



The State of the Commonwealth

Robert M. McNab
Dragas Center for Economic Analysis and Policy
Strome College of Business
Old Dominion University





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The Expansion Continues

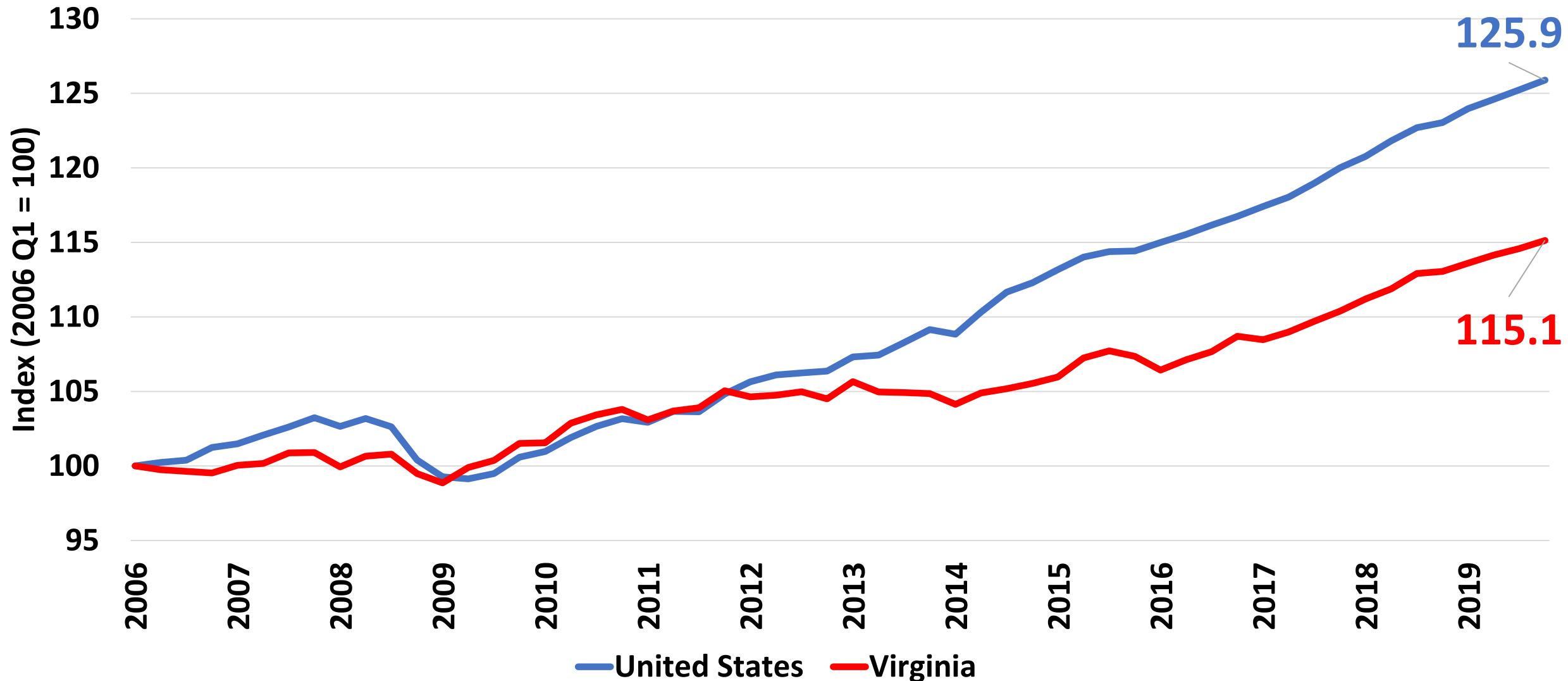
Current and Historical Economic Expansions

<u>Expansion</u>	<u>Duration In Months</u>	<u>Annual Employment Growth</u>	<u>Annual Real GDP Growth</u>
October 1949 – July 1953	45	4.4%	6.9%
May 1954 – August 1957	39	2.5%	4.0%
April 1958 – April 1960	24	3.6%	5.5%
February 1961 – December 1969	106	3.3%	4.9%
November 1970 – November 1973	36	3.4%	5.1%
March 1975 – January 1980	58	3.6%	4.3%
December 1982 – July 1990	91	2.8%	4.0%
March 1991 – March 2001	120	2.0%	3.6%
November 2001 – December 2007	73	0.9%	2.9%
June 2009 – Present*	127	1.4%	2.3%

Sources: Bureau of Labor Statistics, Bureau of Economic Analysis, National Bureau of Economic Research, and Dragas Center for Economic Analysis and Policy. Real GDP in chained 2012 dollars. CAGR = Compound Annual Growth Rate. Annual Real GDP CAGR derived from quarterly series. Annual employment CAGR derived from monthly series. *Current expansion data ends in 2019 Q4 for GDP and January 2020 for US Nonfarm Payrolls. Average annual Real GDP CAGR of previous expansions = 4.5% while average annual employment CAGR from previous expansions = 2.96%.

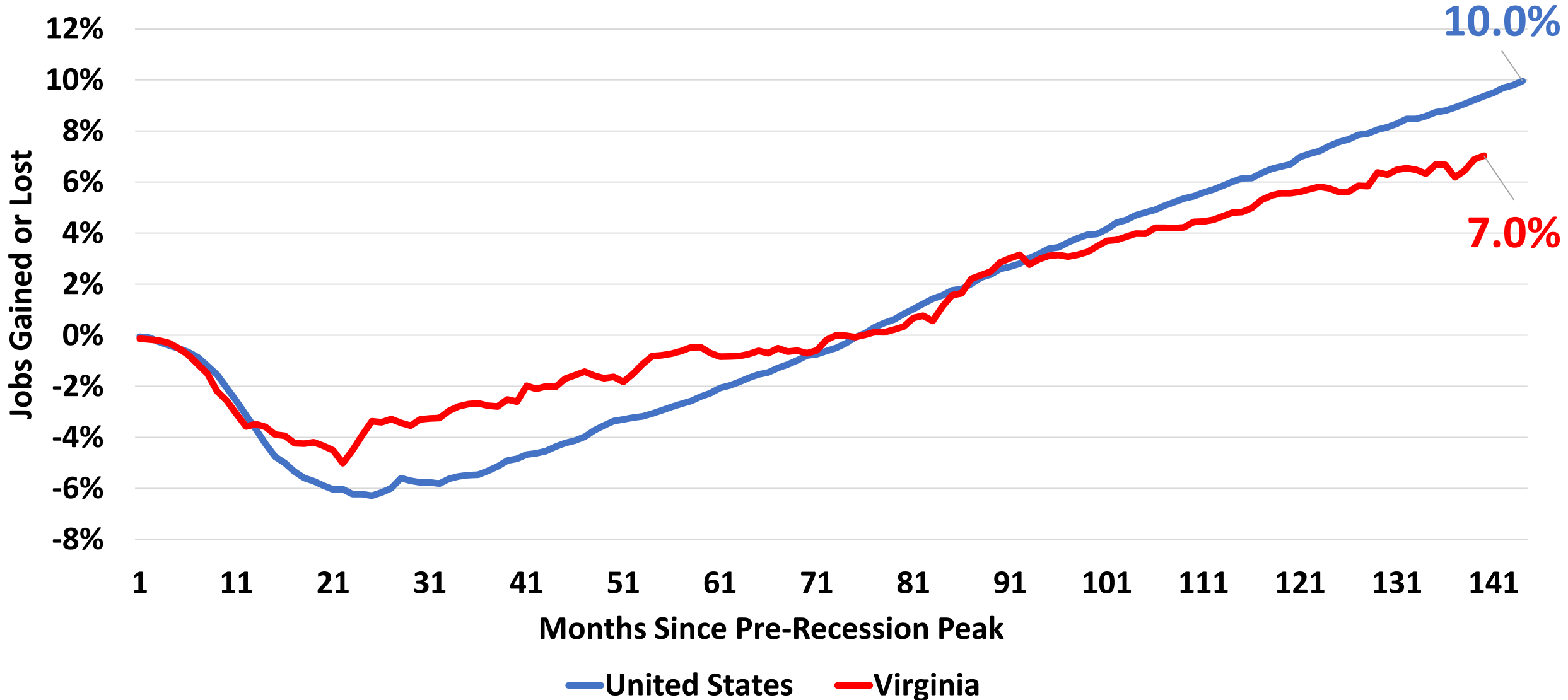
Index of Real Gross Domestic Product

Virginia and the United States, 2006 Q1 to 2019 Q4*



Recovery from the Great Recession

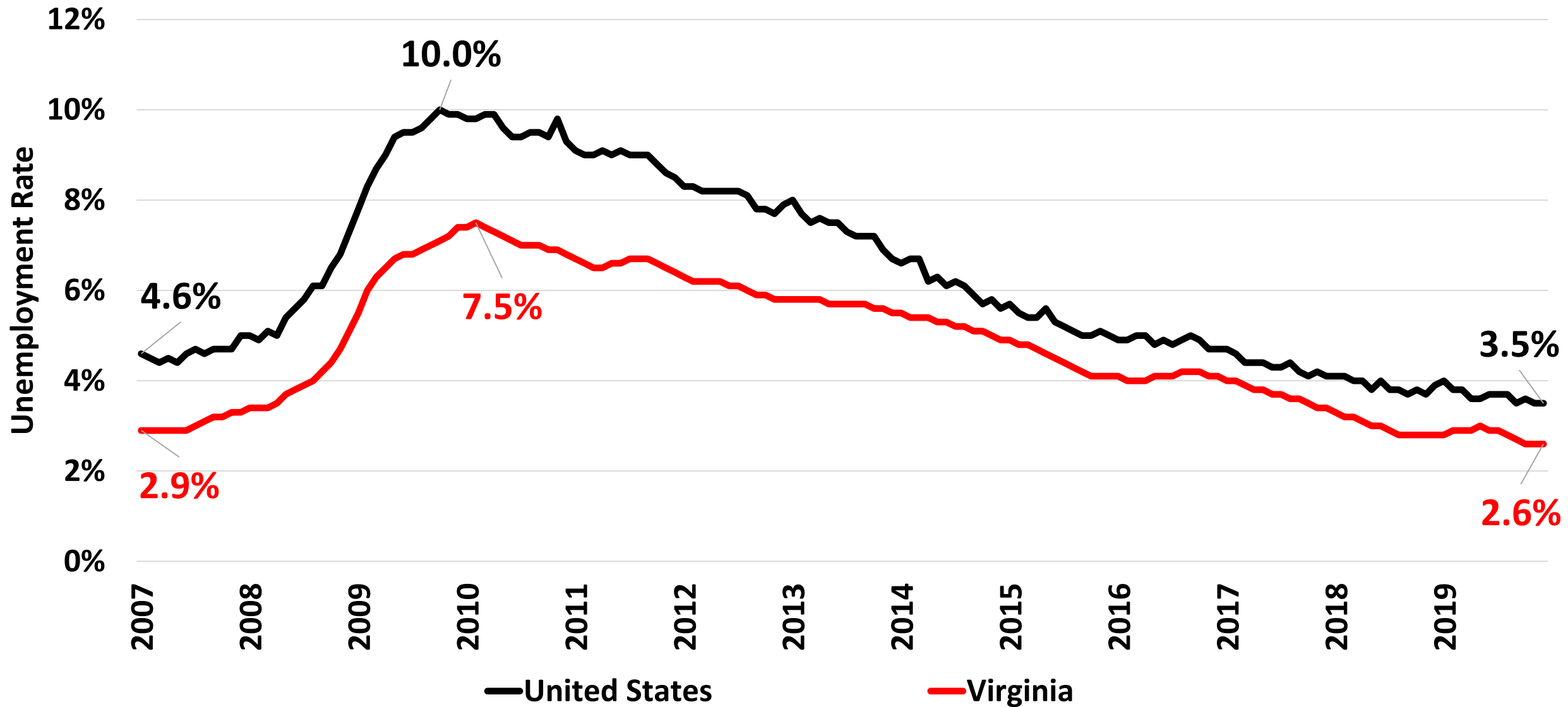
Measured in Total Jobs Restored, 2008 - 2020*



Sources: Bureau of Labor Statistics and Dragas Center for Economic Analysis and Policy. Peak Pre-Recession Dates are January 2008 (United States), and April 2008 (Virginia). *Data through Dec 2019 (VA) and Jan 2020 (US). US data are preliminary the last two months. Virginia data are preliminary for the last month. Seasonally adjusted data.

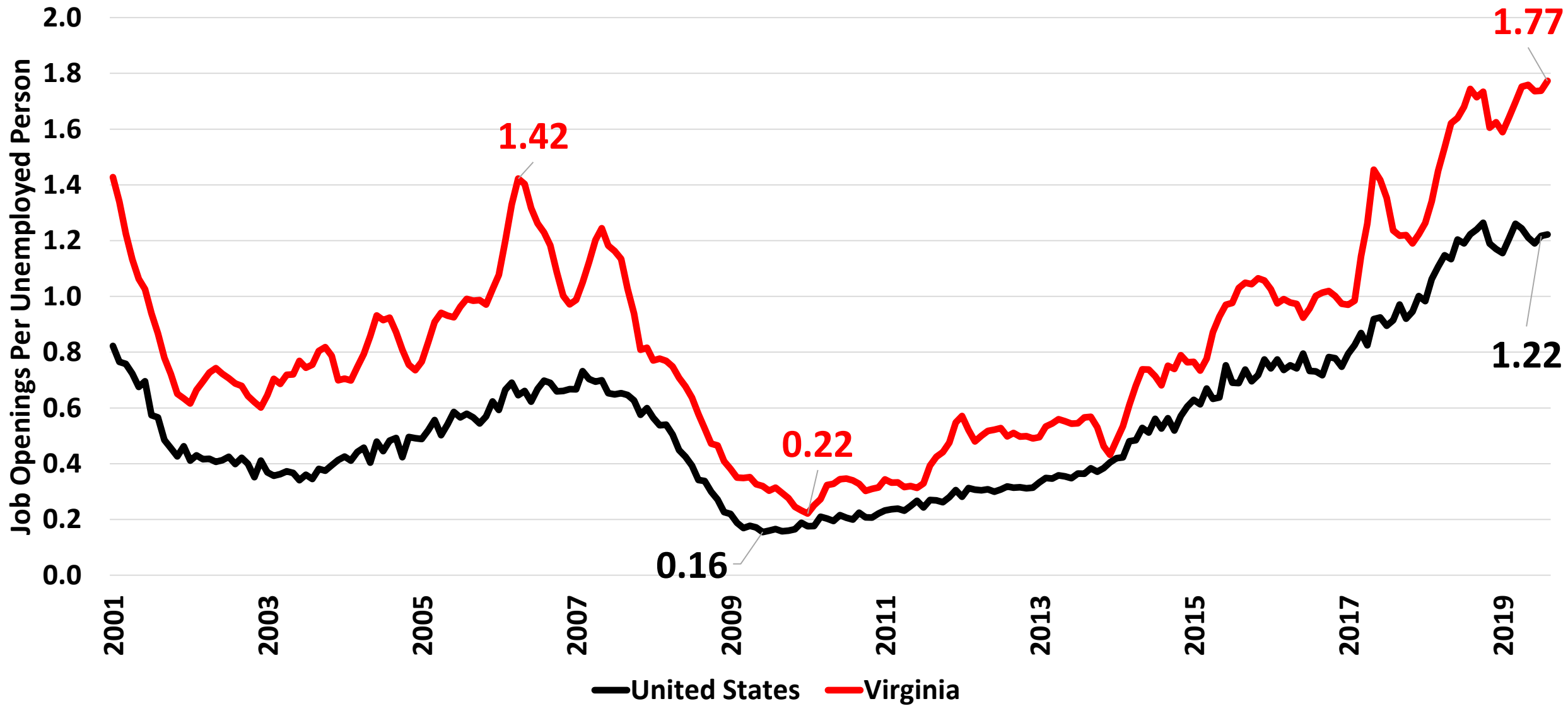
Unemployment Rate (U3)

United States and Virginia, January 2007 – December 2019



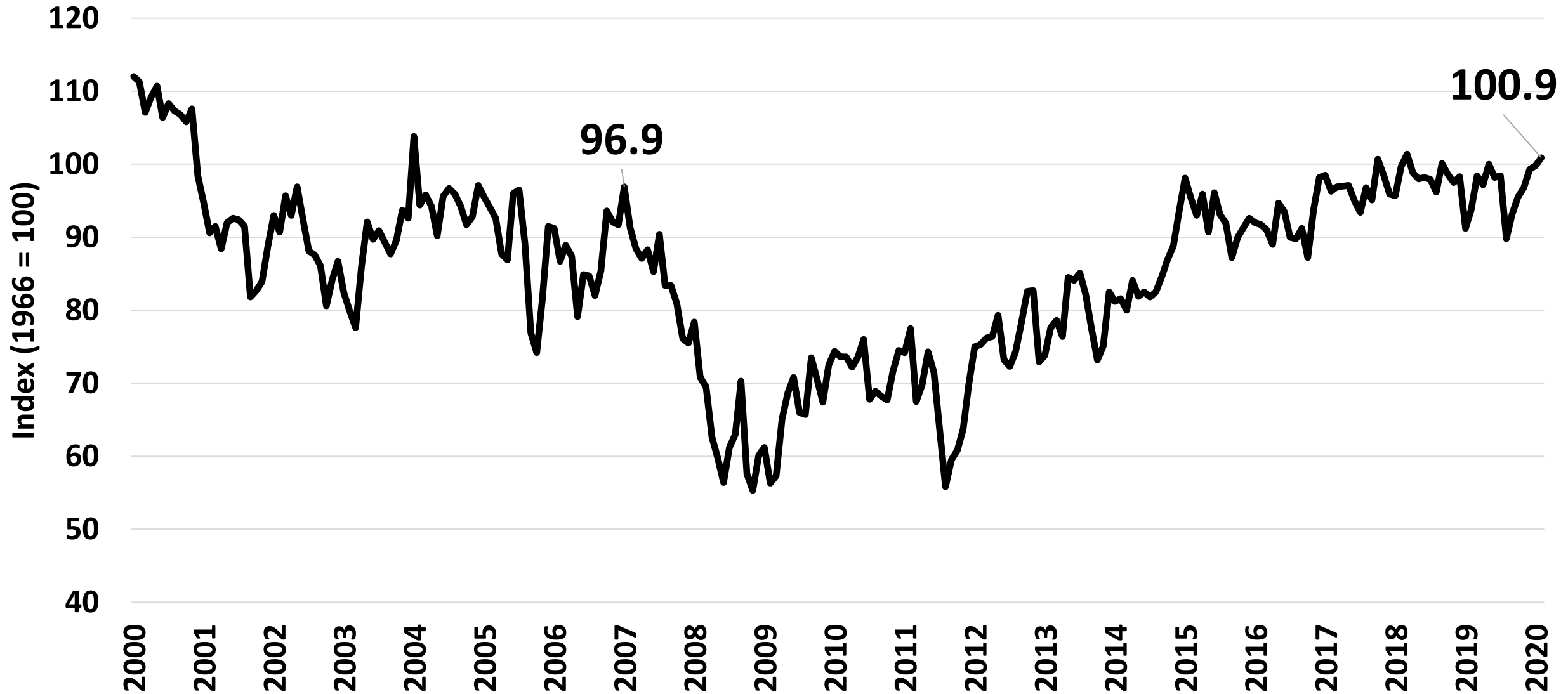
Job Openings Per Unemployed Person

United States and Virginia, February 2001 – September 2019

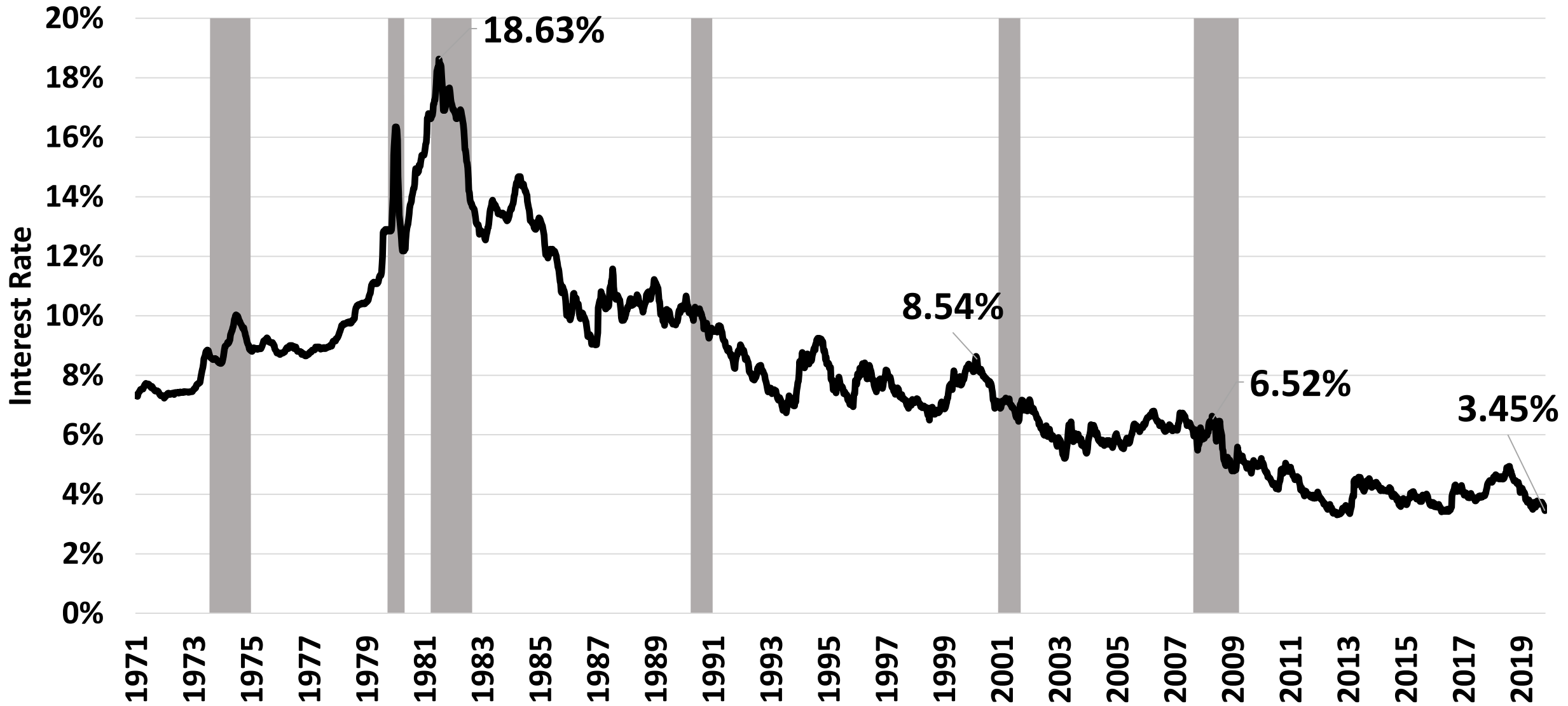


University of Michigan, Consumer Sentiment

January 2000 – February 2020



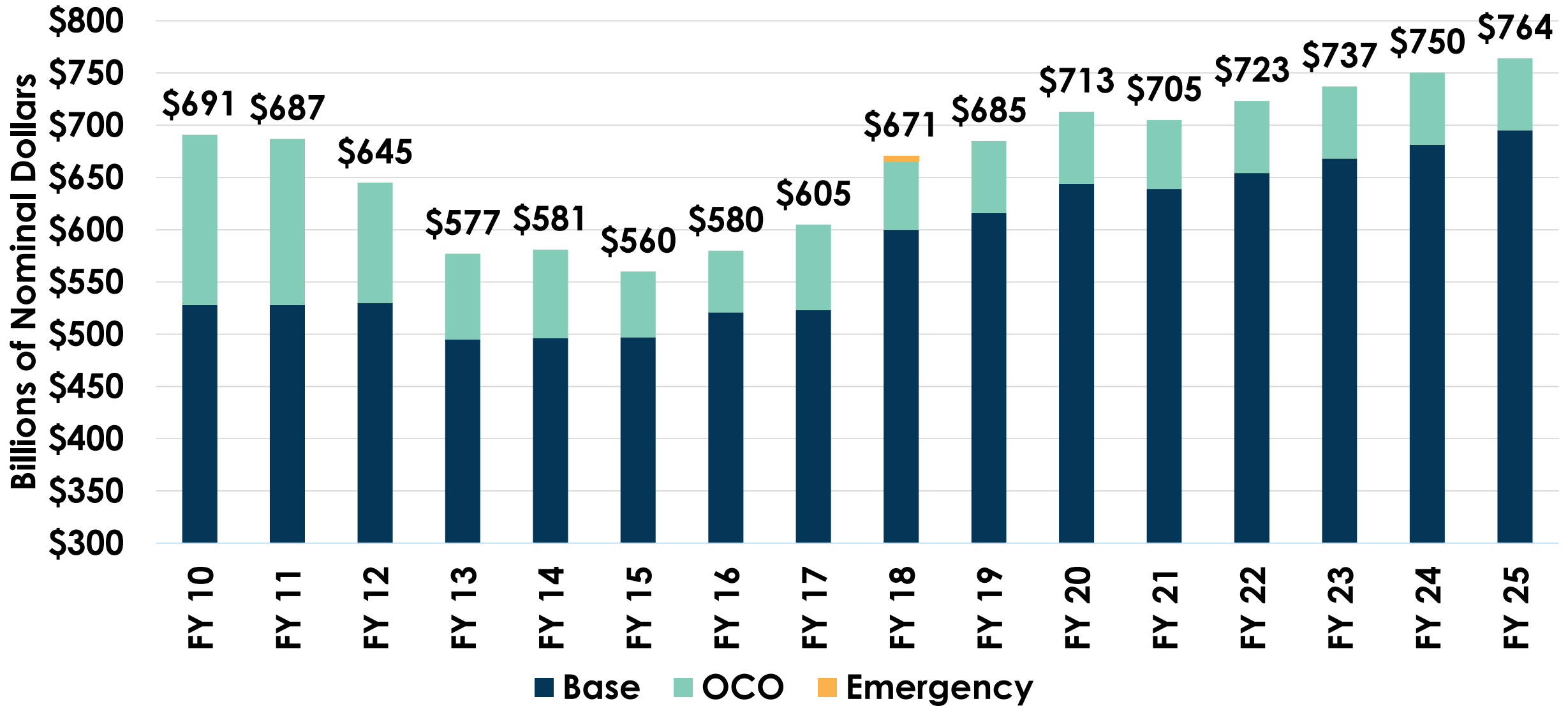
Thirty Year Fixed Rate Conventional Mortgage United States, January 1972 – February 2020



- The Coronavirus has **the potential** to dramatically impact economic growth.
- Scenario: We are past peak infection
 - Infection rates in China continue to slow, mortality does not increase.
 - As factories and businesses reopen, new infections do not spike.
 - The virus spreads globally but awareness and prevention prevent a pandemic from emerging
 - Supply chain disruptions taper and disappear by April.
- Scenario: A pandemic emerges
 - Infections in China rise when factories reopen
 - The lack of capacity, capability, and preparedness lead to new clusters in Europe and Asia
 - Political paralysis in the United States leads to confusing messaging
 - Anti-vaccine communities and disinformation contributes to a lack of response
 - Supply chain disruptions multiply, consumer confidence collapses
- Perspective
 - Over 140,000 people have been hospitalized for the seasonal flu in the United States
 - **At least 16,000 people have died in the United States from the seasonal flu**
 - Right now, your risk from the flu is much more significant than the Coronavirus
 - Availability bias and recency bias, however, cloud our reasoning

Department of Defense Discretionary Budget Authority

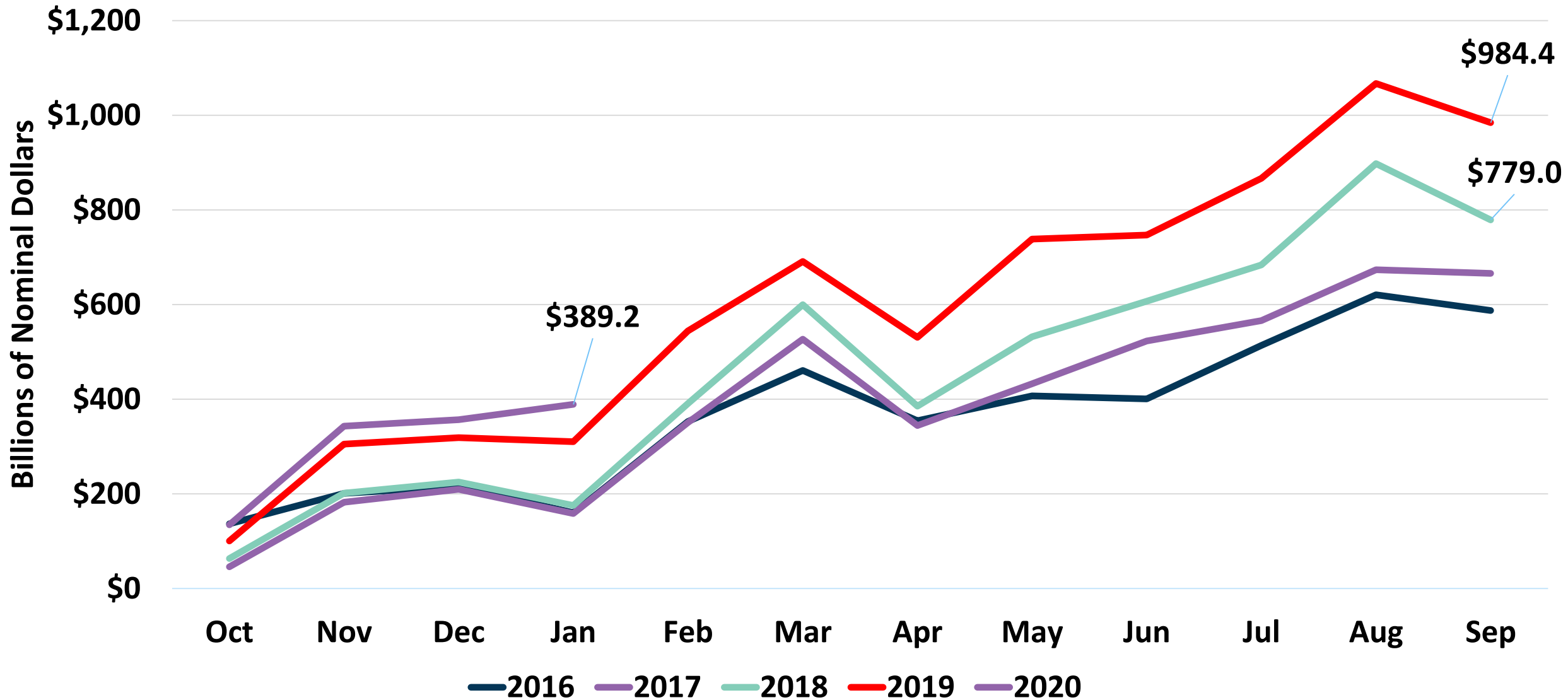
Fiscal Year 2010 – Fiscal Year 2025



Sources: Dragas Center for Economic Analysis and Policy, OSD (Comptroller), FY 2021 Presidential Budget, and Bipartisan Budget Agreement of 2019. Estimated outyear spending on historical allocations of national defense spending. OCO forecast from DoD budget submittal.

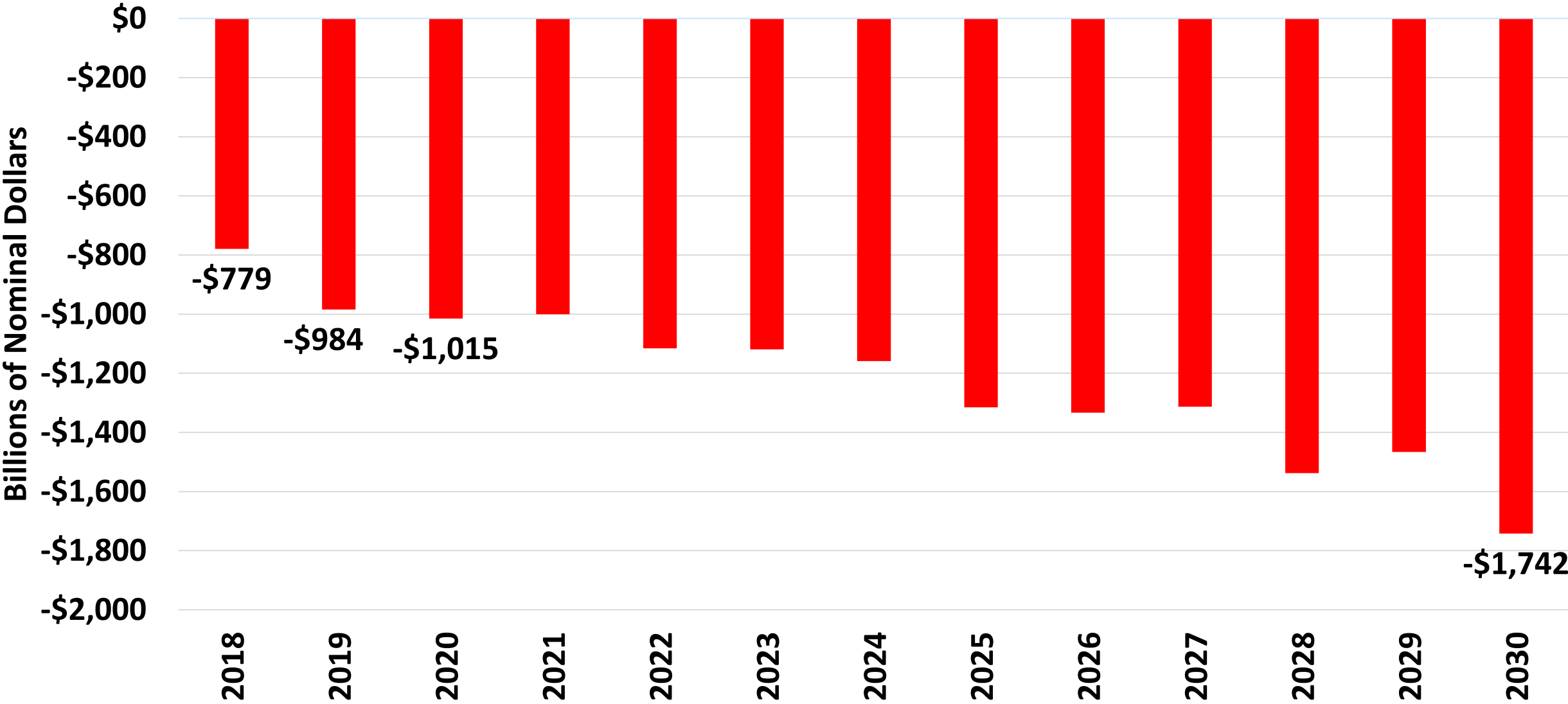
Cumulative U.S. Federal Government Deficit by Month

January 2016 – January 2020



Actual and Projected Federal Deficit

United States, FY 2018 – FY 2030*

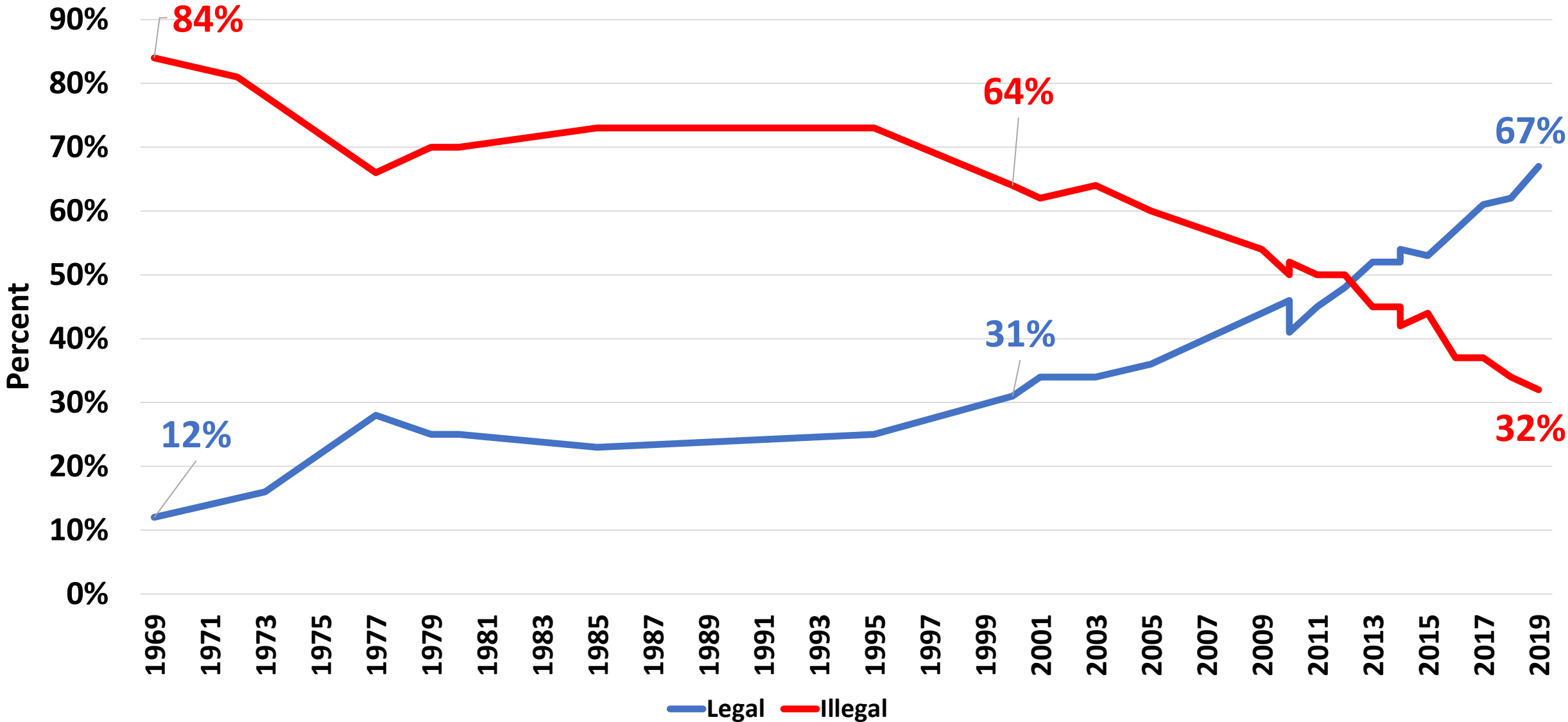


Source: Congressional Budget Office (2020), The Budget and Economic Output: 2020 to 2030 and Dragas Center for Economic Analysis and Policy. Off-Budget includes the revenue and outlays of the Social Security Trust Funds and the net cash flow of the Postal Service. *Actual data through 2019 and projections from 2020 to 2030.



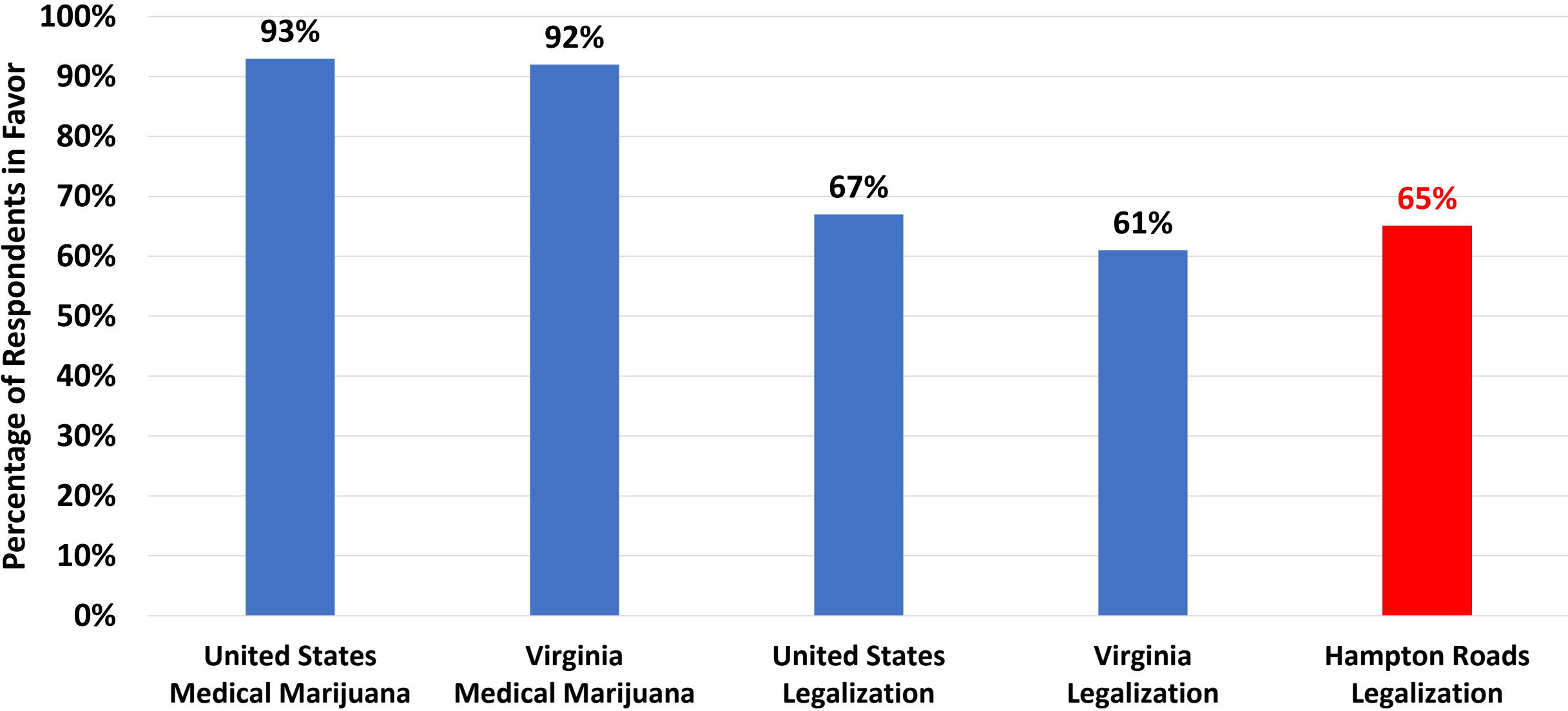
**Hemp, Marijuana, or
CBD?**

Pew Research Poll on Legalizing Marijuana United States, 1969 – 2019



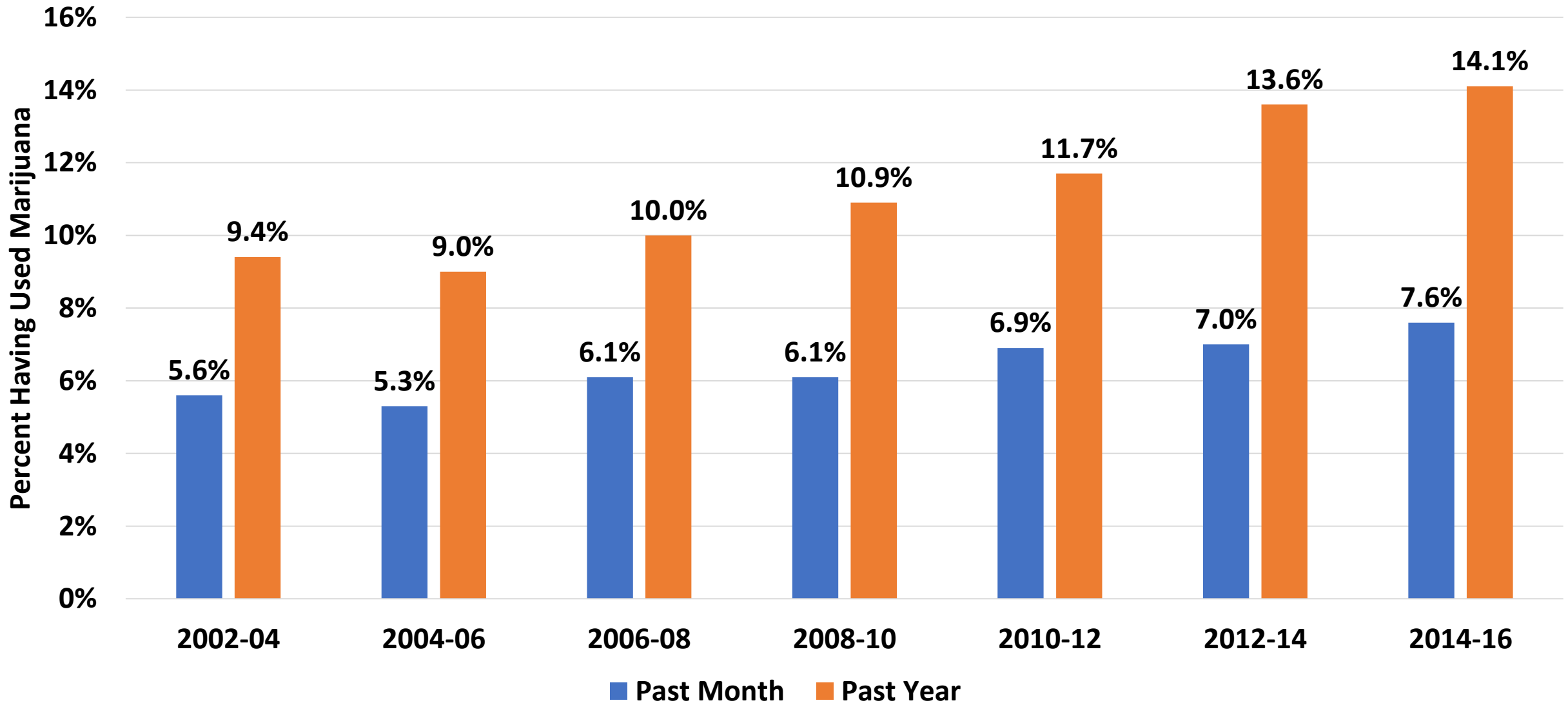
Public Opinion Polling on Marijuana

Hampton Roads, Virginia, and the United States, Most Recent Polling Data



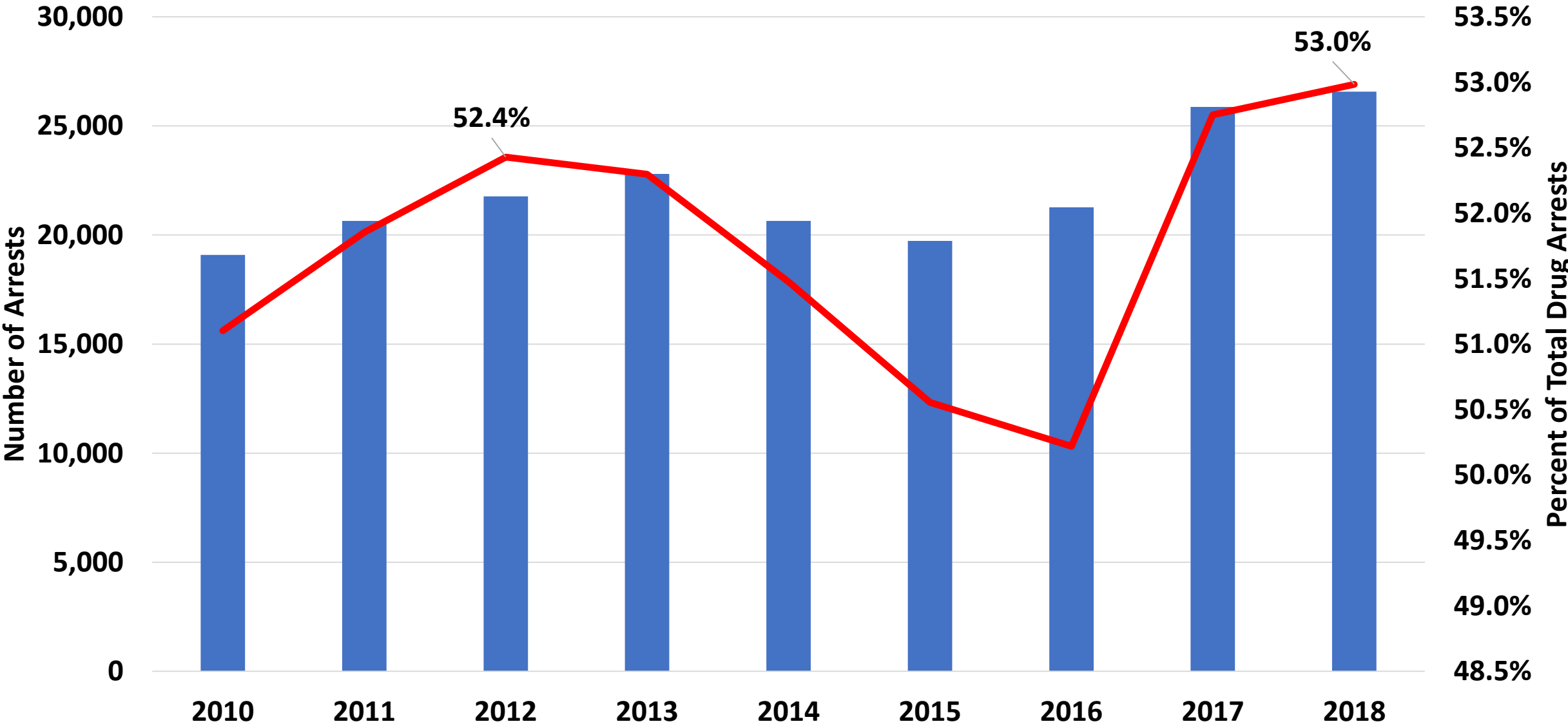
Sources: U.S: Medical Marijuana, Quinnipiac (2019) and Pew (2019). Virginia – Mary Washington Poll (September 2019). Hampton Roads, Social Science Research Center, Summer 2019.

Usage of Marijuana in Previous Year and Previous Month, Ages 18 or Older Hampton Roads, 2002-2016



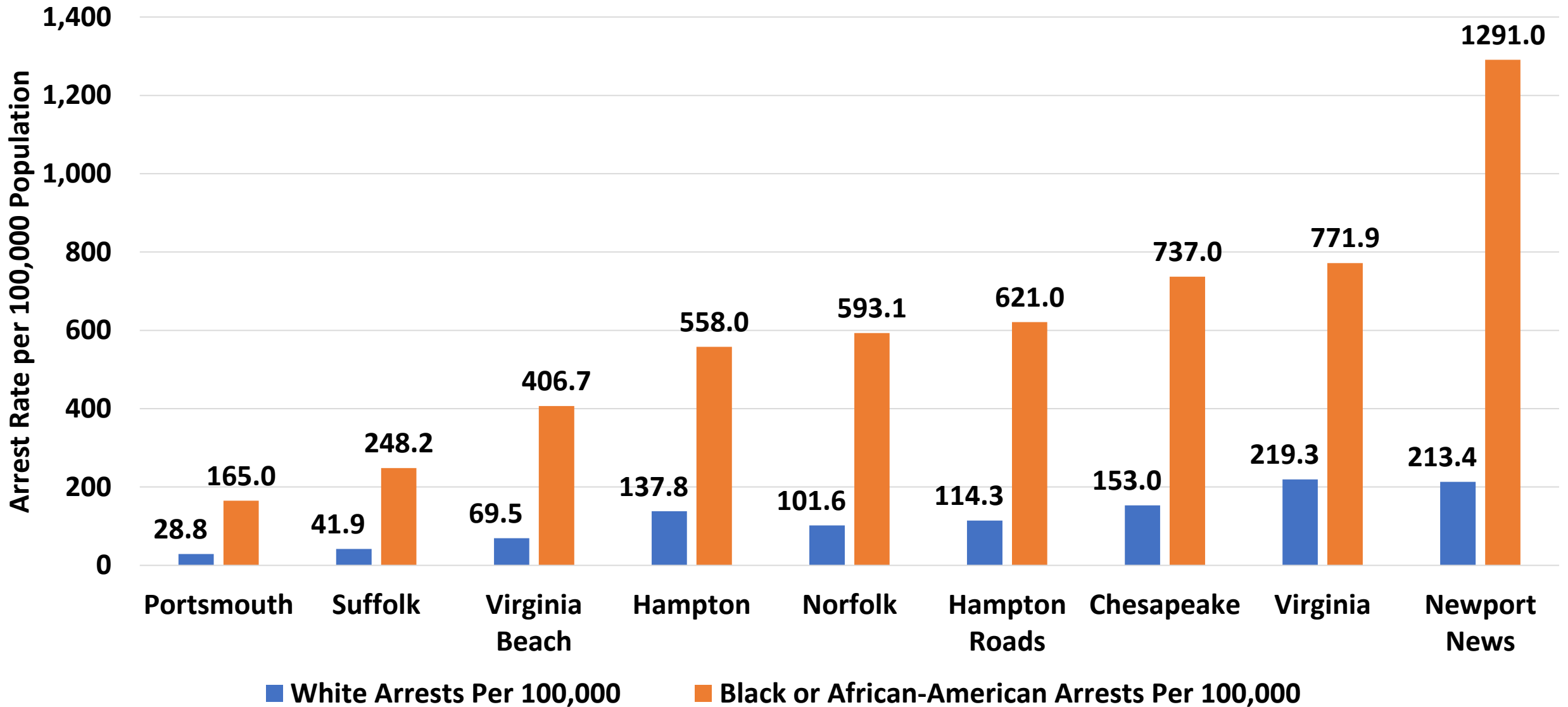
Arrests for Marijuana Possession or Concealment

Totals and Percent of All of Drug Arrests, Virginia, 2010 - 2018



Source: Virginia State Police, Virginia Crime Data: Arrest Drug Activity, Various Years; Marijuana Arrests for Possessing/Concealing and Totals for Arrest Drug Type for Records with Drug Identifier. Data obtained July 29, 2019.

Arrests for Marijuana Possession or Concealment per 100,000 Population Hampton Roads, Virginia, and Selected Cities, 2018



Sources: Virginia State Police (2019), Crime in Virginia Microdata; U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates; and the Dragas Center for Economic Analysis and Policy, Old Dominion University. All possession and concealment arrests are included in the analysis. Arrests are not necessarily equal to individuals.

- **Decriminalization occurs when a criminal offense becomes a civil offense**
- **Decriminalization reduces the financial penalty for marijuana possession but also removes the right to public counsel.**
- **With decriminalization, marijuana possession remains illegal and the sale remains a felony.**
- **Legalization allows the consumption and sale of recreational marijuana (1 ounce or less).**
- **Virginia appears poised to decriminalize the possession of 0.5 ounces of marijuana, punishable by a fine of \$50 dollars or 5 hours of community service.**

Virginia Retirement System Plan 1

Handbook for Members

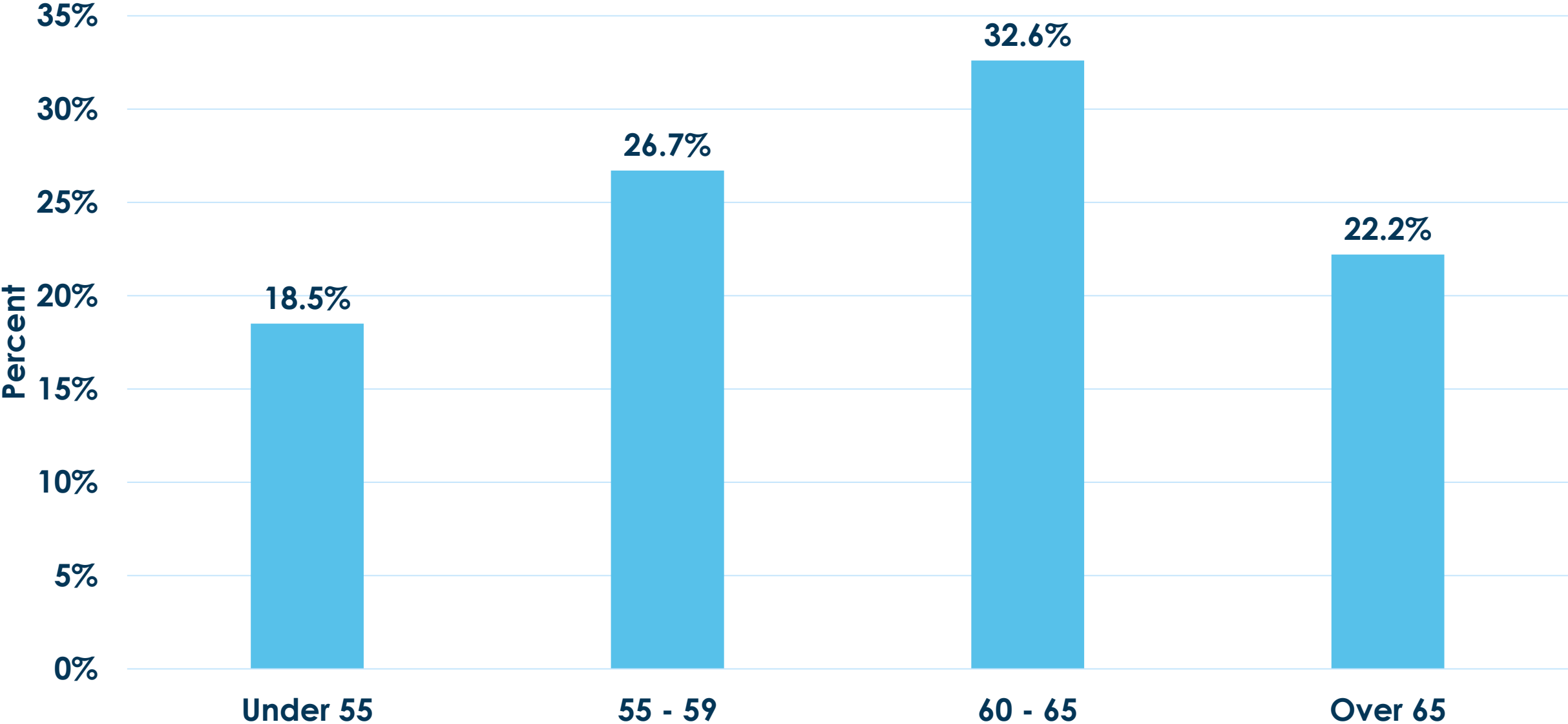


The Virginia Retirement System

- **The Virginia Retirement System (VRS) is the public pension system for state employees and local jurisdictions in Virginia.**
- **The VRS is an independent state agency. Contributions from members and governments are used to make investments that fund current and future retirees.**
- **833 employees participate in VRS.**
- **As of June 30th, 2019, the VRS had 346,273 active members, 162,193 inactive members, and 214,545 retirees and beneficiaries.**
- **The VRS is the 19th largest pension system in the United States and 41st largest pension system in the world.**
- **The net position of the VRS (balance of resources available to pay benefits) reached a record \$82.8 billion at the end of FY 2019.**

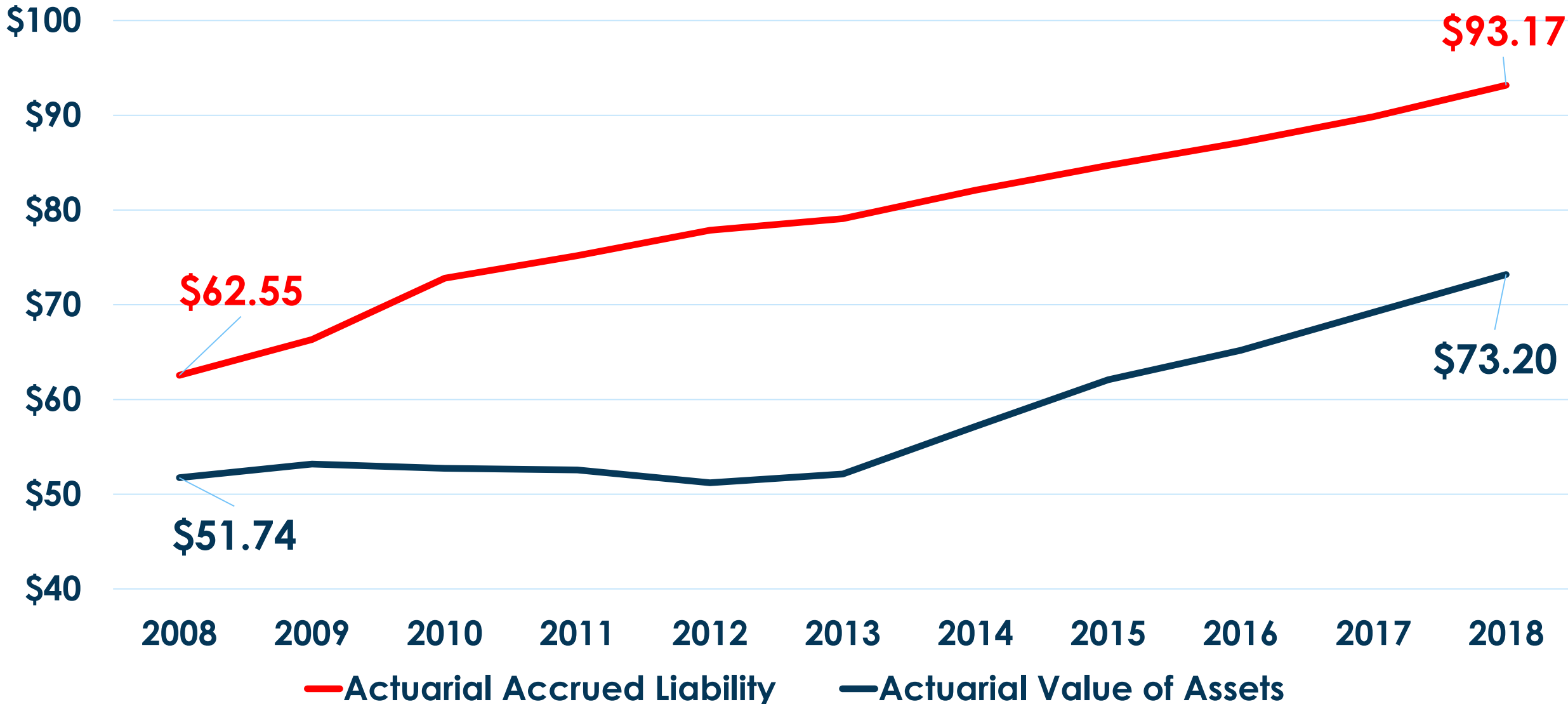
Retirees by Age of Retirement

Virginia Retirement System, June 30, 2019



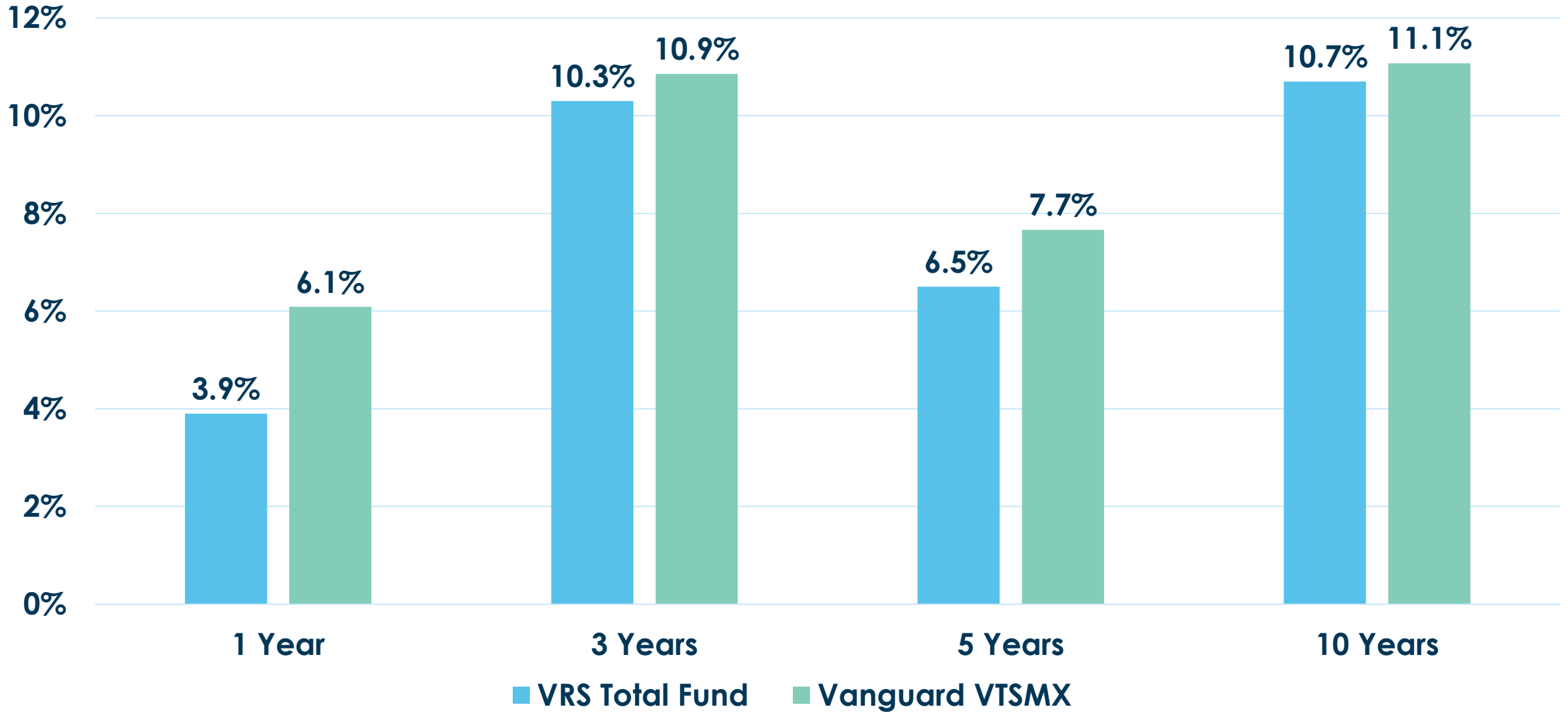
Source: Virginia Retirement System, Comprehensive Financial Annual Report, 2019.

Market Value of System Assets and Actuarial Accrued Liability Virginia Retirement System, FY 2008 – FY 2018



Source: Virginia Retirement System, Comprehensive Financial Annual Report, 2019. Actuarial valuation date is June 30 of each year.

VRS Public Equity and Vanguard Total Stock Market Index Rates of Return



- The VRS is well-run and has improved its financial position.
- However, the VRS has 'left money on the table' by not indexing more of its public equity investments.
- VRS incurs significant management fees to actively manage its hedge fund and other investments.
- We estimate that the VRS could have earned an additional \$2 to \$3 billion over the past two decades by investing in index funds, at the same amount of risk.
- The recent recommendation to lower the VRS assumed rate of return to 6.75% is a step in the right direction but will require more than \$200 million more in contributions.
- The VRS should lower its rate of return to 6.5% or lower, but this will require even more resources from the state and local governments.

