Commonwealth of Virginia
December 14, 2020

Report to the Governor and the General Assembly of Virginia

VRS Oversight Report

DECEMBER 2020

JLARC
JOINT LEGISLATIVE AUDIT
AND REVIEW COMMISSION

Joint Legislative Audit and Review Commission

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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 596 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 post-employment benefit programs. These include life insurance, sickness and disability, long-term care, and the retiree health insurance credit program.

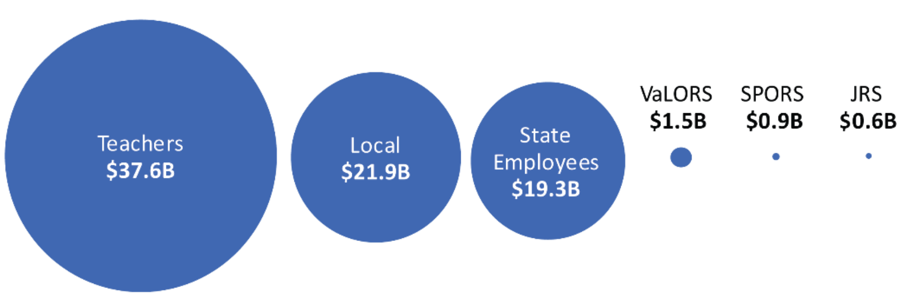
VRS serves nearly 780,000 members, retirees, and beneficiaries. Active members include current state and local employees and teachers in Virginia's public school divisions. VRS also serves retirees, their designated beneficiaries, and "deferred" members, who are not actively employed and are not collecting benefits.

The financial assets used to pay VRS benefits are pooled in the VRS trust fund, which held $85.1 billion in assets as of September 30, 2020. Ranked by value of assets, VRS is the nation's 18th largest public or private pension fund. In FY20, VRS paid $5.3 billion in retirement benefits and $430 million in other post-employment benefits from the trust fund.

VRS receives funds from three main sources: employer contributions, member contributions, and investment income. In FY20, VRS benefits paid out and expenses exceeded additions to the trust fund by approximately $300 million.

Investment income is critical to the VRS trust fund's health, typically accounting for over half of total additions in recent years. However, in FY20 investment income accounted for less than one-third of total additions. VRS investments generated a return of 5.3 percent for the one-year period ending September 30, 2020. The total annualized return over the 10-year period was 7.8 percent, which is above the new 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 2020 valuation report.
NOTE: Figures show total actuarial value of assets attributable to each retirement plan as of June 30, 2020. 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, 2020

359,630	Actively employed members[a]
225,647	Retired members & beneficiaries
193,681	Inactive members
778,958	Total

NET ADDITIONS for fiscal year ending June 30, 2020[b]

$2.9 billion	Employer contributions
$1.1 billion	Member contributions
$1.6 billion	Net investment income
-$5.9 billion	Benefits paid and other expenses[c]
-$300 million	Net additions[d]

ASSETS as of September 30, 2020

$85.1 billion
Total VRS trust fund assets

INVESTMENT PERFORMANCE as of September 30, 2020

	1 year	3 years	5 years	10 years
Total return	5.3%	5.9%	7.6%	7.8%
Benchmark	5.9%	6.2%	7.7%	7.6%
Excess return	-0.6%	-0.3%	-0.1%	+0.2%

SOURCE: VRS 2020 annual report and 2020 membership and investment department data.
a Active membership included 155,878 teachers, 118,428 local government and political subdivision employees, and 85,324 state employees, state police, law enforcement officers, and judges. Within the retirement plans are three benefit groups. Active membership by benefit group included 143,302 in Plan 1, 92,045 in Plan 2, and 124,283 in the hybrid plan. b Includes all additions and deductions to the trust fund for VRS retirement plans and other benefits programs. c Includes $5.3 billion in retirement benefit payments, $430 million in other benefits, $107 million in refunds, and $64 million in administrative and other expenses. d Does not sum because of rounding.

1. Trust fund investments

Management of the trust fund investments is one of the core responsibilities of VRS. 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 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

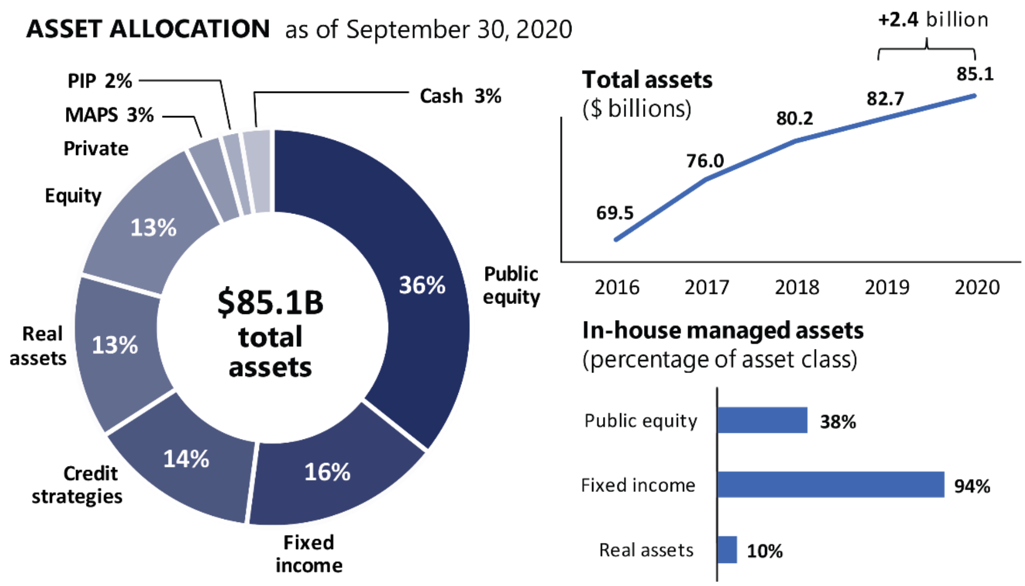
The VRS trust fund held $85.1 billion in assets as of September 30, 2020, an increase of $2.4 billion from a year ago. Approximately $27.8 billion of the trust fund was managed in-house, including nearly all fixed income and some public equities, real assets, and cash. The remaining $57.3 billion was managed by external managers under VRS supervision.

The total fund's investment performance was generally below its investment benchmarks. The total fund outperformed its investment benchmark for the 10-year period ending September 30, 2020 but underperformed its investment benchmarks for the one-year, three-year, and five-year periods (Figure 3). The trust fund's investment returns were mixed compared with the 6.75 percent long-term (30+ year) rate of return that is assumed by VRS for its investments. The fund's five-year and 10-year returns exceeded the long-term rate of return, but the fund's one-year and three-year returns were below the long-term rate of return assumption.

Public equity. The public equity program continues to be the largest VRS asset class, with $30.4 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-eight percent of the program's assets are managed in-house. The program underperformed its benchmarks for all periods. This is the third year in a row that the public equity program underperformed its one-year and three-year benchmarks, and the second year in a row that the program underperformed its five-year benchmark. The underperformance was mainly due to the public equity program's tilt toward value exposures (sidebar) and the recent strong performance of several large cap growth stocks relative to the rest of the S&P 500, according to VRS staff. VRS staff believe that value stocks are attractive exposures going forward.

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, 2020

	FY to date	1 year	3 years	5 years	10 years
Total fund	5.3%	5.3%	5.9%	7.6%	7.8%
VRS custom benchmark	6.4	5.9	6.2	7.7	7.6
Public equity	6.9	5.9	5.0	8.3	8.5
Benchmark	8.2	9.1	6.8	9.4	8.6
Fixed income	1.6	8.6	6.0	5.0	4.3
Benchmark	0.9	6.5	5.1	4.1	3.6
Credit strategies	4.3	4.0	4.7	6.2	6.1
Benchmark	3.9	4.1	4.8	6.2	5.6
Real assets	0.9	-0.2	5.6	7.8	10.4
Benchmark	-0.4	0.4	4.8	6.3	9.1
Private equity	11.3	7.5	12.4	12.9	13.8
Benchmark	19.3	5.5	10.0	10.3	14.2
Multi-asset public strategies (MAPS)	4.2	0.1	n/a	n/a	n/a
Benchmark	3.6	6.1	n/a	n/a	n/a
Private investment partnerships (PIP)	6.9	-2.6	4.0	5.1	n/a
Benchmark	8.2	3.8	6.2	6.4	n/a

SOURCE: VRS investment department data.

Fixed income. The fixed income program is the second-largest VRS asset class, with $13.9 billion in assets. The program primarily consists of U.S. dollar-denominated securities, such as bonds and money market instruments that pay a specific interest rate. As of 2020, the fixed income program also includes emerging market debt (EMD). EMD was previously included in the credit strategies program. 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 94 percent of fixed income assets are managed in-house. The program outperformed its benchmarks for all periods.

Credit strategies. The credit strategies program is the third-largest VRS asset class, with $11.8 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 or met its benchmarks for the fiscal year to date (first quarter of FY21), five-year, and 10-year periods, but underperformed its benchmarks for the one-year and three-year periods. The underperformance over the past year was due to illiquid investments, while underperformance over the past three years was due to convertible securities and emerging market debt, according to VRS staff.

Private equity. The private equity program is the fourth-largest VRS asset class, with $11.5 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 that are 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 the one-year, three-year, and five-year periods, but underperformed its benchmarks for the fiscal year to date (first quarter of FY21) and 10-year period. The recent underperformance was due to the nature of the private equity market, which tends to lag upswings in the public equity market such as those that have occurred recently, according to VRS staff.

Real assets. The real assets program is now the smallest of the five major asset classes, with $11.4 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. Nearly 90 percent of VRS real assets are managed externally. The program outperformed its benchmarks for all but the one-year period. The underperformance over the past year was due to weak returns from public real estate investment trusts and market volatility resulting from the COVID-19 pandemic, according to VRS staff.

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*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, 2020 because valuations of private assets have a timing lag behind other assets. Instead, performance figures are based on valuations as of June 30, 2020, adjusted for cash flows during the quarter that ended September 30, 2020.

Multi-asset public strategies. The multi-asset public strategies program is a relatively new, small exposure program, with $2.5 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 underperformed its benchmark for the one-year period. The underperformance in both dynamic strategies and risk-based investments is due to sell-offs brought on by the COVID-19 pandemic. The portfolio is too new to have performance or benchmarks for additional periods.

Private investment partnerships. The private investment partnerships portfolio is another relatively new, small exposure program, with $1.4 billion in assets. The portfolio comprises multi-asset private investments and is managed externally. The portfolio underperformed its benchmarks for all periods. The underperformance resulted mainly from significant mark downs in portfolio positions during the last quarter of FY20, which lowered performance. 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 and amended its pay plans to clarify its discretion regarding such payments.

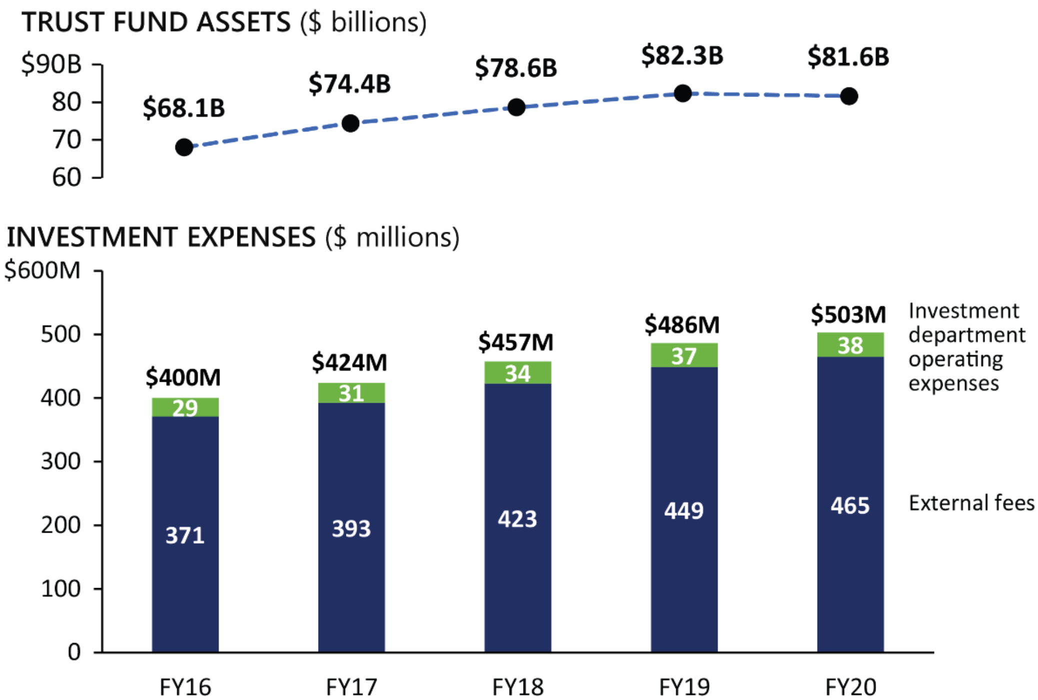
VRS investment expenses increased as the trust fund increased, but expenses remained below peers

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 5.9 percent per year, for a total increase of $103 million since FY16. This growth was driven by the trust fund, which also grew by an average of 4.7 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 but increased slightly from FY19 to FY20. Over the five-year period, investment expenses as a percentage of the total trust fund were between 0.57 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 $29 million in FY16 to $38 million in FY20, an increase of 31 percent. The main growth drivers were related to staffing, data subscriptions, and consulting services. During this time period, VRS added and filled 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 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.

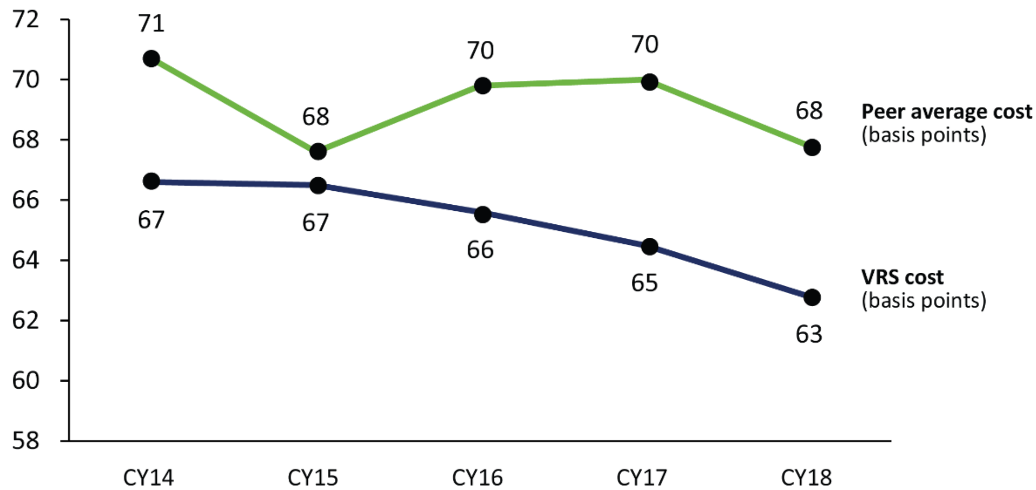
FIGURE 4
Trend in VRS investment expenses compared with trust fund assets



SOURCE: VRS annual reports and investment department data.
NOTE: Trust fund assets are as of June 30 each year. External fees include management and performance fees paid to third parties that invest VRS assets. They also include fees paid to the bank that serves 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 have steadily decreased since 2014 to a level of 63 basis points in 2018. VRS expenses were one to five basis points lower than the peer average over the same time period, adjusted for fund size and asset mix (Figure 5). (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 be able to compare them to peers.) The difference in basis points between VRS and its peer average was the equivalent of $7 million to $44 million in lower total investment expenses in a given year.

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 that they are comparable to peers. Benchmark comparisons for 2019 and 2020 are not yet available.

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

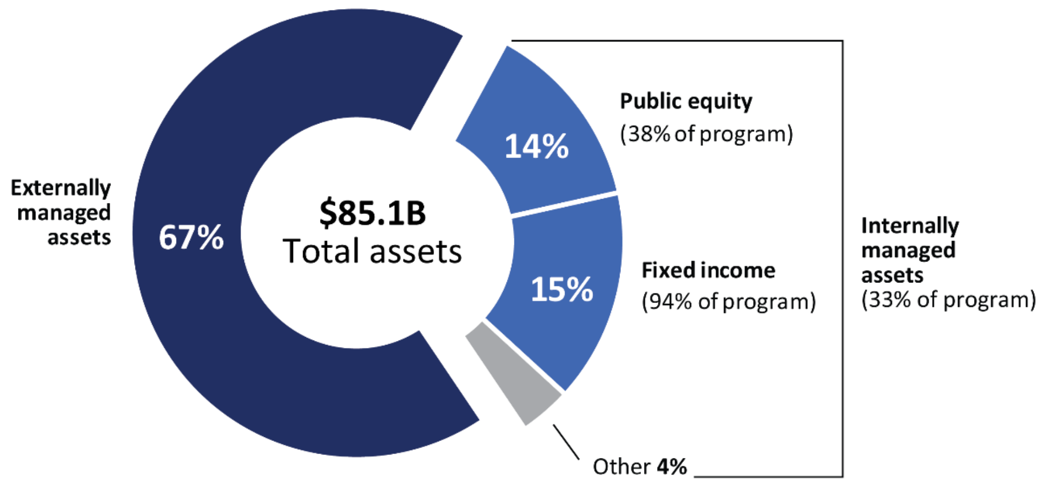
VRS manages a portion of the trust fund's assets in-house, with the goal of reducing costs while maintaining a high return on investments. As of September 30, 2020, 33 percent of the trust fund was managed in-house (Figure 6). In-house managed assets included nearly the entire fixed income program and approximately 38 percent of the public equity program.

VRS staff indicated that in-house management of assets has resulted in substantial cost savings. According to CEM, approximately $59 million is saved 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 the savings over time.

In-house managed public equity assets outperformed their benchmark for the 10-year period ending September 30, 2020. These assets generated an annualized return of 10.9 percent over the 10-year period, 40 basis points above the 10-year benchmark. This is in contrast to the overall public equity program, which underperformed its benchmark for the 10-year period. Similar to the overall public equity program, in-house managed public equity assets underperformed their benchmark for the one-year, three-year, and five-year periods.

Among fixed income assets managed in-house, the core portfolio outperformed its benchmarks for all periods ending September 30, 2020. Core portfolio assets outperformed the 10-year benchmark by 60 basis points and generated an annualized return of 4.2 percent over that period. 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, 2020)



SOURCE: VRS investment department data, 2020.
NOTE: Other includes cash exposures and real assets.

Board approved $4.5 million in incentive awards and bonuses and clarified pay plans

Consistent with VRS's employee pay plans, in September 2020 the VRS board approved FY20 incentive awards and bonuses for eligible investment and administrative staff totaling $4.5 million. Approximately three-fourths of the overall amount ($3.4 million) was incentive awards for investment staff, which are mostly based on investment performance of the total fund and asset classes over the 3-year and 5-year periods. Bonuses for administrative employees, and investment department operations and administrative staff, are based on annual agency performance outcomes and individual performance evaluations.

Although the board approved staff incentive awards and bonuses for FY20 performance, it amended the pay plans in recognition of the economic challenges associated with the COVID-19 pandemic. The board clarified that it reserves the right to "cancel, reduce, or delay" bonuses because of "extreme budgetary pressures, economic, market or other conditions[.]" The clarifications were not changes from the board's existing policy, which gives discretion to modify bonus and incentive payments under certain circumstances.

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 as a supplemental benefit. The aggregate value of participant accounts held in the VRS-managed defined contribution plans was $6.0 billion as of September 30, 2020.

TABLE 1
VRS defined contribution plans (as of September 30, 2020)

	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]	$3,974
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.	$1,170
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.	$857
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).	$21

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, $20.4 million; Optional Retirement Plan for School Superintendents, $235,000; and Virginia Supplemental Retirement Plan for certain educators, $155,000.

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 $2.0 billion in assets, met or exceeded nearly all of their performance benchmarks (Table 2). One option did not meet its one-year benchmark.

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 $2.9 billion in assets, met or exceeded the majority of their performance benchmarks (Table 2). Two options did not meet their one-year, three-year, and five-year benchmarks.

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 $68 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 or a diversified portfolio option, or they can 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, 2020, the TIAA program held $905 million in assets.

TABLE 2
Investment performance of VRS defined contribution plans

for the period ending September 30, 2020

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

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. The new options met or exceeded their benchmarks, with the exception of two options that failed to meet their one-year benchmarks (Table 2). Most TIAA assets (71 percent) are held in legacy options that are not available under the new menu. VRS no longer tracks performance for these options because they were 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 $142 million in the higher education retirement plan is held with private deselected providers with which VRS no longer partners. This includes Fidelity, which became a deselected provider for new hires on June 1, 2019 and existing participants on January 1, 2020. VRS does not track investment performance for deselected providers because participants can no longer contribute to them through the plan.

3. Trust fund rates and funding

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 596 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.

Virginia's statutory schedule for fully funding rates requires 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.

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.

Employer contribution rates increased

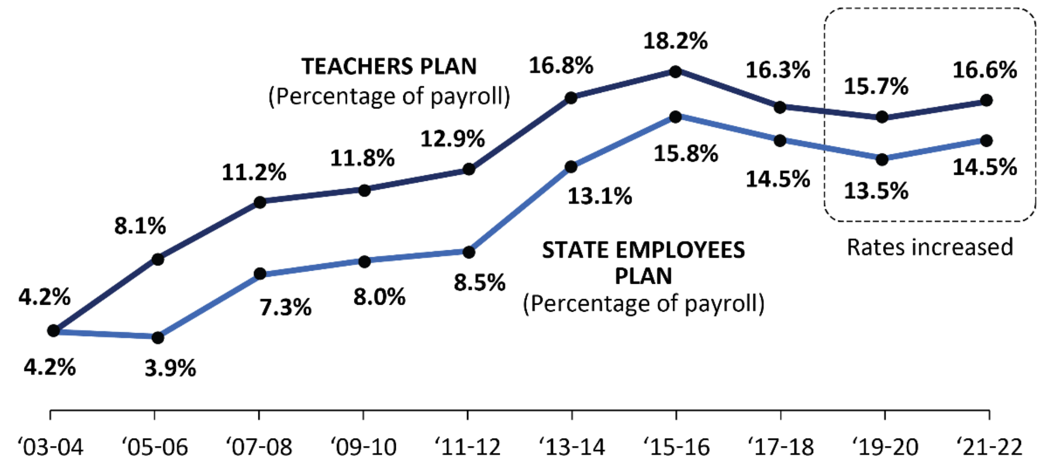
Last year the VRS board certified the employer contribution rates that were recommended by its actuary for the FY21–FY22 biennium. The board-certified rates *increased* from the preceding biennium for most of VRS's statewide plans. For example, rates for the teachers plan increased from 15.68 percent (FY19–FY20 biennium) to 16.62 percent (FY21–FY22 biennium). Similarly, rates for the state employees plan increased from 13.52 percent to 14.46 percent during the same time period (Table 3). The rate increases reversed the trend of decreasing rates over the previous two biennia for most plans (Figure 7). Rates primarily increased because of the board's reduction in 2019 of VRS's long-term rate of return assumption from 7.0 percent to 6.75 percent. VRS needs approximately $183 million in additional employer contributions in FY21 compared with FY20 to cover the lower investment returns anticipated under the new return assumption. The amount of additional employer contributions needed each year after FY21 may be higher or lower, depending on trust fund investment returns, payroll levels, and other factors.

TABLE 3
Employer contribution rates certified by VRS board

	FY19–FY20	FY21–FY22	Percentage point change
Teachers	15.68%	16.62%	↑ 0.94%
State Employees	13.52	14.46	↑ 0.94
VaLORS	21.61	21.88	↑ 0.27
SPORS	24.88	26.26	↑ 1.38
JRS	34.39	29.84	↓ 4.55
Local plan average	7.60	8.33	↑ 0.73

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 2017–2018 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.

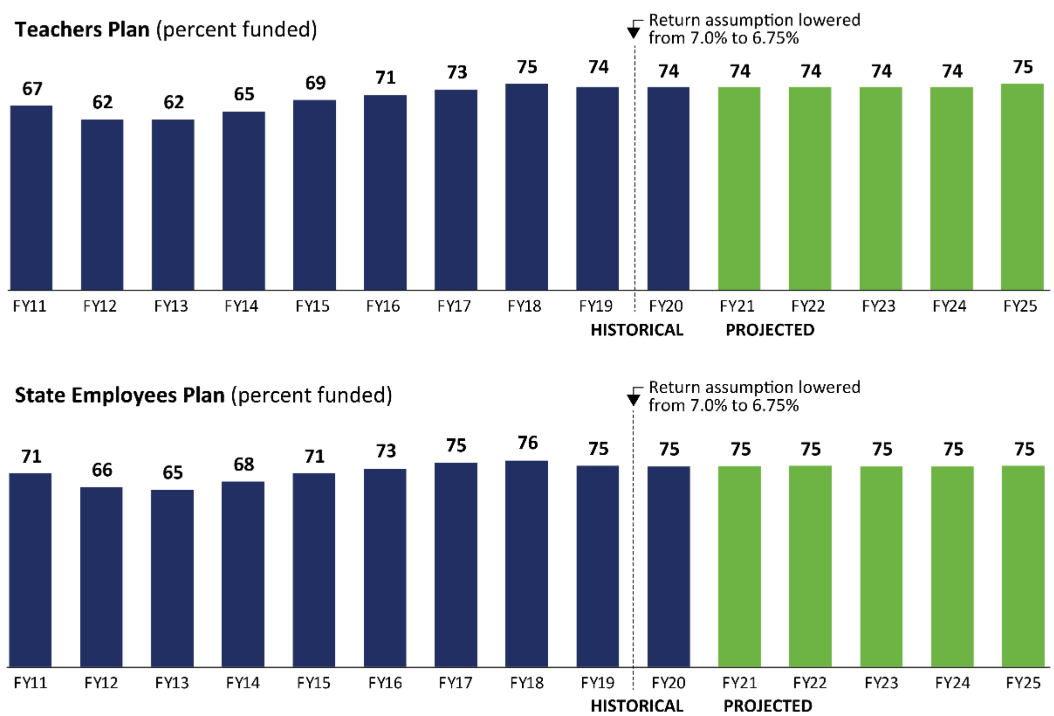
Employer contributions are also paid by local governments and political subdivisions in support of the 596 local plans. The VRS actuary calculates a unique rate for each local plan, and the VRS board certifies rates. Local employers have historically been required to pay the full board-certified rate 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 7.60 percent for FY19–FY20 to 8.33 percent for FY21–FY22. This increase was largely due to the reduction in VRS's long-term rate of return assumption. 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 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.

Even though this is not a rate-setting year for budgeting, the VRS actuary calculated rates as of June 30, 2020 for informational purposes. The informational rates calculated for the teachers (16.65 percent), state employees (14.57 percent), and most other plans were slightly higher than those that were enacted by the 2020 Appropriation Act. Informational rates suggest a trend in future rates, but rates may change before the 2021 actuarial valuation, which will determine the recommended contribution rates for the FY23–FY24 biennium. The VRS actuary projected that contribution rates for teachers and state employees will remain close to their current levels over the next 10 years, assuming investments meet the assumed 6.75 percent rate of return.

Funded status of VRS plans remained about the same in FY20

A pension plan's health is commonly measured by its funded status, which is the ratio of plan assets to liabilities. In FY20, the funded status for VRS's state employees, teachers, SPORS, VaLORS, and JRS plans decreased based on the market value of assets but stayed approximately the same on an actuarial basis—increasing less than one percentage point in most cases. Funded status on an actuarial basis stayed approximately the same despite relatively lower investment returns for two primary reasons. First, investment returns are phased in over five years when calculating the actuarial value of assets, which minimizes the impact of returns in any given year. Second, the plans experienced lower than anticipated increases in payroll and inflationary adjustments to benefits. Assuming that investment performance meets the 6.75 percent long-term rate of return in each year, the funded status of the state employees and teachers plans is projected to remain constant at about 75 percent through 2025 (Figure 8).

FIGURE 8
Funded status of Teachers and State Employees plans



SOURCE: VRS actuarial valuation report, 2020, 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.

If the state adheres to its repayment plan, the balance of the contributions to the teachers plan that were deferred during the 2010–2012 biennium will be repaid by the end of FY22. The state deferred more than $1 billion in contributions to the state employees and teachers plans during the 2010–2012 biennium after the recession. Repayment of those contributions was spread over a 10-year period beginning in FY12. The state accelerated repayment of deferred contributions to the *state employees* plan, and those contributions were fully repaid in the 2016–2018 biennium. The remaining balance of deferred contributions to the *teachers* plan was $61 million at the end of FY20, and the state is scheduled to repay that amount in FY22.

The average funded status of the local plans, adjusted to account for size differences across plans, remained at approximately 90 percent from FY19 to FY20. 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 an increase in the voluntary contributions of hybrid plan members in 2020 resulting from the plan's statutory auto-escalation feature.

VRS operating expenses generally increased but remained lower than peers

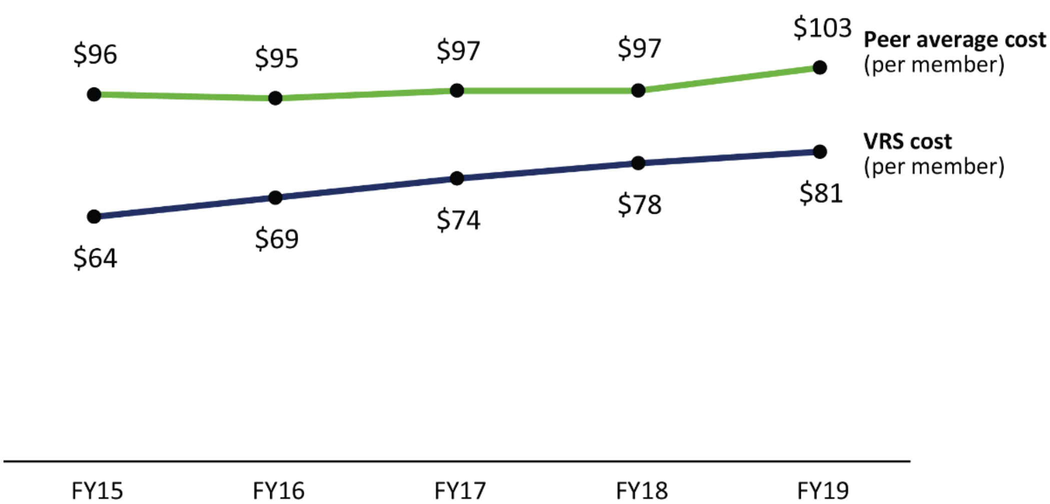
VRS operating expenses include spending related to benefits administration, agency management, and investment department operations (not including external fees). Agency expenses in FY20 were $93 million. Expenses increased by $14 million in the four-year period from FY16 to FY20, with an average growth rate of 4.4 percent per year. However, expenses decreased by nearly $6 million from FY19 to FY20, or by 5.8 percent.

VRS expense increases between FY16 and FY19 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.

The 5.8 percent decrease in operating expenses in FY20 was primarily the result of reduced spending on IT and data processing services. Approximately $2.7 million in reduced spending was due to various IT costs in FY19 that did not occur in FY20. An additional $2.5 million in reduced spending was due to VRS completing the next phase of its myVRS tool for members and beneficiaries. Other decreases in operating expenses were the result of reduced travel and training costs and delays on hiring and compensation actions during the COVID-19 pandemic.

VRS's administrative costs compare favorably to peer retirement systems. VRS's benchmarking service, 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 $32 lower per member than its peer average from FY15 to FY19 (Figure 9). This difference was estimated to be $13 million to $17 million less in administrative expenses per year. VRS expenses grew at a faster rate than the peer average, likely because of costs associated with implementing major projects such as the hybrid plan and IT projects.

FIGURE 9
VRS retirement plan administration costs compared with peers



SOURCE: CEM retirement plan administration benchmarking reports to the VRS board.
NOTE: Benchmark comparisons for 2020 are not yet available.

Hybrid plan voluntary contribution participation rate increased in 2020 because of automatic escalation

Hybrid plan members contribute a total of 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.

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.

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 slightly more than one-third of the total active VRS membership as of September 30, 2020. (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.

To help ensure adequate savings at retirement, members of the hybrid plan should consider making voluntary contributions to the defined contribution portion of their plan. Hybrid plan members are required to contribute 1 percent of their salary to their defined contribution component. Hybrid plan members may make additional voluntary contributions of up to 4 percent of their salary and receive an employer match, thereby enhancing their retirement savings. Hybrid plan members who do not make adequate voluntary contributions will likely not meet an income replacement target of approximately 80 percent of their pre-retirement income.*

As expected, the percentage of hybrid plan members making voluntary contributions increased substantially in 2020 following an automatic rate escalation. Automatic escalations increase participation rates because they bring participants into the voluntary contribution component of the plan unless they opt out. On January 1, 2020, the voluntary contribution rate increased 0.5 percent for members who did not opt out or choose a different amount. (Only 1 percent of members decided to opt out.) As a result, the percentage of hybrid members making voluntary contributions was a little over 79 percent as of September 30, 2020, up from 45 percent as of September 30, 2019. Among members making voluntary contributions, approximately 46 percent are contributing the lowest voluntary amount of 0.5 percent. A little less than one-third of members making voluntary contributions are contributing the maximum of 4 percent.

*80 percent replacement target takes into account social security benefits and assumes 30 years of service. Actual voluntary contributions needed to meet 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.

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