) (home of Virginia Tech). As one moves from east to west across the Commonwealth, median age tends to rise, however, several counties stand out. In 12 counties, the median age of the resident population was 50 years or higher in 2022. Lancaster County (59.2 years) was the highest, followed by Northumberland County (59.0 years), Highland County (58.0 years), Middlesex County (54.9 years), and Mathews County (53.7 years).

5 The 2019 – 2023 ACS 5-year estimates were scheduled to be released on December 12, 2024 and unavailable at the time of writing.

GRAPH 4

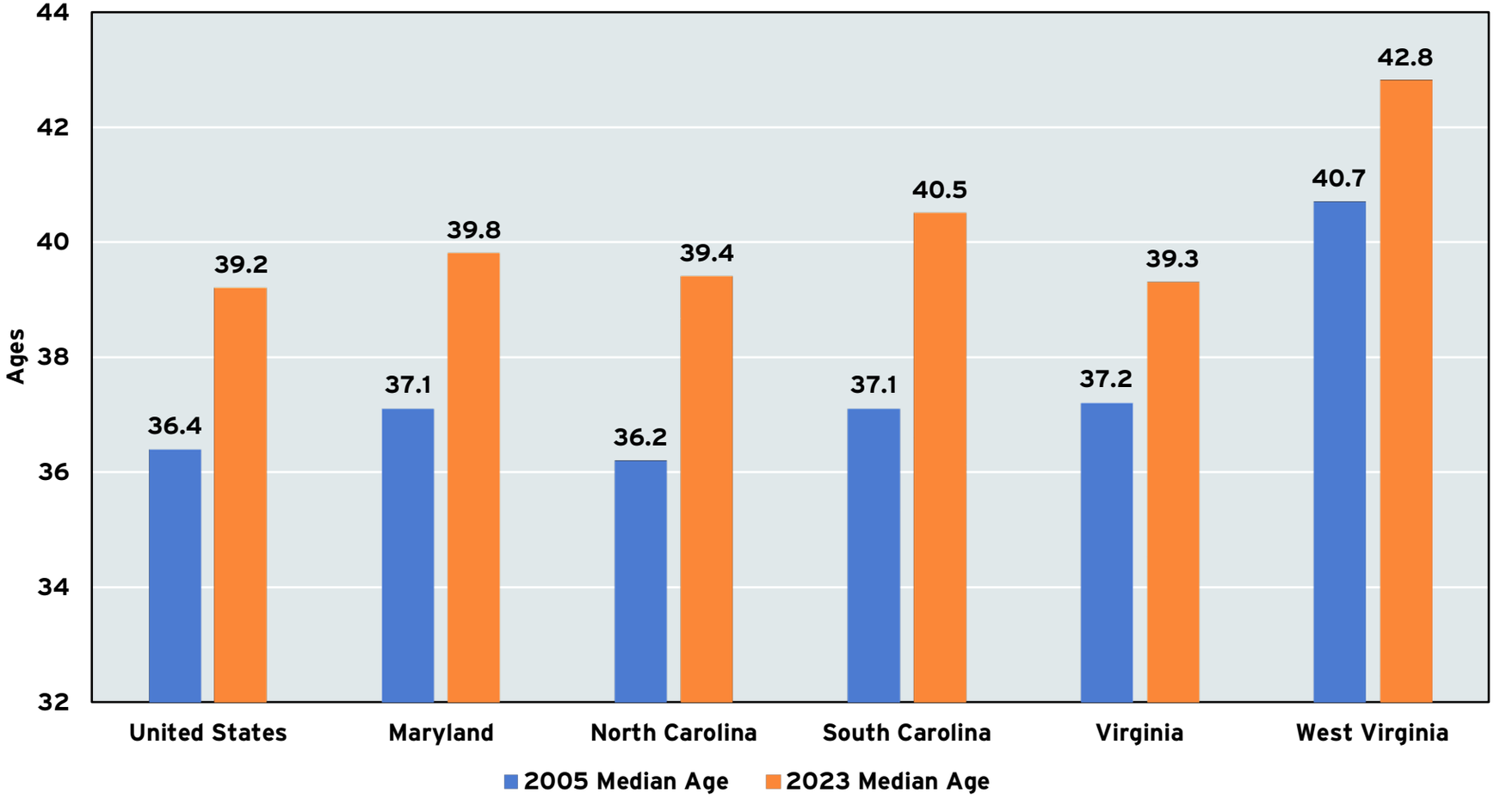
MEDIAN AGE OF THE RESIDENT POPULATION
VIRGINIA AND THE UNITED STATES, 2005 - 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates (2024), various years. *2020 estimates are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 5

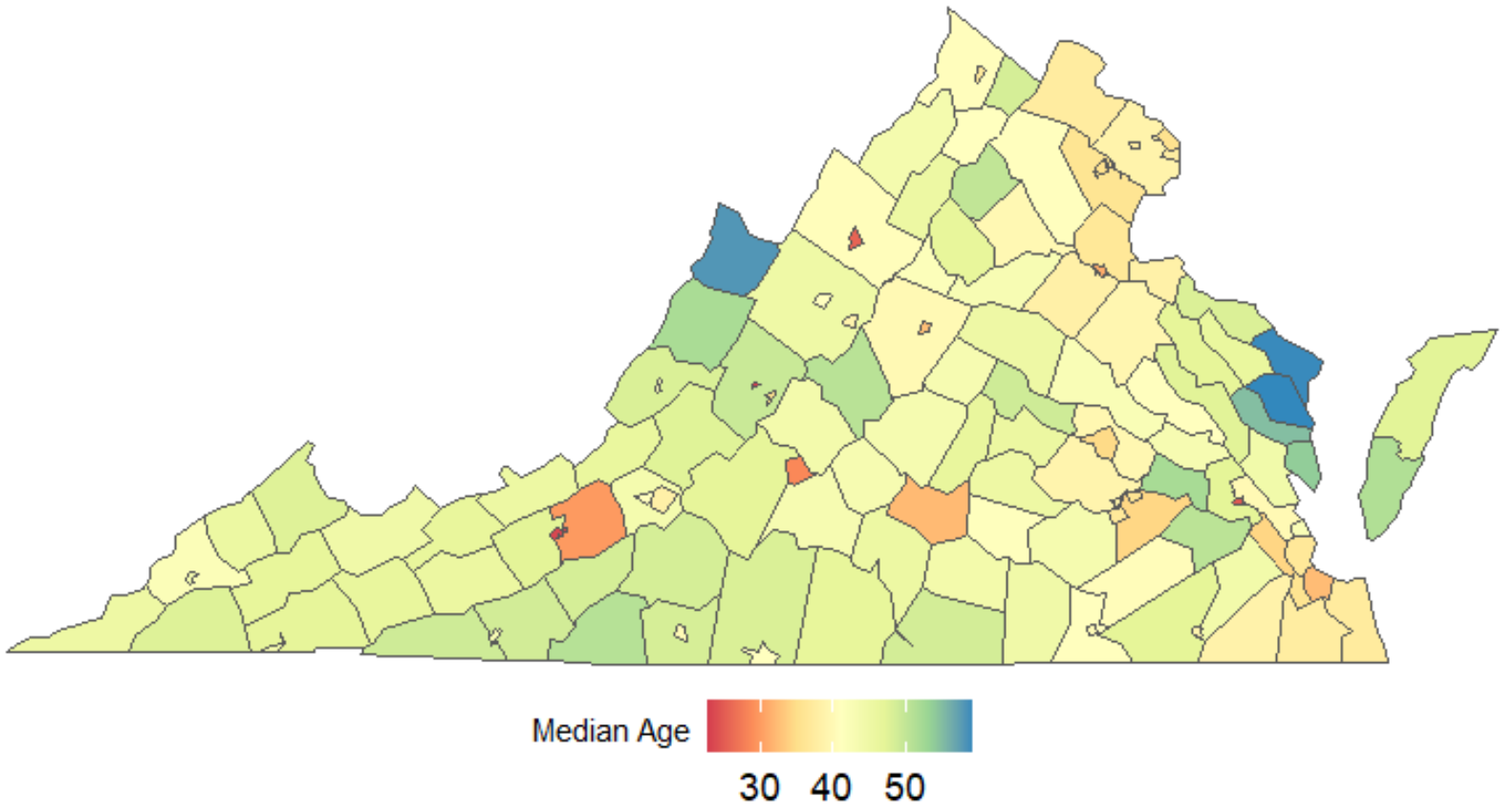
MEDIAN AGE OF THE RESIDENT POPULATION
SELECTED STATES AND THE UNITED STATES, 2005 AND 2023



Source: United States Census Bureau, 2005 and 2023 American Community Survey 1-Year estimates (2024).

FIGURE 1

MEDIAN AGE
VIRGINIA INDEPENDENT CITIES AND COUNTIES, 2018 - 2022



Source: U.S. Census Bureau, 2018 – 2022 American Community Survey, 5-Year Estimates (2023).

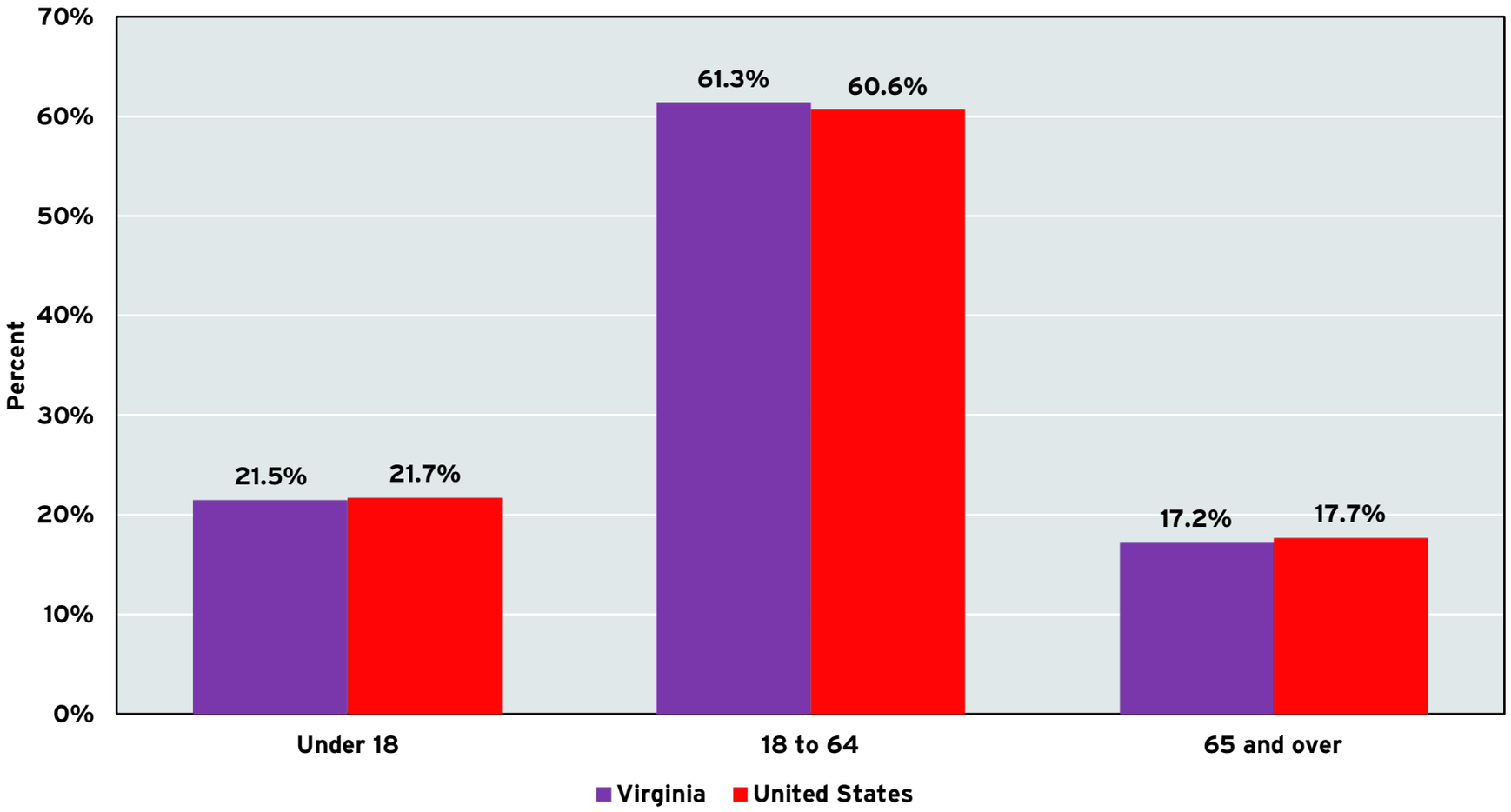
The Population Age Distribution: Virginia

In Graph 6, we can see that the Commonwealth had a slightly lower proportion of residents under the age of 18 (21.5%) than the nation (21.7%) in 2023. Adults aged 18 to 64 were 61.3% of Virginia's population in 2023, almost one percentage point higher than the nation (60.6%). When we turn to the population aged 65 and older, we observe that the share of the resident population is lower in Virginia (17.2%) compared to the nation (17.7%).

Graph 7 breaks down the resident population of Virginia and the United States in 2023 by age decile. The Commonwealth's and nation's distributions roughly mirror each other. There is no appreciable difference in the shares of the population for those deciles under the age of 40. Virginia's share of the resident population for the ages 40 to 49, and 50 to 59 deciles were 0.4 and 0.3 percentage points higher, respectively, than the nation's in 2023. The United States, on the other hand, had higher shares for the ages 60 to 69 decile (0.2 percentage points higher), ages 70 to 79 decile (0.2 percentage points higher), and ages 80 and higher decile (0.2 percentage points higher). It should be no surprise that the median age in Virginia has 'caught up' to the nation as the distribution of the two populations appears to be converging over time.

GRAPH 6

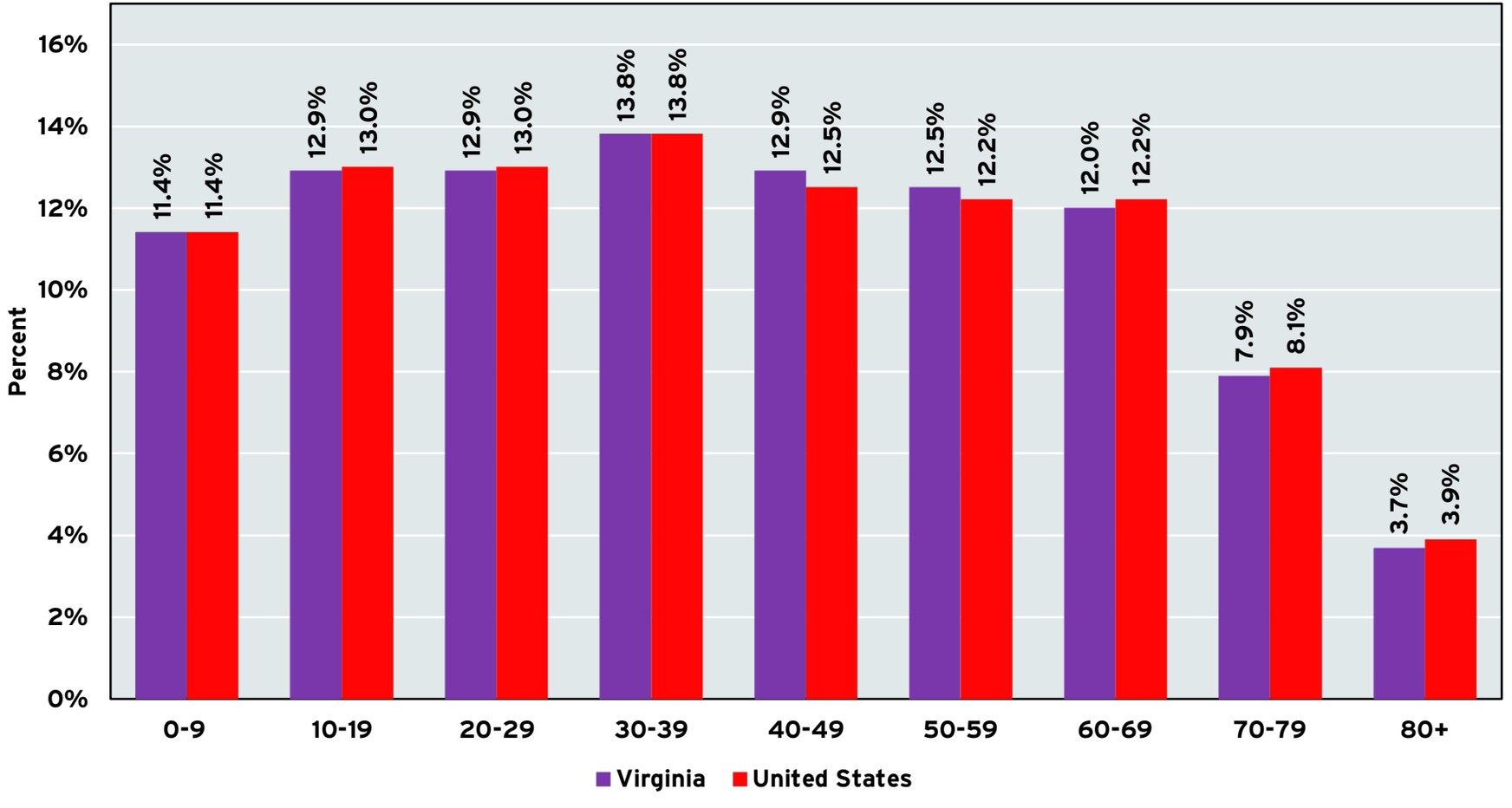
DISTRIBUTION OF RESIDENT POPULATION BY BROAD AGE GROUP
VIRGINIA AND THE UNITED STATES, 2023



Source: United States Census Bureau, American Community Survey, 2023 1-Year Estimates (2024).

GRAPH 7

DISTRIBUTION OF RESIDENT POPULATION BY AGE GROUP
VIRGINIA AND THE UNITED STATES, 2023



Source: United States Census Bureau, American Community Survey, 2023 1-Year Estimates (2024).

Residents Aged 65 and Above in Virginia

Graph 8 illustrates the resident population of Virginia aged 65 and above from 2005 to 2023. In 2005, according to the U.S. Census Bureau's American Community Survey, approximately 11.2% of the resident population was aged 65 and over, rising to approximately 12.2% of the population by 2010. By 2019, the aged 65 and above population was 15.9% of the population. According to the 2023 ACS 1-year estimates, there were approximately 1,498,931 residents in the Commonwealth aged 65 and above, about 17.2% of the overall population.

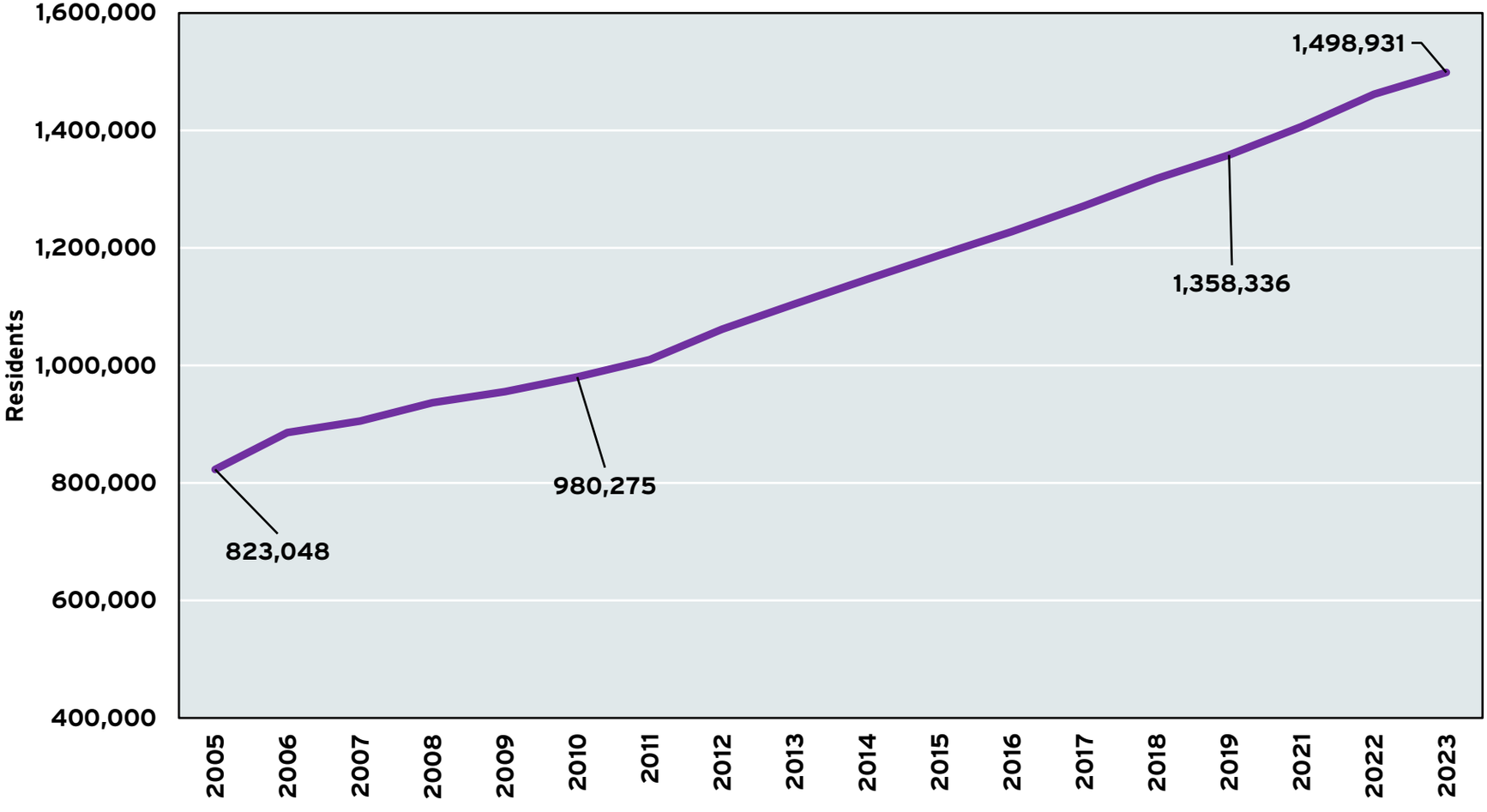
In Graph 9, we observe that, from 2005 to 2023, the increase in Virginia's population aged 65 and over outpaced the nation. Over this period, the aged 65 and over population in the Commonwealth grew by 82.1% relative to 70.6% for the United States. If we focus on more recent data, the same story holds true. From 2019 to 2023, the resident population aged 65 and older in Virginia increased by 10.4%, approximately 0.7 percentage points higher than the nation. In other words, while the population aged 65 and older increased for the state and the nation, it increased more rapidly in Virginia from 2005 to 2023.

In Graph 10, we turn our attention to Virginia, several neighboring states, and the nation. In 2005, the aged 65 and older population in Virginia was 12.2% of the resident population, rising to 17.2% in 2023. In 2005, Virginia's share of the aged 65 and older population was lower than the nation and selected states. Between 2005 and 2023, Virginia's share increased by 5.0 percentage points, 0.4 percentage points higher than the nation and 0.3 percentage points higher than North Carolina. West Virginia (5.4 percentage-point increase) and South Carolina (5.6 percentage-point increase) saw the largest increases among the selected states in the share of the resident population that was aged 65 and over.

Figure 2 illustrates the share of the resident population aged 65 and over for Virginia's independent cities and counties using estimates from the U.S. Census Bureau's 2018 – 2022 ACS 5-year estimates. Seven of the 10 localities with the lowest shares of the aged 65 and over population were in Northern Virginia. Radford had the lowest share of residents aged 65 and over at 9.3%, followed by Harrisonburg (9.6%), Manassas Park (9.8%), Loudoun County (10.0%), Prince Wiliam County (10.5%), Manassas (10.7%), Stafford County (11.0%), Fredericksburg (11.2%), Arlington County (11.3%), and Norfolk (12.3%). Radford, Harrisonburg, and Norfolk have major colleges or universities and Norfolk is also home to a significant number of active-duty servicemembers and their families. In general, as one moves from east to west, the share of the resident population aged 65 and old increases. In five counties, more than 3 in 10 residents were aged 65 and over from 2018 to 2022: Lancaster County (39.4%), Highland County (36.9%), Northumberland County (36.8%), Middlesex County (33.6%), and Mathews County (30.7%).

GRAPH 8

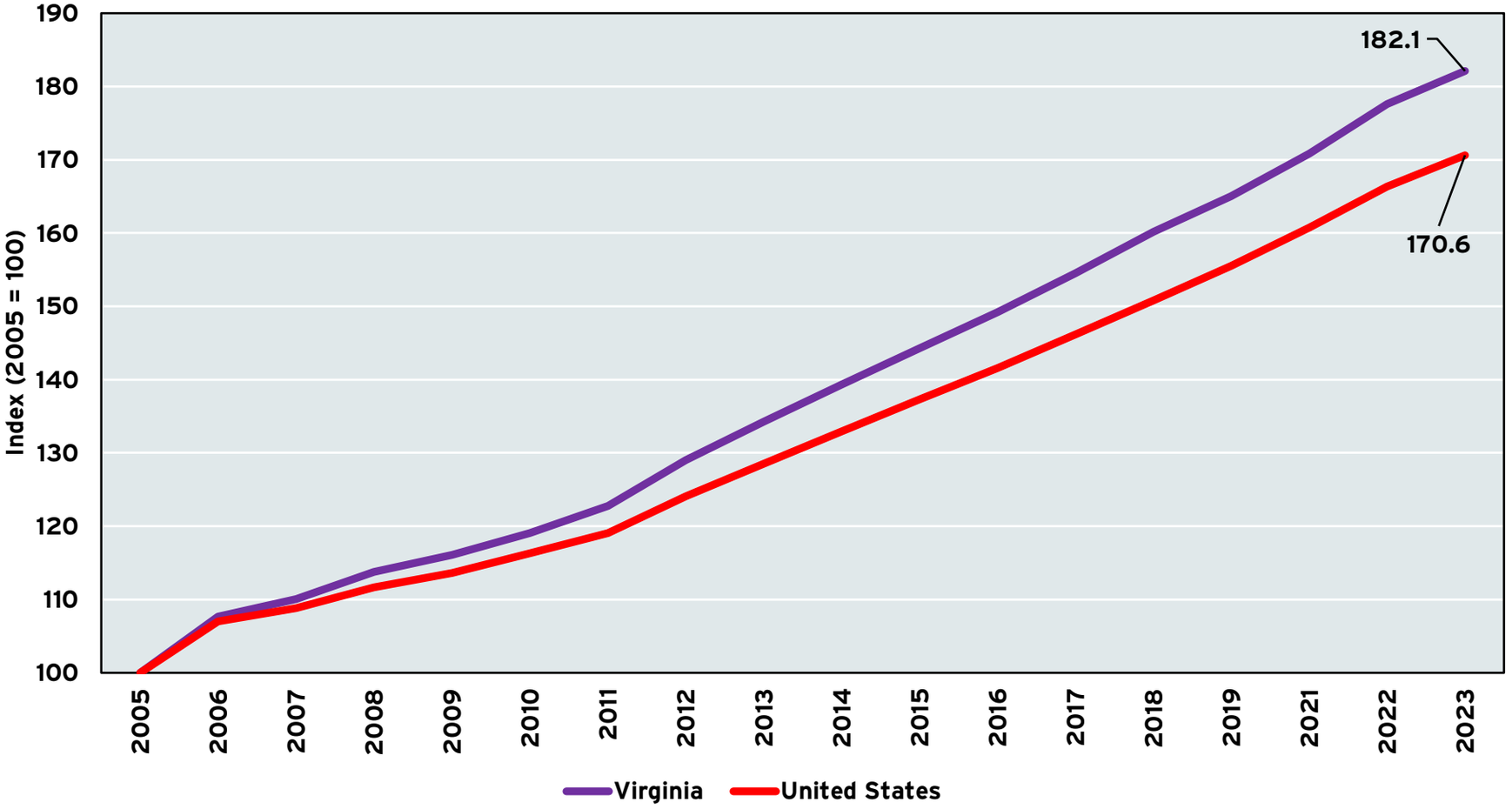
RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA, 2005 - 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2023). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 9

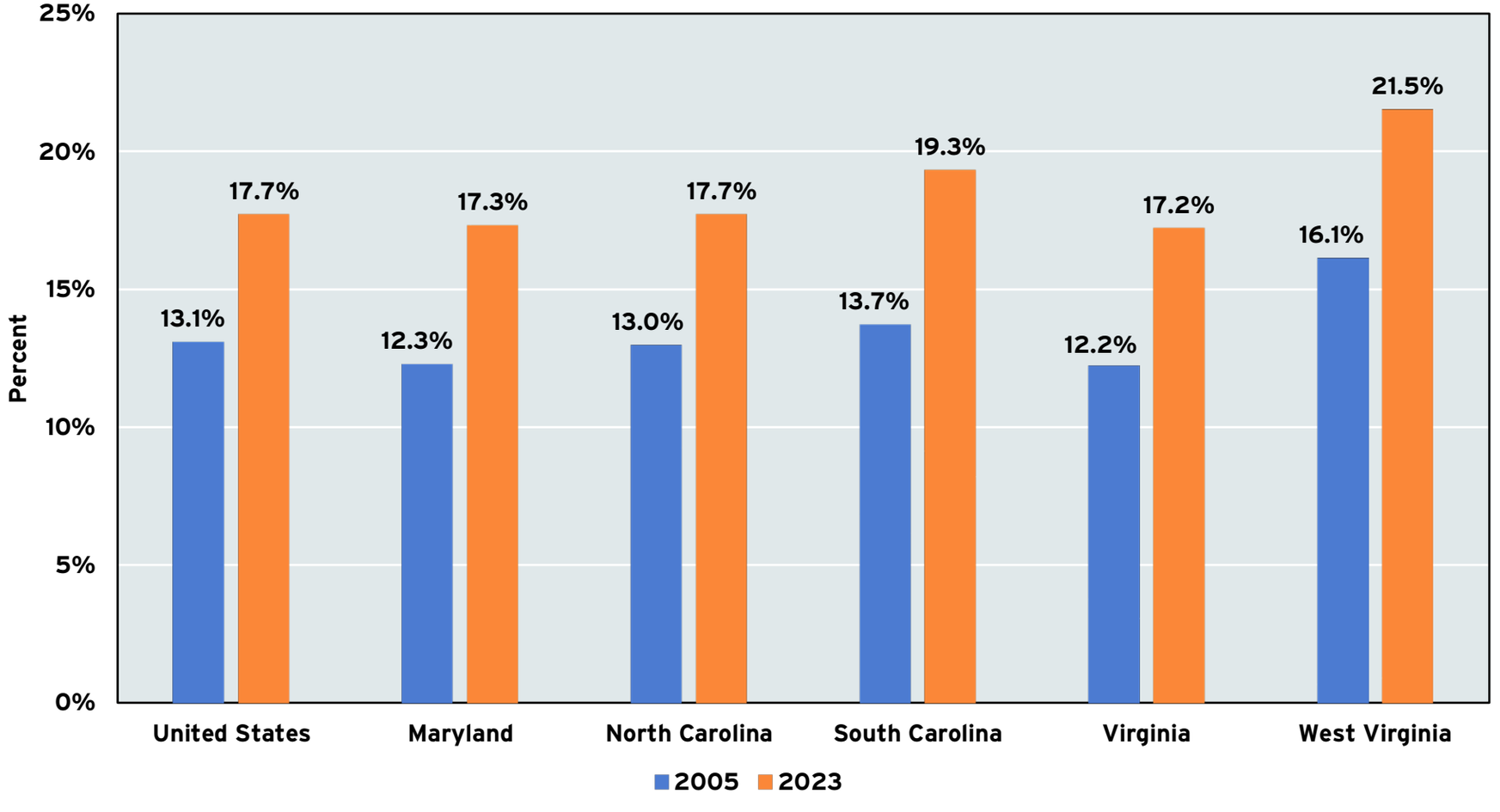
INDEX OF POPULATION GROWTH
RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA AND THE UNITED STATES, 2005 – 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 10

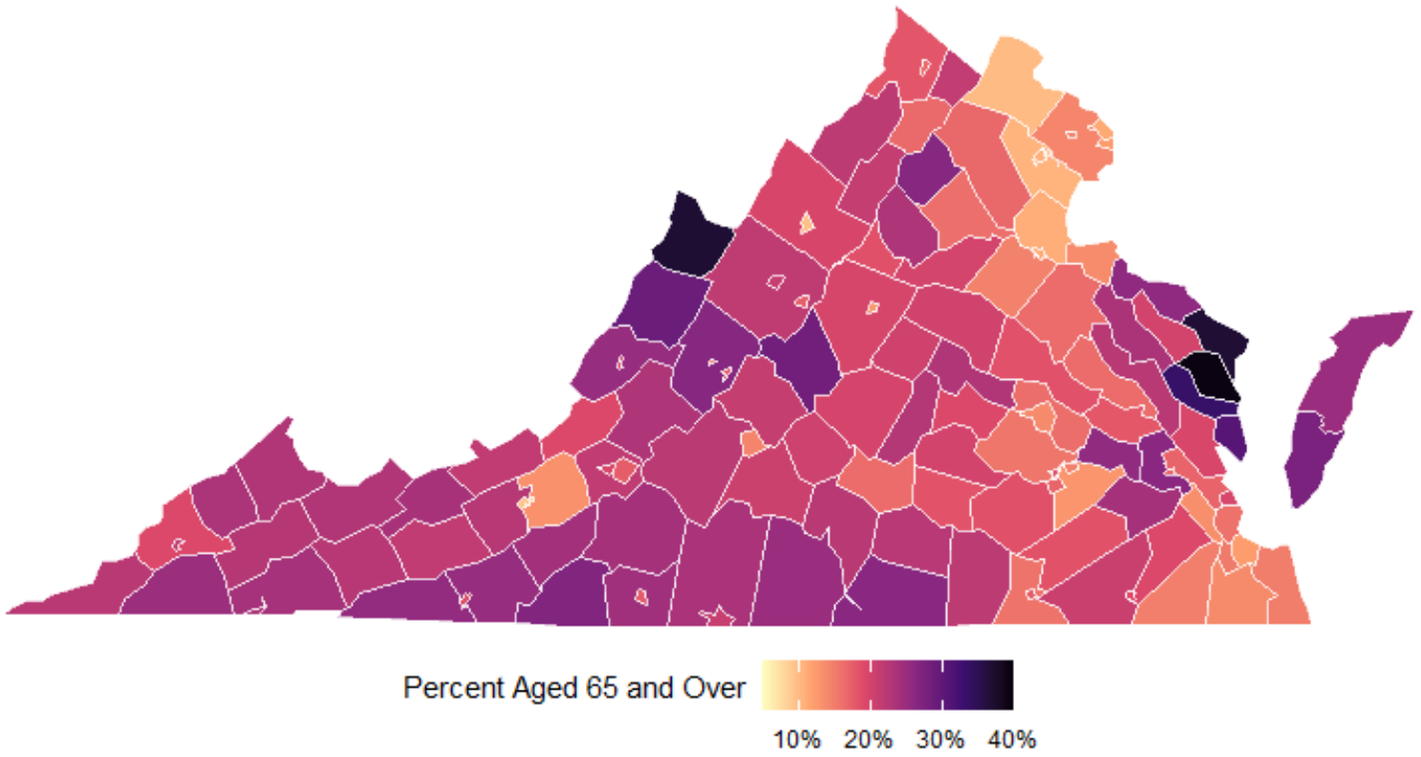
POPULATION AGED 65 AND OVER AS A PERCENT OF TOTAL POPULATION
SELECTED STATES AND THE UNITED STATES, 2005 AND 2023



Source: United States Census Bureau, 2005 and 2023 American Community Survey 1-Year Estimates, Population 65 Years and Over in the United States subject tables (2024).

FIGURE 2

PERCENT OF RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA INDEPENDENT CITIES AND COUNTIES, 2018 - 2022



Source: U.S. Census Bureau, 2018 – 2022 American Community Survey, 5-Year Estimates (2023).

Who Are Aged 65 and Older in Virginia?

In Graph 11, we break down the resident population aged 65 and above in Virginia by sex.[6] The female population for this age group was consistently larger than the male age group, as one might expect given the longer life expectancy of the female population. The sex ratio, which is equal to ratio of the number of males to females, was 0.74 in 2005, rising to 0.81 in 2023. In other words, while the male and female population in Virginia have grown over time, the male population has grown more rapidly than the female population.

In Graph 12, we present an index of the change in the male population aged 65 and over for Virginia and the United States from 2005 to 2023. Over this period, the male population in the state grew by 91.6%. Nationally, the male population aged 65 and above grew by 80.5% from 2005 to 2023.

When we compare Graph 12 and Graph 13, the difference in growth profiles between the male and female populations aged 65 and above becomes starker. First, from 2005 to 2023, the female resident population in Virginia aged 65 and above grew by 75.1% while the same population group for the nation increased by 63.2%. Even though the female population in Virginia aged 65 and above increased from 2005 to 2023, its total increase was still 16.5 percentage points below that of the male population of the same age group.

Table 1 lends insight into how the resident population aged 65 years and older has grown from 2005 to 2023 in Virginia. Over this period, the total population of the state increased at an average annual rate of 1.0% while the age 65 and older population rose at an average annual rate of 3.4%. The fastest growing segment of the population was the aged 70 to 74 years group (3.8% annual rate), followed by the 65 to 69 age group (3.7% annual rate), and the aged 85 years and above group (3.3% annual rate). The slowest growing age group, those aged 80 to 84 years, still grew at more than double (2.2%) the average rate for the resident population of the Commonwealth.

Graph 14 shows how the male and female population of each age group changed in Virginia from 2005 to 2023. First, while the male and female populations have each grown over this period, each male age group grew faster than their female counterparts except for the aged 70 to 74 years age group where the average annual growth rates were about equal. Second, each of male and female age groups aged 65 and older grew faster than their counterparts for the entire population.

TABLE 1

PERCENT CHANGE IN RESIDENT POPULATION BY SELECTED AGE GROUP VIRGINIA, 2005 - 2023*

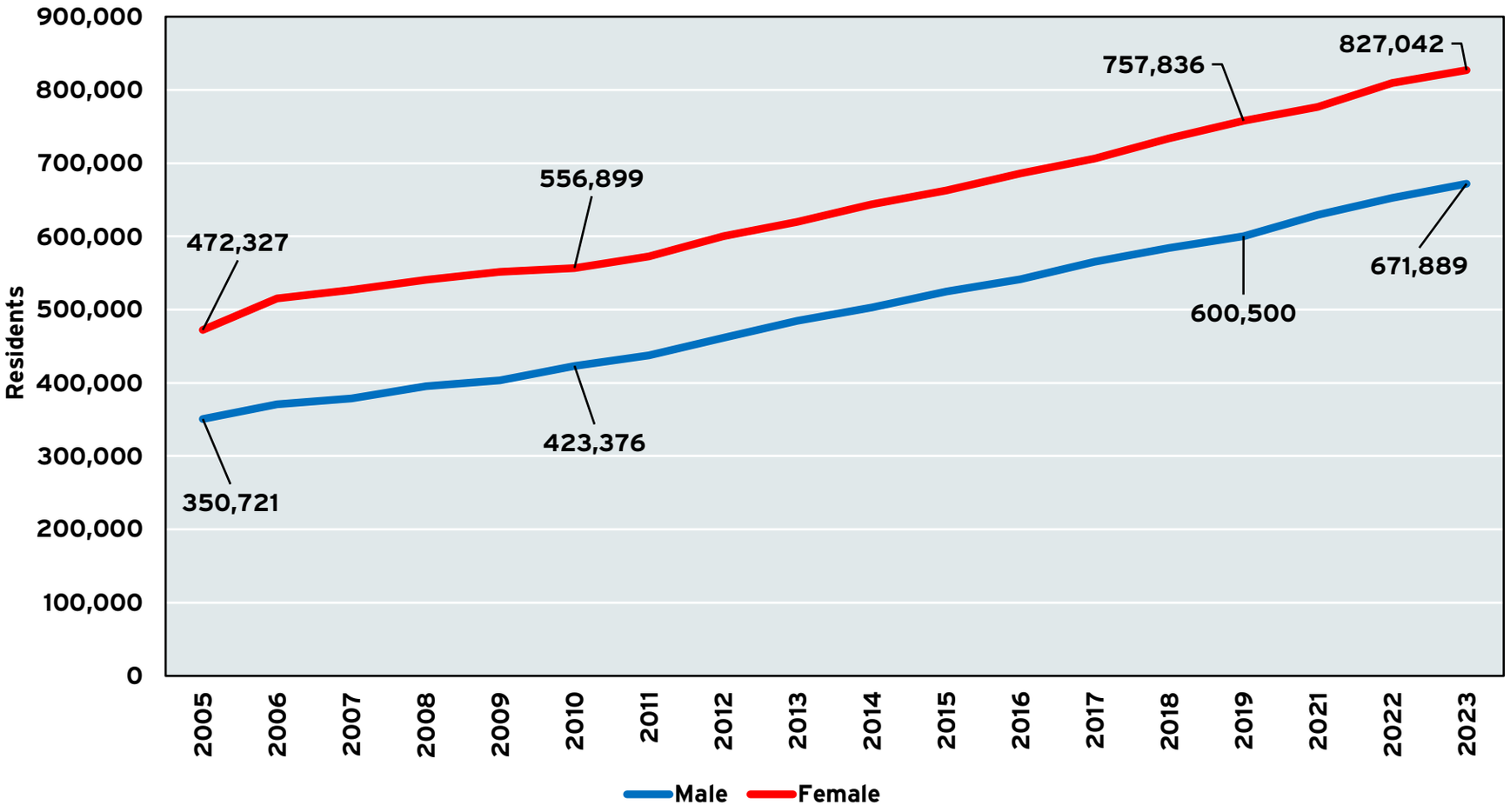
Age Group	2005 Population	2023 Population	Average Annual Growth Rate
65 to 69 Years	252,750	484,054	3.7%
70 to 74 Years	204,125	396,914	3.8%
75 to 79 Years	165,113	293,416	3.2%
80 to 84 Years	119,416	177,990	2.2%
85 Years and Above	81,644	146,557	3.3%
Age 65 and Above	823,048	1,498,931	3.4%
Total Population	7,332,608	8,715,698	1.0%

Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024).
*2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

6 According to the U.S. Census Bureau, the American Community Survey asks a question about the sex of each respondent. This information is used to create statistics about males and females in the population and to provide other data, such as education and occupation by sex. The survey instrument includes a question about current sex and respondents are instructed to respond either "male" or "female" based on how they currently identify their sex. We follow the Census Bureau's conventions in this regard. More information is available at: https://www.census.gov/acs/www/about/why-we-ask-each-question/sex/

GRAPH 11

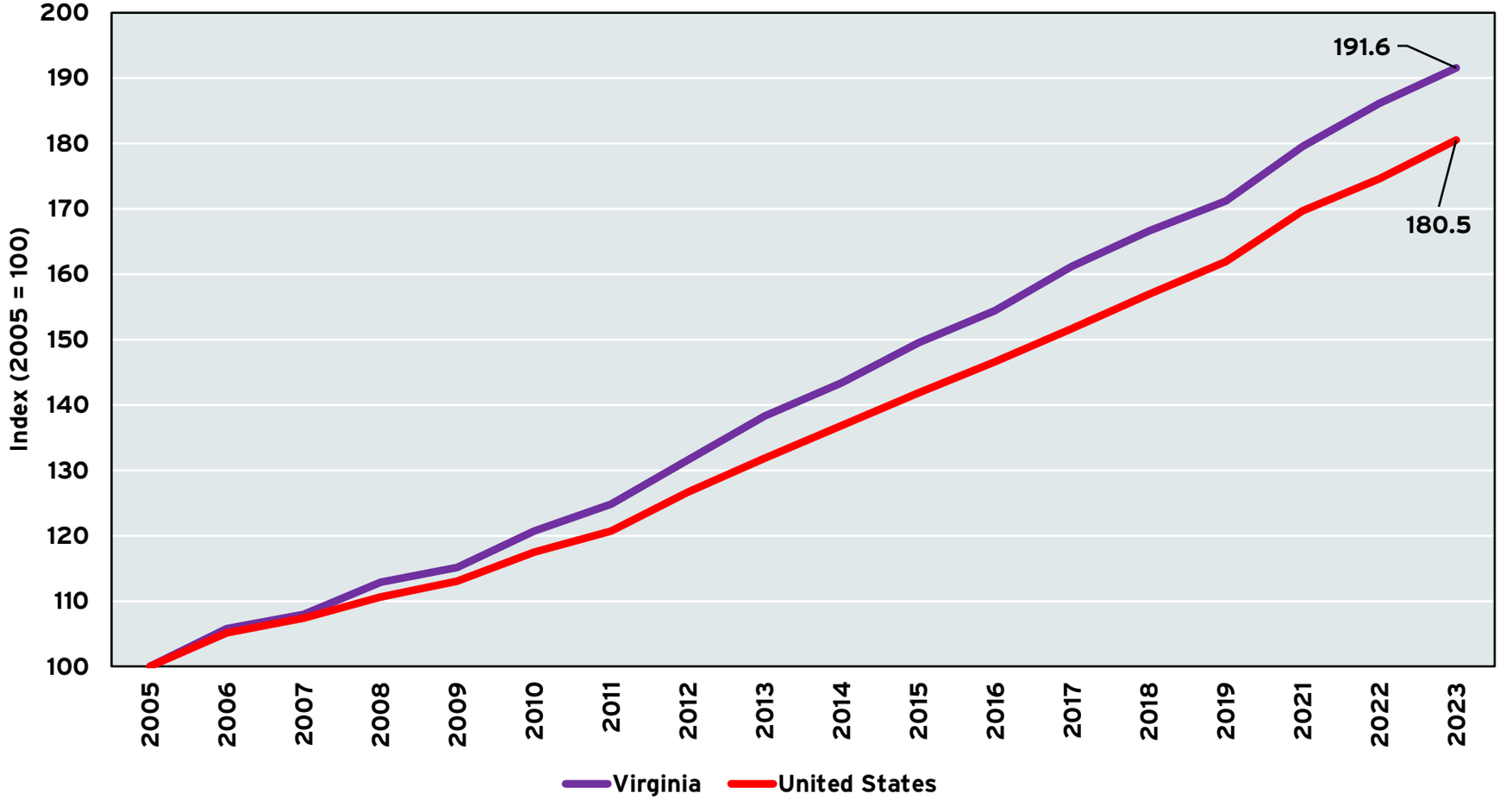
RESIDENT POPULATION AGED 65 AND ABOVE BY SEX
VIRGINIA, 2005 - 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 12

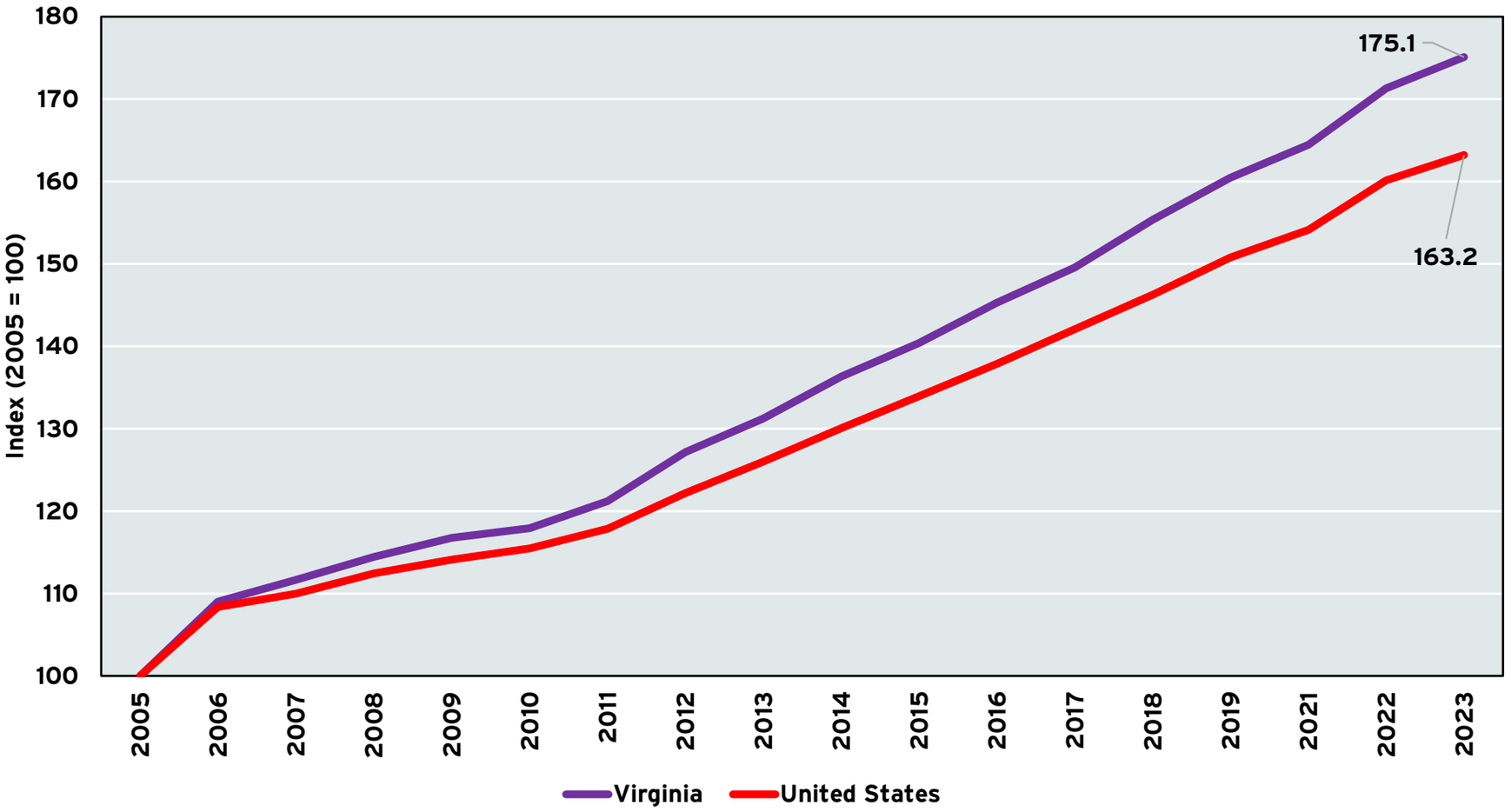
INDEX OF POPULATION GROWTH
MALE RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA AND THE UNITED STATES, 2005 – 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 13

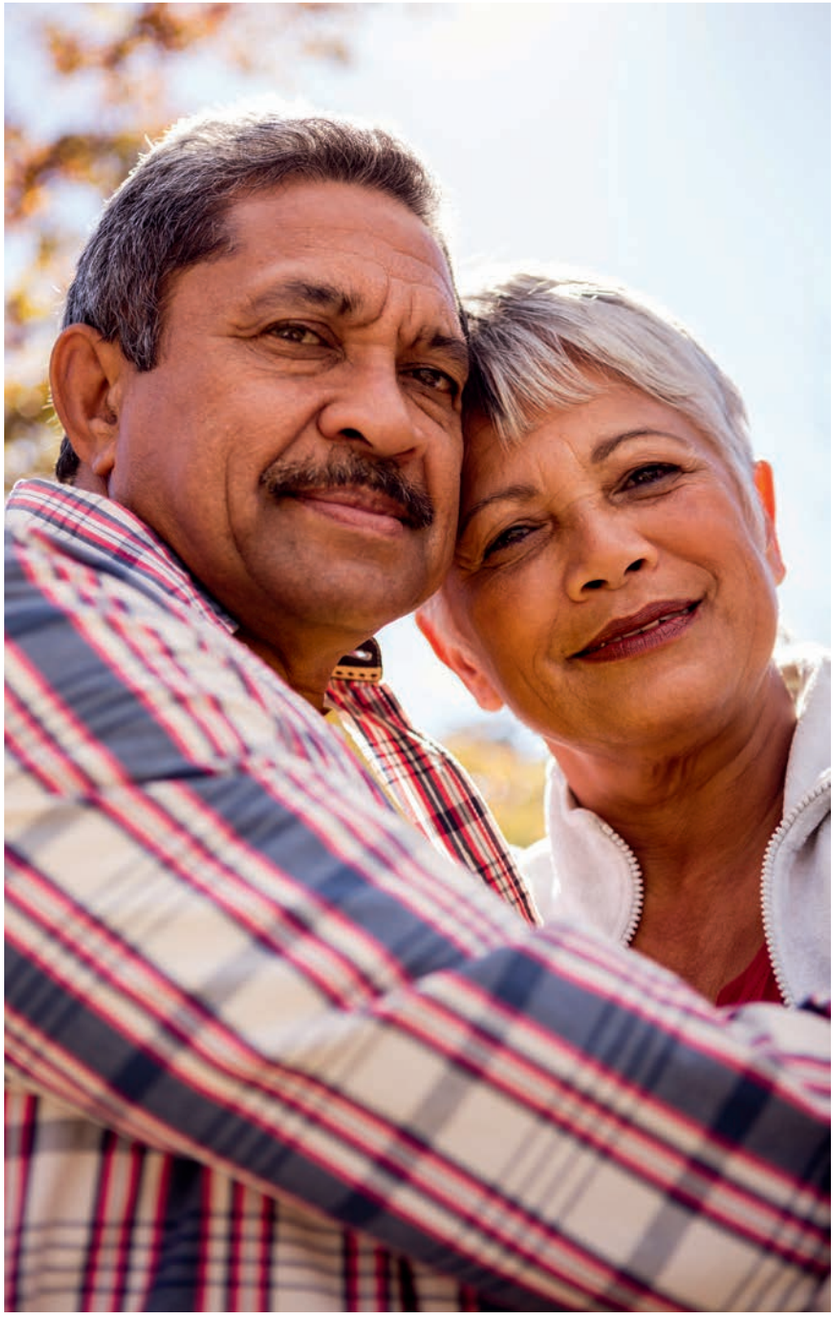
INDEX OF POPULATION GROWTH
FEMALE RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA AND THE UNITED STATES, 2005 – 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

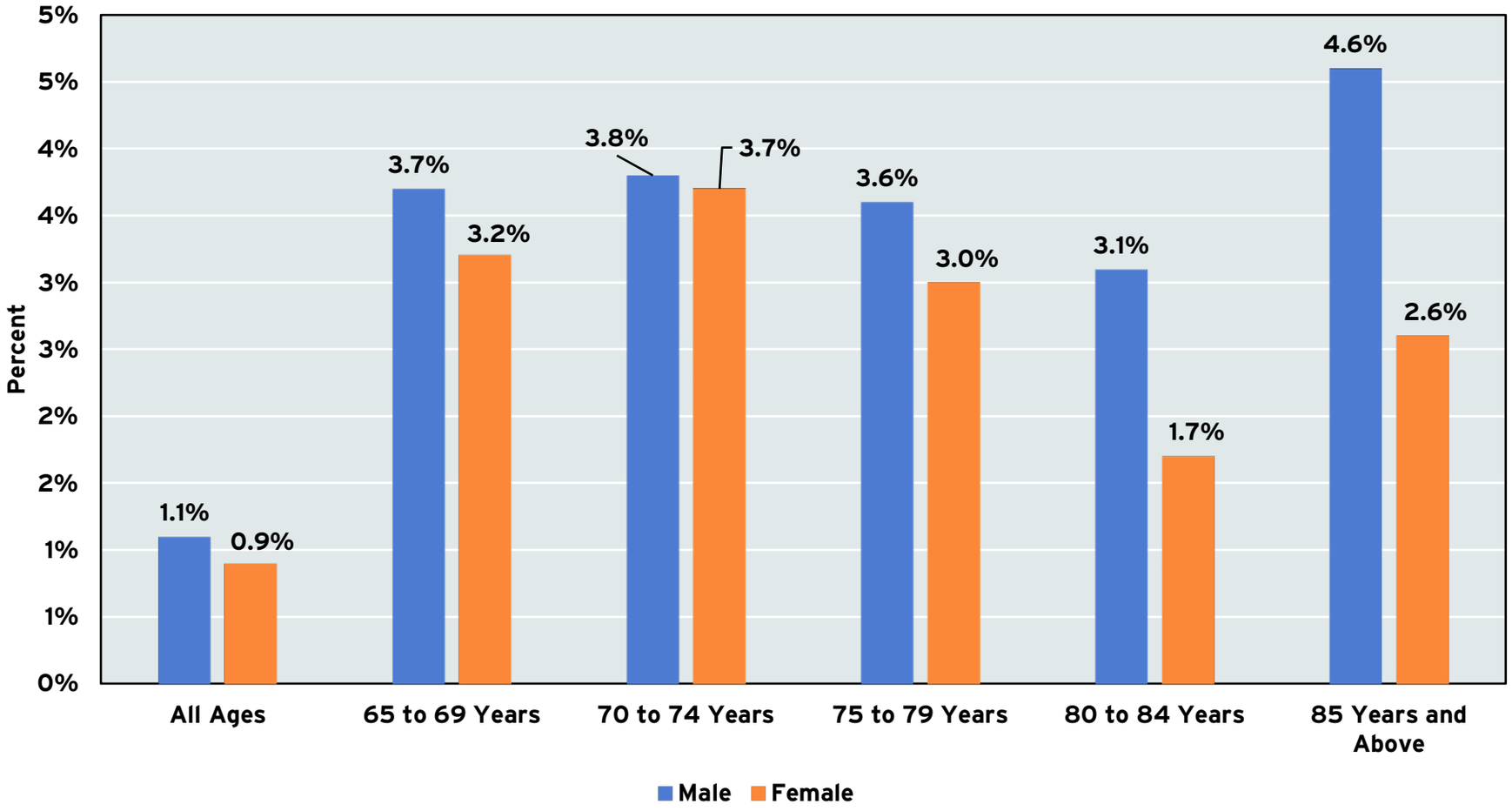
Let's dive into the 85 years and above age group and compare Virginia and the United States in Graph 15. The resident population of this age group grew faster in Virginia (3.3%), on average, from 2005 to 2023 than the nation (2.7%). We note that the male population aged 85 and older is growing faster for the state and nation than the female population of the same group. On average, the male population aged 85 and older in Virginia grew at an annual rate of 4.6% over the period compared to 3.3% for the United States. The female population of the age group in Virginia grew at an annual rate of 2.6%, 0.2 percentage points higher than the nation but 2 percentage points less than their male counterparts in Virginia.

Our discussion highlights the fact that Virginia has a lower share of the resident population that is aged 65 and older than the nation but that Virginia's aged 65 and older population is growing faster than the nation. If we dive into the age groups, residents of the Commonwealth aged 85 and older are growing faster than the nation, that is, Virginians are living longer and 'pulling up' the median age of the state. As the share of Virginians aged 65 and older continues to grow, the demands on the state and local governments will only increase. Are we preparing for the growth in this population and its demands? To understand how this population may differ from the population at large, we need to highlight some of the characteristics of the population in Virginia.



GRAPH 14

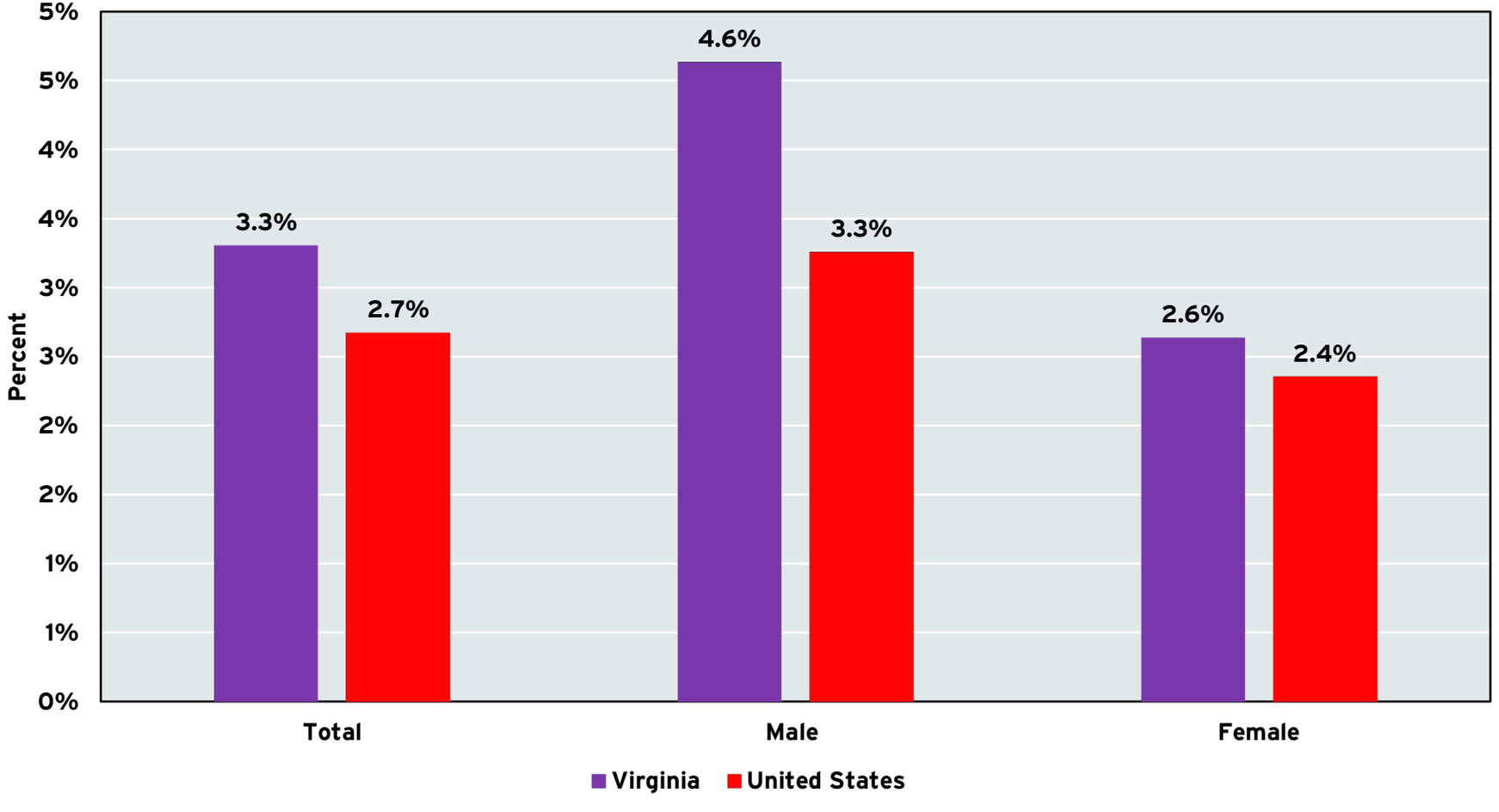
AVERAGE ANNUAL GROWTH IN POPULATION BY AGE GROUP AND SEX
RESIDENT POPULATION AND RESIDENT POPULATION AGED 65 AND ABOVE
VIRGINIA, 2005 - 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

GRAPH 15

AVERAGE ANNUAL GROWTH IN RESIDENT POPULATION BY SEX
POPULATION AGED 85 YEARS AND ABOVE
VIRGINIA AND THE UNITED STATES, 2005 - 2023*



Source: United States Census Bureau, American Community Survey 1-Year estimates, various years (2024). *2020 estimates are not available for metropolitan areas and are experimental for the state and nation. We exclude these experimental estimates from the graph and our discussion.

Selected Characteristics of the Population Aged 65 and Above in Virginia

Graph 16 illustrates how the resident population of Virginia is distributed by race for the entire population and the aged 65 and over population in 2023.[7] According to the 2023 ACS 1-year estimates, approximately 59.8% of the resident population of the Commonwealth identified as white compared to 72.6% of the aged 65 and over population. While 18.4% of the population identified as Black or African American, about 16.2% of those aged 65 and over identified as Black or African American in 2023. Of note is that while 9.8% of the population self-identified as two or more races in 2023, only 3.9% of the population 65 and over identified in the same category.

How does the population aged 65 and above compare to the total population? As illustrated in Table 2, an individual who is aged 65 and over in the state was more likely to be a veteran than the population at large. This should not be surprising given that the Commonwealth has one of the highest percentages of veterans among the states. It also should not be surprising that, when asked by the Census Bureau if they have a disability, almost 1 in 3 individuals in Virginia aged 65 and over responded in the affirmative. For the general population, the disability rate was 12.8% in 2023. Again, this is not surprising as disability rates tend to be positively correlated with age. It is equally important to note that as the share of the adult population that is 65 and older has increased, this rise also likely translates into an increased demand for services associated with disabilities.

From a labor market perspective, approximately 64.6% of the civilian resident population aged 16 and older participated in the labor force (working or actively looking for work) in 2023, a rate that was about 3 times higher than the population aged 65 and above. While not a shattering observation, the data also highlight an interesting fact about those older adults who decide to participate in the labor force: they are less likely to be unemployed than the general population. The reported unemployment rate in 2023 for the working-age population was 3.7% compared to 2.1% for the population aged 65 and above. For those older adults who decided to work, they did not appear to have difficulties in finding gainful employment.

TABLE 2

SELECTED CHARACTERISTICS OF THE RESIDENT POPULATION AND POPULATION AGED 65 AND OLDER VIRGINIA, 2023

Characteristic	Resident Population	Population Aged 65 and Older
Veteran Status	9.1%	15.9%
Disability Status	12.8%	30.5%
In Labor Force	64.6%	21.0%
Employed	62.2%	20.6%
Unemployed	3.7%	2.1%
Below 100% of Poverty Level	10.2%	9.5%
100% to 149% of Poverty Level	6.2%	7.1%
Same Residence 1 Year Ago	87.0%	94.5%
Owner-Occupied Housing	67.8%	81.8%

Source: United States Census Bureau, American Community Survey 2023 1-Year estimates (2024).

7 The Census Bureau follows guidance from the Office of Management and Budget regarding standards for race or ethnicity. The Census Bureau asks individuals to self-identify their race, and individuals may identify with more than one race. For more information, see https://www.census.gov/topics/population/race/about.html.

In 2023, about 1 in 10 of residents of Virginia had incomes below 100% of the federal poverty level compared to 9.5% of the aged 65 and over population. Approximately 6.2% of all individuals had incomes between 100% and 149% of the federal poverty level compared to 7.1% of older adults. Consequently, 83.6% of Virginia's population had incomes at or above 150% of the poverty level in 2023, compared to 83.4% of the population aged 65 and above.

The older population in Virginia is more likely to own their home and less likely to move residences. In 2023, 94.5% of Virginia residents aged 65 and over were in the same residence that they were in the previous year. The homeownership rate was also higher for this age group, with 81.8% occupying their own home compared to 67.8% of the state's resident population. We note that the percentage of homeowners that were considered housing cost-burdened was higher for the older population (24.3%) than the overall population (20.8%).[8] Turning to residents who rent, we observe a similar phenomenon. In 2023, approximately 53.8% of renting households by someone aged 65 and over were rental-cost burdened compared to 57.3% of the population. One reason may be that older households may be less willing (or able) to work and thus are more reliant on retirement income and housing costs have outpaced the growth of Social Security (and many other forms of income) over the last decade.

Median Household Income

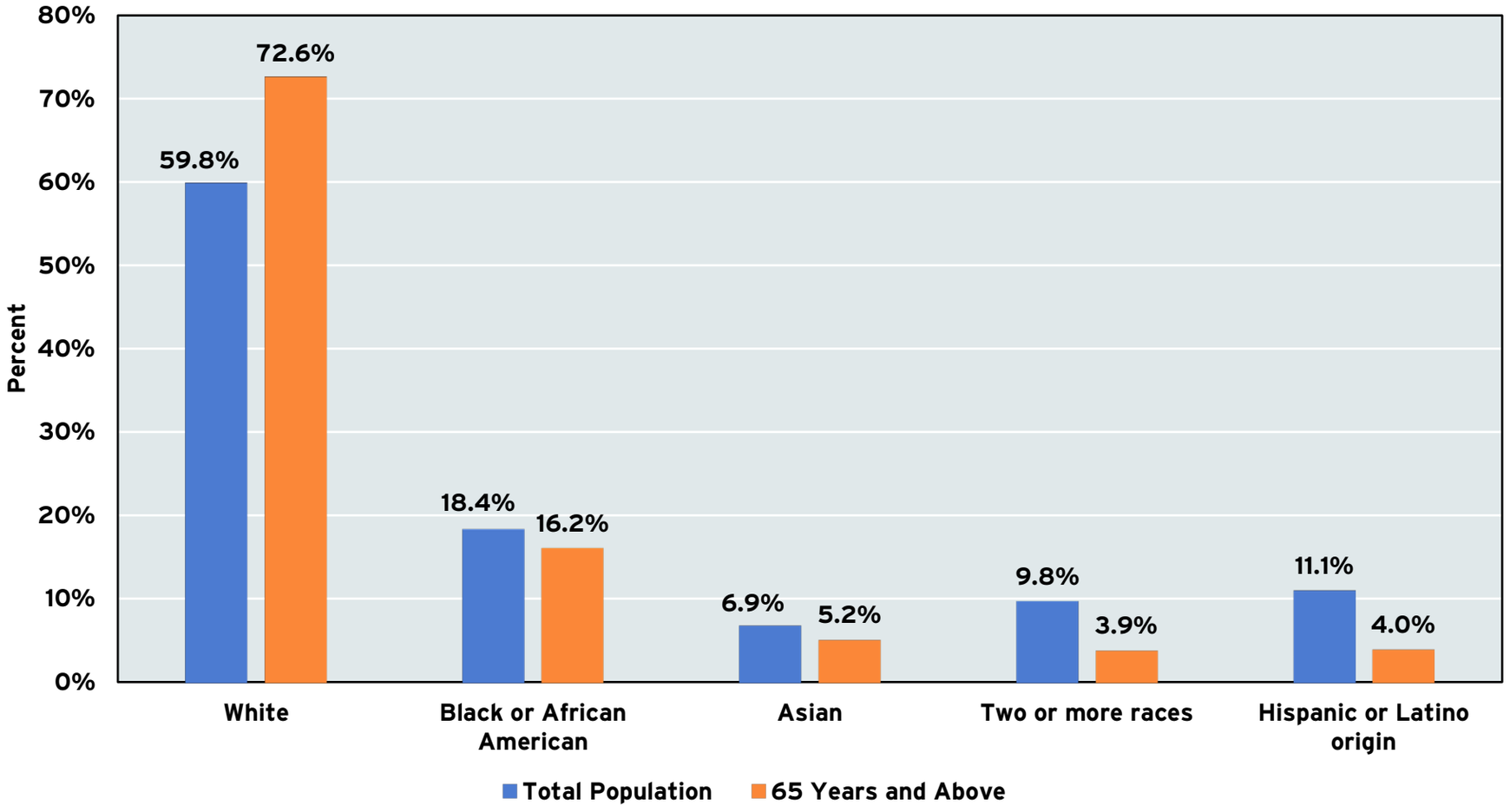
In 2023, median household income in Virginia was $89,931. Graph 17 depicts the distribution by income group of median household income in 2023. Approximately 13.0% of households in the Commonwealth had household incomes less than $25,000 in 2023. On the opposite end of the spectrum, 45.2% of households had household incomes greater than $100,000 in 2023.

How did household income vary by age group in 2023? Graph 18 displays median household income in Virginia by the age of householder. Households aged 45 to 64 years, who are typically in their highest earning years, not surprisingly, had the highest level of median household income at $110,074. The youngest households, as one might expect, had the lowest median household income at $50,670. The median household headed by someone aged 65 and over had an income of $64,938. In other words, given that median household income for Virginia in 2023 was $89,931, the median older household tended to earn less than the median household in the Commonwealth.

8 The housing cost burden is estimated as selected owner monthly costs as a percentage of household income. A household is considered cost-burdened if it expends more than 30% of monthly income on housing costs.

GRAPH 16

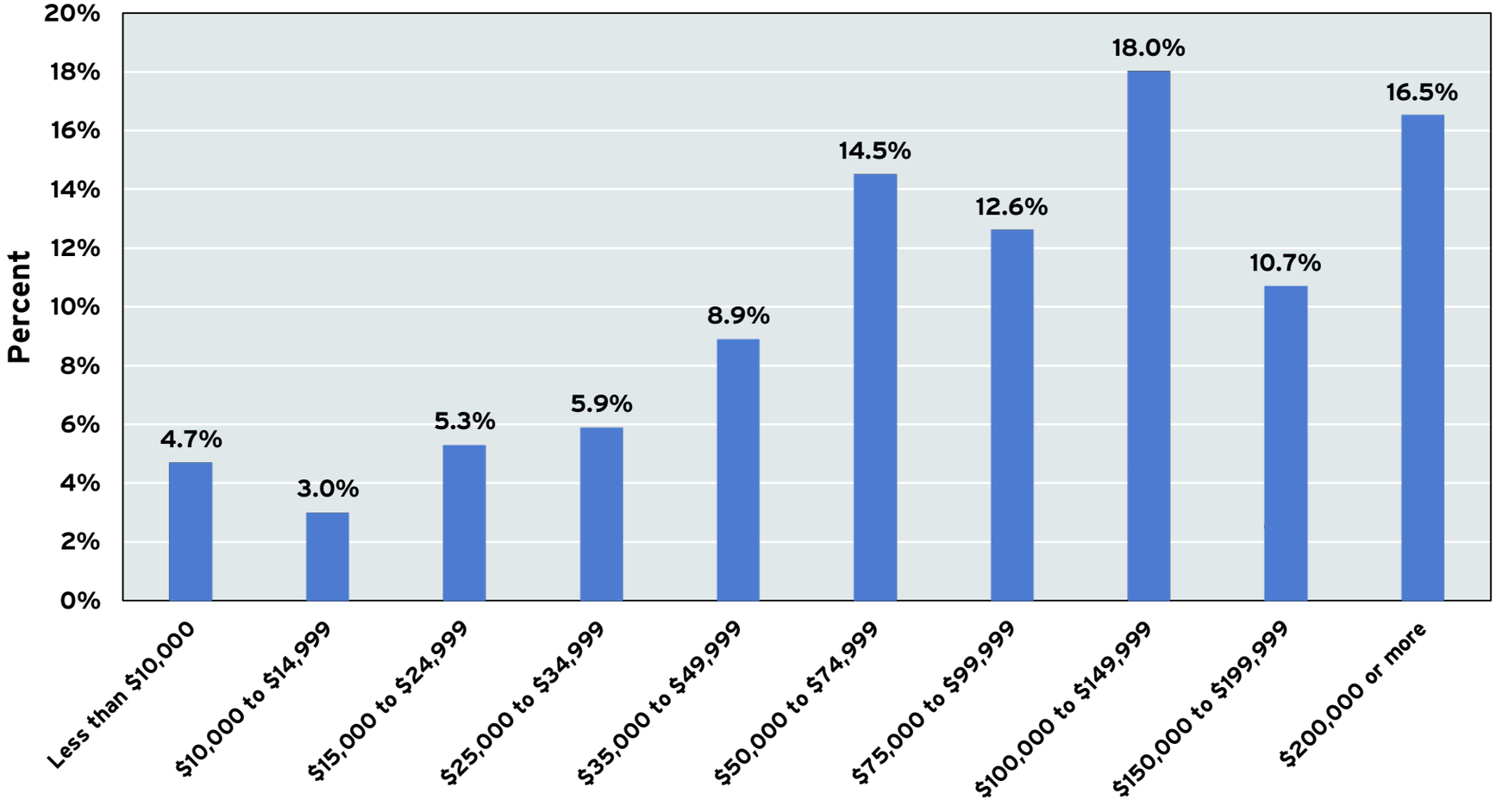
DISTRIBUTION OF THE RESIDENT POPULATION BY RACE
TOTAL POPULATION AND AGED 65 AND ABOVE
VIRGINIA, 2023



Source: United States Census Bureau, American Community Survey 2023 1-Year estimates (2024).

GRAPH 17

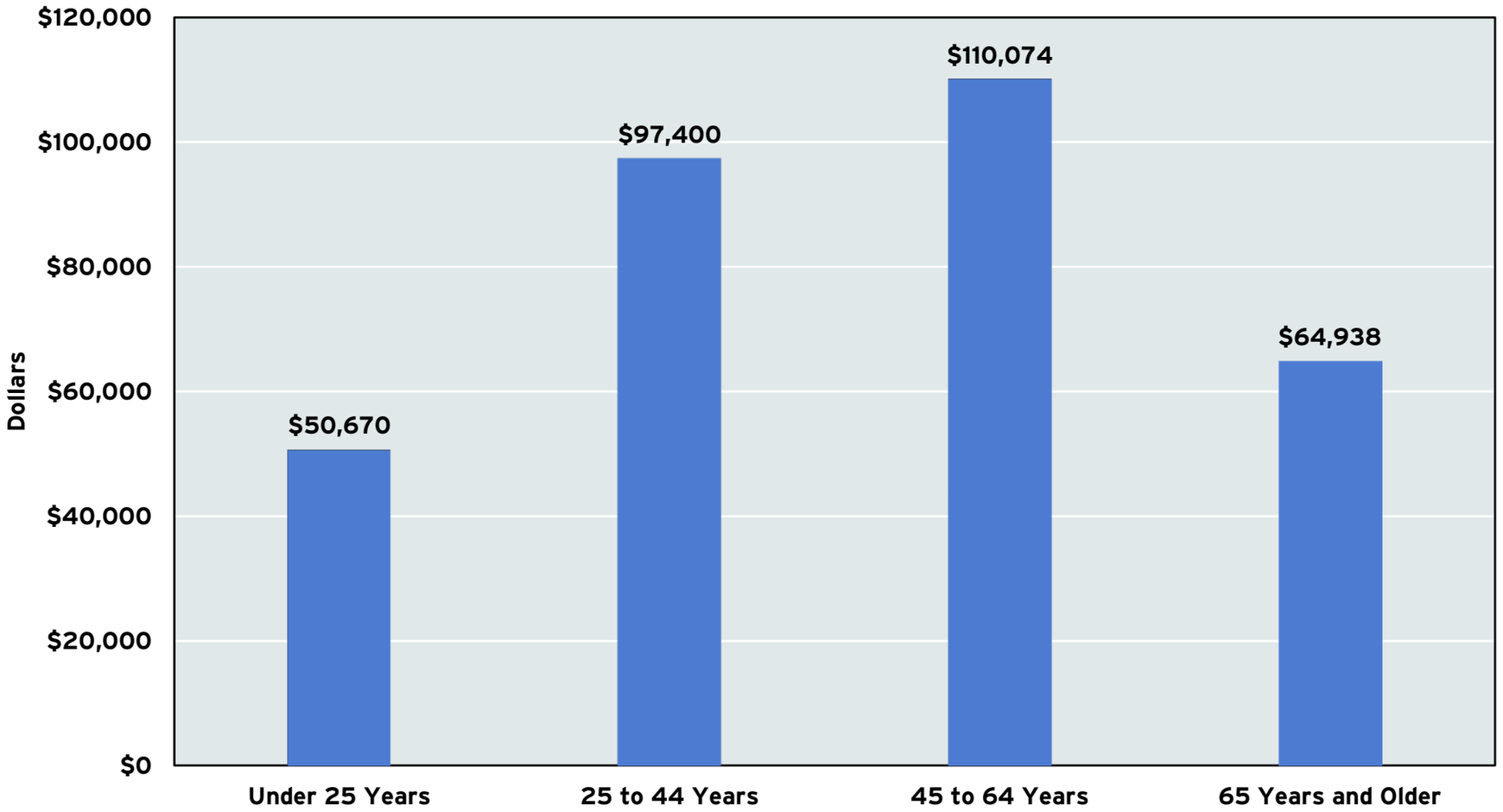
HOUSEHOLD INCOME IN THE PAST 12 MONTHS BY INCOME GROUP
VIRGINIA, 2023



Source: United States Census Bureau, American Community Survey 2023 1-Year estimates (2024). Estimates are in 2023 inflation-adjusted dollars.

GRAPH 18

MEDIAN HOUSEHOLD INCOME BY AGE GROUP
VIRGINIA, 2023



Source: United States Census Bureau, American Community Survey 2023 1-Year estimates (2024).

Population Projections

How will the population of Virginia change over the coming decades? To answer this question, we first examine the U.S. Census Bureau's population projections for the United States. These projections show the 'graying' of the nation over the remainder of the current century. The 2023 projection uses the official estimates of the resident population as of July 1, 2022 to form projections of the U.S. population through 2100.

In 2022, there were approximately 57.8 million individuals in the nation who were aged 65 years and older or about 17.3% of the total population (Graph 19). By 2050, the Census Bureau projects that this segment of the population will grow to 82.1 million individuals which will be 22.8% of the population. By 2100, the population aged 65 and older will grow to over 106.3 million individuals or 29.1% of the projected population.

In Graph 20, we provide the projected population for the nation for individuals aged 65 and over from 2022 to 2100. From 2022 to 2100, the Census Bureau projects the national population will grow by 9.7%. In 2022, the Census Bureau estimates there were 25.9 million males and 31.9 million females aged 65 and over in the United States. Over the remainder of the century, the female population aged 65 and over will grow to approximately 56.8 million, an increase of 78.4%. The male population aged 65 and over, however, will grow to about 49.5 million, an increase of 90.9%. For those 85 years and older, the female population will increase from 4.2 million in 2022 to 15.9 million in 2100 (278.0%). Over the same period, the male population is projected to climb from 2.3 million in 2022 to 11.4 million in 2100. In other words, the male population age 85 and over is expected to jump by 398.5% by the end of the century. The sex ratio, or the ratio of males to females, for the 65 and older population will increase from 0.81 in 2022 to 0.87 in 2100. Likewise, the sex ratio for the 85 and older population will increase from 0.54 in 2022 to 0.72 in 2100 as the male population over the age of 85 is expected to grow more rapidly than the female population of the same age group.

The Weldon Cooper Center at the University of Virginia produces population estimates and projections for Virginia.[9] While projection future population growth is an uncertain business, the projections do provide insight into what is most likely to happen to the population of the Commonwealth over the coming decades. As baby-boomers age, the share of the resident population aged 65 and over will grow over the coming decade. However, by 2040, the share will begin a decline, reaching 18.1% of the resident population by 2050.

TABLE 3

POPULATION AND POPULATION PROJECTIONS
VIRGINIA, 2022 - 2050

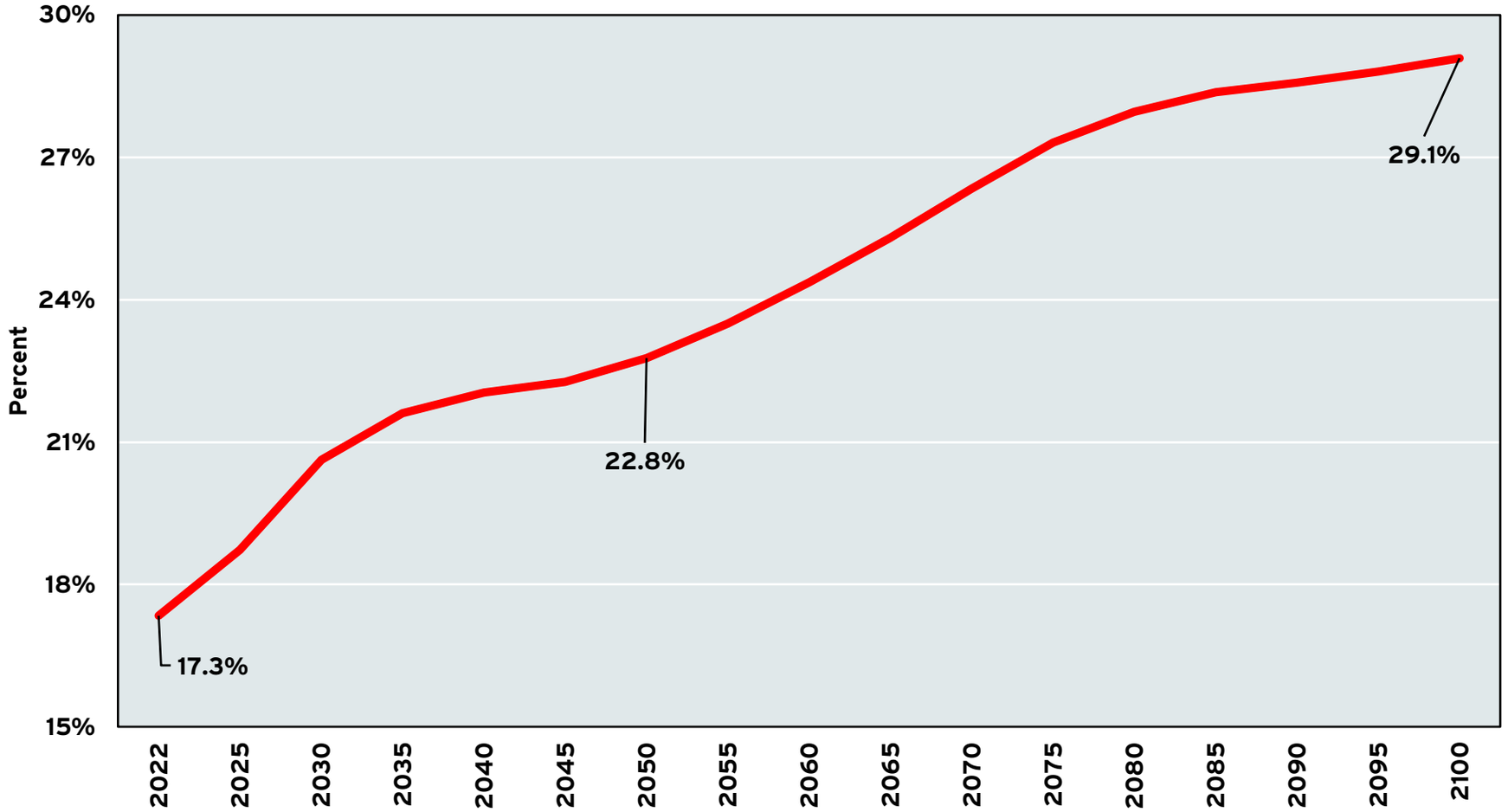
	2022	2030	2040	2050
Total Population	8,683,619	9,129,002	9,759,371	10,535,810
Age 65 and Older	1,462,042	1,762,641	1,866,818	1,907,232
Age 65 and Older As A Percent of Total Population	16.8%	19.3%	19.1%	18.1%

Source: United States Census Bureau, American Community Survey 2022 1-Year estimates and University of Virginia Weldon Cooper Center for Public Service. (2022). Virginia Population Projections. Retrieved from https://coopercenter.org/virginia-population-projections.

9 For more information, see https://demographics.coopercenter.org/virginia-population-estimates

GRAPH 19

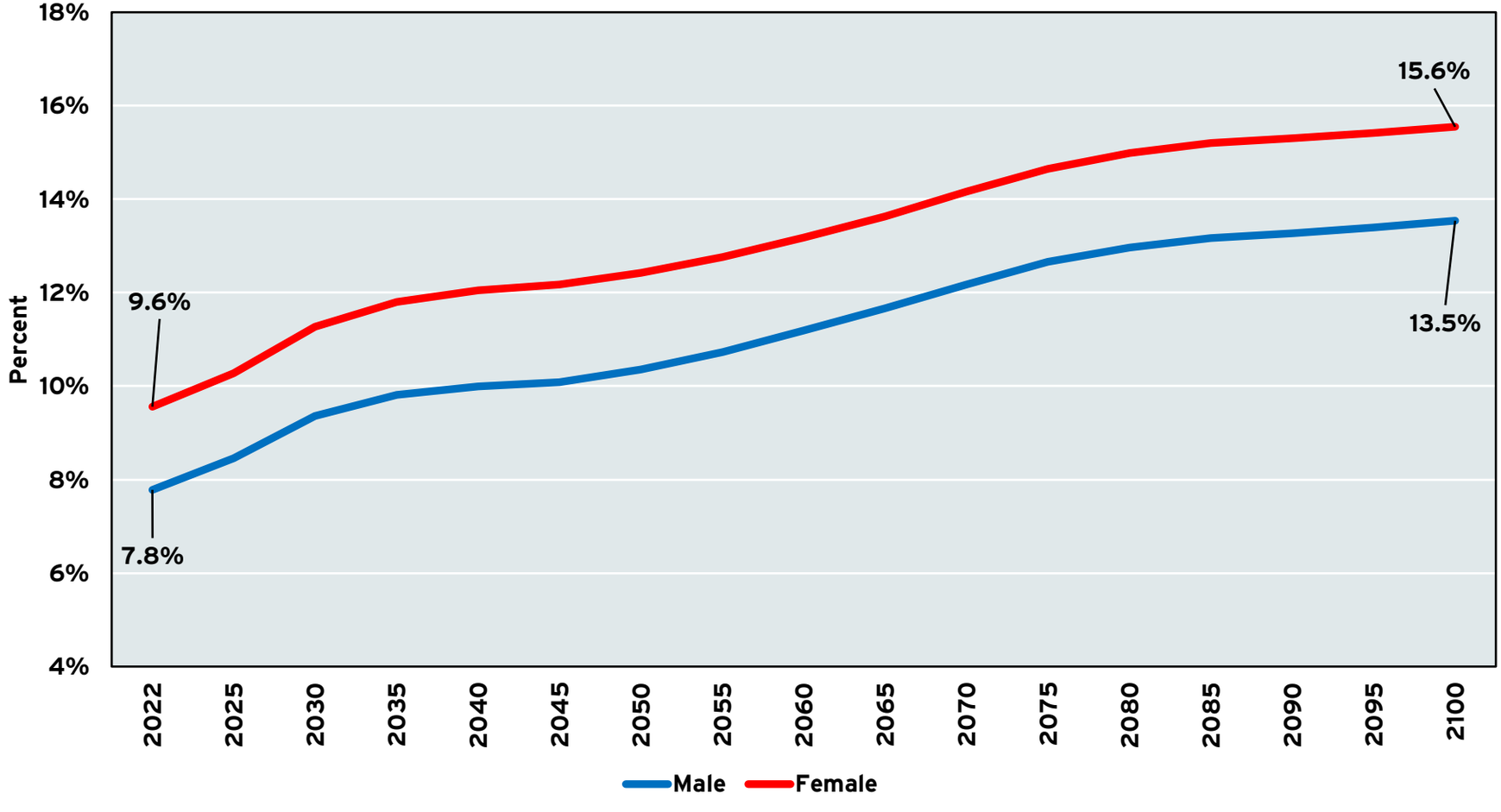
PROJECTED POPULATION OF THE UNITED STATES
AGED 65 YEARS AND OVER AS A SHARE OF THE TOTAL PROJECTED POPULATION
2022 - 2100



Source: United States Census Bureau, Projected Population by Age Group and Sex, 2023.

GRAPH 20

POPULATION PROJECTIONS FOR POPULATION AGED 65 AND OVER BY SEX
UNITED STATES, 2022 - 2100



Source: United States Census Bureau, Projected Population by Age Group and Sex, 2023.

Final Thoughts

There is no doubt that we have grown older as a state and nation. Over the decade, we will likely observe a continued increase in the population aged 65 and older driven, in part, by the number of males that are living to the age of 85 and beyond. As we age, discussions of what is the appropriate age for retirement will only increase, as well as demands for medical care and other services related to aging.

For Virginia, how we age as a region and economic development are hand-in-hand processes. This means furthering existing conversations about senior housing and folding those talks into a statewide housing strategy to improve workforce (and other types) of housing. These conversations will need to involve the multiple public and non-profit agencies operating in this space. As housing costs rise in the near term, these agencies are likely to face increased demands for assistance from both younger and older households in the region. Given that older households may have more complex needs, we need to move forward now rather than wait for solutions to appear from the federal government.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