

Chief Investment Officer's Letter



Ronald D. Schmitz, Chief Investment Officer

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October 8, 2018

To: Members of the Board of Trustees and Participants of the Virginia Retirement System

Fiscal year 2018 continued to bring positive global economic growth and corporate earnings have showed continued strength. As a result, equity markets responded favorably. Tax cuts have enhanced the reported earnings of U.S. domiciled companies. The U.S. Federal Reserve has begun the transition from monetary easing to monetary tightening. Ten-year Treasuries rose to about 3% in June. Inflation remains in check, although low unemployment rates should begin to boost wage pressures. Changing demographic trends and reasonable capacity utilization rates seem able to offset significant wage pressures at this point in the cycle.

PERFORMANCE OVERVIEW

The VRS portfolio is positioned to provide diversification across a variety of asset classes. The Total Fund generated a return of 7.5% for the fiscal year. Returns by VRS primary asset classes from highest to lowest were as follows: Private Equity at 15.8%, Public Equity at 9.7%, Real Assets at 9.5%, Credit Strategies at 5.2% and Fixed Income at -0.1%. The Strategic Opportunities Portfolio (non-traditional, multi-asset class strategies) returned 7.0% for the fiscal year.

The Total Fund has tended to perform well versus its benchmark for the longer term. However, the return for the fiscal year fell just short of the benchmark. Some of this shortfall is attributable to the fact that the portfolio was positioned a bit defensively going into the fiscal year while the markets provided robust returns. My letter in the 2017 CAFR describes our rationale for defensive positioning. Some of this year's lag in performance relates to difficulties within individual asset classes, which I will discuss.

Annualized Return for Periods Ended June 30, 2018:

	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
VRS Total Fund	7.5%	7.1%	8.3%	6.1%	7.8%	6.5%	8.2%
Benchmark*	7.7%	6.8%	7.8%	5.8%	7.3%	6.0%	7.1%

Investment return calculations were prepared using a time-weighted return methodology based on market value, net of investment expenses.

** The VRS Total Fund Benchmark is a blend of the asset class benchmarks at policy weights. Benchmarks are selected with the help of a third-party investment consultant.*

Figures 3.1 and 3.2 in the Investment Section show the asset allocation of the fund at June 30, 2018, as well as performance for various periods ended on that date. Some comments on the asset class returns appear below.

While providing strong performance over time, the one-year return in the Public Equity portfolio fell short of its index by 1.2% for the fiscal year. Our long-term positioning led us to overweight low volatility and “value” stocks. These types of stocks were not in favor for much of the year. Although disappointing in the short run, we are heartened by the fact that the Public Equity portfolio has performed above the market benchmark over five- and 10-year periods.

As noted, the Federal Reserve recently began raising interest rates, causing an increase in the bond portfolio yield while simultaneously depressing its market value. As a result, the absolute return of the Fixed Income portfolio was basically flat. But the portfolio exceeded the benchmark return of -0.4%. The Fixed Income team continues to provide excellent value-added relative results on a consistent basis.

The Credit Strategies portfolio had an excellent year, generating a 5.2% return versus its benchmark of 3.7%. Within the more traditional publicly traded assets, convertible bonds generated the highest returns owing to their equity market sensitivity. Perhaps the biggest story within the program, however, is the return generated by the “alternative” components. These include privately negotiated transactions, operational enhancements and unique security structures. Such non-traditional strategies have been emphasized by the Credit Strategies team for several years now as we capitalize on our position as a large, long-term-oriented investor.

The Real Assets portfolio had a solid year generating a return of 9.5%, which was 2.1% above its benchmark. This strong result occurred in both traditional real estate (property markets) as well as in the less traditional areas including infrastructure (airports, seaports and pipelines) and income-oriented energy investments. Further, the team has delivered strong results over longer-term periods as well.

The Private Equity team had a strong year with a portfolio return of 15.8%. Unfortunately, this was below a strong index return of 16.6%. Since Private Equity investments are made as a substitute for public equities, a better perspective is to measure the return versus the Public Equity portfolio benchmark return of 10.9%. Additionally, Private Equity has been the Total Fund's highest absolute performance-generating asset over longer time periods.

The Strategic Opportunities Portfolio is a mix of diverse strategies whose purpose has changed over time. On the surface, the portfolio has underperformed. However, the portfolio has accomplished its mission as defined. Staff worked with the Investment Advisory Committee and the VRS Board of Trustees to segregate this portfolio into its component parts starting July 1, 2018.

The Board has adopted an efficient portfolio policy in a risk versus reward sense, with the target portfolio expected to generate returns similar to our peer states with risk levels lower than average (defined by annual volatility). VRS investment staff continues to generate good performance relative to the Board's benchmark portfolio and has added real dollars to the fund through its investment activity, compared to passive alternatives. Over the past 10 years, that excess performance has generated more than \$1.6 billion extra dollars for the plan.

MARKET OUTLOOK

Financial conditions in advanced economies remain accommodative, though in the U.S., the Federal Reserve is beginning to tighten monetary policy. Growth is expected to remain above trend for the time being, but the outlook for 2019 and beyond is a bit cloudier. The U.S. market outlook is somewhat insulated from tightening liquidity and moderating growth in the near term as federal tax reforms have encouraged corporate repatriation of earnings. However, fiscal deficits and rising rates will increase the cost of debt burdens over the intermediate term.

Emerging economies have generally favorable economic conditions as well. But there are significant differences from country to country based on economic fundamentals and political uncertainty. Crosswinds include oil and commodity prices, trade tensions and rising U.S. interest rates that are expected to increase the strength of the dollar.

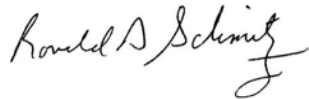
As we did last year, staff conducted a scenario analysis exercise that looked at symmetrical near-term shifts in projected inflation and economic growth. Given the historically high current asset valuations across all asset classes, last year's exercise had somewhat negatively skewed outcomes. That is, positive scenarios did not provide as strong an increase in returns as negative results caused price declines. This year, however, there is a stronger positive skew, given current fiscal conditions and growth outlook. That said, many of the scenarios do suggest returns below the 7% assumed long-term return.

Further, we studied a series of scenarios as defined by various external economists. Unlike the shifts in the first exercise in 2017, the outcomes this year were negatively skewed. Positive scenarios included increased productivity and an extension in the already long business cycle. Negative scenarios included a recession, a tariff-driven disruption to global trade, an economic crisis in China, a Eurozone breakup and inflation shocks.

Given these exercises, the portfolio is positioned neutrally as compared to the policy portfolio. We remain watchful for negative signs.

To conclude, I want to thank the Board of Trustees and the Investment Advisory Committee for their dedication and support over this past year. Many thanks also to my counterparts on the administrative side of VRS. Last, my appreciation goes out to the excellent team of investment professionals at VRS. Together, we will continue to build on the agency's great legacy.

Sincerely,

A handwritten signature in black ink, reading "Ronald D. Schmitz". The signature is written in a cursive style with a large, stylized initial "R".

Ronald D. Schmitz
Chief Investment Officer

The Investment Section provides detailed information regarding the structure of the investment portfolio. This information includes performance, asset allocations, portfolio highlights, a list of VRS' money managers and public equity commissions for the fiscal year. The section also presents the System's investment management fees and expenses and an investment summary.

Investment Account

The VRS Board of Trustees has fiduciary responsibility to invest the fund solely in the interest of the beneficiaries of the System. As established by the *Code of Virginia*, "the Board shall invest the assets of the Retirement System with the care, skill, prudence and due diligence that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims."

Benefit payments are projected to occur over a long period of time, allowing VRS to adopt a long-term investment horizon and asset allocation policy for the management of fund assets. Asset allocation policy is critical because it defines the basic risk and return characteristics of the VRS investment portfolio. Asset allocation targets are established using an asset-liability analysis designed to assist the Board in determining an acceptable volatility target for the fund and an optimal asset allocation policy mix. The asset-liability analysis considers both sides of the VRS balance sheet in order to estimate the potential impact of various asset class mixes on key measures of total plan risk, including the resulting estimated impact on funded status and contribution rates.

The Board delegates authority to the Chief Investment Officer to allocate the System's investments within the approved asset allocation policy and within the Board-approved active risk budget. The total fund active risk budget describes the degree of tolerance for yearly variation in the fund's performance relative to the Total Fund VRS Custom Benchmark. The primary risk measure used for this purpose is Total Fund Tracking Error, calculated as the standard deviation of the difference between the fund's return and the return of the Total Fund VRS Custom Benchmark. From this measure, probability estimates can be derived to help the Board estimate the risk of underperforming the benchmark by certain margins.

The investment staff manages the VRS portfolio on a day-to-day basis according to policies and guidelines established by the Board. The staff manages assets on a direct basis and through outside investment managers. Managers employ both active and passive investment strategies. The Board has established various performance benchmarks to serve as tools for measuring progress toward the achievement of long-term investment goals.

The asset allocation mix of the VRS fund as of June 30, 2018, is shown in Figure 3.1:

FIGURE 3.1: ASSET ALLOCATION MIX

AS OF JUNE 30, 2018

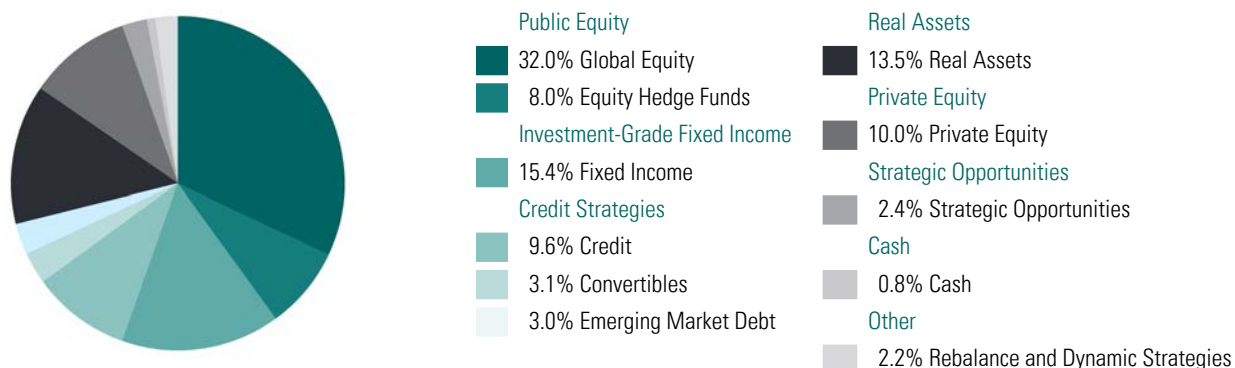


FIGURE 3.2: INVESTMENT PERFORMANCE SUMMARY

ANNUALIZED DATA FOR THE PERIOD ENDING JUNE 30, 2018

	1 Year	3 Years	5 Years	10 Years
1. Total Fund				
VRS	7.5%	7.1%	8.3%	6.1%
VRS Custom Benchmark ¹	7.7%	6.8%	7.8%	5.8%
2. Total Public Equity				
VRS	9.7%	7.7%	9.9%	6.7%
Custom Benchmark ²	10.9%	8.0%	9.6%	6.4%
3. Total Investment-Grade Fixed Income				
VRS	-0.1%	2.3%	2.8%	4.6%
Custom Benchmark ³	-0.4%	1.7%	2.3%	3.8%
4. Total Credit Strategies				
VRS	5.2%	5.5%	5.9%	6.8%
Custom Benchmark ⁴	3.7%	4.9%	5.3%	5.6%
5. Total Real Assets				
VRS	9.5%	10.6%	11.6%	6.7%
Custom Benchmark ⁵	7.4%	8.7%	9.5%	6.2%
6. Total Private Equity				
VRS	15.8%	14.2%	14.7%	10.3%
Custom Benchmark ⁶	16.6%	11.4%	12.9%	10.9%
7. Total Strategic Opportunities				
VRS	7.0%	4.2%	3.5%	n/a
Custom Benchmark ⁷	8.8%	6.3%	4.7%	n/a

Investment return calculations were prepared using a time-weighted return methodology based on market value, net of investment expenses.

FIGURE 3.2: INVESTMENT PERFORMANCE SUMMARY, cont.

- ¹ *The VRS Custom Benchmark is a blend of the Asset Class Benchmarks at policy weights.*
- ² *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%).*
- ³ *Effective July 2014, the Investment-Grade Fixed Income Custom Benchmark consists of the Bloomberg Barclays Capital U.S. Aggregate Index.*
- ⁴ *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.*
- ⁵ *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.*
- ⁶ *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.*
- ⁷ *Effective January 2015, the Strategic Opportunities Portfolio Custom Benchmark is the market value weighted average of the benchmarks of the mandates within the program.*

Portfolio Highlights

PUBLIC EQUITY

The market value of the Total Public Equity Program as of June 30, 2018, was \$31.4 billion, representing approximately 40% of the total fund. The program is dominated by traditional strategies valued at \$25.1 billion or 80.0%. The program also employs equity-oriented hedge fund strategies valued at \$6.3 billion or 20.0%. The objective of the portfolio is to exceed the Custom Benchmark over longer-term periods, net of all costs. The Custom Benchmark is comprised of 80% MSCI All Country World Index (ACWI) IMI with Developed Market currencies 50% hedged and 20% Credit Suisse Equity Long/Short Broad Index.

The Traditional Public Equity portfolio had 52% invested in domestic equity and 48% in international equity. Less than 1% was invested in passive strategies and 41% was managed internally.

At fiscal year-end, the ACWI IMI benchmark was comprised of 53.3% of the MSCI U.S. Investible Market Index (IMI), 35.4% of the MSCI World excluding U.S. IMI (50% hedged) and 11.3% in the MSCI Emerging IMI.

Traditional Public Equity versus the MSCI ACWI IMI strategic sectors and region weights are as follows:

FIGURE 3.3: TRADITIONAL EQUITY CUSTOM BENCHMARK SECTORS AND REGIONS*

Strategic Sectors	VRS	MSCI ACWI IMI	Regions	VRS	MSCI ACWI IMI
Consumer Discretionary	11.77%	12.59%	North America	55.53%	56.53%
Consumer Staples	8.00%	7.68%	Europe/Middle East/Africa	21.09%	21.84%
Energy	6.10%	6.49%	Asia/Pacific	22.13%	20.46%
Financials	15.85%	16.92%	Latin and South America	1.25%	1.17%
Health Care	12.20%	11.07%		100.00%	100.00%
Industrials	10.76%	11.31%			
Information Technology	19.18%	18.83%			
Materials	5.14%	5.63%			
Real Estate	3.60%	4.02%			
Telecommunication Services	3.32%	2.53%			
Utilities	4.08%	2.93%			
	100.00%	100.00%			

* Based on Barra's classification of sectors and regions and excludes cash.

The top 10 holdings in the Total Public Equity Program comprised 5.8% of the program at fiscal year-end. Three companies, Samsung Electronics,

Berkshire Hathaway and Exxon Mobil, were replaced by Verizon Communications, Royal Dutch Shell and Visa on this year's schedule.

FIGURE 3.4: PUBLIC EQUITY – TOP 10 EXPOSURES*

AS OF JUNE 30, 2018

Company	Fair Value	Shares
Microsoft	\$ 314,387,416	3,188,190
Apple	245,624,680	1,326,912
Amazon.com	218,203,326	128,370
Johnson & Johnson	197,895,833	1,630,920
Facebook	155,352,622	799,468
Verizon Communications	151,958,990	3,020,453
Roche Holding	149,902,701	674,885
Alphabet	139,832,224	125,337
Royal Dutch Shell	121,644,787	3,369,846
Visa	120,085,925	906,651

* Aggregated various share classes based on parent company. Refer to the "More Information" section for details on how to request additional information.

FIXED INCOME

VRS invests a portion of its portfolio in fixed income investments to reduce total fund volatility, produce income and provide for some protection in the event of a deflationary environment. The market value of the Fixed Income Program as of June 30, 2018, was \$12.1 billion, representing 15.4% of the total fund.

The Fixed Income Program is internally invested in a diversified portfolio of high-quality assets, such as government securities, corporate securities and mortgage-backed securities. The objective of the program is to exceed the return of the Bloomberg Barclays U.S. Aggregate Index, while staying in compliance with risk limits. For fiscal year 2018, the return of the program was -0.1% versus a return of -0.4% for the benchmark.

FIGURE 3.5: FIXED INCOME PORTFOLIO BY SECTOR ALLOCATION

AS OF JUNE 30, 2018

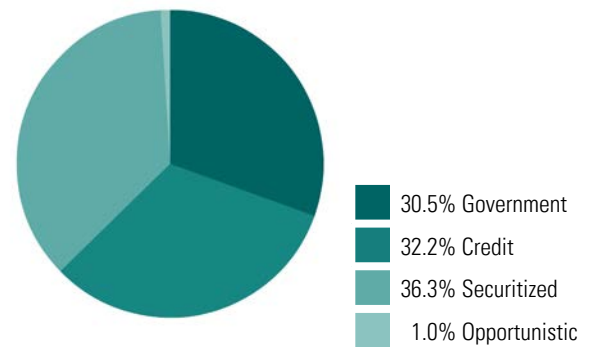


FIGURE 3.6: FIXED INCOME PORTFOLIO BY CREDIT QUALITY BREAKDOWN

AS OF JUNE 30, 2018

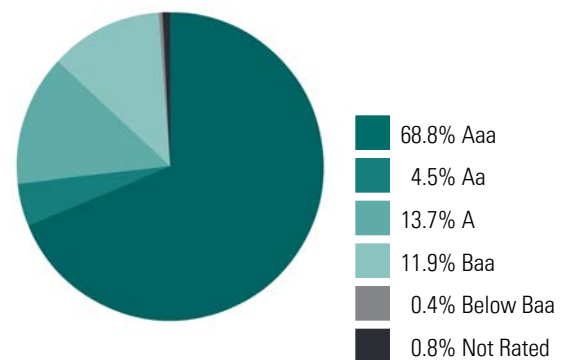


FIGURE 3.7: FIXED INCOME – TOP 10 HOLDINGS BY MARKET VALUE*

AS OF JUNE 30, 2018

Security	Par Value	Fair Value
TREASURY NOTE	\$ 150,000,000	\$ 149,944,633
TREASURY NOTE	125,000,000	122,898,438
TREASURY NOTE	121,000,000	120,830,805
TREASURY NOTE	115,000,000	113,154,701
TREASURY BOND	111,300,000	108,178,650
TREASURY NOTE	106,000,000	102,073,854
TREASURY NOTE	100,000,000	99,452,127
TREASURY NOTE	100,000,000	98,243,432
FREDDIE MAC MBS	85,155,613	83,389,880
TREASURY NOTE	80,000,000	80,277,700

* Refer to the "More Information" section for details on how to request additional information.

SHORT-TERM INVESTMENTS AND TRANSITION ACTIVITY

Generally, VRS desires to remain fully invested at all times and seeks to minimize its holdings of cash investments. Temporary cash balances are invested in short-term money market instruments with the goal of maintaining high credit quality and liquidity, as well as to synthetically replicate exposure to equity and/or fixed income.

PRIVATE EQUITY

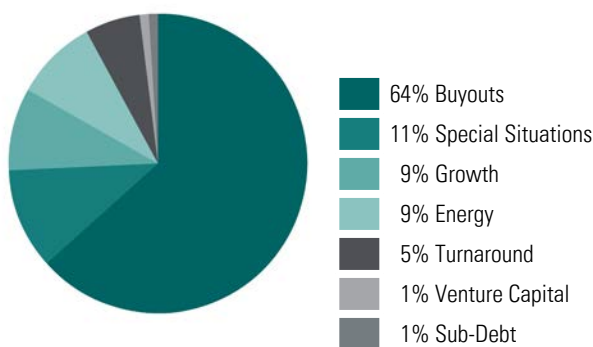
VRS invests in private equity to achieve returns greater than those available in the public equity markets. Specifically, the program seeks to outperform the Morgan Stanley Capital International All Country World Index (MSCI ACWI) by 2.5% per year. Program returns are calculated on both a time-weighted basis and a dollar-weighted or internal rate-of-return (IRR) basis. On a time-weighted basis, the program return for fiscal year 2018 was 15.8%. On a dollar-weighted or IRR basis, the private equity one-year return was 17.5% as of March 31, 2018.

As of June 30, 2018, the carrying value of the program was approximately \$7.9 billion. Most of the program is invested in limited partnerships.

Sectors in which the program invests include leveraged buyouts, venture capital, growth, sub-debt, turnaround, energy and special situations. The Private Equity Program's market value by subclass was as follows:

FIGURE 3.8: PRIVATE EQUITY PROGRAM

AS OF JUNE 30, 2018



REAL ASSETS

A portion of the VRS portfolio is invested in real assets to help diversify the Total Fund by providing exposure to asset classes and sectors that offer low historical correlations with the public markets and with the additional objectives of generating competitive risk-adjusted returns, significant operating cash flows and inflation linkages. The portfolio continued to grow in fiscal year 2018, producing a 9.5% return and outperforming the benchmark by 210 basis points. The private real estate portfolio delivered a 9.5% return while the real estate investment trusts (REITs) produced a total return of 7.3%. Investments in infrastructure, natural resources, timberland and farmland produced a 10.2% return for the fiscal year.

The percentage of the Total Fund represented by the real assets portfolio increased over the course of the year from 12.6% to 13.5%. In dollar terms, the real asset portfolio grew \$1.2 billion due primarily to asset income and appreciation, with contributions to new investments slightly outpacing distributions from existing investments by approximately \$295 million.

At fiscal year-end, the portfolio was composed of approximately 61.2% private real estate, 11.1% REITs, 14.8% infrastructure, 7.0% energy and mining, 4.6% timberland and 1.3% farmland. Portfolio leverage as a percentage of total real assets was 33.5% as of June 30, 2018.

FIGURE 3.9: REAL ASSETS BY SECTOR

AS OF JUNE 30, 2018

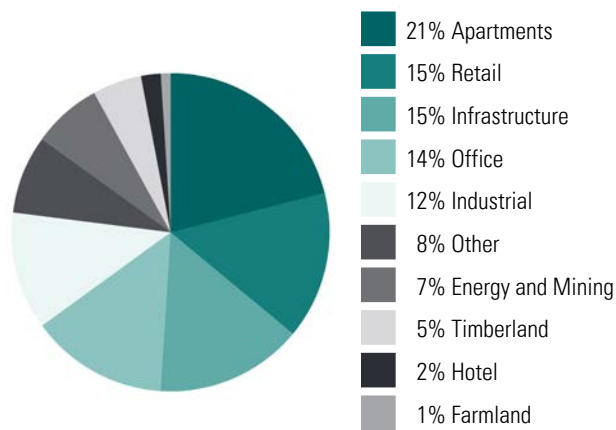
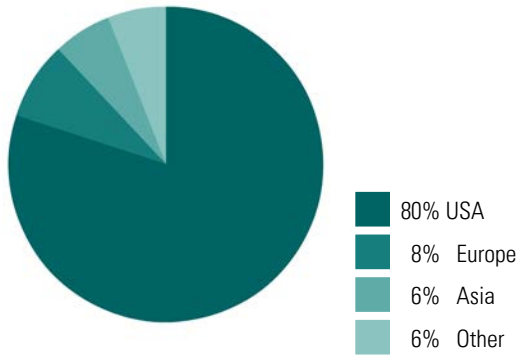


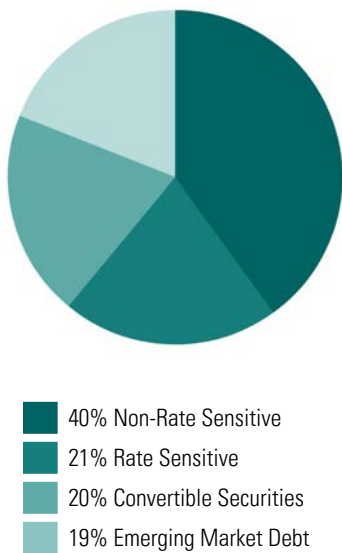
FIGURE 3.10: REAL ASSETS BY GEOGRAPHIC REGION
AS OF JUNE 30, 2018



CREDIT STRATEGIES

VRS allocates a portion of the portfolio to credit-related investments. The Credit Strategies program generates returns through income and capital appreciation. The objective of the program is to provide an attractive risk/return profile relative to the Custom Credit Strategies benchmark. For the fiscal year, the program returned 5.2%, while the program’s custom benchmark returned 3.7%.

FIGURE 3.11: CREDIT STRATEGIES PROGRAM
AS OF JUNE 30, 2018



CURRENCY

VRS has currency risk due to its investments in non-dollar-denominated assets. To help control this risk, VRS has a Currency Program that uses a combination of internal hedging strategies and external managers. The external currency management part aims to lower overall Fund volatility and provide diversified alpha across the Fund. Investments include constrained positions in developed and emerging market currencies. The currency positions are typically traded on a forward basis, and thus no capital is necessary at the time of the trade. At forward settlement date, gains and losses are received/paid out against a notional value.

The current notional value, as of June 30, 2018, was \$1.8 billion. For the fiscal year, it returned -3.0% versus a zero benchmark.

STRATEGIC OPPORTUNITIES PORTFOLIO

The Board of Trustees approved the Strategic Opportunities Portfolio on January 1, 2013, to manage strategies that staff believes would add value to the Total Fund but would otherwise not fit in individual program mandates or benchmarks. As of June 30, 2018, the portfolio had a market value of \$1.9 billion and was invested with two multi-asset class public investments managers and two multi-asset class private investments managers. During the fiscal year, it returned 7.0% against the program’s custom benchmark, which returned 8.8%.

MORE INFORMATION

A complete list of the investment portfolio is available upon request. Address requests to the VRS FOIA Coordinator, Virginia Retirement System, P.O. Box 2500, Richmond, VA 23218-2500.

More information is available at www.varetire.org/legal/foia.asp.

VRS Money Managers

The diversified investment structure as of June 30, 2018, is reflected in the following tables, which list

VRS managers by investment program and style.

PUBLIC EQUITY MONEY MANAGERS

External Managers – Top 10 Managers	Style Description
Acadian Asset Management	Emerging, Non-U.S. Small-Cap
Ariel	Global
Arrowstreet Capital	Global
Baillie Gifford	Global
GMO	Emerging
J.P. Morgan	U.S. Large-Cap
LSV Asset Management	Global, Non-U.S. Small-Cap, U.S. Small-Cap
Nordea	Emerging, Global
Select	U.S. Small-Cap
TimesSquare	U.S. Small-Cap
Internal Portfolios	Style Description
Afton	U.S. Small
Matoaka	Non-U.S. Large
Mobjack	U.S. Large
Piedmont	Non-U.S. Large
Potomac	U.S. Large
Tuckahoe	Emerging
Top 10 Equity Hedge Funds	Style Description
Cevian	Activist
Eminence	Long/Short
Farallon	Multi-Strat
Highline	Long/Short
Kylin	Long/Short
Lansdowne Partners	Long/Short
Maverick Capital	Long/Short
Select – Cooper Square	Long/Short
Theleme	Long/Short
ValueAct Capital	Activist

FIXED INCOME

Internal Portfolios	Style Description
VRS Credit	High-Quality Corporates
VRS Fixed Income Opportunistic	Various Fixed Income Related Assets
VRS Government	Treasuries, Agencies and Other Government-Related
VRS Securitized	Mortgage and Other Asset-Backed Securities

PRIVATE EQUITY – TOP 10 MANAGERS

	Style Description
Apax Partners	Buyout
Bain Capital	Buyout
First Reserve Corp.	Energy
Grosvenor	Customized Separate Account
Hellman and Friedman	Buyout
Littlejohn & Co.	Turnaround
Natural Gas Partners	Energy
Nordic Capital	Buyout
TA Associates	Growth
TPG Partners	Buyout

CREDIT STRATEGIES – TOP 10 MANAGERS

	Style Description
Advent Capital	Convertibles
Anchorage Capital	Hedge Fund, Opportunistic High-Yield
Beach Point Capital Management	Distressed, Leveraged Loans, Opportunistic
Oaktree Capital Management	Convertibles, Distressed, Mezzanine
Pacific Investment Management Co.	Emerging Market Debt, High-Yield
Payden & Rygel	Emerging Market Debt
Prudential	High-Yield, Investment-Grade, Mezzanine
Solus	Hedge Fund, Leveraged Loan
Tennenbaum Capital Partners	Direct Lending
Zazove Associates	Convertibles

STRATEGIC OPPORTUNITIES PORTFOLIO

	Style Description
AQR	Multi-Asset Class Public Investments
Bridgewater	Multi-Asset Class Public Investments
Carlyle	Multi-Asset Class Private Investments
KKR	Multi-Asset Class Private Investments

CURRENCY

	Style Description
First Quadrant	Developed

REAL ASSETS – TOP 10 MANAGERS

	Style Description
Blackstone Real Estate Partners	Core, Enhanced Core, Opportunistic Real Estate
Clarion Partners	Enhanced Core Real Estate
Industry Funds Management	Global Infrastructure
J.P. Morgan Asset Management Inc.	Core Real Estate
LaSalle Investment Management	Core & Opportunistic Real Estate
Morgan Stanley	Core, Enhanced Core, Opportunistic Real Estate, International REITs & Global Infrastructure
PGIM	Core & Enhanced Core Real Estate
Pritzker Realty Group	Opportunistic Real Estate
Stonepeak	U.S. Infrastructure
VRS – Internal Equity Management	U.S. REITs

Public Equity Commissions

AS OF JUNE 30, 2018

Broker	Commission	Broker	Commission
National Financial Services Corp., New York	\$ 1,322,810.87	Deutsche Bank Securities Inc., New York	
Goldman Sachs & Co., New York	\$ 1,199,196.89	(NWSCUS33)	\$ 132,084.93
Credit Suisse, New York (CSUS)	\$ 1,145,514.94	Sanford C. Bernstein & Co., New York	\$ 122,841.75
Merrill Lynch International London Equities	\$ 525,429.04	UBS Warburg, London	\$ 114,631.58
Merrill Lynch Pierce Fenner Smith Inc., New York	\$ 323,670.15	Citigroup Global Market Ltd., London	\$ 113,925.72
Sanford C. Bernstein & Co. Inc., London	\$ 236,426.07	Citigroup Global Markets/Salomon, New York	\$ 112,073.68
Morgan Stanley & Co. Inc., New York	\$ 220,209.59	Other Brokers	\$ 2,446,354.84
Instinet Europe Limited, London	\$ 207,347.27	Total FY 2018	\$ 8,388,716.29
UBS Securities LLC, Stamford	\$ 166,198.97		

SCHEDULE OF INVESTMENT EXPENSES

FOR THE YEAR ENDED JUNE 30, 2018

(EXPRESSED IN THOUSANDS)

	Assets Under Management	Management Fees and Expenses
External Management:		
Public Equity Managers	\$ 12,163,230	\$ 57,597
Fixed Income Managers	3,745,571	1,358
Credit Strategies Managers	11,243,816	57,368
Real Assets Managers	10,537,618	93,483
Alternative Investment Managers	8,052,849	104,497
Hedge Funds Managers	7,167,860	76,771
Strategic Opportunity Portfolio	1,911,520	17,003
Currency Managers*		4,399
Dynamic Strategy	881,366	—
Internal Management:	24,630,779	34,225
Miscellaneous Fees and Expenses:		
Custodial Fees	—	4,500
Legal Fees	—	1,064
Other Fees and Expenses	—	5,079
Total	\$ 80,334,609	\$ 457,344

* The fees related to Active Currency Overlay Program is based on the managers' notional account values. The total notional value at June 30, 2018, was \$1.8 billion.

Investment Summary: Defined Benefit Plans

In accordance with Section 51.1-124.31 of the *Code of Virginia* (1950), as amended, the Board of Trustees has pooled substantially all defined benefit plan assets of the Virginia Retirement System, the State Police Officers' Retirement System, the Judicial Retirement System, the Group Life

Insurance Fund and the Retiree Health Insurance Credit Fund into a common investment pool. The common investment pool of the pension trust funds and other trust funds held the following composition of investments at June 30, 2018 and 2017:

(EXPRESSED IN THOUSANDS)

	2018 Fair Value	Percent of Total Value	2017 Fair Value	Percent of Total Value
Bonds and Mortgage Securities:				
U.S. Government and Agencies	\$ 4,056,580	5.04%	\$ 3,840,770	5.01%
Mortgage Securities	4,361,474	5.42%	4,165,151	5.44%
Corporate and Other Bonds	13,355,608	16.60%	13,954,761	18.21%
Total Bonds and Mortgage Securities	21,773,662	27.06%	21,960,682	28.66%
Common and Preferred Stocks	24,452,265	30.40%	24,329,065	31.75%
Index and Pooled Funds				
Equity Index and Pooled Funds	10,502,999	13.06%	9,630,071	12.57%
Fixed-Income Commingled Funds	1,360,209	1.69%	1,151,868	1.50%
Total Index and Pooled Funds	11,863,208	14.75%	10,781,939	14.07%
Real Assets	9,242,121	11.49%	8,279,144	10.81%
Private Equity	12,919,297	16.07%	11,114,649	14.51%
Short-Term Investments				
Treasurer of Virginia – LGIP Investment Pool	99,344	0.12%	78,861	0.11%
Foreign Currencies	84,056	0.11%	70,983	0.09%
Total Short-Term Investments	183,400	0.23%	149,844	0.20%
Total Investments	\$ 80,433,953	100.00%	\$ 76,615,323	100.00%

Description of Hybrid Defined Contribution Plan

Defined contribution plan assets for Hybrid Retirement Plan members are maintained in two separate accounts. The Hybrid 401(a) Cash Match Plan account contains the hybrid plan member and employer mandatory contributions and the employer match on the voluntary member

contributions. The Hybrid 457 Deferred Compensation Plan account contains the hybrid plan member's voluntary contributions. The schedule below shows the assets in each investment option and the accumulated plan assets in each option.

HYBRID PARTICIPANT ACCOUNT PLAN ASSETS BY FUND OPTION

AS OF JUNE 30, 2018

Fund Name	Hybrid 401(a)	Hybrid 457	Total
Retirement Portfolio	\$ 2,156,080	\$ 960,236	\$ 3,116,316
Target Date 2020 Portfolio	8,545,830	4,272,928	12,818,758
Target Date 2025 Portfolio	14,698,828	6,616,137	21,314,965
Target Date 2030 Portfolio	19,369,173	9,830,014	29,199,187
Target Date 2035 Portfolio	23,524,828	10,758,078	34,282,906
Target Date 2040 Portfolio	23,615,469	9,429,182	33,044,651
Target Date 2045 Portfolio	27,596,392	11,191,933	38,788,325
Target Date 2050 Portfolio	34,804,694	11,936,694	46,741,388
Target Date 2055 Portfolio	56,653,423	15,448,030	72,101,453
Target Date 2060 Portfolio	13,016,203	3,369,159	16,385,362
Money Market Fund	1,756,906	269,286	2,026,192
Stable Value Fund	401,860	601,817	1,003,677
Bond Fund	338,392	413,444	751,836
Inflation-Protected Bond Fund	88,926	121,259	210,185
High-Yield Bond Fund	298,001	586,366	884,367
Stock Fund	4,206,786	5,101,645	9,308,431
Small/Mid-Cap Stock Fund	1,732,285	2,061,557	3,793,842
International Stock Fund	1,007,925	1,230,961	2,238,886
Global Real Estate Fund	461,427	558,206	1,019,633
VRS Investment Portfolio – Interim Account	2,916	1,061	3,977
VRS Investment Portfolio	47,502	35,868	83,370
Self-Directed Brokerage	89,799	48,929	138,728
Total Plan Assets	\$ 234,413,645	\$ 94,842,790	\$ 329,256,435

Description of Defined Contribution Plans Investment Options

Participants in the System's Hybrid Retirement Plan benefit structure have access to a number of core investment options for contributions to their defined contribution plans. These options are intended to provide participants with a variety of investment choices while controlling the associated costs. In addition to the option-specific annual operating expense detailed in the Investment Option Performance Summary, participants pay an annual record-keeping fee of \$30.50 that is deducted from their accounts on a monthly basis (approximately \$2.54 per month).

Participants with more than one account in the Plan pay only one annual fee of \$30.50. At June 30, 2018, the plans provided the following core investment options to participants. *Note: Some sector allocations may not total 100% due to rounding.*

DO-IT-FOR-ME FUNDS

Retirement Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that object, the portfolio will be broadly diversified across global asset classes.

U.S. Bonds: 51.3% U.S. Large/Mid-Cap Stocks: 20.5% International Stocks: 11.4%
U.S. Inflation-Index Bonds: 8.8% U.S. Small-Cap Stocks: 4.0%
Commodities: 3.5% Developed Real Estate: 0.5%

Target Date 2020 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Bonds: 46.7% U.S. Large/Mid-Cap Stocks: 23.2% International Stocks: 14.1%
U.S. Inflation-Index Bonds: 7.7% U.S. Small-Cap Stocks: 3.9%
Commodities: 3.4% Developed Real Estate: 1.0%

Target Date 2025 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Bonds: 35.9% U.S. Large/Mid-Cap Stocks: 29.4% International Stocks: 18.2%
U.S. Inflation-Index Bonds: 5.8% Developed Real Estate: 4.3%
Commodities: 3.4% U.S. Small-Cap Stocks: 3.1%

Target Date 2030 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 34.6% U.S. Bonds: 26.7% International Stocks: 21.7%
Developed Real Estate: 7.2% U.S. Inflation-Index Bonds: 4.1%
Commodities: 3.4% U.S. Small-Cap Stocks: 2.4%

Target Date 2035 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 39.5% International Stocks: 25.0% U.S. Bonds: 17.9%
Developed Real Estate: 9.9% Commodities: 3.4%
U.S. Inflation-Index Bonds: 2.6% U.S. Small-Cap Stocks: 1.9%

Target Date 2040 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 44.0% International Stocks: 27.9%
Developed Real Estate: 12.3% U.S. Bonds: 9.9% Commodities: 3.4%
U.S. Small-Cap Stocks: 1.3% U.S. Inflation-Index Bonds: 1.2%

Target Date 2045 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large-/Mid-Cap Stocks: 46.4% International Stocks: 30.4%
Developed Real Estate: 14.5% U.S. Bonds: 3.7% Commodities: 3.6%
U.S. Small-Cap Stocks: 1.2% U.S. Inflation-Index Bonds: 0.3%

Target Date 2050 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 47.3% International Stocks: 31.4% Developed Real Estate: 15.4%
Commodities: 3.5% U.S. Bonds: 1.3% U.S. Small-Cap Stocks: 1.1%

Target Date 2055 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 47.4% International Stocks: 31.5% Developed Real Estate: 15.5%
Commodities: 3.5% U.S. Bonds: 1.0% U.S. Small-Cap Stocks: 1.0%

Target Date 2060 Portfolio: Seeks to provide for retirement outcomes consistent with investor preferences throughout the savings and drawdown phase based on quantitatively measured risk that investors, on average, may be willing to accept. In pursuit of that objective, the portfolio will be broadly diversified across global asset classes, with asset allocations becoming more conservative over time.

U.S. Large/Mid-Cap Stocks: 47.4% International Stocks: 31.5% Developed Real Estate: 15.5%
Commodities: 3.6% U.S. Small-Cap Stocks: 1.1% U.S. Bonds: 1.0%

HELP-ME-DO-IT FUNDS

Money Market Fund: Seeks to provide a high level of current income as is consistent with liquidity and stability of principal.

Other Repurchase Agreement: 48.3% Asset-Backed Commercial Paper: 14.0%
Certificate of Deposit: 13.5% Time Deposits: 11.4% Commercial Paper: 8.1%
Government Agency Debt: 2.2% Government Agency Repurchase Agreement: 1.6%
Other: 0.5% Treasury Debt: 0.4%

Stable Value Fund: Seeks to provide safety of principal, while earning a reasonable level of interest income consistent with an underlying portfolio of short- to intermediate-duration high-quality fixed income (bond) securities and cash or cash equivalents, and liquidity to accommodate participant transactions.

Corporates: 26.9% Agency MBS: 21.2% Asset-Backed: 16.1% U.S. Treasury/Agency: 9.5%
Cash/Equivalents: 8.8% CMBS: 7.0% Other U.S. Government: 5.6%
Taxable Municipals: 3.7% Non-Agency MBS: 1.1%

Bond Fund: Seeks to track the performance of the Bloomberg Barclays Aggregate Bond Index. The index is an unmanaged index that represents the broad U.S. investment-grade bond market and is comprised of U.S. treasury securities, government agency bonds, corporate bonds, mortgage-backed securities, asset-backed securities and a small amount of foreign bonds traded in the U.S.

Treasury: 37.2% Mortgages: 28.1% Industrials: 15.1% Financials: 7.9%
Non-U.S. Credit: 4.3% Agencies: 2.4% CMBS: 1.9% Utilities: 1.8%
Taxable Municipals: 0.6% Asset-Backed Securities: 0.5% Cash: 0.2% Hybrid ARM: 0.1%

Inflation-Protected Bond Fund: Seeks to track the performance of the Bloomberg Barclays U.S. Treasury Inflation-Protected Securities Index. The index is an unmanaged index that represents the U.S. Treasury Inflation-Protection Securities (TIPS) market. The index includes investment-grade TIPS with one or more years to final maturity.

U.S. Treasury: 97.2% Cash: 2.8%

High-Yield Bond Fund: Seeks to achieve returns that exceed, over time, its benchmark, the ICE BofAML U.S. High-Yield BB-B Constrained Index. The index is an unmanaged index of BB-B rated securities that caps any single issuer exposure to 2.0%. The index is indicative of the higher quality high-yield bond market.

Communications: 25.4% Consumer Non-Cyclical: 17.3% Consumer Cyclical: 13.9%
Energy: 10.7% Technology: 8.5% Other/Cash: 7.9% Capital Goods: 7.5% Basic Industry: 3.5%
Finance: 2.3% Transportation: 1.8% Utilities: 0.7% Other Industrial: 0.6%

Stock Fund: Seeks to track the performance of the Standard & Poor's 500 Index. The index is an unmanaged index that represents the broad large-capitalization U.S. stock market and is comprised of 500 widely held U.S. stocks chosen by Standard & Poor's.

Information Technology: 26.0% Health Care: 14.1% Financials: 13.9% Consumer Discretionary: 12.9%
Industrials: 9.6% Consumer Staples: 6.9% Energy: 6.3%
Utilities: 3.0% Real Estate: 2.9% Materials: 2.6% Telecommunications Services: 2.0%

Small/Mid-Capitalization Stock Fund: Seeks to track the performance of the Russell 2500 Index. The index is an unmanaged index that represents the broad middle- to smaller-capitalization U.S. stock market.

Information Technology: 16.0% Financials: 15.9% Industrials: 15.1%
Consumer Discretionary: 13.4% Health Care: 12.6% Real Estate: 9.7% Materials: 5.7%
Energy: 4.9% Utilities: 3.5% Consumer Staples: 2.8% Telecommunication Services: 0.5%

International Stock Fund: Seeks to track the performance of the MSCI ACWI ex-U.S. IMI Index. The index is an unmanaged index that represents the equity performance of large, mid- and small-cap segments of developed and emerging markets, excluding the U.S.

Financials: 20.4% Industrials: 12.7% Information Technology: 12.0% Consumer Discretionary: 11.8%
Consumer Staples: 9.2% Materials: 8.5% Health Care: 8.0% Energy: 6.9%
Real Estate: 4.1% Telecommunication Services: 3.4% Utilities: 3.0%

Global Real Estate Fund: Seeks to track the performance of the FTSE EPRA/NAREIT Developed Index. The index is an unmanaged index that is designed to reflect the performance of listed real estate companies worldwide, including the U.S.

Retail REITs: 20.7% Office REITs: 12.1% Residential REITs: 10.7% Real Estate Operating Companies: 10.0%
Diversified REITs: 9.5% Diversified Real Estate Activities: 8.5%
Industrial REITs: 7.7% Specialized REITs: 7.3% Health Care REITs: 7.1%
Hotel & Resort REITs: 4.3% Real Estate Development: 1.8% Health Care Facilities: 0.2%
Hotels, Resorts & Cruise Lines: 0.1%

VRS Investment Portfolio (VRSIP): Seeks to maximize return while managing risk within an acceptable range. Due to the long-term nature of the defined benefit plan's liabilities, the horizon for investment decisions is generally defined as 10 years or longer.

Public Equity: 41.0% Fixed Income: 16.2% Credit Strategies: 16.1% Real Assets: 13.5%
Private Equity: 10.0% Strategic Opportunities Portfolio: 2.4% Cash: 0.8%

DO-IT-MYSELF FUNDS

Self-Directed Brokerage Account (SDBA): Allows investors to select from thousands of publicly traded mutual funds, exchange-traded funds (ETFs) and individual securities in addition to the available core investment options. The SDBA option is offered through TD Ameritrade. The SDBA option is for knowledgeable investors who acknowledge and understand the risks and costs associated with the investments contained in this option.

In addition to the annual record-keeping fee and operating expenses, this option is subject to transaction fees charged by TD Ameritrade and investment management-related fees and expenses for the funds or investments selected. ICMA-RC charges a \$50 setup fee when a member establishes a SDBA and deducts the fee from the member's ICMA-RC account.

Investment Option Performance Summary: Defined Contribution Plans

AS OF JUNE 30, 2018

(RETURNS GREATER THAN ONE YEAR ARE ANNUALIZED)

DO-IT-FOR-ME PATH: TARGET DATE PORTFOLIOS

Investment Options	Inception Date	1 Year	3 Years	5 Years	10 Years or Since Inception	Total Annual Operating Expenses	
						As a %	Per \$1,000
Retirement Portfolio	08/01/05	4.83%	4.49%	5.11%	5.21%	0.08%	\$0.80
Custom Benchmark ¹		4.77%	4.45%	5.08%	5.18%		
Target Date 2020 Portfolio	08/01/05	5.61%	5.03%	5.92%	5.35%	0.08%	\$0.80
Custom Benchmark ¹		5.54%	4.97%	5.86%	5.31%		
Target Date 2025 Portfolio	07/05/06	6.85%	5.82%	6.70%	5.73%	0.08%	\$0.80
Custom Benchmark ¹		6.77%	5.75%	6.63%	5.67%		
Target Date 2030 Portfolio	08/01/05	7.96%	6.52%	7.40%	6.05%	0.08%	\$0.80
Custom Benchmark ¹		7.85%	6.41%	7.29%	5.97%		
Target Date 2035 Portfolio	07/05/06	9.01%	7.19%	8.02%	6.34%	0.08%	\$0.80
Custom Benchmark ¹		8.89%	7.05%	7.91%	6.24%		
Target Date 2040 Portfolio	08/01/05	9.94%	7.75%	8.58%	6.57%	0.08%	\$0.80
Custom Benchmark ¹		9.81%	7.59%	8.44%	6.45%		
Target Date 2045 Portfolio	07/05/06	10.57%	8.12%	8.99%	6.72%	0.08%	\$0.80
Custom Benchmark ¹		10.41%	7.93%	8.83%	6.59%		
Target Date 2050 Portfolio	09/30/07	10.76%	8.24%	9.21%	6.92%	0.08%	\$0.80
Custom Benchmark ¹		10.65%	8.06%	9.06%	6.81%		
Target Date 2055 Portfolio	05/19/10	10.75%	8.23%	9.33%	10.29%	0.08%	\$0.80
Custom Benchmark ¹		10.65%	8.06%	9.18%	10.19%		
Target Date 2060 Portfolio	11/17/14	10.71%	8.24%	N/A	7.37%	0.08%	\$0.80
Custom Benchmark ¹		10.65%	8.06%	N/A	7.20%		

HELP-ME-DO-IT PATH: INDIVIDUAL OPTIONS

Investment Options	Inception Date						Total Annual Operating Expenses	
		1 Year	3 Years	5 Years	10 Years or Since Inception	As a %	Per \$1,000	
Money Market Fund	11/01/99	1.64%	0.88%	0.53%	0.47%	0.08%	\$0.80	
Benchmark: Bloomberg Barclays 3-Month Treasury Bill Index								
Yield as of June 30, 2018, was 2.24%								
Stable Value Fund	02/01/95	2.01%	1.78%	1.67%	2.29%	0.26%	\$2.60	
Custom Benchmark ²								
Yield as of June 30, 2018, was 2.16%								
Bond Fund	11/01/99	-0.36%	1.77%	2.33%	3.79%	0.04%	\$0.40	
Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index								
Inflation-Protected Bond Fund	07/30/02	2.27%	2.06%	1.78%	3.11%	0.03%	\$0.30	
Benchmark: Bloomberg Barclays U.S. Treasury Inflation-Protected Securities Index								
High-Yield Bond Fund	05/31/04	3.01%	5.58%	5.59%	7.80%	0.40%	\$4.00	
Benchmark: ICE BofAML U.S. High-Yield BB-B Constrained Index								
Stock Fund	11/01/99	14.39%	11.94%	13.45%	10.22%	0.02%	\$0.20	
Benchmark: S&P 500 Index								
Small/Mid-Cap Stock Fund	11/01/99	16.31%	10.45%	12.41%	10.58%	0.04%	\$0.40	
Benchmark: Russell 2500 Index ³								
International Stock Fund	11/01/99	8.03%	5.63%	6.80%	3.03%	0.09%	\$1.00	
Benchmark: MSCI ACWI ex-U.S. IMI Index ⁴								
Global Real Estate Fund	10/01/02	6.05%	6.64%	6.74%	7.31%	0.11%	\$1.10	
Benchmark: FTSE EPRA/NAREIT Developed Index ⁵								
VRS Investment Portfolio (VRSIP)	07/01/08	7.55%	7.10%	8.27%	6.11%	0.58%	\$5.80	
VRS Custom Benchmark ⁶								

- ¹ Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Portfolios' asset classes. Weightings are adjusted quarterly to reflect the Portfolios' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are Russell 1000 Index, Russell 2000 Index, MSCI ACWI ex-U.S. IMI Index, Bloomberg Barclays U.S. Aggregate Bond Index, Bloomberg Barclays U.S. Treasury Inflation-Protected Securities Index, FTSE EPRA/NAREIT Developed Index and the Bloomberg Commodity Index Total Return.
- ² Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% two-year maturity + 50% three-year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment. Prior to August 2016, the custom benchmark was based on the monthly yield of actively traded U.S. Treasuries with a three-year maturity plus an annualized spread of 0.50%. The benchmark returns are linked.
- ³ Effective July 2012, the performance benchmark is the Russell 2500 Index. Prior to July 2012, the performance benchmark was the Russell Small-Cap Completeness Index. The benchmark returns are linked.
- ⁴ Effective August 2016, the performance benchmark is the MSCI ACWI ex-U.S. IMI Index. It was the MSCI World ex-U.S. Index from July 2012 through July 2016, and prior to July 2012, it was the MSCI EAFE Index. The benchmark returns are linked.
- ⁵ Effective July 2012, the performance benchmark is the FTSE EPRA/NAREIT Developed Index. Prior to July 2012, the performance benchmark was the Dow Jones U.S. Select REIT Index. The benchmark returns are linked.
- ⁶ The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.