The State of the Commonwealth

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The Expansion Continues
## Current and Historical Economic Expansions

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

Index of Real Gross Domestic Product
Virginia and the United States, 2006 Q1 to 2019 Q4*

Index (2006 Q1 = 100)

Recovery from the Great Recession
Measured in Total Jobs Restored, 2008 - 2020*

Jobs Gained or Lost

Months Since Pre-Recession Peak

United States  Virginia

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

Sources: Bureau of Labor Statistics and Dragas Center for Economic Analysis and Policy. Seasonally adjusted data.
Sources: Bureau of Labor Statistics and Dragas Center for Economic Analysis and Policy. Seasonally adjusted data. State level JOLTS data is an experimental product.
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.
Actual and Projected Federal Deficit
United States, FY 2018 – FY 2030*

Billions of Nominal Dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>-$779</td>
</tr>
<tr>
<td>2019</td>
<td>-$984</td>
</tr>
<tr>
<td>2020</td>
<td>-$1,015</td>
</tr>
<tr>
<td>2021</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
</tr>
<tr>
<td>2023</td>
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<td>2024</td>
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<td>2026</td>
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<tr>
<td>2028</td>
<td></td>
</tr>
<tr>
<td>2029</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>-$1,742</td>
</tr>
</tbody>
</table>

Hemp, Marijuana, or CBD?
Pew Research Poll on Legalizing Marijuana
United States, 1969 – 2019

Source: Pew Research Center (2019)
Public Opinion Polling on Marijuana
Hampton Roads, Virginia, and the United States, Most Recent Polling Data

Percentage of Respondents in Favor

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage Favor</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Medical Marijuana</td>
<td>93%</td>
</tr>
<tr>
<td>Virginia Medical Marijuana</td>
<td>92%</td>
</tr>
<tr>
<td>United States Legalization</td>
<td>67%</td>
</tr>
<tr>
<td>Virginia Legalization</td>
<td>61%</td>
</tr>
<tr>
<td>Hampton Roads Legalization</td>
<td>65%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Past Month</th>
<th>Past Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-04</td>
<td>5.6%</td>
<td>9.4%</td>
</tr>
<tr>
<td>2004-06</td>
<td>5.3%</td>
<td>9.0%</td>
</tr>
<tr>
<td>2006-08</td>
<td>6.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>2008-10</td>
<td>6.1%</td>
<td>10.9%</td>
</tr>
<tr>
<td>2010-12</td>
<td>6.9%</td>
<td>11.7%</td>
</tr>
<tr>
<td>2012-14</td>
<td>7.0%</td>
<td>13.6%</td>
</tr>
<tr>
<td>2014-16</td>
<td>7.6%</td>
<td>14.1%</td>
</tr>
</tbody>
</table>

Arrests for Marijuana Possession or Concealment
Totals and Percent of All of Drug Arrests, Virginia, 2010 - 2018

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

Arrest Rate per 100,000 Population

White Arrests Per 100,000  Black or African-American Arrests Per 100,000

Portsmouth  28.8  165.0
Suffolk  41.9  248.2
Virginia Beach  69.5  406.7
Hampton  137.8  558.0
Norfolk  101.6  593.1
Hampton Roads  114.3  621.0
Chesapeake  153.0  737.0
Virginia  219.3  771.9
Newport News  213.4  1291.0

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.
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

- Under 55: 18.5%
- 55 - 59: 26.7%
- 60 - 65: 32.6%
- Over 65: 22.2%

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

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.