



## **Defined Contribution Plans Advisory Committee (DCPAC) Meeting**

1111 E. Main St.  
Richmond, VA 23219

Thursday, 9/8/2022  
1:00 - 3:00 PM ET

### **1. Welcome**

### **2. Adoption of the Minutes from the June 2, 2022 Meeting**

*2022.6.2 Minutes - Page 2*

### **3. Governing Documents Update**

Defined Contribution Incentive Plan (DCIP) Plan Document Amendments and Amended DCIP Master Trust  
- RBA - Approve Amended and Restated DCIP Plan Document  
and Approve First Amendment to DCIP Master Trust

*RBA - Amended and Restated DCIP and Master Trust Amendment - Page 7*

*VRS - Restated DCIP (Effective 1-1-2023) - Page 9*

*VRS First Amendment to DCPIP Trust Agreement (Effective 9-22-2022) - Page 34*

### **4. Administration**

*2022Q2 Administrative Summary - Page 36*

#### **a. Administrative Reports & Communications**

#### **b. DC Plans Record Keeper RFP Update**

### **5. Investments**

Annual Investment Review

*Final DC Investments 9-8-22 slide deck - Page 59*

### **6. Other Business**

Discussion of New Ideas

### **7. 2022 Meetings**

#### **a. Remaining 2022 Meeting**

December 1, 2022 at 1:00 p.m.

#### **b. ORPHE Annual Employer Update**

(not a meeting of the DCPAC) - September 29, 2022

### **8. Appendix**

*Q2 2022 VRS Quarterly Review - VRS Copy - Page 78*

*Annual DC Investment Review - FY 2022 - Page 84*

### Minutes

The Defined Contribution Plans Advisory Committee (DCPAC) of the VRS Board of Trustees convened on June 2, 2022, with the following members present:

Hon. J. Brandon Bell, II, Chair  
Ravindra Deo  
Shannon Irvin  
Rick Larson  
Brenda Madden  
Arun Muralidhar (attended remotely under § 2.2-3708.2(A)(1)(b))  
Ned Smither  
David Winter

VRS Board of Trustees:  
John Bennett\*

VRS Staff:  
Trish Bishop, Steve Cerreto\*, Jeanne Chenault, Michael Cooper\*, Alicia Diggs\*, Valerie Disanto, Josh Fox\*, Brian Goodman\*, Kelley Harlow\*, Kelly Hiers\*, KC Howell, Robert Irving, Ryan LaRochelle, Joyce Monroe\*, Teresa Nguyen\*, Laura Pugliese, Steven Ramirez, Michael Scott, Kristy Scott\*, Jillian Sherman, Jennifer Schreck, Ashley Spradley\*, Bridgette Watkins, Rachel Webb and Cindy Wilkinson\*.

Guests:  
Joe Ebisa\*, Within Intelligence; Brian McCleave, Empower; Andrew Ness\*, SageView Advisors; Jamie Bitz, JLARC

*\*Attended remotely*

The meeting convened at 1:04 p.m.

### Opening Remarks

Brandon Bell welcomed Committee members, Board members, VRS staff, representatives from other stakeholder groups and members of the public.

Mr. Bell took a roll call of each DCPAC member for attendance purposes:

Mr. Deo – Present  
Ms. Irvin – Present  
Mr. Larson – Present  
Ms. Madden – Present  
Mr. Muralidhar - Present  
Mr. Smither – Present

Mr. Winter – Present  
Mr. Bell - Present

### **Approval of Minutes**

Upon a motion by Mr. Winter, with a second by Mr. Smither the Committee approved the minutes of the March 24, 2022 meeting of the Defined Contribution Plans Advisory Committee.

### **Administrative Reports and Communications Update**

Kelly Hiers, DC Plans Administrator, provided an introduction of the VRS Defined Contribution Plans summary for the first quarter, ending March 31, 2022. Ms. Hiers shared the topics to be presented to include information across all DC plans, as well as current initiatives. Ms. Hiers then introduced Robert Irving to continue the presentation.

#### DC Plans and Hybrid Plan Update

Mr. Irving provided an update on total assets and accounts in the VRS Defined Contribution Plans through March 31, 2022.

Mr. Irving shared that VRS was the recipient of the 2022 Communicator Award of Distinction. This award was presented by the Academy of Interactive and Visual Arts (AVIA) in the Marketing Effectiveness category for a communications campaign about SmartStep Auto-Increase Awareness.

Mr. Irving provided an update on total assets and accounts in the COV 457 and Virginia Cash Match plans through March 31, 2022, as well as highlighted the COV 457 plan being the largest of all plans, changes in assets due to market fluctuation and an increase in plan adoptions. These plan adoptions could bring approximately 3,000 potential new participants.

Mr. Irving also provided a review of total assets and accounts in the Hybrid Retirement Plan for the first quarter of 2022. He further updated the Committee on the Hybrid 401(a) reaching \$1 billion in assets and the Hybrid 457 plan reaching \$500 million. Further, Mr. Irving highlighted the Hybrid 457 plan auto-escalation as a significant feature. Four new local employers and three new state employers have adopted the Hybrid Retirement plan. Overall participation in Hybrid voluntary contributions has decreased slightly; however, the active election rate is steady. The 2023 auto-escalation cycle will provide an increase in voluntary contributions with approximately 105,000 eligible participants being impacted.

Mr. Irving provided a brief overview of the Optional Retirement Plan for Higher Education. Assets in this plan are held with MissionSquare and TIAA, with the majority held by TIAA.

Mr. Irving next reviewed the DC Plans teams' focus on improving asset retention for the COV 457, Hybrid 401(a) and Hybrid 457 plans, indicating that they will be reviewed on a quarterly basis. He shared

the current retention results over the last four years for these plans. The retention rate is attributed to making sure plan participants understand that they do not have to take distributions after termination. Asset retention across all unbundled plans was reviewed by age and employment status.

Distribution activity is reviewed annually for changing trends; including rollovers, unforeseen emergency withdrawals and small balance distributions. Mr. Irving reviewed various asset retention-related efforts, including updated forms with enhanced messaging, along with financial planning services and a revised Leaving Employment Guide, which is intended to help with retention over time.

#### Upcoming Events

Mr. Irving shared upcoming activities, which include the annual service review meetings with TIAA and MissionSquare. Annual fee disclosures will be distributed in the fall and meetings will be held for the ORPHE annual employer update and open enrollment.

#### DC Plans Consultant RFP Update

Mr. Irving provided an update on the DC Plans consultant RFP and reported that a consultant has been hired. VRS will be working with Sageview Consulting, with Andrew Ness being the primary consultant.

Mr. Bell thanked Mr. Irving and Ms. Hiers for their presentation.

### **DC Plans Investments Update**

Laura Pugliese, Portfolio Manager, Defined Contribution Plans, addressed two follow-up questions posed by attendees at the March 24, 2022 DCPAC meeting regarding the Callan 2022 Survey. She informed the Committee that her Callan contact informed her that: (1) on page 8 of the Callan Survey “Avoidance of Fiduciary Issues” generally related to and revolves around good governance and managing potential risk from litigation or governmental audit; and (2) on page 20 a “None of the Above” response meant that a plan sponsor was in status quo mode and did not anticipate making any changes around target date funds.

#### Performance Reports

Ms. Pugliese provided a high level overview of the markets and reviewed the April 30, 2022 performance reports, including the unbundled DC plans investment options and the bundled TIAA ORPHE Retirement Choice (RC) investment menu options. Ms. Pugliese also informed the Committee of BlackRock’s changes to the fixed income portion of their LifePath target date portfolios.

#### Benchmark Review

Ms. Pugliese provided an overview of the standard performance benchmarks used for the individual investment options within the Help-Me-Do-It Path for the Unbundled DC Plans and stressed the importance of benchmark selection as it relates to passively managed funds. She shared a benchmark

correlation table for the five-year period ending March 31, 2022 and provided an overview of general findings related to what government peers are using for performance benchmarks within their DC plans. The DCPAC did not express any concerns regarding the standard benchmarks currently being used within the DC investment program.

#### 2022 PIMCO U.S. DC Consulting Study

Ms. Pugliese gave an overview of the key findings from the 2022 PIMCO U.S. DC Consulting Study. She highlighted some of the findings, such as the dominance of target date funds being used as the default investment option and the increasing interest in ESG and alternatives in DC investing.

Mr. Bell thanked Ms. Pugliese for her presentation.

### **Other Business**

#### Discussion of New Ideas

Mr. Bell asked if Committee members had anything new to bring to the Committee. Mr. Larson started a discussion on how DCPAC impacts VRS customers. He also asked how VRS reconciles annual data in an environment that's rapidly changing. Staff explained that in addition to receiving annual studies from various sources, staff participates in webinars and these meetings usually include surveys. Staff also continuously engages with various parties within the DC industry, including business partners, throughout the year. Trends are reviewed to ascertain longer term perspectives. Insights were also provided on behavioral finance and how changes in the stock market, variations in data and current conditions affect how customers react.

### **Upcoming Defined Contribution Plans Advisory Committee Meetings**

Mr. Bell confirmed the remaining DCPAC meeting dates for 2022. The next meeting of the DCPAC will take place on September 8, 2022, with the last meeting of the year to be held on December 1<sup>st</sup>. Both meetings will be held at 1:00 p.m.

The ORPHE Annual Employer Update is scheduled for Thursday, September 29<sup>th</sup> and will appear on the agenda as an upcoming event. This is not a DCPAC meeting; however, members may attend this remote meeting, if interested.

### **Adjournment**

There being no further business, Mr. Bell adjourned the meeting at 2:43 p.m. upon a motion by Mr. Deo, with a second by Mr. Larson, upon a unanimous vote.

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Chair

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Date



## **Approve Amended and Restated Defined Contribution Incentive Plan for VRS Personnel (DCIP) and First Amendment to the DCIP Master Trust.**

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### **Requested Action**

The VRS Board of Trustees approves the Amended and Restated Defined Contribution Incentive Plan for VRS Personnel (DCIP) (effective as of January 1, 2023) and the First Amendment to the DCIP Master Trust (effective September 22, 2022).

### **Description/Background**

In connection with its review of all VRS defined contribution plans, outside benefits counsel (Ice Miller) went over the provisions of the Defined Contribution Incentive Plan for VRS Personnel (DCIP), recommending that an amended and restated document be prepared and adopted by the Board. The original plan document was adopted by the Board effective July 1, 2002, and an amended and restated plan document was adopted by the Board effective May 1, 2013. There were three amendments to the current plan document, made in 2014, 2017 and 2020. Outside counsel's recommendations are designed to provide additional assurance that VRS does and will continue to comply with state and federal law with respect to the master trust.

VRS staff also consulted with outside benefits counsel to determine what changes would be needed to the master trust relating to the amended and restated DCIP. The resulting amendment accounts for the recent name change to the plan as well as adding a provision to cover the return of mistaken contributions without violating the trust. Finally, the amendment strengthens the language in the trust regarding its compliance with the IRS separate accounting requirement. Outside counsel's recommendations are designed to provide additional assurance that VRS does and will continue to comply with state and federal law with respect to the master trust.

The Defined Contribution Plans Advisory Committee has reviewed the amended and restated plan document and the first amendment to the master trust, and that committee recommends the approval of this RBA.

### **Rationale for Requested Action**

Outside benefits counsel and VRS staff collaborated on the amended and restated plan document and the amendment to the DCIP Master Trust. Among other things, the plan document contains technical changes and is updated to reflect the provisions of recent legislation affecting qualified plans such as the SECURE Act and changes to the required minimum distribution (RMD) rules. Also, the proposed plan document's format and structure is consistent with that of the other defined contribution plan documents, which were amended and restated recently with the collaboration of outside benefits counsel and VRS staff. The Master Trust amendments are outlined above.

### **Authority for Requested Action**

*Code of Virginia* § 51.1-124.22(11) authorizes the Board to establish and administer a compensation plan for officers and employees of the Retirement System. *Code of Virginia* § 51.1-124.22(8)

authorizes the Board to make determinations necessary to carry out the provisions of Title 51.1 of the *Code of Virginia*, and § 51.1-124.22(10) requires the Board to adopt rules and policies that bring the Retirement System into compliance with any applicable law or regulation of the Commonwealth of Virginia or the United States.

The above action is approved.

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A. Scott Andrews, Chair  
VRS Board of Trustees

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Date



**DEFINED CONTRIBUTION INCENTIVE PLAN  
FOR VRS PERSONNEL**

Amended and Restated Effective January 1, 2023

**TABLE OF CONTENTS**

	<b><u>Page</u></b>
ARTICLE I. ESTABLISHMENT AND RESTATEMENT OF PLAN.....	1
Section 1.01. Plan Establishment and History .....	1
Section 1.02. Plan Restatement.....	1
ARTICLE II. CONSTRUCTION AND DEFINITIONS .....	1
Section 2.01. Construction and Governing Law .....	1
Section 2.02. Definitions.....	2
ARTICLE III. ELIGIBILITY AND PARTICIPATION .....	6
Section 3.01. Participation .....	6
Section 3.02. Cessation of Contributions.....	6
Section 3.03. Reemployment .....	6
ARTICLE IV. CONTRIBUTIONS .....	7
Section 4.01. Employer Contributions.....	7
Section 4.02. Transfer Contributions .....	7
Section 4.03. Rollover Contributions.....	7
Section 4.04. Expenses of Plan.....	7
ARTICLE V. LIMITATIONS ON CONTRIBUTIONS.....	7
Section 5.01. Code Section 415(c) Limits .....	7
Section 5.02. Excess Annual Additions.....	8
ARTICLE VI. ACCOUNTING .....	8
Section 6.01. Participant Accounts .....	8
Section 6.02. Valuation.....	9
Section 6.03. General Statement of Method of Account Valuations.....	9
Section 6.04. Adjustment of Accounts on Valuation Date .....	9
Section 6.05. Value of Accounts.....	10
Section 6.06. Participant Statements.....	10
ARTICLE VII. TRUST .....	10
Section 7.01. Trust Fund.....	10
Section 7.02. Trust Status .....	10
ARTICLE VIII. DISTRIBUTIONS .....	10
Section 8.01. Commencement and Form of Distributions.....	10
Section 8.02. Mandatory Cash-Out.....	10
Section 8.03. Required Minimum Distribution Rules .....	11
Section 8.04. Additional Tax on Early Withdrawals .....	12
Section 8.05. Transfers from the Plan.....	12
ARTICLE IX. LOANS .....	12
ARTICLE X. VESTING .....	13

Section 10.01.	Vesting .....	13
Section 10.02.	Felony Convictions .....	13
ARTICLE XI.	ROLLOVERS FROM THIS PLAN .....	13
Section 11.01.	Definitions for this Article .....	13
Section 11.02.	Direct Transfer of Eligible Rollover Distribution.....	14
Section 11.03.	Mandatory Withholding of Eligible Rollover Distributions.....	15
Section 11.04.	Explanation of Plan Distribution and Withholding Requirements .....	15
ARTICLE XII.	ADMINISTRATION OF THE PLAN .....	16
Section 12.01.	Authority of the Administrator .....	16
Section 12.02.	Powers of the Administrator .....	16
Section 12.03.	Delegation by Administrator.....	16
Section 12.04.	Employment of Consultants.....	16
ARTICLE XIII.	REQUESTS FOR INFORMATION AND OTHER CLAIMS PROCEDURES.....	16
Section 13.01.	Requests for Information Concerning Eligibility, Participation and Contributions.....	16
Section 13.02.	Requests for Information Concerning the Trust .....	16
Section 13.03.	Processing of Claims.....	17
ARTICLE XIV.	QUALIFIED GOVERNMENTAL EXCESS BENEFIT ARRANGEMENT .....	17
Section 14.01.	General.....	17
Section 14.02.	Eligibility and Participation .....	17
Section 14.03.	Contributions and Vesting .....	17
Section 14.04.	415(m) Accounts.....	17
Section 14.05.	Distributions on Account of Severance from Employment.....	18
Section 14.06.	Distributions Upon Participant's Death.....	18
ARTICLE XV.	AMENDMENT AND TERMINATION .....	18
Section 15.01.	Amendment and Termination .....	18
Section 15.02.	Adverse Effects.....	18
Section 15.03.	Distribution Upon Termination of the Plan .....	18
ARTICLE XVI.	MISCELLANEOUS .....	19
Section 16.01.	Non-Alienation .....	19
Section 16.02.	Military Service .....	20
Section 16.03.	Limitation of Rights and Obligations .....	20
Section 16.04.	Federal and State Taxes .....	21
Section 16.05.	Erroneous Payments.....	21
Section 16.06.	Payments to Minors or Incompetents .....	21
Section 16.07.	Missing or Lost Participants .....	21
Section 16.08.	No Reversion .....	21
Section 16.09.	Claims of Other Persons .....	22
Section 16.10.	Counterparts .....	22

**DEFINED CONTRIBUTION INCENTIVE PLAN  
FOR VRS PERSONNEL**

**ARTICLE I.**  
**ESTABLISHMENT AND RESTATEMENT OF PLAN**

**Section 1.01. Plan Establishment and History.**

(a) Pursuant to the Section 51.1-124.22.A.11 the Code of Virginia ("Va. Code"), the Board of Trustees of the Virginia Retirement System ("Board") established the Defined Contribution Incentive Plan for VRS Personnel ("Plan"), effective July 1, 2002, in order to provide retirement benefits for eligible employees.

(b) The Plan is, and is intended to remain, a defined contribution plan qualified under Code Section 401(a) and a profit sharing plan within the meaning of Code Section 401(a)(27), with contributions made without regard to profits. The Plan is a governmental plan within the meaning of Code Section 414(d) and Section 3(32) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). As a governmental plan, ERISA does not apply.

(c) The Plan was most recently amended and restated effective May 1, 2013, and was amended three times thereafter.

**Section 1.02. Plan Restatement.**

(a) The Plan is now being amended and restated effective January 1, 2023.

(b) Except as otherwise specifically provided herein, the Plan as hereinafter set forth establishes the rights and obligations with respect to individuals who are Employees on and after January 1, 2023, and to transactions under the Plan on and after January 1, 2023. The rights and benefits, if any, of individuals who are not Employees on or after January 1, 2023, shall be determined in accordance with the terms and provisions of the Plan that were in effect on the date of their Severance from Employment, except as otherwise specifically provided herein or in a subsequent amendment.

**ARTICLE II.**  
**CONSTRUCTION AND DEFINITIONS**

**Section 2.01. Construction and Governing Law.**

(a) This Plan shall be interpreted, enforced, and administered in accordance with the Code and, when not inconsistent with the Code, or expressly provided otherwise herein, the Va. Code without regard to conflict of law principles.

(b) Words used herein in the masculine gender shall be construed to include the feminine gender where appropriate, and *vice versa*, and words used herein in the singular or plural shall be construed as being in the plural or singular, where appropriate, and *vice versa*.

(c) The headings and subheadings in the Plan are inserted for convenience of reference only and are not to be considered in the construction of any provision of the Plan.

(d) If any provision of the Plan shall be held to violate the Code or be illegal or invalid for any other reason, that provision shall be deemed to be null and void, but the invalidation of that provision shall not otherwise impair or affect the Plan.

(e) In resolving any conflict between provisions of the Plan and in resolving any other uncertainty as to the meaning or intention of any provision of the Plan, the interpretation that causes the Plan to (i) constitute a qualified plan under the provisions of Code Section 401 with the earnings of the Trust exempt from income tax under Code Section 501, (ii) constitute a profit sharing plan within the meaning of Code Section 401(a)(27), (iii) be a governmental plan as defined in ERISA Section 3(32) and Code Section 414(d), and (iv) comply with all applicable requirements of the Code, shall prevail over any different interpretation.

**Section 2.02. Definitions.** When the initial letter of a word or phrase is capitalized herein, the meaning of such word or phrase shall be as follows:

(a) "Account" means the separate account maintained for each Participant to reflect his or her interest under the Plan attributable to his or her Employer Contributions pursuant to Section 4.01.

(b) "Administrator" means VRS; provided, however, that to the extent that VRS has delegated any of its responsibilities as Administrator to any other person or persons, the term Administrator shall be deemed to refer to that person or persons. The VRS Director shall serve as the chief administrative officer of the Plan.

(c) "Agent" means a service provider selected by the Administrator, in its sole and absolute discretion, to provide services under the Plan.

(d) "Annual Addition" means the annual addition as defined in Code Section 415(c) and as modified in Code Sections 415(l)(1) and 419A(d)(2). In general, Code Section 415(c) defines annual addition as the sum of the following amounts credited to a Participant's accounts for the Limitation Year under this Plan and any other defined contribution plan maintained by the Employer:

- (1) Employee contributions;
- (2) Employer contributions, including Employer Contributions under Section 4.01;
- (3) forfeitures;
- (4) amounts allocated to an individual medical account, as defined in Code Section 415(l)(2), which is part of a pension or annuity plan maintained by the Employer or a Related Employer, or both, as applicable; and

(5) mandatory employee contributions to a defined benefit plan maintained by the Employer unless the contributions are picked up by the Employer pursuant to Code Section 414(h)(2).

Annual Additions shall not include transfer contributions or rollover contributions.

(e) "Applicable Form" means the appropriate form as designated and furnished by the Administrator or the Agent to make any election or provide any notice required by the Plan. In those circumstances where a written election or consent is not required by the Plan or the Code, the Administrator and/or the Agent may prescribe an electronic or telephonic form in lieu of or in addition to a written form.

(f) "Beneficiary" means any person, company, trustee, or estate designated by the Participant on the Applicable Form to receive any benefits payable under the Plan in the event of the Participant's death. If the designated primary or contingent Beneficiary does not survive the Participant or there is no Beneficiary designated, the Participant's Beneficiary shall be determined in accordance with Va. Code Section 51.1-162, as follows: (i) the Participant's surviving Spouse, or if none; (ii) the Participant's children and descendants of deceased children, per stirpes, or if none; (iii) the Participant's parents equally if both living, or if none; (iv) the duly appointed executor or administrator of the Participant's estate, or if none; (v) the next of kin entitled to inherit under the laws of the Participant's domicile at the time of death. If a Beneficiary survives the Participant but dies before the entire Account has been distributed, then the unpaid balance of the Account shall be distributed to the Beneficiary's estate. Beneficiary also means an alternate payee within the meaning of Code Section 414(p)(8).

(g) "Board" means the Board of Trustees of the Virginia Retirement System.

(h) "Code" means the Internal Revenue Code of 1986, as amended from time to time.

(i) "Commonwealth" means the Commonwealth of Virginia and an agency or instrumentality thereof.

(j) "Cost-of-Living Adjustment" means the cost-of-living adjustment prescribed by the Secretary of the Treasury under Code Section 401(a)(17) or 415(d) for any applicable year.

(k) "Effective Date" of the Plan means July 1, 2002, and of this amendment and restatement means January 1, 2023.

(l) "Eligible Employee" means an Employee who is employed by VRS and is (i) the Director of VRS or (ii) a member of the Investment Management Committee. As of the Effective Date of this amendment and restatement, the Investment Management Committee includes the (i) Chief Investment Officer, (ii) the Chief Managing Director, (iii) Managing Directors, and (iv) Program Directors, including Research.

(m) "Employee" means any common law employee employed by an Employer. An Employee does not include an independent contractor.

(n) "Employer" means the Commonwealth.

(o) "Employer Contributions" mean the contributions made to the Plan by the Employer on behalf of a Participant pursuant to Section 4.01.

(p) "Excess Annual Additions" mean that portion of a Participant's Employer Contributions to the Plan and contributions to another 401(a) defined contribution plan maintained by the Employer or a Related Employer for a Limitation Year which exceeds the limits of Code Section 415.

(q) "Excess Benefit Plan" means the qualified governmental excess benefit arrangement under Code Section 415(m) that is described in Article XIV.

(r) "Excess Contribution" means, with respect to a Participant, the Employer contributions that would have been made for a 415(m) Participant to a 401(a) Plan for a Plan Year, but could not be made because of the application of Code Section 415(c).

(s) "HEART" means the Heroes Earnings Assistance and Relief Tax Act of 2008, as amended from time to time.

(t) "Incentive Compensation" means the incentive award approved under the Virginia Retirement System Investment Professionals' Pay Plan, as amended from time to time, or such other applicable authority, for a Plan Year.

(u) "Limitation Year" means the Plan Year.

(v) "Participant" means any Eligible Employee who is or may become eligible to receive a benefit of any type under the Plan. A Participant shall also mean, when appropriate to the context, a former Eligible Employee who is eligible to receive a benefit of any type under the Plan.

(w) "Plan" means the Defined Contribution Incentive Plan for VRS Personnel, as amended from time to time.

(x) "Plan Compensation" means all compensation as defined in Code Section 415(c)(3). In general, Code Section 415(c)(3) defines compensation as all of an Employee's wages as defined in Code Section 3401(a) for the purposes of income tax withholding at the source but determined without regard to any rules that limit the remuneration included in wages based on the nature or location of the employment or the services performed (such as the exception for agricultural labor in Code Section 3401(a)(2)); provided, however, Plan Compensation shall also include the amount of any elective deferrals, as defined in Code Section 402(g)(3), and any amount contributed or deferred by the Employer at the election of the Employee and which is not includible in the gross income of the Employee by reason of Code Section 125, 403(b), 132(f)(4), 401(k), or 457(b). Plan Compensation for a Plan Year includes compensation paid by the later of (i) two and one-half months after an Employee's Severance from Employment, or (ii) the end of the Plan Year that includes the date of the Employee's Severance from Employment, if:

(1) the payment is regular compensation for services during the Employee's regular working hours, or compensation for services outside the Employee's regular

working hours (*e.g.*, overtime or shift differential), commissions, bonuses, or other similar payments and the payment would have been paid to the Employee prior to a Severance from Employment if the Employee had continued in employment with the Employer; or

(2) the payment is for unused accrued bona fide sick, vacation, or other leave, but only if the Employee would have been able to use the leave if the Employee had continued in employment.

Plan Compensation does not include any amounts "picked up" by the Employer within the meaning of Code Section 414(h). Plan Compensation for any Plan Year shall not exceed the limits under Code Section 401(a)(17) increased by the Cost-of-Living Adjustment.

(y) "Plan Year" means the 12 month period beginning July 1.

(z) "Related Employer" means the Employer and any other entity which is under common control with the Employer under Code Section 414(b), (c) or (m). For this purpose, the Board shall determine which entities are Related Employers based on a reasonable, good faith standard and taking into account the special rules applicable under Notice 89-23, 1989-1 C.B. 654.

(aa) "Section" means, when not preceded by the word Code, a section of the Plan.

(bb) "Severance from Employment" means the complete termination of the employment relationship between the Employee, the Employer, and any employer who participates in a retirement plan established under Chapters 1, 2, 2.1, or 3 of Title 51.1 of the Va. Code.

(cc) "Spouse" means the person to whom the Participant is legally married under federal law.

(dd) "Trust" means the Trust for the Defined Contribution Incentive Plan for VRS Personnel, which may incorporate one or more qualified trusts under Code Section 401(a), custodial accounts treated as qualified trusts under Code Section 401(f), and/or annuity contracts treated as qualified trusts under Code Section 401(f), established under the Plan to hold Plan assets.

(ee) "Trust Fund" means the assets of the Plan held pursuant to the terms of the Plan and the Trust.

(ff) "Trustee" means the trustee or any successor trustee designated and appointed by VRS, and includes a custodian of a custodial account or an insurer of an annuity contract under Code Section 401(f).

(gg) "USERRA" means the Uniformed Services Employment and Reemployment Rights Act of 1994, as amended from time to time.



(hh) "Valuation Date" means the last day of each calendar quarter of the Plan Year and such other date or dates as the Administrator may designate.

(ii) "Va. Code" means the Code of Virginia, as amended from time to time.

(jj) "Vested" means the interest of the Participant or Beneficiary in his or her Accounts which is unconditional, legally enforceable, and nonforfeitable at all times.

(kk) "VRS" means the Virginia Retirement System.

(ll) "401(a) Plan" means this Plan and all other tax-qualified defined contribution plans under Code Section 401(a) maintained by the Employer,

(mm) "415(m) Account" means the separate bookkeeping account maintained for each 415(m) Participant reflecting his or her interest under the Excess Benefit Plan attributable to Excess Contributions.

(nn) "415(m) Participant" means an Eligible Employee or former Eligible Employee who has an 415(m) Account balance under the Excess Benefit Plan. Effective June 30, 2013, the individual serving as Chief Investment Officer is the only 415(m) Participant. No other Participant is or may become a 415(m) Participant.

### **ARTICLE III.** **ELIGIBILITY AND PARTICIPATION**

#### **Section 3.01. Participation.**

(a) An Eligible Employee who is a Participant on the day before the Effective Date of this amended and restated Plan shall continue to be a Participant on the Effective Date.

(b) An Employee who becomes an Eligible Employee on or after the Effective Date of this amended and restated Plan shall become a Participant in the Plan on the date he or she becomes an Eligible Employee.

(c) VRS shall notify the Eligible Employee of his or her eligibility to participate in the Plan. To become a Participant under the Plan, an Eligible Employee must complete the Applicable Forms, which may include enrollment, beneficiary designation, and investment election forms, and return them to the Administrator or Agent, as applicable.

**Section 3.02. Cessation of Contributions.** A Participant shall cease to be eligible for Employer Contributions under the Plan when (i) he or she is no longer an Eligible Employee or (ii) the Plan is terminated.

**Section 3.03. Reemployment.** A former Eligible Employee who subsequently becomes an Eligible Employee again shall participate in the Plan as described in Section 3.01.

**ARTICLE IV.**  
**CONTRIBUTIONS**

**Section 4.01. Employer Contributions.**

(a) The Employer shall make an Employer Contribution to the Plan on behalf of each Participant for the Plan Year as follows:

(1) Except as provided in subparagraph (2), a Participant shall receive an Employer Contribution to his or her Account each Plan Year equal to the sum of (i) a specified percentage of the Incentive Compensation determined for such Participant by the Board for such Plan Year and (ii) any additional amount determined by the Board to be made on behalf of such Participant; provided, however, that if the Board does not specify a percentage under (i) for a Plan Year, the Employer Contribution shall be 50% of the Incentive Compensation.

(2) A Participant who is the Director of VRS shall receive an Employer Contribution to his or her Account each Plan Year in an amount to be determined by the Board in its sole and absolute discretion from time to time as allowed by applicable law.

(b) Employer Contributions for any Plan Year shall be subject to the limit under Code Section 401(a)(17), as increased by the Cost-of-Living Adjustment, if applicable.

(c) Employer Contributions shall be paid to the Plan by the Employer within the time required by law for the Plan Year during which they are being made. Employer Contributions shall be allocated to each Participant's Account as of the date made to the Plan, but no later than the last day of the Plan Year.

**Section 4.02. Transfer Contributions.** The Plan shall not accept transfer contributions of any kind.

**Section 4.03. Rollover Contributions.** The Plan shall not accept rollover contributions of any kind.

**Section 4.04. Expenses of Plan.** All reasonable expenses of administering the Plan shall be charged against and paid from the Participant's Accounts, subject to the terms of the Trust, unless paid by the Employer or VRS. The Administrator shall have the right to allocate expenses associated with maintaining the Accounts of terminated Employees to such Accounts, even if no expenses are allocated to the Accounts of active Employees, in accordance with rules promulgated by the Internal Revenue Service.

**ARTICLE V.**  
**LIMITATIONS ON CONTRIBUTIONS**

**Section 5.01. Code Section 415(c) Limits.**

(a) Notwithstanding any provision of the Plan to the contrary, Annual Additions to the Plan and any other Code Section 401(a) plan maintained by the Employer or a Related

Employer for a Participant in a Limitation Year shall not exceed the limitations set forth in Code Section 415(c).

- (b) The Code Section 415(c) limit for any Limitation Year is the lesser of:
- (1) \$61,000 for 2022, increased by the Cost-of-Living Adjustment thereafter;
- or
- (2) 100% of the Participant's Plan Compensation for the Limitation Year.

**Section 5.02. Excess Annual Additions.**

(a) If as of the end of the Plan Year, the Annual Additions allocated to any Participant's Account exceed the limitations of this Article V, the Excess Annual Additions will be corrected as permitted under the Employee Plans Compliance Resolution System (or similar Internal Revenue Service correction program).

(b) If a Participant has Excess Annual Additions for a Plan Year, an adjustment to comply with this Article shall be made as soon as administratively possible, but no later than the time permitted under Internal Revenue Service guidance: (i) first, to all plans not hereinafter described; (ii) second, to any profit sharing plan (such as this Plan) that does not provide matching contributions based on the employee's elective deferrals to a 403(b) or 457(b) plan that is required to be aggregated with this Plan; (iii) third, to any profit sharing plan providing matching contributions based on the employee's elective deferrals to a 403(b) or 457(b) plan that is required to be aggregated with this Plan (such as the Virginia Cash Match Plan); (iv) fourth, to any money purchase pension plan that is required to be aggregated with this Plan; (v) fifth, to any target benefit plan that is required to be aggregated with this Plan; (vi) sixth, to any welfare benefit fund and individual medical benefit account; and (vii) seventh, to any defined benefit plan requiring mandatory employee contributions that is required to be aggregated with this Plan.

(c) If a Participant is a participant in two or more plans of the same type described in paragraph (b), the adjustment provided for in paragraph (b) to such plans shall be made to contributory plans or aspects thereof first, and then to non-contributory plans or aspects thereof.

**ARTICLE VI.**  
**ACCOUNTING**

**Section 6.01. Participant Accounts.** The Administrator or Agent shall establish and maintain adequate records to reflect the Accounts of each Participant and Beneficiary. Credits and charges shall be made to such Accounts to reflect additions, distributions, and withdrawals, and to reflect gains or losses pursuant to the terms of the Trust. The maintenance of individual Accounts is for accounting purposes only, and a segregation of Plan assets to each Account shall not be required. Participants do not have the right to direct the investment of their Accounts under the Plan.

**Section 6.02. Valuation.** As of each Valuation Date, the Trustee shall determine the fair market value of the Trust Fund. Based on the valuation of the Trustee, the Administrator shall determine the value of the Account of each Participant.

**Section 6.03. General Statement of Method of Account Valuations.** The value of the Account of a Participant as of each Valuation Date shall be equal to the value of the Account as of the preceding Valuation Date less any payments from the Account since the preceding Valuation Date, plus the amount of any Employer Contributions allocated to the Account since the preceding Valuation Date, and plus or minus the applicable adjustments under Section 6.04.

**Section 6.04. Adjustment of Accounts on Valuation Date.** The Account of each Participant shall be adjusted as of each Valuation Date in accordance with the provisions of this Section.

(a) The Trustee shall determine the fair market value of the Trust Fund as of each Valuation Date by a method uniformly applied. For purposes of this Section, the determination of fair market value shall be subject to the following rules:

(1) The current fair market value shall exclude any Employer Contributions allocated since the prior Valuation Date.

(2) The fair market value as of the immediately preceding Valuation Date shall include Employer Contributions allocated as of such date but shall exclude benefits paid and withdrawals made from the Trust Fund during the period beginning with the preceding Valuation Date and ending with the current Valuation Date.

(b) The increase or decrease, if any, in the Trust Fund shall be equal to the difference between the value of the Trust Fund as of the current Valuation Date and the value of the Trust Fund as of the immediately preceding Valuation Date.

(c) As of the close of business on each Valuation Date, the Administrator shall allocate the increase or decrease, as the case may be, of the Trust Fund to the Accounts of the Participants in the Trust Fund, each Account being treated separately, in the same proportion that the balance of each Account of a Participant in the Trust Fund as of the close of business on the immediately preceding Valuation Date bears to the balance of all Accounts of all Participants in the Trust Fund as of the close of business on the immediately preceding Valuation Date.

(d) For purposes of the preceding allocations, the balance of the Account of a Participant as of the preceding Valuation Date shall be equal to his or her respective balance as of the immediately preceding Valuation Date reduced by any payments or withdrawals since such date.

(e) If the Administrator determines in making any valuation, allocation or adjustments to a Participant's Account that the strict application of this Section will not produce an equitable and non-discriminatory allocation among the Participant Accounts, the Administrator may modify its procedures under this Section for purposes of achieving an equal and non-discriminatory allocation under the Plan.

**Section 6.05. Value of Accounts.** The value of an Account as of any date shall be the value of the Account after all adjustments and allocations as of the Valuation Date on or immediately before such date, increased by the amount of any Employer Contributions allocated to the Account after the prior Valuation Date and reduced by the amount of any payments or withdrawals made from the Account after the prior Valuation Date.

**Section 6.06. Participant Statements.** The Administrator or the Agent shall provide to each Participant a statement reflecting the value of the Participant's Account within a reasonable period after each reporting period, but no less than annually. All reports to Participants shall be based on the fair market value of investments credited to their Accounts as of the reporting dates.

## **ARTICLE VII.** **TRUST**

**Section 7.01. Trust Fund.** All Employer Contributions under the Plan shall be transferred to the Trustee to be held in Trust as part of the Trust Fund in accordance with the provisions of the Plan and the Trust, as applicable. All assets held in connection with the Plan, including all Employer Contributions, all property and rights acquired or purchased with such amounts, and all income attributable to such amounts, property or rights, shall be held in, managed, invested and distributed in Trust as part of the Trust Fund, in accordance with the provisions of the Plan. All benefits under the Plan shall be distributed solely from the Trust Fund, and the Employer and/or VRS shall have no liability for any such benefits other than the obligation to make Employer Contributions as provided in the Plan.

**Section 7.02. Trust Status.** The Trust Fund shall be held in Trust for the exclusive benefit of Participants and Beneficiaries under the Plan in accordance with Code Section 501(a). No part of the Trust Fund shall be used for, or diverted to, purposes other than for the exclusive benefit of Participants and their Beneficiaries, and for defraying the reasonable expenses of the Plan and Trust. The Trust is exempt from tax pursuant to Code Sections 401(a) and 501(a).

## **ARTICLE VIII.** **DISTRIBUTIONS**

### **Section 8.01. Commencement and Form of Distributions.**

(a) A Participant or Beneficiary, as applicable, shall receive a lump sum distribution of his or her Vested Account as soon as administratively practicable following the last day of the quarter in which Participant has a Severance from Employment.

(b) Notwithstanding paragraph (a), a distribution may be delayed for a reasonable period in the event that the recipient cannot be located or is not competent to receive the benefit payment, there is a dispute as to the proper recipient of the benefit payment, additional time is needed to complete the Plan valuation adjustments and allocations, or additional time is necessary to properly explain the recipient's distribution options.

**Section 8.02. Mandatory Cash-Out.** A lump sum payment of the Participant's Account may be made without the consent of the Participant if his or her Account balance

exceeds \$1,000 but does not exceed \$5,000, provided that such distribution shall be made in a direct rollover to an individual retirement plan designated by the Administrator, unless the Participant elects to have such distribution paid directly to an eligible retirement plan specified by the Participant in a direct rollover or to receive the distribution directly in a lump sum. Any lump sum payments made under this Section 8.02 shall be made in a uniform and nondiscriminatory manner. This Section does not apply to an individual who is not a Participant.

**Section 8.03. Required Minimum Distribution Rules.**

(a) The provisions of this Section 8.03 take precedence over any inconsistent provisions of the Plan. All distributions under this Plan shall be made in accordance with Code Section 401(a)(9) and the regulations promulgated thereunder, including the incidental death benefit rules under Code Section 401(a)(9)(G), and the changes under the Setting Every Community Up for Retirement Enhancement Act of 2019, and any regulatory guidance issued thereunder, and shall comply with rules under this Section 8.03.

(b) Distributions may only be made over one of the following periods (or a combination thereof):

- (1) The life of the Participant;
- (2) The life of the Participant and a designated individual Beneficiary;
- (3) A period certain not extending beyond the life expectancy of the Participant; or
- (4) A period certain not extending beyond the joint and last survivor life expectancy of the Participant and designated individual Beneficiary.

(c) A Participant's Accounts shall be distributed to the Participant beginning no later than April 1 of the calendar year following the calendar year in which the Participant attains age 70½ (age 72 for distributions required to be made after December 31, 2019, with respect to a Participant who would have attained age 70½ after December 31, 2019) or, if later, April 1 of the calendar year following the calendar year that the Participant has a Severance from Employment.

(d) The Administrator or its Agent shall calculate the amounts required to be distributed to a Participant under this Section and notify such Participant of such distributions prior to the date distributions must begin.

(e) Notwithstanding anything in this Section 8.03 to the contrary, for 2020 or such longer period as provided in legislation modifying or extending the Coronavirus Aid, Relief, and Economic Security Act of 2020, the minimum distribution requirements will be satisfied for 2020 as provided in this paragraph. Effective March 27, 2020, or as soon as administratively practicable thereafter, a Participant or Beneficiary who would have been required to receive a required minimum distribution in 2020 (or paid in 2021 for the 2020 calendar year for a Participant with a required beginning date of April 1, 2021) but for the enactment of Code Section 401(a)(9)(I) ("2020 RMDs") and who would have satisfied that

requirement by receiving distributions that are (i) equal to the 2020 RMDs, or (ii) one or more payments (that include the 2020 RMDs) in a series of substantially equal periodic payments made at least annually and expected to last for the life (or life expectancy) of the Participant, the joint lives (or joint life expectancies) of the Participant and the Beneficiary, or for a period of at least 10 years ("Extended 2020 RMDs"), will receive this distribution unless the Participant or Beneficiary chooses not to receive such distributions. Participants and Beneficiaries described in the preceding sentence will be given the opportunity to elect to stop receiving the distribution described in the preceding sentence. In addition, 2020 RMDs and Extended 2020 RMDs will not be treated as eligible rollover distributions in 2020.

**Section 8.04. Additional Tax on Early Withdrawals.**

(a) Generally, and except as described in paragraph (b), if a Participant receives any amount under the Plan, his or her tax for the taxable year in which such amount is received is increased by an amount equal to ten percent (10%) of the portion of such amount which is includible in gross income. Such amount shall be included in gross income to the extent allocable to income on the Trust and shall not be included in gross income to the extent allocable to the investment in the Trust as provided in Code Section 72(e)(2)(b).

(b) The penalty described in paragraph (a) generally does not apply to any distribution (i) made on or after the date on which the Participant attains age 59½, (ii) made on or after the death of the Participant, (iii) attributable to the Participant becoming disabled within the meaning of Code Section 72(m)(7), (iv) which is part of a series of substantially equal periodic payments made (not less frequently than annually) for the life or life expectancy of the Participant or the joint lives (or joint life expectancies) of such Participant and his or her designated Beneficiary, (v) made to a Participant after Severance from Employment following the attainment of age 55, (vi) which is a qualified reservist distribution within the meaning of Code Section 72(t)(2)(G)(iii), or (vii) any other circumstance permitted by the Code or the Internal Revenue Service.

**Section 8.05. Transfers from the Plan.**

(a) The Plan shall permit a transfer a portion of a Participant's Account (but not all of the Participant's Account) from the Plan to the Virginia Cash Match Plan if (i) the Participant has obtained age 55 and (ii) the Participant has established an account under the Commonwealth of Virginia 457 Deferred Compensation Plan. The transferred amounts shall be held in the Virginia Cash Match Plan in the Participant's Account undersuch plan.

(b) The transfer shall satisfy such rules and policies established by the Administrator.

**ARTICLE IX.**  
**LOANS**

Loans are not permitted under the Plan.

**ARTICLE X.**  
**VESTING**

**Section 10.01. Vesting.** A Participant shall be 100% Vested in his or her Accounts at all times.

**Section 10.02. Felony Convictions.**

(a) Notwithstanding Section 10.01, if a Participant (i) is convicted of a felony and (ii) his or her Employer determines that the felony arose from misconduct occurring on or after July 1, 2011, in any position in which the Participant was covered for retirement purposes under any retirement system administered by the Board, the Participant shall forfeit his or her Employer Contribution Account. Such forfeiture shall occur following the Employer's notification to VRS that a felony conviction arising from such misconduct has been obtained and the administrative process as set forth in Va. Code Section 51.1-124.13 has concluded.

(b) Forfeitures arising under paragraph (a) shall be allocated to a forfeiture account under the Plan, and shall be used to reduce Plan expenses.

**ARTICLE XI.**  
**ROLLOVERS FROM THIS PLAN**

**Section 11.01. Definitions for this Article.** For purposes of this Article, the following definitions shall apply.

(a) "Direct Rollover" means an Eligible Rollover Distribution that is paid directly to an Eligible Retirement Plan for the benefit of the Distributee.

(b) "Distributee" means a Participant, the Spouse of the Participant, or the Participant's former Spouse who is the alternate payee under a qualified domestic relations order as defined in Code Section 414(p), and a Participant's non-Spouse Beneficiary, any of whom is eligible to receive a distribution from the Plan.

(c) "Eligible Retirement Plan," as defined under Code Section 402(c)(8)(B), means:

- (1) an individual retirement account described in Code Section 408(a);
- (2) an individual retirement annuity (other than an endowment contract) described in Code Section 408(b);
- (3) any annuity plan described in Code Section 403(a);
- (4) a plan described in Code Section 403(b);
- (5) a qualified plan described in Code Section 401(a);



(6) a Code Section 457(b) eligible deferred compensation plan which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state;

(7) a Roth individual retirement account described in Code Section 408A(e) provided the Distributee's adjusted gross income does not exceed any limit applicable under federal law for the tax year in which the distribution occurs; and

(8) a SIMPLE IRA described in Code Section 408(p)(1), provided that the rollover contribution is made after the two year period described in Code Section 72(t)(6).

In the case of a distribution to a non-Spouse Beneficiary, an Eligible Retirement Plan means the plans described in subparagraphs (1) and (2) only, to the extent consistent with the provisions of Code Section 402(c)(11) and any successor provisions thereto or additional guidance issued thereunder.

(d) "Eligible Rollover Distribution," as defined in Code Section 402(f)(2)(A), means any distribution of all or any portion of the balance to the credit of the Distributee under the Plan, excluding the following:

(1) any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the Distributee or the joint lives (or joint life expectancies) of the Distributee and the Distributee's designated Beneficiary, or for a specified period of 10 years or more;

(2) any distribution to the extent such distribution is required under Code Section 401(a)(9);

(3) the portion of any distribution that is not includible in gross income; however, a portion of a distribution will not fail to be an eligible rollover distribution merely because the portion consists of after-tax employee contributions that are not includible in gross income, although such portion may be transferred only to an individual retirement account or annuity described in Code Section 408(a) or (b) or to a qualified retirement plan described in Code Section 401(a) that agrees to separately account for amounts so transferred (and earnings thereon), including separately accounting for the portion of the distribution that is includible in gross income and the portion of the distribution that is not so includible;

(4) any distribution which is made upon the financial hardship of the Participant; and

(5) other items designated by regulations, or by the Commissioner in revenue rulings, notices, or other guidance, as items that do not constitute an eligible rollover distribution.

**Section 11.02. Direct Transfer of Eligible Rollover Distribution.** A Distributee may elect on an Applicable Form to have an Eligible Rollover Distribution paid directly to an Eligible

Retirement Plan as specified by the Distributee in a Direct Rollover, at the time and in the manner prescribed by the Administrator. An Eligible Rollover Distribution that is paid to an Eligible Retirement Plan in a Direct Rollover is excludable from the Distributee's gross income under Code Section 402; provided, however, if any portion of such Eligible Rollover Distribution is subsequently distributed from the Eligible Retirement Plan, that portion shall be included in gross income to the extent required under Code Section 402, 403, or 408.

**Section 11.03. Mandatory Withholding of Eligible Rollover Distributions.**

(a) If the Distributee of an Eligible Rollover Distribution does not elect to have the Eligible Rollover Distribution paid directly from the Plan to an Eligible Retirement Plan in a Direct Rollover pursuant to Code Section 401(a)(31), the Eligible Rollover Distribution shall be subject to a mandatory 20% federal income tax withholding under Code Section 3405(c). Only that portion of the Eligible Rollover Distribution that is not paid directly from the Plan to an Eligible Retirement Plan in a Direct Rollover shall be subject to the mandatory withholding requirement under Code Section 3405(e), and only to the extent such amount would otherwise be includible in the Distributee's taxable gross income.

(b) If a Distributee elects to have an Eligible Rollover Distribution paid to the Distributee, the distribution may be excluded from the gross income of the Distributee provided that said distribution is contributed to an Eligible Retirement Plan no later than the 60th day following the day on which the Distributee received the distribution.

(c) If the Plan distribution is not an Eligible Rollover Distribution, said distribution shall be subject to the elective withholding provisions of Code Section 3405(a) and (b).

**Section 11.04. Explanation of Plan Distribution and Withholding Requirements.**

(a) Not fewer than 30 days nor more than 180 days before an Eligible Rollover Distribution, the Administrator shall provide each Distributee a written explanation as required under Code Section 402(f), which explains the rules:

(1) under which a Distributee may elect to have an Eligible Rollover Distribution paid in a Direct Rollover to an Eligible Retirement Plan;

(2) that require the withholding of tax on an Eligible Rollover Distribution if it is not paid in a Direct Rollover to an Eligible Retirement Plan;

(3) that provide that a distribution shall not be subject to tax if the distribution is rolled over to an Eligible Retirement Plan within 60 days after the date the Distributee receives the distribution; and

(4) if applicable, certain special rules regarding taxation of the distribution as described in Code Sections 402(d) and (e).

(b) Notwithstanding paragraph (a), a distribution may begin fewer than 30 days after the notice discussed in the preceding sentence is given, provided that the Administrator clearly informs the Participant that he or she has a right to a period of at least 30 days after receiving

the notice to consider the decision of whether or not to elect a distribution and the Participant, after receiving a notice, affirmatively elects a distribution.

**ARTICLE XII.**  
**ADMINISTRATION OF THE PLAN**

**Section 12.01. Authority of the Administrator.** The Administrator is responsible for performing the duties required for operation of the Plan. The Administrator shall have all power necessary or convenient to enable it to exercise its authority under the Plan. In connection therewith, the Administrator may provide rules and regulations, not inconsistent with the provisions hereof, for the operation and management of the Plan, and may from time to time amend or rescind such rules or regulations. The Administrator is authorized to accept service of legal process for the Plan.

**Section 12.02. Powers of the Administrator.** The Administrator shall have the power and discretion to construe and interpret the Plan, including any ambiguities, to determine all questions of fact or law arising under the Plan, and to resolve any disputes arising under and all questions concerning administration of the Plan. The Administrator may correct any defect, supply any omission or reconcile any inconsistency in the Plan in such manner and to such extent as the Administrator may deem expedient and, subject to the Plan's claims procedures, the Administrator should be the sole and final judge of such expediency. Benefits under the Plan shall be paid only if the Administrator decides in its discretion that the Participant or Beneficiary is entitled to them.

**Section 12.03. Delegation by Administrator.** The Administrator may delegate to an individual, committee, or organization to carry out its fiduciary duties or other responsibilities under the Plan. Any such individual, committee, or organization delegated fiduciary duties shall be a fiduciary until the Administrator revokes such delegation. A delegation of the Administrator duties or responsibilities may be revoked without cause or advance notice. Such individual, committee, or organization shall have the same power and authority with respect to such delegated fiduciary or other responsibilities as the Administrator has under the Plan.

**Section 12.04. Employment of Consultants.** The Administrator may employ one or more persons to render advice with regard to its responsibilities under the Plan.

**ARTICLE XIII.**  
**REQUESTS FOR INFORMATION AND OTHER CLAIMS PROCEDURES**

**Section 13.01. Requests for Information Concerning Eligibility, Participation and Contributions.** Requests for information concerning eligibility, participation, contributions, or any other aspects of the operation of the Plan, and service of legal process, should be in writing and directed to the Administrator of the Plan.

**Section 13.02. Requests for Information Concerning the Trust.** Requests for information concerning the Trust and its terms, conditions, and interpretations thereof, claims thereunder, and any requests for review of such claims, should be in writing and directed to the Administrator of the Plan.

**Section 13.03. Processing of Claims.** Claims under the Plan shall be processed in a manner consistent with the Virginia Administrative Process Act, Va. Code Section 2.2-4000 *et seq.*

**ARTICLE XIV.**  
**QUALIFIED GOVERNMENTAL EXCESS BENEFIT ARRANGEMENT**

**Section 14.01. General.**

(a) The Excess Benefit Plan is intended to be a portion of the Plan that is a qualified excess benefit arrangement within the meaning of Code Section 415(m)(3) and an exempt governmental deferred compensation plan described in Code Section 3121(v)(3). Code Sections 83, 402(d), 409A, 457(a), and 457(f) shall not apply to the Excess Benefit Plan. The sole purpose of the Excess Benefit Plan is to provide for contributions that would have been made to a 401(a) Plan absent the limitations of Code Section 415(c).

(b) No election is provided at any time to a 415(m) Participant, directly or indirectly, to defer compensation under the Excess Benefit Plan, and no employee pre-tax or after-tax contributions may be made to or under the Excess Benefit Plan at any time.

(c) Under no circumstances shall Excess Contributions under the Excess Benefit Plan be credited to the Plan or paid from the Trust. The Excess Benefit Plan shall be and remain unfunded, and amounts credited to a Participant's 415(m) Account shall be payable from the Employer's general assets only. The Excess Benefit Plan constitutes an unsecured promise by the Employer to make benefit payments in the future from its general assets.

**Section 14.02. Eligibility and Participation.**

(a) The Chief Investment Officer is the only Participant eligible to participate in the Excess Benefit Plan.

(b) The Chief Investment Officer shall automatically participate in the Excess Benefit Plan for a Plan Year if the Board determines there is an Excess Contribution for the Plan Year.

**Section 14.03. Contributions and Vesting.**

(a) The Board shall make an Excess Contribution for each 415(m) Participant to the Excess Benefit Plan not later than the latest date on which contributions could be made to the 401(a) Plan for such Plan Year to which the Excess Contribution relates.

(b) A 415(m) Participant is 100% Vested in his or her 415(m) Account at all times.

**Section 14.04. 415(m) Accounts.** The Administrator or Agent shall establish and maintain adequate records to reflect the 415(m) Accounts of each 415(m) Participant. The 415(m) Account shall reflect the record of the 415(m) Participant's interest under this Excess Benefit Plan attributable to Excess Contributions made by the Board and the earnings and losses thereon. The maintenance of individual accounts is for accounting purposes only, and a segregation of Excess Benefit Plan assets to each 415(m) Account shall not be required. 415(m)

Participants do not have the right to direct the investment of their 415(m) Accounts under the Excess Benefit Plan.

**Section 14.05. Distributions on Account of Severance from Employment.** A Participant's 415(m) Account shall be distributed in a single lump sum payment within 180 days after the Participant's Severance from Employment. The amount to be distributed to the Participant shall be determined based on the value of the Participant's 415(m) Account as determined on the last day of the quarter in which the Participant has a Severance from Employment with the Employer.

**Section 14.06. Distributions Upon Participant's Death.** In the event that the 415(m) Participant dies before receiving a distribution of the amount credited to his or her 415(m) Account, such amount shall be distributed in a single lump sum payment within 180 days of the Participant's death to the Participant's Beneficiary. The amount to be distributed to the Participant's Beneficiary shall be determined based on the value of the Participant's 415(m) Account as determined on the last day of the quarter in which the Participant died.

**Section 14.07. Expenses of Excess Benefit Plan.** All reasonable expenses of administering the Excess Benefit Plan shall be charged against and paid from 415(m) Participants' 415(m) Accounts, unless paid by the Employer.

## **ARTICLE XV.** **AMENDMENT AND TERMINATION**

**Section 15.01. Amendment and Termination.** While it is expected that the Plan shall continue indefinitely, the Commonwealth reserves the right to amend, freeze, or terminate the Plan, or to discontinue any further Employer Contributions to the Plan at any time. The Board may, consistent with Va. Code Section 51.1-124.22.A.11, make any amendment to the Plan, provided that no such amendment shall reduce, suspend or terminate the accrued benefits otherwise payable to a Participant or Beneficiary hereunder as of the date of such amendment. To the extent required by the exclusive benefit rule, any amendment shall not be effective to the extent that the amendment has the effect of causing any Plan assets to be diverted to or inure to the benefit of the Employer, or to be used for any purpose other than providing benefits to Participants and Beneficiaries and defraying reasonable expenses of administering the Plan. Notwithstanding the foregoing, the Board hereby delegates to the VRS Director the right to modify, alter, or amend the Plan in whole or in part to make any technical modification, alteration or amendment which in the opinion of VRS' counsel is necessary to comply with federal law.

**Section 15.02. Adverse Effects.** Any amendment or termination of the Plan cannot adversely affect the benefits accrued by Participants prior to the date of amendment or termination. The Plan may not be amended in a manner that violates any provision of the Code.

**Section 15.03. Distribution Upon Termination of the Plan.** The Commonwealth has the right to completely terminate this Plan at any time and in its sole discretion. In such a case, VRS shall arrange for suitable distribution of Plan assets, including the possibility of transfer to another 401(a) plan or plans. The Trustee shall not be required to pay out any asset of the Trust

Fund to Participants and Beneficiaries or a successor plan upon termination of the Trust until the Trustee has received written confirmation from VRS (i) that all provisions of the law with respect to such termination have been complied with, and, (ii) after the Trustee has made a determination of the fair market value of the assets of the Plan, that the assets of the Plan are sufficient to discharge when due all obligations of the Plan required by law. The Trustee shall rely conclusively upon such written certification and shall be under no obligation to investigate or otherwise determine its propriety.

**ARTICLE XVI.**  
**MISCELLANEOUS**

**Section 16.01. Non-Alienation.**

(a) A Participant's Account under the Plan shall not be liable for any debt, liability, contract, engagement, or tort of the Participant or his or her Beneficiary, nor subject to anticipation, sale, assignment, transfer, encumbrance, pledge, charge, attachment, garnishment, execution, alienation, or any other voluntarily or involuntarily alienation or other legal or equitable process, nor transferable by operation of law.

(b) Notwithstanding paragraph (a), the Plan shall comply with any judgment, decree or order ("domestic relations order") which establishes the right of an alternate payee within the meaning of Code Section 414(p)(8) to all or a portion of a Participant's benefit under the Plan to the extent that it is a "qualified domestic relations order" ("QDRO") under Code Section 414(p). The Administrator shall establish reasonable written procedures to determine whether a domestic relations order is a QDRO and to administer the distribution of benefits with respect to such orders, which procedures may be amended from time to time, and which shall be provided to Participants upon request. Notwithstanding any other provisions in the Plan, the Plan may make an immediate distribution to the alternate payee pursuant to a QDRO.

(c) Notwithstanding paragraph (a), the Plan shall offset from the benefit otherwise payable to a Participant or his or her Spouse such amounts as are permitted to be offset under a court order, civil judgment, or settlement agreement in accordance with Code Section 401(a)(13)(C).

(d) Notwithstanding paragraph (a), the Administrator may pay from Participant's or Beneficiary's Account under the Plan the amount that the Administrator finds is lawfully demanded under a levy issued by the Internal Revenue Service with respect to that Participant or Beneficiary or is sought to be collected by the United States Government under a judgment resulting from an unpaid tax assessment against the Participant or Beneficiary. Except in the case of an alternate payee within the meaning of Code Section 414(p)(8), under no circumstances may a payment under this paragraph (d) take place before a Participant has a Severance from Employment.

(e) Notwithstanding paragraph (a), pursuant to Va. Code Section 51.1-124.4(A), the Administrator shall honor any process for a debt to the Employer who has employed such person, and except for administrative actions pursuant to Chapter 19 (Section 63.2-1900 *et seq.*) of Title 63.2 of the Va. Code or any court process to enforce a child or child and spousal

support obligation. Under no circumstances may a payment under this paragraph (e) take place before a Participant has a Severance from Employment.

**Section 16.02. Military Service.**

(a) Notwithstanding any provisions of this Plan to the contrary, contributions, benefits, and service credit with respect to qualified military service shall be provided in accordance with USERRA, HEART, Code Section 414(u), and Code Section 401(a)(37). For purposes of this Section, "qualified military service" means any service in the uniformed services as defined in USERRA by any individual if such individual is entitled to reemployment rights under USERRA with respect to such service.

(b) If a Participant whose employment is interrupted by qualified military service or who is on a leave of absence for qualified military service under Code Section 414(u), timely resumes employment with the Employer in accordance with USERRA as an Eligible Employee, the Employer shall make the Employer Contributions that would have been made if the Participant had remained employed during the Participant's qualified military service. Contributions must be made no later than 90 days after the date of reemployment or when the Employer Contributions are normally due for the year in which the qualified military service was performed, if later.

(c) To the extent provided under Code Section 401(a)(37), in the case of a Participant whose employment is interrupted by qualified military service and who dies while performing qualified military service, the survivor of such Participant shall be entitled to any additional benefit (other than benefit accruals) provided under the Plan as if the Participant timely resumed employment in accordance with USERRA and then, on the next day, terminated employment on account of death.

(d) Differential wage payments within the meaning of Code Section 414(u)(12)(D) shall be treated as Plan Compensation under the Plan.

**Section 16.03. Limitation of Rights and Obligations.** Neither the establishment nor maintenance of the Plan, nor any amendment thereof, nor the purchase of any insurance contract, nor any act or omission under the Plan or resulting from the operation of the Plan shall be construed:

(a) as conferring upon any Participant, Beneficiary or any other person any right or claim against VRS, the Employer, the Administrator, or the Trust, except to the extent that such right or claim shall be specifically expressed and provided in the Plan;

(b) as a contract or agreement between VRS and/or the Employer and any Participant or other person; or

(c) as an agreement, consideration, or inducement of employment or as affecting in any manner or to any extent whatsoever the rights or obligations of VRS, the Employer, or any Employee to continue or terminate the employment relationship at any time.

**Section 16.04. Federal and State Taxes.** It is intended that Employer Contributions, plus any earnings thereunder, are excludable from gross income for federal and state income tax purposes until paid to Participants or Beneficiaries. However, the Administrator does not guarantee that any particular federal or state income, payroll or other tax consequence will occur as a result of participation in this Plan.

**Section 16.05. Erroneous Payments.** If the Administrator or its Agent makes any payment that according to the terms of the Plan and the benefits provided hereunder should not have been made, the Administrator or its Agent may recover that incorrect payment, by whatever means necessary, whether or not it was made due to the error of the Administrator or its Agent, from the person to whom it was made or from any other appropriate party. For example, if any such incorrect payment is made directly to a Participant, the Administrator or its Agent may deduct it when making any future payments directly to that Participant.

**Section 16.06. Payments to Minors or Incompetents.** If a Participant or Beneficiary entitled to receive any benefits hereunder is a minor or is determined to be legally incapable of giving valid receipt and discharge for such benefits by a court or by the Administrator, benefits shall be paid to such person as the Administrator may designate for the benefit of such Participant or Beneficiary. Such payments shall be considered a payment to the Participant or Beneficiary and shall, to the extent made, be deemed a complete discharge of any liability for such payments under the Plan.

**Section 16.07. Missing or Lost Participants.** In the event that the Administrator does not have current contact information for or is unable to identify a Participant or Beneficiary under the Plan, the Administrator shall make reasonable attempts to determine the address and identity of the Participant or Beneficiary entitled to benefits under the Plan. A reasonable attempt to locate a missing or lost Participant or Beneficiary shall include (i) providing notice to the Participant at the Participant's last known address via certified mail; (ii) determining whether the Employer's records or the records of another plan maintained by the Employer has a more current address for the Participant; (iii) attempting to contact any named Beneficiary of the Participant; and (iv) searching for the missing Participant via free electronic search tools, such as Internet search engines, public record databases, obituaries, and social media. If such search methods are unsuccessful, based on the facts and circumstances, the Administrator may use other search methods, including using Internet search tools, commercial locator services, credit reporting agencies, information brokers, investigation databases, and analogous services that may involve charges. The Administrator may charge missing Participants and Beneficiaries reasonable expenses for efforts to find them. In the event that the Administrator is unable to locate a Participant or Beneficiary entitled to benefits under the Plan, the Trustee shall continue to hold the benefits due to such person under the Plan.

**Section 16.08. No Reversion.** Under no circumstances or conditions will any Employer Contributions revert to, be paid to, or inure to the benefit of, directly or indirectly, VRS or the Employer, but shall be held for the exclusive purpose of providing benefits to Participants and their Beneficiaries and defraying the reasonable expenses of administering the Plan. However, if Employer Contributions are made by VRS or the Employer by mistake of fact, these amounts and, if applicable, any interest earned therein, may be returned to VRS or the Employer, as applicable, within one year of the date that they were made.



**Section 16.09. Claims of Other Persons.** The provisions of the Plan will not be construed as giving any Participant or any other person, firm, or corporation, any legal or equitable right against VRS or the Employer, its officers, employees, or directors, except the rights as specifically provided for in this Plan or created in accordance with the terms and provisions of this Plan.

**Section 16.10. Counterparts.** The Plan may be executed in any number of counterparts, each of which shall be deemed to be an original. All counterparts shall constitute but one and the same instrument and shall be evidenced by any one counterpart.

IN WITNESS WHEREOF, the Board has caused this amended and restated Plan to be adopted as of the Effective Date.

**BOARD OF TRUSTEES OF THE  
VIRGINIA RETIREMENT SYSTEM**

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**FIRST AMENDMENT TO THE  
TRUST FOR THE DEFINED CONTRIBUTION INCENTIVE PLAN FOR  
VRS INVESTMENT MANAGEMENT PERSONNEL**

**(As Effective July 1, 2002)**

Pursuant to Section 7.1 of the Trust for the Defined Contribution Incentive Plan for VRS Investment Management Personnel ("Trust"), the Trust Sponsor hereby amends the Trust effective as of September 22, 2022.

1. The name of the Trust is amended to be "Trust for the Defined Contribution Incentive Plan for VRS Personnel" wherever referred to in the Trust.
2. The first paragraph of the WITNESSETH: section of the Trust is amended to read as follows:

The Board maintains a qualified defined contribution plan within the meaning of Internal Revenue Code Section 401(a) as applicable to governmental plans as defined in Section 414(d) of the Code for the benefit of certain key investment professionals employed by the Commonwealth of Virginia in the Investment Department of the Virginia Retirement System and certain other key personnel of Virginia Retirement System. The purpose of the Plan is to provide retirement benefits for eligible employees under the terms of the Plan and to strengthen the link between the performance of the Systems Fund and the compensation of these individuals.

3. Section 1.13 of the Trust is amended to read as follows:

1.13 **"Plan"**: The Defined Contribution Incentive Plan for VRS Personnel, intended to be maintained as a qualified defined contribution plan within the meaning of Section 401(a) of the Code as applicable to governmental plans as defined in Section 414(d) of the Code.

4. Section 3.4 of the Trust is amended to read as follows:

3.4 **Return of Mistaken Contributions.** If a contribution is made under a mistake of fact, upon written direction by the Administrator, the Trustee shall return to the Employer, an amount equal to such mistaken contribution, adjusted for any income or loss income or loss in value, if any, attributable to such mistaken contribution within one year of the date made to the Trust. Notwithstanding anything to the contrary in the foregoing, any such return shall be limited to an amount which would not cause the balance of any Participant's account to be reduced to less than the balance such Participant's account would have been had such amount not been contributed.

5. Section 5.2(a) of the Trust is amended to read as follows:

5.2 **Accounts.**

5.2(a) The Trustee shall keep true and accurate accounts of all investments, receipts, and disbursements and other transactions hereunder, and all accounts, books and records relating thereto shall be open to inspection and audit at all reasonable times by any person or persons designated by the auditor of Public Accounts or the Joint Legislative Audit Committee of the General Assembly of the Commonwealth of Virginia. Whenever the assets of the Plan are invested in another trust, a separate account shall be maintained to reflect the interest of the Plan, including contributions to the Plan, disbursements from the Plan, and investment experience allocable to the Plan. A transaction or accounting method which has the effect of directly or indirectly transferring value from the account of the Plan into the account of another plan violates this separate accounting requirement.

The undersigned Chairman of the Board has signed this First Amendment to the Trust Agreement on the 22nd day of September, 2022, thereby evidencing the approval and adoption of this First Amendment pursuant to this aforesaid authorization.

BOARD OF TRUSTEES  
VIRGINIA RETIREMENT SYSTEM

By: \_\_\_\_\_  
Chairman

# VRS Defined Contribution Plans

2nd Quarter 2022  
(April - June)

Administrative Summary  
September 7, 2022

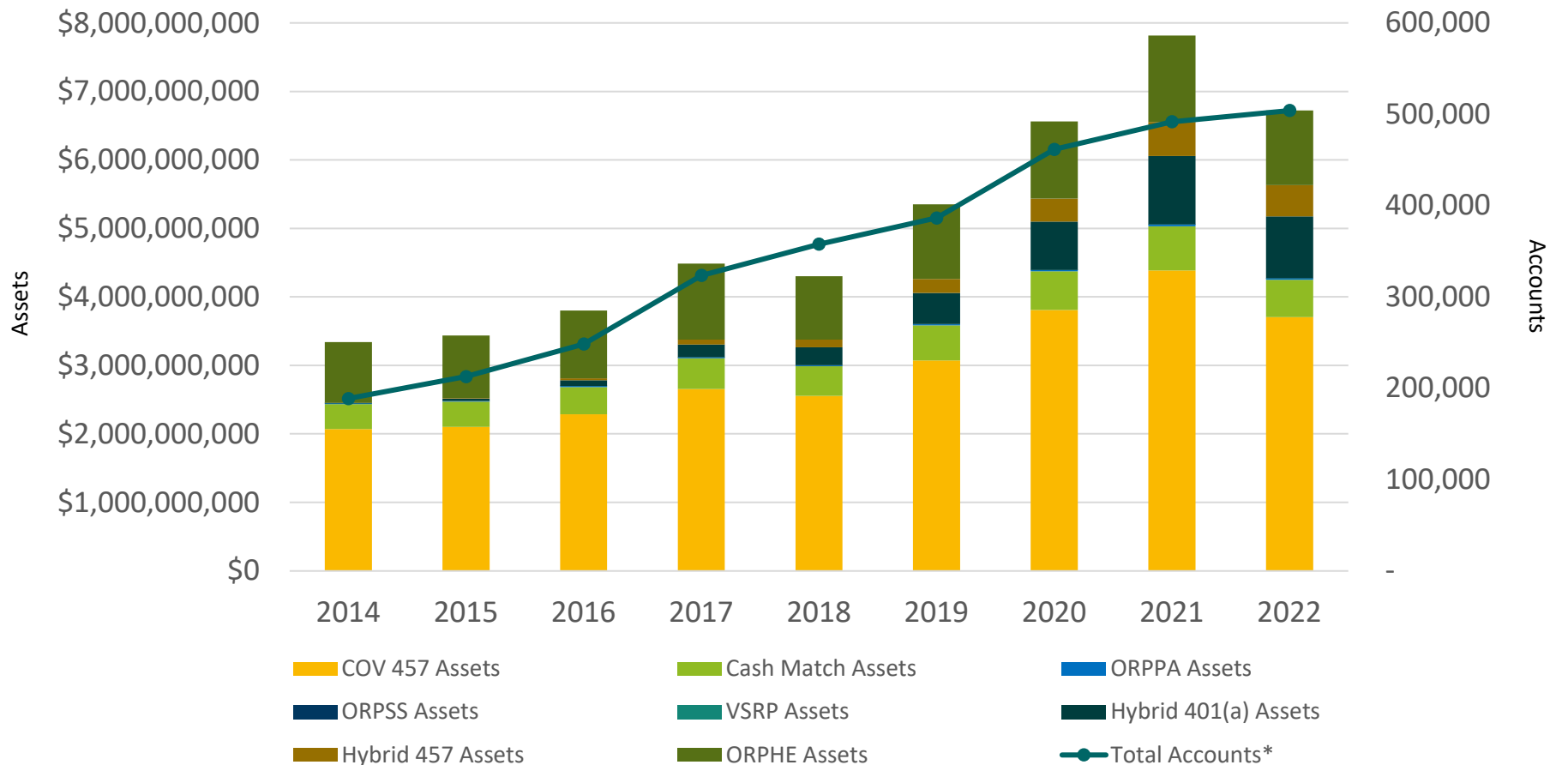


Topic	Slide Number(s)
General Updates	3-4
COV 457 & Cash Match Plans	5
Hybrid Retirement Plan	6-10
ORPHE	11
Focus: Annual Reviews	12-19
Upcoming Events	20
DC Plans Unbundled Record Keeper Contract Update	21

# Total Assets and Accounts Over Time

Totals as of 6/30/2022	Assets	Accounts
	\$6,720,515,832	504,028

**Assets ↓ 11%**  
**Accounts ↑ 5%**  
 since March 31, 2022



Note: Except for current quarter, data reflects totals as of calendar year end and includes ORPHE selected providers and MissionSquare participant, beneficiary, forfeiture & reserve accounts. 2022 data is as of 6/30/2022.

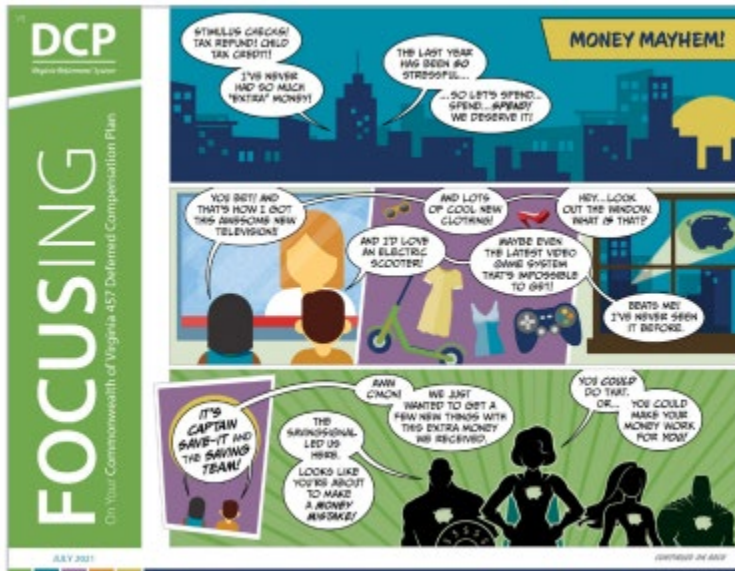
\*Does not indicate unique participants.

# NAGDCA Leadership Awards

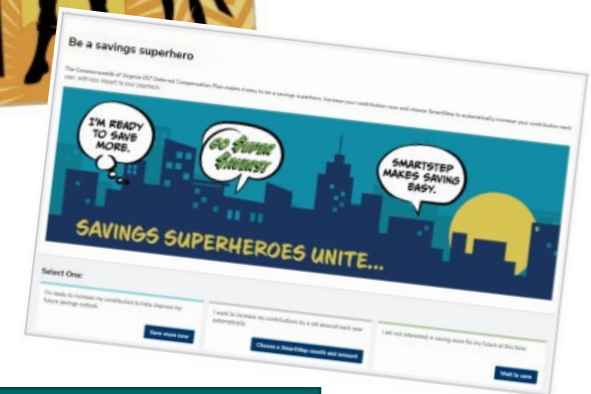


VRS received a Leadership Award in two categories:

- COV-19 response
- Participant Engagement and Communication



SmartStep Auto-Increase Awareness Campaign



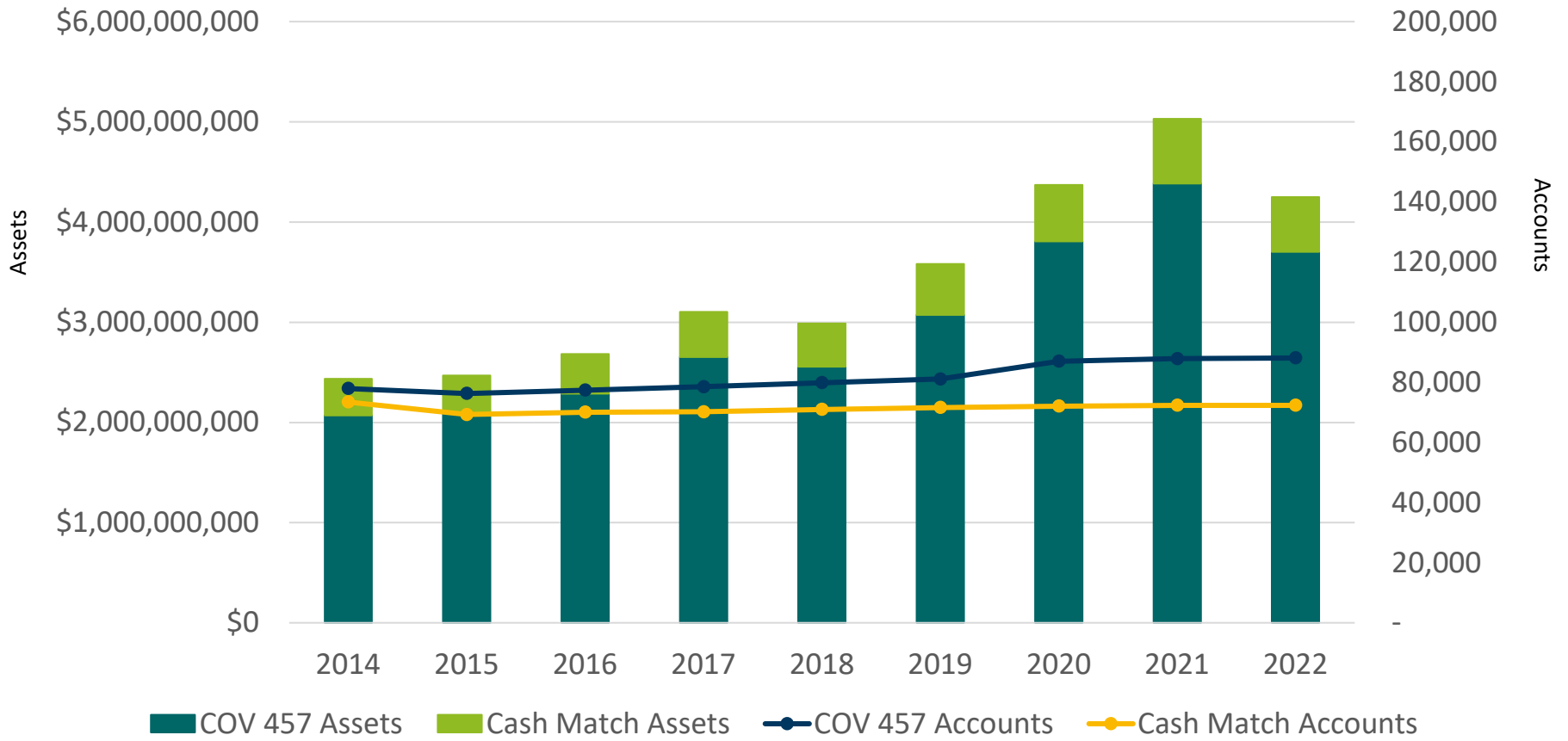
Top 10 finalist for the Art Caple Award!

# COV 457/Cash Match Plan Assets and Accounts



Totals as of 6/30/2022	Assets	Accounts
<b>COV 457</b>	\$3,704,208,818	88,146
<b>Cash Match</b>	\$545,721,662	72,363

**Assets ↓ 12% since March 31, 2022**



Note: Except for current quarter, data reflects totals as of calendar year end and includes MissionSquare participant, beneficiary & reserve accounts. 2022 data is as of 6/30/2022.

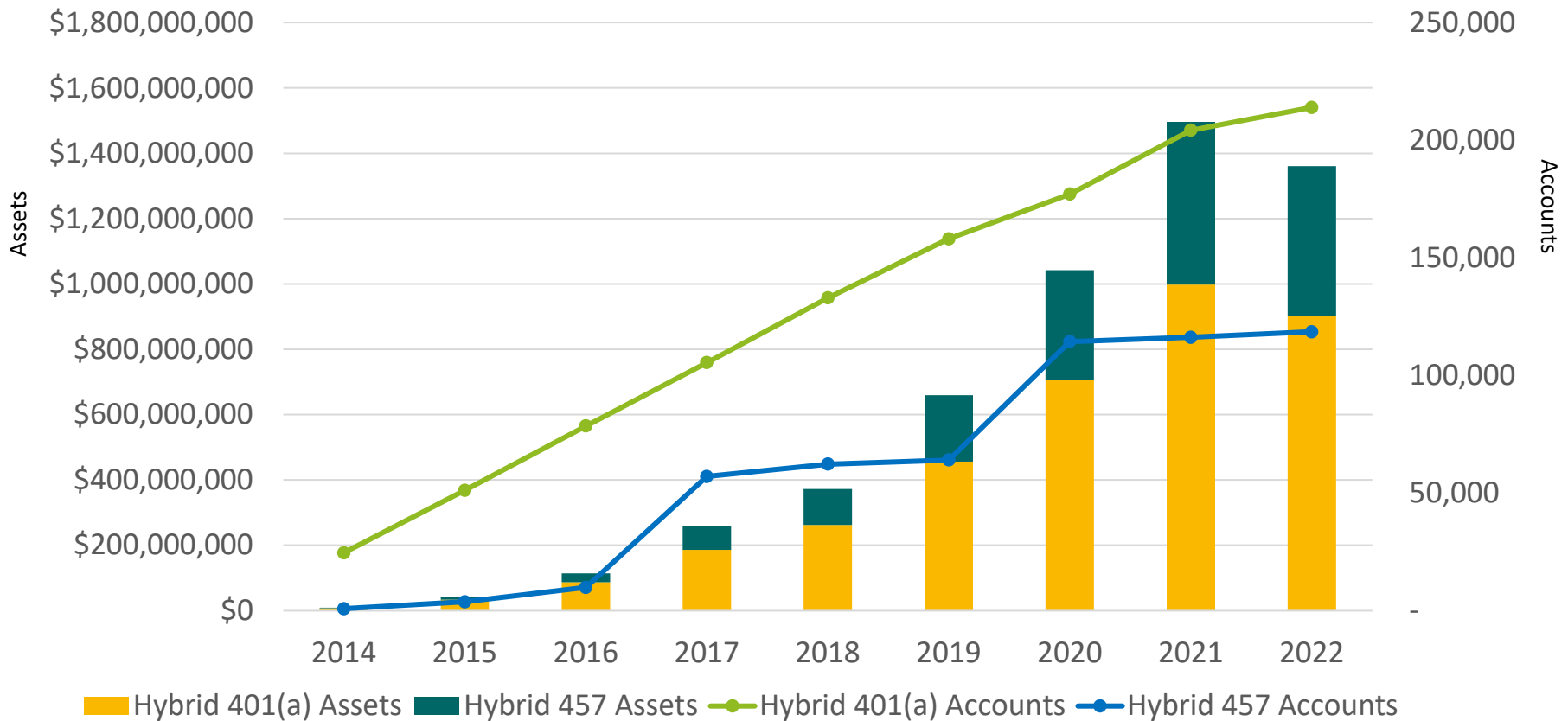


# Hybrid Retirement Plan Assets and Accounts (DC only)



Totals as of 6/30/2022	Assets	Accounts
Hybrid 401(a)	\$902,338,336	213,954
Hybrid 457	\$458,721,430	118,582

Assets ↓ 9%  
Accounts ↑ 2%  
since March 31, 2022



Note: Except for current quarter, data reflects totals as of calendar year end and includes MissionSquare participant, beneficiary & for future accounts 2022 data is as of 6/30/2022.

# Hybrid Retirement Plan Participation Highlights

Overall participation in  
Hybrid Voluntary  
Contributions – 61%

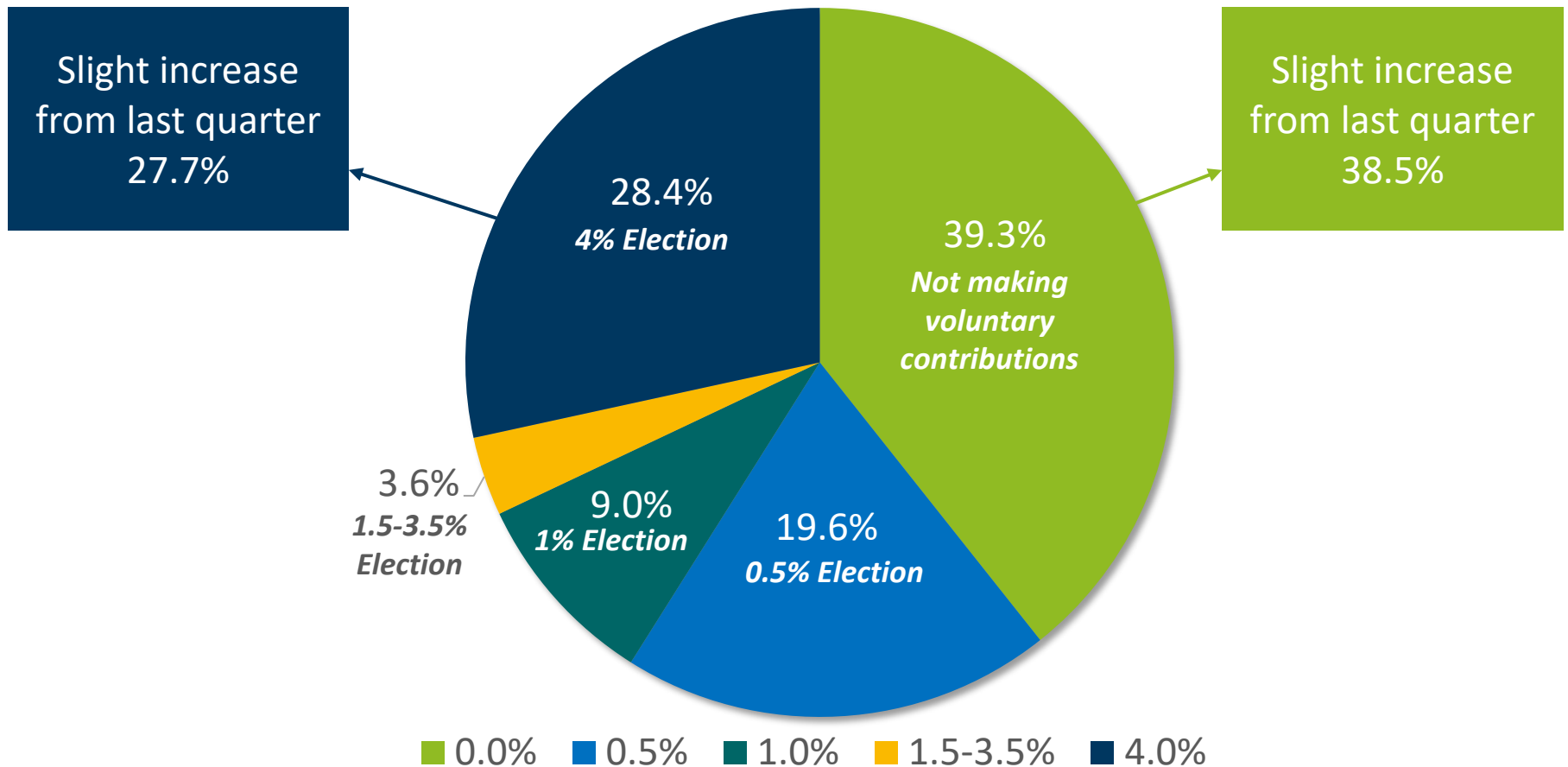
**Active Election  
Participation – 33%**

Of members  
making voluntary  
contributions

**47% are maximizing at 4%  
47% are at 1% or less**

# Hybrid Retirement Plan Voluntary Contribution Elections

Voluntary contribution percentages for active hybrid plan members effective July 1, 2022



# Hybrid Retirement Plan Automatic Escalation

Interactive webpages

Members: [varetire.org/auto-escalation](https://varetire.org/auto-escalation)

Employers: [varetire.org/auto-escalation-employer](https://varetire.org/auto-escalation-employer)

## Keep Your Savings Rolling With Auto-Escalation

Click the icons below to learn more.



### Why is it beneficial?

Auto-escalation offers you a convenient way to save more for your future!

- **The more you save through voluntary contributions, the more you receive in matching employer contributions.**  
When you contribute 4%, your employer contributes 2.5%!
- **It's easy — no action required!** You only need to take action if you choose to opt out of saving more for your future.

Members can opt out of auto-escalation from September 16 through December 15, 2022, before the 4 p.m. ET deadline. Log in to Account Access at [varetire.org/hybrid](https://varetire.org/hybrid) or call Participant Services at VRS-DC-PLAN1 (877-327-5261), select option 1.



105,680  
Estimated eligible\*  
population for 2023

79,751  
Auto-escalated in  
2020

\*Eligible hybrid plan members hired on or before September 1, 2022 and have a voluntary contribution of less than 4%.

# Hybrid Retirement Plan Automatic Escalation

## Employer Guide

**AUTO-ESCALATION EMPLOYER GUIDE**  
HYBRID RETIREMENT PLAN

On January 1, 2023, the Hybrid Retirement Plan's auto-escalation feature will boost retirement savings for your hybrid plan members. Every three years, voluntary contributions to the Hybrid 457 Deferred Compensation Plan automatically increase by 0.5% until the member reaches the maximum of 4%.

Automatic increases and matching employer contributions help keep savings rolling for your members.

**How It Works**

As an employer, you can promote the benefits of auto-escalation and make member announcements to educate employees on the long-term value of contributing 4% to build retirement savings.

**Benefits**

Voluntary contributions allow hybrid members to accumulate savings on a pre-tax basis, increase their savings through the employer match and work toward income replacement during retirement. VRS members have access to a variety of low-cost investment options and the opportunity to generate compounded earnings on their contributions.

Encourage your members not to wait for auto-escalation to take effect every three years. By contributing the maximum amount now, they will receive the full 2.5% employer match.

**Communications**

Use the auto-escalation announcements and visit the Voluntary Contributions page for more resources that help educate your members about the easy way to save. VRS and MissionSquare Retirement will also notify members about auto-escalation through the hybrid member website, call center and targeted mailings.

**Auto-Escalation Announcements for Members**  
Click on an image below to download the pdf.

**Keep Your Savings Rolling With Auto-Escalation**

Your voluntary contribution to the Hybrid Retirement Plan will automatically increase by 0.5% January 1, 2023 unless you opt-out. VRS will automatically increase your voluntary contribution until you reach the 4% maximum unless you opt-out. The employer matching will continue to grow the QR code to learn more.

Poster

[Download PDF](#)

(available in September)

**Keep Your Savings Rolling With Auto-Escalation**

Your voluntary contribution to the Hybrid Retirement Plan will automatically increase by 0.5% January 1, 2023, unless you opt-out. With auto-escalation, your voluntary contribution will increase every three years until you reach the 4% maximum savings. Visit [varetire.org/auto-escalation](http://varetire.org/auto-escalation) or scan the QR code to learn more.

## Account Access Splash Screen

Welcome, Mary Jo Sullivan-Smith

VIRGINIA RETIREMENT SYSTEM CONTACT US

**Hybrid**  
Commonwealth of Virginia

### Auto-Escalation Goes Into Effect January 1, 2023

To help you maximize your retirement savings, the Hybrid Retirement Plan includes an auto-escalation feature. Every three years, voluntary contributions to your Hybrid 457 Deferred Compensation Plan account will automatically increase by 0.5%, until reaching the maximum 4%.

Learn more by visiting [www.varetire.org/hybrid](http://www.varetire.org/hybrid) or sign up today by clicking the Show me more button below.

## Keep Your Savings Rolling With Auto-Escalation

**Select One:**

I'm ready to save 4% and maximize my hybrid voluntary contributions and employer match.

Save 4%

I'm interested in learning more about this tool to help me save for my future.

Show me more

I am not interested in saving more for my future at this time.

Opt me out

## Member Poster

# Administrative Summary

## ORPHE

ORPHE Totals*			
	3/31/2022	6/30/2022	% Change
Assets	\$1,207,570,890	<b>\$1,086,882,207</b>	-10%
Participants	10,525	<b>10,520</b>	0%
Average Balance	\$114,734	<b>\$103,316</b>	-10%



DCP	
	6/30/2022
Assets	<b>\$136,059,510</b>
Participants	<b>2,295</b>
Average Balance	<b>\$59,285</b>

TIAA**	
	6/30/2022
Assets	<b>\$950,822,697</b>
Participants	<b>8,225</b>
Average Balance	<b>\$115,602</b>

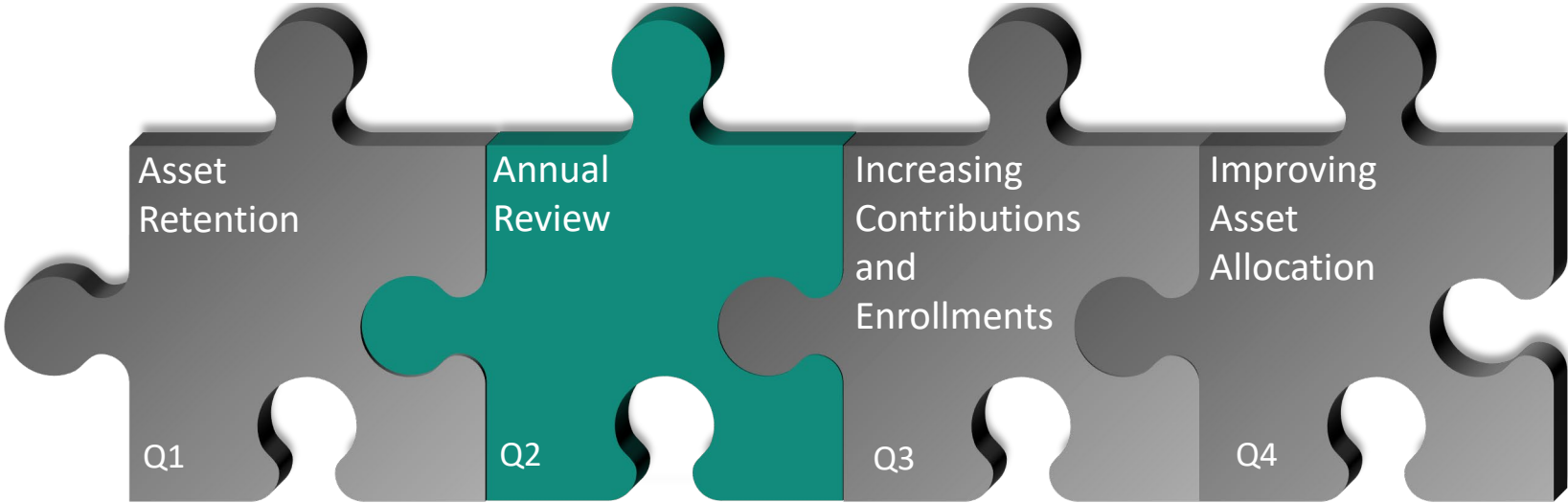
22% of new hires YTD have elected DCP as their provider.

78% of new hires YTD have elected TIAA as their provider.

\*Excludes deselected providers. Fidelity became a deselected provider effective 1/1/2020.

\*\*Includes assets in GRA/RA and RC contracts.

# Annual Review and Benchmarking



# Annual MissionSquare Relationship Meeting



**Meeting conducted on July 15, 2022.**

Agenda included:

- By the Numbers
- Overall relationship and 2021 Accomplishments
  - Performance Standards
  - Employer Support
  - Conversions and Adoptions
  - Operational Highlights
  - Call Center Quality Assurance Monitoring
  - Technology
  - Participant Education Activity
  - Communications
- Future Initiatives
  - Review of SS&C Partnership (on track for March 2023)

**All performance standards met for 2021.**

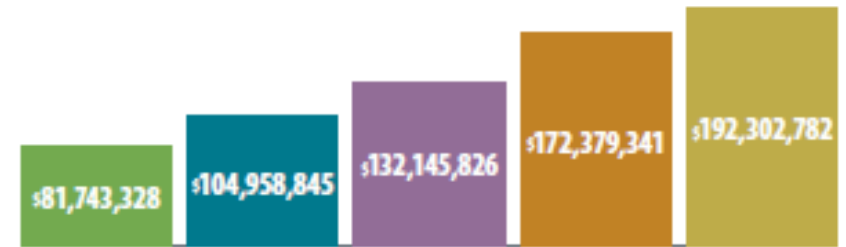


# Annual Review: Hybrid Retirement Plan By the Numbers

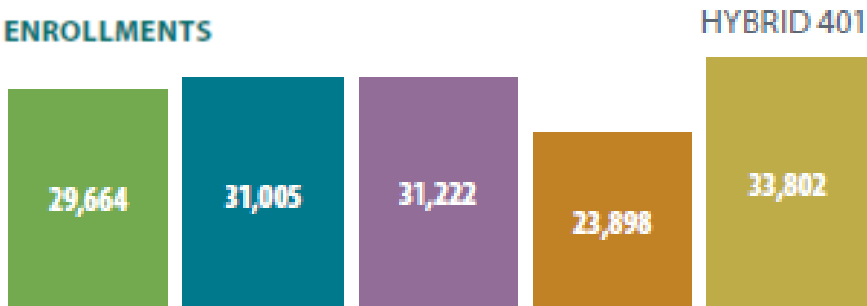
● 2017   
 ● 2018   
 ● 2019   
 ● 2020   
 ● 2021

- **13% increase** in contributions to the Hybrid 457, which is consistent with previous years.
- **44% increase** in the number of new enrollments in the Hybrid 401(a), likely due to increased hiring following the pandemic

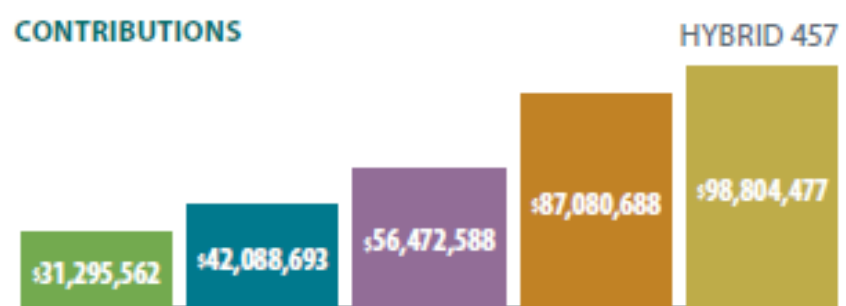
CONTRIBUTIONS



ENROLLMENTS



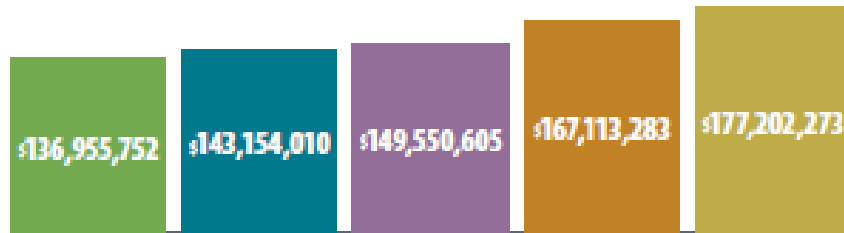
CONTRIBUTIONS



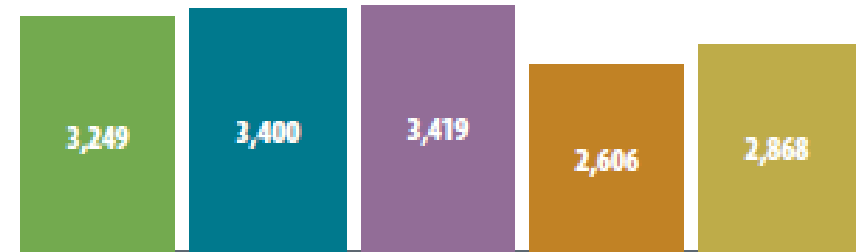
# Annual Review: COV 457 Plan By the Numbers

● 2017 ● 2018 ● 2019 ● 2020 ● 2021

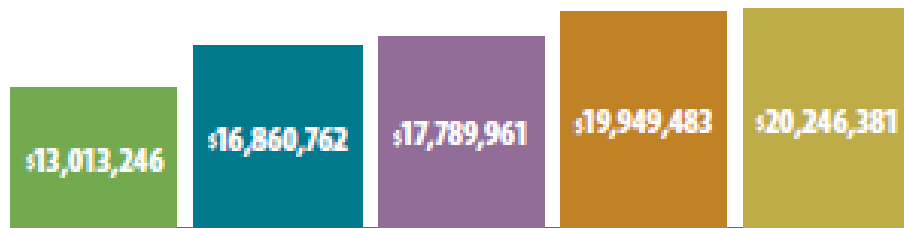
## CONTRIBUTIONS



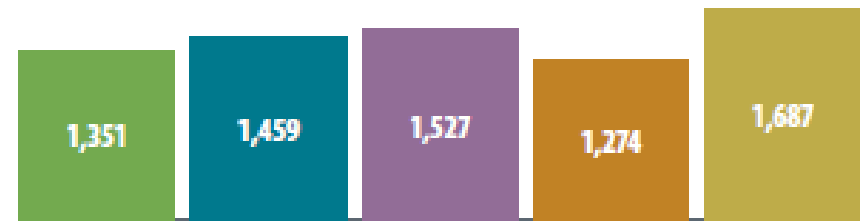
## ENROLLMENTS



## INCOMING ROLLOVERS



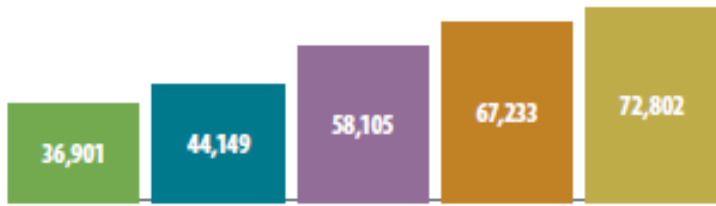
## COV 457 SELF-ENROLLED



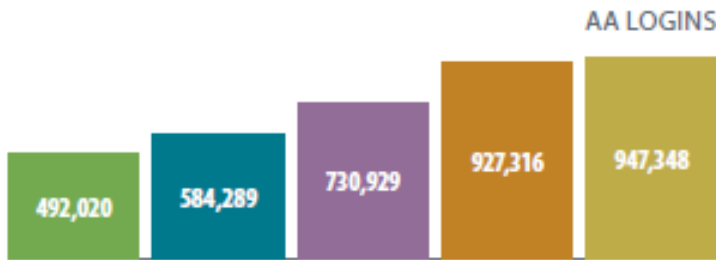
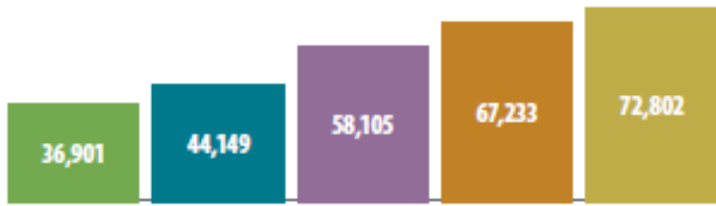
- **6% increase** in contributions to the COV 457 Plan and a **1.5% increase** in incoming rollovers into the COV 457 Plan.
- **32% increase** in self-enrollments in the COV 457 Plan.

# Annual Review : Participant Engagement Highlights

ACCOUNT ACCESS USAGE



AA USER IDS

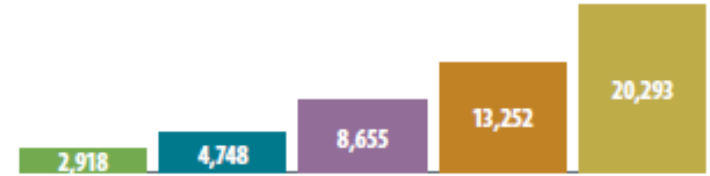


AA LOGINS

Consistent increases in Account Access usage.

**58%** increase in Text Access usage!

TEXTACCESS



SIGNED UP



KEYWORDS FOR 2021

Balance/Bal	80.8%
Rate of Return/ROR	15.4%
Contribution/Cont	2.5%
Other:	
Disbursement/Disb.	0.8%
Last 3 Transactions/Trans	0.4%
Loans/Loan	0.1%

## Other highlights

- Close to 80,000 calls to the 800#.
- Over 2,300 calls to the local service center.

- Over 11,000 interactions with a field-based representative.
- Average satisfaction score of 3.6 out of 4 for webinars and seminars.

# Annual Update: 2021 Key Accomplishments

- Launched COV 457 Plan splash screen.



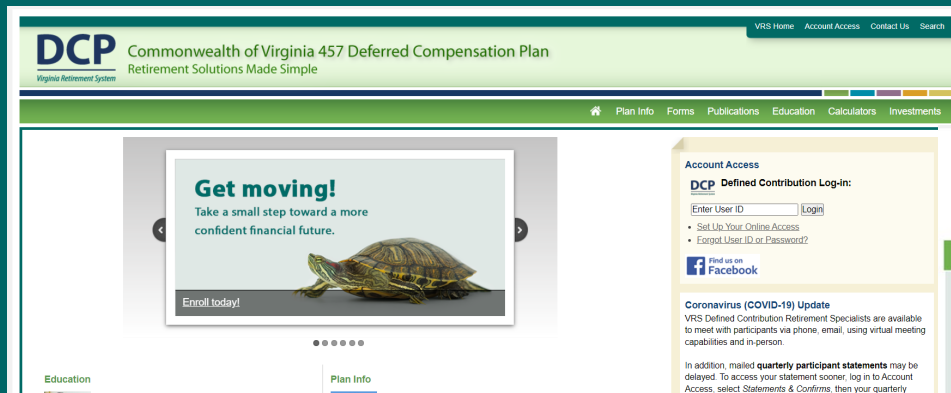
- Implemented several enhancements to the contributions page to encourage savings and provide clarity.
- Six plan adoptions.
- Two new state agencies onboarded.
- Direct emails to promote virtual resources.

- Special outreach project for Hybrid/COV 457 Plan Crossover population.
  - Calls placed to 136 members in danger of exceeding contribution limits.
  - Calls/direct emails to 222 members contributing to COV 457 instead of Hybrid.

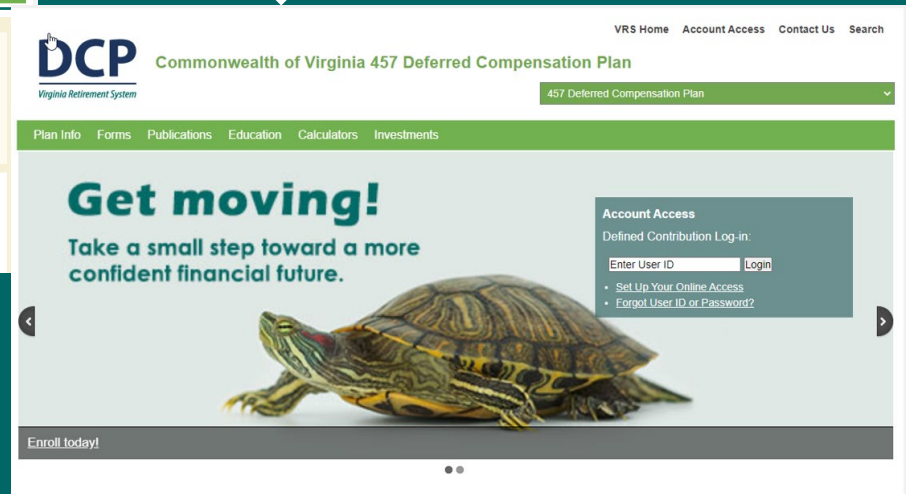


112%  
increase in webinar  
attendance

# Annual Review: Future Initiatives



**Website refresh**  
(Launch date: coming soon!)



## SS&C Transition

- General transition for majority of MissionSquare's client base scheduled originally for July 2022, pushed back to October 2022
- VRS tentatively scheduled for late March 2023
- Impacts to participant and employer web portals

## Other Initiatives

- Higher Education Savings Solutions
- National Retirement Security Month
- New fee education page

**Initial service review meeting scheduled held on July 13, 2022.  
Follow-up meeting held on August 18, 2022.  
All performance standards met for 2021.**

## Outcomes Highlights

Average Income Replacement Ratio\*  
**83%**

↓ 0.1% Year-over-Year

Total Annual Payouts to Annuitants  
**\$6.19M**

## Plan Highlights

Assets  
**\$950.8M**

↓ 11.0% Year-over-Year

Contributions  
**\$34.2M**

↑ 3.9% Year-over-Year

Distributions  
**\$54.6M**

↑ 39.1% Year-over-Year

## Participant Highlights

Participants with balances  
**8,225**

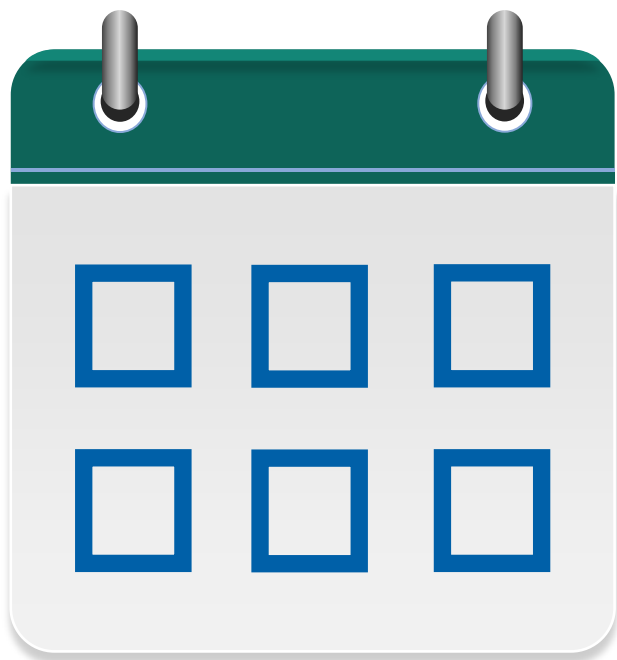
Engagement Activity  
(as of 6/30/22)

Total Phone Calls (Transactional) 280

Rebalanced 557

Data provided by TIAA. \*This data snapshot is as of the period ending 06/30/2022 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans. This report excludes details on non-participant accounts (forfeiture and revenue credit account) but includes the balances. 1. This report uses estimated salary and/or compensation data to calculate the average income replacement ratio.

## Upcoming Events



### September 2022

- Issue Recordkeeper RFP
- NAGDCA conference
  - September 19<sup>th</sup>-21<sup>st</sup>
- Distribute ORPHE Annual Fee Disclosure
  - Scheduled to mail mid-September
- ORPHE Annual Employer Update
  - Scheduled for September 29th

### Annual Fee Disclosures

All other plans – distributed with 3<sup>rd</sup> quarter statements.

### ORPHE Open Enrollment

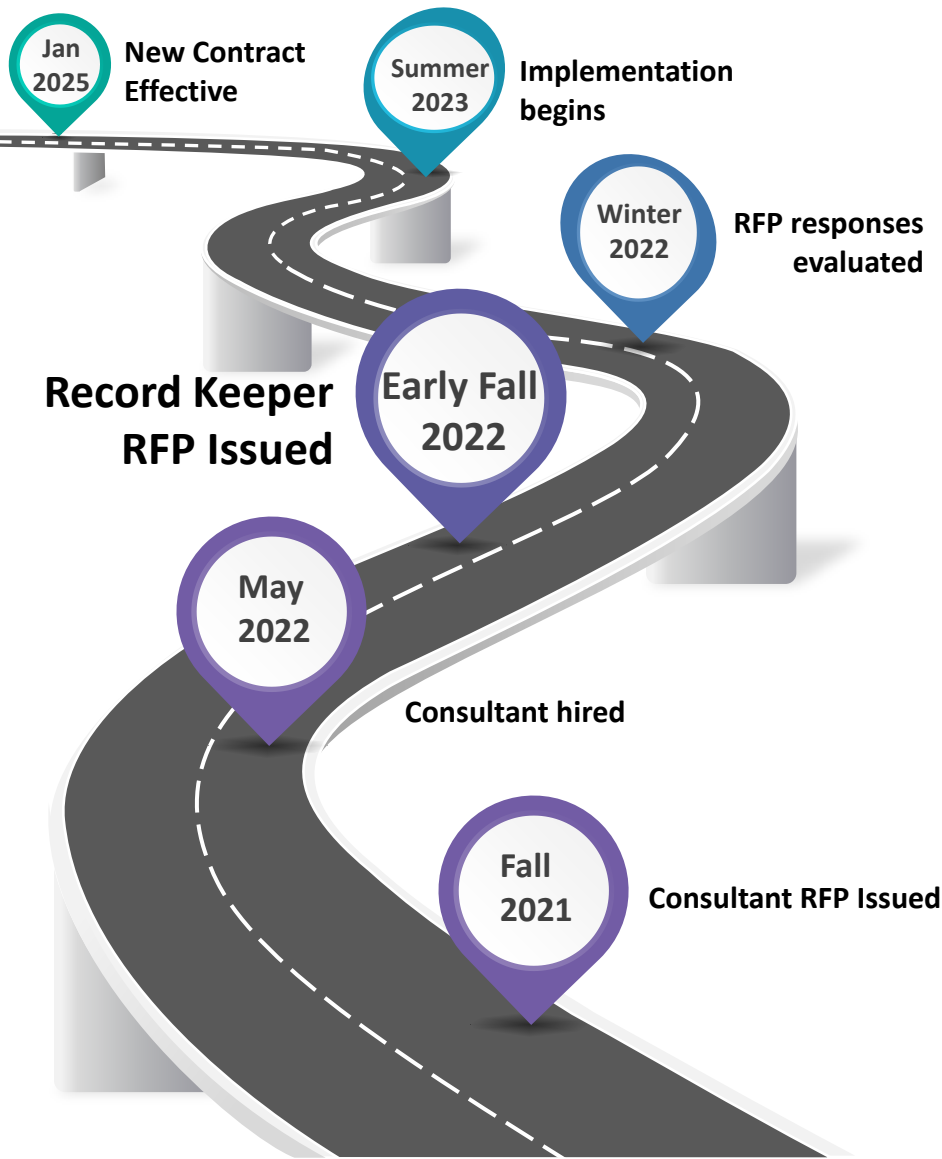
Held annually in October. Allows participants to change providers for future contributions.

# DC Plans Unbundled Recordkeeper Project Status





# Unbundled Record Keeper Contract



## Project Status

- RFP has been drafted and is in final review process.

### Stakeholder Review Process included:

- DC Plans.
  - Policy.
  - Investments.
  - Finance.
  - Technology.
  - Data Security.
  - Communications/Public Relations
  - Multiple rounds of consultant review.
- Expect to issue by mid- to late September.
  - RFP will be posted in eVA, the Commonwealth's procurement website.

# Thank You!

# DC Plans Investments

September 8, 2022



- VRS announced earlier this year Ron Schmitz will retire effective January 2023
- After an extensive national search, the VRS Board of Trustees appointed Andrew Junkin to the Chief Investment Officer position
- Andrew will begin serving in September and Ron will remain with VRS through the end of the year to provide continuity and facilitate an effective transition
- We thank Ron for his thoughtful leadership and sense of humor over the years and welcome Andrew to the VRS team

# Annual Investments Review Highlights



# DCPAC Investment Duties and Responsibilities

- Review trends and identify best practices
- Assist staff in identifying potential asset classes and investment strategies
- Perform annual comprehensive review of the investment program with emphasis on three-year and five-year periods
- Periodically review the VRS Defined Contribution Plans Investment Belief Statements
- Periodically review the DC Investment Policy Statements
- Provide recommendations to the Board as needed

- The complete annual investments review package is found in the Appendix
- The incoming Chief Investment Officer, Andrew Junkin, will review the two DC Investment Policy Statements and DC Investment Belief Statements which may result in observations for discussion at a later date
- As of June 30, 2022 DC plans assets overseen by investment staff totaled \$6.1 billion (\$5.8 billion unbundled DC plans; \$312.4 million TIAA ORPHE)

- An unbundled DC plan structure provides investment staff with maximum flexibility whereas a bundled plan structure does not provide the same flexibility
  - TIAA operates as a bundled plan provider for the ORPHE
- No changes were made to the unbundled DC plans investment platform
- No changes were made to the bundled TIAA ORPHE investment platform



# Unbundled DC Plans



Unbundled DC Plans

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics			
			1 Year	3 Years*	5 Years*	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio
		%	%	%	%	%	%	%	%	%	%	%	%
<b>Money Market Fund</b>	Capital Preservation	0.08	<b>0.37</b>	<b>0.73</b>	<b>1.26</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FTSE 3 Month Treasury Bill Index			0.19	0.61	1.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Excess Return			0.18	0.12	0.17								
<b>Stable Value Fund<sup>1</sup></b>	Capital Preservation	0.23	<b>1.47</b>	<b>1.93</b>	<b>2.03</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Custom Benchmark <sup>2</sup>			1.59	1.14	1.69	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Excess Return	(Book Value)		-0.12	0.79	0.34								
<i>eVestment Alliance Median: Stable Value Universe<sup>3</sup></i>			1.70	2.02	2.13								
<b>Bond Fund</b>	Passive	0.03	<b>-10.22</b>	<b>-0.89</b>	<b>0.92</b>	4.55	-0.33	0.07	n/a	4.04	-0.04	0.06	n/a
Bloomberg U.S. Aggregate Bond Index			-10.29	-0.93	0.88	4.56	-0.34			4.04	-0.05		
Excess Return			0.07	0.04	0.04								
<i>MSTAR Ave: Intermediate Term Bond</i>			-10.74	-1.00	0.72								
<b>Inflation-Protected Bond Fund</b>	Passive	0.03	<b>-5.17</b>	<b>3.11</b>	<b>3.30</b>	5.04	0.50	0.09	n/a	4.31	0.51	0.07	n/a
Bloomberg U.S. TIPS Index			-5.14	3.04	3.21	5.01	0.49			4.29	0.50		
Excess Return			-0.03	0.07	0.09								
<i>MSTAR Ave: Inflation-Protected Bond</i>			-3.79	2.82	2.85								
<b>High-Yield Bond Fund</b>	Active	0.39	<b>-11.17</b>	<b>0.92</b>	<b>2.75</b>	9.65	0.03	1.71	0.51	8.01	0.21	1.40	0.49
ICE BofA U.S. HY BB-B Constrained Index			-12.20	0.04	2.07	9.71	-0.06			8.03	0.12		
Excess Return			1.03	0.88	0.68								
<i>MSTAR Ave: High-Yield Bond</i>			-11.80	-0.21	1.46								
<b>Stock Fund</b>	Passive	0.01	<b>-10.61</b>	<b>10.64</b>	<b>11.35</b>	18.64	0.54	0.03	n/a	16.95	0.61	0.03	n/a
S&P 500 Index			-10.62	10.60	11.31	18.64	0.54			16.95	0.60		
Excess Return			0.01	0.04	0.04								
<i>MSTAR Ave: Large Blend</i>			-11.58	9.14	9.77								
<b>Small/Mid-Cap Stock Fund</b>	Passive	0.02	<b>-20.93</b>	<b>5.96</b>	<b>7.08</b>	23.38	0.23	0.07	n/a	21.08	0.28	0.07	n/a
Russell 2500 Index			-21.00	5.91	7.04	23.38	0.23			21.07	0.28		
Excess Return			0.07	0.05	0.04								
<i>MSTAR Ave: Mid-Cap Blend</i>			-13.90	6.70	6.97								
<b>International Stock Fund</b>	Passive	0.06	<b>-19.40</b>	<b>1.89</b>	<b>2.82</b>	17.85	0.07	1.41	n/a	15.95	0.11	1.23	n/a
MSCI ACWI ex-U.S. IMI Index (linked to MSCI World ex-U.S. Index July 2012 - July 2016)			-19.86	1.55	2.50	17.94	0.05			16.00	0.09		
Excess Return			0.46	0.34	0.32								
<i>MSTAR Ave: Foreign Large Blend</i>			-18.69	1.31	2.08								
<b>Global Real Estate Fund</b>	Passive	0.08	<b>-12.75</b>	<b>-0.30</b>	<b>2.72</b>	20.60	-0.04	0.38	n/a	17.50	0.09	0.38	n/a
FTSE EPRA/NAREIT Developed Index			-13.44	-1.07	1.95	20.81	-0.08			17.64	0.05		
Excess Return			0.69	0.77	0.77								
<i>MSTAR Ave: Global Real Estate</i>			-14.67	-0.33	2.57								

\*Annualized.

<sup>1</sup> Stable value funds typically track the general movements of interest rates with a lag. It is expected that when interest rates are falling stable value yields do not fall as quickly and when interest rates are rising stable value yields do not rise as quickly.

<sup>2</sup> Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% 2-year maturity + 50% 3-year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment.

<sup>3</sup> eVestment Alliance universe returns are gross of investment management fees and net of wrap fees. The Stable Value Fund returns are net of all fees.

Results within reasonable expectations due to rising interest rate environment and the nature of book value accounting treatment.

Data provided by BlackRock, Galliard, MissionSquare and Zephyr StyleADVISOR.

Unbundled DC Plans

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics			
			1 Year	3 Years*	5 Years*	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio
		%	%	%	%	%				%			
<b>Retirement Portfolio</b>	Passive	0.08	<b>-11.69</b>	<b>2.77</b>	<b>3.93</b>	8.61	0.25	0.19	n/a	7.49	0.38	0.16	n/a
Custom Benchmark <sup>4</sup>			-11.68	2.72	3.89	8.63	0.24			7.49	0.37		
Excess Return			-0.01	0.05	0.04								
<b>Target Date 2025 Portfolio</b>	Passive	0.08	<b>-12.10</b>	<b>3.48</b>	<b>4.75</b>	10.43	0.27	0.25	n/a	9.34	0.39	0.22	n/a
Custom Benchmark <sup>4</sup>			-12.11	3.42	4.69	10.47	0.27			9.35	0.38		
Excess Return			0.01	0.06	0.06								
<b>Target Date 2030 Portfolio</b>	Passive	0.08	<b>-12.88</b>	<b>4.21</b>	<b>5.40</b>	12.39	0.29	0.33	n/a	11.05	0.39	0.28	n/a
Custom Benchmark <sup>4</sup>			-12.92	4.14	5.33	12.43	0.28			11.06	0.38		
Excess Return			0.04	0.07	0.07								
<b>Target Date 2035 Portfolio</b>	Passive	0.08	<b>-13.64</b>	<b>4.90</b>	<b>6.03</b>	14.27	0.30	0.40	n/a	12.69	0.39	0.34	n/a
Custom Benchmark <sup>4</sup>			-13.71	4.81	5.93	14.33	0.29			12.72	0.38		
Excess Return			0.07	0.09	0.10								
<b>Target Date 2040 Portfolio</b>	Passive	0.08	<b>-14.42</b>	<b>5.47</b>	<b>6.54</b>	16.03	0.30	0.46	n/a	14.22	0.38	0.39	n/a
Custom Benchmark <sup>4</sup>			-14.51	5.36	6.43	16.09	0.30			14.25	0.38		
Excess Return			0.09	0.11	0.11								
<b>Target Date 2045 Portfolio</b>	Passive	0.08	<b>-15.12</b>	<b>5.93</b>	<b>6.92</b>	17.37	0.31	0.52	n/a	15.37	0.38	0.44	n/a
Custom Benchmark <sup>4</sup>			-15.25	5.80	6.78	17.44	0.30			15.41	0.37		
Excess Return			0.13	0.13	0.14								
<b>Target Date 2050 Portfolio</b>	Passive	0.08	<b>-15.57</b>	<b>6.13</b>	<b>7.07</b>	18.04	0.31	0.55	n/a	15.93	0.38	0.46	n/a
Custom Benchmark <sup>4</sup>			-15.72	6.00	6.93	18.12	0.30			15.98	0.37		
Excess Return			0.15	0.13	0.14								
<b>Target Date 2055 Portfolio</b>	Passive	0.08	<b>-15.68</b>	<b>6.15</b>	<b>7.08</b>	18.14	0.31	0.56	n/a	16.01	0.37	0.47	n/a
Custom Benchmark			-15.86	6.02	6.94	18.25	0.30			16.07	0.36		
Excess Return			0.18	0.13	0.14								
<b>Target Date 2060 Portfolio</b>	Passive	0.08	<b>-15.69</b>	<b>6.14</b>	<b>7.07</b>	18.15	0.30	0.56	n/a	16.01	0.37	0.47	n/a
Custom Benchmark <sup>4</sup>			-15.86	6.02	6.94	18.25	0.30			16.07	0.36		
Excess Return			0.17	0.12	0.13								
<b>Target Date 2065 Portfolio</b>	Passive	0.08	<b>-15.71</b>	<b>N/A</b>	<b>N/A</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Custom Benchmark <sup>4</sup>			-15.88	N/A	N/A	n/a	n/a			n/a	n/a		
Excess Return			0.17	N/A	N/A								

\*Annualized.

<sup>4</sup> The Custom Benchmark is calculated using blended returns of third party indices that proportionally reflect the respective weightings of the Fund's asset classes. Weightings are adjusted quarterly to reflect the Fund's changing asset allocations over time. As of May 11, 2022 the indices used to calculate the Custom Benchmark are the: Russell 1000 Index, Russell 2000 Index, MSCI ACWI ex-U.S. IMI Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized MBS,ABS and CMBS Index, Bloomberg U.S. Treasury Inflation Protected Securities Index, FTSE EPRA NAREIT Developed Index and the Bloomberg Commodity Total Return Index.

Data provided by BlackRock, Galliard, MissionSquare and Zephyr StyleADVISOR.

**Unbundled DC Plans - Fund Annual Operating Expenses**  
**Information as of June 30, 2022**

Investment Option <sup>1</sup>	Investment Manager	Type	Investment Management Costs	Wrap & Acquired Fund <sup>2</sup> Costs	Fund Embedded Costs <sup>2</sup>	State Street Cost to Strike Net NAV	Total Annual Expense Ratio	Expense Ratio YOY Change
Money Market Fund	BlackRock	Capital Preservation	0.080000%	n/a	0.000600%	n/a	<b>0.08%</b>	0.00%
Stable Value Fund	Galliard	Capital Preservation (Book Value)	0.065000%	0.166000%	n/a	n/a	<b>0.23%</b>	-0.01%
Bond Fund	BlackRock	Passive	0.030000%	n/a	0.003300%	n/a	<b>0.03%</b>	0.00%
Inflation-Protected Bond Fund	BlackRock	Passive	0.020000%	n/a	0.006500%	n/a	<b>0.03%</b>	0.00%
High-Yield Bond Fund	JPMorgan	Active	0.380000%	n/a	0.010000%	0.004736%	<b>0.39%</b>	-0.01%
Stock Fund	BlackRock	Passive	0.007500%	n/a	0.001000%	0.004322%	<b>0.01%</b>	0.00%
Small/Mid-Cap Stock Fund	BlackRock	Passive	0.015000%	n/a	0.003200%	0.004539%	<b>0.02%</b>	0.00%
International Stock Fund	BlackRock	Passive	0.040000%	n/a	0.020000%	0.004440%	<b>0.06%</b>	0.00%
Global Real Estate Fund	BlackRock	Passive	0.070000%	n/a	0.009300%	0.004333%	<b>0.08%</b>	0.00%
Retirement Portfolio	BlackRock	Passive	0.070000%	n/a	0.005300%	n/a	<b>0.08%</b>	0.00%
Target Date 2025 Portfolio	BlackRock	Passive	0.070000%	n/a	0.006100%	n/a	<b>0.08%</b>	0.00%
Target Date 2030 Portfolio	BlackRock	Passive	0.070000%	n/a	0.007000%	n/a	<b>0.08%</b>	0.00%
Target Date 2035 Portfolio	BlackRock	Passive	0.070000%	n/a	0.008000%	n/a	<b>0.08%</b>	0.00%
Target Date 2040 Portfolio	BlackRock	Passive	0.070000%	n/a	0.008900%	n/a	<b>0.08%</b>	0.00%
Target Date 2045 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009800%	n/a	<b>0.08%</b>	0.00%
Target Date 2050 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009900%	n/a	<b>0.08%</b>	0.00%
Target Date 2055 Portfolio	BlackRock	Passive	0.070000%	n/a	0.010000%	n/a	<b>0.08%</b>	0.00%
Target Date 2060 Portfolio	BlackRock	Passive	0.070000%	n/a	0.010000%	n/a	<b>0.08%</b>	0.00%
Target Date 2065 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009400%	n/a	<b>0.08%</b>	0.00%
VRSIP	VRS	Active	n/a	n/a	n/a	n/a	<b>0.59%</b>	-0.01%

<sup>1</sup> There are no short-term trading redemption costs associated with any of the investment options.

<sup>2</sup> Includes custody, audit and other specific investment option related administrative costs.

**Defined Contribution Plans Advisory Committee Report**  
**Unbundled Plans Investment Performance**

Below are the totals for the period ending June 30, 2022. Returns greater than one year are annualized.

Investment Options	1 Month	3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs / Since Inception <sup>1</sup>	Fund Expense Ratio <sup>2</sup>	Inception Date	Market Value	% of Market Value <sup>27</sup>	% of Participants Selecting an Option <sup>28</sup>
	%	%	%	%	%	%	%	%		\$	%	%
<b>Do-It-For-Me: Target Date Portfolios<sup>3,4</sup></b>												
Retirement Portfolio	-4.40	-9.03	-13.69	-11.69	2.77	3.93	4.57	0.08	8/1/05	366,305,463	6.4	5.2
Custom Benchmark	-4.44	-9.14	-13.75	-11.68	2.72	3.89	4.52					
Target Date 2025 Portfolio	-4.98	-9.89	-14.51	-12.10	3.48	4.75	5.99	0.08	7/5/06	312,881,561	5.4	6.1
Custom Benchmark	-5.03	-10.04	-14.58	-12.11	3.42	4.69	5.93					
Target Date 2030 Portfolio	-5.87	-11.21	-15.81	-12.88	4.21	5.40	6.70	0.08	8/1/05	315,945,601	5.5	8.0
Custom Benchmark	-5.94	-11.44	-15.90	-12.92	4.14	5.33	6.61					
Target Date 2035 Portfolio	-6.67	-12.43	-17.02	-13.64	4.90	6.03	7.34	0.08	7/5/06	323,505,668 <sup>24</sup>	5.6	9.2
Custom Benchmark	-6.77	-12.73	-17.15	-13.71	4.81	5.93	7.24					
Target Date 2040 Portfolio	-7.41	-13.58	-18.20	-14.42	5.47	6.54	7.90	0.08	8/1/05	277,341,211	4.8	9.2
Custom Benchmark	-7.53	-13.95	-18.34	-14.51	5.36	6.43	7.78					
Target Date 2045 Portfolio	-8.03	-14.55	-19.20	-15.12	5.93	6.92	8.34	0.08	7/5/06	262,247,312	4.6	10.5
Custom Benchmark	-8.17	-14.97	-19.36	-15.25	5.80	6.78	8.20					
Target Date 2050 Portfolio	-8.32	-15.11	-19.81	-15.57	6.13	7.07	8.60	0.08	9/30/07	262,691,005	4.6	12.0
Custom Benchmark	-8.49	-15.56	-19.97	-15.72	6.00	6.93	8.46					
Target Date 2055 Portfolio	-8.38	-15.25	-19.95	-15.68	6.15	7.08	8.75	0.08	5/19/10	310,625,334	5.4	15.9
Custom Benchmark	-8.56	-15.71	-20.14	-15.86	6.02	6.94	8.61					
Target Date 2060 Portfolio	-8.39	-15.26	-19.96	-15.69	6.14	7.07	6.74	0.08	11/17/14	151,516,542	2.6	12.5
Custom Benchmark	-8.56	-15.71	-20.15	-15.86	6.02	6.94	6.58					
Target Date 2065 Portfolio	-8.38	-15.26	-19.97	-15.71	n/a	n/a	6.19	0.08	9/23/19	12,690,252	0.2	2.7
Custom Benchmark	-8.56	-15.72	-20.16	-15.88	n/a	n/a	6.16					
<b>Help-Me-Do-It: Individual Options</b>												
Money Market Fund <sup>5,6</sup>	0.11	0.24	0.30	0.37	0.73	1.26	0.74	0.08	11/1/99	102,913,280	1.8	1.9
FTSE 3 Month Treasury Bill Index	0.07	0.14	0.17	0.19	0.61	1.09	0.62					
Yield as of 06/30/22: 1.73% <sup>7</sup>												
Stable Value Fund <sup>8,9</sup>	0.12	0.37	0.71	1.47	1.93	2.03	1.87	0.23	2/1/95	661,710,542	11.5	7.0
Custom Benchmark <sup>10</sup>	0.27	0.76	1.21	1.59	1.14	1.69	1.50					
Yield as of 06/30/22: 1.54% <sup>11</sup>												
Bond Fund <sup>12</sup>	-1.56	-4.67	-10.23	-10.22	-0.89	0.92	1.61	0.03	11/1/99	151,850,637	2.6	3.3
Bloomberg U.S. Aggregate Bond Index	-1.57	-4.69	-10.35	-10.29	-0.93	0.88	1.54					
Inflation-Protected Bond Fund <sup>13</sup>	-3.18	-6.11	-8.90	-5.17	3.11	3.30	1.81	0.03	7/30/02	56,947,117	1.0	1.5
Bloomberg U.S. TIPS Index	-3.16	-6.08	-8.92	-5.14	3.04	3.21	1.73					
High-Yield Bond Fund <sup>14</sup>	-6.34	-8.91	-12.27	-11.17	0.92	2.75	4.75	0.39	5/31/04	45,612,072	0.8	1.7
ICE BofA U.S. High-Yield BB-B Constrained Index	-6.75	-9.50	-13.64	-12.20	0.04	2.07	4.34					
Stock Fund <sup>15</sup>	-8.25	-16.10	-19.95	-10.61	10.64	11.35	12.99	0.01	11/1/99	1,367,180,390	23.7	10.0
S&P 500 Index	-8.25	-16.10	-19.96	-10.62	10.60	11.31	12.96					
Small/Mid-Cap Stock Fund <sup>16</sup>	-9.54	-16.98	-21.79	-20.93	5.96	7.08	10.57	0.02	11/1/99	371,813,081	6.4	5.7
Russell 2500 Index <sup>17</sup>	-9.55	-16.98	-21.81	-21.00	5.91	7.04	10.49					
International Stock Fund <sup>18</sup>	-8.54	-13.10	-18.60	-19.40	1.89	2.82	5.66	0.06	11/1/99	182,321,369	3.2	4.7
MSCI ACWI ex-U.S. IMI Index <sup>19</sup>	-8.95	-14.28	-19.08	-19.86	1.55	2.50	5.36					
Global Real Estate Fund <sup>20</sup>	-8.42	-16.88	-20.26	-12.75	-0.30	2.72	5.46	0.08	10/1/02	95,705,485	1.7	3.0
FTSE EPRA/NAREIT Developed Index <sup>21</sup>	-8.69	-17.45	-20.71	-13.44	-1.07	1.95	4.69					
VRSIP <sup>22</sup>	0.24	-0.54	-3.44	6.11	11.42	9.13	9.32	0.59	7/1/08	55,496,204 <sup>25</sup>	1.0	0.5
VRS Custom Benchmark <sup>23</sup>	-0.18	-3.40	-6.15	-0.75	8.58	7.48	8.21					

VRSIP and benchmark returns are reported with a one month lag. [Return information shown is as of May 31, 2022.] [Market value as of May 31, 2022 was \$55,696,166.]

<b>Do-It-Myself: Self-Directed Brokerage Account</b>												
TD Ameritrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	82,393,009	1.4	0.2
<b>Total</b>										<b>\$5,769,693,135<sup>26</sup></b>		

- 1 If the fund was not in existence for 10 years, fund and corresponding benchmark returns shown represent performance from the since inception date.
- 2 Fund investment advisers may voluntarily agree to waive expenses. Expense waivers may be terminated at any time.
- 3 The Target Date Portfolios invest in units of BlackRock's LifePath Index Funds O. The LifePath Index Funds O invest in the master LifePath Index Funds F. The inception dates shown reflect the inception dates of the master LifePath Funds F. The inception dates for most LifePath Funds O were 12/9/11. The 2055 Fund's O inception date was 12/12/11, the 2060 Fund's O inception date was 1/2/15, and the 2065 Fund's O inception date was 9/23/2019. Returns prior to Funds' O inception dates are those of the Funds F with deductions taken for Funds O investment management fees.
- 4 Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Portfolios' asset classes. Weightings are adjusted quarterly to reflect the Portfolios' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are: Russell 1000 Index, Russell 2000 Index, MSCI ACWI Ex-U.S. IMI Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized: MBS, ABS, and CMBS Index, Bloomberg U.S. TIPS Index, FTSE EPRA/NAREIT Developed Index and the Bloomberg Commodity Index Total Return.
- 5 The Money Market Fund invests in units of BlackRock's Short-Term Investment Fund W. The inception data shown reflects the VRS Defined Contribution Plan's investment strategy inception date. Returns of the Fund from July 2012 through July 2016 represent performance of other BlackRock funds. Returns prior to July 2012 represent performance by the previous investment manager, State Street Global Advisors. All performance returns are linked.
- 6 An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment it is possible to lose money by investing in the Fund.
- 7 The current yield more closely reflects the earnings of the Fund than the total net return information.
- 8 The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date.
- 9 Direct transfers from the Stable Value Fund to the Money Market Fund (considered a "competing fund") are not permitted. Before transferring to the Money Market Fund, participants must first transfer to a "non-competing" fund for 90 days. Optional Retirement Plan for Higher Education (ORPHE) participants who want to make a direct exchange to another ORPHE provider, must first exchange to a "non-competing" fund on the MissionSquare Retirement investment platform for 90 days.
- 10 Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% 2- year maturity + 50% 3- year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment. Prior to August 2016 the custom benchmark was based on the monthly yield of actively traded U.S Treasuries with a 3-year maturity plus an annualized spread of 0.50%. The benchmark returns are linked.
- 11 The current yield more closely reflects the earnings of the Fund than the total net return information. There is no guarantee that the Fund will earn the current yield in the future.
- 12 The Bond Fund invests in units of BlackRock's U.S. Debt Index Fund M. The U.S. Debt Index Fund M invests in the master Fund F. The inception date shown reflects the VRS Defined Contribution Plans strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 13 The Inflation-Protected Bond Fund invests in units of BlackRock's U.S. Treasury-Inflation Protected Securities Fund M. The U.S. Treasury Inflation-Protected Securities Fund M invests in the master Fund F. The inception date shown reflects the inception date of the master Fund F. The inception date of BlackRock's U.S. Treasury Inflation-Protected Securities Fund M was July 20, 2012. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 14 The High-Yield Bond Fund invests in units of JPMorgan's Corporate High-Yield Fund-Investment Class. The inception date shown reflects the date the current investment team at JPMorgan commenced management responsibility of the Fund. Performance reflects the investment manager's returns for the aforementioned Fund with deductions taken for investment management fees negotiated by VRS and fund administrative expenses.
- 15 The Stock Fund invests in units of BlackRock's Equity Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 16 The Small/Mid-Cap Stock Fund invests in units of BlackRock's Russell 2500 Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 17 Effective July 2012, the performance benchmark is the Russell 2500 Index. Prior to July 2012, the performance benchmark was the Russell Small Cap Completeness Index. The benchmark returns are linked.
- 18 The International Stock Fund invests in units of BlackRock's MSCI ACWI ex-U.S. IMI Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plan's investment strategy inception date. Returns from July 2012 through July 2016 represent performance of another BlackRock Fund. Returns prior to July 2012 represent performance by the previous manager, State Street Global Advisors. All performance returns are linked.
- 19 Effective August 2016, the performance benchmark is the MSCI ACWI ex-U.S. IMI Index. It was the MSCI World ex-U.S Index from July 2012 through July 2016 and prior to July 2012 it was the MSCI EAFE Index. The benchmark returns are linked.
- 20 The Global Real Estate Fund invests in units of BlackRock's Developed Real Estate Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date. The Fund transitioned from a U.S. domestic REIT fund to a global real estate fund during July 2012. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 21 Effective July 2012, the performance benchmark is the FTSE EPRA/NAREIT Developed Index. Prior to July 2012, the performance benchmark was the Dow Jones U.S. Select REIT Index. The benchmark returns are linked.
- 22 The inception date shown reflects the date the VRS Investment Portfolio (VRSIP) was unitized.
- 23 The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.
- 24 Includes Pending Account VRSIP amount of \$0.
- 25 Includes Preliminary Investment Portfolio Account - PIP amount of \$1,196,815.
- 26 Includes \$5,436,572 held in the administrative Special Accounts.
- 27 May not equal 100% due to rounding.
- 28 The data reflects the percentage of participants who selected a particular investment option as of June 30, 2022. There were 495,803 participant accounts as of June 30, 2022 across all unbundled DC plans.

**All fund performance returns shown reflect all fund management fees and expenses, but do not reflect the Plan administrative fee charged by MissionSquare Retirement which would further reduce the returns shown.**

All calculations assume reinvestment of dividends and capital gains. All returns are calculated in U.S. dollars. Performance returns are provided by BlackRock, Galliard Capital Management, JPMorgan, Bank of New York Mellon, and MissionSquare Retirement. Benchmark returns are provided by BlackRock, Russell/Mellon Analytical Services, Galliard, and MissionSquare Retirement. Although data is gathered from sources believed to be reliable, we cannot guarantee completeness or accuracy.

**Plan Administrative Fee:** An annual record keeping and communication services fee of \$30.50 is deducted from participant accounts on a monthly basis (approximately \$2.54 per month). Only one annual fee of \$30.50 is deducted from participant accounts for those participants participating in more than one Commonwealth of Virginia defined contribution plan.

# Bundled TIAA ORPHE



**Bundled ORP for Higher Education - TIAA RC Contract<sup>1,2</sup>**

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics				
			1 Year	3 Years*	5 Years*	Standard Deviation (%)	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation (%)	Sharpe Ratio	Tracking Error	Information Ratio	
<b>BlackRock Equity Index Fund J</b>	Passive	0.01	%	%	%	%								
S&P 500 Index			-10.61	10.64	11.35	18.64	0.54	0.03	n/a	16.95	0.61	0.03	n/a	
Excess Return			-10.62	10.60	11.31	18.64	0.54			16.95	0.60			
<i>MSTAR Ave: Large Blend</i>			0.01	0.04	0.04									
<b>BlackRock Russell 2500 Index Fund M</b>	Passive	0.03												
Russell 2500 Index			-20.94	5.95	7.07	23.38	0.23	0.07	n/a	21.08	0.28	0.07	n/a	
Excess Return			-21.00	5.91	7.04	23.38	0.23			21.07	0.28			
<i>MSTAR Ave: Mid-Cap Blend</i>			0.06	0.04	0.03									
<b>BlackRock MSCI ACWI ex-U.S. IMI Index Fund M</b>	Passive	0.11												
MSCI ACWI ex-U.S. IMI Index			-19.44	1.84	2.78	17.85	0.07	1.41	n/a	15.95	0.11	1.23	n/a	
Excess Return			-19.86	1.55	2.50	17.94	0.05			16.00	0.09			
<i>MSTAR Ave: Foreign Large Blend</i>			0.42	0.29	0.28									
<b>BlackRock MSCI ACWI IMI Index Non-Lendable Fund M</b>	Passive	0.05												
MSCI ACWI IMI Index			-16.21	6.26	7.04	18.37	0.31	0.63	n/a	16.47	0.36	0.56	n/a	
Excess Return			-16.52	5.98	6.70	18.46	0.29			16.53	0.34			
<i>MSTAR Ave: World Stock</i>			0.31	0.28	0.34									
<b>TIAA Real Estate Account</b>	Active	0.77												
Custom Benchmark <sup>3</sup>			23.04	9.87	7.96	5.03	1.83	3.08	0.38	4.01	1.70	2.45	0.20	
Excess Return			18.61	8.70	7.47	5.11	1.57			4.06	1.56			
			4.43	1.17	0.49									

\*Annualized.

<sup>1</sup> Refer to the unbundled DC plans for information regarding BlackRock's LifePath Index Funds O, Short-Term Investment Fund W, U.S. Debt Index Fund M and U.S. TIPs Fund M.

Although the unbundled DC plans use white lable fund names and TIAA does not these funds are the same exact funds.

<sup>2</sup> The TIAA Traditional Annuity is not included in this exercise due to the fact there is no performance benchmark associated with TIAA's fixed annuity product offering.

<sup>3</sup> Effective January 2014, the Custom Benchmark is 70% NCREIF Open End Diversified Core Equity (ODCE) Net Index, 20% Bloomberg 3-Month Treasury Bill Index and 10% Dow Jones U.S. Select REIT Index. TIAA's investment management team does not manage its real estate account to a published index benchmark. The Custom Benchmark represents a reasonable proxy of how TIAA allocates among real property, short-term investments and REITS over time. VRS anticipates that the TIAA Real Estate Account's returns may vary greatly from those of the custom benchmark.

Fund with TIAA plan services expense offset.

Data provided by TIAA, BlackRock, MissionSquare, VRS and Zephyr StyleADVISOR.



**Bundled ORP for Higher Education - TIAA RC Contract Fund Annual Operating Expenses<sup>1,2</sup>**  
**Information as of June 30, 2022**

Investment Option	Investment Manager	Type	Investment Management Costs	Record-Keeping & Plan Administration Costs	[12(b)-1] Distribution Costs	Other Costs	Total Annual Expense Ratio	Expense Ratio YOY Change
<b>TIAA Traditional Annuity</b>	TIAA	Fixed Annuity	n/a	0.150000%	n/a	0.320000%	<b>0.47%</b>	0.02%
<b>TIAA Real Estate Account</b>	TIAA	Active (variable annuity)	0.270000%	0.140000%	0.080000%	0.280000%	<b>0.77%</b>	-0.10%
<b>BlackRock Equity Index Fund J</b>	BlackRock	Passive	0.010000%	n/a	n/a	0.002700%	<b>0.01%</b>	0.00%
<b>BlackRock Russell 2500 Index Fund M</b>	BlackRock	Passive	0.030000%	n/a	n/a	0.004900%	<b>0.03%</b>	0.00%
<b>BlackRock MSCI ACWI ex-U.S. IMI Index Fund M</b>	BlackRock	Passive	0.090000%	n/a	n/a	0.019200%	<b>0.11%</b>	0.00%
<b>BlackRock MSCI ACWI IMI Index Non-Lendable Fund M</b>	BlackRock	Passive	0.040000%	n/a	n/a	0.009900%	<b>0.05%</b>	0.00%

<sup>1</sup> There are no short-term trading redemption costs associated with any of the investment options.

<sup>2</sup> Refer to the unbundled DC plans for information regarding BlackRock's LifePath Index Funds O, Short-Term Investment Fund W, U.S. Debt Index Fund M and U.S. TIPs Fund M. The unbundled DC plans use white label fund names for the aforementioned funds. However, TIAA does not have the capability to use white label fund names.

Funds with plan services expense offsets within the TIAA RC contract.

**Percentage of Embedded Record-Keeping and Plan Administration Costs**

Investment Option	Type	Record-Keeping & Plan Administration Costs	Total Annual Expense Ratio	% of Record-Keeping & Plan Administration Costs
<b>TIAA Traditional Annuity</b>	Fixed Annuity	0.150000%	0.47%	<b>32%</b>
<b>TIAA Real Estate Account</b>	Active (variable annuity)	0.140000%	0.77%	<b>18%</b>

Defined Contribution Plans Advisory Committee Report

TIAA RC Contract Investment Performance

Below are the totals for the period ending June 30, 2022. Returns greater than one year are annualized.

Investment Options	1 Month	3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs / Since Inception <sup>1</sup>	Fund Expense Ratio <sup>2</sup>	Inception Date	Market Value	% of Market Value <sup>19</sup>	% of Participants Selecting an Option <sup>20</sup>
	%	%	%	%	%	%	%	%		\$	%	%
<b>Target Date Portfolios<sup>3,4</sup></b>												
BlackRock LifePath Index Retirement Fund O	-4.40	-9.03	-13.69	-11.69	2.77	3.93	4.57	0.08	8/1/05	24,470,901	7.8	8.8
Custom Benchmark	-4.44	-9.14	-13.75	-11.68	2.72	3.89	4.52					
BlackRock LifePath Index 2025 Fund O	-4.98	-9.89	-14.51	-12.10	3.48	4.75	5.99	0.08	7/5/06	19,024,480	6.1	7.0
Custom Benchmark	-5.03	-10.04	-14.58	-12.11	3.42	4.69	5.93					
BlackRock LifePath Index 2030 Fund O	-5.87	-11.21	-15.81	-12.88	4.21	5.40	6.70	0.08	8/1/05	27,616,899	8.8	8.6
Custom Benchmark	-5.94	-11.44	-15.90	-12.92	4.14	5.33	6.61					
BlackRock LifePath Index 2035 Fund O	-6.67	-12.43	-17.02	-13.64	4.90	6.03	7.34	0.08	7/5/06	21,515,931	6.9	9.0
Custom Benchmark	-6.77	-12.73	-17.15	-13.71	4.81	5.93	7.24					
BlackRock LifePath Index 2040 Fund O	-7.41	-13.58	-18.20	-14.42	5.47	6.54	7.90	0.08	8/1/05	24,132,368	7.7	9.7
Custom Benchmark	-7.53	-13.95	-18.34	-14.51	5.36	6.43	7.78					
BlackRock LifePath Index 2045 Fund O	-8.03	-14.55	-19.20	-15.12	5.93	6.92	8.34	0.08	7/5/06	20,319,929	6.5	10.2
Custom Benchmark	-8.17	-14.97	-19.36	-15.25	5.80	6.78	8.20					
BlackRock LifePath Index 2050 Fund O	-8.32	-15.11	-19.81	-15.57	6.13	7.07	8.60	0.08	9/30/07	11,994,151	3.8	8.1
Custom Benchmark	-8.49	-15.56	-19.97	-15.72	6.00	6.93	8.46					
BlackRock LifePath Index 2055 Fund O	-8.38	-15.25	-19.95	-15.68	6.15	7.08	8.75	0.08	5/19/10	5,532,507	1.8	6.0
Custom Benchmark	-8.56	-15.71	-20.14	-15.86	6.02	6.94	8.61					
BlackRock LifePath Index 2060 Fund O	-8.39	-15.26	-19.96	-15.69	6.14	7.07	6.74	0.08	11/17/14	1,185,528	0.4	2.6
Custom Benchmark	-8.56	-15.71	-20.15	-15.86	6.02	6.94	6.58					
BlackRock LifePath Index 2065 Fund O	-8.38	-15.26	-19.97	-15.71	n/a	n/a	6.19	0.08	9/23/19	1,445,308	0.5	1.2
Custom Benchmark	-8.56	-15.72	-20.16	-15.88	n/a	n/a	6.16					
<b>Individual Options</b>												
BlackRock Short-Term Investment Fund W <sup>5</sup>	0.11	0.24	0.30	0.37	0.73	1.26	0.81	0.08	7/1/03	5,944,639	1.9	7.8
FTSE 3 Month Treasury Bill Index	0.07	0.14	0.17	0.19	0.61	1.09	0.62					
Yield as of 06/30/22: 1.73% <sup>6</sup>												
BlackRock U.S. Debt Index Fund M <sup>7</sup>	-1.56	-4.67	-10.23	-10.22	-0.89	0.92	1.61	0.03	6/6/96	8,795,111	2.8	18.4
Bloomberg U.S. Aggregate Bond Index	-1.57	-4.69	-10.35	-10.29	-0.93	0.88	1.54					
BlackRock U.S. TIPS Fund M <sup>8</sup>	-3.18	-6.11	-8.90	-5.17	3.11	3.30	1.81	0.03	7/30/02	4,930,984	1.6	12.6
Bloomberg U.S. TIPS Index	-3.16	-6.08	-8.92	-5.14	3.04	3.21	1.73					
BlackRock Equity Index Fund J <sup>9</sup>	-8.25	-16.10	-19.95	-10.61	10.64	11.35	12.99	0.01	3/5/97	32,742,522	10.5	24.7
S&P 500 Index	-8.25	-16.10	-19.96	-10.62	10.60	11.31	12.96					
BlackRock Russell 2500 Index Fund M <sup>10</sup>	-9.54	-16.99	-21.80	-20.94	5.95	7.07	10.57	0.03	9/30/08	7,521,958	2.4	4.7
Russell 2500 Index	-9.55	-16.98	-21.81	-21.00	5.91	7.04	10.49					
BlackRock MSCI ACWI ex-U.S. IMI Index Fund M <sup>11</sup>	-8.54	-13.11	-18.63	-19.44	1.84	2.78	5.22	0.11	2/28/11	14,439,111	4.6	18.4
MSCI ACWI ex-U.S. IMI Index	-8.95	-14.28	-19.08	-19.86	1.55	2.50	5.01					
BlackRock MSCI ACWI IMI Index Non-Lendable Fund M <sup>12</sup>	-8.43	-15.28	-20.12	-16.21	6.26	7.04	7.81	0.05	4/12/13	39,494,824	12.6	32.4
MSCI ACWI IMI Index	-8.63	-15.83	-20.44	-16.52	5.98	6.70	7.44					
TIAA Real Estate Account <sup>13</sup>	0.94	5.11	10.82	23.04	9.87	7.96	8.08	0.77	10/2/95	12,157,752	3.9	27.0
Custom Composite Benchmark <sup>14</sup>	0.27	1.23	5.91	18.61	8.70	7.47	7.93					
TIAA Traditional Annuity RC <sup>15,16,17,18</sup>	0.35	1.05	1.97	3.73	3.85	3.94	4.15	0.47	8/1/05	24,901,502	8.0	29.0
<b>Self-Directed Brokerage Account</b>												
TIAA - Self-Directed Account	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4,256,756	1.4	0.9
<b>Total</b>										\$312,423,161		

Footnotes >

- 1 If the fund was not in existence for 10 years, fund and corresponding benchmark returns shown represent performance from the since inception date.
- 2 Fund investment advisers may voluntarily agree to waive expenses. Expense waivers may be terminated at any time.
- 3 The BlackRock LifePath Index Funds O invest in the master LifePath Index Funds F. The inception dates shown reflect the inception date of the master LifePath Funds F. The inception dates for most LifePath Funds O were 12/9/11. The 2055 Fund's O inception date was 12/12/11, the 2060 Fund's O inception date was 1/2/15 and the 2065 Fund's O inception date was 9/23/19. Returns prior to Funds' O inception dates are those of Funds F with deductions taken for Funds O investment management fees.
- 4 Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Funds' asset classes. Weightings are adjusted quarterly to reflect the Funds' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are: Russell 1000 Index, Russell 2000 Index, MSCI ACWI Ex-U.S. IMI Index, Bloomberg U.S. Aggregate Bond Index, Bloomberg U.S. TIPS Index, FTSE EPRA/NAREIT Developed Index and the Bloomberg Commodity Index Total Return.
- 5 An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment it is possible to lose money by investing in the Fund.
- 6 The current yield more closely reflects the earnings of the Fund than the total net return information.
- 7 The BlackRock U.S. Debt Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 7/20/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 8 The BlackRock U.S. Treasury Inflation-Protected Securities Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 7/20/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M' investment management fees.
- 9 The BlackRock Equity Index Fund J invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund J was 3/20/17. Returns prior to Fund J's inception date are those of Fund F with deductions taken for Fund J's investment management fees.
- 10 The BlackRock Russell 2500 Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 1/30/13. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 11 The BlackRock MSCI ACWI ex-U.S. IMI Index Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 12/31/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 12 The BlackRock MSCI ACWI IMI Index Fund M invests in the master Fund F. Inception dates for the master Fund F and Fund M are both 4/12/13.
- 13 Transfers out of the TIAA Real Estate Account (REA) are limited to one per quarter. Currently, these transfers do not require a minimum transaction amount; however, in the future TIAA reserves the right, in its sole discretion, to impose minimum transaction levels, which levels will generally be at least \$1,000 (except for systematic transfers, which must be at least \$100) or your entire accumulation, if less. Participants may not make a lump-sum transfer into the REA if their aggregated balances across all contracts is greater than \$150,000. Systematic transfers and recurring contributions are not subject to this limitation.
- 14 Effective January 2014, the Custom Composite Index is 70% NCREIF Open End Diversified Core Equity (ODCE) Net Index, 20% Bloomberg 3-Month Treasury Bill Index, and 10% Dow Jones U.S. Select REIT Index. Prior periods include other representative indices. TIAA's investment management team does not manage its real estate portfolio to a specific published index benchmark. The Custom Composite Index represents a reasonable proxy of how TIAA allocates assets among real property, short-term investments, and REITs over time. The Virginia Retirement System anticipates that Fund returns may vary greatly from those of the Custom Composite Index. Benchmark returns are not available for months that do not end on a calendar quarter due to the fact that NCREIF ODCE Index returns are only published each calendar quarter.
- 15 Upon separation from service or retirement participants can convert their TIAA Traditional accumulation dollars amount to a lifetime income option or withdraw funds through a fixed period annuity ranging from five to 30 years or a Transfer Payout Annuity, which enables participants to move funds out of the TIAA Traditional Annuity in 7 annual installments for the Retirement Choice (RC) contract. Each installment includes a portion of principal and interest, based on the rate in effect when transfer or withdrawal funds are made. However, there are two exceptions to the payout installment. First, if the TIAA Traditional account balance is less than \$5,000, participants can transfer the total amount at any time following termination of employment, but only once during the life of the contract. Second, TIAA Traditional can be withdrawn or transferred to another company up to the full balance within 120 days following termination of employment, subject to 2.5% surrender charge. After the 120-day period, participants can withdraw funds only through a fixed period annuity ranging from five to 30 years or the Transfer Payout Annuity.
- 16 The TIAA Traditional Annuity RC contract has minimum guaranteed rate during the accumulation phase of 1% to 3% . The current minimum rate for the RC contract is 1%. Further, the TIAA Traditional Annuity RC contract applies to premiums deposited during the applicable calendar year and is guaranteed for 10 years, at which point the minimum rate for these premiums will be reset.
- 17 TIAA's annual credited rate on new money for the RC contract for the month of June was 5.25%.
- 18 The TIAA Traditional Annuity is not an investment for purposes of federal securities laws; it is a guaranteed insurance contract. Therefore, unlike a variable annuity or mutual fund, the TIAA Traditional Annuity does not include an identifiable expense ratio. The 47 basis points (0.47%) approximates the expense provision in the formula for determining TIAA Traditional Annuity returns inclusive of administrative and investment expenses. This expense provision is not guaranteed, it is subject to change.
- 19 May not equal 100% due to rounding
- 20 The data reflects the percentage of participants who selected a particular investment option as of June 30, 2022. There were 5,213 (RC contract) participants as of June 30, 2022.

**Performance returns shown reflect all fund management fees and other investment related expenses, but do not reflect the TIAA annual administrative fee of \$66 (deducted at \$16.50 per quarter) which would further reduce the returns shown. Performance returns do not reflect redemption fees and/or surrender charges, if applicable.**

All calculations assume reinvestment of dividends and capital gains. All returns are calculated in U.S dollars. Fund and benchmark returns are provided by TIAA and BlackRock. Although data is gathered from sources to be reliable, the Virginia Retirement System cannot guarantee completeness or accuracy.

# DC Trends and Developments



Ongoing monitoring of DC investment trends and developments including but not limited to:

- Default investment options - target date funds most widely used
- Investment menu structure and offerings
- Behavioral finance
- Investment advice and managed accounts
- Retirement income

# Quarterly Review

## VRS Defined Contribution Plans

*April 1, 2022 – June 30, 2022*

# DCP

Virginia Retirement System

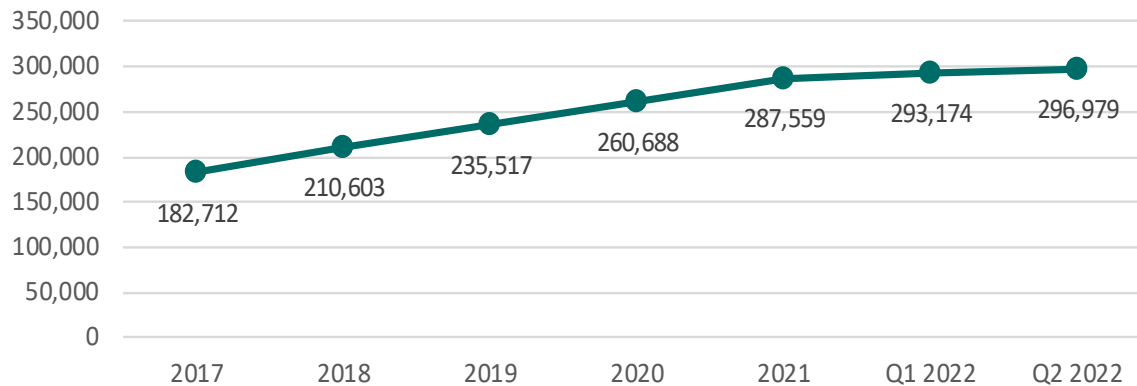


# VRS Defined Contribution Plans<sup>1</sup>

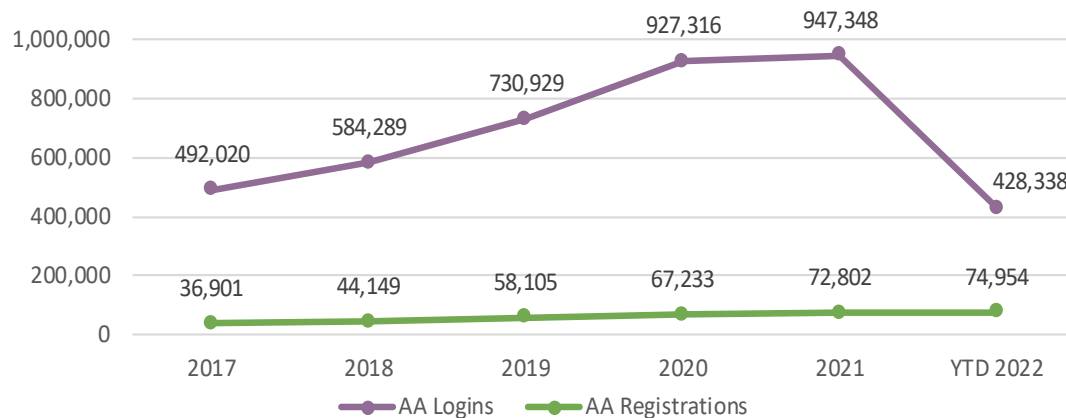
2<sup>nd</sup> Quarter 2022 – DC Plans Metrics

Total Assets<sup>2</sup>: \$5,764,256,497.07 Total Accounts<sup>2</sup>: 494,996

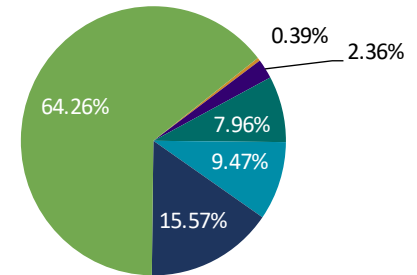
## Unique Participants



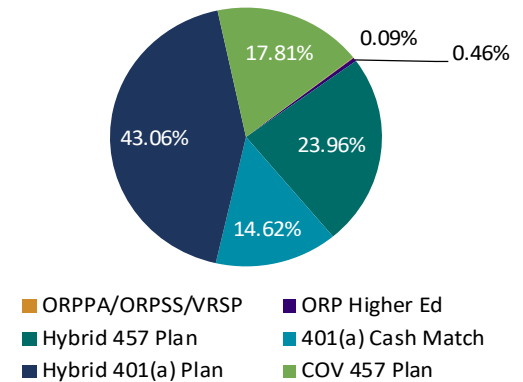
## Account Access Registrations & Logins



## Assets Under Management



## Accounts Under Management



## Top 10 Visited Pages<sup>3</sup>

1. Hybrid Retirement Plan Landing Page
2. COV 457 Retirement Plan Landing Page
3. Hybrid 457 Voluntary Contributions
4. Hybrid Plan Group Life Insurance
5. Hybrid Plan Education
6. Virginia Cash Match Landing Page
7. COV 457 Overview
8. COV 457 Plan Info
9. Hybrid Plan Leaving Employment
10. Hybrid Forms

# VRS Defined Contribution Plans

## 2<sup>nd</sup> Quarter 2022 – DC Plans Participant Engagement

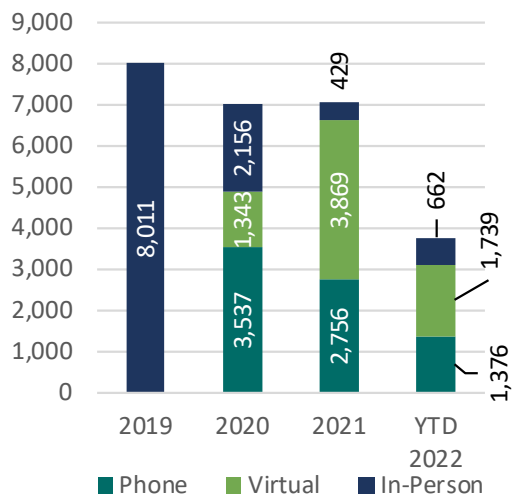
### Call Center – Participant Services

- 26,599 calls received YTD in 2022
- 55,311 calls received in 2021
- 63,953 calls received in 2020
- 56,612 calls received in 2019

#### Current call trends:

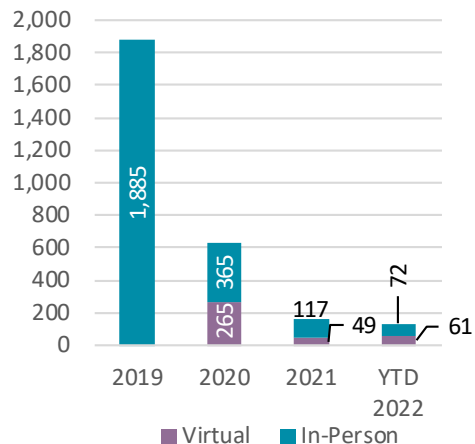
1. Withdrawals
2. General inquiries
3. Internet assistance
4. Indicative data
5. Deferrals

### Individual Account Reviews

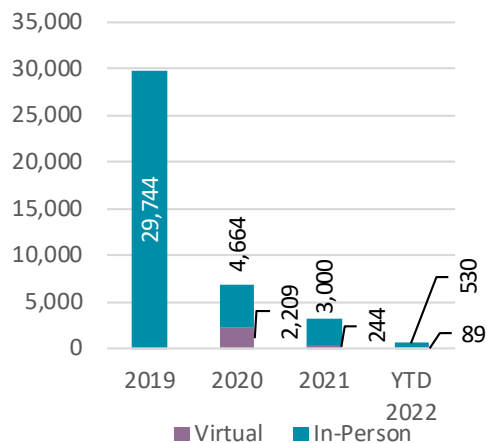


### Participant Sessions

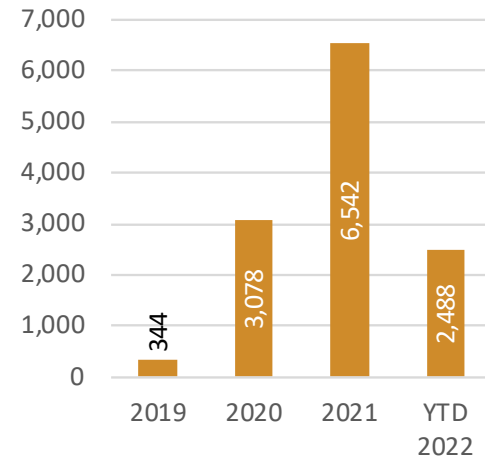
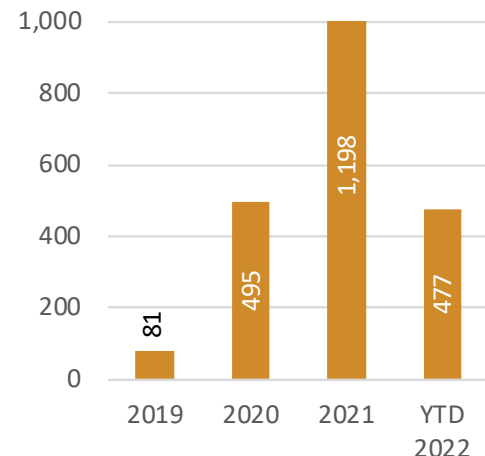
#### Group Meetings



### Participant Attendance



#### Webinars

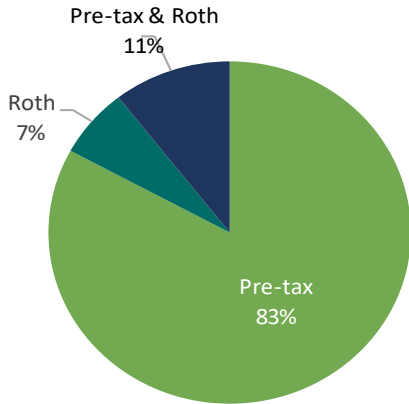




# VRS Defined Contribution Plans

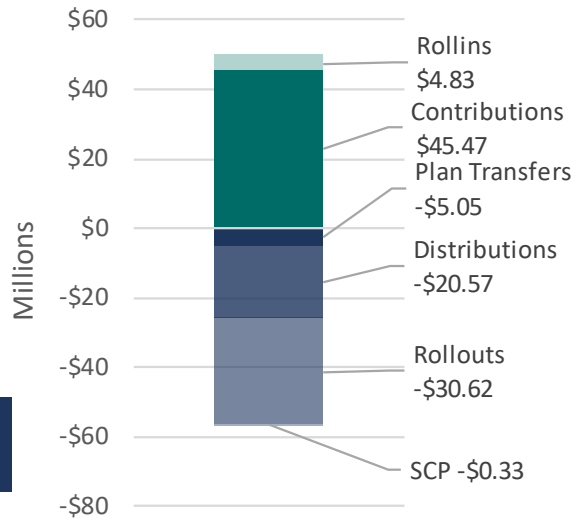
2<sup>nd</sup> Quarter 2022 – COV 457 Plan, Virginia Cash Match Plan

## Deferral Type



Average pre-tax deferral per pay = \$172.09  
Average Roth deferral per pay = \$173.30

## Contributions/Distributions<sup>5</sup>



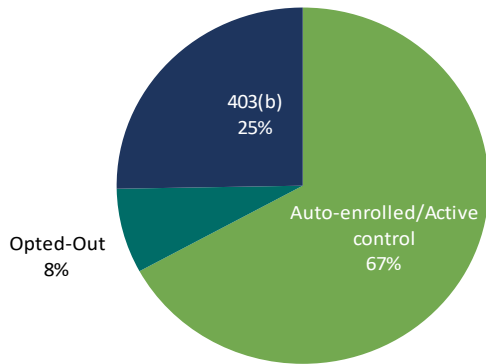
## COV 457 Participation Rates

- State<sup>4</sup> 35.92%
- Non-state 9.52%

## Top 10 Fund Holdings

- Stock \$1,284,996,819
- Target Date Portfolios \$1,218,014,897
- Stable Value \$642,395,060
- Small/Mid-Cap Stock \$345,401,190
- International Stock \$170,426,580
- Bond \$145,817,433
- Money Market \$89,953,546
- Global Real Estate \$89,574,584
- TD Ameritrade \$76,971,574
- VRS Investment Portfolio \$55,203,244

## Auto Enrollment



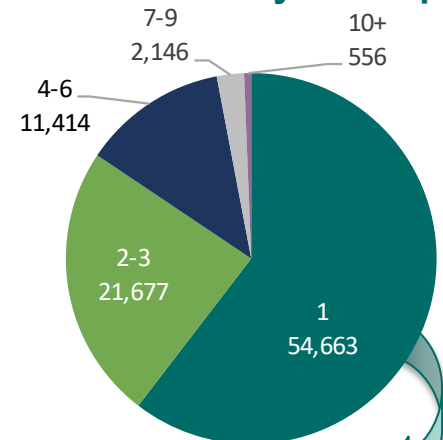
## Participant Status Overview<sup>6</sup>

159,845 total accounts

57% Active  
43% Separated

\$1,858m assets at-risk

## # of Funds Held by Participants

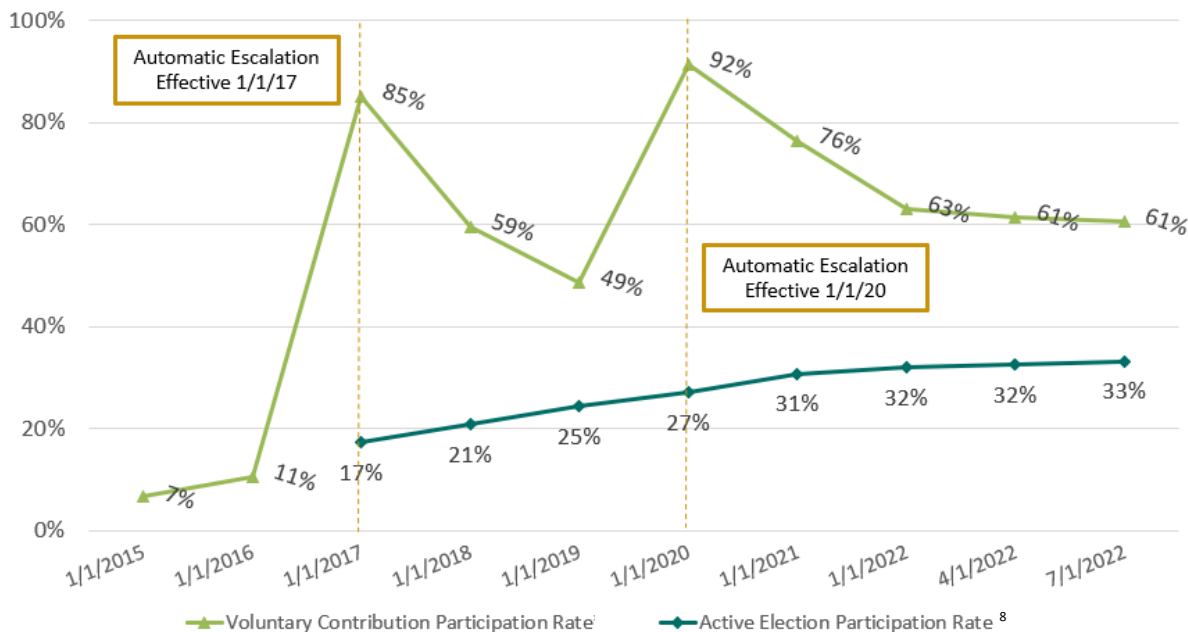


81% of this population is invested in a single TDP

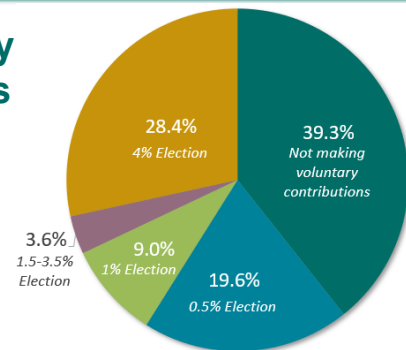
# VRS Defined Contribution Plans

2<sup>nd</sup> Quarter 2022 – Hybrid Retirement Plan – 401(a) & 457(b)

## Participation Rates<sup>7</sup>



## Voluntary Elections



## Top 10 Fund Holdings

1. Target Date Portfolios	\$1,261,676,004
2. Stock	\$46,552,273
3. Small/Mid-Cap Stock	\$14,350,978
4. Money Market	\$8,572,785
5. Stable Value	\$8,055,512
6. International Stock	\$7,092,969
7. Global Real Estate	\$3,580,039
8. High-Yield Bond	\$2,960,586
9. Bond	\$2,819,645
10. TD Ameritrade	\$2,681,314

## Participant Status Overview<sup>3</sup>

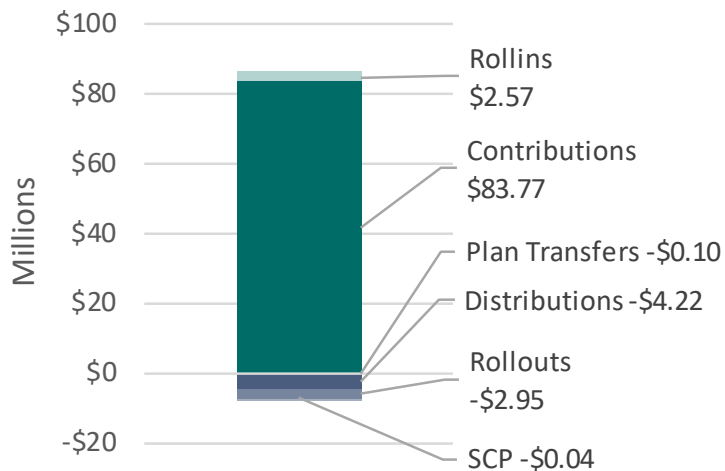
331,694 total accounts

71% Active

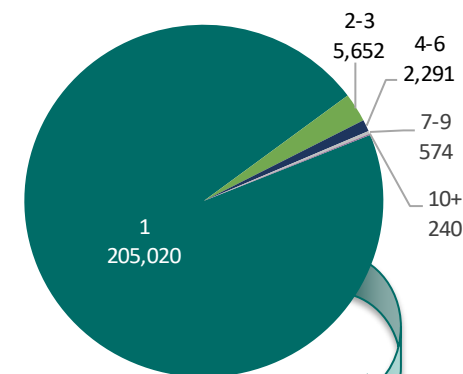
29% Separated

\$249m assets at-risk

## Contributions/Distributions



## # of Funds Held by Participants



99.5% of this population is invested in a single TDP

# VRS Defined Contribution Plans

## 2<sup>nd</sup> Quarter 2022 – DC Plans Metrics

### Source Information/Additional Footnotes

All data unless noted otherwise was provided by MissionSquare Retirement and is as of 6/30/2022.

1. Includes DC plans record kept by MissionSquare Retirement.
2. Total assets and accounts include beneficiaries and excludes forfeiture and reserve accounts.
3. Web statistics provided by Google Analytics.
4. Includes employees at higher education institutions who are also eligible for a 403(b).
5. Cash Flow Definitions
  - Rollins – Contributions into a participant’s account from a retirement plan or IRA.
  - Contributions – Payroll contributions from a participant’s paycheck.
  - Plan Transfers – Transfer of funds between VRS retirement plans.
  - Distributions – Consists of auto enrollment refunds, required minimum distributions (RMDs) unforeseen emergency withdrawals and full, partial, installment and de minimis requests
  - Rollouts – Withdrawal request sent to another retirement plan or IRA
  - SCP – A request to transfer employee contribution funds from the plan to VRS to purchase service credit. Please note, SCP is not permitted from the H401 plan.
6. Active Participants do not have a termination date on file and may not have made a contribution during the quarter. Terminated Participants have a termination date on file.
7. Source: Active Hybrid Member Demographics Report.
8. Active Election participation rate includes members who had a self-selected voluntary election on file prior to the automatic escalation that occurred on 12/16/19.

# Virginia Retirement System



## **DC Plans Advisory Committee Annual Investment Review**

**September 8, 2022**

**Virginia Retirement System  
DC Plans Advisory Committee  
Investment Department – Annual Review 2022**

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**Overview**

The Defined Contribution Plans Advisory Committee (DCPAC) is an advisory committee with the purpose of reviewing matters relating to or affecting the plan administration, plan design, and investments of the various defined contribution (DC) plans established pursuant to the Code of Virginia and to make recommendations to the Board regarding those matters. The DCPAC's recommendations are not binding on the Board and the DCPAC has no authority over staff or administrative and investment decisions.

The Committee Charter outlines several responsibilities to be performed by the DCPAC. Investment responsibilities include:

- Reviewing national trends and identifying best practices.
- Assisting staff with identifying potential asset classes and investment strategies and recommending changes to the Board as needed.
- Performing an annual comprehensive review of the investment program for each plan with an emphasis on longer time frames, such as 3 and 5 years but shorter-term trends are also considered if they are significant. The DCPAC may provide recommendations to the Board regarding any investment options that should be considered for addition or deletion as well as informing the Board of any significant performance issues as appropriate.
- Periodically, reviewing the Investment Policy Statements for the VRS DC plans, the VRS Defined Contribution Plans Investment Belief Statements and recommending any changes to the Board.

The purpose of this annual review is to provide the DCPAC with investment information needed to perform its annual comprehensive review of the investment program for each plan. Please refer to subsequent sections of this package for performance information that covers the periods ending June 30, 2022.

As of June 30, 2022, DC plan assets for those investments overseen by investment staff totaled \$6.1 billion (unbundled plans: ~\$5.8 billion; bundled TIAA ORPHE ~\$312.4 million). Each program offered the following number of investment options\*:

- Unbundled DC Plans: Eleven\* investment options and a self-directed brokerage option.
- ORPHE TIAA: Ten\* investment options and a self-directed brokerage option.

\*Target date portfolio series are counted as one investment option. If each target date portfolio is counted separately there are a total of 20 core investment options within the unbundled DC plans and 19 core investment options within the bundled TIAA ORPHE.

### **Unbundled DC Plan Structure**

An unbundled DC plan structure provides investment staff with maximum flexibility to add or delete investment options as appropriate in an efficient manner. This fully open architecture approach enables investment staff to contract directly with investment managers. The unbundling of investment contracts from plan recordkeeping / administration contracts is a best practice within the DC industry and is in line with VRS Defined Contribution Plans Investment Belief Statements.

Most DC plans administered by VRS operate in a fully unbundled plan structure. The exception is the Optional Retirement Plan for Higher Education (ORPHE) where one of the two plan program providers operate under a bundled plan structure.

No changes were made to the unbundled DC plans investment platform this past fiscal year. Detailed information about the unbundled DC plans investments is included in subsequent sections of this package.

### **Bundled DC Plan Structure**

A bundled DC plan structure does not provide investment staff with maximum flexibility to add or delete investment options as appropriate in an efficient manner and is not the preferable structure. Constraints within a bundled plan construct may limit the scope of available investment options and may limit access to more attractive options within asset classes.

TIAA, one of the providers for the ORPHE, is structured in a bundled manner where investment option offerings are included as part of the provider's recordkeeping / administration contract. TIAA has become more flexible over the years in working with plan sponsors such as VRS to increase its investment fund opportunity set.

No changes were made to the bundled TIAA investment platform this past fiscal year. Detailed information about the bundled TIAA investment offerings is included in subsequent sections of this package.

### **Investment Policy Statements**

Currently, staff is not recommending any changes to the two defined contribution investment policy statements (unbundled structure and bundled structure). The incoming Chief Investment Officer, Andrew Junkin, will review the two DC Investment Policy Statements which may result in observations for discussion at a later date.

### **VRS Defined Contribution Plans Investment Belief Statements**

Currently, staff is not recommending any changes to the VRS Defined Contribution Plans Investment Belief Statements. The incoming Chief Investment Officer, Andrew Junkin, will review the DC Investment Belief Statements which may result in observations for discussion at a later date.

**Other**

During this past annual reporting period staff discussed various DC trends and best practices and provided the Committee with CEM's annual Defined Contribution Plans Survey results.

# **Unbundled DC Plans Structure**



Unbundled DC Plans

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics			
			1 Year	3 Years*	5 Years*	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio
		%	%	%	%	%	%	%	%	%	%	%	%
<b>Money Market Fund</b>	Capital Preservation	0.08	<b>0.37</b>	<b>0.73</b>	<b>1.26</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FTSE 3 Month Treasury Bill Index			0.19	0.61	1.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Excess Return			0.18	0.12	0.17								
<b>Stable Value Fund<sup>1</sup></b>	Capital Preservation	0.23	<b>1.47</b>	<b>1.93</b>	<b>2.03</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Custom Benchmark <sup>2</sup>			1.59	1.14	1.69	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Excess Return	(Book Value)		-0.12	0.79	0.34								
<i>eVestment Alliance Median: Stable Value Universe<sup>3</sup></i>			1.70	2.02	2.13								
<b>Bond Fund</b>	Passive	0.03	<b>-10.22</b>	<b>-0.89</b>	<b>0.92</b>	4.55	-0.33	0.07	n/a	4.04	-0.04	0.06	n/a
Bloomberg U.S. Aggregate Bond Index			-10.29	-0.93	0.88	4.56	-0.34			4.04	-0.05		
Excess Return			0.07	0.04	0.04								
<i>MSTAR Ave: Intermediate Term Bond</i>			-10.74	-1.00	0.72								
<b>Inflation-Protected Bond Fund</b>	Passive	0.03	<b>-5.17</b>	<b>3.11</b>	<b>3.30</b>	5.04	0.50	0.09	n/a	4.31	0.51	0.07	n/a
Bloomberg U.S. TIPS Index			-5.14	3.04	3.21	5.01	0.49			4.29	0.50		
Excess Return			-0.03	0.07	0.09								
<i>MSTAR Ave: Inflation-Protected Bond</i>			-3.79	2.82	2.85								
<b>High-Yield Bond Fund</b>	Active	0.39	<b>-11.17</b>	<b>0.92</b>	<b>2.75</b>	9.65	0.03	1.71	0.51	8.01	0.21	1.40	0.49
ICE BofA U.S. HY BB-B Constrained Index			-12.20	0.04	2.07	9.71	-0.06			8.03	0.12		
Excess Return			1.03	0.88	0.68								
<i>MSTAR Ave: High-Yield Bond</i>			-11.80	-0.21	1.46								
<b>Stock Fund</b>	Passive	0.01	<b>-10.61</b>	<b>10.64</b>	<b>11.35</b>	18.64	0.54	0.03	n/a	16.95	0.61	0.03	n/a
S&P 500 Index			-10.62	10.60	11.31	18.64	0.54			16.95	0.60		
Excess Return			0.01	0.04	0.04								
<i>MSTAR Ave: Large Blend</i>			-11.58	9.14	9.77								
<b>Small/Mid-Cap Stock Fund</b>	Passive	0.02	<b>-20.93</b>	<b>5.96</b>	<b>7.08</b>	23.38	0.23	0.07	n/a	21.08	0.28	0.07	n/a
Russell 2500 Index			-21.00	5.91	7.04	23.38	0.23			21.07	0.28		
Excess Return			0.07	0.05	0.04								
<i>MSTAR Ave: Mid-Cap Blend</i>			-13.90	6.70	6.97								
<b>International Stock Fund</b>	Passive	0.06	<b>-19.40</b>	<b>1.89</b>	<b>2.82</b>	17.85	0.07	1.41	n/a	15.95	0.11	1.23	n/a
MSCI ACWI ex-U.S. IMI Index (linked to MSCI World ex-U.S. Index July 2012 - July 2016)			-19.86	1.55	2.50	17.94	0.05			16.00	0.09		
Excess Return			0.46	0.34	0.32								
<i>MSTAR Ave: Foreign Large Blend</i>			-18.69	1.31	2.08								
<b>Global Real Estate Fund</b>	Passive	0.08	<b>-12.75</b>	<b>-0.30</b>	<b>2.72</b>	20.60	-0.04	0.38	n/a	17.50	0.09	0.38	n/a
FTSE EPRA/NAREIT Developed Index			-13.44	-1.07	1.95	20.81	-0.08			17.64	0.05		
Excess Return			0.69	0.77	0.77								
<i>MSTAR Ave: Global Real Estate</i>			-14.67	-0.33	2.57								

\*Annualized.

<sup>1</sup> Stable value funds typically track the general movements of interest rates with a lag. It is expected that when interest rates are falling stable value yields do not fall as quickly and when interest rates are rising stable value yields do not rise as quickly.

<sup>2</sup> Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% 2-year maturity + 50% 3-year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment.

<sup>3</sup> eVestment Alliance universe returns are gross of investment management fees and net of wrap fees. The Stable Value Fund returns are net of all fees.

Results within reasonable expectations due to rising interest rate environment and the nature of book value accounting treatment.

Data provided by BlackRock, Galliard, MissionSquare and Zephyr StyleADVISOR.

Unbundled DC Plans

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics			
			1 Year	3 Years*	5 Years*	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation	Sharpe Ratio	Tracking Error	Information Ratio
		%	%	%	%	%				%			
<b>Retirement Portfolio</b>	Passive	0.08	<b>-11.69</b>	<b>2.77</b>	<b>3.93</b>	8.61	0.25	0.19	n/a	7.49	0.38	0.16	n/a
Custom Benchmark <sup>4</sup>			-11.68	2.72	3.89	8.63	0.24			7.49	0.37		
Excess Return			-0.01	0.05	0.04								
<b>Target Date 2025 Portfolio</b>	Passive	0.08	<b>-12.10</b>	<b>3.48</b>	<b>4.75</b>	10.43	0.27	0.25	n/a	9.34	0.39	0.22	n/a
Custom Benchmark <sup>4</sup>			-12.11	3.42	4.69	10.47	0.27			9.35	0.38		
Excess Return			0.01	0.06	0.06								
<b>Target Date 2030 Portfolio</b>	Passive	0.08	<b>-12.88</b>	<b>4.21</b>	<b>5.40</b>	12.39	0.29	0.33	n/a	11.05	0.39	0.28	n/a
Custom Benchmark <sup>4</sup>			-12.92	4.14	5.33	12.43	0.28			11.06	0.38		
Excess Return			0.04	0.07	0.07								
<b>Target Date 2035 Portfolio</b>	Passive	0.08	<b>-13.64</b>	<b>4.90</b>	<b>6.03</b>	14.27	0.30	0.40	n/a	12.69	0.39	0.34	n/a
Custom Benchmark <sup>4</sup>			-13.71	4.81	5.93	14.33	0.29			12.72	0.38		
Excess Return			0.07	0.09	0.10								
<b>Target Date 2040 Portfolio</b>	Passive	0.08	<b>-14.42</b>	<b>5.47</b>	<b>6.54</b>	16.03	0.30	0.46	n/a	14.22	0.38	0.39	n/a
Custom Benchmark <sup>4</sup>			-14.51	5.36	6.43	16.09	0.30			14.25	0.38		
Excess Return			0.09	0.11	0.11								
<b>Target Date 2045 Portfolio</b>	Passive	0.08	<b>-15.12</b>	<b>5.93</b>	<b>6.92</b>	17.37	0.31	0.52	n/a	15.37	0.38	0.44	n/a
Custom Benchmark <sup>4</sup>			-15.25	5.80	6.78	17.44	0.30			15.41	0.37		
Excess Return			0.13	0.13	0.14								
<b>Target Date 2050 Portfolio</b>	Passive	0.08	<b>-15.57</b>	<b>6.13</b>	<b>7.07</b>	18.04	0.31	0.55	n/a	15.93	0.38	0.46	n/a
Custom Benchmark <sup>4</sup>			-15.72	6.00	6.93	18.12	0.30			15.98	0.37		
Excess Return			0.15	0.13	0.14								
<b>Target Date 2055 Portfolio</b>	Passive	0.08	<b>-15.68</b>	<b>6.15</b>	<b>7.08</b>	18.14	0.31	0.56	n/a	16.01	0.37	0.47	n/a
Custom Benchmark			-15.86	6.02	6.94	18.25	0.30			16.07	0.36		
Excess Return			0.18	0.13	0.14								
<b>Target Date 2060 Portfolio</b>	Passive	0.08	<b>-15.69</b>	<b>6.14</b>	<b>7.07</b>	18.15	0.30	0.56	n/a	16.01	0.37	0.47	n/a
Custom Benchmark <sup>4</sup>			-15.86	6.02	6.94	18.25	0.30			16.07	0.36		
Excess Return			0.17	0.12	0.13								
<b>Target Date 2065 Portfolio</b>	Passive	0.08	<b>-15.71</b>	<b>N/A</b>	<b>N/A</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Custom Benchmark <sup>4</sup>			-15.88	N/A	N/A	n/a	n/a			n/a	n/a		
Excess Return			0.17	N/A	N/A								

\*Annualized.

<sup>4</sup> The Custom Benchmark is calculated using blended returns of third party indices that proportionally reflect the respective weightings of the Fund's asset classes. Weightings are adjusted quarterly to reflect the Fund's changing asset allocations over time. As of May 11, 2022 the indices used to calculate the Custom Benchmark are the: Russell 1000 Index, Russell 2000 Index, MSCI ACWI ex-U.S. IMI Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized MBS,ABS and CMBS Index, Bloomberg U.S. Treasury Inflation Protected Securities Index, FTSE EPRA NAREIT Developed Index and the Bloomberg Commodity Total Return Index.

Data provided by BlackRock, Galliard, MissionSquare and Zephyr StyleADVISOR.

**Unbundled DC Plans - Fund Annual Operating Expenses**  
**Information as of June 30, 2022**

Investment Option <sup>1</sup>	Investment Manager	Type	Investment Management Costs	Wrap & Acquired Fund <sup>2</sup> Costs	Fund Embedded Costs <sup>2</sup>	State Street Cost to Strike Net NAV	Total Annual Expense Ratio	Expense Ratio YOY Change
Money Market Fund	BlackRock	Capital Preservation	0.080000%	n/a	0.000600%	n/a	<b>0.08%</b>	0.00%
Stable Value Fund	Galliard	Capital Preservation (Book Value)	0.065000%	0.166000%	n/a	n/a	<b>0.23%</b>	-0.01%
Bond Fund	BlackRock	Passive	0.030000%	n/a	0.003300%	n/a	<b>0.03%</b>	0.00%
Inflation-Protected Bond Fund	BlackRock	Passive	0.020000%	n/a	0.006500%	n/a	<b>0.03%</b>	0.00%
High-Yield Bond Fund	JPMorgan	Active	0.380000%	n/a	0.010000%	0.004736%	<b>0.39%</b>	-0.01%
Stock Fund	BlackRock	Passive	0.007500%	n/a	0.001000%	0.004322%	<b>0.01%</b>	0.00%
Small/Mid-Cap Stock Fund	BlackRock	Passive	0.015000%	n/a	0.003200%	0.004539%	<b>0.02%</b>	0.00%
International Stock Fund	BlackRock	Passive	0.040000%	n/a	0.020000%	0.004440%	<b>0.06%</b>	0.00%
Global Real Estate Fund	BlackRock	Passive	0.070000%	n/a	0.009300%	0.004333%	<b>0.08%</b>	0.00%
Retirement Portfolio	BlackRock	Passive	0.070000%	n/a	0.005300%	n/a	<b>0.08%</b>	0.00%
Target Date 2025 Portfolio	BlackRock	Passive	0.070000%	n/a	0.006100%	n/a	<b>0.08%</b>	0.00%
Target Date 2030 Portfolio	BlackRock	Passive	0.070000%	n/a	0.007000%	n/a	<b>0.08%</b>	0.00%
Target Date 2035 Portfolio	BlackRock	Passive	0.070000%	n/a	0.008000%	n/a	<b>0.08%</b>	0.00%
Target Date 2040 Portfolio	BlackRock	Passive	0.070000%	n/a	0.008900%	n/a	<b>0.08%</b>	0.00%
Target Date 2045 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009800%	n/a	<b>0.08%</b>	0.00%
Target Date 2050 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009900%	n/a	<b>0.08%</b>	0.00%
Target Date 2055 Portfolio	BlackRock	Passive	0.070000%	n/a	0.010000%	n/a	<b>0.08%</b>	0.00%
Target Date 2060 Portfolio	BlackRock	Passive	0.070000%	n/a	0.010000%	n/a	<b>0.08%</b>	0.00%
Target Date 2065 Portfolio	BlackRock	Passive	0.070000%	n/a	0.009400%	n/a	<b>0.08%</b>	0.00%
VRSIP	VRS	Active	n/a	n/a	n/a	n/a	<b>0.59%</b>	-0.01%

<sup>1</sup> There are no short-term trading redemption costs associated with any of the investment options.

<sup>2</sup> Includes custody, audit and other specific investment option related administrative costs.

**Unbundled DC Plans  
Annual Calendar Year End Return Data**

Fund	2021	2020	2019	2018	2017
	%	%	%	%	%
<b>Money Market Fund</b>	<b>0.15</b>	<b>0.66</b>	<b>2.40</b>	<b>2.14</b>	<b>1.20</b>
FTSE 3 Month Treasury Bill Index <sup>1</sup>	0.05	0.58	2.30	1.89	0.87
<b>Stable Value Fund</b>	<b>1.59</b>	<b>2.20</b>	<b>2.51</b>	<b>2.18</b>	<b>1.83</b>
Custom Benchmark	0.61	0.66	2.21	2.83	1.74
eVestment Alliance Stable Value Universe <sup>2</sup>	1.71	2.14	2.50	2.14	1.85
<b>Bond Fund</b>	<b>-1.61</b>	<b>7.61</b>	<b>8.74</b>	<b>0.04</b>	<b>3.63</b>
Bloomberg U.S. Aggregate Bond Index	-1.54	7.51	8.72	0.01	3.54
MSTAR Ave: Intermediate Term Bond	-1.48	7.52	8.06	-0.50	3.71
<b>Inflation-Protected Bond Fund</b>	<b>5.92</b>	<b>11.19</b>	<b>8.48</b>	<b>-1.15</b>	<b>3.20</b>
Bloomberg U.S. TIPS Index	5.96	10.99	8.43	-1.26	3.01
MSTAR Ave: Inflation-Protected Bond	5.61	10.01	7.92	-1.64	2.72
<b>High-Yield Bond Fund</b>	<b>7.45</b>	<b>4.75</b>	<b>14.77</b>	<b>-1.29</b>	<b>7.11</b>
ICE BofA U.S. HY BB-B Constrained Index	4.60	6.28	15.10	-2.04	6.98
MSTAR Ave: High-Yield Bond	4.77	4.91	12.62	-2.59	6.47
<b>Stock Fund</b>	<b>28.73</b>	<b>18.47</b>	<b>31.54</b>	<b>-4.35</b>	<b>21.85</b>
S&P 500 Index	28.71	18.40	31.49	-4.38	21.83
MSTAR Ave: Large Blend	26.07	15.83	28.78	-6.27	20.44
<b>Small/Mid-Cap Stock Fund</b>	<b>18.24</b>	<b>20.02</b>	<b>27.80</b>	<b>-9.96</b>	<b>16.83</b>
Russell 2500 Index	18.18	19.99	27.77	-10.00	16.81
MSTAR Ave: Mid-Cap Blend	23.40	12.39	26.21	-11.15	15.93
<b>International Stock Fund</b>	<b>8.62</b>	<b>11.46</b>	<b>21.94</b>	<b>-14.50</b>	<b>28.21</b>
MSCI ACWI ex-U.S. IMI Index <sup>3</sup>	8.53	11.12	21.63	-14.76	27.81
MSTAR Ave: Foreign Large Blend	9.72	9.30	21.59	-14.59	25.12
<b>Global Real Estate Fund</b>	<b>26.99</b>	<b>-8.42</b>	<b>22.91</b>	<b>-5.02</b>	<b>11.85</b>
FTSE EPRA/NAREIT Developed Index	26.09	-9.04	21.91	-5.63	10.36
MSTAR Ave: Global Real Estate	22.90	-5.43	23.45	-7.11	15.12
<b>VRSIP</b>	<b>18.63</b>	<b>10.32</b>	<b>15.31</b>	<b>-1.31</b>	<b>14.35</b>
VRS Custom Benchmark	13.59	10.24	15.43	-1.12	13.86
<b>Retirement Portfolio</b>	<b>6.95</b>	<b>11.97</b>	<b>15.65</b>	<b>-3.48</b>	<b>10.18</b>
Custom Benchmark	7.04	11.80	15.61	-3.48	10.09
<b>Target Date 2025 Portfolio</b>	<b>8.99</b>	<b>12.19</b>	<b>18.60</b>	<b>-4.87</b>	<b>13.91</b>
Custom Benchmark	9.07	12.03	18.54	-4.90	13.75
<b>Target Date 2030 Portfolio</b>	<b>11.43</b>	<b>12.88</b>	<b>20.78</b>	<b>-5.70</b>	<b>15.83</b>
Custom Benchmark	11.51	12.71	20.70	-5.76	15.63
<b>Target Date 2035 Portfolio</b>	<b>13.80</b>	<b>13.57</b>	<b>22.85</b>	<b>-6.50</b>	<b>17.70</b>
Custom Benchmark	13.85	13.42	22.74	-6.58	17.46
<b>Target Date 2040 Portfolio</b>	<b>15.96</b>	<b>14.14</b>	<b>24.73</b>	<b>-7.24</b>	<b>19.38</b>
Custom Benchmark	15.99	13.98	24.60	-7.33	19.10
<b>Target Date 2045 Portfolio</b>	<b>17.72</b>	<b>14.83</b>	<b>26.04</b>	<b>-7.84</b>	<b>20.46</b>
Custom Benchmark	17.71	14.64	25.93	-7.98	20.14
<b>Target Date 2050 Portfolio</b>	<b>18.67</b>	<b>15.20</b>	<b>26.62</b>	<b>-8.12</b>	<b>20.84</b>
Custom Benchmark	18.61	15.07	26.49	-8.26	20.53
<b>Target Date 2055 Portfolio</b>	<b>18.83</b>	<b>15.32</b>	<b>26.67</b>	<b>-8.14</b>	<b>20.82</b>
Custom Benchmark	18.81	15.18	26.56	-8.29	20.53
<b>Target Date 2060 Portfolio</b>	<b>18.82</b>	<b>15.31</b>	<b>26.66</b>	<b>-8.15</b>	<b>20.77</b>
Custom Benchmark	18.80	15.18	26.56	-8.29	20.53
<b>Target Date 2065 Portfolio</b>	<b>18.78</b>	<b>15.14</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Custom Benchmark	18.79	15.18	N/A	N/A	N/A

<sup>1</sup> Prior to December 2020 it was the Bloomberg Barclays U.S. 3-Month Treasury Bill Index.

<sup>2</sup> eVestment Alliance universe returns are gross of investment management fees and net of wrap fees. The Stable Value Fund returns are net of all fees.

<sup>3</sup> Prior to August 2016 it was the MSCI World ex-U.S. Index from July 2012 - July 2016.

Data provided by BlackRock, Galliard, BofNY Mellon, MissionSquare, eVestment, and Morningstar.

Defined Contribution Plans Advisory Committee Report  
Unbundled Plans Investment Performance

Below are the totals for the period ending June 30, 2022. Returns greater than one year are annualized.

Investment Options	1 Month	3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs / Since Inception <sup>1</sup>	Fund Expense Ratio <sup>2</sup>	Inception Date	Market Value	% of Market Value <sup>27</sup>	% of Participants Selecting an Option <sup>28</sup>
	%	%	%	%	%	%	%	%		\$	%	%
<b>Do-It-For-Me: Target Date Portfolios<sup>3,4</sup></b>												
Retirement Portfolio	-4.40	-9.03	-13.69	-11.69	2.77	3.93	4.57	0.08	8/1/05	366,305,463	6.4	5.2
Custom Benchmark	-4.44	-9.14	-13.75	-11.68	2.72	3.89	4.52					
Target Date 2025 Portfolio	-4.98	-9.89	-14.51	-12.10	3.48	4.75	5.99	0.08	7/5/06	312,881,561	5.4	6.1
Custom Benchmark	-5.03	-10.04	-14.58	-12.11	3.42	4.69	5.93					
Target Date 2030 Portfolio	-5.87	-11.21	-15.81	-12.88	4.21	5.40	6.70	0.08	8/1/05	315,945,601	5.5	8.0
Custom Benchmark	-5.94	-11.44	-15.90	-12.92	4.14	5.33	6.61					
Target Date 2035 Portfolio	-6.67	-12.43	-17.02	-13.64	4.90	6.03	7.34	0.08	7/5/06	323,505,668 <sup>24</sup>	5.6	9.2
Custom Benchmark	-6.77	-12.73	-17.15	-13.71	4.81	5.93	7.24					
Target Date 2040 Portfolio	-7.41	-13.58	-18.20	-14.42	5.47	6.54	7.90	0.08	8/1/05	277,341,211	4.8	9.2
Custom Benchmark	-7.53	-13.95	-18.34	-14.51	5.36	6.43	7.78					
Target Date 2045 Portfolio	-8.03	-14.55	-19.20	-15.12	5.93	6.92	8.34	0.08	7/5/06	262,247,312	4.6	10.5
Custom Benchmark	-8.17	-14.97	-19.36	-15.25	5.80	6.78	8.20					
Target Date 2050 Portfolio	-8.32	-15.11	-19.81	-15.57	6.13	7.07	8.60	0.08	9/30/07	262,691,005	4.6	12.0
Custom Benchmark	-8.49	-15.56	-19.97	-15.72	6.00	6.93	8.46					
Target Date 2055 Portfolio	-8.38	-15.25	-19.95	-15.68	6.15	7.08	8.75	0.08	5/19/10	310,625,334	5.4	15.9
Custom Benchmark	-8.56	-15.71	-20.14	-15.86	6.02	6.94	8.61					
Target Date 2060 Portfolio	-8.39	-15.26	-19.96	-15.69	6.14	7.07	6.74	0.08	11/17/14	151,516,542	2.6	12.5
Custom Benchmark	-8.56	-15.71	-20.15	-15.86	6.02	6.94	6.58					
Target Date 2065 Portfolio	-8.38	-15.26	-19.97	-15.71	n/a	n/a	6.19	0.08	9/23/19	12,690,252	0.2	2.7
Custom Benchmark	-8.56	-15.72	-20.16	-15.88	n/a	n/a	6.16					
<b>Help-Me-Do-It: Individual Options</b>												
Money Market Fund <sup>5,6</sup>	0.11	0.24	0.30	0.37	0.73	1.26	0.74	0.08	11/1/99	102,913,280	1.8	1.9
FTSE 3 Month Treasury Bill Index	0.07	0.14	0.17	0.19	0.61	1.09	0.62					
Yield as of 06/30/22: 1.73% <sup>7</sup>												
Stable Value Fund <sup>8,9</sup>	0.12	0.37	0.71	1.47	1.93	2.03	1.87	0.23	2/1/95	661,710,542	11.5	7.0
Custom Benchmark <sup>10</sup>	0.27	0.76	1.21	1.59	1.14	1.69	1.50					
Yield as of 06/30/22: 1.54% <sup>11</sup>												
Bond Fund <sup>12</sup>	-1.56	-4.67	-10.23	-10.22	-0.89	0.92	1.61	0.03	11/1/99	151,850,637	2.6	3.3
Bloomberg U.S. Aggregate Bond Index	-1.57	-4.69	-10.35	-10.29	-0.93	0.88	1.54					
Inflation-Protected Bond Fund <sup>13</sup>	-3.18	-6.11	-8.90	-5.17	3.11	3.30	1.81	0.03	7/30/02	56,947,117	1.0	1.5
Bloomberg U.S. TIPS Index	-3.16	-6.08	-8.92	-5.14	3.04	3.21	1.73					
High-Yield Bond Fund <sup>14</sup>	-6.34	-8.91	-12.27	-11.17	0.92	2.75	4.75	0.39	5/31/04	45,612,072	0.8	1.7
ICE BofA U.S. High-Yield BB-B Constrained Index	-6.75	-9.50	-13.64	-12.20	0.04	2.07	4.34					
Stock Fund <sup>15</sup>	-8.25	-16.10	-19.95	-10.61	10.64	11.35	12.99	0.01	11/1/99	1,367,180,390	23.7	10.0
S&P 500 Index	-8.25	-16.10	-19.96	-10.62	10.60	11.31	12.96					
Small/Mid-Cap Stock Fund <sup>16</sup>	-9.54	-16.98	-21.79	-20.93	5.96	7.08	10.57	0.02	11/1/99	371,813,081	6.4	5.7
Russell 2500 Index <sup>17</sup>	-9.55	-16.98	-21.81	-21.00	5.91	7.04	10.49					
International Stock Fund <sup>18</sup>	-8.54	-13.10	-18.60	-19.40	1.89	2.82	5.66	0.06	11/1/99	182,321,369	3.2	4.7
MSCI ACWI ex-U.S. IMI Index <sup>19</sup>	-8.95	-14.28	-19.08	-19.86	1.55	2.50	5.36					
Global Real Estate Fund <sup>20</sup>	-8.42	-16.88	-20.26	-12.75	-0.30	2.72	5.46	0.08	10/1/02	95,705,485	1.7	3.0
FTSE EPRA/NAREIT Developed Index <sup>21</sup>	-8.69	-17.45	-20.71	-13.44	-1.07	1.95	4.69					
VRSIP <sup>22</sup>	0.24	-0.54	-3.44	6.11	11.42	9.13	9.32	0.59	7/1/08	55,496,204 <sup>25</sup>	1.0	0.5
VRS Custom Benchmark <sup>23</sup>	-0.18	-3.40	-6.15	-0.75	8.58	7.48	8.21					

VRSIP and benchmark returns are reported with a one month lag. [Return information shown is as of May 31, 2022.] [Market value as of May 31, 2022 was \$55,696,166.]

<b>Do-It-Myself: Self-Directed Brokerage Account</b>												
TD Ameritrade	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	82,393,009	1.4	0.2
<b>Total</b>										<b>\$5,769,693,135<sup>26</sup></b>		

- 1 If the fund was not in existence for 10 years, fund and corresponding benchmark returns shown represent performance from the since inception date.
- 2 Fund investment advisers may voluntarily agree to waive expenses. Expense waivers may be terminated at any time.
- 3 The Target Date Portfolios invest in units of BlackRock's LifePath Index Funds O. The LifePath Index Funds O invest in the master LifePath Index Funds F. The inception dates shown reflect the inception dates of the master LifePath Funds F. The inception dates for most LifePath Funds O were 12/9/11. The 2055 Fund's O inception date was 12/12/11, the 2060 Fund's O inception date was 1/2/15, and the 2065 Fund's O inception date was 9/23/2019. Returns prior to Funds' O inception dates are those of the Funds F with deductions taken for Funds O investment management fees.
- 4 Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Portfolios' asset classes. Weightings are adjusted quarterly to reflect the Portfolios' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are: Russell 1000 Index, Russell 2000 Index, MSCI ACWI Ex-U.S. IMI Net Dividend Return Index, Bloomberg U.S. Long Credit Bond Index, Bloomberg U.S. Intermediate Credit Bond Index, Bloomberg U.S. Long Government Bond Index, Bloomberg U.S. Intermediate Government Bond Index, Bloomberg U.S. Securitized: MBS, ABS, and CMBS Index, Bloomberg U.S. TIPS Index, FTSE EPRA/NAREIT Developed Index and the Bloomberg Commodity Index Total Return.
- 5 The Money Market Fund invests in units of BlackRock's Short-Term Investment Fund W. The inception data shown reflects the VRS Defined Contribution Plan's investment strategy inception date. Returns of the Fund from July 2012 through July 2016 represent performance of other BlackRock funds. Returns prior to July 2012 represent performance by the previous investment manager, State Street Global Advisors. All performance returns are linked.
- 6 An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment it is possible to lose money by investing in the Fund.
- 7 The current yield more closely reflects the earnings of the Fund than the total net return information.
- 8 The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date.
- 9 Direct transfers from the Stable Value Fund to the Money Market Fund (considered a "competing fund") are not permitted. Before transferring to the Money Market Fund, participants must first transfer to a "non-competing" fund for 90 days. Optional Retirement Plan for Higher Education (ORPHE) participants who want to make a direct exchange to another ORPHE provider, must first exchange to a "non-competing" fund on the MissionSquare Retirement investment platform for 90 days.
- 10 Effective August 2016, the benchmark represents a hypothetical return generated by the monthly yields of actively traded U.S. Treasuries based on [50% 2- year maturity + 50% 3- year maturity] plus an annualized spread of 0.25% and is representative of the Fund's expected return profile, given how the Fund is managed and book value accounting treatment. Prior to August 2016 the custom benchmark was based on the monthly yield of actively traded U.S Treasuries with a 3-year maturity plus an annualized spread of 0.50%. The benchmark returns are linked.
- 11 The current yield more closely reflects the earnings of the Fund than the total net return information. There is no guarantee that the Fund will earn the current yield in the future.
- 12 The Bond Fund invests in units of BlackRock's U.S. Debt Index Fund M. The U.S. Debt Index Fund M invests in the master Fund F. The inception date shown reflects the VRS Defined Contribution Plans strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 13 The Inflation-Protected Bond Fund invests in units of BlackRock's U.S. Treasury-Inflation Protected Securities Fund M. The U.S. Treasury Inflation-Protected Securities Fund M invests in the master Fund F. The inception date shown reflects the inception date of the master Fund F. The inception date of BlackRock's U.S. Treasury Inflation-Protected Securities Fund M was July 20, 2012. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 14 The High-Yield Bond Fund invests in units of JPMorgan's Corporate High-Yield Fund-Investment Class. The inception date shown reflects the date the current investment team at JPMorgan commenced management responsibility of the Fund. Performance reflects the investment manager's returns for the aforementioned Fund with deductions taken for investment management fees negotiated by VRS and fund administrative expenses.
- 15 The Stock Fund invests in units of BlackRock's Equity Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 16 The Small/Mid-Cap Stock Fund invests in units of BlackRock's Russell 2500 Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans strategy inception date. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 17 Effective July 2012, the performance benchmark is the Russell 2500 Index. Prior to July 2012, the performance benchmark was the Russell Small Cap Completeness Index. The benchmark returns are linked.
- 18 The International Stock Fund invests in units of BlackRock's MSCI ACWI ex-U.S. IMI Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plan's investment strategy inception date. Returns from July 2012 through July 2016 represent performance of another BlackRock Fund. Returns prior to July 2012 represent performance by the previous manager, State Street Global Advisors. All performance returns are linked.
- 19 Effective August 2016, the performance benchmark is the MSCI ACWI ex-U.S. IMI Index. It was the MSCI World ex-U.S Index from July 2012 through July 2016 and prior to July 2012 it was the MSCI EAFE Index. The benchmark returns are linked.
- 20 The Global Real Estate Fund invests in units of BlackRock's Developed Real Estate Index Fund F. Performance represents BlackRock's returns for the master Fund F with deductions taken for investment management fees negotiated by VRS and fund administrative expenses. The inception date shown reflects the VRS Defined Contribution Plans investment strategy inception date. The Fund transitioned from a U.S. domestic REIT fund to a global real estate fund during July 2012. Performance returns are linked to the previous investment manager. Returns prior to July 2012 represent performance by State Street Global Advisors.
- 21 Effective July 2012, the performance benchmark is the FTSE EPRA/NAREIT Developed Index. Prior to July 2012, the performance benchmark was the Dow Jones U.S. Select REIT Index. The benchmark returns are linked.
- 22 The inception date shown reflects the date the VRS Investment Portfolio (VRSIP) was unitized.
- 23 The VRS Custom Benchmark is a blend of the asset class benchmarks at policy weights.
- 24 Includes Pending Account VRSIP amount of \$0.
- 25 Includes Preliminary Investment Portfolio Account - PIP amount of \$1,196,815.
- 26 Includes \$5,436,572 held in the administrative Special Accounts.
- 27 May not equal 100% due to rounding.
- 28 The data reflects the percentage of participants who selected a particular investment option as of June 30, 2022. There were 495,803 participant accounts as of June 30, 2022 across all unbundled DC plans.

**All fund performance returns shown reflect all fund management fees and expenses, but do not reflect the Plan administrative fee charged by MissionSquare Retirement which would further reduce the returns shown.**

All calculations assume reinvestment of dividends and capital gains. All returns are calculated in U.S. dollars. Performance returns are provided by BlackRock, Galliard Capital Management, JPMorgan, Bank of New York Mellon, and MissionSquare Retirement. Benchmark returns are provided by BlackRock, Russell/Mellon Analytical Services, Galliard, and MissionSquare Retirement. Although data is gathered from sources believed to be reliable, we cannot guarantee completeness or accuracy.

**Plan Administrative Fee:** An annual record keeping and communication services fee of \$30.50 is deducted from participant accounts on a monthly basis (approximately \$2.54 per month). Only one annual fee of \$30.50 is deducted from participant accounts for those participants participating in more than one Commonwealth of Virginia defined contribution plan.

# **TIAA ORPHE**

**Bundled ORP for Higher Education - TIAA RC Contract<sup>1,2</sup>**

Data for period ending June 30, 2022

Fund	Type	Fund Expense Ratio	Returns			3 Year Statistics				5 Year Statistics				
			1 Year	3 Years*	5 Years*	Standard Deviation (%)	Sharpe Ratio	Tracking Error	Information Ratio	Standard Deviation (%)	Sharpe Ratio	Tracking Error	Information Ratio	
<b>BlackRock Equity Index Fund J</b>	Passive	0.01	%	%	%	%								
S&P 500 Index			-10.61	10.64	11.35	18.64	0.54	0.03	n/a	16.95	0.61	0.03	n/a	
Excess Return			-10.62	10.60	11.31	18.64	0.54			16.95	0.60			
<i>MSTAR Ave: Large Blend</i>			0.01	0.04	0.04									
<b>BlackRock Russell 2500 Index Fund M</b>	Passive	0.03												
Russell 2500 Index			-20.94	5.95	7.07	23.38	0.23	0.07	n/a	21.08	0.28	0.07	n/a	
Excess Return			-21.00	5.91	7.04	23.38	0.23			21.07	0.28			
<i>MSTAR Ave: Mid-Cap Blend</i>			0.06	0.04	0.03									
<b>BlackRock MSCI ACWI ex-U.S. IMI Index Fund M</b>	Passive	0.11												
MSCI ACWI ex-U.S. IMI Index			-19.44	1.84	2.78	17.85	0.07	1.41	n/a	15.95	0.11	1.23	n/a	
Excess Return			-19.86	1.55	2.50	17.94	0.05			16.00	0.09			
<i>MSTAR Ave: Foreign Large Blend</i>			0.42	0.29	0.28									
<b>BlackRock MSCI ACWI IMI Index Non-Lendable Fund M</b>	Passive	0.05												
MSCI ACWI IMI Index			-16.21	6.26	7.04	18.37	0.31	0.63	n/a	16.47	0.36	0.56	n/a	
Excess Return			-16.52	5.98	6.70	18.46	0.29			16.53	0.34			
<i>MSTAR Ave: World Stock</i>			0.31	0.28	0.34									
<b>TIAA Real Estate Account</b>	Active	0.77												
Custom Benchmark <sup>3</sup>			23.04	9.87	7.96	5.03	1.83	3.08	0.38	4.01	1.70	2.45	0.20	
Excess Return			18.61	8.70	7.47	5.11	1.57			4.06	1.56			
			4.43	1.17	0.49									

\*Annualized.

<sup>1</sup> Refer to the unbundled DC plans for information regarding BlackRock's LifePath Index Funds O, Short-Term Investment Fund W, U.S. Debt Index Fund M and U.S. TIPs Fund M.

Although the unbundled DC plans use white lable fund names and TIAA does not these funds are the same exact funds.

<sup>2</sup> The TIAA Traditional Annuity is not included in this exercise due to the fact there is no performance benchmark associated with TIAA's fixed annuity product offering.

<sup>3</sup> Effective January 2014, the Custom Benchmark is 70% NCREIF Open End Diversified Core Equity (ODCE) Net Index, 20% Bloomberg 3-Month Treasury Bill Index and 10% Dow Jones U.S. Select REIT Index. TIAA's investment management team does not manage its real estate account to a published index benchmark. The Custom Benchmark represents a reasonable proxy of how TIAA allocates among real property, short-term investments and REITS over time. VRS anticipates that the TIAA Real Estate Account's returns may vary greatly from those of the custom benchmark.

Fund with TIAA plan services expense offset.

Data provided by TIAA, BlackRock, MissionSquare, VRS and Zephyr StyleADVISOR.



**Bundled ORP for Higher Education - TIAA RC Contract Fund Annual Operating Expenses<sup>1,2</sup>**  
**Information as of June 30, 2022**

Investment Option	Investment Manager	Type	Investment Management Costs	Record-Keeping & Plan Administration Costs	[12(b)-1] Distribution Costs	Other Costs	Total Annual Expense Ratio	Expense Ratio YOY Change
<b>TIAA Traditional Annuity</b>	TIAA	Fixed Annuity	n/a	0.150000%	n/a	0.320000%	<b>0.47%</b>	0.02%
<b>TIAA Real Estate Account</b>	TIAA	Active (variable annuity)	0.270000%	0.140000%	0.080000%	0.280000%	<b>0.77%</b>	-0.10%
<b>BlackRock Equity Index Fund J</b>	BlackRock	Passive	0.010000%	n/a	n/a	0.002700%	<b>0.01%</b>	0.00%
<b>BlackRock Russell 2500 Index Fund M</b>	BlackRock	Passive	0.030000%	n/a	n/a	0.004900%	<b>0.03%</b>	0.00%
<b>BlackRock MSCI ACWI ex-U.S. IMI Index Fund M</b>	BlackRock	Passive	0.090000%	n/a	n/a	0.019200%	<b>0.11%</b>	0.00%
<b>BlackRock MSCI ACWI IMI Index Non-Lendable Fund M</b>	BlackRock	Passive	0.040000%	n/a	n/a	0.009900%	<b>0.05%</b>	0.00%

<sup>1</sup> There are no short-term trading redemption costs associated with any of the investment options.

<sup>2</sup> Refer to the unbundled DC plans for information regarding BlackRock's LifePath Index Funds O, Short-Term Investment Fund W, U.S. Debt Index Fund M and U.S. TIPs Fund M. The unbundled DC plans use white label fund names for the aforementioned funds. However, TIAA does not have the capability to use white label fund names.

Funds with plan services expense offsets within the TIAA RC contract.

**Percentage of Embedded Record-Keeping and Plan Administration Costs**

Investment Option	Type	Record-Keeping & Plan Administration Costs	Total Annual Expense Ratio	% of Record-Keeping & Plan Administration Costs
<b>TIAA Traditional Annuity</b>	Fixed Annuity	0.150000%	0.47%	<b>32%</b>
<b>TIAA Real Estate Account</b>	Active (variable annuity)	0.140000%	0.77%	<b>18%</b>

**Bundled ORP for Higher Education - TIAA RC Contract <sup>1</sup>**  
**Annual Calendar Year End Return Data**

Fund	2021	2020	2019	2018	2017
	%	%	%	%	%
<b>TIAA Traditional Annuity RC</b>	<b>3.55</b>	<b>4.00</b>	<b>4.01</b>	<b>4.12</b>	<b>4.06</b>
<b>TIAA Real Estate Account</b>	<b>17.87</b>	<b>-0.84</b>	<b>5.51</b>	<b>4.79</b>	<b>4.37</b>
Custom Index	18.86	-0.39	5.76	5.16	5.21
<b>BlackRock Equity Index Fund J</b>	<b>28.72</b>	<b>18.47</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
S&P 500 Index	28.71	18.40	n/a	n/a	n/a
MSTAR Ave: Large Blend	26.07	15.83	n/a	n/a	n/a
<b>BlackRock Russell 2500 Index Fund M</b>	<b>18.22</b>	<b>20.01</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
Russell 2500 Index	18.18	19.99	n/a	n/a	n/a
MSTAR Ave: Mid-Cap Blend	23.40	12.39	n/a	n/a	n/a
<b>BlackRock MSCI ACWI ex-U.S. IMI Index Fund M</b>	<b>8.57</b>	<b>11.39</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
MSCI ACWI ex-U.S. IMI Index	8.53	11.12	n/a	n/a	n/a
MSTAR Ave: Foreign Large Blend	9.72	9.30	n/a	n/a	n/a
<b>BlackRock MSCI ACWI IMI Index Non-Lendable Fund M</b>	<b>18.27</b>	<b>16.50</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
MSCI ACWI IMI Index	18.22	16.25	n/a	n/a	n/a
MSTAR Ave: World Stock	17.72	12.96	n/a	n/a	n/a

Data provided by TIAA

<sup>1</sup> Refer to the unbundled DC plans for information regarding BlackRock's LifePath Index Funds O, Short-Term Investment Fund W, U.S. Debt Index Fund M and U.S. TIPS Fund M. Although the unbundled DC plans use white label names and TIAA does not, these are the exact same funds

**Defined Contribution Plans Advisory Committee Report**  
**TIAA RC Contract Investment Performance**

Below are the totals for the period ending June 30, 2022. Returns greater than one year are annualized.

Investment Options	1 Month	3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs / Since Inception <sup>1</sup>	Fund Expense Ratio <sup>2</sup>	Inception Date	Market Value	% of Market Value <sup>19</sup>	% of Participants Selecting an Option <sup>20</sup>
	%	%	%	%	%	%	%	%		\$	%	%
<b>Target Date Portfolios<sup>3,4</sup></b>												
BlackRock LifePath Index Retirement Fund O	-4.40	-9.03	-13.69	-11.69	2.77	3.93	4.57	0.08	8/1/05	24,470,901	7.8	8.8
Custom Benchmark	-4.44	-9.14	-13.75	-11.68	2.72	3.89	4.52					
BlackRock LifePath Index 2025 Fund O	-4.98	-9.89	-14.51	-12.10	3.48	4.75	5.99	0.08	7/5/06	19,024,480	6.1	7.0
Custom Benchmark	-5.03	-10.04	-14.58	-12.11	3.42	4.69	5.93					
BlackRock LifePath Index 2030 Fund O	-5.87	-11.21	-15.81	-12.88	4.21	5.40	6.70	0.08	8/1/05	27,616,899	8.8	8.6
Custom Benchmark	-5.94	-11.44	-15.90	-12.92	4.14	5.33	6.61					
BlackRock LifePath Index 2035 Fund O	-6.67	-12.43	-17.02	-13.64	4.90	6.03	7.34	0.08	7/5/06	21,515,931	6.9	9.0
Custom Benchmark	-6.77	-12.73	-17.15	-13.71	4.81	5.93	7.24					
BlackRock LifePath Index 2040 Fund O	-7.41	-13.58	-18.20	-14.42	5.47	6.54	7.90	0.08	8/1/05	24,132,368	7.7	9.7
Custom Benchmark	-7.53	-13.95	-18.34	-14.51	5.36	6.43	7.78					
BlackRock LifePath Index 2045 Fund O	-8.03	-14.55	-19.20	-15.12	5.93	6.92	8.34	0.08	7/5/06	20,319,929	6.5	10.2
Custom Benchmark	-8.17	-14.97	-19.36	-15.25	5.80	6.78	8.20					
BlackRock LifePath Index 2050 Fund O	-8.32	-15.11	-19.81	-15.57	6.13	7.07	8.60	0.08	9/30/07	11,994,151	3.8	8.1
Custom Benchmark	-8.49	-15.56	-19.97	-15.72	6.00	6.93	8.46					
BlackRock LifePath Index 2055 Fund O	-8.38	-15.25	-19.95	-15.68	6.15	7.08	8.75	0.08	5/19/10	5,532,507	1.8	6.0
Custom Benchmark	-8.56	-15.71	-20.14	-15.86	6.02	6.94	8.61					
BlackRock LifePath Index 2060 Fund O	-8.39	-15.26	-19.96	-15.69	6.14	7.07	6.74	0.08	11/17/14	1,185,528	0.4	2.6
Custom Benchmark	-8.56	-15.71	-20.15	-15.86	6.02	6.94	6.58					
BlackRock LifePath Index 2065 Fund O	-8.38	-15.26	-19.97	-15.71	n/a	n/a	6.19	0.08	9/23/19	1,445,308	0.5	1.2
Custom Benchmark	-8.56	-15.72	-20.16	-15.88	n/a	n/a	6.16					
<b>Individual Options</b>												
BlackRock Short-Term Investment Fund W <sup>5</sup>	0.11	0.24	0.30	0.37	0.73	1.26	0.81	0.08	7/1/03	5,944,639	1.9	7.8
FTSE 3 Month Treasury Bill Index	0.07	0.14	0.17	0.19	0.61	1.09	0.62					
Yield as of 06/30/22: 1.73% <sup>6</sup>												
BlackRock U.S. Debt Index Fund M <sup>7</sup>	-1.56	-4.67	-10.23	-10.22	-0.89	0.92	1.61	0.03	6/6/96	8,795,111	2.8	18.4
Bloomberg U.S. Aggregate Bond Index	-1.57	-4.69	-10.35	-10.29	-0.93	0.88	1.54					
BlackRock U.S. TIPS Fund M <sup>8</sup>	-3.18	-6.11	-8.90	-5.17	3.11	3.30	1.81	0.03	7/30/02	4,930,984	1.6	12.6
Bloomberg U.S. TIPS Index	-3.16	-6.08	-8.92	-5.14	3.04	3.21	1.73					
BlackRock Equity Index Fund J <sup>9</sup>	-8.25	-16.10	-19.95	-10.61	10.64	11.35	12.99	0.01	3/5/97	32,742,522	10.5	24.7
S&P 500 Index	-8.25	-16.10	-19.96	-10.62	10.60	11.31	12.96					
BlackRock Russell 2500 Index Fund M <sup>10</sup>	-9.54	-16.99	-21.80	-20.94	5.95	7.07	10.57	0.03	9/30/08	7,521,958	2.4	4.7
Russell 2500 Index	-9.55	-16.98	-21.81	-21.00	5.91	7.04	10.49					
BlackRock MSCI ACWI ex-U.S. IMI Index Fund M <sup>11</sup>	-8.54	-13.11	-18.63	-19.44	1.84	2.78	5.22	0.11	2/28/11	14,439,111	4.6	18.4
MSCI ACWI ex-U.S. IMI Index	-8.95	-14.28	-19.08	-19.86	1.55	2.50	5.01					
BlackRock MSCI ACWI IMI Index Non-Lendable Fund M <sup>12</sup>	-8.43	-15.28	-20.12	-16.21	6.26	7.04	7.81	0.05	4/12/13	39,494,824	12.6	32.4
MSCI ACWI IMI Index	-8.63	-15.83	-20.44	-16.52	5.98	6.70	7.44					
TIAA Real Estate Account <sup>13</sup>	0.94	5.11	10.82	23.04	9.87	7.96	8.08	0.77	10/2/95	12,157,752	3.9	27.0
Custom Composite Benchmark <sup>14</sup>	0.27	1.23	5.91	18.61	8.70	7.47	7.93					
TIAA Traditional Annuity RC <sup>15,16,17,18</sup>	0.35	1.05	1.97	3.73	3.85	3.94	4.15	0.47	8/1/05	24,901,502	8.0	29.0
<b>Self-Directed Brokerage Account</b>												
TIAA - Self-Directed Account	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4,256,756	1.4	0.9
<b>Total</b>										<b>\$312,423,161</b>		

Footnotes >

- 1 If the fund was not in existence for 10 years, fund and corresponding benchmark returns shown represent performance from the since inception date.
- 2 Fund investment advisers may voluntarily agree to waive expenses. Expense waivers may be terminated at any time.
- 3 The BlackRock LifePath Index Funds O invest in the master LifePath Index Funds F. The inception dates shown reflect the inception date of the master LifePath Funds F. The inception dates for most LifePath Funds O were 12/9/11. The 2055 Fund's O inception date was 12/12/11, the 2060 Fund's O inception date was 1/2/15 and the 2065 Fund's O inception date was 9/23/19. Returns prior to Funds' O inception dates are those of Funds F with deductions taken for Funds O investment management fees.
- 4 Benchmarks are calculated using blended returns of third-party indices that proportionately reflect the respective weightings of the Funds' asset classes. Weightings are adjusted quarterly to reflect the Funds' asset allocation shifts over time. Indices currently used to calculate the custom benchmarks are: Russell 1000 Index, Russell 2000 Index, MSCI ACWI Ex-U.S. IMI Index, Bloomberg U.S. Aggregate Bond Index, Bloomberg U.S. TIPS Index, FTSE EPRA/NAREIT Developed Index and the Bloomberg Commodity Index Total Return.
- 5 An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment it is possible to lose money by investing in the Fund.
- 6 The current yield more closely reflects the earnings of the Fund than the total net return information.
- 7 The BlackRock U.S. Debt Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 7/20/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 8 The BlackRock U.S. Treasury Inflation-Protected Securities Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 7/20/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M' investment management fees.
- 9 The BlackRock Equity Index Fund J invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund J was 3/20/17. Returns prior to Fund J's inception date are those of Fund F with deductions taken for Fund J's investment management fees.
- 10 The BlackRock Russell 2500 Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 1/30/13. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 11 The BlackRock MSCI ACWI ex-U.S. IMI Index Fund M invests in the master Fund F. The inception date shown reflects the inception of the master Fund F. The inception date of Fund M was 12/31/12. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M's investment management fees.
- 12 The BlackRock MSCI ACWI IMI Index Fund M invests in the master Fund F. Inception dates for the master Fund F and Fund M are both 4/12/13.
- 13 Transfers out of the TIAA Real Estate Account (REA) are limited to one per quarter. Currently, these transfers do not require a minimum transaction amount; however, in the future TIAA reserves the right, in its sole discretion, to impose minimum transaction levels, which levels will generally be at least \$1,000 (except for systematic transfers, which must be at least \$100) or your entire accumulation, if less. Participants may not make a lump-sum transfer into the REA if their aggregated balances across all contracts is greater than \$150,000. Systematic transfers and recurring contributions are not subject to this limitation.
- 14 Effective January 2014, the Custom Composite Index is 70% NCREIF Open End Diversified Core Equity (ODCE) Net Index, 20% Bloomberg 3-Month Treasury Bill Index, and 10% Dow Jones U.S. Select REIT Index. Prior periods include other representative indices. TIAA's investment management team does not manage its real estate portfolio to a specific published index benchmark. The Custom Composite Index represents a reasonable proxy of how TIAA allocates assets among real property, short-term investments, and REITs over time. The Virginia Retirement System anticipates that Fund returns may vary greatly from those of the Custom Composite Index. Benchmark returns are not available for months that do not end on a calendar quarter due to the fact that NCREIF ODCE Index returns are only published each calendar quarter.
- 15 Upon separation from service or retirement participants can convert their TIAA Traditional accumulation dollars amount to a lifetime income option or withdraw funds through a fixed period annuity ranging from five to 30 years or a Transfer Payout Annuity, which enables participants to move funds out of the TIAA Traditional Annuity in 7 annual installments for the Retirement Choice (RC) contract. Each installment includes a portion of principal and interest, based on the rate in effect when transfer or withdrawal funds are made. However, there are two exceptions to the payout installment. First, if the TIAA Traditional account balance is less than \$5,000, participants can transfer the total amount at any time following termination of employment, but only once during the life of the contract. Second, TIAA Traditional can be withdrawn or transferred to another company up to the full balance within 120 days following termination of employment, subject to 2.5% surrender charge. After the 120-day period, participants can withdraw funds only through a fixed period annuity ranging from five to 30 years or the Transfer Payout Annuity.
- 16 The TIAA Traditional Annuity RC contract has minimum guaranteed rate during the accumulation phase of 1% to 3% . The current minimum rate for the RC contract is 1%. Further, the TIAA Traditional Annuity RC contract applies to premiums deposited during the applicable calendar year and is guaranteed for 10 years, at which point the minimum rate for these premiums will be reset.
- 17 TIAA's annual credited rate on new money for the RC contract for the month of June was 5.25%.
- 18 The TIAA Traditional Annuity is not an investment for purposes of federal securities laws; it is a guaranteed insurance contract. Therefore, unlike a variable annuity or mutual fund, the TIAA Traditional Annuity does not include an identifiable expense ratio. The 47 basis points (0.47%) approximates the expense provision in the formula for determining TIAA Traditional Annuity returns inclusive of administrative and investment expenses. This expense provision is not guaranteed, it is subject to change.
- 19 May not equal 100% due to rounding
- 20 The data reflects the percentage of participants who selected a particular investment option as of June 30, 2022. There were 5,213 (RC contract) participants as of June 30, 2022.

**Performance returns shown reflect all fund management fees and other investment related expenses, but do not reflect the TIAA annual administrative fee of \$66 (deducted at \$16.50 per quarter) which would further reduce the returns shown. Performance returns do not reflect redemption fees and/or surrender charges, if applicable.**

All calculations assume reinvestment of dividends and capital gains. All returns are calculated in U.S dollars. Fund and benchmark returns are provided by TIAA and BlackRock. Although data is gathered from sources to be reliable, the Virginia Retirement System cannot guarantee completeness or accuracy.

# **Unbundled DC Plan Structure Investment Policy Statement**



### APPROVED BY THE BOARD OF TRUSTEES: EFFECTIVE JANUARY 2, 2020\*

The Virginia Retirement System (VRS) sponsors several primary and supplemental defined contribution (DC) plans. Most plans operate fully under an unbundled (open architecture) approach whereby the investment function is contracted separately from the recordkeeping, enrollment and marketing functions. The purposes of the plans are set forth in the Plan Documents and Master Trusts, which are accessible on the VRS website at [varetire.org](http://varetire.org).

This Investment Policy Statement has been adopted by the VRS Board of Trustees (Board) to provide guidelines for the investment offerings under an unbundled plan construct. Plans using an unbundled structure approach include the Deferred Compensation Plan of the Commonwealth of Virginia, the Virginia Cash Match Plan, the Optional Retirement Plan of the Commonwealth of Virginia for Political Appointees, the Optional Retirement Plan of the Commonwealth of Virginia for Public School Superintendents, the Virginia Supplemental Retirement Plan, the defined contribution component of the Hybrid Retirement Plan and the Optional Retirement Plan of the Commonwealth of Virginia for Employees of Institutions of Higher Education.

## 1. Investment Objectives

In a defined contribution investment program, each participant has his or her own risk tolerance, time horizon and investment objectives. Participants are responsible for their own investment decisions. To help meet these varying needs, the VRS unbundled DC plans seek to provide participants with an array of investment choices across a range of asset classes, risk levels, and investment strategies so they can construct and/or invest in portfolios that address their individual needs, and do so using investment vehicles and structures that provide competitive risk-adjusted returns at a reasonable cost.

The Board recognizes that DC plan participants have varying levels of investment knowledge and/or interest in actively managing their investments. The following organizational framework has been designed to categorize the types of investment options available to VRS unbundled DC plan participants:

- *Do-It-For-Me Investors:* These investors may have limited investment knowledge, confidence, or interest in managing their investments. For whatever reason, they prefer a pre-packaged, diversified investment option that has been designed to reasonably fit most people of their ages and retirement planning horizons. To meet this need, a series of Target Date Portfolios is made available whose investment policy, glide paths, and investment strategies are expected to meet the general needs of the average DC plan participant, based on a periodic analysis of the demographic characteristics of participants and the long-term investment opportunity set.

\* Originally adopted February 16, 2012. Amended November 14, 2013, February 9, 2017, and January 2, 2020.

(Continued)

- *Help-Me-Do-It Investors:* These investors have some knowledge of investments and want to be more involved in structuring their portfolios, but they would like the ability to pick from a menu of fund options that have been screened by VRS and for which investment fees and expenses have been negotiated to institutional price levels through VRS bargaining power. To meet this need, a menu of Core Investment Options is made available, each targeted to a different asset class or strategy. The core fund lineup will generally consist of funds representing the constituent asset classes included in the target date portfolios, but there may be funds included in the core lineup that are not included in the target date portfolios, and vice versa.
- *Do-It-Myself Investors:* Some investors are very knowledgeable and/or desire to take a very active approach to their investments, and therefore may desire investment alternatives in addition to those offered as part of the Target Date Portfolios or Core Investment Options. To meet this need, a self-directed brokerage account (SDBA) is made available to self-designated knowledgeable investors who are willing to accept all risks, costs, and operational rules and procedures related to participating in a SDBA.

## 2. Decision Making

The Board is responsible for the following:

- Selection of the default investment option. (Appendix 1)
- Within Target Date Portfolios, ensuring a robust process is used to establish the glide path's asset allocation and to determine which asset classes and strategies to include. (Appendix 1)
- Within the Core Investment Options, included asset classes. (Appendix 2)
- Whether to offer a Self-Directed Brokerage Account (SDBA). (Appendix 3)
- Whether individual investment advice will be provided and the terms on which it will be available to participants.

Beyond these guidelines, the Board delegates to the Chief Investment Officer (CIO) all other decisions related to VRS unbundled defined contribution investments. Changes that are contemplated are expected to be done with due consideration of administrative needs as to the operations, outreach, and communications, etc. The CIO or a designee will report regularly to the Defined Contribution Plans Advisory Committee (DCPAC) and Board on the status and investment results of the DC investment program. Included in such reporting will be performance benchmarks selected by the CIO to appropriately measure or compare the risk and investment objectives of the various investment options.

In carrying out its fiduciary duty to oversee DC investments, the Board will consider advice and recommendations provided by the DCPAC. The specific duties and responsibilities of the DCPAC are described in the DCPAC Charter.

Additionally, the Board developed a set of twelve Defined Contribution Plans Investment Belief Statements intended to help guide the strategic management of the VRS DC investment program.

(Continued)

### **3. Plan Level Policies**

The CIO has full authority to hire and terminate investment managers and negotiate or renegotiate fees. The CIO shall develop policies and procedures for hiring, monitoring, and terminating investment managers and other investment related service providers. The CIO shall also develop procedures for appropriate mapping of plan assets and/or funds as situations arise. Mapping means the transfer of assets from a discontinued investment option or terminated investment manager to another investment option or investment manager under the DC plans. The CIO works with the Director to coordinate implementation relating to changes to the unbundled DC plans investment program and may consult with the DCPAC as needed.

The CIO is responsible for ensuring that adequate due diligence is being performed in the evaluation of potential and existing investments, and that all investment activity will be in compliance with applicable regulatory requirements.

### **4. Trading Restrictions and Redemption Fees**

The Board and the investment managers may impose restrictions and/or fees that discourage investment trading that could have an adverse impact on the management of a fund, other plan participants, or clients of the fund's management.

### **5. Best Execution**

Generally, all investment transactions executed on behalf of the plans should be made on the basis of best execution. VRS defines best execution as the process and price that results in the best overall performance impact, as judged by the portfolio manager, taking into account current market conditions. VRS will generally discourage the use of soft dollar arrangements, and where such arrangements are utilized, staff will review this usage for reasonableness.

### **6. Use of Consultants/Service Providers**

The CIO has the authority to hire consultants, research providers, and other service providers providing that such expenditures are in alignment with the Board approved operating budget.

### **7. Code of Ethics**

The investment staff will conduct its affairs in a manner that reflects the highest standards of ethical conduct. The staff is expected to comply with the [CFA Institute of Code of Ethics and Standards of Professional Conduct](#).



**Target Date Portfolios  
As of November 14, 2013  
Appendix 1**

A series of target date portfolios with investment policy glide paths and investment strategies that are expected to meet the general needs of the average DC plan participant in different age cohorts is offered through the plans. A glide path represents the changes made to the asset allocation mix over time as the target date approaches. There is a higher equity allocation in the longer dated portfolios because of the long-term investment time horizon. Over time, the equity allocation decreases as the investment time horizon decreases.

The Board expects target date portfolios to be broadly diversified. These portfolios may include exposure to various sub-segments of the broad asset classes as well as to alternative asset classes as determined by the target date provider using reasonable optimization techniques to measure the risk/reward trade off. Asset classes used within target date portfolios may include: large cap domestic equity, small/mid cap domestic equity, international equity, emerging market equity and debt, domestic core fixed income, high-yield bonds, inflation-protected securities, international/global fixed income, commodities, real estate and cash. A target date portfolio is not required to include each of these asset classes and may include other asset classes.

The target date portfolios' glide paths shall be based on sound investment theory and investment methodology as well as reasonable capital market assumptions. Plan demographics shall be taken into consideration when developing a custom glide path or selecting an off the shelf provider. Based on work done by a consultant together with VRS staff, advice from the DCPAC, and general investment philosophy of VRS, the Board expects to employ a glide path that is more on the conservative side of the target date portfolios available at the time of the study. The percentage allocation to equities in a more conservative glide path is comparatively lower than that of an aggressive glide path at retirement.

The target date portfolios serve as the unbundled DC plans default investment option.

**Asset Classes: Core Funds  
As of November 14, 2013  
Appendix 2**

Core investment options shall represent the broad asset classes available in the capital markets to the extent they are practical and, when prudent, certain sub-asset classes. The core fund lineup will generally consist of funds representing the constituent asset classes included in the target date portfolios, but there may be funds included in the core lineup that are not included in the target date portfolios, and vice versa. From time to time additional asset classes may be added or existing asset classes may be deleted in order to maintain an array of investment options that address participants' changing needs or changes in the investment industry.

The Board delegates to the CIO decisions as to 1) whether a fund investment option shall utilize a passive or active investment strategy or a combination of both; 2) whether a fund should exhibit a large, mid, or small capitalization structure or a combination thereof; 3) whether a fund should exhibit a growth, value, blended style, or targeted volatility orientation; 4) whether a fund should have a single investment manager or use multiple investment managers or firms; and 5) whether a fund invests in a single asset class or more than one asset class.

The following asset class categories are considered for possible inclusion in the plans:

**Capital Preservation**

- Money Market
- Stable Value

**Fixed Income**

- Investment grade (short-term, intermediate, long-term)
- Inflation-Protected
- High-Yield
- International/Global

**Global Public Equity**

- U.S. Equity
- Non-U.S. Developed Equity
- Emerging Equity

**Real Estate (public & private)****Asset Allocation**

- VRS unitized investment portfolio (VRSIP) – includes all asset classes utilized in the VRS investment portfolio.



**Self-Directed Brokerage Account  
As of November 14, 2013  
Appendix 3**

A Self-Directed Brokerage Account (SDBA) is available for self-designated knowledgeable investors who acknowledge and understand the SDBA's operational rules and procedures as well as the risks and costs associated with the investments allowed in the SDBA. Subject to limitations imposed by the SDBA provider, allowable SDBA investments include mutual funds, exchange traded funds (ETFs) and individual securities. Participants must complete the SDBA enrollment materials prior to investing in the SDBA.

The SDBA is made available through the plans' third party administrator and is not contracted for separately. The third party administrator may change the SDBA provider from time to time.

# **Bundled DC Plan Structure Investment Policy Statement**



## APPROVED BY THE BOARD OF TRUSTEES: EFFECTIVE JANUARY 2, 2020\*

This Investment Policy Statement has been adopted by the VRS Board of Trustees (Board) to provide guidelines for the investment offerings provided to participants of the Optional Retirement Plan of the Commonwealth of Virginia for Employees of Institutions of Higher Education (ORPHE) when a bundled plan construct is utilized. The purpose of the plan is set forth in the Plan Document and Master Trust, which are accessible on the VRS website at [varetire.org](http://varetire.org). Bundled plans use the same company for investments, recordkeeping, enrollment and marketing services. A bundled plan provider's investment platform may include the provider's proprietary investment options as well as non-proprietary options.

### 1. Investment Objectives

In a defined contribution (DC) investment program, each participant has his or her own risk tolerance, time horizon and investment objectives. Participants are responsible for their own investment decisions. To help meet these varying needs, the VRS ORPHE seeks to provide participants with an array of investment choices across a range of asset classes, risk levels, and investment strategies so they can construct and/or invest in portfolios that address their individual needs, and do so using investment vehicles and structures that provide competitive risk-adjusted returns at a reasonable cost within a bundled plan construct.

The Board recognizes that DC plan participants have varying levels of investment knowledge and/or interest in actively managing their investments, and therefore may desire investment alternatives in addition to those offered as part of a core investment lineup. To meet this need, a self-directed brokerage account (SDBA) is made available to self-designated knowledgeable investors who are willing to accept all risks, costs, and operational rules and procedures related to participating in a SDBA.

### 2. Decision Making

The Board is responsible for the following:

- Selection of the plan default investment option. (Appendix 1)
- Within the fund lineup, included asset classes. (Appendix 2)
- Whether to offer a Self-Directed Brokerage Account (SDBA). (Appendix 3)
- Whether individual investment advice will be provided and the terms on which it will be available to participants.

(Continued)

\* Originally adopted February 16, 2012. Amended November 14, 2013, February 9, 2017, and January 2, 2020.

Beyond these guidelines, the Board delegates to the Chief Investment Officer (CIO) all other investment decisions related to the ORPHE as it relates to the bundled plan structure. The CIO or a designee will report regularly to the Defined Contribution Plans Advisory Committee (DCPAC) and Board on the status and investment results of the investment program. Included in such reporting will be performance benchmarks selected by the CIO to appropriately measure or compare the risk and investment objectives of the various investment options.

In carrying out its fiduciary duty to oversee DC investments, the Board will consider advice and recommendations provided by the DCPAC. The specific duties and responsibilities of the DCPAC are described in the DCPAC Charter.

Additionally, the Board developed a set of twelve Defined Contribution Plans Investment Belief Statements intended to help guide the strategic management of the VRS DC investment program.

### **3. Plan Level Policies**

The CIO shall work with the VRS Director and the DCPAC relative to hiring and terminating a bundled plan provider. The CIO has full authority to select or eliminate fund options within a bundled plan provider's investment program using reasonable processes and to negotiate or renegotiate investment fees. The CIO shall also develop procedures for appropriate mapping of bundled plan assets and/or funds as situations arise. Mapping means the transfer of assets from a discontinued investment option or terminated provider to another investment option or provider under the ORPHE. The CIO works with the Director to coordinate implementation relating to changes to the bundled plan investment program and may consult with the DCPAC as needed.

The CIO is responsible for ensuring that adequate due diligence is being performed in the evaluation of potential and existing investments, and that all investment activity will be in compliance with applicable regulatory requirements.

### **4. Trading Restrictions and Redemption Fees**

The Board and the bundled plan provider(s) may impose restrictions and/or fees that discourage investment trading that could have an adverse impact on the management of a fund, other participants, or clients of the provider companies.

*(Continued)*

## 5. Best Execution

Taking into consideration the nature of a bundled DC plan structure, generally all investment transactions executed on behalf of the plan should be made on the basis of best execution. VRS defines best execution as the process and price that results in the best overall performance impact, as judged by the portfolio manager, taking into account current market conditions. VRS will generally discourage the use of soft dollar arrangements, and where such arrangements are utilized, staff will review this usage for reasonableness.

## 6. Use of Consultants/Service Providers

The CIO has the authority to hire consultants, research providers, and other service providers providing that such expenditures are in alignment with the Board approved operating budget.

## 7. Code of Ethics

The investment staff will conduct its affairs in a manner that reflects the highest standards of ethical conduct. The staff is expected to comply with the [CFA Institute of Code of Ethics and Standards of Professional Conduct](#).

**Default Investment Option  
Effective January 2, 2020  
Appendix 1**

TIAA-CREF Program: BlackRock LifePath Index Funds



**Asset Classes: Investment Options  
Effective November 14, 2013  
Appendix 2**

Investment options shall represent the broad asset classes available in the capital markets to the extent they are practical and, when prudent, certain sub-asset classes. From time to time additional asset classes may be added, or existing asset classes may be deleted in order to maintain an array of investment options that address participants' changing needs or changes in the investment industry.

The Board notes that due to the nature of the bundled plan structure investment decisions are limited to investment options that are, or can be made, available on a provider's investment platform. It is possible that bundled plan constraints may limit the scope of investment options available to participants, limit access to more attractive options within the asset classes and limit the extent to which negotiations can be made relative to investment management and investment related fees.

The Board delegates to the CIO decisions as to 1) whether a fund investment option shall utilize a passive or active investment strategy or a combination of both; 2) whether a fund should exhibit a large, mid, or small capitalization structure or a combination thereof; 3) whether a fund should exhibit a growth, value, blended style, or targeted volatility orientation; 4) whether a fund should have a single investment manager or use multiple investment managers or firms and; 5) whether a fund invests in a single asset class or more than one asset class.

The following asset class categories are considered for possible inclusion in the plan:

**Capital Preservation**

- Money Market
- Stable Value
- Fixed Annuity

**Fixed Income**

- Investment grade (short-term, intermediate, long-term)
- Inflation-Protected
- High-Yield
- International/Global

**Global Public Equity**

- U.S. Equity
- Non-U.S. Developed Equity
- Emerging Equity

**Real Estate (public & private)****Asset Allocation**

- Target Date
- Risk Based

*(Continued)*

**Asset Classes: Investment Options**  
**Effective November 14, 2013**  
**Appendix 2** *(continued)*

The Board expects asset allocation funds to be diversified portfolios. These portfolios may include exposure to various sub-segments of the broad asset classes as well as to alternative asset classes as determined by the provider company using reasonable optimization techniques to measure the risk/reward trade off. Asset classes used within asset allocation funds may include: large cap domestic equity, small/mid cap domestic equity, international equity, emerging market equity and debt, domestic core fixed income, high-yield bonds, inflation-protected securities, international/global fixed income, commodities, real estate and cash. An asset allocation fund is not required to include each of these asset classes and may include other asset classes. Glide paths for target date portfolios shall be based on sound investment theory and investment methodology as well as reasonable capital market assumptions. A glide path represents the changes made to the asset allocation mix over time as the target date approaches. There is a higher equity allocation in the longer dated portfolios because of the long-term investment time horizon. Over time, the equity allocation decreases as the investment time horizon decreases.



**Self-Directed Brokerage Account  
Effective February 9, 2017  
Appendix 3**

A Self-Directed Brokerage Account (SDBA) is made available through the plan's bundled provider(s) and is not contracted for separately. A bundled plan provider may change its SDBA provider from time to time.

The SDBA is available for self-designated knowledgeable investors who acknowledge and understand the SDBA's operational rules and procedures as well as the risks and costs associated with the investments allowed in the SDBA. Subject to limitations imposed by the SDBA provider, allowable investments include mutual funds, exchange traded funds (ETFs) and individual securities. Participants must complete the SDBA enrollment materials prior to investing the SDBA.

# **DC Investment Belief Statements**



**APPROVED BY THE BOARD OF TRUSTEES: SEPTEMBER 21, 2021**

## I. Introduction

The Virginia Retirement System (VRS) fulfills the fiduciary obligations outlined in the *Code of Virginia*, which require the VRS Board of Trustees (Board) to discharge its duties with respect to the defined contribution (DC) plans solely in the interest of the beneficiaries thereof and affords the Board the opportunity to contract with private corporations or institutions subject to the standards set forth in § 51.1-124.30 to provide investment products and services. The Board, therefore, developed these Defined Contribution Plans Investment Beliefs to guide the strategic management of the VRS DC Plans investment program. These statements represent a high-level framework for making decisions that require balancing multiple, often competing, factors and issues. In addition, the Defined Contribution Plans Investment Beliefs provide context for VRS actions and reflect VRS values, with a focus on maintaining the long-term commitment to provide benefits to participants.

## II. VRS DC Investment Belief Statements

The Board developed the following Defined Contribution Plans Investment Belief Statements to guide decisions and provide an anchor to the stated goals and objectives.

### ***Goals and Objectives***

A defined contribution plan provides participants an individual account to exercise discretion over their retirement assets using investment options selected by VRS or selected by the participant through the brokerage window. Each participant has an individual risk tolerance, time horizon and investment objectives.

- 1.** The primary objective of the VRS DC Plans is to provide participants with an array of investment choices across a range of asset classes, risk levels and investment strategies so participants have the opportunity to develop a retirement income stream that complements the VRS Defined Benefit (DB) Plan or other retirement income.
- 2.** Given the vital role of the DC Plans in VRS' primary retirement plan offerings, appropriate governance of the DC Plans is critical.
  - a.** The VRS Board of Trustees has overall fiduciary authority over the DC investment program. To assist the Board in fulfilling its duty the Board has appointed a Defined Contribution Plans Advisory Committee to provide the Board with objective DC plan design and investment advice.

(Continued)

- b. Governing documents such as the Charter for the DC Plans Advisory Committee, DC Investment Policy Statements, Master Trusts and Plan Documents delineate various roles and responsibilities of the Board, the Committee, VRS staff and other interested parties.
  
3. VRS is responsible for offering a reasonable range of diversified portfolios to serve as the Plans' default investment option and for participants who do not have the time, desire, or expertise to design and manage a diversified portfolio.
  
4. To the extent possible, VRS will explore and implement capabilities, controls and procedures that are transferrable from VRS' DB plan activities to VRS' DC plans activities, particularly with respect to investments.
  - a. Well-structured alternative investments can enhance an individual participant's portfolio risk/reward profile. VRS will examine methods for providing qualifying alternative investment options into its menu of pre-mixed diversified investment options, where feasible.
  
5. VRS will monitor and evaluate DC plans industry best practices and incorporate them where feasible to seek to enhance plan outcomes as demonstrated by qualitative and quantitative measures.
  
6. Controlling and managing costs is critical to a successful DC plan investment program.
  - a. Investment options should provide competitive net-of-cost risk adjusted returns.
  - b. The DC Plans' costs should be transparent to the individual participant.
  - c. Given VRS' large-scale presence in the institutional marketplace, it is beneficial for the individual participant to access VRS' expertise and capabilities.
  - d. Unbundling of DC administration and investment activities should lead to improved cost management.
  
7. Investment offerings should present wide-ranging options to accommodate participants' varying investment knowledge and/or interest in managing their investments while addressing the differences among participants at varying career stages.
  - a. Individuals should be educated to recognize that their specific investment plans require a long-term, multi-decade planning/investment horizon.
  - b. Investment horizons are unique to the individual participant and may extend beyond the accumulation phase into the retirement (decumulation) phase.

(Continued)

- c. In keeping with industry best practice, the administrative and investment aspects of the individual's overall investment plan should be unbundled/disaggregated to allow for maximum design flexibility.
  - d. VRS should continue efforts to contact eligible employees who are not participating in the VRS DC plans to build awareness of plan benefits.
8. The self-directed brokerage window that VRS provides in the VRS DC Plans can serve as an effective investment tool for individual participants.
9. VRS should continue to explore viable solutions to assist participants in managing the critically important task of decumulation of retirement assets.
10. Participant investment education is a valuable resource to participants and can enhance a successful program.
- a. Participant investment education should cover certain key topics consistent with industry best practices including:
    - i. Identifying principal retirement planning risks (see Belief Statement 11).
    - ii. Understanding the accumulation phase versus the decumulation phase.
    - iii. Analyzing the costs associated with various investment options.
    - iv. Considering the impact of non-plan (outside) assets.
    - v. Considering other potential sources of retirement income.
  - b. VRS should also consider making various investment advice and financial planning solutions/products available to participants.
11. VRS should seek to inform DC plan participants about fundamental retirement planning risks.
- a. *Shortfall risk* – The probability or potential that an individual may not meet his/her long-term retirement savings goal.
  - b. *Longevity risk* – The potential that an individual may outlive his/her retirement assets.
  - c. *Drawdown risk* – The impact that short-term declines in a portfolio can have on long-term values.