

Chief Investment Officer's Letter



Andrew H. Junkin, Chief Investment Officer

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September 27, 2024

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

Fiscal year 2024 carried forward with many similar themes from the prior year — sustained inflation, higher but stable short-term interest rates and growing geopolitical issues.

In the U.S., the Federal Reserve has a dual mandate to promote maximum employment and stable prices. During the fiscal year, inflation was notably lower than 2023 but hovered between 3% and 3.7%, above the Federal Reserve's stated goal of 2%. However, as inflation moderated, the unemployment rate slowly climbed from 3.5% in July 2023 to 4.1% in June 2024. Balancing the two mandates, the Federal Reserve began to signal that interest rates would likely decline and, ultimately, decreased the rate by 0.5% in September.

Geopolitically, fiscal year 2024 brought unwelcome news. The war in Ukraine continued unabated in its second year. Last October, Hamas-led militant groups launched a surprise attack in Israel that prompted retaliation and ongoing armed conflict, affecting the stability of the entire region. U.S. and China relations continue to be strained on economic and defense issues.

Despite the challenging backdrop, the global stock market ended the fiscal year with a strong 19.4% return. World financial markets experienced positive returns, with the ongoing and notable exception of real estate.

PERFORMANCE OVERVIEW

While the economic news offered a mixed picture, the VRS portfolio returned 9.9% for the fiscal year, underperforming the total fund benchmark of 11.6% but above the 6.75% assumed rate of return. VRS' long-term investment strategy is focused on maximizing the return while minimizing risk. To achieve that balance, the VRS portfolio is highly diversified with investments around the globe in a variety of asset classes and strategies such as publicly traded stocks, private equity, fixed income, credit strategies, real assets, and other risk-mitigating and return-seeking strategies.

The VRS portfolio outperformed the fund benchmark and the assumed rate of return for intermediate-term periods (three and five years) and long-term periods (10, 15, 20 and 25 years) as shown below.

ANNUALIZED RETURN FOR PERIODS ENDED JUNE 30, 2024

| | 1 Year | 3 Years | 5 Years | 10 Years | 15 Years | 20 Years | 25 Years |
|-----------------------|--------|---------|---------|----------|----------|----------|----------|
| VRS Total Fund | 9.9% | 5.5% | 8.7% | 7.6% | 9.1% | 7.5% | 6.7% |
| Benchmark | 11.6% | 3.9% | 7.2% | 6.8% | 8.4% | 6.7% | 5.9% |

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

PERFORMANCE COMMENTARY

- Public stock markets had strong, positive returns for the fiscal year. U.S. stocks led the way with a 24.6% return for the S&P 500, although much of the performance was driven by just seven stocks (Alphabet/Google, Apple, Amazon, Meta, Microsoft, Nvidia and Tesla). VRS' globally diversified portfolio returned 20.1%, ahead of the benchmark, which had a return of 18.0%.
- Fixed Income returns finished the year up 3.8%, ahead of the benchmark, which returned 3.3%, continuing the consistent run of the bond team's outperformance.
- The Credit Strategies portfolio – largely comprised of private credit strategies – continued to take advantage of a favorable environment, committing and deploying capital in a period of elevated interest rates. Credit Strategies returned 11.7% for the year, ahead of the benchmark return of 10.8%.
- Private Equity returned 5.8%, falling below the one-year benchmark. This investment strategy requires a long-term perspective as underlying investments are less liquid. However, this lack of liquidity creates additional opportunities for generating returns. Private equity continues to provide strong excess returns over the long term and has been the highest returning asset class over the 3-, 5- and 10-year periods.
- The Real Assets program, which includes real estate, infrastructure and other inflation sensitive assets, returned -3.2%. The program's benchmark also declined with a return of -5.8%. The commercial real estate market has created headwinds for all investors as interest rates have increased and competition for tenants remains fierce.

MARKET OUTLOOK

The Federal Reserve has eased rates once this year. We expect additional rate cuts that should help maintain stability in financial markets and buoy the job market to some degree. The Federal Reserve's goal is to engineer the so-called "soft landing" – reducing inflation without causing a recession. A recession is possible over the next year, but we believe the odds are low.

VRS remains highly diversified, which is a key tenet of our investment strategy. We continue to balance risk with return, targeting investments where opportunities present themselves. VRS is well positioned to continue delivering returns that allow the commonwealth to meet its benefit obligations.

Sincerely,



Andrew H. Junkin
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, 2024, is shown in Figure 3.1.

FIGURE 3.1: ASSET ALLOCATION MIX

AS OF JUNE 30, 2024

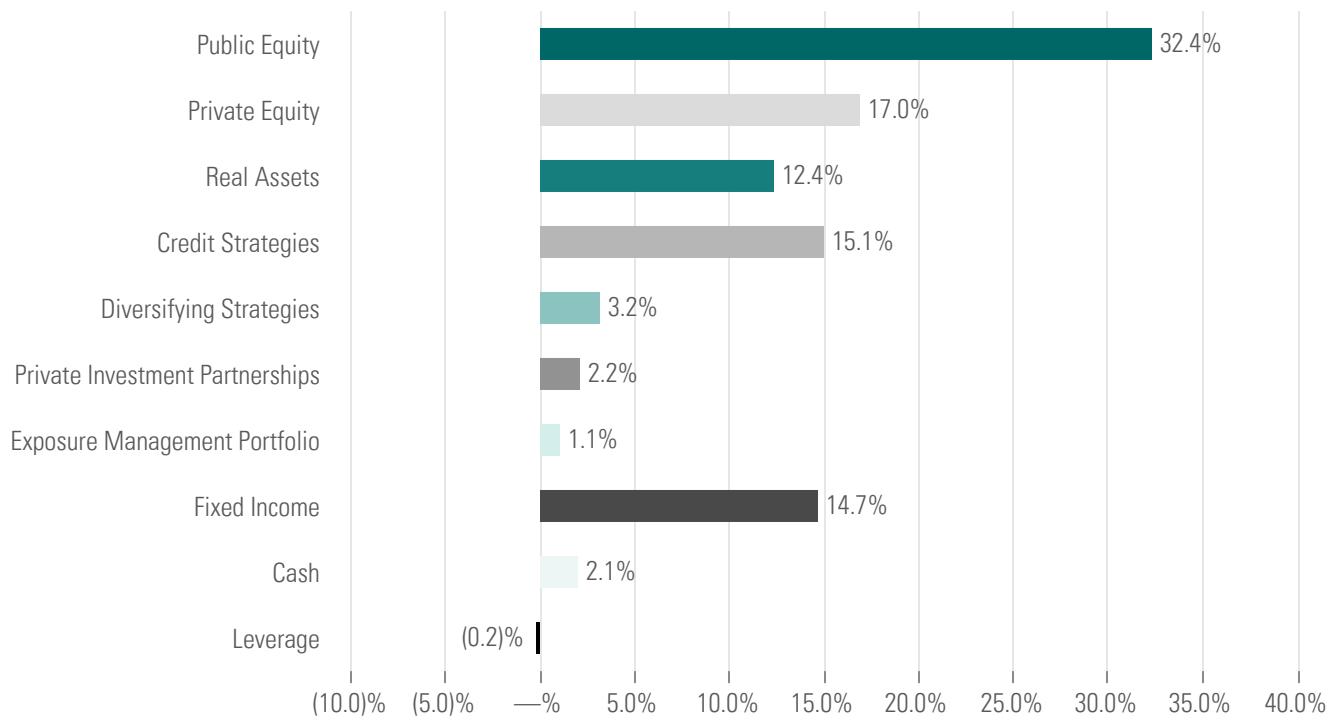


FIGURE 3.2: INVESTMENT PERFORMANCE SUMMARY

ANNUALIZED DATA FOR THE PERIOD ENDING JUNE 30, 2024

| | 1 Year | 3 Years | 5 Years | 10 Years |
|---|--------|---------|---------|----------|
| 1. Total Fund | | | | |
| VRS | 9.9% | 5.5% | 8.7% | 7.6% |
| VRS Custom Benchmark ¹ | 11.6% | 3.9% | 7.2% | 6.8% |
| 2. Total Public Equity | | | | |
| VRS | 20.1% | 5.8% | 10.6% | 8.5% |
| Custom Benchmark ² | 18.0% | 4.9% | 10.6% | 8.5% |
| 3. Total Private Equity | | | | |
| VRS | 5.8% | 10.2% | 15.8% | 14.3% |
| Custom Benchmark ³ | 24.3% | 7.1% | 12.3% | 11.5% |
| 4. Total Real Assets | | | | |
| VRS | -3.2% | 6.2% | 6.1% | 8.2% |
| Custom Benchmark ⁴ | -5.8% | 3.4% | 3.8% | 6.1% |
| 5. Total Credit Strategies | | | | |
| VRS | 11.7% | 6.2% | 7.3% | 6.1% |
| Custom Benchmark ⁵ | 10.8% | 4.2% | 5.0% | 4.8% |
| 6. Total Diversifying Strategies | | | | |
| VRS | 9.7% | 4.0% | 5.6% | N/A |
| Custom Benchmark ⁶ | 9.1% | 2.5% | 5.4% | N/A |
| 7. Total Private Investment Partnerships | | | | |
| VRS | 8.2% | 8.9% | 9.6% | N/A |
| Custom Benchmark ⁷ | 8.7% | 5.5% | 7.6% | N/A |
| 8. Total Fixed Income | | | | |
| VRS | 3.8% | -2.3% | 1.1% | 2.2% |
| Custom Benchmark ⁸ | 3.3% | -2.8% | 0.0% | 1.5% |

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

¹ The VRS Custom Benchmark is a blend of the Asset Class Benchmarks at policy weights.

² Effective January 2024, the Public Equity Custom Benchmark is a weighted average of the MSCI ACWI IMI Index (net VRS tax rate) (85%) and the MSCI World Min Vol Index (net VRS tax rate) (15%).

³ Effective January 2024, the Private Equity Custom Benchmark is the regional benchmarks of the MSCI ACWI IMI Index (net VRS tax rate) lagged by three months, weighted to reflect the Private Equity opportunity set (currently 75% North America, 20% Europe, and 5% Asia and Emerging Markets).

⁴ Effective January 2023, the Real Assets Custom Benchmark is the market value weighted blend of the NCREIF Private Real Estate Benchmark (ODCE Index (net) lagged by three months) and the Other Real Assets Custom Benchmark (the CPI-U Index plus 400 basis points per annum lagged by three months).

⁵ Effective July 2023, the Credit Strategies Custom Benchmark is a blend of the Morningstar LSTA Performing Loan Index (50%), Bloomberg U.S. HY Ba/B 2% Issuer Cap Index (50%).

⁶ Effective January 2024, the Diversifying Strategies Custom Benchmark is the ICE BofA U.S. 3-Month Treasury Bill Index plus 250 basis points per annum.

⁷ Effective January 2024, the Private Investment Partnerships (PIP) Custom Benchmark is the weighted average of the custom Private Equity Benchmark (33%), the NCREIF Private Real Estate Benchmark (25%), the Other Real Assets Custom Benchmark (8%), the Bloomberg U.S. HY Ba/B 2% Issuer Cap Index (17%), and the Morningstar LSTA Performing Loan Index (17%).

⁸ Effective July 2020, the Fixed Income Custom Benchmark is a blend of the Bloomberg U.S. Aggregate Bond Index (90%), Bloomberg U.S. HY Ba/B 2% Issuer Cap Index (5%), and JP Morgan EMBI Global Core Index (5%).

Portfolio Highlights

PUBLIC EQUITY

The market value of the Total Public Equity Program as of June 30, 2024, was \$36.9 billion, representing approximately 32.4% of the total fund. The program is dominated by traditional strategies valued at \$30.7 billion, or 83.1%. The program also employs equity-oriented hedge fund strategies valued at \$6.2 billion, or 16.9%. The objective of the portfolio is to exceed the Custom Benchmark over longer-term periods, net of all costs. The current Custom Benchmark is a blended index

comprised of 85% Morgan Stanley Capital International All Country World Index (MSCI ACWI) IMI and 15% MSCI World Minimum Volatility Index (both net of VRS tax rates). The Traditional Public Equity portfolio had 61% invested in domestic equity and 39% in international equity. Internal assets represent 52% of Total Public Equity.

At fiscal year-end, the custom benchmark was comprised of 64% U.S. equity, 27% developed non-U.S. equity and 9% emerging markets equity.

FIGURE 3.3: TRADITIONAL EQUITY CUSTOM BENCHMARK SECTORS AND REGIONS*

| Strategic Sectors | VRS | Custom Benchmark | Regions | VRS | Custom Benchmark |
|------------------------|----------------|------------------|---------------------------|----------------|------------------|
| Communication Services | 7.50% | 8.03% | North America | 62.92% | 66.75% |
| Consumer Discretionary | 11.70% | 9.90% | Europe/Middle East/Africa | 19.76% | 16.25% |
| Consumer Staples | 5.45% | 6.82% | Asia Pacific | 16.65% | 16.38% |
| Energy | 3.85% | 4.14% | Latin and South America | 0.67% | 0.62% |
| Financials | 15.92% | 15.61% | Total | 100.00% | 100.00% |
| Health Care | 12.20% | 11.72% | | | |
| Industrials | 12.98% | 10.95% | | | |
| Information Technology | 21.50% | 23.70% | | | |
| Materials | 4.45% | 3.92% | | | |
| Real Estate | 1.91% | 2.25% | | | |
| Utilities | 2.54% | 2.96% | | | |
| Total | 100.00% | 100.00% | | | |

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

The top 10 holdings in the Traditional Public Equity Program comprised 12.4% of the program at fiscal year-end.

Three companies, BroadCom, Exxon Mobil and Merck & Co., were replaced by Berkshire Hathaway Inc., J.P. Morgan Chase & Co. and Novo Nordisk on this year's schedule.

FIGURE 3.4: PUBLIC EQUITY – TOP 10 EXPOSURES*

AS OF JUNE 30, 2024

| Company | Fair Value | Shares |
|--|----------------|-----------|
| Microsoft Corp. | \$ 914,434,224 | 2,045,943 |
| Apple Inc. | 754,672,101 | 3,583,098 |
| Nvidia | 709,933,358 | 5,746,587 |
| Amazon.com | 507,360,869 | 2,625,412 |
| Alphabet Inc. | 471,925,371 | 2,582,492 |
| Meta Platforms | 381,836,730 | 757,282 |
| Taiwan Semiconductor Manufacturing Co. | 314,824,509 | 8,283,026 |
| J.P. Morgan Chase & Co. | 182,688,918 | 903,238 |
| Berkshire Hathaway Inc. | 181,758,240 | 446,800 |
| Novo Nordisk | 170,416,190 | 1,179,165 |

* Aggregated various share classes based on parent company. Refer to the "More Information" section on page 176 for details on how to request additional information.

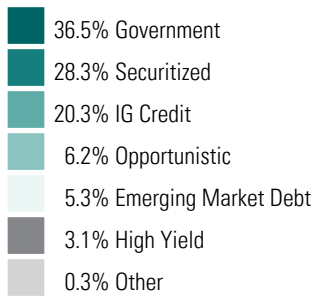
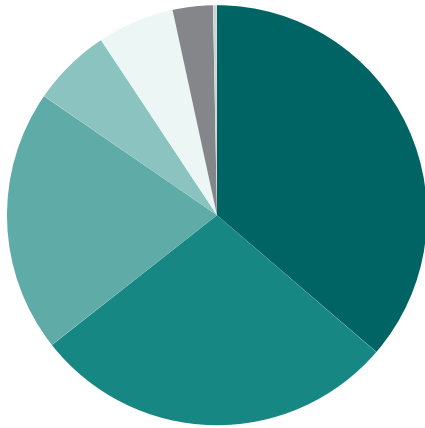
FIXED INCOME

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, 2024, was \$16.7 billion, representing approximately 14.7% of the total fund.

FIGURE 3.5: FIXED INCOME PORTFOLIO BY SECTOR ALLOCATION

AS OF JUNE 30, 2024



The Fixed Income Program is invested in a diversified portfolio of debt securities, such as government securities, corporate securities, mortgage-backed securities and emerging market debt. The objective of the program is to exceed the return of the Fixed Income blended benchmark comprised of 90% Bloomberg Barclays U.S. Aggregate Index, 5% JPM EMBI Global Core Index and 5% Bloomberg Barclays U.S. HY Ba/B 2% Issuer Constrained Index, while staying in compliance with risk limits. Approximately ninety-five percent of the Fixed Income Program is managed internally. For fiscal year 2024, the return of the program was 3.8% versus a return of 3.3% for the benchmark.

FIGURE 3.6: FIXED INCOME – TOP 10 HOLDINGS BY MARKET VALUE*

AS OF JUNE 30, 2024

| Security | Par Value | Fair Value |
|---|-----------------|-----------------|
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | \$1,775,109,308 | \$1,450,754,235 |
| TREASURY NOTE | 300,000,000 | 278,226,564 |
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | 272,198,783 | 249,021,637 |
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | 247,200,000 | 210,388,459 |
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | 235,000,000 | 183,961,525 |
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | 190,894,329 | 180,669,561 |
| TREASURY NOTE | 165,000,000 | 146,269,923 |
| TREASURY NOTE | 150,000,000 | 142,183,595 |
| UNIFORM MORTGAGE BACKED SECURITY (UMBS) | 141,600,000 | 139,614,910 |
| TREASURY NOTE | 130,000,000 | 129,441,407 |

* Refer to the "More Information" section on page 176 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 optimize 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 synthetically replicating 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 a custom region-weighted Morgan Stanley Capital International All Country World Index (MSCI ACWI). Program returns are calculated on both a time-weighted basis and a dollar-weighted, or internal rate-of-return (IRR) basis.

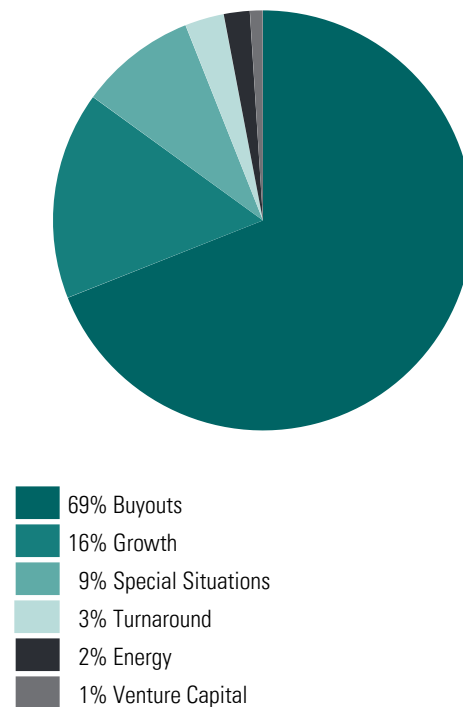
On a time-weighted basis, the program return for fiscal year 2024 was 5.8%. On a dollar-weighted, or IRR basis, the private equity one-year return was 5.9% as of March 31, 2024.

As of June 30, 2024, the carrying value of the program was approximately \$19.4 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 3.7: PRIVATE EQUITY PROGRAM

AS OF JUNE 30, 2024



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 size of the portfolio remained largely unchanged in fiscal year 2024, despite experiencing a -3.2% return. The Real Assets portfolio outperformed its blended benchmark by 260 basis points. The private real estate portfolio delivered a -5.7% return versus its benchmark of -12.0%. Investments in infrastructure, natural resources, timberland and farmland produced a 1.7% return for the fiscal year versus the benchmark of 7.5%.

The percentage of the Total Fund represented by the Real Assets portfolio fluctuated over the course of the year and stood at 12.4% at fiscal year-end. In dollar terms, the real asset portfolio remained roughly unchanged and decreased by \$47 million to \$14.1 billion due primarily to asset income being offset by asset depreciation, with contributions to new investments outpacing distributions from existing investments by approximately \$380 million.

At fiscal year-end, the portfolio strategy composition was approximately 66% private real estate, 19% infrastructure, 8% energy and mining, 4% timberland and 3% farmland. Portfolio leverage as a percentage of total real assets was 35.6% as of June 30, 2024.

FIGURE 3.8: REAL ASSETS BY SECTOR

AS OF JUNE 30, 2024

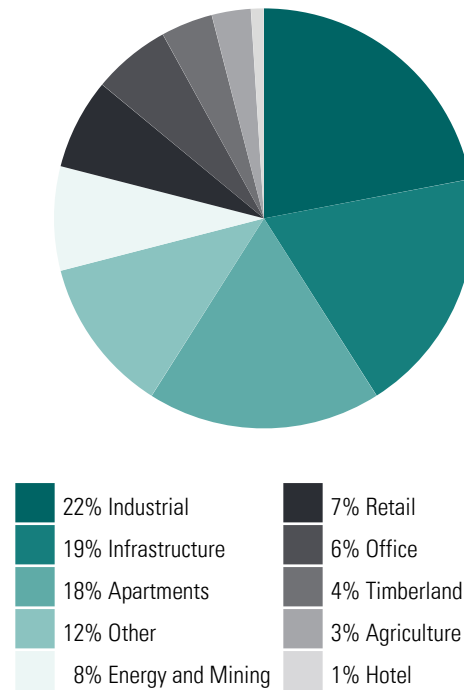
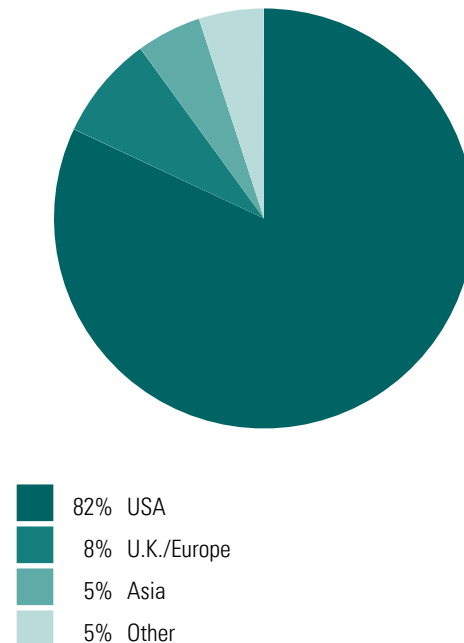


FIGURE 3.9: REAL ASSETS BY GEOGRAPHIC REGION

AS OF JUNE 30, 2024

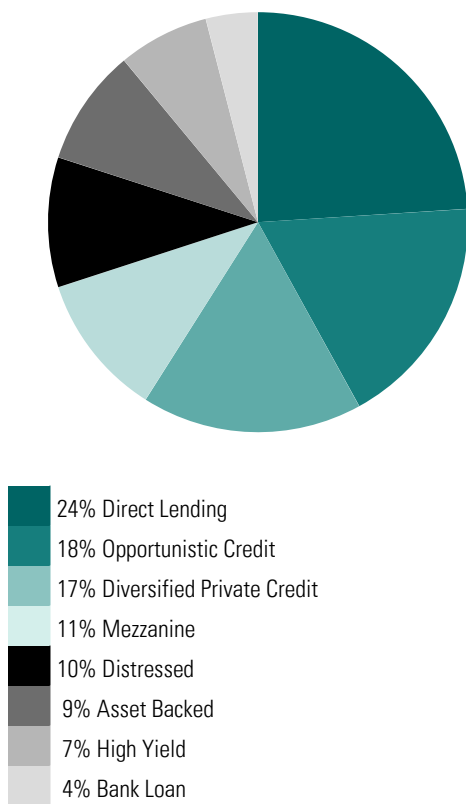


CREDIT STRATEGIES

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 11.7%, while the program's custom benchmark returned 10.8%.

FIGURE 3.10: CREDIT STRATEGIES PROGRAM

AS OF JUNE 30, 2024



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 management. The external currency management part aims to lower overall Fund volatility and provide diversified alpha across the Fund. Investments include constrained positions in global 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, 2024, was \$1.8 billion. For the fiscal year, it returned -3.2% versus a zero benchmark.

DIVERSIFYING STRATEGIES

The program is comprised of two portfolios. The Risk-Based Investment portfolio invests in strategies that offer meaningful diversification to the exposures of the overall plan. The Dynamic Strategies portfolio seeks to add value across asset classes through the incorporation of macro perspectives. As of June 30, 2024, the total program had a market value of \$3.6 billion and was invested with eight multi-asset class public investments managers. During the fiscal year, it returned 9.7% against the program's custom benchmark, which returned 9.1%.

PRIVATE INVESTMENT PARTNERSHIPS

Beginning July 1, 2018, the VRS Board approved a strategic allocation to Private Investment Partnerships (PIP). These investments had previously been part of the Strategic Opportunities Portfolio. The objective of the program is to provide an attractive risk/return profile relative to the Private Investment Partnerships benchmark.

Managers in this program invest broadly across the private and less liquid components of the credit, private equity, real asset and real estate investment spaces. During the fiscal year the program returned 8.2% while its custom benchmark returned 8.7%.

LEVERAGE

The long-term strategic asset allocation (SAA) approved by the VRS Board of Trustees in June 2023 incorporates a prudent amount of leverage to enhance diversification and improve risk-return efficiency for the Fund. The Board also approved rebalancing leverage. Staff plans to transition to this SAA over the next few years.

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 varetire.org/web-policy/foia.

VRS Money Managers

The diversified investment structure as of June 30, 2024, is reflected in the following tables, which list VRS managers by investment program and style.

PUBLIC EQUITY MONEY MANAGERS

| External Managers | Style Description |
|---------------------------|--|
| Acadian Asset Management | Emerging, Non-U.S. Small Cap |
| Ariel | Global |
| Arrowstreet Capital | Global |
| Baillie Gifford | Emerging, Global |
| Jackson Square | U.S. Small Cap |
| J.P. Morgan | Global |
| Lansdowne | Global |
| LSV Asset Management | Global, Non-U.S. Small Cap, U.S. Small Cap |
| WCM Investment Management | Global |
| Internal Portfolios | Style Description |
| Afton | U.S. Small Cap |
| Amherst | U.S. Large Cap |
| Bearfence | Global |
| Rivanna | Global |
| Tuckahoe | Emerging |
| Top 10 Equity Hedge Funds | Style Description |
| CET Energy Dynamics | Long/Short |
| Cevian | Activist |
| Coatue | Long/Short |
| Eminence | Long/Short Extension |
| Farallon | Multi-Strat |
| Maverick Capital | Long/Short Extension |
| Nitorum | Long/Short |
| Select | Long/Short |
| Theleme | Long/Short |
| ValueAct Capital | Activist |

FIXED INCOME

| Internal Portfolios | Style Description |
|--------------------------------|--|
| VRS Investment Grade Credit | High-Quality Corporates |
| VRS Securitized | Mortgage and Other Asset-Backed Securities |
| VRS Government | U.S. and Other Government-Related Debt |
| VRS Emerging Market Debt | EM Sovereign and Quasi-Sovereign Debt |
| VRS Systematic High Yield | High-Yield Corporates |
| VRS Fixed-Income Opportunistic | Various Fixed-Income Related Assets |

(Continued)

VRS Money Managers, cont.

FIXED INCOME, cont.

| External Portfolios | Style Description |
|---------------------------|-----------------------|
| FI Man Numeric High Yield | High-Yield Corporates |
| FI Payden & Rygel EMD | Emerging Market Debt |
| FI PIMCO EMD | Emerging Market Debt |

PRIVATE EQUITY – TOP 10 MANAGERS

| | Style Description |
|----------------------|-----------------------------|
| Apax Partners | Buyout |
| Bain Capital | Buyout |
| CVC Capital | Buyout |
| General Atlantic | Growth |
| Grosvenor | Customized Separate Account |
| Hellman and Friedman | Buyout |
| Olympus Partners | Buyout |
| Stone Point Capital | Buyout |
| TA Associates | Growth |
| Veritas Capital | Buyout |

CREDIT STRATEGIES – TOP 10 MANAGERS

| | Style Description |
|--------------------------------|--|
| Ares Management | Direct Lending, Mezzanine, Opportunistic, Asset Backed |
| Beach Point Capital Management | Distressed, Broadly Syndicated Loans, Opportunistic |
| BlackRock | Direct Lending |
| Carlyle | Diversified Private Credit |
| HPS Investment Partners | Direct Lending, Mezzanine |
| J.P. Morgan | High Yield Bonds |
| Oak Hill Advisors | Broadly Syndicated Loans, Diversified Private Credit |
| Sixth Street Partners | Distressed, Opportunistic |
| Solus | Opportunistic, Broadly Syndicated Loans |
| Varde Partners | Diversified Private Credit, Asset Backed |

PRIVATE INVESTMENT PARTNERSHIPS

| | Style Description |
|---------|---------------------------------------|
| Carlyle | Multi-Asset Class Private Investments |
| KKR | Multi-Asset Class Private Investments |

CURRENCY

| | Style Description |
|-------------|-------------------|
| Systematica | Developed |

VRS Money Managers, cont.

REAL ASSETS – TOP 10 MANAGERS

Style Description

| | |
|-----------------------------------|---|
| Blackstone Real Estate Partners | Core, Enhanced Core & Opportunistic Real Estate |
| Carson Companies | Core Real Estate |
| Clarion Partners | Enhanced Core Real Estate |
| Global Infrastructure Partners | Global Infrastructure |
| Industry Funds Management | Global Infrastructure |
| J.P. Morgan Asset Management Inc. | Core Real Estate |
| Morgan Stanley | Core Real Estate, Global Infrastructure |
| Pantheon Ventures | Global Infrastructure, Global Natural Resources |
| PGIM | Core & Enhanced Core Real Estate |
| Pritzker Realty Group | Core & Enhanced Core Real Estate |

DIVERSIFYING STRATEGIES

Style Description

| | |
|-----------------------------|--------------------------------------|
| Aksia | Multi-Asset Class Public Investments |
| AQR | Multi-Asset Class Public Investments |
| BlackRock | Multi-Asset Class Public Investments |
| Capstone | Multi-Asset Class Public Investments |
| Internal Portfolio Strategy | Multi-Asset Class Public Investments |
| J.P. Morgan | Multi-Asset Class Public Investments |
| Man Group | Multi-Asset Class Public Investments |
| Orchard Global | Multi-Asset Class Public Investments |

Public Equity Commissions

AS OF JUNE 30, 2024

| Broker | Commission | Shares | Average Commission Per Share |
|---|------------------------|----------------------|------------------------------|
| Merrill Lynch, Pierce, Fenner & Smith, Inc., New York | \$ 2,125,018.00 | 172,236,220 | \$ 0.0123 |
| Goldman Sachs & Co., New York | 1,247,057.00 | 137,743,895 | 0.0091 |
| UBS Equities, London | 584,715.00 | 200,593,436 | 0.0029 |
| National Finl Svcs Corp., New York | 277,575.00 | 8,904,543 | 0.0312 |
| Barclays Capital, London | 257,945.00 | 154,139,633 | 0.0017 |
| Citigroup Global Markets Ltd., London | 217,747.00 | 81,498,747 | 0.0027 |
| Morgan Stanley and Co., LLC, New York | 210,049.00 | 111,065,352 | 0.0019 |
| Instinet Europe Limited, London | 176,406.00 | 69,956,699 | 0.0025 |
| HSBC Bank PLC (Midland Bk)(JAC), London | 164,247.00 | 23,801,898 | 0.0069 |
| Jefferies & Co. Inc., New York | 155,041.00 | 23,059,925 | 0.0067 |
| Other Brokers | 2,560,469.00 | 1,079,132,688 | 0.0024 |
| Total FY 2024 | \$ 7,976,270.00 | 2,062,133,036 | \$ 0.0039 |

SCHEDULE OF INVESTMENT EXPENSES

FOR THE YEAR ENDED JUNE 30, 2024

(EXPRESSED IN THOUSANDS)

| | Assets Under Management | Management Fees and Expenses |
|--|-------------------------|------------------------------|
| External Management: | | |
| Public Equity Managers | \$ 11,523,197 | \$ 59,690 |
| Fixed Income Managers | 4,273,920 | 3,697 |
| Credit Strategies Managers | 16,990,409 | 134,897 |
| Real Assets Managers | 14,565,466 | 149,122 |
| Alternative Investment Managers | 19,418,255 | 175,535 |
| Hedge Funds Managers | 17,559,093 | 61,663 |
| Multi-Asset Class/Other Managers | 7,068,324 | 31,597 |
| Subtotal: External Management | 91,398,664 | 616,201 |
| Internal Management | 24,601,843 | 50,399 |
| Miscellaneous Fees and Expenses: | | |
| Custodial Fees | — | 4,500 |
| Legal Fees | — | 1,718 |
| Other Fees and Expenses | — | 17,332 |
| Subtotal: Miscellaneous Fees and Expenses | — | 23,550 |
| Total | \$ 116,000,507 | \$ 690,150 |

Investment Summary

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, other trust funds and custodial funds held the following composition of investments at June 30, 2024 and 2023:

(EXPRESSED IN THOUSANDS)

| | 2024 Fair Value | Percent of Total Value | 2023 Fair Value | Percent of Total Value |
|--|-----------------------|---------------------------|-----------------------|---------------------------|
| Bonds and Mortgage Securities: | | | | |
| U.S. Government and Agencies | \$ 7,811,767 | 6.71% | \$ 5,463,039 | 5.07% |
| Mortgage Securities | 5,736,229 | 4.92% | 7,743,993 | 7.18% |
| Corporate and Other Bonds | 8,251,049 | 7.08% | 5,893,713 | 5.47% |
| Total Bonds and Mortgage Securities | 21,799,045 | 18.71% | 19,100,745 | 17.72% |
| Common and Preferred Stocks | 27,035,632 | 23.21% | 24,906,540 | 23.10% |
| Index and Pooled Funds: | | | | |
| Equity Index and Pooled Funds | 14,484,488 | 12.43% | 13,242,981 | 12.28% |
| Fixed-Income Commingled Funds | — | 0.00% | 823,876 | 0.76% |
| Total Index and Pooled Funds | 14,484,488 | 12.43% | 14,066,857 | 13.04% |
| Real Assets | 14,153,874 | 12.15% | 13,999,754 | 12.98% |
| Private Equity | 38,502,907 | 33.06% | 35,612,059 | 33.02% |
| Short-Term Investments: | | | | |
| Treasurer of Virginia – LGIP Investment Pool | 482,233 | 0.42% | 76,066 | 0.07% |
| Foreign Currencies | 24,562 | 0.02% | 74,850 | 0.07% |
| Total Short-Term Investments | 506,795 | 0.44% | 150,916 | 0.14% |
| Total Investments | \$ 116,482,741 | 100.00% | \$ 107,836,871 | 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, 2024

| Fund Name | Hybrid 401(a) | Hybrid 457 | Total |
|-------------------------------------|-------------------------|-----------------------|-------------------------|
| Retirement Portfolio | \$ 39,491,673 | \$ 22,030,035 | \$ 61,521,708 |
| Target Date 2025 Portfolio | 81,116,615 | 49,065,878 | 130,182,493 |
| Target Date 2030 Portfolio | 128,981,948 | 78,218,014 | 207,199,962 |
| Target Date 2035 Portfolio | 166,425,283 | 97,698,303 | 264,123,586 |
| Target Date 2040 Portfolio | 175,807,002 | 98,556,987 | 274,363,989 |
| Target Date 2045 Portfolio | 204,193,381 | 111,006,749 | 315,200,130 |
| Target Date 2050 Portfolio | 243,070,057 | 123,089,913 | 366,159,970 |
| Target Date 2055 Portfolio | 351,181,179 | 159,339,341 | 510,520,520 |
| Target Date 2060 Portfolio | 220,515,990 | 93,101,121 | 313,617,111 |
| Target Date 2065 Portfolio | 44,913,677 | 13,829,762 | 58,743,439 |
| Money Market Fund | 11,102,469 | 4,269,259 | 15,371,728 |
| Stable Value Fund | 4,456,715 | 5,713,145 | 10,169,860 |
| Bond Fund | 2,078,758 | 2,587,033 | 4,665,791 |
| Inflation-Protected Bond Fund | 1,230,184 | 1,217,028 | 2,447,212 |
| High-Yield Bond Fund | 2,296,678 | 3,215,894 | 5,512,572 |
| Stock Fund | 54,840,927 | 55,643,527 | 110,484,454 |
| Small/Mid-Cap Stock Fund | 12,065,231 | 13,094,878 | 25,160,109 |
| International Stock Fund | 6,453,784 | 6,929,755 | 13,383,539 |
| Global Real Estate Fund | 2,444,732 | 2,853,516 | 5,298,248 |
| VRS Investment Portfolio – PIPVRSIP | 58,946 | 32,706 | 91,652 |
| VRS Investment Portfolio | 514,742 | 539,798 | 1,054,540 |
| Self-Directed Brokerage | 2,755,396 | 2,560,329 | 5,315,725 |
| Total Plan Assets* | \$ 1,755,995,364 | \$ 944,592,970 | \$ 2,700,588,334 |

* Fund totals have been rounded to the nearest dollar amount and may not foot due to rounding.

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 plan. 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, 2024, the plans provided the following core investment options to participants.

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: 54.1% U.S. Large/Mid-Cap Stocks: 23.3% International Stocks: 11.5%
U.S. Inflation-Index Bonds: 5.7% U.S. Small-Cap Stocks: 2.2%
Commodities: 1.6% Developed Real Estate: 1.7%

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: 52.6% U.S. Large/Mid-Cap Stocks: 24.1% International Stocks: 12.1%
U.S. Inflation-Index Bonds: 5.6% U.S. Small-Cap Stocks: 2.2%
Developed Real Estate: 1.9% Commodities: 1.5%

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. Bonds: 40.5% U.S. Large/Mid-Cap Stocks: 31.7% International Stocks: 16.6%
U.S. Inflation-Index Bonds: 4.9% Developed Real Estate: 2.5%
U.S. Small-Cap Stocks: 2.4% Commodities: 1.3%

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: 38.8% U.S. Bonds: 29.4% International Stocks: 20.7%
U.S. Inflation-Index Bonds: 4.1% Developed Real Estate: 3.1%
U.S. Small-Cap Stocks: 2.8% Commodities: 1.1%

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: 45.5% International Stocks: 24.6% U.S. Bonds: 19.1%
Developed Real Estate: 3.7% U.S. Inflation-Index Bonds: 3.0% U.S. Small-Cap Stocks: 3.1% Commodities: 0.8%

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: 51.8% International Stocks: 28.3% U.S. Bonds: 9.8%
Developed Real Estate: 4.3% U.S. Inflation-Index Bonds: 1.8% U.S. Small-Cap Stocks: 3.5% Commodities: 0.5%

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: 56.5% International Stocks: 30.8% Developed Real Estate: 4.3%
U.S. Bonds: 3.7% U.S. Small-Cap Stocks: 3.7% U.S. Inflation-Index Bonds: 0.8% Commodities: 0.2%

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: 58.3% International Stocks: 32.2% Developed Real Estate: 4.2%
U.S. Small-Cap Stocks: 3.9% U.S. Bonds: 1.1% U.S. Inflation-Index Bonds: 0.2% Commodities: 0.1%

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: 58.7% International Stocks: 32.2% Developed Real Estate: 4.2%
U.S. Small-Cap Stocks: 3.8% U.S. Bonds: 0.9% U.S. Inflation-Index Bonds: 0.1%

Target Date 2065 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: 58.6% International Stocks: 32.3% Developed Real Estate: 4.2%
U.S. Small-Cap Stocks: 3.9% 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: 60.5% Certificate of Deposit: 8.0% U.S. Treasury Debt: 4.4%
Asset-Backed Commercial Paper: 7.0% Non-Negotiable Time Deposit: 6.7% U.S. Government Agency Debt: 1.1%
U.S. Government Agency Repurchase Agreement: 3.5% Financial Company Commercial Paper: 8.3%
Non-Financial Company Commercial Paper: 0.5%

Stable Value Fund: Seeks to provide safety of principal, while earning a 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: 23.4% Asset-Backed: 21.1% Agency MBS: 18.1% U.S. Treasury/Agency: 9.5% Cash/Equivalents: 4.3%
CMBS: 9.2% Taxable Municipals: 3.8% Other U.S. Government: 10.2% Non-Agency MBS: 0.6%

Bond Fund: Seeks to track the performance of the Bloomberg U.S. 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: 43.3% Mortgages: 25.4% Industrials: 14.0% Financials: 8.0% Non-U.S. Credit: 3.0% CMBS: 1.5%
Utilities: 2.2% Agencies: 0.9% Taxable Municipals: 0.5% Asset-Backed Securities: 0.5% Cash: 0.6%

Inflation-Protected Bond Fund: Seeks to track the performance of the Bloomberg 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: 99.9% Cash: 0.1%

High-Yield Bond Fund: Seeks to achieve returns that exceed, over time, its benchmark, the ICE BofA 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.

Consumer Cyclical: 19.8% Consumer Non-Cyclical: 14.8% Communications: 18.1%
Energy: 13.0% Capital Goods: 9.5% Technology: 6.7% Basic Industry: 3.5%
Finance: 5.2% Transportation: 2.8% Other/Cash: 4.4% Other Industrial: 0.9% Utilities: 1.5%

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: 32.5% Health Care: 11.7% Financials: 12.4%
Consumer Discretionary: 10.0% Communication Services: 9.3% Industrials: 8.1% Consumer Staples: 5.8%
Energy: 3.7% Utilities: 2.3% Real Estate: 2.2% Materials: 2.2%

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.

Industrials: 19.0% Financials: 16.1% Information Technology: 12.3% Health Care: 12.7%
Consumer Discretionary: 12.6% Real Estate: 6.8% Materials: 5.8%
Energy: 5.8% Consumer Staples: 3.6% Utilities: 2.4% Communication Services: 3.0%

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: 20.3% Industrials: 14.8% Consumer Discretionary: 11.2%
Information Technology: 13.8% Health Care: 9.1% Consumer Staples: 7.1% Materials: 7.7%
Communication Services: 5.0% Energy: 5.3% Real Estate: 2.7% Utilities: 3.1%

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.

Specialized REITs: 18.3% Retail REITs: 16.6% Residential REITs: 13.2% Industrial REITs: 15.6%
Office REITs: 5.5% Health Care REITs: 9.8% Diversified REITs: 6.1%
Real Estate Management & Development: 12.3% Hotel & Resort REITs: 2.6%

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: 33.0% Private Equity: 17.0% Fixed Income: 14.7% Credit Strategies: 15.1%
Real Assets: 12.4% Diversified Strategies: 3.2% PIP: 2.2% EMP: 1.1% Cash: 2.0% Leverage: -0.6%

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 Charles Schwab & Co. 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 Charles Schwab & Co. and investment management-related fees and expenses for the funds or investments selected.

Investment Option Performance Summary: Defined Contribution Plans

AS OF JUNE 30, 2024

(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 | 8.37% | 0.17% | 4.32% | 4.28% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 8.44% | 0.21% | 4.31% | 4.26% | | |
| Target Date 2025 Portfolio | 07/05/06 | 8.78% | 0.43% | 5.01% | 5.04% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 8.85% | 0.45% | 4.99% | 4.99% | | |
| Target Date 2030 Portfolio | 08/01/05 | 10.72% | 1.42% | 6.27% | 5.89% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 10.83% | 1.44% | 6.24% | 5.82% | | |
| Target Date 2035 Portfolio | 07/05/06 | 12.61% | 2.34% | 7.45% | 6.68% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 12.74% | 2.34% | 7.42% | 6.60% | | |
| Target Date 2040 Portfolio | 08/01/05 | 14.47% | 3.21% | 8.55% | 7.40% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 14.59% | 3.19% | 8.50% | 7.29% | | |
| Target Date 2045 Portfolio | 07/05/06 | 16.23% | 4.01% | 9.52% | 7.97% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 16.35% | 3.97% | 9.45% | 7.85% | | |
| Target Date 2050 Portfolio | 09/30/07 | 17.48% | 4.55% | 10.10% | 8.28% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 17.61% | 4.49% | 10.02% | 8.15% | | |
| Target Date 2055 Portfolio | 05/19/10 | 18.00% | 4.75% | 10.28% | 8.35% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 18.14% | 4.70% | 10.20% | 8.23% | | |
| Target Date 2060 Portfolio | 11/17/14 | 18.01% | 4.76% | 10.27% | 8.77% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 18.16% | 4.70% | 10.21% | 8.63% | | |
| Target Date 2065 Portfolio | 09/23/19 | 18.02% | 4.76% | N/A | 10.52% | 0.06% | \$0.60 |
| Custom Benchmark ¹ | | 18.16% | 4.70% | N/A | 10.50% | | |

(Continued)

Investment Option Performance Summary: Defined Contribution Plans, cont.

HELP-ME-DO-IT PATH: INDIVIDUAL OPTIONS

| Investment Options | Inception Date | 1 Year | 3 Years | 5 Years | 10 Years or Since Inception | Total Annual Operating Expenses | |
|---|-----------------|---------------|---------------|---------------|-----------------------------|---------------------------------|---------------|
| | | | | | | As a % | Per \$1,000 |
| Money Market Fund | 11/01/99 | 5.70% | 3.37% | 2.38% | 1.70% | 0.08% | \$0.80 |
| Benchmark: FTSE 3-Month Treasury Bill Index | | | | | | | |
| Yield as of June 30, 2024, was 5.53% | | | | | | | |
| Stable Value Fund | 02/01/95 | 3.18% | 2.24% | 2.21% | 2.02% | 0.24% | \$2.40 |
| Custom Benchmark ² | | | | | | | |
| Yield as of June 30, 2024, was 3.36% | | | | | | | |
| Bond Fund | 11/01/99 | 2.66% | -2.98% | -0.19% | 1.40% | 0.03% | \$0.30 |
| Benchmark: Bloomberg U.S. Aggregate Bond Index | | | | | | | |
| Inflation-Protected Bond Fund | 07/30/02 | 2.78% | -1.29% | 2.14% | 2.00% | 0.03% | \$0.30 |
| Benchmark: Bloomberg U.S. Treasury Inflation-Protected Securities Index | | | | | | | |
| High-Yield Bond Fund | 05/31/04 | 9.78% | 1.47% | 3.87% | 4.52% | 0.39% | \$3.90 |
| Benchmark: ICE BofA U.S. High-Yield BB-B Constrained Index | | | | | | | |
| Stock Fund | 11/01/99 | 24.55% | 10.01% | 15.06% | 12.89% | 0.01% | \$0.10 |
| Benchmark: S&P 500 Index | | | | | | | |
| Small/Mid-Cap Stock Fund | 11/01/99 | 10.57% | -0.20% | 8.38% | 8.08% | 0.02% | \$0.20 |
| Benchmark: Russell 2500 Index | | | | | | | |
| International Stock Fund | 11/01/99 | 11.17% | 0.32% | 5.79% | 4.08% | 0.06% | \$0.60 |
| Benchmark: MSCI ACWI ex-U.S. IMI Index ³ | | | | | | | |
| Global Real Estate Fund | 10/01/02 | 5.48% | -3.87% | 0.18% | 2.92% | 0.08% | \$0.80 |
| Benchmark: FTSE EPRA/NAREIT Developed Index | | | | | | | |
| VRS Investment Portfolio (VRSIP) | 07/01/08 | 9.88% | 5.47% | 8.68% | 7.60% | 0.63% | \$6.30 |
| VRS Custom Benchmark ⁴ | | | | | | | |

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 Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized: MBS, ABS, and CMBS Index, Bloomberg U.S. Treasury Inflation Protection Securities (TIPS) Index (Series L), 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 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. The benchmark returns are linked.

⁴ The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.