

**Virginia Retirement System  
Performance Summary  
As of December 31, 2018**

**TOTAL FUND PERFORMANCE**

(Expressed in Percentages, Net of Fees)

	<b>10 Yr</b>	<b>5 Yr</b>	<b>3 Yr</b>	<b>1 Yr</b>	<b>Qtr</b>	<b>Month</b>	<b>Fiscal YTD</b>	<b>Cal YTD</b>
<b>Total Public Equity Strategies</b>	<b>10.3</b>	<b>5.0</b>	<b>5.7</b>	<b>-9.1</b>	<b>-11.9</b>	<b>-6.6</b>	<b>-8.8</b>	<b>-9.1</b>
<i>Benchmark<sup>1</sup></i>	9.7	4.8	6.1	-7.9	-11.7	-6.3	-8.5	-7.9
<b>Total Investment-Grade Fixed Income</b>	<b>4.7</b>	<b>3.0</b>	<b>2.7</b>	<b>0.2</b>	<b>1.6</b>	<b>1.8</b>	<b>1.8</b>	<b>0.2</b>
<i>Benchmark<sup>2</sup></i>	3.4	2.5	2.1	0.0	1.6	1.8	1.7	0.0
<b>Total Credit Strategies</b>	<b>9.2</b>	<b>4.5</b>	<b>6.2</b>	<b>-0.1</b>	<b>-3.2</b>	<b>-1.2</b>	<b>-1.2</b>	<b>-0.1</b>
<i>Benchmark<sup>3</sup></i>	7.9	4.0	5.7	-1.0	-3.6	-1.6	-1.6	-1.0
<b>Total Real Assets</b>	<b>8.6</b>	<b>10.9</b>	<b>9.9</b>	<b>8.1</b>	<b>1.2</b>	<b>1.6</b>	<b>3.0</b>	<b>8.1</b>
<i>Benchmark<sup>4</sup></i>	7.3	8.9	7.6	6.7	1.3	0.4	2.8	6.7
<b>Total Private Equity</b>	<b>11.9</b>	<b>14.4</b>	<b>16.1</b>	<b>16.9</b>	<b>4.2</b>	<b>4.3</b>	<b>8.7</b>	<b>16.9</b>
<i>Benchmark<sup>5</sup></i>	12.7	12.6	16.7	13.9	4.5	1.0	7.0	13.9
<b>Total Private Investment Partnerships</b>	<b>n/a</b>	<b>n/a</b>	<b>9.2</b>	<b>9.3</b>	<b>3.1</b>	<b>3.1</b>	<b>5.1</b>	<b>9.3</b>
<i>Benchmark<sup>6</sup></i>	n/a	n/a	9.2	9.3	2.9	0.6	5.0	9.3
<b>Total Multi-Asset Public Strategies</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>-4.6</b>	<b>-1.2</b>	<b>-3.6</b>	<b>n/a</b>
<i>Benchmark<sup>7</sup></i>	n/a	n/a	n/a	n/a	-5.4	-1.9	-4.1	n/a
<b>Total Fund</b>	<b>8.7</b>	<b>6.0</b>	<b>6.7</b>	<b>-1.3</b>	<b>-4.6</b>	<b>-1.8</b>	<b>-2.2</b>	<b>-1.3</b>
<i>VRS Custom Benchmark<sup>8</sup></i>	8.0	5.6	6.7	-1.1	-4.5	-2.4	-2.3	-1.1

Notes:

1. Effective July 2015, the Public Equity Custom Benchmark is a blend of the MSCI ACWI IMI with developed market currencies 50% hedged (net VRS tax rates) Index (80%) and the Credit Suisse Equity Long/Short Broad Index (20%).

2. Effective July 2014, the Investment-Grade Fixed Income Custom Benchmark consists of the Bloomberg Barclays Capital US Aggregate Index.

3. Effective July 2012, the Credit Strategies Custom Benchmark is the weighted average of the Citigroup Broad Investment Grade Index (10%), the Bank of America Merrill Lynch BB-B Constrained Index (20%), the S&P Performing Loan Index (30%), the Emerging Market Debt Custom Benchmark (20%), and the Bank of America Merrill Lynch All U.S. Convertibles Index (20%). For the four years prior to July 2012, the risk-adjusted benchmark is the weighted average of the Bank of America Merrill Lynch U.S. High Yield BB-B Constrained Index and the Bank of America All Convertibles Index.

4. Effective July 2014, the Real Assets Custom Benchmark is the market value weighted blend of the Total Real Estate Benchmark, of which 85% is the NCREIF Private Real Estate Benchmark (ODCE Index (net) lagged by three months) and 15% is the Total REIT Benchmark (FTSE/EPRA/NAREIT Developed REIT Index) and the Other Real Assets Custom Benchmark (the CPI-U Index plus 400 basis points per annum lagged by three months) with modified benchmarking for Other Real Assets during the increased allocation period.

5. Effective July 2013, the Private Equity Custom Benchmark is the MSCI ACWI IMI with the Developed Market Currencies 50% Hedged customized for the VRS dividend withholding tax rates lagged by three months plus 250 basis points per annum with modified benchmarking during the increased allocation period.

6. The Private Investment Partnerships Benchmark is the weighted average of the custom VRS Private Equity Benchmark (MSCI 50% hedged customized for the VRS dividend withholding tax rate lagged by three months plus 250 basis points) (40%), the NCREIF Private Real Estate Benchmark (ODCE Index (net) lagged by three months) (30%), the Other Real Assets Custom Benchmark (the CPI-U Index plus 400 basis points per annum lagged by three months) (10%), the Credit Strategies Rate Sensitive Benchmark (the Bank of America Merrill Lynch High Yield BB-B Constrained Index) (10%), and the Credit Strategies Non-Rate Sensitive Benchmark (the S&P Performing Loan Index) (10%).

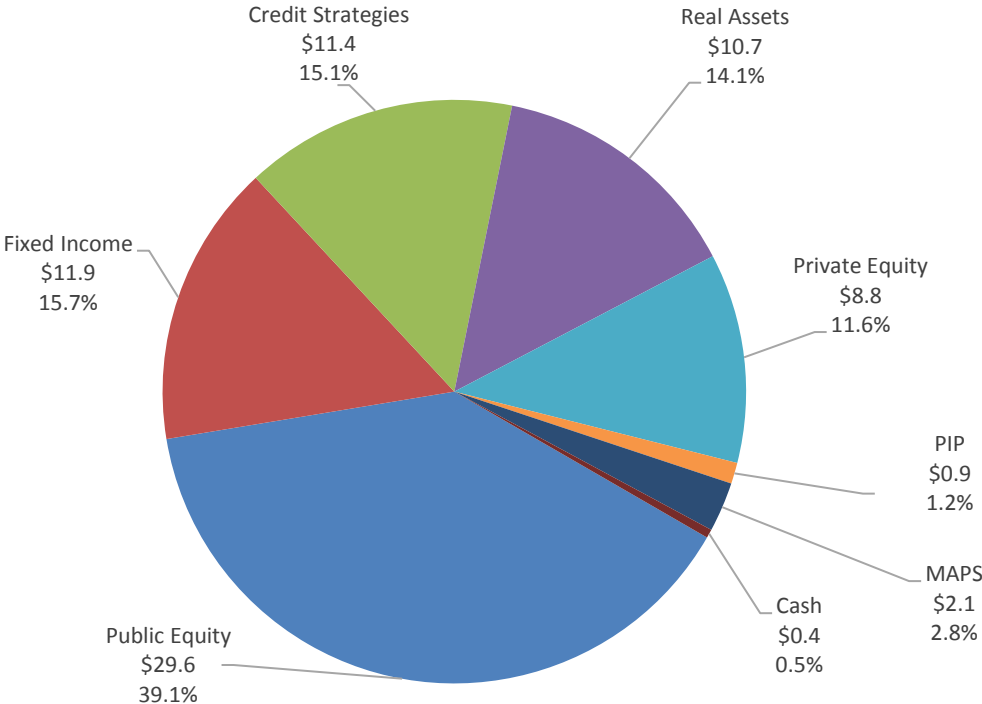
7. Effective July 2018, the Multi-Asset Public Strategies Custom Benchmark is the market value weighted average of the benchmarks of the mandates (Dynamic Strategies and Risk-Based Investments) within the program.

8. The VRS Custom Benchmark is a blend of the Asset Class Benchmarks at policy weights.

# Virginia Retirement System Asset Allocation as of December 31, 2018

(Dollar amounts in Billions / Percent of Total Fund)

**Total Fund market value = \$75.8 billion**



Source: Bank of New York Mellon

# Fund Performance – Net of Fees



	<b>VRS Return</b> (As of December 31, 2018)
1-year	-1.3%
3-year	6.7%
5-year	6.0%
10-year	8.7%
15-year	6.7%
20-year	6.2%
25-year	7.9%

Source: Bank of New York Mellon