



Administration and Personnel Committee (A&P) Meeting
VRS, 1111 E. Main St., 3rd Floor Board Room
Wednesday, 4/6/2022
11:00 AM - 12:30 PM ET

I. Approve Minutes

• **February 8, 2022**

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II. RBA – Approve Revised Investment Professionals’ Pay Plan

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III. RBA – Reappointment of Defined Contribution Plans Advisory Committee Members

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Bio for Ravindra Deo - Page 62

Bio for Brenda Madden - Page 63

Bio for Ned Smither - Page 64

IV. Budget Update

FY22 YTD Budget Report - Page 65

V. Administration Classification and Compensation Study Update

Minutes

A regular meeting of the Virginia Retirement System Administration and Personnel Committee was held February 8, 2022 in Richmond, Virginia with the following members participating:

O’Kelly E. McWilliams, III, Chair
Joseph W. Montgomery, Vice Chair
W. Brett Hayes
Troilen G. Seward, Ed.S.

Board members present:
John M. Bennett

VRS Staff:

Patricia Bishop, Ron Schmitz, Jennifer Schreck, Jeanne Chenault, Michael Cooper, Harriet Covey, Juanita Cribbs, Valerie Disanto, Barry Faison, Jon Farmer, Brian Goodman, Robert Irving, LaShaunda King, Ryan LaRoche, Curt Mattson, Angela Payne, Matt Priestas, Paula Reid, Jillian Sherman and Cindy Wilkinson.

Guests:

Jamie Bitz, Joint Legislative Audit and Review Commission; and Latosha Johnson, Department of Planning and Budget.

The meeting convened at 1:00 p.m.

Opening Remarks

O’Kelly E. McWilliams, III, called the meeting to order and welcomed everyone to the February 8, 2022 meeting of the Administration and Personnel Committee.

Approval of Minutes

Upon Ms. Seward’s motion, with a second by Mr. Montgomery, the Committee approved the minutes of its November 16, 2021 meeting.

Reappointment of Investment Advisory Committee Member

Ron Schmitz, Chief Investment Officer, presented the recommendation to reappoint W. Bryan Lewis to the Investment Advisory Committee (IAC) for a two-year term ending March 31, 2024.

Upon a motion by Mr. Montgomery, with a second by Mr. Hayes, the Committee recommended approval of the following action to the full Board of Trustees:

RBA: Reappointment of IAC Member.

Request for Board Action: *The Board reappoints W. Bryan Lewis to the Investment Advisory Committee for a two-year term ending March 31, 2024.*

Appointment of Defined Contribution Plans Advisory Committee Member

Next, Mr. Schmitz presented the recommendation to appoint Arun S. Muralidhar to fill the vacancy on the Defined Contribution Plans Advisory Committee (DCPAC) for a term ending June 20, 2022. The recommendation included the reappointment of Mr. Muralidhar for a two-year term ending June 20, 2024.

Upon a motion by Ms. Seward, with a second by Mr. Montgomery, the Committee recommended approval of the following action to the full Board of Trustees:

RBA: Appointment of DCPAC Member.

Request for Board Action: *The Board appoints Arun S. Muralidhar to the vacant seat on the Defined Contribution Plans Advisory Committee (DCPAC) for a term ending June 20, 2022 and reappoints Mr. Muralidhar for a two-year term ending June 20, 2024.*

Quarterly Budget Update

Next, Jon Farmer, Budget and Performance Reporting Manager, provided a quarterly budget update to the Committee.

Mr. McWilliams thanked Mr. Farmer for the update.

Other Business

Lastly, Mr. McWilliams noted the Benefits and Actuarial Committee will meet February 9 at 1:00 p.m. and the full Board of Trustees will meet February 10 at 1:00 p.m.

Adjournment

There being no further business and following a motion by Mr. Montgomery, with a second by Ms. Seward, the Committee agreed to adjourn the meeting at 1:12 p.m.

Chair

Date



Approve changes to Investment Professionals' Pay Plan.

Requested Action

The Virginia Retirement System Board of Trustees approves an amended Investment Professionals' Pay Plan ("Pay Plan").

Description/Background

The VRS Board of Trustees approved the current Pay Plan on April 20, 2021.

The proposed amendments are the result of recommendations from McLagan's most recent compensation study of investment positions, and they are designed to allow the VRS compensation structure to remain competitive with the market. A summary of the changes to the Pay Plan follows:

- Update the salary range in the Pay Plan so as to reflect the VRS target midpoints (75th percentile of public fund peers) and target total compensation (median total cash weighted 75% to leading public pension funds and 25% to a broad range of private sector funds);
- Eliminate the position of Deputy Chief Investment Officer at pay grade 11; and,
- Eliminate the position of Manager at pay grade 5.

Authority for Requested Action

Code of Virginia § 51.1-124.22(A)(11) authorizes the Board to establish and administer a compensation plan for officers and employees of the Retirement System.

The above action is approved.

O'Kelly E. McWilliams, III, Chair
VRS Board of Trustees

Date



VIRGINIA RETIREMENT SYSTEM
INVESTMENT PROFESSIONALS' PAY PLAN
Effective April 19, 2022

OVERVIEW & PAY PHILOSOPHY

The Virginia Retirement System's (VRS) Board of Trustees has designed this investment professionals' pay plan after working with an independent compensation consultant. In addition, the Board has adopted benchmarks, recommended by an independent investment consultant, to be used as part of this pay plan.

This pay plan includes three core elements:

- Base Salary (described in Section I of this document)
- Incentive Pay Plan (described in Section II)
- Deferred Compensation Plan for VRS Investment Management Personnel (DCPIP) (described in Section III)

Overall, this pay plan design is to:

- Attract, motivate and retain skilled investment professionals by offering competitive compensation opportunities.
- Directly align compensation with long-term, superior relative and absolute investment performance.
- Reinforce risk management priorities and standards.
- Attract and retain senior investment professionals by deferring a portion of incentive compensation on a tax-deferred basis.
- Benefit all stakeholders – VRS' beneficiaries, VRS' employees, and Virginia's taxpayers – through a compensation plan that is clear, aligned with performance, competitive and cost effective.

Importantly, this pay plan anchors on two broad and long-standing philosophical principles:

1. VRS should pay base salaries consistent with the 75th percentile of a peer group of other leading public funds. The primary guidelines for determining VRS' leading public fund peer group will be (1) funds of similar size (AUM) as VRS and (2) funds with significant (>25%) assets managed internally. Additional criteria the Board may consider is asset allocation / diverse portfolio similar to VRS, degree of delegation to the CIO and staff, use of outside investment consultants, and Board pay decision making authority.
2. VRS should provide incentive compensation opportunities such that, in combination with base salary, total compensation levels approximate the median (50th percentile) of a blended group weighted 75% to the total compensation levels of leading peer group public funds and 25% to the total compensation levels of a broad range of private-sector firms that employ investment professionals.

I. Base Salary

SALARY RANGES

This pay plan establishes a salary range for each job class taking into account its relative importance to VRS and the salaries paid for comparable types of jobs in other leading public funds.

Minimum, midpoint, and maximum salary rates define the salary range for each job class/position. The midpoint of each job class/position approximates the 75th percentile salaries of a peer group of leading public pension funds. Actual salaries can be higher or lower than the midpoint depending on factors such as job performance, professional education and certifications, the willingness to assume new and higher-level duties and responsibilities, the ability to learn quickly and apply new knowledge and skills, being a team player, and the length of time in the position.

Each position's salary range includes a defined:

- **Minimum** is the lowest base salary paid for a job within the job class/position.
- **Midpoint** represents the market salary paid to a fully qualified employee, who has the institutional knowledge and practical experience to fulfill independently all of the responsibilities of the job/position.
- **Maximum** is the highest salary rate for the job class/position.

Grade	Position	Salary Range (in thousands)		
		Min	Mid	Max
10	Chief Investment Officer	\$ 325	\$ 430	\$ 540
9	Managing Director	275	365	455
8	Program Director	235	315	395
7	Director- Strategy, Research, Risk and/or Investment Decision Support	205	275	345
6	Senior Portfolio Manager	205	275	345
5	Portfolio Manager	160	215	270
4	Senior Investment Officer	135	180	225
3	Investment Officer	105	140	175
2	Senior Investment Analyst	80	105	130
1	Investment Analyst	65	85	105

In considering the above salary range, it important to note the following:

- **Market Pay Reviews:** The VRS normally conducts a comparative market total pay study at least every two years to ensure competitiveness of the salary and incentive structures. Typically, the VRS conducts the study in the 1st quarter of the calendar year (in even years) with an effective date of July 1 (the beginning of the fiscal year).
- **Changes in Salary Ranges:** The Board must approve changes to the salary scale and incentive structure.

SALARY ADJUSTMENTS

Oversight & Administration

VRS will implement pay actions consistent with the provisions of the Appropriation Act. The VRS Board, however, approves across-the-board performance-based salary increases, market-based salary increases and incentive pools, for VRS investment professionals, consistent with the Code of Virginia and the Appropriation Act. The Chief Investment Officer (CIO) approves salary adjustments for individual investment professionals and, as described later in this document, sign-on bonuses, incentive payments, and relocation expenses subject to the limitations in the Code of Virginia and other applicable state or federal law and regulation.

Merit Increases

- Salary increases are based on meeting individual performance standards. The supervisor completes the evaluation after the end of the fiscal year. If a participant in the investment employees' pay plan does not meet overall performance standards, then the participant is ineligible for performance increases to their base salary and market adjustments to their base salary for that performance cycle. Performance cycles are on a fiscal year, July 1 through June 30, and typically begin, with an effective date of performance plans in the first quarter of the newfiscal year.
- The CIO will receive base salary increases as approved by the VRS Board of Trustees and in accordance with the terms in the CIO's Employment Agreement, with approved effective dates established by the VRS Board of Trustees.

Starting Salaries

The starting salary for a new employee considers the rates presently paid to other employees in the department and those in the same job class (when applicable), the candidate's education, skills, work experience, and salary history. The starting salary normally does not exceed the salary grade midpoint.

Reallocation

Occurs when a job classification is reviewed by Human Resources and it is determined that the job duties and responsibilities have changed significantly enough to place the job in a different job title and job class. Unless the CIO authorizes an exception, this would not exceed a 15% increase. However, the individual's salary will always be at least at the minimum of the range of the new job, regardless of the amount of the increase.

In-grade Adjustments

Occur to ensure competitiveness, retention, and to recognize increased skills, abilities, knowledge, obtainment of a degree or certification, or significant increases in responsibilities within the job class. Unless the CIO authorizes an exception adjustments will not exceed a 10% increase.

Promotions

Promotions occur when an individual moves into a position in a higher job class. Promotions can be competitive (selected through a recruitment and hiring process) or non-competitive (through a job reclassification or reallocation.) Unless the CIO approves an exception, promotions will not exceed a 15% increase. However, the individual's salary will always be at least at the minimum of the range of the new job, regardless of the amount of the increase.

Downward Assignment

Downward adjustment occurs when an employee changes positions whether voluntarily, or because of unsatisfactory performance, resulting in a downward change in job class. A reduction in salary may occur based on a review of the salary and range and the circumstances associated with the downward move. In downward assignments, an individual's salary cannot exceed the maximum of the new salary range.

II. Incentive Pay Plan

PLAN ADMINISTRATION

The VRS Board of Trustees, the Plan Administrator, through the Administration and Personnel (A&P) Committee, administers the Incentive Plan (Plan) and retains full and complete discretion:

- To increase or decrease incentives for any and/or all Plan participants.
- To modify, amend or rescind any aspect of the Plan at any time for any and/or all Plan participants.
- While the Plan Administrator remains mindful of the value that staff adds to the organization and supportive of the pay plan, the Plan Administrator also specifically reserves the right to cancel, reduce, or delay the amount of any incentives payable under this plan when, in the sole discretion of the Plan Administrator, extreme budgetary pressures, economic, market or other conditions are such that the Plan Administrator deems such action necessary under the circumstances.
- Consistent with the preceding paragraph, payment of incentives under this plan is not guaranteed.

The Plan Administrator may delegate certain aspects of this Plan's day-to-day operation to the VRS CIO and the VRS Director of Human Resources. However, any substantive Plan-related questions or issues impacting incentive payouts for the CIO require the Plan Administrator's prior approval.

PLAN ELIGIBILITY

Incumbents in the positions listed below are eligible to participate in this incentive plan, provided they:

- Are active VRS employees.
- Work for VRS at least forty hours per week. Plan participants who work less than full-time may be eligible to receive a prorated incentive payment. Wage employees are not eligible to participate in the plan.
- Receive an individual performance evaluation of at least "meets expectations" for the relevant performance year (i.e., the year preceding the normally scheduled year of payment).
- Remain in compliance with the VRS Investment Department Code of Ethics and Standards of Professional Conduct Policy.

**Positions Eligible to Participate in the
Investment Professional's Pay Plan**

Chief Investment Officer
Managing Director- Strategy, Research, Risk and/or Investment Decision Support
Managing Director- Internal Assets
Managing Director- Global Investments
Program Director
Director- Strategy, Research, Risk and/or Investment Decision Support
Senior Portfolio Manager
Portfolio Manager
Senior Investment Officer
Investment Officer
Senior Investment Analyst
Investment Analyst

The CIO will determine the design of the incentive plan structure for the positions supporting the Defined Contribution Plans, with both quantitative and qualitative elements.

Generally, employees on an approved leave of absence are considered active employees. The CIO will resolve all questions regarding eligibility or, in the case of the CIO, eligibility will be determined by the Board.

Participation in this Plan in any one year does *not* confer the right to participate in this Plan in any other year *nor* to receive Plan payouts for the current and/or any future year. Participation in this Plan does not confer the right to continued employment. Subject to the provisions of this Plan, only active VRS employees may receive payments under this Plan.

OVERALL INCENTIVE PLAN MECHANICS

As described in more detail throughout this document, under the terms of this Plan:

- Eligible Plan participants will be assigned an incentive opportunity, expressed as a percentage of their actual earned base salary.
- Incentive opportunities vary by position, with the level of such opportunities increasing with the degree to which the position directly affects VRS' investment performance.
- Incentives are weighted or allocated to separate Plan components, described below, with the specific components and weightings varying by position:
 1. Total Fund relative investment performance
 2. Asset Class relative investment performance
 3. Average of Asset Class Multipliers (for positions that support multiple asset classes)
 4. Qualitative – focuses on individual achievement of assigned objectives.
- After year-end, payouts under each Plan component would be determined based on performance.
- Each participant's preliminary award would equal the sum of all of their performance adjusted Plan components.
- Final awards would equal preliminary awards adjusted, up or down, based on the Total Fund's one-year absolute returns. Specifically, there will be no adjustment for returns between 0% and the assumed rate of return, currently 7%. There will be a positive one-for-one adjustment for returns in excess of the assumed rate of return (e.g., if Total Fund one-year actual absolute return equals +10%, then the preliminary awards will be increased by 3%). There will be a negative one-for-one adjustment for returns less than 0% (e.g., if Total Fund one-year actual absolute return equals -15%, then the preliminary awards will be reduced by 15%). This adjustment is specifically intended to systematically

take into account, in the shorter term, the effect of market cycles on the health of the pension plan by providing a mechanism to reflect the impact of up and down markets on incentive compensation.

- 50% of eligible senior staff-members' awards (up to IRS limits) will be deferred into tax-qualified accounts. See section III, Defined Contribution Incentive Plan for VRS Investment Management Personnel (DCPIP). While deferred, awards are subject to the Total Fund's annual absolute returns.
- All other awards paid in cash.

Generally, a Participant must be employed on the date of payment of the award. However, see INCENTIVE PLAN PROVISIONS, *Termination of Employment Due to Death, Disability or Retirement*.

INCENTIVE OPPORTUNITIES

Incentive opportunities will vary by position based on multiple criteria:

- The position's potential effect on the VRS' investment performance.
- Competitive market pay requirements.
- Internal equity considerations.
- Other factors determined by the CIO or, in the case of the Chief Investment Officer's position, by VRS' Board.

Actual awards can vary based on performance.

For the fiscal year ending June 30, 2013 and all subsequent years, unless as otherwise determined, the Plan's incentive opportunities are as follows:

Incentive Levels	
VRS Position	Incentive (1) (% salary)
Chief Investment Officer	70% (2)
Managing Director- Strategy, Research, Risk and/or Investment Decision Support	65% (2)
Managing Director- Internal Assets	65% (2)
Managing Director- Global Investments	65% (2)
Program Director	60% (2)
Director – Strategy, Research, Risk and/or Investment Decision Support	50%
Senior Portfolio Manager	50%
Portfolio Manager	40%
Senior Investment Officer	30%
Investment Officer	30%
Senior Investment Analyst	25%
Investment Analyst	5%
<p>(1) Performance-adjusted preliminary awards can vary from zero to two times the incentive.</p> <p>(2) A portion, up to 50%, of these positions' earned incentives is subject to mandatory deferral.</p>	

INCENTIVE WEIGHTINGS

Each participant's incentive award will be weighted or allocated to separate, stand-alone Plan components. Importantly, all participants have a portion of their incentive opportunities weighted:

- To the Total Fund Plan component – which helps reinforce the importance of collective success as measured by the Total Fund's relative investment results.
- To the Qualitative Plan component – this helps reinforce achievement of specific initiatives and professional development.

Described below are the specific Plan weightings and the approach for determining awards under each of these Plan components.

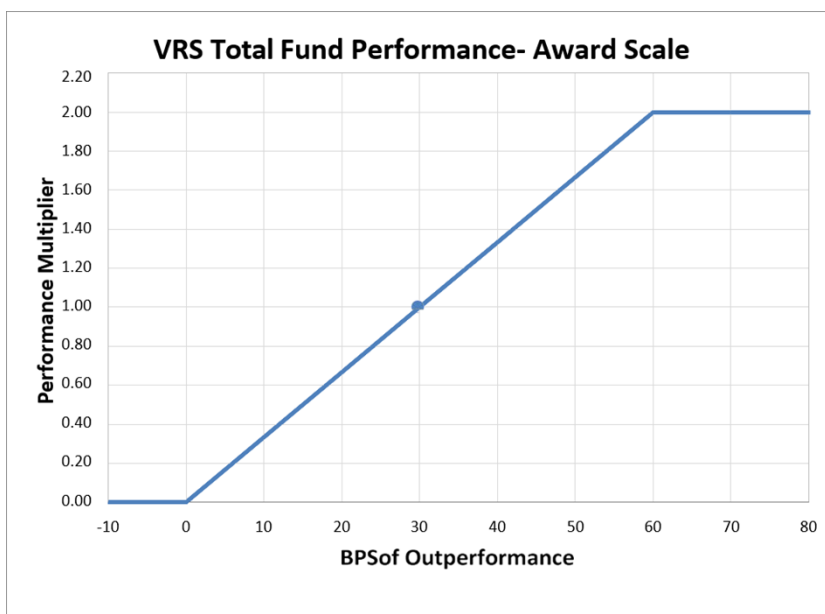
Incentive Weightings by Plan Component						
VRS Position	Total Fund	Quantitative Average of		Asset Class	Qualitative	Total
		Asset Class	Multipliers			
(% of total incentive weighted to each component)						
Chief Investment Officer	60%	20%	(1)		20%	100%
Managing Director- Strategy, Research, Risk and/or Investment Decision Support	60%	20%	(1,4)		20%	100%
Managing Director- Internal Assets	40%	40%	(2,4)		20%	100%
Managing Director- Global Investments	40%	40%	(3)		20%	100%
Program Director	30%	50%	(5)	50%	20%	100%
Director- Strategy, Research, Risk and/or Investment Decision Support	30%	50%	(1)		20%	100%
Senior Portfolio Manager	20%			60%	20%	100%
Portfolio Manager	20%			60%	20%	100%
Senior Investment Officer	20%	60%	(5)	60%	20%	100%
Investment Officer	20%	60%	(5)	60%	20%	100%
Senior Investment Analyst	20%	30%	(5)	30%	50%	100%
Investment Analyst	20%	30%	(5)	30%	50%	100%
<p>(1) Average multiplier based on the multipliers of all asset classes under the incumbent's purview.</p> <p>(2) The MD Internal Assets average multiplier is based on the multipliers of the internal asset classes under the incumbent's purview.</p> <p>(3) The MD Global Investments average multiplier is based on the multipliers of the external asset classes under the incumbent's purview.</p> <p>(4) There is currently a single person taking on the role of MD Strategy, Research, Risk and/or Investment Decision Support and MD Internal Assets. The incentive for this individual is a 50/50% blend of the two separate MD positions.</p> <p>(5) These positions may support a specific asset class or multiple asset classes. If the position supports a specific asset class, then the multiplier is based on the asset class multiplier. If the position supports multiple asset classes, then the multiplier is based on the average of the multipliers of the asset classes supported.</p>						

QUANTITATIVE PLAN COMPONENTS

These Plan components link participants' incentive compensation to relative investment performance or, more specifically, the extent by which the Total Fund and/or Asset Class performance exceeds passive benchmarks (indices) as measured over trailing three- and five-year annualized periods (each weighted 50%).

For purposes of this Plan:

- Measurement of relative investment performance is net of third-party fees, which consist of investment management fees and performance fees paid to investment managers, custodian fees, legal fees, internal investment staff administrative expenses, and miscellaneous fees.
- A performance-award scale defines the linkage between relative investment performance and a corresponding Performance Multiplier. Illustrating this approach at the Total Fund level when VRS' relative investment performance:
 - Equals zero or less (i.e., no relative value added), then the VRS Performance Multiplier will equal zero and there will be no incentive payouts under this Plan component.
 - Equals 30 bps, then the VRS Performance Multiplier will equal 1.00 and there will be a 100% payout of this Plan component.
 - Equals 60 bps or more, then the VRS Performance Multiplier will equal 2.00 and there will be a 200% payout of this Plan component.
 - Is anywhere between zero and 60 bps, then the VRS Performance Multiplier is determined on an interpolated, straight-line basis.



- Selected participants whose responsibilities span multiple asset classes may have a portion of their incentive weighted to a component that is determined based on the average multipliers of asset classes they support. The intent of this Plan component is to recognize and reward superior relative investment performance, regardless of the level of the associated assets.

The Board is responsible for setting the basis point outperformance standards for the Total Fund. The CIO is responsible for setting the basis point outperformance standards for individual asset classes, subject to the Board's final review and approval.

QUALITATIVE PLAN COMPONENT

The qualitative incentive multiplier can range from 0.00 to 2.00 at the CIO's discretion, with input from applicable senior staff regarding individual performance levels. This Plan component links participants' incentive compensation to achievement of individual and/or position-specific performance objectives and VRS' overall performance objectives. Actual awards under this plan component will reflect:

- Position- and/or incumbent-specific performance criteria.
- Achievement of key VRS performance objectives, including:
 - Building an effective organization.
 - Enhancing investment excellence.
 - Developing staff.

The Board will annually determine the CIO's qualitative incentive multiplier after assessing attainment of the qualitative performance objectives, considering input and recommendations provided by the A&P Committee.

DETERMINING PRELIMINARY AWARDS

After the end of each fiscal year, a preliminary award will be determined for each Plan participant by aggregating all of their performance multiplier-adjusted weighted Plan components. In particular:

- Performance multipliers will be determined for each Plan component based on actual results.
- Preliminary payouts under each weighted Plan component will be determined by multiplying the incentive dollars weighted to that component by the associated performance multiplier.
- Total preliminary awards would be determined by adding up all of that participant's weighted Plan components.

Illustrated below is this approach for a position with an incentive of \$80,000.

Plan Component	Weighted Portion of Incentive		Performance Multiplier	=	
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200
Preliminary Award					\$91,200

DETERMINING FINAL AWARDS

Final awards, if any, would be determined after each fiscal year-end by adjusting the sum of each participant's preliminary award, up or down, based on VRS' one-year absolute return for the most recently completed fiscal year. Specifically, there will be no adjustment for returns between 0% and the assumed rate of return, currently 7%. There will be a positive one-for-one adjustment for returns in excess of the assumed rate of return. There will be a negative one-for-one adjustment for returns less than 0%. Illustrated below is the process for determining final awards.

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200

Scenario #1:
 The Total Fund's One-Year Absolute Returns are +5%

	Preliminary Award	\$91,200
X no adjustment		0%
Final Award		\$91,200

Scenario #2:
 The Total Fund's One-Year Absolute Returns are +10%

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200
Preliminary Award					\$91,200
X 1+ VRS Fund's One-Year Rate of Return less assumed rate of return					103%
Final Award					\$93,936

Scenario #3:
 The Total Fund's One-Year Absolute Returns are -15%

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200
Preliminary Award					\$91,200
X 1+ VRS Fund's One-Year Rate of Return					85%
Final Award					\$77,520

PAYING OUT FINAL AWARDS

Board Review

Prior to payout of any and/or all awards, the CIO will present a schedule of aggregate incentives to the Board of Trustees, through the A&P Committee, in advance. This report will include, in aggregate, the awards, the multipliers awarded for each component, the actual dollar awards earned for each component and the total awards. Internal Audit and Human Resources will review the calculations. As requested by the A&P Committee, the CIO will provide additional information prior to the Board approving the payout of any and/or all awards.

Final Award Payout

Final awards will be paid out as follows:

- For VRS' most senior staff (i.e., incumbents in positions at or above the level of Program Director) when awards are paid, 50% of total award amounts up to the specified Internal Revenue Code (IRC) § 415(c)(1)(A) plan limits will be deferred into the DCPIP plan. All other amounts paid in cash. Section III of this document describes the terms of the § 415(c)(1)(A) plan.
- For all other Plan participants, awards paid 100% in cash.

Timing of Cash Payouts

When the Board approves incentive awards, the VRS will make payments between July 1 and December 31 after VRS' fiscal year end.

- Awards to senior staff paid as follows: 50% deferred into DCPIP (subject to IRS limits) and the remainder in cash.
- Awards to all other plan participants paid out 100% in cash.

INCENTIVE PLAN PROVISIONS

- ***New employees, promoted employees and other employees who transfer into another position covered in this pay plan:***
 - Employees who join the VRS Investment Department after the commencement of the fiscal year may be eligible to participate in the Plan. Incentives will be computed on the incentive percentage and their actual earned salary for the year.
 - Promoted employees and employees who transfer into another position covered in this pay plan will have their incentives calculated based on their actual earned salary for the year and a proportional incentive percentage.
- ***Minimum Individual Performance Standard:*** Employees with an individual performance rating of "Does Not Meet Expectations" are not eligible to receive any incentive payment under the Plan.
- ***Termination of Employment Due to Death, Disability, or Retirement:*** Terminated employees may be eligible to receive a time-weighted portion of their final award for the current performance year. Plan participants who terminate employment due to death or disability or who retire during a fiscal year will be eligible to receive a time-weighted portion of their Board approved award (1/12 for each complete month worked in their last year of service). The incentive payments for the year in which death, disability or retirement occurs shall be paid 100% in cash to such employee or his representative between July 1 and December 31 following the end of the fiscal year in which such death, disability or retirement occurs.
- ***Termination for all Other Reasons:*** Except as specifically determined by the CIO for all positions other than the CIO, and by the A&P Committee for the CIO's position, participants

who terminate employment with VRS for all other reasons prior to the normally scheduled date of payout forfeit all rights under the plan.

- **Clawback:** In the event of termination for malfeasance related to duties as an investment professional, VRS retains the right to seek repayment for any and/or all paid incentive awards.

III. Defined Contribution Incentive Plan for VRS Investment Management Personnel (DCPIP)

PARTICIPATION

This plan covers VRS investment professionals at or above the level of Program Director. Such positions currently include CIO, Deputy CIO, Managing Director, and Program Director. The Board retains the discretion to modify, at any time, the positions that are eligible to participate in this plan.

AMOUNTS SUBJECT TO ANNUAL DEFERRAL

- Deferrals into this plan only occur in years when VRS' Board decides, at its full and complete discretion, to allow payment of incentive awards.
- Commencing with (and including fiscal 2013), in years when VRS' Board decides to pay incentive awards, 50% of participants' final awards up to specified IRC §415(c)(1)(A) limits will be deferred into this plan. All other amounts paid in cash.

INVESTMENT RETURN

Participants' deferred accounts in the DCPIP and the § 415(m) plan will earn an "investment return" (positive or negative) equaling the current annual rate of return of the VRS Fund. However, upon attaining age 55, the DCPIP permits members of the Investment Management Committee who have established accounts in the Commonwealth of Virginia 457 Deferred Compensation Plan, to transfer a portion into the Virginia Cash Match Plan. This transfer right allows DCPIP participants at age 55 or at any time after attaining age 55, to select any combination of the investment options then offered by the Cash Match Plan. Notwithstanding the transfer right, members of the Investment Management Committee at age 55 or older must leave at least a minimal balance amount in their DCPIP account, to avoid having to re-open the account. The VRS Defined Contribution Plan Administrator will assist participants with these transfers.

FUND TRANSFERS and DISTRIBUTIONS

Participants of the DCPIP cannot transfer funds from the § 415(m) plan into the Cash Match Plan because the § 415(m) plan is a non-qualified "excess plan" not permitted to be held in trust for the exclusive benefit of the plan participants. The § 415(m) plan closed as of June 30, 2013, except for the CIO. The distribution of the balance in the § 415(m) plan will be made in cash to the Participant.

The accumulated DCPIP trust balances will be distributed to the Participant upon termination of employment with the Commonwealth of Virginia. The participant may elect to receive the balance in the DCPIP either in cash or as a "roll-over" into another retirement or related benefit vehicle/trust, or a combination of both. All payouts/rollovers will be credited with earnings through the latest quarter end for which finalized performance is available, by the date of the payment.

All applicable laws and regulations will govern the creation, funding and distributions of the DCPIP and § 415(m) plan. Detailed plan documents are on file with the Human Resources Director and the Chief Financial Officer.

TAXATION

Taxation of the amount contributed to the DCPIP and § 415(m) plans is deferred until distribution from the respective plan.

IV. Other Compensation Plan Information

Competitive Pay Increases

Competitive pay increases are an option available to retain a highly valued employee who has received a job offer from another employer. Requests for competitive pay increases should take into consideration the employee's experience, level of education, performance and contribution to the agency, and the salaries of other employees in comparable jobs. A written job offer must be received to provide a competitive pay increase.

Sign-on Bonuses

Investment professionals hired at the VRS may be eligible for sign-on bonuses, as described in the VRS Employee Sign-on Bonus Program Policy.

Relocation Expenses

Investment professionals hired at the VRS may be eligible for reimbursement of relocation expenses, if approved by the CIO. The reimbursement of the expenses must comply with the Department of Accounts Moving and Relocation Policy.

Employment at Will

The investment employees covered by this policy are exempt from the provisions of the Virginia Personnel Act and employment in these positions is at will. Just as the employee retains the right to resign at any time, the VRS has a similar right to end at will employment with or without cause. An at-will employee does not serve an introductory period. An at-will employee is not eligible to use the agency's grievance procedure to resolve employment disputes.

Investment employees covered by this policy are eligible for all other employment benefits and subject to agency policies that do not contradict their "at will" status.

409A Compliance

The intent of the Board is that payments and benefits under this plan either comply with Section 409A of the Internal Revenue Code and applicable guidance issued thereunder ("Code Section 409A") or qualify for an exemption from Code Section 409A and, accordingly, all provisions of this Plan shall be construed in a manner consistent with the requirements for avoiding taxes or penalties under Code Section 409A. The Board shall not take any action to accelerate or delay the payment of any monies and/or provision of any benefits in any matter which would not be in compliance with Code Section 409A to the extent Code Section 409A applies to such payment or benefit. Notwithstanding any of the provisions of this pay plan, the Board shall not be liable to the employee if any payment or benefit which is to be provided pursuant to this Plan and which is considered deferred compensation subject to Code Section 409A otherwise fails to comply with, or be exempt from, the requirements of Code Section 409A.

CLASS STRUCTURE

The following descriptions are the summaries of VRS' investment professional job classes/positions:

Chief Investment Officer

The CIO manages and directs investment programs, determines appropriate program structure, implementation, and monitoring. The CIO manages investment professionals who are directly responsible for internal and external investment programs. The CIO heads the Executive and Management Committees, which are responsible for reviewing all investment recommendations. The CIO collaborates with the VRS Board-appointed Investment Advisory Committee (IAC) and delivers frequent reports and updates to the VRS Board.

Managing Director

The Managing Director is a senior investment position reporting directly to the CIO. This position serves on the Investment Executive and Management Committees. The Executive Committee is a department wide resource to the CIO for management and administrative issues. The Management Committee participates in asset allocation and manager/fund allocation decisions.

Program Director

The Program Director has deep asset class knowledge and carries full managerial responsibility for a VRS investment program, including all internally and externally managed assets. The Program Director may also support multiple asset classes. The Program Director participates on the Investment Management Committee and regularly presents information to the IAC and the Board. The Program Director, as applicable, operates within an explicit risk budget and has investment performance objectives that are regularly measured. The Program Director has full responsibility for negotiating on behalf of VRS.

Director - Strategy, Research, Risk and/or Investment Decision Support

Strategy – The positions within Strategy identify and evaluate relative value based tilt opportunities that have the potential to 1) improve the fund's return without materially increasing the risk, 2) reduce the fund's risk without materially reducing the return, or 3) some combination of these objectives. In addition, staff within Strategy 1) review and evaluate the implications of macro-economic conditions, 2) analyze current conditions and opportunities within major asset classes and key asset class subsectors, 3) monitor and evaluate the tactical and strategic tilts of key VRS investment partners, and 4) identify strategy ideas including risk and return expectations for base case and alternative scenarios.

Research – The positions within Research have responsibility to support both basic and applied research efforts for all VRS investment staff. This effort includes monitoring, coordinating, facilitating, and implementing current best practices and methods to ensure optimal investment performance and risk management at both the program and plan level.

Risk – The positions within Risk have responsibility in the design, implementation, and management of the risk management program including project management (solicitation and queueing of projects from clients), guidance and coordination within the group, mathematical and statistical analysis of empirical problems, risk management, and high-level programming. Additionally, staff within Risk assist with the design and implementation of an opportunistic portfolio allocation to manage the risk exposures of the total fund.

Investment Decision Support – The positions within Investment Decision Support have responsibility for the design and delivery of investment program, risk management, strategy, and research analytic systems. As a component of this, staff is responsible for all investments data as well as the design, development and implementation of the quantitative infrastructure for the VRS investment programs. This includes a data warehouse, various data retrieval tools, quantitative analysis tools, program level reporting tools and support applications that retrieve, consolidate and report information.

Senior Portfolio Manager

The Senior Portfolio Manager positions have responsibility for multiple portfolio strategies and/or may supervise one or more Senior Investment Officers or Portfolio Managers.

The Senior Portfolio Manager positions provide a potential career progression ladder for Portfolio Managers over time, considering the contributions, experience and sustained performance for the incumbents.

Portfolio Manager

The Portfolio Manager provides critical input to strategy development and is responsible for the more complicated and higher risk investments. The Portfolio Manager may delegate to the Senior Investment Officer certain portions of the investment program. The Portfolio Manager will begin to negotiate terms on behalf of VRS. The Portfolio Manager, from time to time, makes presentations and recommendations to the Management Committee, and perhaps the IAC and Board.

The Portfolio Manager supporting the Defined Contribution Plans is a senior investment position reporting directly to the Managing Director of Global Investments. This position provides critical input to the design, implementation, and monitoring of all investment related aspects of the VRS defined contribution plans (DC). Responsibilities include (1) evaluation and selection of new investment strategies, managers and/or funds, (2) negotiating terms on behalf of VRS, (3) monitoring and management of relationships with existing defined contribution investment managers, (4) implementing investment policy as determined by the VRS Board, (5) presenting to the Defined Contribution Plans Advisory Committee and the Board, and (6) any other projects or duties relating to the defined contribution program as may be assigned from time to time.

Senior Investment Officer

The Senior Investment Officer has higher level monitoring responsibilities that tend to involve higher risk and strategies that are more complicated. Some Senior Investment Officers may have day-to-day responsibilities for managing internal portfolios, subject to risk limits prescribed by the program director. The Senior Investment Officer will increasingly become involved in strategy development and formal recommendations to the Program Director.

Investment Officer

The Investment Officer, in addition to analytical responsibilities, may have direct responsibility for monitoring some portion of the existing portfolio, or some strategies or managers under consideration in the future. Such assignments will typically be in lower risk and less complicated strategies. The Investment Officer may continue to be involved in monitoring, compliance, and administration, but will also begin to make formal investment recommendations to the Program Director.

Senior Investment Analyst

The Senior Investment Analyst performs various types of analysis at the direction of more senior staff members. Analyst activities are geared around providing support for senior staff members more directly involved in the decision-making process. Such activities will include research, reporting, monitoring, compliance, and administration.

Investment Analyst

The Investment Analyst assists other investment professionals in their daily operations, including

investment research and analysis, trading, and portfolio management. Analysts follow and report current market information relating to assigned sectors of the market. In addition, the Analyst conducts independent research on various topics, performs data maintenance, integrity, and report generation tasks.



VIRGINIA RETIREMENT SYSTEM
INVESTMENT PROFESSIONALS' PAY PLAN
Effective ~~June 10, 2021~~ April 19, 2022

OVERVIEW & PAY PHILOSOPHY

The Virginia Retirement System's (VRS) Board of Trustees has designed this investment professionals' pay plan after working with an independent compensation consultant. In addition, the Board has adopted benchmarks, recommended by an independent investment consultant, to be used as part of this pay plan.

This pay plan includes three core elements:

- Base Salary (described in Section I of this document)
- Incentive Pay Plan (described in Section II)
- Deferred Compensation Plan for VRS Investment Management Personnel (DCPIP) (described in Section III)

Overall, this pay plan design is to:

- Attract, motivate and retain skilled investment professionals by offering competitive compensation opportunities.
- Directly align compensation with long-term, superior relative and absolute investment performance.
- Reinforce risk management priorities and standards.
- Attract and retain senior investment professionals by deferring a portion of incentive compensation on a tax-deferred basis.
- Benefit all stakeholders – VRS' beneficiaries, VRS' employees, and Virginia's taxpayers – through a compensation plan that is clear, aligned with performance, competitive and cost effective.

Importantly, this pay plan anchors on two broad and long-standing philosophical principles:

1. VRS should pay base salaries consistent with the 75th percentile of a peer group of other leading public funds. The primary guidelines for determining VRS' leading public fund peer group will be (1) funds of similar size (AUM) as VRS and (2) funds with significant (>25%) assets managed internally. Additional criteria the Board may consider is asset allocation / diverse portfolio similar to VRS, degree of delegation to the CIO and staff, use of outside investment consultants, and Board pay decision making authority.
2. VRS should provide incentive compensation opportunities such that, in combination with base salary, total compensation levels approximate the median (50th percentile) of a blended group weighted 75% to the total compensation levels of leading peer group public funds and 25% to the total compensation levels of a broad range of private-sector firms that employ investment professionals.

I. Base Salary

SALARY RANGES

This pay plan establishes a salary range for each job class taking into account its relative importance to VRS and the salaries paid for comparable types of jobs in other leading public funds.

Minimum, midpoint, and maximum salary rates define the salary range for each job class/position. The midpoint of each job class/position approximates the 75th percentile salaries of a peer group of leading public pension funds. Actual salaries can be higher or lower than the midpoint depending on factors such as job performance, professional education and certifications, the willingness to assume new and higher-level duties and responsibilities, the ability to learn quickly and apply new knowledge and skills, being a team player, and the length of time in the position.

Each position's salary range includes a defined:

- **Minimum** is the lowest base salary paid for a job within the job class/position.
- **Midpoint** represents the market salary paid to a fully qualified employee, who has the institutional knowledge and practical experience to fulfill independently all of the responsibilities of the job/position.
- **Maximum** is the highest salary rate for the job class/position.

Grade	Position	Salary Range (in thousands)		
		Min	Mid	Max
12 <u>10</u>	Chief Investment Officer	\$ 327 <u>325</u>	\$ 408 <u>430</u>	\$ 489 <u>540</u>
11	Deputy Chief Investment Officer	269	336	403
10 <u>9</u>	Managing Director	260 <u>275</u>	326 <u>365</u>	391455
98	Program Director	212 <u>235</u>	265 <u>315</u>	317395
7	Director- Strategy, Research, Risk and/or Investment Decision Support	193 <u>205</u>	242 <u>275</u>	290345
76	Senior Portfolio Manager	193 <u>205</u>	242 <u>275</u>	290345
65	Portfolio Manager	168 <u>160</u>	210 <u>215</u>	251270
5	Manager— Strategy, Research, Risk and/or Investment Decision Support	150	188	225
4	Senior Investment Officer	124 <u>135</u>	155 <u>180</u>	185225
3	Investment Officer	92 <u>105</u>	116 <u>140</u>	139175
2	Senior Investment Analyst	75 <u>80</u>	94 <u>105</u>	113 <u>130</u>
1	Investment Analyst	61 <u>65</u>	77 <u>85</u>	91 <u>105</u>

In considering the above salary range, it important to note the following:

- **Market Pay Reviews:** The VRS normally conducts a comparative market total pay study at least every two years to ensure competitiveness of the salary and incentive structures. Typically, the VRS conducts the study in the 1st quarter of the calendar year (in even years) with an effective date of July 1 (the beginning of the fiscal year).
- **Changes in Salary Ranges:** The Board must approve changes to the salary scale and incentive structure.

SALARY ADJUSTMENTS

Oversight & Administration

VRS will implement pay actions consistent with the provisions of the Appropriation Act. The VRS Board, however, approves across-the-board performance-based salary increases, market-based salary increases and incentive pools, for VRS investment professionals, consistent with the Code of Virginia and the Appropriation Act. The Chief Investment Officer (CIO) approves salary adjustments for individual investment professionals and, as described later in this document, sign-on bonuses, incentive payments, and relocation expenses subject to the limitations in the Code of Virginia and other applicable state or federal law and regulation.

Merit Increases

- Salary increases are based on meeting individual performance standards. The supervisor completes the evaluation after the end of the fiscal year. If a participant in the investment employees' pay plan does not meet overall performance standards, then the participant is ineligible for performance increases to their base salary and market adjustments to their base salary for that performance cycle. Performance cycles are on a fiscal year, July 1 through June 30, and typically begin, with an effective date of performance plans in the first quarter of the new fiscal year.
- The CIO will receive base salary increases as approved by the VRS Board of Trustees and in accordance with the terms in the CIO's Employment Agreement, with approved effective dates established by the VRS Board of Trustees.

Starting Salaries

The starting salary for a new employee considers the rates presently paid to other employees in the department and those in the same job class (when applicable), the candidate's education, skills, work experience, and salary history. The starting salary normally does not exceed the salary grade midpoint.

Reallocation

Occurs when a job classification is reviewed by Human Resources and it is determined that the job duties and responsibilities have changed significantly enough to place the job in a different job title and job class. Unless the CIO authorizes an exception, this would not exceed a 15% increase. However, the individual's salary will always be at least at the minimum of the range of the new job, regardless of the amount of the increase.

In-grade Adjustments

Occur to ensure competitiveness, retention, and to recognize increased skills, abilities, knowledge, obtainment of a degree or certification, or significant increases in responsibilities within the job class. Unless the CIO authorizes an exception adjustments will not exceed a 10% increase.

Promotions

Promotions occur when an individual moves into a position in a higher job class. Promotions can be competitive (selected through a recruitment and hiring process) or non-competitive (through a job reclassification or reallocation.) Unless the CIO approves an exception, promotions will not exceed a 15% increase. However, the individual's salary will always be at least at the minimum of the range of the new job, regardless of the amount of the increase.

Downward Assignment

Downward adjustment occurs when an employee changes positions whether voluntarily, or because of unsatisfactory performance, resulting in a downward change in job class. A reduction in salary may occur based on a review of the salary and range and the circumstances associated with the downward move. In downward assignments, an individual's salary cannot exceed the maximum of the new salary range.

II. Incentive Pay Plan

PLAN ADMINISTRATION

The VRS Board of Trustees, the Plan Administrator, through the Administration and Personnel (A&P) Committee, administers the Incentive Plan (Plan) and retains full and complete discretion:

- To increase or decrease incentives for any and/or all Plan participants.
- To modify, amend or rescind any aspect of the Plan at any time for any and/or all Plan participants.
- While the Plan Administrator remains mindful of the value that staff adds to the organization and supportive of the pay plan, the Plan Administrator also specifically reserves the right to cancel, reduce, or delay the amount of any incentives payable under this plan when, in the sole discretion of the Plan Administrator, extreme budgetary pressures, economic, market or other conditions are such that the Plan Administrator deems such action necessary under the circumstances.
- Consistent with the preceding paragraph, payment of incentives under this plan is not guaranteed.

The Plan Administrator may delegate certain aspects of this Plan's day-to-day operation to the VRS CIO and the VRS Director of Human Resources. However, any substantive Plan-related questions or issues impacting incentive payouts for the CIO require the Plan Administrator's prior approval.

PLAN ELIGIBILITY

Incumbents in the positions listed below are eligible to participate in this incentive plan, provided they:

- Are active VRS employees.
- Work for VRS at least forty hours per week. Plan participants who work less than full-time may be eligible to receive a prorated incentive payment. Wage employees are not eligible to participate in the plan.
- Receive an individual performance evaluation of at least "meets expectations" for the relevant performance year (i.e., the year preceding the normally scheduled year of payment).
- Remain in compliance with the VRS Investment Department Code of Ethics and Standards of Professional Conduct Policy.

Positions Eligible to Participate in the Investment Professional's Pay Plan

Chief Investment Officer
~~Deputy Chief Investment Officer~~
Managing Director- Strategy, Research, Risk and/or Investment Decision Support
Managing Director- Internal Assets
Managing Director- Global Investments
Program Director
Director- Strategy, Research, Risk and/or Investment Decision Support
Senior Portfolio Manager
Portfolio Manager
~~Manager— Strategy, Research, Risk and/or Investment Decision Support~~
Senior Investment Officer
Investment Officer
Senior Investment Analyst
Investment Analyst

The CIO will determine the design of the incentive plan structure for the positions supporting the Defined Contribution Plans, with both quantitative and qualitative elements.

Generally, employees on an approved leave of absence are considered active employees. The CIO will resolve all questions regarding eligibility or, in the case of the CIO, eligibility will be determined by the Board.

Participation in this Plan in any one year does *not* confer the right to participate in this Plan in any other year *nor* to receive Plan payouts for the current and/or any future year. Participation in this Plan does not confer the right to continued employment. Subject to the provisions of this Plan, only active VRS employees may receive payments under this Plan.

OVERALL INCENTIVE PLAN MECHANICS

As described in more detail throughout this document, under the terms of this Plan:

- Eligible Plan participants will be assigned an incentive opportunity, expressed as a percentage of their actual earned base salary.
- Incentive opportunities vary by position, with the level of such opportunities increasing with the degree to which the position directly affects VRS' investment performance.
- Incentives are weighted or allocated to separate Plan components, described below, with the specific components and weightings varying by position:
 1. Total Fund relative investment performance
 2. Asset Class relative investment performance
 3. Average of Asset Class Multipliers (for positions that support multiple asset classes)
 4. Qualitative – focuses on individual achievement of assigned objectives.
- After year-end, payouts under each Plan component would be determined based on performance.
- Each participant's preliminary award would equal the sum of all of their performance adjusted Plan components.
- Final awards would equal preliminary awards adjusted, up or down, based on the Total Fund's one-year absolute returns. Specifically, there will be no adjustment for returns between 0% and the assumed rate of return, currently 7%. There will be a positive one-for-one adjustment for returns in excess of the assumed rate of return (e.g., if Total Fund one-year actual absolute return equals +10%, then the preliminary awards will be increased by 3%). There will be a negative one-for-one adjustment for returns less than 0% (e.g., if Total Fund one-year actual absolute return equals -15%, then the preliminary awards will be reduced by 15%). This adjustment is specifically intended to systematically

take into account, in the shorter term, the effect of market cycles on the health of the pension plan by providing a mechanism to reflect the impact of up and down markets on incentive compensation.

- 50% of eligible senior staff-members' awards (up to IRS limits) will be deferred into tax-qualified accounts. See section III, Defined Contribution Incentive Plan for VRS Investment Management Personnel (DCPIP). While deferred, awards are subject to the Total Fund's annual absolute returns.
- All other awards paid in cash.

Generally, a Participant must be employed on the date of payment of the award. However, see INCENTIVE PLAN PROVISIONS, *Termination of Employment Due to Death, Disability or Retirement*.

INCENTIVE OPPORTUNITIES

Incentive opportunities will vary by position based on multiple criteria:

- The position's potential effect on the VRS' investment performance.
- Competitive market pay requirements.
- Internal equity considerations.
- Other factors determined by the CIO or, in the case of the Chief Investment Officer's position, by VRS' Board.

Actual awards can vary based on performance.

For the fiscal year ending June 30, 2013 and all subsequent years, unless as otherwise determined, the Plan's incentive opportunities are as follows:

Incentive Levels	
VRS Position	Incentive (1) (% salary)
Chief Investment Officer	70% (2)
Deputy Chief Investment Officer	65% (2)
Managing Director- Strategy, Research, Risk and/or Investment Decision Support	65% (2)
Managing Director- Internal Assets	65% (2)
Managing Director- Global Investments	65% (2)
Program Director	60% (2)
Director – Strategy, Research, Risk and/or Investment Decision Support	50%
Senior Portfolio Manager	50%
Portfolio Manager	40%
Manager – Strategy, Research, Risk and/or Investment Decision Support	30%
Senior Investment Officer	30%
Investment Officer	30%
Senior Investment Analyst	25%
Investment Analyst	5%
<p>(1) Performance-adjusted preliminary awards can vary from zero to two times the incentive.</p> <p>(2) A portion, up to 50%, of these positions' earned incentives is subject to mandatory deferral.</p>	

INCENTIVE WEIGHTINGS

Each participant's incentive award will be weighted or allocated to separate, stand-alone Plan components. Importantly, all participants have a portion of their incentive opportunities weighted:

- To the Total Fund Plan component – which helps reinforce the importance of collective success as measured by the Total Fund's relative investment results.
- To the Qualitative Plan component – this helps reinforce achievement of specific initiatives and professional development.

Described below are the specific Plan weightings and the approach for determining awards under each of these Plan components.

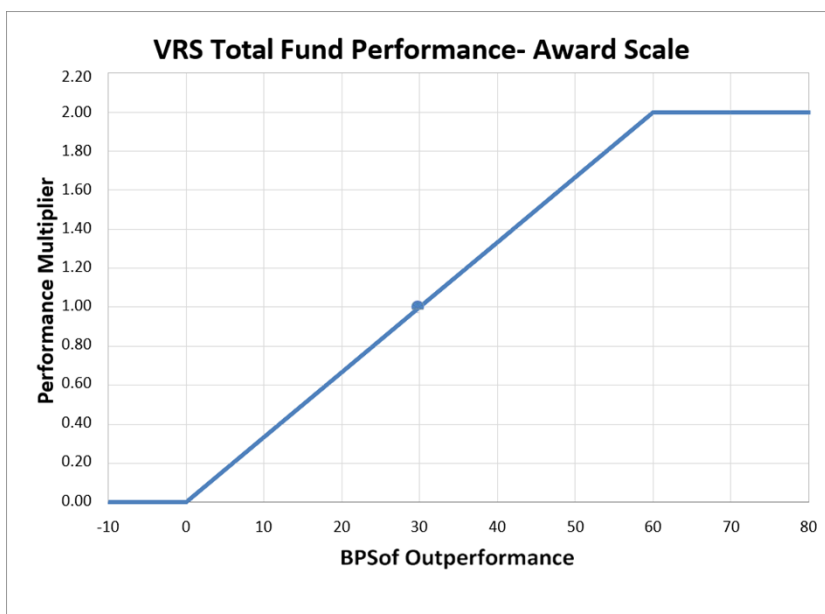
Incentive Weightings by Plan Component						
VRS Position	Total Fund	Quantitative Average of		Asset Class	Qualitative	Total
		Asset Class	Multipliers			
(% of total incentive weighted to each component)						
Chief Investment Officer	60%	20%	(1)		20%	100%
Deputy Chief Investment Officer	60%	20%	(1)		20%	100%
Managing Director- Strategy, Research, Risk and/or Investment Decision Support	60%	20%	(1,4)		20%	100%
Managing Director- Internal Assets	40%	40%	(2,4)		20%	100%
Managing Director- Global Investments	40%	40%	(3)		20%	100%
Program Director	30%	50%	(5)	50%	20%	100%
Director- Strategy, Research, Risk and/or Investment Decision Support	30%	50%	(1)		20%	100%
Senior Portfolio Manager	20%			60%	20%	100%
Portfolio Manager	20%			60%	20%	100%
Manager— Strategy, Research, Risk and/or Investment Decision Support	30%	50%	(1)		20%	100%
Senior Investment Officer	20%	60%	(5)	60%	20%	100%
Investment Officer	20%	60%	(5)	60%	20%	100%
Senior Investment Analyst	20%	30%	(5)	30%	50%	100%
Investment Analyst	20%	30%	(5)	30%	50%	100%
<p>(1) Average multiplier based on the multipliers of all asset classes under the incumbent's purview.</p> <p>(2) The MD Internal Assets average multiplier is based on the multipliers of the internal asset classes under the incumbent's purview.</p> <p>(3) The MD Global Investments average multiplier is based on the multipliers of the external asset classes under the incumbent's purview.</p> <p>(4) There is currently a single person taking on the role of MD Strategy, Research, Risk and/or Investment Decision Support and MD Internal Assets. The incentive for this individual is a 50/50% blend of the two separate MD positions.</p> <p>(5) These positions may support a specific asset class or multiple asset classes. If the position supports a specific asset class, then the multiplier is based on the asset class multiplier. If the position supports multiple asset classes, then the multiplier is based on the average of the multipliers of the asset classes supported.</p>						

QUANTITATIVE PLAN COMPONENTS

These Plan components link participants' incentive compensation to relative investment performance or, more specifically, the extent by which the Total Fund and/or Asset Class performance exceeds passive benchmarks (indices) as measured over trailing three- and five-year annualized periods (each weighted 50%).

For purposes of this Plan:

- Measurement of relative investment performance is net of third-party fees, which consist of investment management fees and performance fees paid to investment managers, custodian fees, legal fees, internal investment staff administrative expenses, and miscellaneous fees.
- A performance-award scale defines the linkage between relative investment performance and a corresponding Performance Multiplier. Illustrating this approach at the Total Fund level, when VRS' relative investment performance:
 - Equals zero or less (i.e., no relative value added), then the VRS Performance Multiplier will equal zero and there will be no incentive payouts under this Plan component.
 - Equals 30 bps, then the VRS Performance Multiplier will equal 1.00 and there will be a 100% payout of this Plan component.
 - Equals 60 bps or more, then the VRS Performance Multiplier will equal 2.00 and there will be a 200% payout of this Plan component.
 - Is anywhere between zero and 60 bps, then the VRS Performance Multiplier is determined on an interpolated, straight-line basis.



- Selected participants whose responsibilities span multiple asset classes may have a portion of their incentive weighted to a component that is determined based on the average multipliers of asset classes they support. The intent of this Plan component is to recognize and reward superior relative investment performance, regardless of the level of the associated assets.

The Board is responsible for setting the basis point outperformance standards for the Total Fund. The CIO is responsible for setting the basis point outperformance standards for individual asset classes, subject to the Board's final review and approval.

QUALITATIVE PLAN COMPONENT

The qualitative incentive multiplier can range from 0.00 to 2.00 at the CIO's discretion, with input from applicable senior staff regarding individual performance levels. This Plan component links participants' incentive compensation to achievement of individual and/or position-specific performance objectives and VRS' overall performance objectives. Actual awards under this plan component will reflect:

- Position- and/or incumbent-specific performance criteria.
- Achievement of key VRS performance objectives, including:
 - Building an effective organization.
 - Enhancing investment excellence.
 - Developing staff.

The Board will annually determine the CIO's qualitative incentive multiplier after assessing attainment of the qualitative performance objectives, considering input and recommendations provided by the A&P Committee.

DETERMINING PRELIMINARY AWARDS

After the end of each fiscal year, a preliminary award will be determined for each Plan participant by aggregating all of their performance multiplier-adjusted weighted Plan components. In particular:

- Performance multipliers will be determined for each Plan component based on actual results.
- Preliminary payouts under each weighted Plan component will be determined by multiplying the incentive dollars weighted to that component by the associated performance multiplier.
- Total preliminary awards would be determined by adding up all of that participant's weighted Plan components.

Illustrated below is this approach for a position with an incentive of \$80,000.

Plan Component	Weighted Portion of Incentive		Performance Multiplier	=	
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200
Preliminary Award					\$91,200

DETERMINING FINAL AWARDS

Final awards, if any, would be determined after each fiscal year-end by adjusting the sum of each participant's preliminary award, up or down, based on VRS' one-year absolute return for the most recently completed fiscal year. Specifically, there will be no adjustment for returns between 0% and the assumed rate of return, currently 7%. There will be a positive one-for-one adjustment for returns in excess of the assumed rate of return. There will be a negative one-for-one adjustment for returns less than 0%. Illustrated below is the process for determining final awards.

Scenario #1:
 The Total Fund's One-Year Absolute Returns are +5%

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200

	Preliminary Award	\$91,200
X no adjustment		0%
	Final Award	\$91,200

Scenario #2:
 The Total Fund's One-Year Absolute Returns are +10%

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200

	Preliminary Award	\$91,200
X 1+ VRS Fund's One-Year Rate of Return less assumed rate of return		103%
	Final Award	\$93,936

Scenario #3:
 The Total Fund's One-Year Absolute Returns are -15%

Plan Component	Weighted Portion of Incentive		Performance Multiplier		Actual Award
Total Fund	\$16,000	X	1.50	=	\$24,000
Asset Class	48,000	X	1.00	=	48,000
Qualitative	16,000	X	1.20	=	19,200

	Preliminary Award	\$91,200
X 1+ VRS Fund's One-Year Rate of Return		85%
	Final Award	\$77,520

PAYING OUT FINAL AWARDS

Board Review

Prior to payout of any and/or all awards, the CIO will present a schedule of aggregate incentives to the Board of Trustees, through the A&P Committee, in advance. This report will include, in aggregate, the awards, the multipliers awarded for each component, the actual dollar awards earned for each component and the total awards. Internal Audit and Human Resources will review the calculations. As requested by the A&P Committee, the CIO will provide additional information prior to the Board approving the payout of any and/or all awards.

Final Award Payout

Final awards will be paid out as follows:

- For VRS' most senior staff (i.e., incumbents in positions at or above the level of Program Director) when awards are paid, 50% of total award amounts up to the specified Internal Revenue Code (IRC) § 415(c)(1)(A) plan limits will be deferred into the DCPIP plan. All other amounts paid in cash. Section III of this document describes the terms of the § 415(c)(1)(A) plan.
- For all other Plan participants, awards paid 100% in cash.

Timing of Cash Payouts

When the Board approves incentive awards, the VRS will make payments between July 1 and December 31 after VRS' fiscal year end.

- Awards to senior staff paid as follows: 50% deferred into DCPIP (subject to IRS limits) and the remainder in cash.
- Awards to all other plan participants paid out 100% in cash.

INCENTIVE PLAN PROVISIONS

- ***New employees, promoted employees and other employees who transfer into another position covered in this pay plan:***
 - Employees who join the VRS Investment Department after the commencement of the fiscal year may be eligible to participate in the Plan. Incentives will be computed on the incentive percentage and their actual earned salary for the year.
 - Promoted employees and employees who transfer into another position covered in this pay plan will have their incentives calculated based on their actual earned salary for the year and a proportional incentive percentage.
- ***Minimum Individual Performance Standard:*** Employees with an individual performance rating of "Does Not Meet Expectations" are not eligible to receive any incentive payment under the Plan.
- ***Termination of Employment Due to Death, Disability, or Retirement:*** Terminated employees may be eligible to receive a time-weighted portion of their final award for the current performance year. Plan participants who terminate employment due to death or disability or who retire during a fiscal year will be eligible to receive a time-weighted portion of their Board approved award (1/12 for each complete month worked in their last year of service). The incentive payments for the year in which death, disability or retirement occurs shall be paid 100% in cash to such employee or his representative between July 1 and December 31 following the end of the fiscal year in which such death, disability or retirement occurs.
- ***Termination for all Other Reasons:*** Except as specifically determined by the CIO for all positions other than the CIO, and by the A&P Committee for the CIO's position, participants

who terminate employment with VRS for all other reasons prior to the normally scheduled date of payout forfeit all rights under the plan.

- **Clawback:** In the event of termination for malfeasance related to duties as an investment professional, VRS retains the right to seek repayment for any and/or all paid incentive awards.

III. Defined Contribution Incentive Plan for VRS Investment Management Personnel (DCPIP)

PARTICIPATION

This plan covers VRS investment professionals at or above the level of Program Director. Such positions currently include CIO, Deputy CIO, Managing Director, and Program Director. The Board retains the discretion to modify, at any time, the positions that are eligible to participate in this plan.

AMOUNTS SUBJECT TO ANNUAL DEFERRAL

- Deferrals into this plan only occur in years when VRS' Board decides, at its full and complete discretion, to allow payment of incentive awards.
- Commencing with (and including fiscal 2013), in years when VRS' Board decides to pay incentive awards, 50% of participants' final awards up to specified IRC §415(c)(1)(A) limits will be deferred into this plan. All other amounts paid in cash.

INVESTMENT RETURN

Participants' deferred accounts in the DCPIP and the § 415(m) plan will earn an "investment return" (positive or negative) equaling the current annual rate of return of the VRS Fund. However, upon attaining age 55, the DCPIP permits members of the Investment Management Committee who have established accounts in the Commonwealth of Virginia 457 Deferred Compensation Plan, to transfer a portion into the Virginia Cash Match Plan. This transfer right allows DCPIP participants at age 55 or at any time after attaining age 55, to select any combination of the investment options then offered by the Cash Match Plan. Notwithstanding the transfer right, members of the Investment Management Committee at age 55 or older must leave at least a minimal balance amount in their DCPIP account, to avoid having to re-open the account. The VRS Defined Contribution Plan Administrator will assist participants with these transfers.

FUND TRANSFERS and DISTRIBUTIONS

Participants of the DCPIP cannot transfer funds from the § 415(m) plan into the Cash Match Plan because the § 415(m) plan is a non-qualified "excess plan" not permitted to be held in trust for the exclusive benefit of the plan participants. The § 415(m) plan closed as of June 30, 2013, except for the CIO. The distribution of the balance in the § 415(m) plan will be made in cash to the Participant.

The accumulated DCPIP trust balances will be distributed to the Participant upon termination of employment with the Commonwealth of Virginia. The participant may elect to receive the balance in the DCPIP either in cash or as a "roll-over" into another retirement or related benefit vehicle/trust, or a combination of both. All payouts/rollovers will be credited with earnings through the latest quarter end for which finalized performance is available, by the date of the payment.

All applicable laws and regulations will govern the creation, funding and distributions of the DCPIP and § 415(m) plan. Detailed plan documents are on file with the Human Resources Director and the Chief Financial Officer.

TAXATION

Taxation of the amount contributed to the DCPIP and § 415(m) plans is deferred until distribution from the respective plan.

IV. Other Compensation Plan Information

Competitive Pay Increases

Competitive pay increases are an option available to retain a highly valued employee who has received a job offer from another employer. Requests for competitive pay increases should take into consideration the employee's experience, level of education, performance and contribution to the agency, and the salaries of other employees in comparable jobs. A written job offer must be received to provide a competitive pay increase.

Sign-on Bonuses

Investment professionals hired at the VRS may be eligible for sign-on bonuses, as described in the VRS Employee Sign-on Bonus Program Policy.

Relocation Expenses

Investment professionals hired at the VRS may be eligible for reimbursement of relocation expenses, if approved by the CIO. The reimbursement of the expenses must comply with the Department of Accounts Moving and Relocation Policy.

Employment at Will

The investment employees covered by this policy are exempt from the provisions of the Virginia Personnel Act and employment in these positions is at will. Just as the employee retains the right to resign at any time, the VRS has a similar right to end at will employment with or without cause. An at-will employee does not serve an introductory period. An at-will employee is not eligible to use the agency's grievance procedure to resolve employment disputes.

Investment employees covered by this policy are eligible for all other employment benefits and subject to agency policies that do not contradict their "at will" status.

409A Compliance

The intent of the Board is that payments and benefits under this plan either comply with Section 409A of the Internal Revenue Code and applicable guidance issued thereunder ("Code Section 409A") or qualify for an exemption from Code Section 409A and, accordingly, all provisions of this Plan shall be construed in a manner consistent with the requirements for avoiding taxes or penalties under Code Section 409A. The Board shall not take any action to accelerate or delay the payment of any monies and/or provision of any benefits in any matter which would not be in compliance with Code Section 409A to the extent Code Section 409A applies to such payment or benefit. Notwithstanding any of the provisions of this pay plan, the Board shall not be liable to the employee if any payment or benefit which is to be provided pursuant to this Plan and which is considered deferred compensation subject to Code Section 409A otherwise fails to comply with, or be exempt from, the requirements of Code Section 409A.

CLASS STRUCTURE

The following descriptions are the summaries of VRS' investment professional job classes/positions:

Chief Investment Officer

The CIO manages and directs investment programs, determines appropriate program structure, implementation, and monitoring. The CIO manages investment professionals who are directly responsible for internal and external investment programs. The CIO heads the Executive and Management Committees, which are responsible for reviewing all investment recommendations. The CIO collaborates with the VRS Board-appointed Investment Advisory Committee (IAC) and delivers frequent reports and updates to the VRS Board.

Deputy CIO

~~Working under the direction of the CIO, this position is responsible for assisting in developing and implementing the Fund's overall investment policies and programs. The Deputy CIO serves as an internal consultant to the CIO on a range of investment strategies, works on special investment related projects, serves on the Executive and Management Committees and assumes many of the CIO responsibilities, allowing the CIO to focus on investment management, Board relations, and other critical Fund-level activities or initiatives.~~

Managing Director

The Managing Director is a senior investment position reporting directly to the CIO. This position serves on the Investment Executive and Management Committees. The Executive Committee is a department wide resource to the CIO for management and administrative issues. The Management Committee participates in asset allocation and manager/fund allocation decisions.

Program Director

The Program Director has deep asset class knowledge and carries full managerial responsibility for a VRS investment program, including all internally and externally managed assets. The Program Director may also support multiple asset classes. The Program Director participates on the Investment Management Committee and regularly presents information to the IAC and the Board. The Program Director, as applicable, operates within an explicit risk budget and has investment performance objectives that are regularly measured. The Program Director has full responsibility for negotiating on behalf of VRS.

Director or Manager - Strategy, Research, Risk and/or Investment Decision Support

Strategy – The positions within Strategy identify and evaluate relative value based tilt opportunities that have the potential to 1) improve the fund's return without materially increasing the risk, 2) reduce the fund's risk without materially reducing the return, or 3) some combination of these objectives. In addition, staff within Strategy 1) review and evaluate the implications of macro-economic conditions, 2) analyze current conditions and opportunities within major asset classes and key asset class subsectors, 3) monitor and evaluate the tactical and strategic tilts of key VRS investment partners, and 4) identify strategy ideas including risk and return expectations for base case and alternative scenarios.

Research – The positions within Research have responsibility to support both basic and applied research efforts for all VRS investment staff. This effort includes monitoring, coordinating, facilitating, and implementing current best practices and methods to ensure optimal investment performance and risk management at both the program and plan level.

Risk – The positions within Risk have responsibility in the design, implementation, and management of the risk management program including project management (solicitation and queueing of projects from clients), guidance and coordination within the group, mathematical and statistical analysis of empirical problems, risk management, and high-level programming. Additionally, staff within Risk assist with the design and implementation of an opportunistic portfolio allocation to manage the risk exposures of the total fund.

Investment Decision Support – The positions within Investment Decision Support have responsibility for the design and delivery of investment program, risk management, strategy, and research analytic systems. As a component of this, staff is responsible for all investments data as well as the design, development and implementation of the quantitative infrastructure for the VRS investment programs. This includes a data warehouse, various data retrieval tools, quantitative analysis tools, program level reporting tools and support applications that retrieve, consolidate and report information.

Senior Portfolio Manager

The Senior Portfolio Manager positions have responsibility for multiple portfolio strategies and/or may supervise one or more Senior Investment Officers or Portfolio Managers.

The Senior Portfolio Manager positions provide a potential career progression ladder for Portfolio Managers over time, considering the contributions, experience and sustained performance for the incumbents.

Portfolio Manager

The Portfolio Manager provides critical input to strategy development and is responsible for the more complicated and higher risk investments. The Portfolio Manager may delegate to the Senior Investment Officer certain portions of the investment program. The Portfolio Manager will begin to negotiate terms on behalf of VRS. The Portfolio Manager, from time to time, makes presentations and recommendations to the Management Committee, and perhaps the IAC and Board.

The Portfolio Manager supporting the Defined Contribution Plans is a senior investment position reporting directly to the Managing Director of Global Investments. This position provides critical input to the design, implementation, and monitoring of all investment related aspects of the VRS defined contribution plans (DC). Responsibilities include (1) evaluation and selection of new investment strategies, managers and/or funds, (2) negotiating terms on behalf of VRS, (3) monitoring and management of relationships with existing defined contribution investment managers, (4) implementing investment policy as determined by the VRS Board, (5) presenting to the Defined Contribution Plans Advisory Committee and the Board, and (6) any other projects or duties relating to the defined contribution program as may be assigned from time to time.

Senior Investment Officer

The Senior Investment Officer has higher level monitoring responsibilities that tend to involve higher risk and strategies that are more complicated. Some Senior Investment Officers may have day-to-day responsibilities for managing internal portfolios, subject to risk limits prescribed by the program director. The Senior Investment Officer will increasingly become involved in strategy development and formal recommendations to the Program Director.

Investment Officer

The Investment Officer, in addition to analytical responsibilities, may have direct responsibility for monitoring some portion of the existing portfolio, or some strategies or managers under consideration in the future. Such assignments will typically be in lower risk and less complicated strategies. The Investment Officer may continue to be involved in monitoring, compliance, and administration, but will also begin to make formal investment recommendations to the Program Director.

Senior Investment Analyst

The Senior Investment Analyst performs various types of analysis at the direction of more senior staff members. Analyst activities are geared around providing support for senior staff members more directly involved in the decision-making process. Such activities will include research, reporting, monitoring, compliance, and administration.

Investment Analyst

The Investment Analyst assists other investment professionals in their daily operations, including

investment research and analysis, trading, and portfolio management. Analysts follow and report current market information relating to assigned sectors of the market. In addition, the Analyst conducts independent research on various topics, performs data maintenance, integrity, and report generation tasks.



Investment Compensation Program Review

April 2022

Competitive Market Trends

Public Funds

- YE 2020 salaries and total cash compensation stay the course (i.e., up low single digits for those that received pay increases).
- While many funds froze pay last year due to the pandemic, these freezes have been lifted as the labor market and asset levels have rebounded.
- Significant turnover for EDs and CIOs across leading public funds, mostly due to retirements and to departures to the private sector (e.g., Maryland SRPS, North Dakota, New Mexico PERA, PA PSERS, CalSTRS, MOSERS, CalPERS, Penn SERS).
- Many funds continue to struggle in their executive search efforts, often due to: prohibitions about use of search firms, pay-related limitations/constraints, perceptions of challenging internal politics, and a robust labor market in the private sector (e.g., asset management firms, OCIOs, E&Fs, family offices, etc.).
- Many funds explore remote long-term work opportunities

Private Sector

- YE 2021 Market: The BIG maybe. The best pay year in over 20 years: high-water-mark absolute pay, the highest year-over-year percentage change in pay funding. In particular, if financial markets remain flat through year-end, then within diversified firms:
 - Bonus pools should be up 20% or more, driving payouts of 30%+ for top-performing senior-level employees.
 - Profits should be up by about the same amount.
- Hiring has normalized – Covid-related restraints have been lifted
- The HR agenda is largely focused on:
 1. Defining what return-to-the office really means:
 - The tactical: What are the protocols related to masks, vaccines, office space, etc.?
 - The soft stuff: How to drive innovation, reinforce culture, and assimilate new hires?
 2. DE&I. While a top strategic priority, quantitative progress will likely continue to fall short of stated objectives, given:
 - Low turnover and net hiring trending at about +5%.
 - An especially tight labor market for women and diverse talent – especially in investments.
 3. Supporting business change, often focused on tech, alternatives and non-US operations.

Introduction & Methodology

- Virginia Retirement System Board of Trustees (“VRS”) asked McLagan to assess the competitiveness of VRS’ investment professionals’ pay levels versus their Board-approved targeted pay positioning. Specifically, for:
 - Salaries, VRS targets the 75th percentile of leading public pension funds.
 - Target total compensation, VRS targets median total cash (weighted 75% to leading public pension funds and 25% to a broad range of private sector firms).
- In reviewing its current pay levels, VRS would like to ensure that it continues to:
 - Attract, motivate and retain its skilled investment professionals.
 - Benefit all stakeholders through a compensation plan that is clear, aligned with performance, competitive and cost effective.
 - Directly align compensation with long-term investment performance.
- To complete this review, McLagan:
 - Reviewed background materials provided by VRS (e.g., plan documents, JLARC reviews, updated survey matches, etc.).
 - Assembled pay data from McLagan’s proprietary *2020 Investment Management Surveys* for VRS’ long-standing blended peer group (weighted 75% to leading public funds and 25% to a broad range of private sector firms).
- In addition, McLagan also reviewed VRS’ current incentive plan structure which can be found later in this document.

Pay Level Analysis

▪ **Base Salary**

- In aggregate, VRS’ base salary spend for 50 investment professionals of \$9.9M was positioned -9% below the targeted \$10.9M 75th percentile.

	VRS Inv Prof		Targeted Pay Positioning	Competitive Market			VRS Variance vs. Targeted Positioning
	# of Incs	Spend		25th	50th	75th	
Base Salary	50	\$9,933	75th %ile Public Funds	\$8,768	\$9,829	\$10,953	-9%

▪ **Target Total Compensation**

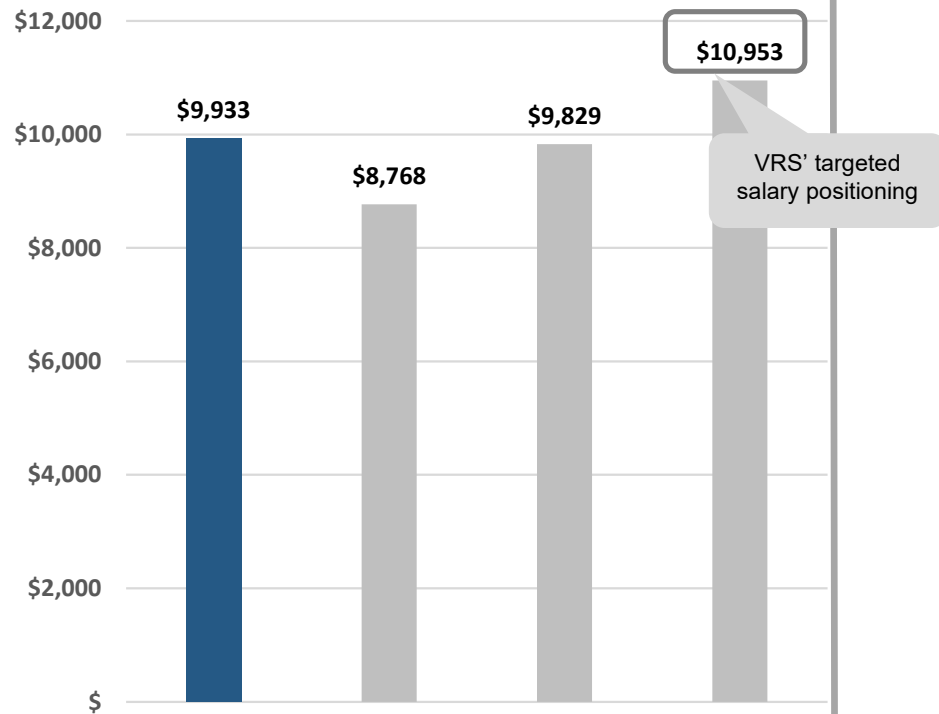
- VRS’ aggregate \$14.6M target total compensation (i.e., base salary + target incentives) fell 14% below the targeted \$17.0M median.

	VRS Inv Prof		Targeted Pay Positioning	Competitive Market			VRS Variance vs. Targeted Positioning
	# of Incs	Spend		25th	50th	75th	
Target Total Comp	50	\$14,623	Med 75% / 25% Blend	\$13,114	\$17,027	\$24,247	-14%

Overview – Base Salaries and Target Total Cash

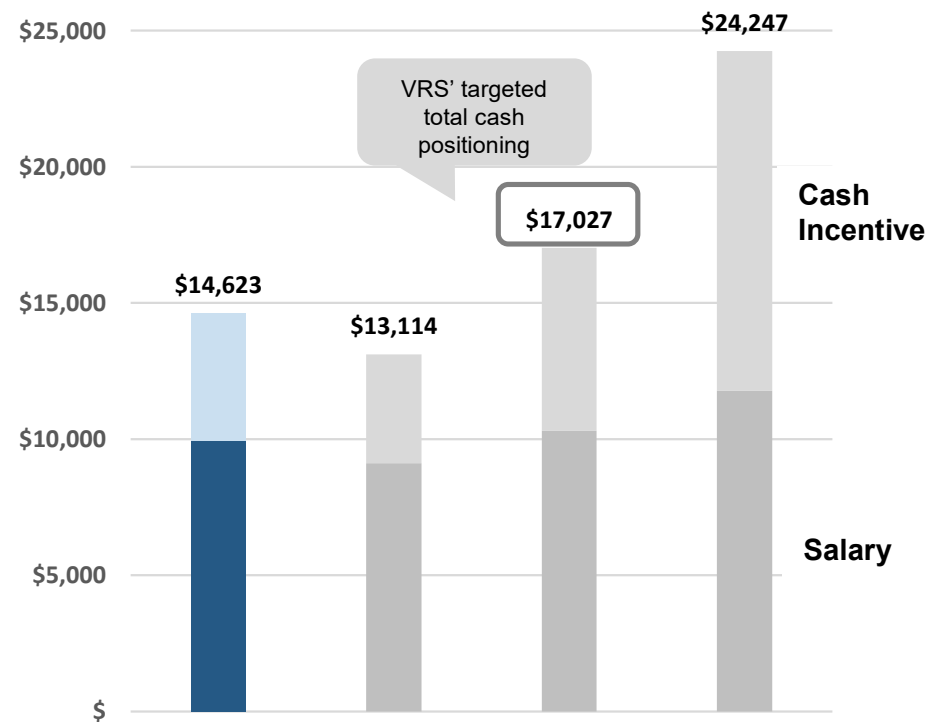
Aggregate spend for 50 VRS incumbents

VRS' Salaries vs. Leading Public Funds



	VRS	Leading Public Funds		
		25th	50th	75th
Salary	\$9,933	\$8,768	\$9,829	\$10,953
Variance		13%	1%	-9%

VRS' Target Total Cash vs. 75/25 Blend



	VRS	75th Pub Fund / 25% Priv Sect		
		25th	50th	75th
Salary	\$9,933	\$9,115	\$10,301	\$11,771
Cash Incentive	\$4,689	\$3,999	\$6,726	\$12,476
Total Cash	\$14,623	\$13,114	\$17,027	\$24,247
Variance		12%	-14%	-40%

Note: VRS' Pay Philosophy is to target base salaries at the 75th percentile of leading public funds with total cash compensation targeted at the median of the 75/25 blended peer group.

Pay Level Analysis Base Salaries

- In aggregate, VRS' salary spend is positioned 9% below the 75th percentile of other leading public funds. 76% of staff are paid below the 75th percentile.
- The incumbent-weighted positioning is driven by the more junior levels, whose aggregate salary spend fell 14%, 27% and 13% below the market 75th percentile, respectively.

VRS Investment Management	Salary	# EEs Matched	Leading Public Funds Base Salary			Positioning vs 75th Percentile		VRS vs 75th
			25th	50th	75th	% Under	% Over	
Chief Investment Officer	\$470	1	\$397	\$450	\$546	100%	0%	-14%
Managing Director	1,000	3	757	881	983	33%	67%	2%
Program Director	2,040	7	1,690	1,863	1,996	43%	57%	2%
Director	1,142	5	1,013	1,138	1,251	80%	20%	-9%
Senior Portfolio Manager	461	2	398	454	499	50%	50%	-7%
Portfolio Manager	2,518	13	2,201	2,494	2,800	77%	23%	-10%
Senior Investment Officer	1,088	7	1,000	1,119	1,270	86%	14%	-14%
Investment Officer	952	9	1,057	1,158	1,308	100%	0%	-27%
Senior Investment Analyst	262	3	256	273	302	100%	0%	-13%
Total	\$9,933	50	\$8,768	\$9,829	\$10,953	76%	24%	-9%

Base Salaries + Target Incentives

- While salaries are largely competitive across all levels, target total cash is less competitive. In aggregate, VRS' target total compensation spend fell 14% below the median of the 75/25 blended peer group.
- 88% of VRS incumbents have target total cash levels below the targeted median of the 75/25 blended peer group.
- It is important to note that all positions have the opportunity to earn more than median compensation for maximum levels of performance (see Appendix).

VRS Investment Management	T. Cash	# EEs Matched	Blended Peer Group			Positioning vs 75th Percentile		VRS vs 50th
			25th	50th	75th	% Under	% Over	
Target Total Cash								
Chief Investment Officer	\$798	1	\$619	\$794	\$1,114	0%	100%	0%
Managing Director	1,650	3	1,430	1,917	3,041	100%	0%	-14%
Program Director	3,264	7	2,729	3,610	5,741	100%	0%	-10%
Director	1,713	5	1,813	2,329	3,352	100%	0%	-26%
Senior Portfolio Manager	692	2	645	908	1,387	100%	0%	-24%
Portfolio Manager	3,526	13	2,977	4,003	5,473	77%	23%	-12%
Senior Investment Officer	1,415	7	1,299	1,642	1,952	100%	0%	-14%
Investment Officer	1,238	9	1,311	1,489	1,774	89%	11%	-17%
Senior Investment Analyst	327	3	291	334	415	67%	33%	-2%
Total	\$14,623	50	\$13,114	\$17,027	\$24,247	88%	12%	-14%

Pay Level Analysis VRS Midpoints

- While the previous pages focused on actual salaries and incentive opportunities, the below analysis focuses on VRS' target midpoints.
- Most targeted salary midpoints fell slightly below the public fund 75th percentile while most targeted total compensation midpoints fell below the median of the targeted 75/25 blend.

Position	Salary Grade	Base Salary			Sal + Target Incentive			
		Current Mid	Pub Fund 75th	Variance %	% Sal	Current Mid	75/25 Median	Variance %
Chief Investment Officer	12	408	546	-25%	70%	694	794	-13%
Deputy Chief Investment Officer	11	336	--	--	65%	554	--	--
Managing Director	10	326	328	-1%	65%	538	639	-16%
Program Director	9	265	285	-7%	60%	424	516	-18%
Director - Strategy, Research, or Risk	8	242	250	-3%	50%	363	466	-22%
Senior Portfolio Manager	7	242	249	-3%	50%	363	454	-20%
Portfolio Manager	6	210	215	-2%	40%	294	308	-5%
Risk Manager, Research Manager	5	188	--	--	30%	244	--	--
Senior Investment Officer	4	155	181	-15%	30%	202	235	-14%
Investment Officer	3	116	145	-20%	30%	151	165	-9%
Senior Investment Analyst	2	94	101	-6%	25%	118	111	6%
Investment Analyst	1	77	--	--	5%	81	--	--

Pay Level Analysis

VRS' Current and Proposed Salary Ranges

The survey data used in this exhibit differs from the prior pages. The data used on slides 10 & 11 has been aged to reflect the most recent performance year.

10

- To remain competitive with other leading public funds, McLagan proposes the below changes to VRS' salary range structure:
 - Proposed changes to the current salary range using VRS target midpoints (75th percentile of public fund peers).
 - Compress the below levels:
 - Deputy CIO and Managing Director
 - Portfolio Manager and Manager

Grade	Position	Current Salary Range			PF 75th %ile	Proposed Salary Range		
		Min	Mid	Max		Min	Mid	Max
12	Chief Investment Officer	\$327	\$408	\$489	\$579	325	\$430	540
11	Deputy Chief Investment Officer	269	336	403	364	275	365	455
10	Managing Director	260	326	391	348			
9	Program Director	212	265	317	303	235	315	395
8	Director	193	242	290	265	205	275	345
7	Senior Portfolio Manager	193	242	290	265	205	275	345
6	Portfolio Manager	168	210	251	228			
5	Manager	150	188	225	--	160	215	270
4	Senior Investment Officer	124	155	185	192	135	180	225
3	Investment Officer	92	116	139	154	105	140	175
2	Senior Investment Analyst	75	94	113	107	80	105	130
1	Investment Analyst	61	77	91	88	65	85	105

Note: The Public Fund survey data has been aged 3% per year from 2020 to 2022 for base salaries.

VRS' Proposed Salaries & Target Total Comp

The survey data used in this exhibit differs from the prior pages. The data used on slides 10 & 11 has been aged to reflect the most recent performance year.

- Incorporating VRS' current target incentives (as a percent of salary) and proposed salary ranges, the variance to market median total cash is approximately +/- 10% in all instances except for the Director and Senior Portfolio Manager levels.

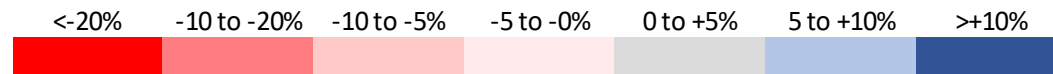
Position	Salary Grade	VRS - Proposed Salary Range			Sal + Target Incentive						
		Minimum	Midpoint	Maximum	Target T.Comp Range				75/25 Median	Variance \$	Variance %
					IC % Sal	Minimum	Midpoint	Maximum			
Chief Investment Officer	10	\$325	\$430	\$540	70%	\$553	\$731	\$918	\$832	-\$101	-12%
Dep CIO / Managing Director	9	275	365	455	65%	454	602	751	670	-67	-10%
Program Director	8	235	315	395	60%	376	504	632	540	-36	-7%
Director	7	205	275	345	50%	308	413	518	484	-72	-15%
Senior Portfolio Manager	6	205	275	345	50%	308	413	518	484	-72	-15%
Portfolio Manager / Manager	5	160	215	270	40%	224	301	378	323	-22	-7%
Senior Investment Officer	4	135	180	225	30%	176	234	293	246	-12	-5%
Investment Officer	3	105	140	175	30%	137	182	228	173	9	5%
Senior Investment Analyst	2	80	105	130	20%	96	126	156	117	9	8%
Investment Analyst	1	65	85	105	10%	72	94	116	--	--	--

Note: The Public Fund survey data has been aged 3% per year from 2019 to 2021 for total cash compensation. The private sector data has been aged 7% per year from 2019 to 2021 for total cash compensation.

Investment Professional Total Compensation 2017 - 2020

- Overall, total compensation for all employees within US public funds tends to increase modestly each year (approximately +0% to +4%).
- Investment functions however, have seen larger increases each year. Since 2017, total compensation for investment professionals within public funds has increased low- to mid-single digits at median.
- Important to note, the below covers only constant incumbents (present in all three years) and those within the investment functions (e.g., portfolio management, research, trading, etc.).

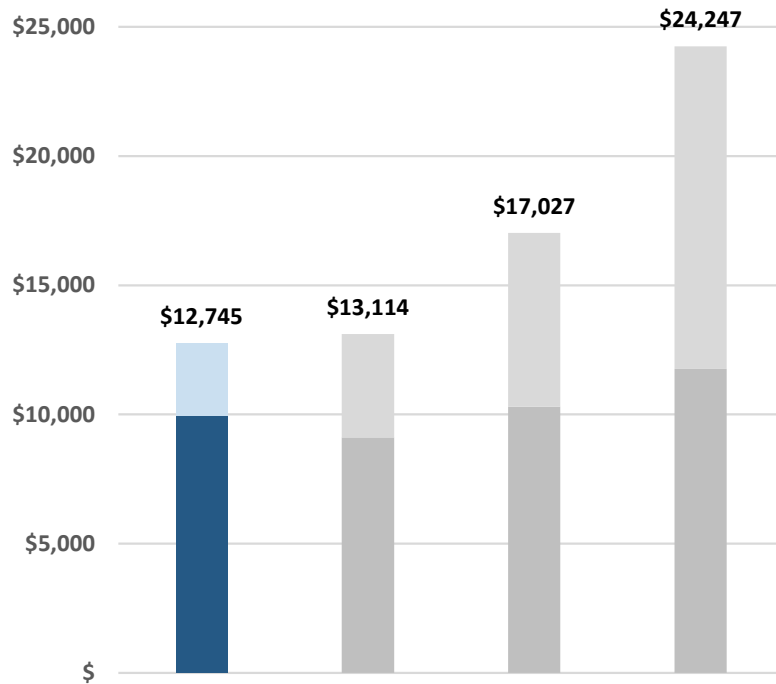
Investment Only	All Constant Incs			Only Bonus Eligible Constant Incs		
	% Δ Total Compensation			% Δ Total Compensation		
	'17 to '18	'18 to '19	'19 to '20	'17 to '18	'18 to '19	'19 to '20
\$0 - \$100K	8%	8%	5%	9%	7%	4%
\$100K - \$200K	6%	5%	3%	7%	5%	3%
\$200K - \$300K	4%	7%	2%	4%	7%	3%
\$300K - \$500K	2%	6%	5%	2%	7%	5%
\$500K+	3%	0%	4%	3%	0%	4%
# of Constant Incs	1,565			958		



Appendix I

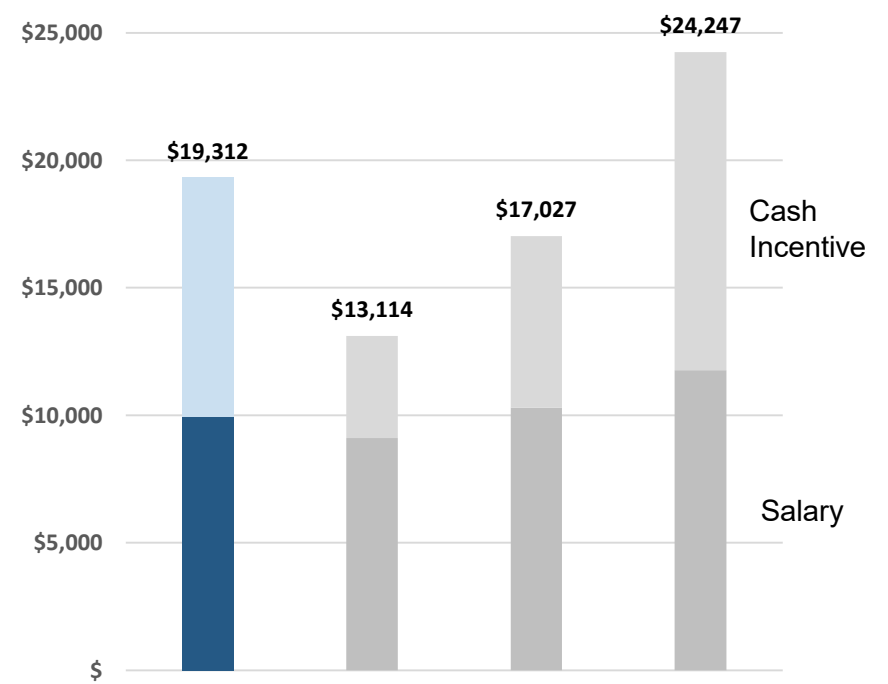
Overview – Maximum and Actual Total Cash

VRS' Actual Total Cash vs. 75/25 Blend



	VRS	75th Pub Fund / 25% Priv Sect		
		25th	50th	75th
Salary	\$9,933	\$9,115	\$10,301	\$11,771
Cash Incentive	\$2,811	\$3,999	\$6,726	\$12,476
Total Cash	\$12,745	\$13,114	\$17,027	\$24,247
Variance		-3%	-25%	-47%

VRS' Maximum Total Cash vs. 75/25 Blend



	VRS	75th Pub Fund / 25% Priv Sect		
		25th	50th	75th
Salary	\$9,933	\$9,115	\$10,301	\$11,771
Cash Incentive	\$9,379	\$3,999	\$6,726	\$12,476
Total Cash	\$19,312	\$13,114	\$17,027	\$24,247
Variance		47%	13%	-20%

Base Salaries + Maximum Incentives

- Consistent with its pay philosophy, all VRS positions have the opportunity to earn above-median pay for superior performance (e.g., all incentive components at maximum). As with previous years, VRS' \$19.3M maximum total cash falls between the \$17.0M median and \$24.2M 75th percentile.

VRS Investment Management	T. Cash	# EEs Matched	Blended Peer Group T. Cash			Positioning vs 75th Percentile		VRS vs 50th
			25th	50th	75th	% Under	% Over	
Maximum Total Cash								
Chief Investment Officer	\$1,127	1	\$619	\$794	\$1,114	0%	100%	42%
Managing Director	2,301	3	1,430	1,917	3,041	33%	67%	20%
Program Director	4,488	7	2,729	3,610	5,741	0%	100%	24%
Director	2,284	5	1,813	2,329	3,352	60%	40%	-2%
Senior Portfolio Manager	923	2	645	908	1,387	50%	50%	2%
Portfolio Manager	4,533	13	2,977	4,003	5,473	15%	85%	13%
Senior Investment Officer	1,741	7	1,299	1,642	1,952	29%	71%	6%
Investment Officer	1,524	9	1,311	1,489	1,774	56%	44%	2%
Senior Investment Analyst	393	3	291	334	415	0%	100%	18%
Total	\$19,312	50	\$13,114	\$17,027	\$24,247	28%	72%	13%

Base Salaries + Actual Earned Incentives

- Based on actual earned incentives, VRS' \$12.7M total cash spend fell 25% below the \$17.0M median reflecting that for these 50 incumbents, actual payouts were below both target and maximum.

VRS Investment Management	T. Cash	# EEs Matched	Blended Peer Group			Positioning vs 75th Percentile		VRS vs 50th
			25th	50th	75th	% Under	% Over	
Actual Total Cash								
Chief Investment Officer	\$602	1	\$619	\$794	\$1,114	100%	0%	-24%
Managing Director	1,402	3	1,430	1,917	3,041	100%	0%	-27%
Program Director	2,742	7	2,729	3,610	5,741	86%	14%	-24%
Director	1,645	5	1,813	2,329	3,352	100%	0%	-29%
Senior Portfolio Manager	512	2	645	908	1,387	100%	0%	-44%
Portfolio Manager	3,114	13	2,977	4,003	5,473	92%	8%	-22%
Senior Investment Officer	1,310	7	1,299	1,642	1,952	100%	0%	-20%
Investment Officer	1,119	9	1,311	1,489	1,774	100%	0%	-25%
Senior Investment Analyst	299	3	291	334	415	100%	0%	-10%
Total	\$12,745	50	\$13,114	\$17,027	\$24,247	96%	4%	-25%

Leading Public Funds Peer Group

Leading Public Funds Peer Group		
	AUM	% Internally Managed
California Public Employees' Retirement System	\$394.7	
California State Teachers' Retirement System	254.1	
New York State & Local Retirement System	225.9	
Florida State Board Administration	169.7	
Teacher Retirement System of Texas	160.0	
New York State Teachers' Retirement System	125.6	
Washington State Investment Board	107.5	
State of Wisconsin Investment Board	116.5	
Ohio Public Employees' Retirement System	104.2	
State Teachers Retirement System of Ohio	71.5	
Michigan State Retirement Systems	77.7	
Colorado Public Employees Retirement Association	52.0	
Hig Quartile	\$183.8	61%
Median	121.0	51%
Low Quartile	97.6	43%
Virginia Retirement System	\$92.1	29%

*Amounts for VRS were provided by VRS to McLagan.

Private Sector Firm Summary

All Private Sector				
	# Firms	12/31/19 AUM (\$Billions)		
		LowQ	Median	HighQ
Investment Mangement Firms	162	\$14.9	\$53.1	\$218.6
Banks (Investment Management Department)	24	15.8	38.6	88.6
Insurance Companies (Investment Management Departments)	39	26.1	63.1	97.3
Endowments & Foundations	54	1.9	3.3	7.2
Corporate Plan Sponsors	11	1.7	6.0	17.6
Total	290	\$7.0	\$28.4	\$101.2



Reappointment of DCPAC Members.

Requested Action

The Board reappoints Ravindra Deo, Brenda Madden, and Edward N. (Ned) Smither to the Defined Contribution Plans Advisory Committee (DCPAC), each for a two-year term ending June 20, 2024.

Rationale for Requested Action

Mr. Deo, Ms. Madden, and Mr. Smither currently serve on the DCPAC and are willing to be reappointed for another two-year term. Mr. Deo is the Executive Director of the Federal Retirement Thrift Investment Board. Ms. Madden is a Senior Vice President and the Human Resources Director of Davenport & Company. Mr. Smither is the County Administrator for Powhatan County.

Authority for Requested Action

Code of Virginia § 51.1-124.26 authorizes the Board to appoint such other advisory committees as it deems necessary. Each member appointment requires a two-thirds vote of the Board, and advisory committee members serve at the pleasure of the Board.

The above action is approved.

O’Kelly E. McWilliams, III, Chair
VRS Board of Trustees

Date

Ravindra Deo Ravindra Deo serves as the Executive Director of the largest defined contribution plan in the world. Ravindra joined the FRTIB in 2015 as the Chief Investment Officer. During his time at FRTIB, he also served as acting COO from June 2016 to February 2017, and acting Executive Director from May 2017 to August 2017. Ravindra started his career in 1986 and worked in the asset management industry for 29 years prior to joining the FRTIB. He has worked in a variety of roles including as an overlay asset allocator focused on risk reduction, as part of a team that worked on the creation of the first ETFs, as a team leader focused on lifestyle funds, and as an investment advisory consultant to some of the largest institutional investors in the world. He has been the lead on investment and manager research teams and has conducted extensive manager research on both alternative and traditional asset classes. Ravindra has a Bachelor of Technology from the Indian Institute of Technology, Delhi and an MBA from the University of California, Berkeley

Professional Biography for:

Brenda O. Madden, SPHR, SHRM-SCP
SVP, Human Resources Director
Davenport & Company
Richmond Virginia

Brenda Madden is a Human Resources Executive with 30 years of Human Resources experience with various Richmond-based companies. She is certified as a Senior Professional in Human Resources (SPHR, SHRM-SCP).

She has been in her current role for 15 years as Director of Human Resources with Davenport & Company, an employee-owned, regional Investment Brokerage firm with over 480 employees, primarily in Virginia and North Carolina. She is responsible for providing strategic guidance and leadership for all aspects of Human Resources. She oversees all aspects of human resources management including benefits administration with emphasis on health & welfare benefits, defined contribution retirement plans, talent management, compensation, performance management, regulatory compliance, employee relations and organizational development, while being a trusted business partner to managers and associates of the firm.

In her role, she also serves on Davenport's Profit Sharing Committee, which meets quarterly and reviews investment performance and plan administration matters for its 401k, and Profit Sharing retirement plans. The Human Resources department handles day to day interaction with employees related to these plans to include everything from new employee education/enrollment, distributions, loans, rollovers, RMD's, to retirement options and communication.

Prior to joining Davenport & Company, she worked at The Colony Group (part of Argonaut Insurance Company), Virginia Mutual Insurance Company (now Alfa Mutual) and Heritage Savings Bank.

She has served on the board of the Virginia Society of Human Resources State Council for 13 years and has been in her current role of Treasurer for the past 5 years.

She received a Bachelor's degree in Business Administration from Virginia Commonwealth University.



Davenport & Company LLC Member: NYSE | FINRA | SIPC

Ned Smither was named County Administrator of Powhatan County in 2020 and oversees the operations of Powhatan's \$130,000,000 annual budget and 250 general government staff. Smither came to Powhatan after an extensive career in public finance including eighteen years in local government and eighteen years as an investment banker in the municipal bond financial advisory and underwriting arena. Prior to joining Powhatan as their County Administrator, Smither served as the Director of Finance for Henrico County, overseeing Henrico's \$390 million debt portfolio and the financial operations of one of Virginia's leading counties. During his tenure as Director of Finance, he managed the issuance of over \$1 billion in debt and a rating upgrade of the County's Water and Sewer operations.

Smither served as a director on the VACo/VML Pooled OPEB Trust Board of Directors and currently serves as the Chairman of the Lewistown Commerce Center Community Development Authority in Hanover County.

Smither received both his bachelor's degree and his MBA from the University of Richmond and lives in Mechanicsville with his wife Sandy.



Virginia Retirement System (VRS) FY 2022 Budget to Actual Projections

	Current Budget ¹ A	Expenses through 2/28/2022 B	Projected Remaining Expenses C	Projected Total Expenses ² D = B + C	Projected Variance Favorable/ (Unfavorable) E = A - D	% Remaining E / A
Administration						
Personnel						
Salaries, Wages & Benefits ³	24,678,000	15,366,000	7,473,000	22,839,000	1,839,000	7.5%
Incentive Compensation	1,137,000	808,000	-	808,000	329,000	28.9%
Contractual Services						
Communication Services	945,000	587,000	311,000	898,000	47,000	5.0%
Employee Development Services ⁴	270,000	105,000	96,000	201,000	69,000	25.6%
Management & Informational Services ^{5, 6}	3,327,000	898,000	1,826,000	2,724,000	603,000	18.1%
Medical Review Services	778,000	359,000	364,000	723,000	55,000	7.1%
Support Services ⁷	1,014,000	414,000	591,000	1,005,000	9,000	0.9%
Equipment & Supplies	169,000	121,000	40,000	161,000	8,000	4.7%
Facility	1,785,000	1,158,000	617,000	1,775,000	10,000	0.6%
Insurance, Claims & Bonds	94,000	55,000	36,000	91,000	3,000	3.2%
Service Charges	167,000	88,000	70,000	158,000	9,000	5.4%
Administration Total	34,364,000	19,959,000	11,424,000	31,383,000	2,981,000	8.7%
Information Technology						
Personnel						
Salaries, Wages & Benefits ³	13,456,000	7,511,000	4,127,000	11,638,000	1,818,000	13.5%
Incentive Compensation	396,000	396,000	-	396,000	-	0.0%
Contractual Services						
Communication Services	983,000	505,000	464,000	969,000	14,000	1.4%
Employee Development Services ⁴	55,000	1,000	51,000	52,000	3,000	5.5%
Management & Informational Services ⁵	16,000	1,000	13,000	14,000	2,000	12.5%
Support Services ⁶	12,000	3,000	7,000	10,000	2,000	16.7%
Technical Services	11,868,000	6,258,000	5,269,000	11,527,000	341,000	2.9%
Equipment & Supplies	5,269,000	941,000	3,931,000	4,872,000	13,000	2.9%
Facility	442,000	296,000	133,000	429,000	13,000	2.9%
Insurance, Claims & Bonds	195,000	195,000	-	195,000	-	0.0%
Information Technology Total	32,692,000	16,107,000	13,995,000	30,102,000	2,590,000	7.9%



Virginia Retirement System (VRS) FY 2022 Budget to Actual Projections

	Current Budget ¹ A	Expenses through 2/28/2022 B	Projected Remaining Expenses C	Projected Total Expenses ² D = B + C	Projected Variance Favorable/ (Unfavorable) E = A - D	% Remaining E / A
Investment Management						
Personnel						
Salaries, Wages & Benefits ³	18,651,000	11,135,000	5,785,000	16,920,000	1,731,000	9.3%
Incentive Compensation	8,099,000	8,099,000	-	8,099,000	-	0.0%
Contractual Services						
Communication Services	64,000	1,000	42,000	43,000	21,000	32.8%
Employee Development Services ⁴	645,000	149,000	450,000	599,000	46,000	7.1%
Management & Informational Services ⁵	3,454,000	1,192,000	1,308,000	2,500,000	954,000	27.6%
Technical Services ⁸	9,592,000	3,518,000	5,882,000	9,400,000	192,000	2.0%
Equipment & Supplies	358,000	203,000	109,000	312,000	46,000	12.8%
Facility	657,000	444,000	209,000	653,000	4,000	0.6%
Insurance, Claims & Bonds	27,000	14,000	12,000	26,000	1,000	3.7%
Investment Management Total	41,457,000	24,755,000	13,797,000	38,552,000	2,995,000	7.2%
VRS Total	108,603,000	60,821,000	39,216,000	100,037,000	8,566,000	7.9%

¹ Original budget plus/minus transfers; also includes preliminary estimates of additional appropriation resulting from 5% salary increases approved for FY22

² Projected Total Expenses are best estimates as of the creation of this report and are subject to change

³ Salaries, Wages, & Benefits includes expected 5% increase from Commonwealth for salary adjustment

⁴ Employee Development Services includes organization memberships, subscriptions, employee trainings, and tuition reimbursement; although in-person training and related travel spending continue to be reduced because of the COVID-19 pandemic, online training are encouraged

⁵ Management and Informational Services includes fiscal services, management services, legal services, media services, food services and business travel

⁶ Includes \$300K budgeted for the Retirement Commission, which currently has no planned expenditures and \$400K for LODA that is not budgeted, but credited to VRS

⁷ Support Services includes clerical and manual labor services

⁸ Technical Services includes hardware/software maintenance, technology contractors and data feeds