Commonwealth of Virginia
December 13, 2021

Report to the Governor and the General Assembly of Virginia

VRS Oversight Report

DECEMBER 2021

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

JLARC director
Hal E. Greer

JLARC staff for this report
Kimberly Sarte, Associate Director for Ongoing Oversight and Fiscal Analysis
Jamie Bitz, Chief Legislative Analyst for Ongoing Oversight

Information graphics: Nathan Skreslet
Managing Editor: Jessica Sabbath

JLARC Report 560

jlarc.virginia.gov

Overview

The Virginia Retirement System (VRS) administers retirement plans and other benefit programs for state and local government employees. The two largest plans are the teachers plan and the state employees plan (Figure 1). Other pension plans include the individual retirement plans for 597 local political subdivisions and plans for state police officers (SPORS), other Virginia state law officers (VaLORS), and judges (JRS). VRS also administers several defined contribution retirement plans. In addition to retirement plans, VRS administers other post-employment benefit programs. These include life insurance, sickness and disability, long-term care, and the retiree health insurance credit program.

VRS serves more than 760,000 members, retirees, and beneficiaries. Active members include current state and local employees and teachers in Virginia's public school divisions. VRS also serves retirees, their designated beneficiaries, and "deferred" members, who are not actively employed and are not collecting benefits.

The financial assets used to pay VRS benefits are pooled in the VRS trust fund, which held $103.7 billion in assets as of September 30, 2021. Ranked by value of assets, VRS is the nation's 18th largest public or private pension fund. In FY21, VRS paid $5.5 billion in retirement benefits and $475 million in other post-employment benefits from the trust fund.

VRS receives funds from three main sources: employer contributions, member contributions, and investment income. Due largely to net investment income (FY21 was the highest amount over the past decade), additions to the VRS trust fund in FY21 exceeded benefits paid out and expenses by approximately $20.4 billion.

Investment income is critical to the VRS trust fund's health, typically accounting for over half of total additions in recent years. However, in FY21 investment income accounted for more than 80 percent of total fund additions. VRS investments generated a return of 24.3 percent for the one-year period ending September 30, 2021. The total annualized return over the 10-year period was 10.0 percent, which is above the 6.75 percent long-term (30+ year) rate of return that VRS assumes for its investments.

FIGURE 1
VRS pension assets by plan

SOURCE: VRS 2021 valuation report.
NOTE: Figures show total actuarial value of assets attributable to each retirement plan as of June 30, 2021. Trust fund assets attributable to other benefit programs are not shown. Figure for local plans is the aggregate of assets for political subdivisions that participate in VRS. Local plans (in aggregate) hold more assets than the state employees plan because political subdivisions have historically fully funded the required contributions. The liabilities for the local plans (in aggregate) and the state employees plan are similar.

FIGURE 2
VRS fast facts

MEMBERSHIP as of September 30, 2021

350,649	Actively employed members[a]
232,062	Retired members & beneficiaries
180,108	Inactive members
762,819	Total

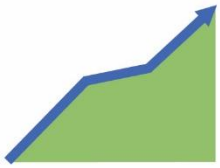
NET ADDITIONS for fiscal year ending June 30, 2021[b]

$3.2 billion	Employer contributions
$1.1 billion	Member contributions
$22.3 billion	Net investment income
-$6.2 billion	Benefits paid and other expenses[c]
$20.4 billion	Net additions[d]

ASSETS as of September 30, 2021

$103.7 billion
Total VRS trust fund assets

INVESTMENT PERFORMANCE as of September 30, 2021



	1 year	3 years	5 years	10 years
Total return	24.3%	11.3%	10.5%	10.0%
Benchmark	19.3%	10.2%	9.8%	9.3%
Excess return	+5.0%	+1.1%	+0.7%	+0.7%

SOURCE: VRS 2021 annual report and 2021 membership and investment department data.

[a] Active membership included 158,386 teachers, 108,608 local government and political subdivision employees, and 83,655 state employees, state police, law enforcement officers, and judges. Within the retirement plans are three benefit groups. Active membership by benefit group included 132,376 in Plan 1, 80,049 in Plan 2, and 138,224 in the hybrid plan. [b] Includes all additions and deductions to the trust fund for VRS retirement plans and other benefits programs. [c] Includes $5.5 billion in retirement benefit payments, $475 million in other benefits, $116 million in refunds, and $63 million in administrative and other expenses. [d] Does not sum because of rounding.

1. Trust fund investments

Management of trust fund investments is one of VRS's core responsibilities. The VRS Board of Trustees sets investment policies for managing the trust fund, including the desired asset allocation and risk parameters for the fund. The investment department manages investment programs within the guidelines set by the board. The investment department manages a little less than one-third of the assets in-house and contracts with external managers to manage other assets.

The VRS board adopts a **long-term investment return assumption** based on the advice of the Investment Advisory Committee, VRS investment staff and plan actuary, and surveys from investment managers and consultants. This is the rate of return expected over the next 30+ years, based on projections of future market performance.

The long-term return assumption is one of the key assumptions used to determine the plan's funded status and employer contribution rates. The current long-term return assumption is 6.75 percent.

Investment performance and asset allocation

The VRS trust fund held $103.7 billion in assets as of September 30, 2021, an increase of $18.6 billion from a year ago. This is the first time the trust fund has increased above the $100 billion level. Approximately $30.6 billion of the trust fund was managed in-house, including nearly all fixed income and some public equities, real assets, and cash. The remaining $73.1 billion was managed by external managers under VRS supervision.

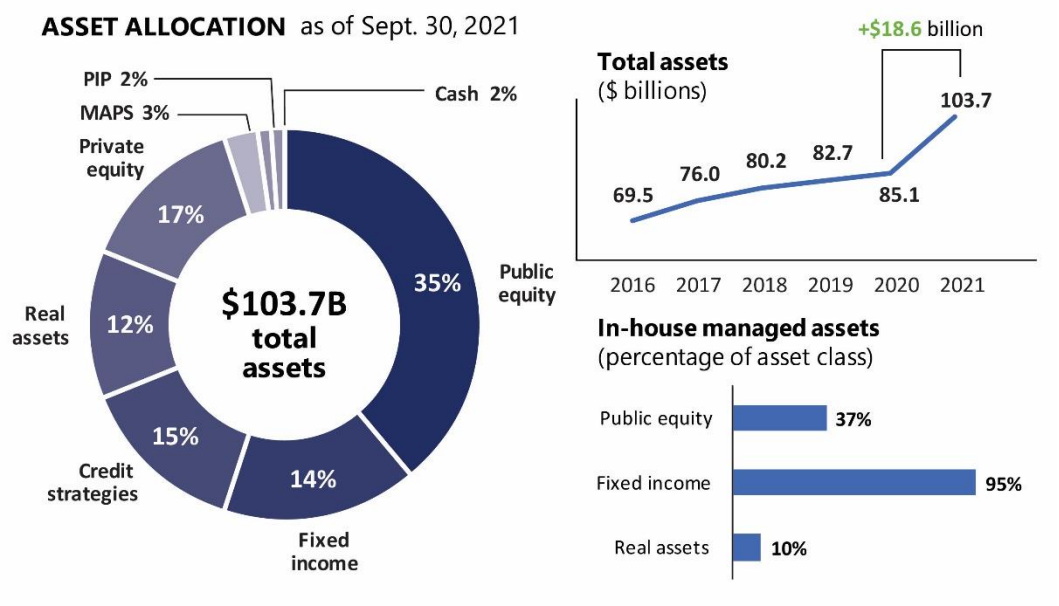
The total fund's investment performance was above its investment benchmarks for all periods. The total fund outperformed its investment benchmark for the one-year period ending September 30, 2021 by 5 percentage points (Figure 3). The trust fund's investment returns also outperformed by substantial margins for all periods the 6.75 percent long-term (30+ year) rate of return that VRS assumes for its investments.

Returns for the fiscal year to date for the total fund and nearly all asset classes are substantially lower than the one-year period, although they are meeting or outperforming the benchmarks for all asset classes. The lower returns largely reflect rising inflation and fear of rising interest rates, which moderate returns in virtually all markets. Markets also often experience a lull after periods of strong returns such as those experienced in the last year. Returns for shorter periods may not reflect longer-term return expectations.

Public equity. The public equity program continues to be the largest VRS asset class, with $35.8 billion in assets. The program consists of stocks and other equity securities for publicly traded companies in the U.S. and globally. Public equity investments are typically higher risk than bonds and are expected to provide long-term capital growth. Thirty-seven percent of the program's assets are managed in-house. The program underperformed its benchmarks for the three-, five-, and 10-year periods, but outperformed its benchmarks for the one-year and fiscal year to date (first quarter of FY21) periods. According to VRS staff, this underperformance was primarily due to value exposures (sidebar) underperforming over the past three-to-five years. VRS staff said several economic factors, including broader earnings growth, are leading to improved performance through value exposures in more recent years.

Value exposures are investments in companies whose stock prices do not reflect their intrinsic worth. By investing in these companies, investors believe stock prices will increase to more accurately reflect their intrinsic worth.

FIGURE 3
Asset allocation and trust fund investment performance



TRUST FUND INVESTMENT PERFORMANCE
for the period ending September 30, 2021

	FY to date	1 year	3 years	5 years	10 years
Total fund	2.6%	24.3%	11.3%	10.5%	10.0%
VRS custom benchmark	1.3	19.3	10.2	9.8	9.3
Public equity	-0.5	31.3	11.8	12.3	12.0
Benchmark	-1.0	29.4	12.8	13.1	12.1
Private equity	12.5	55.7	24.0	21.6	16.8
Benchmark	7.3	41.9	18.1	18.1	14.8
Credit strategies	2.3	16.2	8.3	7.6	7.6
Benchmark	1.0	8.1	6.3	5.9	6.4
Fixed income	0.1	1.8	7.0	4.1	4.0
Benchmark	0.1	-0.1	5.5	3.0	3.1
Real assets	3.4	14.0	7.2	8.2	10.4
Benchmark	3.2	10.2	5.8	6.3	8.8
Multi-asset public strategies (MAPS)	0.3	15.8	5.7	n/a	n/a
Benchmark	0.1	12.7	8.2	n/a	n/a
Private investment partnerships (PIP)	6.8	30.6	11.0	10.7	n/a
Benchmark	3.9	20.1	10.1	10.2	n/a

SOURCE: VRS investment department data.

Private equity. The private equity program is the second-largest VRS asset class, with $17.4 billion in assets.* Private equity is an alternative to traditional public equity and

generally consists of ownership in companies that are not listed on public exchanges. Private equity investments are "opportunistic" investments intended to outperform public equity markets over the long term and enhance total fund returns. All private equity assets are managed externally. The program outperformed its benchmarks for all periods.

Credit strategies. The credit strategies program is the third-largest VRS asset class, with $14.7 billion in assets. The program includes investments in high-yield bonds, convertible bonds, bank loans, and direct lending. Credit strategies investments are intended to provide higher income than bonds and better risk-adjusted returns than stocks. All of the program's assets are managed externally. The program outperformed its benchmarks for all periods. This included a 16.2 percent return for the one-year period, double the benchmark for this period.

Fixed income. The fixed income program is now the fourth-largest VRS asset class, with $14.6 billion in assets. The program primarily consists of U.S. dollar-denominated securities, such as bonds and money market instruments, which pay a specific interest rate. The fixed income program also includes emerging market debt (EMD) and high yield (HY) securities. Fixed income investments are typically lower risk relative to most other asset classes and are expected to generate steady returns even in down equity markets. Approximately 95 percent of fixed income assets are managed in-house. The program met or outperformed its benchmarks for all periods.

Real assets. The real assets program is the smallest of the five major asset classes, with $12.5 billion in assets.* The program includes investments in real estate, infrastructure, and natural resources such as timber. Real assets investments are expected to reduce volatility of the total fund by offering returns that do not have a high statistical correlation to the public equity market. Approximately 90 percent of VRS real assets are managed externally. The program outperformed its benchmarks for all periods.

Multi-asset public strategies. The multi-asset public strategies program is a relatively new, small exposure program, with $3.2 billion in assets. The portfolio, which is managed externally, includes dynamic strategies, which are opportunistic multi-asset allocation approaches. The portfolio also includes risk-based investments, which are uncorrelated, and diversifying strategies relative to the rest of the assets in the fund. The portfolio outperformed its benchmark for the fiscal year to date (first quarter of FY21) and one-year periods but underperformed its benchmark for the three-year period. According to VRS staff, the underperformance is primarily due to one global manager of risk-based investments severely underperforming. VRS no longer partners with the manager. In addition, another manager has been hurt by positioning due to its value

*Performance figures for the real assets and private equity programs, as well as the private investment partnerships portfolio, do not reflect managers' actual valuations of these investments as of September 30, 2021 because valuations of private assets have a timing lag behind other assets. Instead, performance figures are based on valuations as of June 30, 2021, adjusted for cash flows during the quarter that ended September 30, 2021.

style. The portfolio is too new to have performance or benchmarks for the five- and 10-year periods.

Private investment partnerships. The private investment partnerships portfolio is another relatively new, small exposure program, with $2.2 billion in assets.* The portfolio comprises multi-asset private investments and is managed externally. The portfolio outperformed its benchmarks for all periods, including exceeding its one-year benchmark by more than 10 percentage points. The portfolio is too new to have performance returns or a benchmark for the 10-year period.

Investment policies and programs

The VRS board sets investment policies, and the professionals in the investment department implement programs to fulfill those policies. VRS's investment expenses are lower than its peers, in part, because VRS manages some investments in-house. The VRS board recently approved incentive awards and bonuses for eligible investment and administrative staff.

VRS investment expenses increased as the trust fund increased, but expenses remained below peers

VRS investment expenses include external fees, paid mostly to outside investment managers, and the VRS investment department's operating expenses. External fees account for over 90 percent of investment expenses.

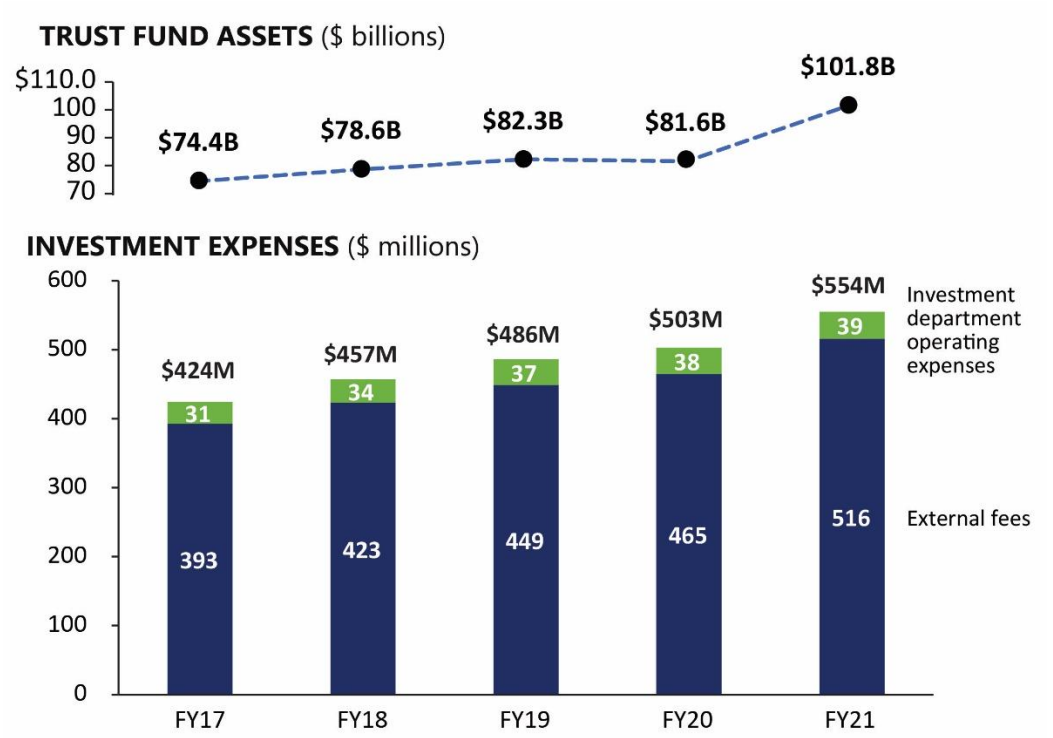
VRS investment expenses have increased over time, but this is mostly attributable to the increasing value of assets held in the VRS trust fund (Figure 4). Investment expenses increased by an average of 6.9 percent per year, for a total increase of $130 million since FY17. This growth was driven by the increasing size of the trust fund, which grew by an average of 8.6 percent per year over the same five-year period, notwithstanding the slight decline in the value of the trust fund in FY20. VRS investment expenses as a percentage of total trust fund investments remained relatively stable during this period. Over the five-year period, investment expenses as a percentage of the total trust fund were between 0.54 percent and 0.62 percent. Most of VRS's investment expenses are fees paid to external managers based on the value of the assets they hold. As the trust fund grew, so did the value of assets held by external managers and the total fees they were paid.

VRS investment department expenses represent a small but growing part of overall investment expenses. These expenses grew from $31 million in FY17 to $39 million in FY21, an increase of 23 percent. The main growth drivers were related to staffing, data subscriptions, and consulting services. During this time period, VRS added eight full-time positions in the investment department. In addition, the cost of data feeds increased, and VRS hired a third party to assist with process improvement. Although

*Performance figures for the real assets and private equity programs, as well as the private investment partnerships portfolio, do not reflect managers' actual valuations of these investments as of September 30, 2021 because valuations of private assets have a timing lag behind other assets. Instead, performance figures are based on valuations as of June 30, 2021, adjusted for cash flows during the quarter that ended September 30, 2021.

investment department expenses increased during this time period overall, their growth reflects the expansion of the in-house management group, which generally aligns with total fund growth.

FIGURE 4
Trend in VRS investment expenses compared to trust fund assets

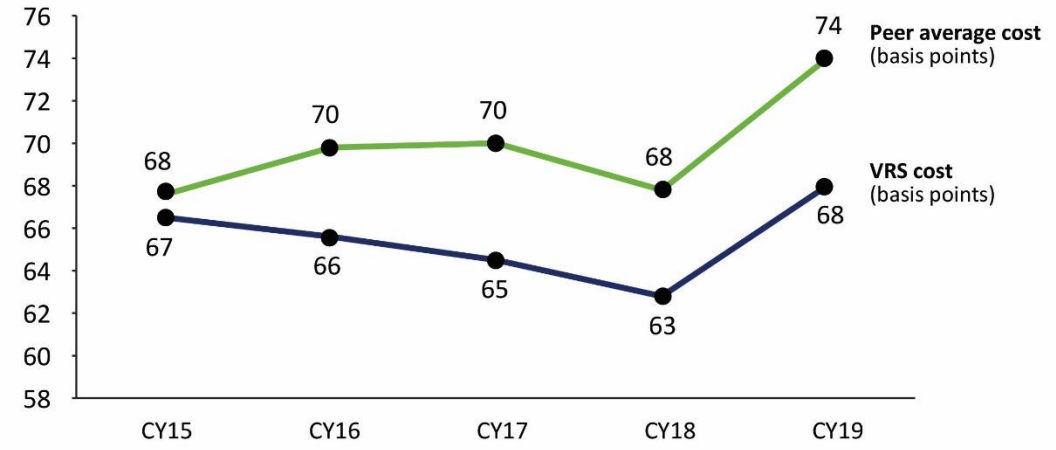


SOURCE: VRS annual reports and investment department data.
NOTE: Trust fund assets are as of June 30 each year. Investment expenses may not equal annual totals because of rounding. Data for FY21 is in draft form because VRS's FY21 Annual Report has not been finalized. External fees include management and performance fees paid to third parties that invest VRS assets. They also include fees paid to the bank that serve as the trust fund's custodian and legal fees. Investment department operating expenses include all staff, IT, facility, and contract services fees (other than those captured in external fees) related to the investment department's routine operations.

Although VRS investment expenses have increased overall, they remain lower than the investment expenses of peer retirement systems. VRS subscribes to and participates with a cost measurement and investment fee benchmarking service, CEM Benchmarking, to annually review its investment expenses and compare them to peers. CEM looked at VRS expenses as a percentage of the trust fund, measured in basis points. CEM reported that VRS investment expenses increased to 68 basis points in 2019 after steadily decreasing over the previous four years. The increase reflects VRS's greater exposure to private markets, which are more expensive than stock and bond management. However, compared to the peer average adjusted for fund size and asset mix, VRS expenses were six basis points lower. The gap between VRS's investment expenses and its peers has also increased since 2019 (Figure 5). The difference in basis points between VRS and its peer average over this period ranged from the equivalent of $7 million to $47 million in lower total investment expenses depending on the year.

(CEM's reported investment expenses are different than those reported by VRS because CEM reports on a calendar year basis and adjusts expenses and assets to allow comparison with peers.)

FIGURE 5
VRS investment expenses compared with peers



SOURCE: CEM investment benchmarking reports to the VRS board.
NOTE: Peer average cost is an estimate of the cost that VRS's peers would incur if they had VRS's asset mix. In conducting its analysis, CEM makes adjustments to VRS expenses and the assets they are measured against so they are comparable to peers. Benchmark comparisons for 2020 and 2021 are not yet available.

In-house asset management reduced fees paid to external investment managers

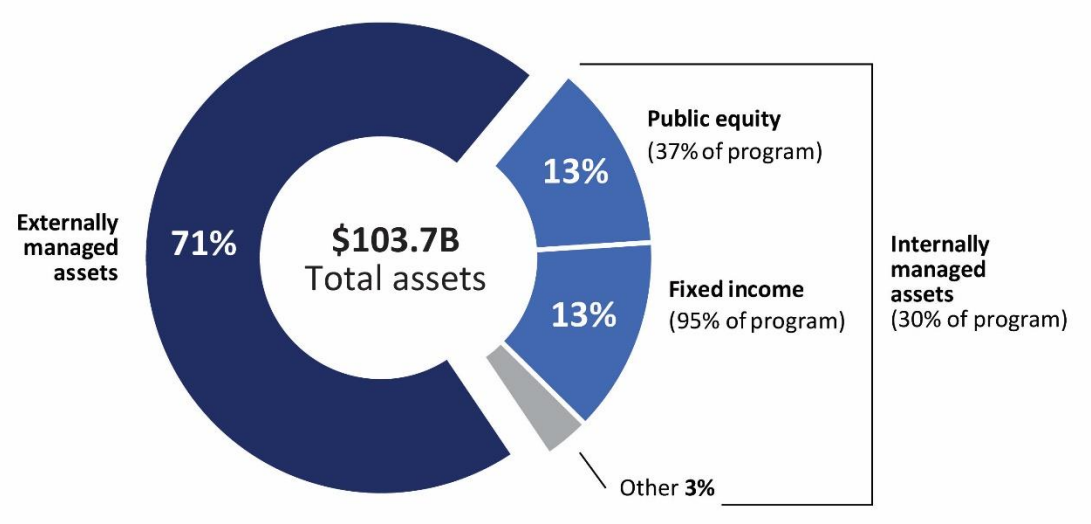
VRS manages a portion of the trust fund's assets in-house, with the goal of reducing costs while maintaining a high return on investments. As of September 30, 2021, approximately 30 percent of the trust fund was managed in-house (Figure 6). In-house managed assets included nearly the entire fixed income program and approximately 37 percent of the public equity program.

In-house management of assets has resulted in substantial cost savings. According to CEM, VRS saves approximately $45 million annually by managing assets in-house instead of paying fees to outside managers. These annual savings remain in the fund and are reinvested, which compounds savings over time.

In-house managed public equity assets met or outperformed their benchmarks for the one- and 10-year periods ending September 30, 2021. For example, these assets generated a return of 13.3 percent over the 10-year period, meeting the benchmark. Similar to the overall public equity program, in-house managed public equity assets underperformed their benchmark for the three- and five-year periods.

Among fixed income assets managed in-house, the core portfolio outperformed its benchmarks for all periods ending September 30, 2021. Core portfolio assets outperformed the 10-year benchmark by 80 basis points and generated an annualized return of 3.8 percent over that period. Core portfolio assets outperformed their three- and five-year benchmarks by 140 and 110 basis points, respectively. The other fixed income asset portfolios managed in-house had mixed performance.

FIGURE 6
VRS in-house and externally managed assets (as of September 30, 2021)



SOURCE: VRS investment department data, 2021.
NOTE: Other includes cash exposures and real assets. Percentages may not equal 100 because of rounding.

Board approved $9.1 million in incentive awards and bonuses

Consistent with VRS's employee pay plans, in September 2021 the VRS board approved FY21 incentive awards and bonuses for eligible investment and administrative staff totaling $9.1 million. Nearly 90 percent of the overall amount ($7.9 million) was incentive awards for investment staff, which are mostly based on investment performance of the total fund and asset classes over the three- and five-year periods. Total incentive awards approved for FY21 were more than double the incentive awards approved for FY20, largely reflecting the significant increase in the total fund's investment returns. Bonuses for administrative employees and investment department operations and administrative staff, are based on annual agency performance outcomes and individual performance evaluations.

2. Defined contribution plans

VRS manages several defined contribution plans for its members. All state employees and many local VRS members are eligible to participate in one or more of the plans (Table 1). Participants in these plans have their own accounts, and individual participants determine how their money is invested from an investment line-up designed by VRS. The defined contribution plans are similar in structure to private-sector 401(k) plans and individual retirement accounts (IRAs).

Some of the VRS defined contribution plans are intended to provide primary retirement benefits, whereas others are intended to be a supplemental benefit. The aggregate value of participant accounts held in the VRS-managed defined contribution plans was $7.5 billion as of September 30, 2021.

TABLE 1
VRS defined contribution plans (as of September 30, 2021)

	Description	Assets ($M)
Deferred compensation and cash match	State employees, and some local VRS members, can choose to make voluntary contributions to their Commonwealth 457 deferred compensation plan to supplement their retirement income. Eligible state employees receive a modest cash match from employers in their Virginia 401(a) cash match plan. [a]	$4,782
Optional plan for higher education [b]	Faculty and other eligible employees at public colleges and universities may make an irrevocable one-time decision to participate in this defined contribution plan instead of the State Employees plan. Employers are required to make contributions to participant accounts, and employees hired after July 1, 2010, are also required to contribute.	$1,381
Hybrid	State and local members of the hybrid plan are required to contribute to their Hybrid 401(a) plan and can choose to make voluntary contributions to their Hybrid 457 plan. Employers make mandatory contributions to participant accounts and match a portion of voluntary contributions made by members. Members are also enrolled in the hybrid plan's defined benefit component.	$1,343
Other [c]	An optional retirement plan is offered as an alternative to political appointees (in place of the VRS State Employees plan) and to school superintendents in school divisions that have elected to have the plan (in place of the VRS Teachers plan).	$26

SOURCE: VRS administration and investment department data.

[a] Most political subdivisions do not have a cash match plan. [b] The following higher education institutions administer their own optional plans: George Mason University, Virginia Commonwealth University, the University of Virginia, Virginia Tech, and the College of William and Mary. Faculty at these institutions are not eligible to participate in the VRS optional plan for higher education. [c] The amounts held in the other plans are as follows: Optional Retirement Plan for Political Appointees, $25.6 million; Optional Retirement Plan for School Superintendents, $277,000; and Virginia Supplemental Retirement Plan for certain educators, $197,000.

Plan performance

Participants in the VRS defined contribution plans may choose from 21 investment options available through the defined contribution plans (DCP). These options include (1) diversified target-date portfolios, (2) individual investment options, and (3) self-directed brokerage accounts. Participants pay a flat administrative fee every year and additional investment fees based on the options they select. Participants in the Optional Retirement Plan for Higher Education may choose to invest in options available through VRS's DCP lineup or in options available through another provider, TIAA. Participants pay investment, administrative, and other fees based on the provider and investment options they select.

Defined contribution plans (DCP)

Target-date portfolios. Participants may select a diversified investment portfolio that reflects their target retirement date. These portfolios are the default for members who do not elect an investment option, and they include a broad spectrum of investments, such as stock, bond, and real estate funds. The mix of investments is automatically adjusted over time to become more conservative as the participant approaches retirement age. The target-date portfolios, which hold $2.8 billion in assets, met or exceeded all of their performance benchmarks (Table 2).

Individual options. Participants may select from one or more individual options to build a customized investment portfolio. The options include different types of stock, bond, money market, and real estate funds, and a fund that allows members to purchase units of the investments held by the VRS defined benefit trust fund. The individual options, which hold $3.5 billion in assets, exceeded all of their performance benchmarks (Table 2).

Self-directed brokerage accounts. The brokerage accounts allow participants to select from thousands of publicly traded mutual funds, exchange-traded funds, and individual securities. Participants who use brokerage accounts have full control over their investments, down to the individual securities held in their portfolio. The brokerage accounts hold $98 million in assets. Because all investment decisions are made by the account holders, VRS does not use performance benchmarks for the brokerage accounts.

Optional Retirement Plan for Higher Education

Participants in the Optional Retirement Plan for Higher Education (ORPHE) can choose to invest in the VRS DCP lineup or with TIAA. Under TIAA, participants may select a target-date portfolio (a diversified portfolio option) or a traditional annuity, or build a custom portfolio from different stock, bond, money market, and real estate funds. TIAA also offers a self-directed brokerage account. As of September 30, 2021, the TIAA program held $1.1 billion in assets.

TABLE 2
Investment performance of VRS defined contribution plans

for the period ending September 30, 2021

	1 year	3 years	5 years	10 years
Options available for all plans				
Target-date portfolios				
Met or exceeded benchmark	10	9	9	8
Total number of options	10	9	9	8
Individual options				
Met or exceeded benchmark	10	10	10	10
Total number of options	10	10	10	10
Additional option under the higher education plan				
TIAA [a]				
Met or exceeded benchmark	17	16	16	14
Total number of options	18	17	17	15

SOURCE: VRS investment department data.
NOTE: (1) Total number of investment options reported for a given period can change because longer-term performance data is not available for newer options. (2) Performance of target-date and individual options is reported net of investment fees but not administrative fees. Performance of the additional options under the higher education plan is reported net of investment and embedded record-keeping and plan administration fees, where applicable. (3) Some funds are passively managed. Passively managed investment options are expected to trail their benchmarks by the expense ratio (fees) charged by the investment managers. Actively managed options are expected to outperform the market and were measured against the benchmark net of investment fund fees. Capital preservation investment options, such as stable value and money market funds, are expected to generate returns at or above zero and were assessed relative to that benchmark. [a] Performance information does not reflect assets held through legacy TIAA contracts, which were in effect before 2017.

VRS updated the TIAA investment menu with new options in January 2020. All but one of the TIAA options exceeded their benchmarks (Table 2). Most TIAA assets (68 percent) are held in legacy options that are not available under the new menu. VRS no longer tracks performance for these options because they have been deselected by VRS. The proportion of funds in the TIAA legacy options will decrease over time as new participants enter the plan and invest in the new options.

An additional $166 million in the higher education retirement plan is held with private deselected providers with which VRS no longer partners. VRS does not track investment performance for deselected providers because participants can no longer contribute to them through the plan.

Plan management

VRS manages the defined contribution plans through contracts with private companies. These companies provide account administration and investment management services to plan participants. VRS's defined contribution plan activities are guided by

the Defined Contribution Plans Advisory Committee. Two VRS board members serve on the committee, and the remaining members are appointed by the board. The committee provides guidance to the board and staff.

3. Trust fund rates and funding

Virginia's statutory schedule for fully funding rates required the state to pay 100 percent of the board-certified employer contribution rates by FY19 (§ 51.1-145). The schedule, which was enacted in 2012, gradually increased the portion of funding required for each plan in each biennium. The General Assembly fully funded rates ahead of schedule in FY18 for all plans.

Employer contributions, paid by the state and local political subdivisions through contribution rates, are one of the main sources of funding for VRS retirement plans. Every two years, the VRS board certifies the employer contribution rates that are needed to pay and fully fund the plans over time, as determined and recommended by its actuary. Employer contribution rates for the teachers plan, state employees plan, and other state-supported plans must be enacted each biennium in the Appropriation Act. For all state-supported plans, the Code of Virginia requires the state to fully fund the board-certified contribution rates. For the 597 local plans that are not supported by the state, the Code of Virginia requires employers to pay the rates certified by the VRS board, with some limited exceptions.

The VRS actuary performs valuations annually, which provide an update on the funded status of the retirement plans. Funded status is a key indicator of the financial health of the plans.

Board-certified employer contribution rates decreased for the state and teachers plans because of large investment returns

The VRS board certified the employer contribution rates that were recommended by its actuary for the FY23–FY24 biennium. The board-certified rates *decreased* from the preceding biennium for the Teachers and State Employees plans, but *increased* for the remaining state plans. The rate for the Teachers plan decreased nearly two percentage points, from 16.62 percent (FY21–FY22 biennium) to 14.76 percent (FY23–FY24 bi-ennium). The rate for the State Employees plan decreased by a smaller amount, from 14.46 percent to 14.13 percent during the same time period (Table 3). The rate decreases are part of a longer term trend of declining contribution rates since their peak in the FY15–FY16 biennium (Figure 7).

Rates for the Teachers and State Employees plans decreased for the upcoming biennium primarily because of the substantial investment returns for the fund in FY21. Investment returns more than offset the increases in plan liabilities resulting from recent changes to the plans' mortality assumptions, which assume future generations of plan members will live longer than current members. Because of decreasing contribution rates, VRS needs approximately $118 million less in employer contributions in FY23 compared with FY22 to fully fund the rates. The amount of employer contributions needed each year after FY23 may be higher or lower, depending on trust fund investment returns, payroll levels, and other factors.

Employer contributions are also paid by local governments and political subdivisions to support the 597 local plans. The VRS actuary calculates a unique rate for each local plan, and the VRS board certifies the rates. Local employers have historically been required to pay the full board-certified rate for their individual plans, with a few limited exceptions in recent years. The average of the board-certified employer contribution rates for local plans increased from 8.33 percent for FY21–FY22 to 8.79 percent for FY23–FY24. This increase is largely due to the recent changes in the plans' mortality assumptions, which were not fully offset by the substantial investment returns for the

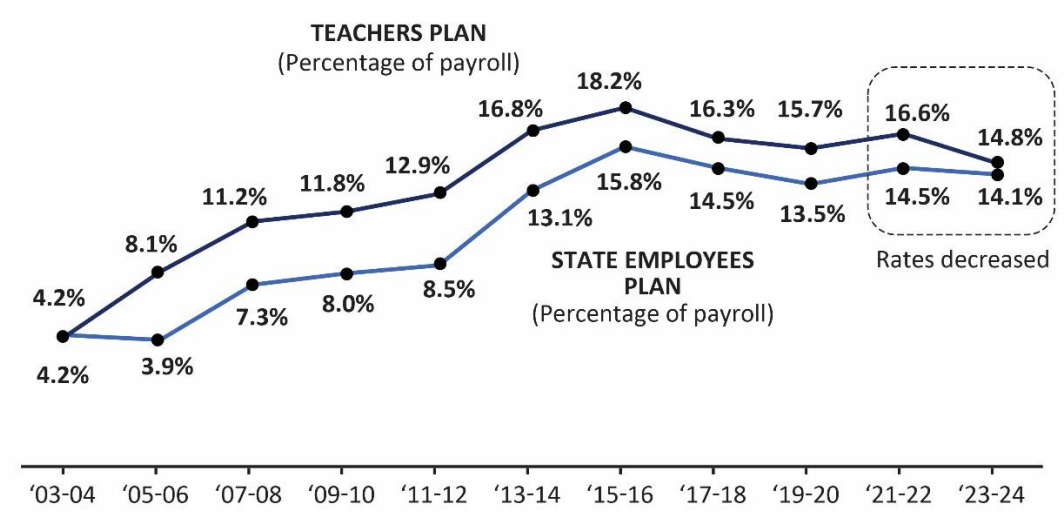
VRS fund in FY21. The average rate for local plans is much lower than the rates for the state plans because local plans generally have smaller unfunded liabilities, and these plans have consistently paid the full actuarially determined board-certified contribution rates. However, trends for individual local plans vary depending on the unique plan experience of each employer.

TABLE 3
Employer contribution rates certified by VRS board

	FY21–FY22	FY23–FY24	Percentage point change
Teachers	16.62%	14.76%	↓ 1.86%
State Employees	14.46	14.13	↓ 0.33
VaLORS	21.90	24.60	↑ 2.70
SPORS	26.33	29.98	↑ 3.65
JRS	29.84	30.67	↑ 0.83
Local plan average	8.33	8.79	↑ 0.46

SOURCE: VRS board meeting documents.

FIGURE 7
Board-certified employer contribution rates for Teachers and State Employees plans



SOURCE: VRS annual reports and historical actuarial data.
NOTE: Board-certified rates reflect the percentage of payroll that each VRS-participating employer would need to contribute to VRS to pay off each plan or program's liabilities over time, as calculated by the VRS actuary. Rates must be enacted by the governor and General Assembly in the annual Appropriation Act. Prior to the 2017–18 biennium, the governor and the General Assembly did not fully fund the rate, so the rates enacted in the Appropriation Act may not match board-certified rates for all past years. For the 2017-2018 biennium, the rate for the State Employees plan was reduced to 13.5 percent after the General Assembly paid the remainder of the 10-year deferred contributions with an accelerated payment.

Funded status of most VRS plans increased in FY21

A pension plan's health is commonly measured by its funded status, which is the ratio of plan assets to liabilities. In FY21, the funded status for VRS's Teachers, State Employees, and VaLORS plans increased on an actuarial basis, while the funded status for the SPORS and JRS plans decreased on an actuarial basis. The Teachers and State Employees plans increased to 77 percent funded—the highest funded status for each plan in more than a decade (Figure 8). The funded status of the Teachers and State Employees plans increased primarily because investment returns to the VRS trust fund more than offset increases in liabilities resulting from recent changes to the plans' mortality assumptions. The funded status of the VaLORS plan increased for similar reasons, though by a smaller amount.

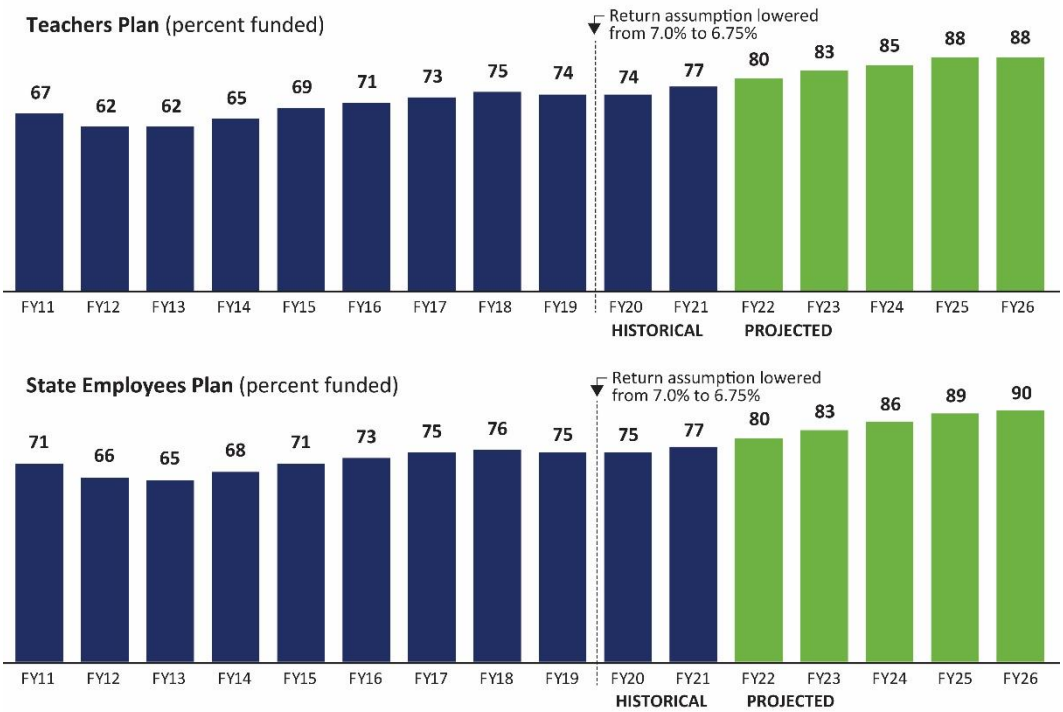
The funded status of the Teachers and State Employees plans is projected to continue increasing through 2026 (Figure 8). Because investment returns are phased in over five years when calculating the actuarial value of assets, the substantial returns for FY21 will mitigate negative impacts on funded status if returns are lower than expected over this period. According to the VRS plan actuary, Cavanaugh Macdonald Consulting, the unfunded liabilities for the plans should continue to decrease if all other assumptions are met.

The General Assembly has taken steps in recent years to increase the funded status of the Teachers and State Employees plans by accelerating the repayment of deferred contributions (sidebar). At least four options exist to further reduce the unfunded liabilities and increase the funded status of these plans, thereby decreasing the long-term cost of the plans:

In recent years the state has **accelerated the repayment of deferred contributions** to the State Employees and Teachers plans. The state deferred more than $1 billion in contributions to these plans during the 2010–2012 biennium after the Great Recession. The state fully repaid deferred contributions to the State Employees plan in the 2016–2018 biennium. The state completed repayment of deferred contributions to the Teachers plan with a $61 million payment in FY21.

- The General Assembly could maintain the higher FY21–FY22 contribution rates rather than reducing them to the VRS board-certified rates for FY23–FY24. For example, maintaining the current contribution rate of 16.62 percent for the Teachers plan could reduce unfunded liabilities for the plan by $382 million.
- The General Assembly could shorten the amortization period for repaying unfunded liabilities from 22 to 20 years and avoid substantial interest expenses. With the State Employees plan, this would require an additional $30 million initially in annual contributions (0.73 percent of state employee salaries) but could achieve as much as $915 million in interest savings over the next two decades.
- The General Assembly could adjust the amortization of unfunded liabilities by repaying a level dollar *amount* rather than a level *percentage* of salaries. For both the Teachers and State Employees plans, this would initially increase contributions by modest amounts but could result in significant savings over the next 22 years, particularly with a shorter amortization period of 20 years.
- Finally, the General Assembly could provide additional one-time cash infusions to pay off unfunded liabilities, similar to the $61 million it provided for the Teachers plan in FY21.

FIGURE 8
Funded status of Teachers and State Employees plans



SOURCE: VRS actuarial valuation report, 2021, and historical actuarial data.
NOTE: Funded status shown is based on actuarial value of assets, using a five-year smoothing period. The VRS board lowered the long-term rate of return assumption from 7.0 percent to 6.75 percent in October 2019, but actuarial calculations of funded status for FY19 assumed a 6.75 percent rate of return. Future funded status projections assume 6.75 percent rate of return on investments and 2.5 percent inflation. The Governmental Accounting Standards Board requires that the funded status of the plans be reported using the market value of assets, which is how they are reported in VRS financial statements.

The average funded status of the local plans, adjusted to account for size differences across plans, increased slightly from 90 percent in FY20 to 91 percent in FY21. Local plans have maintained a higher average funded status than the teachers plan or the state-supported plans mainly because local employers have generally been required to fully fund their plan contribution rates. However, because of plan demographics, benefit provisions, and plan experience, the funded status of any individual local plan may be higher or lower than the group average.

4. Benefits administration and agency management

Administration of member benefits is one of VRS's core responsibilities. To carry out this and other duties, the agency must be effectively managed. Notable topics related to benefits administration and agency management include agency spending growth and a decrease in the voluntary contributions of hybrid plan members in 2021 as new members have joined the plan.

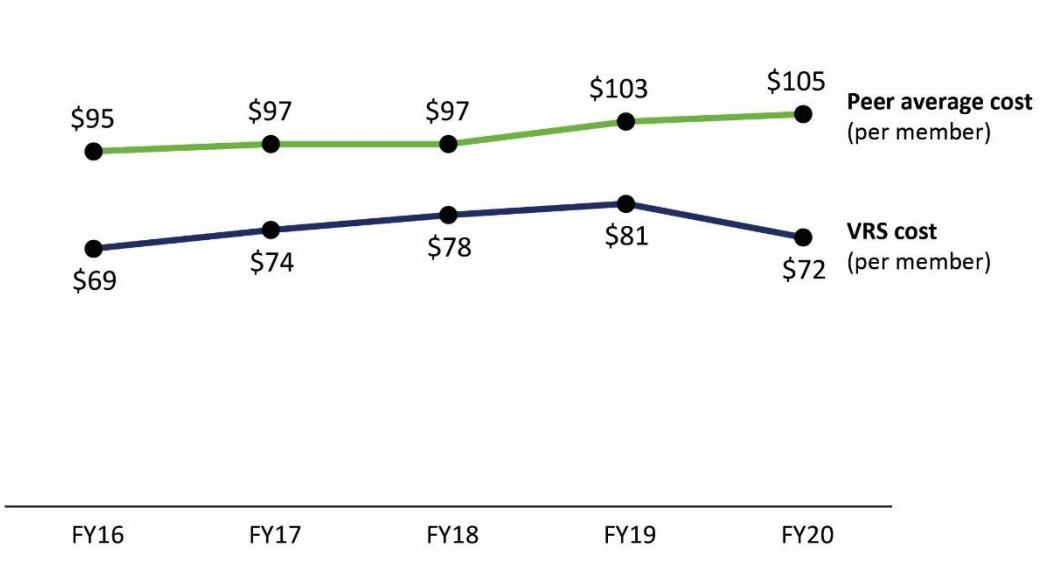
VRS operating expenses generally increased but remained lower than peers

VRS operating expenses include spending related to benefits administration, agency management, and investment department operations (not including external fees). Agency expenses in FY21 were $97 million. Expenses increased by $7.5 million in the five-year period from FY17 to FY21, with an average growth rate of 2.1 percent each year (although they decreased between FY19 and FY20).

VRS expense increases between FY17 and FY21 were attributable to three primary cost drivers. The first driver was higher IT costs. VRS continues to modernize its IT systems to add new capabilities, such as improving online member services and further strengthening cybersecurity. VRS recently migrated away from a legacy mainframe system to a new system and developed a new platform to disburse monthly retiree and beneficiary payments. The second cost driver was the expansion of the investment department, including the addition of new staff positions and development of new IT capabilities. This expansion was commensurate with the overall growth of the total fund. The third cost driver was implementation of the new hybrid plan. VRS added several new staff positions to administer the new plan, made system changes to properly account for the plan, and distributed educational and other materials. VRS also incorporated a third-party defined contribution plan administrator to help carry out various plan administrative functions. Other factors contributing to the growth in expenses included the implementation of the Line of Duty Act program and expansion of member counseling services to assist members as benefit offerings expanded and increased in complexity.

VRS's administrative costs compare favorably to peer retirement systems. The independent benchmarking service that VRS uses, CEM Benchmarking, annually reviews the administration expenses related to its retirement plans and benchmarks them to peers. (This comparison excludes investment expenses and costs associated with administering other benefit programs, such as the retiree health insurance credit program.) CEM reported that VRS retirement plan administration costs were $19 to $33 lower per member than its peer average between FY16 and FY20 (Figure 9). This difference was estimated to be $11 million to $19 million less in administrative expenses per year. While its peer average costs increased in FY20, VRS expenses declined because the costs associated with implementing major projects—including the hybrid plan and IT modernization projects—began to wind down. More broadly, VRS administration expenses are lower than its peers primarily because it has fewer front-office staff and lower IT and other support costs on a per-member basis.

FIGURE 9
VRS retirement plan administration costs compared to peers



SOURCE: CEM retirement plan administration benchmarking reports to the VRS board.
NOTE: Benchmark comparisons for FY21 are not yet available.

Hybrid plan voluntary contribution participation rate has declined since the 2020 automatic escalation

The hybrid plan combines elements of a traditional defined benefit retirement plan with a 401(k)-style defined contribution plan. Hybrid plan members include most state employees, teachers, and local employees hired on or after January 1, 2014, and make up nearly 40 percent of the total active VRS membership as of September 30, 2021. (State employees in the SPORS and VaLORS plans, and local employees with enhanced hazardous duty benefits, are not eligible to participate in the hybrid plan.) The hybrid plan has lower costs and liabilities for the state than the defined benefit plans it replaced. Therefore, it is expected to gradually reduce costs for the state and most localities as it covers an increasing proportion of the workforce. The plan also transfers a higher proportion of investment and longevity risk from employers to plan members.

Under the hybrid plan, the defined contribution component of the plan is an important part of a member's benefit. Compared to a traditional defined benefit plan, such as Plan 1 or Plan 2, the defined *benefit* component provides a lower benefit that is complemented by defined *contribution* savings. The defined benefit component of the hybrid plan likely will not enable a member to meet an income replacement target of approximately 70-80 percent of the member's pre-retirement income, even when combined with social security benefits. Hybrid plan members are required to contribute 1 percent of their salary to their defined contribution component, and they receive a 1 percent matching contribution from their employer. To meet an income replacement target of 70–80 percent, members are encouraged to make voluntary contributions of up to 4

Hybrid plan members contribute 5 percent to 9 percent of their salary toward their retirement benefits.

Members must contribute 4 percent of their salary toward their defined benefit component.

Members are required to contribute 1 percent of salary to their defined contribution component and may voluntarily contribute up to an additional 4 percent.

Employers also are required to contribute to a member's defined benefit component at the actuarially determined rate. Employers are required to contribute 1 percent of a member's salary toward a member's defined contribution component and up to an additional 2.5 percent in matching contributions, based on a member's voluntary contributions.

percent of their salary. These additional contributions are matched by up to 2.5 percent in additional employer contributions.*

An **automatic escalation** of 0.5 percent occurs every three years for voluntary member contributions to the defined contribution component of the hybrid plan, as required under statute (§ 51.1-169 C.3). Members are not subject to the automatic escalation if they opt out or if they are already making the maximum 4 percent voluntary contribution.

As a result of the statutory plan design and similar to past years, the percentage of hybrid plan members making voluntary contributions declined as new members have joined the plan. The plan's second statutory automatic rate escalation took place in January 2020, bringing the percentage of members making voluntary contributions to 79 percent as of September 30, 2020. (Automatic escalations increase participation rates because they bring participants into the voluntary contribution component of the plan unless they opt out.) However, the percentage of members making voluntary contributions has since declined as approximately 12,000 new hybrid members have joined the plan. New employees tend not to initiate a voluntary contribution when they start employment. As a result, the percentage of hybrid members making voluntary contributions declined to 66 percent as of September 30, 2021. Among members making voluntary contributions, approximately 37 percent are contributing the lowest voluntary amount of 0.5 percent. A little more than 40 percent of members making voluntary contributions are contributing the maximum of 4 percent.

VRS has taken a number of steps in recent years aimed at increasing the voluntary contributions made by hybrid plan members. VRS developed a tool, called SmartStep, which members can use to increase their savings on their own schedules. VRS has also conducted online campaigns to encourage savings when members log into their accounts and developed tool kits for employers to help encourage member savings.

*70–80 percent replacement target takes into account social security benefits and assumes 30 years of service. Actual voluntary contributions needed to reach 70–80 percent income replacement target varies with members' income levels and annual investment returns. Hybrid plan members who make the maximum 4 percent in voluntary contributions would potentially receive retirement benefits greater than Plan 1 or Plan 2 members.

JLARC.VIRGINIA.GOV
919 East Main Street Suite 2101 Richmond, VA 23219