

Defined Contribution Plans Advisory Committee (DCPAC) Meeting Virginia Retirement System, Pavilion Building, 3rd Floor Board Room 1111 E. Main Street, Richmond, VA 23219

Thursday, 6/4/2020 10:30 AM - 12:00 PM ET

I. Welcome and Introductions

II. Public Comment

III. Meeting Minutes

— Adoption of the Minutes from the November 7, 2019 Meeting DCPAC Minutes 11-7-2019 - Page 2

IV. Investments

— Performance Reports

DC Investments 6-4-2020 - Page 8

• Unbundled plans

• TIAA

V. Administration — Administrative Reports & Communications

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- DC Plans and Hybrid Plan Update
- ORPHE

VI. Other Business

Legislative Update

Board Legislative Update - Page 48

- i. SECURE Act
- ii. CARES Act

iii. State legislation

• DCPAC Appointment

i. Reappointment of Ravi Deo

Bio for Ravindra Deo - Page 83

ii. RBA for DCPAC appointment

- Motion to approve recommendation for reappointment

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Other New Business

VII. 2020 Meetings

• 2020 Meetings

i. August 27, 2020 at 1:00 p.m. (Annual investment review)

ii. November 19, 2020 at 1:00 p.m.

• ORPHE Annual Employer Update (not a meeting of the DCPAC) — September 24, 2020 VIII. Adjournment

IX. Appendix

Q1 2020 ICMARC Quarterly Review - FINAL - Page 85 46257 VRS ICMARC Annual Strategy Document-FINAL - Page 166 Appendix- Callan 2020 DC Trends Survey - Page 210



Minutes

The Defined Contribution Plans Advisory Committee of the VRS Board of Trustees met on November 7, 2019 in Richmond, Virginia with the following members present:

The Honorable J. Brandon Bell, II Allan Carmody Ravindra Deo Shannon Irvin Rick Larson Margaret Maslak David Winter Brett Hayes, Chair

Members of the Board of Trustees:

O'Kelly McWilliams, III

VRS Staff:

Rory Badura, Trish Bishop, Steve Cerreto, Jeanne Chenault, Michael Cooper, Sara Denson, Pam Elam, Jordan Evans, Kelly Hiers, Robert Irving, Mohamed Kambal, Ciara Lawson, Rebecca Nicholas, Andrea Peeks, Laura Pugliese, Ian Rose, Kristy Scott, Michael Scott, Jillian Sherman, Jennifer Schreck, Ashley Spradley, Peter Thompson, and Cindy Wilkinson.

Joint Legislative Audit and Review Commission: Lauren Axselle and Jamie Bitz

Virginia Governmental Employees Association: Rick Fowler

Mr. Hayes called the meeting to order at 10:29 a.m.

APPROVAL OF MINUTES

Upon a motion by Mr. Deo, with a second by Mr. Bell, the minutes of the September 5, 2019 meeting were approved.

ANNUAL ADMINISTRATIVE EXPENSE REPORT FOR FISCAL YEAR 2019

Pam Elam, VRS Business Performance Analyst, provided an overview of the annual costing update for FY 2019 as required annually by the DCPAC Charter, and a reminder of the ORPHE cost rate increase effective July 1, 2020. Ms. Elam shared a summary overview of the DC Plan participant counts and expenditures for FY 2019.

Andrea Peeks, VRS Budget and Performance Reporting Manager, provided a summary overview of the cost trend analysis over the five-year period from FY 2015 to FY 2019. Ms. Peeks advised that the change in total cost in FY 2019 was driven by an amendment to the cost allocation process for Investment staff's contributions to DC Plans intended to flatten annual rates and make costs level on a per-participant basis across each of the DC Plans. She noted that the change in FY 2019 was a one-time change and should remain relatively constant going forward. Ms. Peeks shared the year-over-year decrease in total



costs for the ORPHE and informed the Committee that effective July 1, 2020 (FY 2021), the ORPHE perparticipant rate will increase from \$110 to \$160 for several reasons; namely, to recover costs associated with program service enhancements effectuated during the five-year rate period, future cost increases associated with inflation, and consideration of the FY 2018 withdrawal of the College of William and Mary, which reduced program enrollment by 20%. Ms. Peeks noted that because a large portion of costs are fixed, the withdrawal of the College of William and Mary led to a smaller population base over which to distribute costs and is a primary factor in the significant increase. She shared that these factors, combined with the Investment cost reallocations, helped to mitigate the potential for higher per participant costs. Ms. Peeks shared with the Committee that the annual per-participant rate would be re-evaluated on a biennial basis to ensure the rate is sufficient. She advised the Committee that the affected institutions have been made aware of the rate increase and, to date, have expressed no concerns.

The Committee thanked Ms. Peeks for her presentation.

VRS STAFF REVIEW OF ORPHE PEER CONTRIBUTION RATE REPORT

Rory Badura, Senior Staff Actuary, presented an overview of the Optional Retirement Plan for Higher Education (ORPHE) contribution level review as of June 30, 2019. He informed the Committee that the review is conducted at least once every six years as required by §51.1-126 of the Code of Virginia, with the last review based on information available as of June 30, 2013. Mr. Badura informed the Committee of the factors that went into the study, including the methodology and peer institutions, and also provided an overview of the contribution rates as well as the replacement ratios the plans generate. Mr. Badura reported to the Committee that the analysis showed that the contribution rates for ORPHE Plan 1 and Plan 2 are in line with the average contribution rates from the peer institutions identified by SCHEV and have not materially changed compared to the 2013 analysis. He provided a comparison of the replacement ratios of the VRS retirement plans based on varying assumed rates of return for the ORPHE plans. He noted that the current 10.4% employer contribution rate for ORPHE Plan 1 members exceeds the peer group average rate of 8.8%. Mr. Badura also highlighted that the 8.5% employer contribution rate for ORPHE Plan 2 members was slightly higher than public institution peers and slightly lower than private institution peers.

The Committee thanked Mr. Badura for his presentation.

Following Mr. Badura's presentation, Mr. Bell moved, with a second by Mr. Deo, to accept the VRS staff report and recommend approval of the following action to the full Board:

RBA: ACCEPT ORPHE PEER CONTRIBUTION RATE REPORT

Request for Board Action: The Board accepts, after considering the recommendation of the Defined Contribution Plans Advisory Committee (DCPAC), the VRS staff report entitled "Optional Retirement Plan for Higher Education Review of Contribution Rates."



CASH MATCH PLAN OPT-OUT POLICY

Cindy Wilkinson, Policy and Compliance Director, provided an overview of the cash match plan opt-out policy that would permit an agency of the Commonwealth of Virginia that is eligible to offer a 403(b) to establish a separate cash match plan, in lieu of participation in the cash match plan established by VRS pursuant to § 51.1-608(A) of the Code of Virginia (the "VRS Cash Match Plan"). Staff advised that agencies that maintain a 403(b) program may consider this option for administrative ease, rather than sending some contributions to their 403(b) program and some funds to the VRS Cash Match Plan. Staff confirmed it would change where contributions are directed, but not impact employee contribution amounts.

Following Ms. Wilkinson's presentation, Mr. Bell moved, with a second by Mr. Deo, to recommend approval of the following action to the full Board:

RBA: APPROVE CASH MATCH PLAN OPT-OUT POLICY

Request for Board Action: The Board adopts the attached "Agreement for Consent to Establish Separate Cash Match Plan" and authorizes the VRS Director to provide consent for an eligible agency of the Commonwealth to establish a separate cash match plan if it signs the Agreement.

ADMINISTRATIVE REPORTS AND COMMUNICATIONS UPDATE

Kelly Hiers, DC Plans Administrator, provided an update of the VRS Defined Contribution Plans for the third quarter ending September 30, 2019. Ms. Hiers shared the total assets under management across all DC plans, as well as an overview of unique participant counts for the unbundled plans and recent plan adoptions.

DC Plans and Hybrid Plan Update

Ms. Hiers provided an update on total assets and accounts in the COV 457 and Virginia Cash Match plans through September 30, 2019, as well as an overview of cash flow from the COV 457 and Virginia Cash Match plans. Ms. Hiers provided a review of total assets and accounts in the Hybrid Retirement Plan for the third quarter of 2019. She also presented an overview of the cash flow from the defined contribution component of the Hybrid Retirement Plan, including contributions, withdrawals and net cash flow. Ms. Hiers updated the Committee on the Hybrid 457 voluntary participation and contribution election rates for the third quarter of 2019. She also informed the Committee of the next auto-escalation increase set to occur January 1, 2020, and provided a status of participant and employer activity through October 30, 2019.

Ms. Hiers provided an overview of the DC Plans goal to increase contributions and enrollments for the third quarter 2019. She noted COV 457 Plan participation by enrollment type and employer type in comparison to overall participation. Ms. Hiers shared with the Committee recent plan adoptions and provided an overview of active and eligible participants as well as participant deferral amounts to the COV 457 Plan, highlighting the analysis between average annual and per pay period deferrals and noting



several initiatives to increase enrollment and contributions among COV 457 Plan participants. She provided an overview of the percentage increase in active voluntary contribution elections among hybrid plan members by employer type for the year over year periods January 2017 to January 2018, and October 2018 to October 2019, respectively. Ms. Hiers highlighted several enhancements launched in the past to increase enrollments and contributions to the Hybrid Retirement Plan.

ORPHE Update

Ms. Hiers provided an overview by provider of total ORPHE assets, participants and average balances for the third quarter of 2019. She also gave an update on ORPHE provider selections and provider initiatives for the third quarter of 2019. Ms. Hiers shared an update of the ORPHE 2020 changes, including an overview of the ORPHE timeline and outreach initiatives through October 30, 2019. She advised the Committee of Fidelity participant activity and other open enrollment activity.

The Committee thanked Ms. Hiers for her presentation.

ORPHE Annual Employer Report

Mr. Rick Larson, DCPAC Committee member representing higher education, presented his report to the Committee on the ORPHE Annual Employer Update hosted by VRS Defined Contribution Plans on Thursday, September 26, 2019.

DC PLANS INVESTMENTS UPDATE

Laura Pugliese, Portfolio Manager, Defined Contribution Plans, provided an overview of the September 30, 2019 performance reports. Ms. Pugliese informed the Committee that the Target Date 2020 Portfolio in the unbundled DC Plans investment lineup would be folding into the Retirement Portfolio on November 15, 2019, and the Target Date 2065 Portfolio would be introduced in January 2020.

CEM Defined Contribution Plans Survey

Ms. Pugliese presented to the Committee the 2018 CEM Defined Contribution Plans Survey results that included 108 corporate and 24 public DC Plans representing \$1.0 trillion in assets.

Ms. Pugliese informed the Committee that the survey results included the unbundled DC Plans supplemental 457 Deferred Compensation Plan, in addition to the bundled TIAA and Fidelity programs for ORPHE. She also noted the TIAA and Fidelity information was based solely on the "selected" plan investment options.

For the calendar year ending December 31, 2018, CEM reported the following:

- The 457 Deferred Compensation Plan was a low-value added, low-cost plan. Total 457 Plan costs of 0.21% were below CEM's calculated VRS 457 Plan benchmark cost of 0.39%. (Note: The investment lineup is predominately passively managed.)
- The TIAA ORPHE program was a low-value added, high-cost plan. Total TIAA plan costs of 0.42% were slightly higher than CEM's calculated TIAA ORPHE benchmark cost of 0.40%.
- The Fidelity ORPHE program was a low-value added, high-cost plan. Fidelity Total plan costs of 0.55% were higher than CEM's calculated Fidelity ORPHE benchmark cost of 0.35%.



CEM calculates a plan-specific benchmark cost to help plan sponsors determine if their costs are reasonable after adjusting for plan size, asset mix, and average account balance. Positive (high) value added indicates that, on average, the plan's investment options are outperforming their benchmark indices, whereas negative (low) value added indicates that investments are not outperforming benchmark indices net of investment and plan administration costs. Plans having a majority of passively managed funds tend to be low value added plans because passively managed funds typically track their benchmark indices minus fund expense ratios.

DC Plans Investment Policy Statements

Ms. Pugliese provided an overview of recommended changes to the VRS Investment Policy Statement for An Unbundled Defined Contribution Plan Structure and the VRS Investment Policy Statement for A Bundled Defined Contribution Plan Structure. Staff affirmed the proposed wording changes do not reflect changes in responsibility but provide clarification, consistency with language found within the VRS defined benefit plan policy statement, where practicable, as well as changes to the Optional Retirement Plan for Higher Education (ORPHE). Staff noted the default investment option change within the updated TIAA investment menu to BlackRock's LifePath Index Funds and the removal of Fidelity Investments as a provider option in the ORPHE.

Upon a motion by Mr. Bell, with a second by Mr. Winter, the Committee voted to recommend approval of the following action to the full Board:

RBA: APPROVE AMENDMENTS TO DC PLANS INVESTMENT POLICY STATEMENTS

Request for Board Action: The Board approves amendments to the Unbundled Defined Contribution Plan Structure Investment Policy Statement and the Bundled Defined Contribution Plan Structure Investment Policy Statement to make refinements to the policy statements and address changes being made to the VRS Optional Retirement Plan for Higher Education (ORPHE) effective January 2020.

OTHER BUSINESS

Code of Ethics and Conduct

Michael Cooper, VRS Chief Operating Officer, informed the Committee that an email notification would be forthcoming that includes instructions and a hyperlink to a learning module on the Board of Trustees' Code of Ethics and Standards of Conduct; an annual requirement of VRS advisory committee members. Staff shared that Committee members will be able to send certification electronically for acknowledgement of the policy upon review of the recorded webinar.



DCPAC Appointments

Trish Bishop, VRS Director, informed the Committee of the retirement of Margaret Maslak and Allan Carmody from the DCPAC, effective at the end of the calendar year. Both Committee terms expire on June 20, 2020. The Committee reviewed the biography of Brenda O. Madden, who is recommended for appointment to fill Ms. Maslak's unexpired term and to a new term to begin June 20, 2020. A recommendation has not yet been received to fill Mr. Carmody's unexpired term, but will be brought to the Committee at its next meeting.

Upon a motion by Mr. Winter, with a second by Mr. Bell, the Committee concurred in the nomination of Ms. Madden and moved to present the nomination to the Administration and Personnel Committee.

RBA: APPOINTMENT OF DCPAC MEMBER

Request for Board Action: The Board appoints Brenda O. Madden to fill the unexpired term of Margaret M. Maslak, which ends June 20, 2020, and reappoints Ms. Madden for a two-year term ending June 20, 2022.

Mr. Hayes thanked Ms. Maslak and Mr. Carmody for their service to the DCPAC.

UPCOMING DEFINED CONTRIBUTION PLANS ADVISORY COMMITTEE MEETINGS

Mr. Hayes confirmed the DCPAC meeting dates for 2020 following the polling of the Committee.

The next meeting of the DCPAC will take place March 12, 2020, from 1:00 p.m. to 4:00 p.m., with remaining meetings on June 4th from 10:30 a.m. to 1:30 p.m., and August 27th and November 19th from 1:00 p.m. to 4:00 p.m. Also, for those Committee members who are interested, the ORPHE Annual Employer Update is scheduled for September 24th, as required by the DCPAC Charter, but is not a meeting of the Committee.

ADJOURNMENT

There being no further business, Mr. Hayes adjourned the meeting at 12:45 p.m.

Brett Hayes, Chair Defined Contribution Plans Advisory Committee



DC Plans Investments June 4, 2020



April 30, 2020 Performance



- A benchmark change effective January 2020 for the Money Market Fund from the Bloomberg Barclays U.S. 3 Month Treasury Bill Index to the FTSE 3 Month Treasury Bill Index (Unbundled DC plans)
- The TIAA ORPHE report reflects the new investment menu
 - Starting January 2020 the TIAA performance reports are solely based on investments offered within TIAA's RC contract
 - Deselected TIAA proprietary funds under TIAA's GRA and RA contracts are no longer monitored by the VRS Investment Department
- Fidelity became a deselected ORPHE provider company in February 2020 and is no longer monitored by the VRS Investment Department

Defined Contribution Plans Advisory Committee Report

Unbundled Plans Investment Performance

Below are the totals for the period ending April 30, 2020. Returns greater than one year are annualized.

Investment Options	4 Month	2 Mantha	VTD	4	3 V	E V-a	10 Yrs / Since Inception ¹	Fund Expense Ratio ²	Inception Date	Market Value	% of Market Value ²⁷	% of Participants Selecting an Option ²⁸
Investment Options		3 Months	YTD	1 Yr	3 Yrs	5 Yrs	-		Date	Market Value		•
Do-It-For-Me: Target Date Portfolios ^{3,4}	%	%	%	%	%	%	%	%	9/4/0E	\$	%	6.3
Retirement Portfolio Custom Benchmark	5.50	-3.21 -3.35	-2.66 -2.72	4.13 4.10	4.90 4.86	4.15	5.41	0.08	8/1/05	368,204,570	8.4	0.3
Target Date 2025 Portfolio	<u>5.50</u> 6.60	<u>-3.35</u> -5.58	<u>-2.72</u> -5.47	<u>4.10</u> 1.68	<u>4.80</u> 5.00	4.11 4.45	<u>5.37</u> 6.36	0.08	7/5/06	241,612,748 ²⁴	5.5	6.6
Custom Benchmark	6.62	-5.73	-5.50	1.65	4.94	4.39	6.29	0.08	115/00	241,012,740	5.5	0.0
Target Date 2030 Portfolio	7.65	<u>-5.75</u> -7.56	<u>-5.50</u> -7.81	-0.30	<u>4.94</u> 4.84	4.39	6.63	0.08	8/1/05	219,455,405	5.0	8.0
Custom Benchmark	7.69	-7.73	-7.83	-0.34	4.76	4.39	6.54			-,,		
Target Date 2035 Portfolio	8.64	-9.38	-9.96	-2.15	4.67	4.51	6.88	0.08	7/5/06	202,501,020	4.6	9.1
Custom Benchmark	8.71	-9.56	-9.96	-2.17	4.58	4.39	6.76					
Target Date 2040 Portfolio	9.57	-11.06	-11.92	-3.84	4.48	4.48	7.06	0.08	8/1/05	165,658,429	3.8	9.2
Custom Benchmark Target Date 2045 Portfolio	9.65	-11.24	-11.90	-3.87	4.38	4.35	6.94	0.08	7/5/06	146,776,288	3.4	10.4
Custom Benchmark	10.28 10.36	-12.16 -12.35	-13.20 -13.18	-4.99 -5.02	4.31 4.21	4.44 4.29	7.21 7.07	0.00	115/00	140,770,200	5.4	10.4
Target Date 2050 Portfolio	10.50	-12.66	-13.79	-5.53	4.21	4.40	7.34	0.08	9/30/07	140,836,895	3.2	12.1
Custom Benchmark	10.71	-12.84	-13.75	-5.55	4.11	4.25	7.20		0,00,01	,,	•.=	
Target Date 2055 Portfolio	10.67	-12.68	-13.81	-5.55	4.20	4.39	8.31	0.08	5/19/10	163,275,205	3.7	16.3
Custom Benchmark	10.76	-12.90	-13.81	-5.61	4.09	4.24	8.20					
Target Date 2060 Portfolio	10.68	-12.67	-13.80	-5.54	4.19	4.39	4.81	0.08	11/17/14	58,540,642	1.3	11.0
Custom Benchmark	10.76	-12.90	-13.81	-5.61	4.09	4.24	4.66				-	-
Target Date 2065 Portfolio	10.69	-12.68	-13.80	n/a	n/a	n/a	-6.98	0.08	9/23/19	899,128	0.0	0.7
Custom Benchmark	10.76	-12.90	-13.81	n/a	n/a	n/a	-6.89		0/20/10		••••	•
Help-Me-Do-It: Individual Options	10.10	12.00	10.01	11/4	11/0	170	0.00					
Money Market Fund ^{5,6}	0.07	0.31	0.46	1.98	1.96	1.34	0.71	0.08	44/4/00	05 000 525		0.4
FTSE 3 Month Treasury Bill Index	0.08	0.33		1.92	1.75	1.14	0.60	0.08	11/1/99	95,699,535	2.2	2.1
Yield as of $04/30/20$: $0.86\%^7$	0.08	0.33	0.47	1.92	1.75	1.14	0.60					
	0.18	0.55	0.77	2.49	2.25	2.01	2.07					
Stable Value Fund ^{8,9}			-	-	-	-	-	0.25	2/1/95	631,478,271	14.4	8.4
Custom Benchmark ¹⁰	0.04	0.23	0.38	1.69	2.21	1.91	1.56					
Yield as of 04/30/20: 2.28% ¹¹												
Bond Fund ¹²	1.81	3.02	5.00	10.85	5.21	3.83	4.01	0.03	11/1/99	178,758,104	4.1	3.9
Bloomberg Barclays U.S. Aggregate Bond Index	1.78	3.00	4.98	10.84	5.17	3.80	3.96					
Inflation-Protected Bond Fund ¹³	2.87	2.41	4.56	9.52	4.31	3.22	3.60	0.03	7/30/02	43,434,448	1.0	1.5
Bloomberg Barclays U.S. TIPS Index	2.78	2.37	4.52	9.46	4.21	3.08	3.52					
High-Yield Bond Fund ¹⁴	3.46	-9.59	-9.78	-4.73	1.96	3.47	5.87	0.40	5/31/04	41,214,779	0.9	1.9
ICE BofAML U.S. High-Yield BB-B Constrained Index	4.18	-8.31	-8.25	-2.86	2.25	3.52	5.84					
Stock Fund ¹⁵	12.83	-9.22	-9.26	0.91	9.09	9.17	11.73	0.01	11/1/99	1,066,732,225	24.4	11.1
S&P 500 Index	12.82	-9.26	-9.29	0.86	9.04	9.12	11.69					
Small/Mid-Cap Stock Fund ¹⁶	14.49	-17.87	-19.55	-14.24	1.13	3.71	8.72	0.02	11/1/99	284,648,015	6.5	6.3
Russell 2500 Index ¹⁷	14.55	-17.83	-19.50	-14.20	1.13	3.62	8.63					
International Stock Fund ¹⁸	7.92	-15.19	-18.00	-11.75	-0.32	0.12	3.66	0.06	11/1/99	153,512,580	3.5	5.3
MSCI ACWI ex-U.S. IMI Index ¹⁹	8.15	-15.61	-17.93	-11.78	-0.50	-0.12	3.38	0.00	11/1/00	100,012,000	0.0	0.0
Global Real Estate Fund ²⁰	6.93	-23.91	-23.29	-16.84	-1.25	0.47	6.74	0.09	10/1/02	02 600 700	1.9	3.4
	7.06	-23.91	-23.29	-17.51	-1.25	-0.40	6.18	0.09	10/1/02	82,698,790	1.9	3.4
FTSE EPRA/NAREIT Developed Index ²¹										05		
VRSIP ²²	-6.86	-10.00	-10.00	-2.19	4.01	4.58	6.95	0.59	7/1/08	37,444,890 ²⁵	0.9	0.6
VRS Custom Benchmark ²³	-7.62	-10.11	-10.11	-1.37	4.02	4.41	6.54					
VRSIP and benchmark returns are reported with a one mo	onth lag. [Retur	n informatio	n shown is	as of Mar	ch 31, 2020).] [Market	value as of Mar	ch 31, 2020 v	vas \$37,138,755	5.]		

Do-It-Myself: Self-Directed Brokerage Account												
TD Ameritrade	n/a	54,307,798	1.2	0.2								
Total										\$4,377,689,765 ²⁶		

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- 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 for most LifePath Funds O were 12/9/11. The 2055 Fund's O inception data 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 Index, Bloomberg Barclays U.S. Aggregate Bond Index, Bloomberg Barclays 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 ICMA-RC 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 \$625,847.
- 25 Includes Preliminary Investment Portfolio Account PIP amount of \$0.
- 26 Includes \$3,438,027 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 March 31, 2020. There were 442,225 participant accounts as of March 31, 2020 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 ICMA-RC 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 ICMA-RC. Benchmark returns are provided by BlackRock, Russell/Mellon Analytical Services, Galliard, and ICMA-RC. 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 on a monthly basis (approximately \$2.54 per month). Only one annual 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 on a monthly basis (approximately \$2.54 per month). Only one annual fee of \$30.50 is deducted from participant accounts for those participants participants participanting in more than one Commonwealth of Virginia defined contribution plan.



DCP (ICMA-RC)		TIAA
White Label Names for BlackRock Funds		Formal BlackRock Fund Names
		(same share class)
Retirement Portfolio	=	BlackRock LifePath Index Retirement Fund O
Target Date 2025 Portfolio	=	BlackRock LifePath Index 2025 Fund O
Target Date 2030 Portfolio	=	BlackRock LifePath Index 2030 Fund O
Target Date 2035 Portfolio	=	BlackRock LifePath Index 2035 Fund O
Target Date 2040 Portfolio	=	BlackRock LifePath Index 2040 Fund O
Target Date 2045 Portfolio	=	BlackRock LifePath Index 2045 Fund O
Target Date 2050 Portfolio	=	BlackRock LifePath Index 2050 Fund O
Target Date 2055 Portfolio	=	BlackRock LifePath Index 2055 Fund O
Target Date 2060 Portfolio	=	BlackRock LifePath Index 2060 Fund O
Target Date 2065 Portfolio	=	BlackRock LifePath Index 2065 Fund O
Money Market Fund*	=	BlackRock Short-Term Investment Fund W
Bond Fund*	=	BlackRock U.S. Debt Index Fund M
Inflation-Protected Bond Fund	=	BlackRock U.S. TIPS Fund M

* Longer dated returns differ than those reflected within the TIAA program because the BlackRock returns are linked to the previous investment manager - SSgA.



DCP (ICMA-RC)		TIAA
White Label Names for BlackRock Funds		Formal BlackRock Fund Names (different share class)
Stock Fund	¥	BlackRock Equity Index Fund J
Small/Mid-Cap Stock Fund	¥	BlackRock Russell 2500 Index Fund M
International Stock Fund	¥	BlackRock MSCI ACW ex- U.S. IMI Index Fund M

TIAA ORPHE Contracts



TIAA ORPHE Proprietary Funds Information as of December 31, 2019

TIAA Proprietary Investment Options	Market Value New Contract (RC)	RC Contract as % of Total Contracts	Market Value Legacy Contracts (GRA,RA, Other)	Legacy Contracts as % of Total Contracts	TIAA Total Market Value All Contracts
CREF Money Market Account	\$3,062,215	17.9%	\$14,022,337	82.1%	\$17,084,552
CREF Bond Market Account	\$4,481,276	14.4%	\$26,597,607	85.6%	\$31,078,884
CREF Inflation-Linked Bond Account	\$2,472,331	14.6%	\$14,461,361	85.4%	\$16,933,692
CREF Equity Index Account	\$13,390,142	15.8%	\$71,459,376	84.2%	\$84,849,518
CREF Stock Account	\$20,313,033	8.9%	\$207,661,230	91.1%	\$227,974,263
CREF Global Equities Account	\$6,797,607	13.1%	\$45,197,860	86.9%	\$51,995,467
TIAA Real Estate Account	\$6,030,122	14.7%	\$34,997,960	85.3%	\$41,028,081
TIAA Traditional Annuity - RC contract	\$13,535,797	6.1%	n/a	n/a	\$13,535,797
TIAA Traditional Annuity - Legacy contracts	n/a	n/a	\$209,688,218	93.9%	\$209,688,218
TIAA-CREF - Self Direct Brokerage Account	\$493,446	100.0%	n/a	n/a	\$493,446
Total	\$70,575,969		\$624,085,949		\$694,661,918
	10.2%		89.8%		

Defined Contribution Plans Advisory Committee Report

TIAA RC Contract Investment Performance

Below are the totals for the period ending April 30, 2020. Returns greater than one year are annualized.

Investment Options	1 Month	3 Months	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs / Since Inception ¹	Fund Expense Ratio ²	Inception Date	Market Value	% of Market Value ¹⁹	% of Participants Selecting an Option ²⁰
Target Date Portfolios ^{3,4}	%	%	%	%	%	%	%	%		\$	%	•
BlackRock LifePath Index Retirement Fund O Custom Benchmark	5.50 5.50	-3.21 -3.35	-2.66 -2.72	4.13 4.10	4.90 4.86	4.15 4.11	5.41 5.37	0.08	8/1/05	26,438,546	11.9	11.1
BlackRock LifePath Index 2025 Fund O Custom Benchmark	6.60 6.62	-5.58	-5.47 -5.50	1.68	5.00 4.94	4.45	6.36 6.29	0.08	7/5/06	17,397,370	7.8	7.1
BlackRock LifePath Index 2030 Fund O Custom Benchmark	7.65 7.69	<u>-5.73</u> -7.56 -7.73	<u>-5.50</u> -7.81 -7.83	<u>1.65</u> -0.30 -0.34	4.94 4.84 4.76	4.39 4.48 4.39	6.29 6.63 6.54	0.08	8/1/05	20,725,151	9.3	9.1
BlackRock LifePath Index 2035 Fund O Custom Benchmark	8.64 8.71	-7.73 -9.38 -9.56	-7.85 -9.96	-0.34 -2.15 -2.17	4.70 4.67 4.58	4. 39 4. 39	6.88 6.76	0.08	7/5/06	15,397,557	6.9	9.4
BlackRock LifePath Index 2040 Fund O Custom Benchmark	9.57 9.65	-11.06 -11.24	-11.92 -11.90	-3.84 -3.87	4.48 4.38	4.3 5	7.06 6.94	0.08	8/1/05	17,001,994	7.6	9.9
BlackRock LifePath Index 2045 Fund O Custom Benchmark	10.28 10.36	-12.16 -12.35	-11.30 -13.20 -13.18	-4.99 -5.02	4.30 4.31 4.21	4.35 4.44 4.29	7.21 7.07	0.08	7/5/06	13,282,414	6.0	10.5
BlackRock LifePath Index 2050 Fund O Custom Benchmark	10.30 10.62 10.71	-12.66 -12.84	-13.79 -13.75	-5.53 -5.55	4.21 4.11	4.2 9 4.40 4.25	7.34 7.20	0.08	9/30/07	6,895,014	3.1	7.8
BlackRock LifePath Index 2055 Fund O Custom Benchmark	10.71 10.67 10.76	-12.64 -12.90	-13.81 -13.81	-5.55 -5.61	4.11 4.20 4.09	4.2 3 4.39 4.24	8.31 8.20	0.08	5/19/10	2,973,175	1.3	5.1
BlackRock LifePath Index 2060 Fund O	10.68	-12.67	-13.80	-5.54	4.19	4.39	4.81	0.08	11/17/14	477,658	0.2	1.7
Custom Benchmark BlackRock LifePath Index 2065 Fund O	10.76 10.69	-12.90 -12.68	-13.81 -13.80	-5.61 n/a	4.09 n/a	4.24 n/a	4.66 -6.98	0.08	9/23/19	30,746	0.0	0.0
Custom Benchmark	10.76	-12.90	-13.81	n/a	n/a	n/a	-6.89					
Individual Options												
BlackRock Short-Term Investment Fund W ⁵ FTSE 3 Month Treasury Bill Index	0.07 0.08	0.31 0.33	0.46 0.47	1.98 1.92	1.96 1.75	1.38 1.14	0.79 0.60	0.08	7/1/03	5,949,765	2.7	8.3
Yield as of 04/30/20: 0.86% ⁶												
BlackRock U.S. Debt Index Fund M ⁷ Bloomberg Barclays U.S. Aggregate Bond Index	1.81 1.78	3.02 3.00	5.00 4.98	10.85 10.84	5.21 5.17	3.83 3.80	4.02 3.96	0.03	6/6/96	7,138,958	3.2	20.3
BlackRock U.S. TIPS Fund M ⁸ Bloomberg Barclays U.S. TIPS Index	2.87	2.41 2.37	4.56 4.52	9.52 9.46	4.31 4.21	3.22 3.08	3.60 3.52	0.03	7/30/02	3,737,502	1.7	13.6
BlackRock Equity Index Fund J ⁹	12.83	-9.22	-9.26	0.91	9.09	9.17	11.75	0.01	3/5/97	19,158,031	8.6	25.3
S&P 500 Index BlackRock Russell 2500 Index M ¹⁰ Russell 2500 Index	12.82 14.49	-9.26 -17.87	-9.29 -19.55	0.86 -14.25	9.04 1.12	9.12 3.71	<u>11.69</u> 8.80	0.04	9/30/08	5,170,927	2.3	3.2
BlackRock MSCI ACWI ex-U.S. IMI Index Fund M ¹¹	14.55 7.92	<u>-17.83</u> -15.21	-18.02	<u>-14.20</u> -11.80	1.13 -0.36	<u>3.62</u> 0.08	8.70 1.89	0.11	2/28/11	12,248,015	5.5	20.6
MSCI ACWI ex-U.S. IMI Index	8.15	-15.61	-17.93		-0.50	-0.10	1.73					
BlackRock MSCI ACWI IMI Index Non-Lendable Fund M ¹²	10.85	-12.55	-13.91	-6.02	4.12	4.42	6.56	0.05	4/12/13	25,216,403	11.3	36.6
MSCI ACWI IMI Index	11.01	-12.74	-13.90	-6.22	3.77	4.05	6.18					
TIAA Real Estate Account ¹³	-0.69	-0.58	-0.58	2.70	4.23	4.78	8.71	0.83	10/2/95	6,820,597	3.1	29.3
Custom Composite Benchmark ¹⁴	n/a	n/a	n/a	n/a	n/a	n/a	n/a					
TIAA Traditional Annuity RC ^{15,16,17,18}	0.33	0.97	1.31	3.99	4.05	4.15	4.24	0.49	8/1/05	16,023,835	7.2	30.6
Self-Directed Brokerage Account TIAA-CREF Self-Directed Account	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	574,965	0.3	0.3
Total										\$222,658,623		

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 dat
- 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 Barclays U.S. Aggregate Bond Index, Bloomberg Barclays 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 M was 3/20/17. Returns prior to Fund M's inception date are those of Fund F with deductions taken for Fund M'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 Barclays 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 April was 3.00%.
- 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 49 basis points (0.49%) 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 March 31, 2020. There were 4,970 (RC contract) participants as of March 31, 2020.

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.

Future DCPAC Meetings



- Performance
- Annual Investments Review
- November 19, 2020
 - Performance
 - CEM 2019 Survey Highlights (if finalized by CEM)
- Other investment-related topics of interest?

Virginia



VRS Defined Contribution Plans 1st Quarter 2020 (January - March) Administrative Summary June 4, 2020

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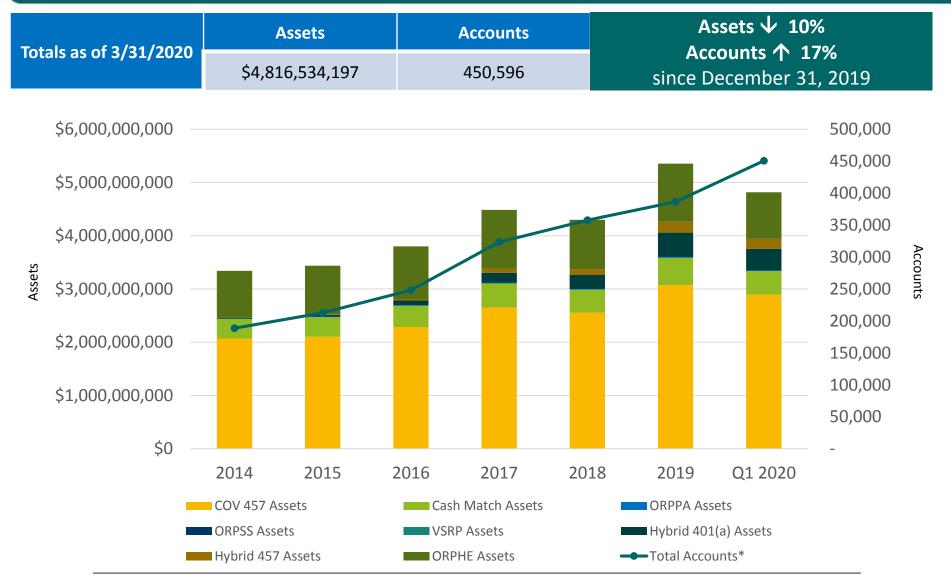
Agenda



Торіс	Slide Number(s)
Total Assets & Accounts	3-4
Unbundled Plans Overview	5-8
COV 457 & Cash Match Plans	9-10
Hybrid Retirement Plan	11-17
Focus: Annual Service Review/Benchmarking	18-25
ORPHE Overview	26-29

Total Assets and Accounts Over Time



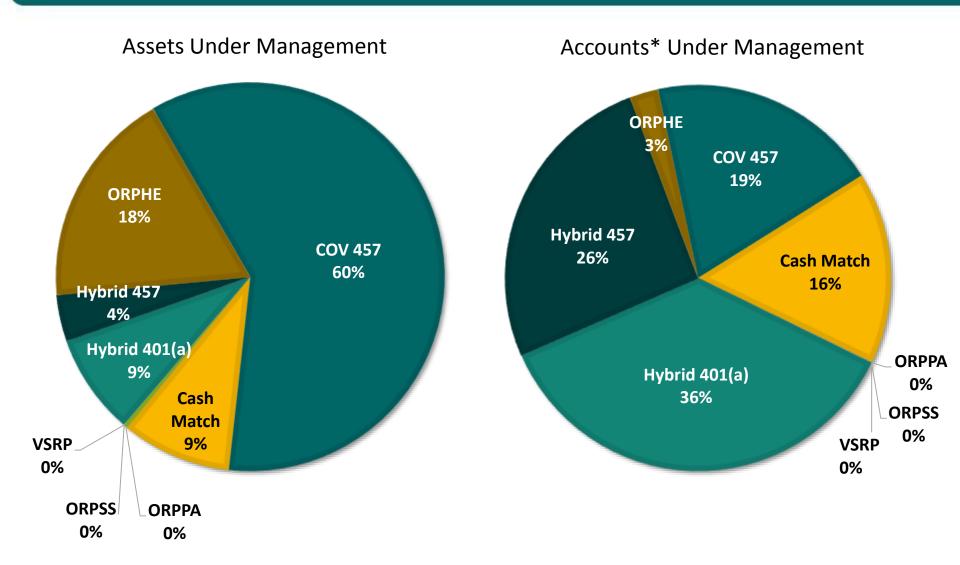


Note: Data as oMuster Hagez# 2000fc20les-Definedector provision Addresser and the server fictor and the court of the court

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Total Assets and Accounts Under Management by Plan as of 3/31/2020





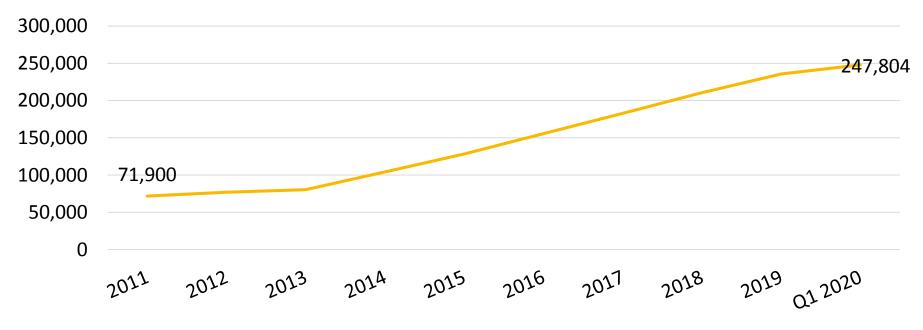
Master Page # 21 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 *Does not indicate unique participants.

4

Unbundled Plans - Unique Participants as of 3/31/2020



Significant growth continues in the unbundled plans, primarily due to new hires into the Hybrid Retirement Plan.



Plans Included:

- COV 457 Plan
- VA Cash Match Plan
- Hybrid 401(a) Cash Match Plan
- Hybrid 457 Deferred Compensation Plan
- ORP for Political Appointees
- ORP for School Superintendents
- VA Supplemental Retirement Plan
- ORP for Higher Education (DCP option ONLY)



5

Unbundled Plans – Plan Adoptions



DC Plans Adoptions

•Chesapeake City Public Schools (COV 457) -Effective Date: 1/1/2020

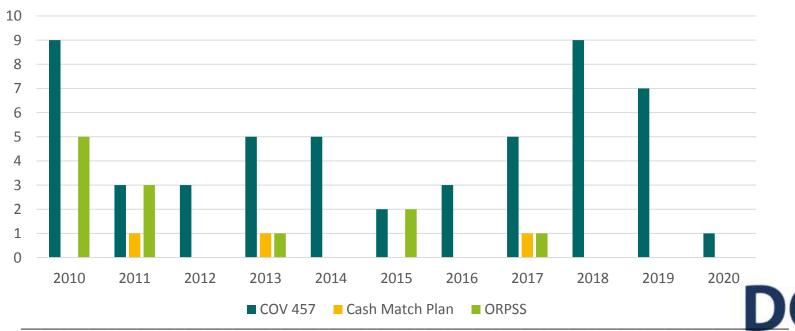
Adoption Agreements Requested

- Lee County (COV 457)
- New River Valley Regional Jail (COV 457)
- Fredericksburg City Schools (COV 457

COV 457 Annual Outreach

- Outreach to employers who have adopted the COV 457 Plan
 - Answer questions/concerns employer may have
 - Demonstrate superior customer service to all participants
 - Ensure employer knows how/where to access resources

Adoption Totals Over Time



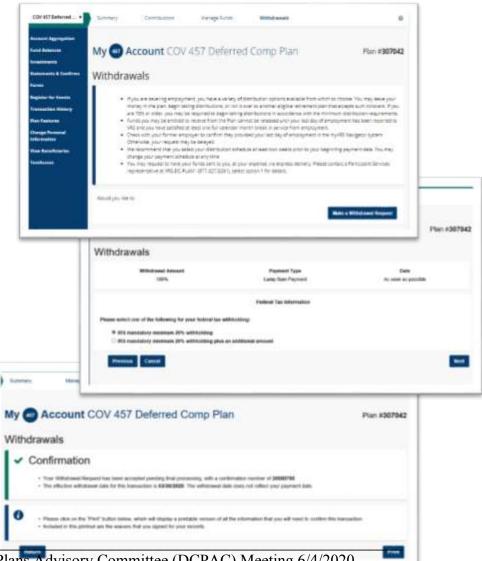
Master Page # 23 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 Note: Data for 2020 is through March 31, 2020. All other data for the full calendar year.

Account Access: Online Distributions



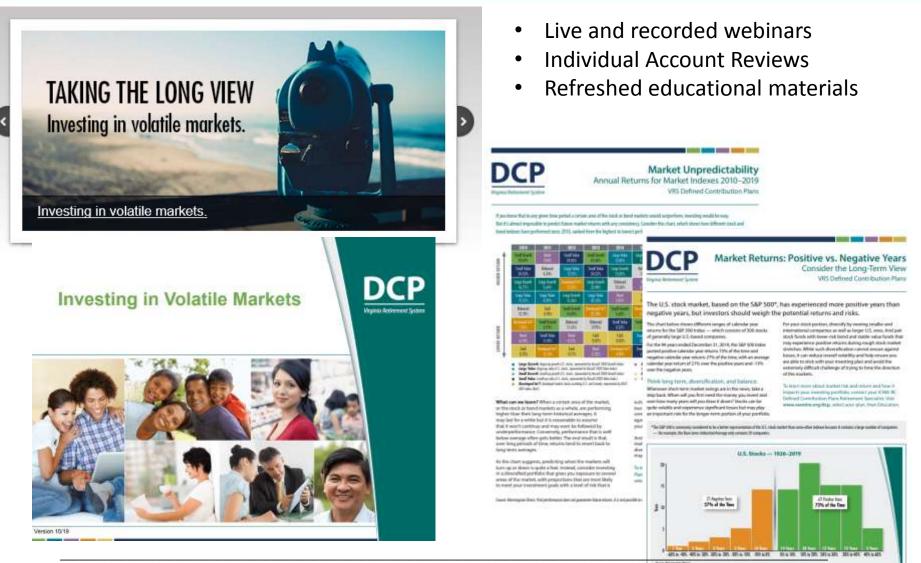
Benefits and Security Features to Participants:

- Can submit request in a quicker manner rather than mail
- Receive a confirmation instantly upon submission which does not take place via mail or fax
- Uses multi-factor authentication at login and security token to process distribution request
- Provides real time notification of disbursement requests sent to participant
- Runs additional security checks on bank accounts for ACH payment options
- Release Date May 27, 2020



Market Volatility Education



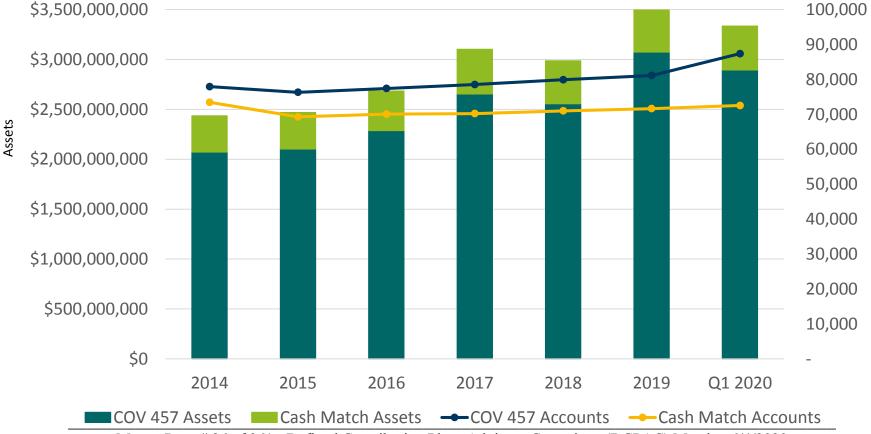


Master Page # 25 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020

COV 457/Cash Match Plan Assets and Accounts



Totals as of 3/31/2020	Assets	Accounts	Assets 🗸 7%
COV 457	\$2,894,643,618	87,394	Accounts 个 5%
Cash Match	\$440,431,016	72,540	since December 31, 2019

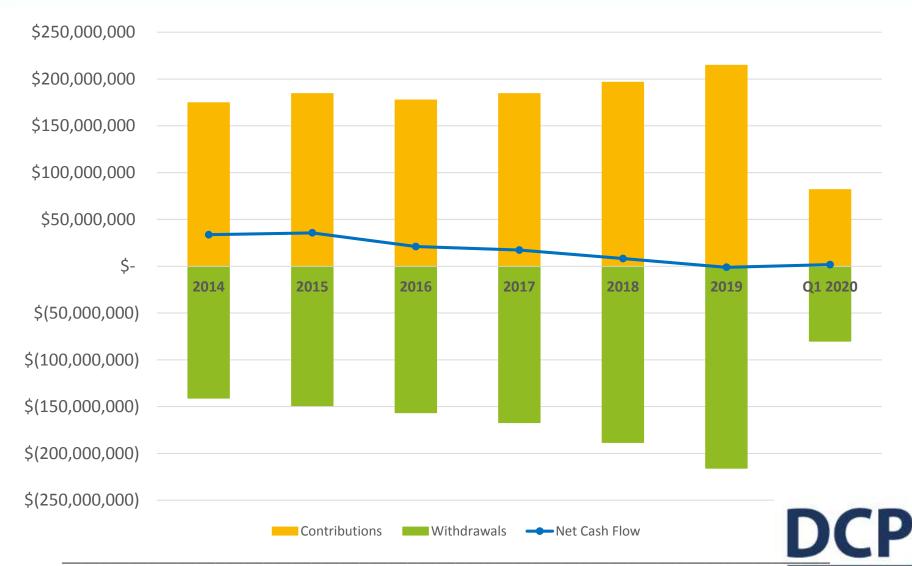


Accounts

9

Master Page # 26 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 Note: Data as of calendar year end except for 2020. Includes participant, beneficiary & reserve accounts.

COV 457/Cash Match Plan Cash Flow



Virginia

Retirement Svstem

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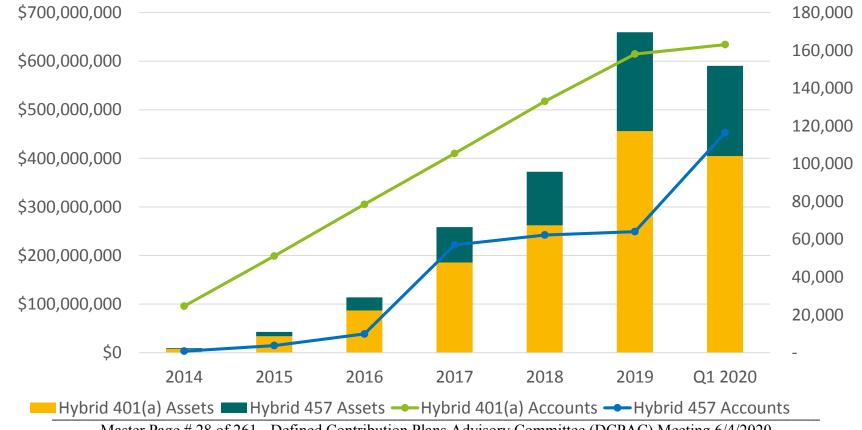
Hybrid Retirement Plan Assets and Accounts (DC only)

Assets

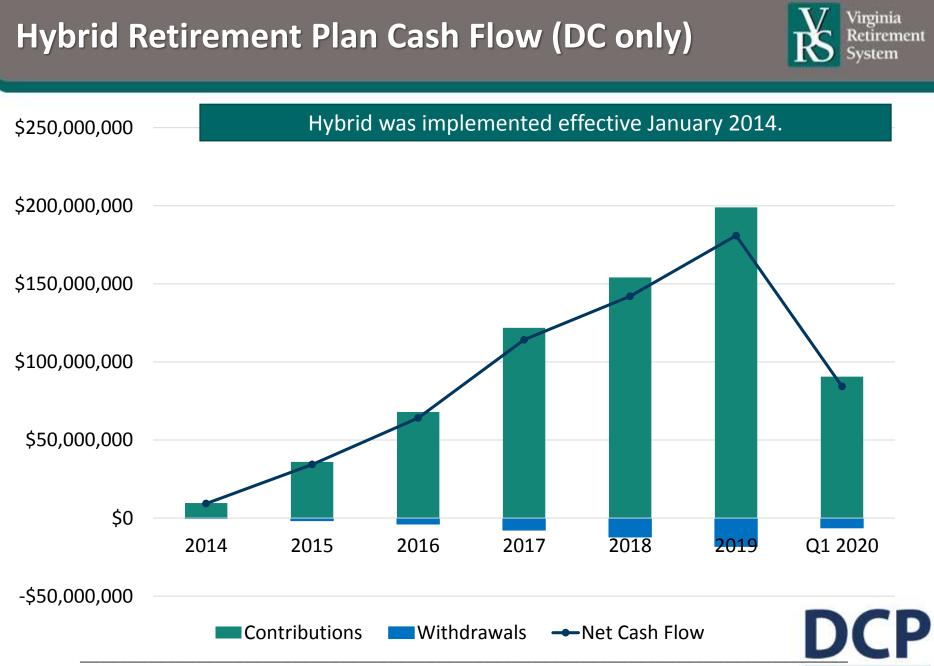
11



Totals as of 3/31/2020	Assets	Accounts	Assets 🗸 10%
Hybrid 401(a)	\$404,514,218	163,057	Accounts 🛧 26%
Hybrid 457	\$186,045,475	116,416	since December 31, 2019



Master Page # 28 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 Note: Data as of calendar year end except for 2020. Includes participant, beneficiary & forfeiture accounts.

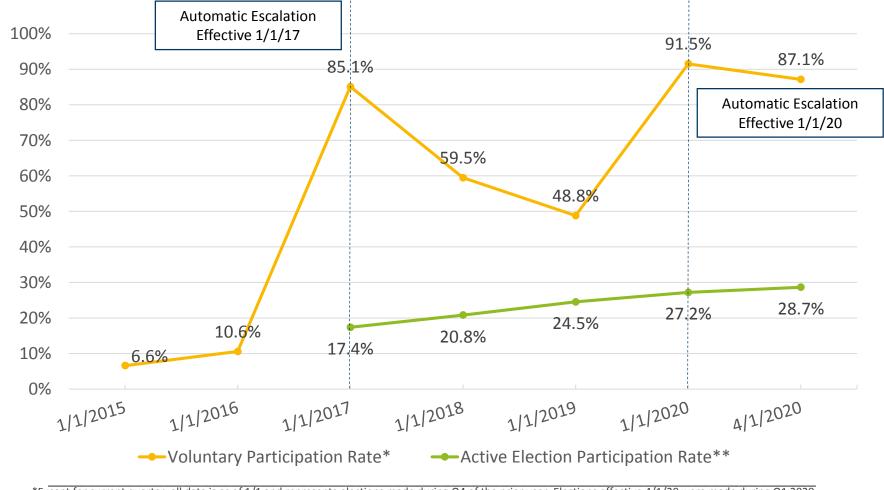


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Hybrid 457 Plan – Voluntary Participation Rate*



As of 3/31/2020, 87% of hybrid plan members (103,649 out of 118,941) have a voluntary contribution percentage with ICMA-RC. 29% made an 'Active Election' outside of the automatic escalation that occurred on 12/16/2019.

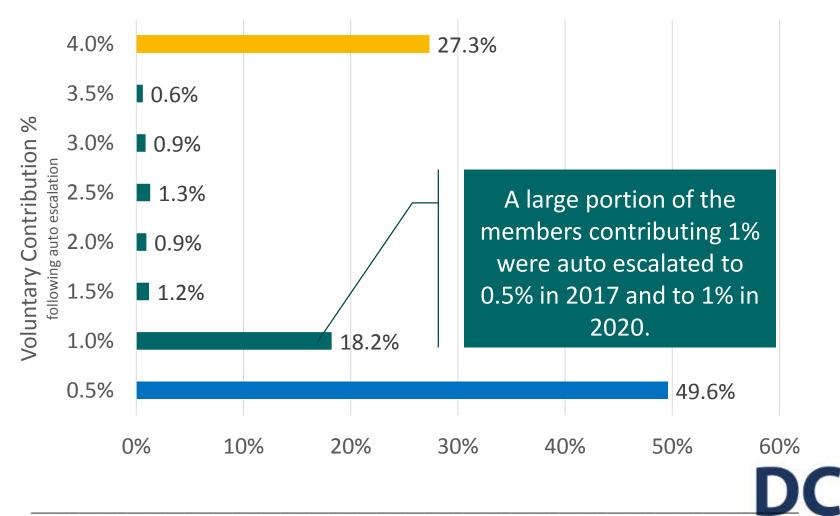


*Except for cwent output and a self-selected voluntary election on file prior to the automatic escalation that occurred on 12/16/2019.

Hybrid 457 Plan -Voluntary Contribution Elections



Active members with a voluntary contribution election on file as of March 16, 2020.



Master Page # 31 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020

Virginia Retirement System

2020 Auto-Escalation Status



Final Rates as of January 1, 2020							
Auto-Escalation	93%						
Active Control	2.5%						
Of the active control population	, 72% elected 4%.						
Opt Out	1.0%						

2017 Historical Rates

Auto-escalated: 89% Active Control: 3.6% Opt Out: 3.1% Number of hybrid members auto-escalated* January 2020 **79,751**





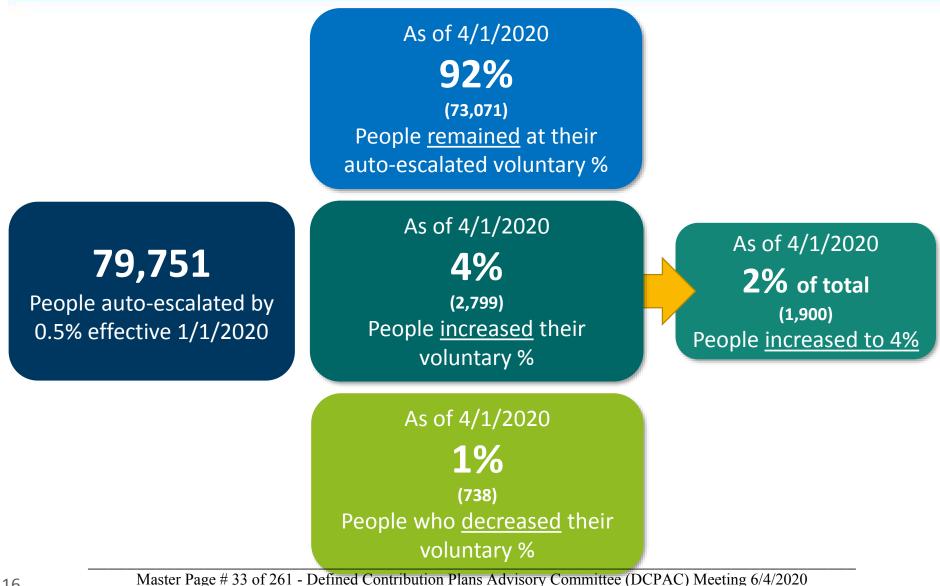
*Auto-escalated hybrid members hired on or before September 3, 2019 and had a voluntary contribution of less than 4

15

percent and did not equal 100% due to employee separations and job changes.

2020 Auto-Escalation Status





Note: Percentages do not equal 100% due to employee separations and job changes.

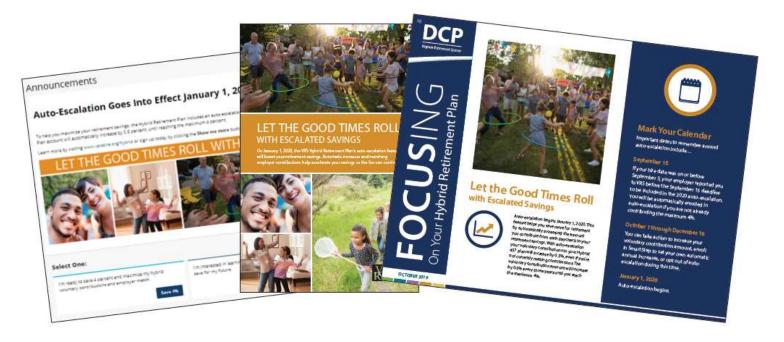
Auto-Escalation Campaign

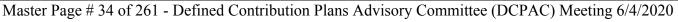


C Communicator Awards

2020 Communicator Award of Distinction

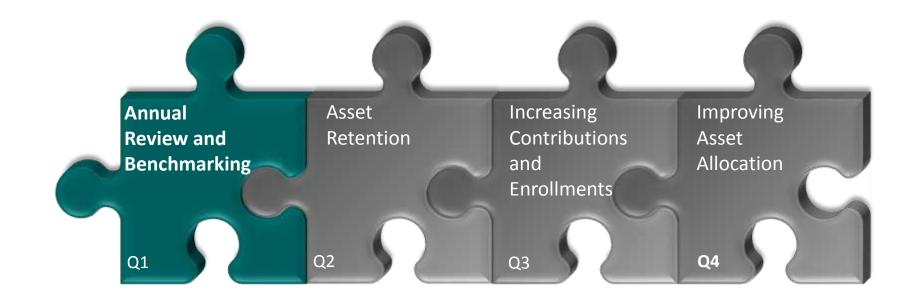
- Academy of Interactive and Visual Arts
- Marketing Effectiveness-Integrated Campaign category





Annual Service Review and Benchmarking





Annual Review and Benchmarking

- ICMA-RC 2019 Annual Service Review
- Benchmarking

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ICMA-RC 2019 Annual Service Review

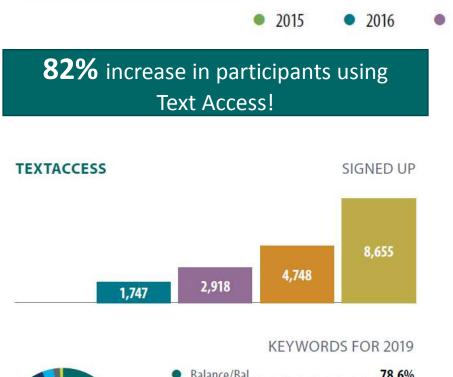


Service Team Senior Leadership Wavid Tanguay Sr. VP, Chief Client Services Officer	Joe Teague Acting Senior Vice President, Chief Sales Officer	•	 Conducted April 30th and May 11th All performance standards met Topics included: 				
Relationship Management Angela Greenleaf Vice President, Client Services	Kathleen Wilson Director, Relationship Management		Performance Standards	Employer Support			
Employer Support Mireya Lacey Relationship Manager, Client Services Plan Administration Maria Pruner	Victoria Curington Coordinator, Client Services	Ashley Velazquez Coordinator, Client Services	Plan Conversions and Adoptions	DC Plans Retirement Specialists Activity			
Project Management & Reporting Bob Jacoby Relationship Manager, Client Services	Educational Support Steve Scott Plan Manager, Field Sales	Operations Supervisor Operations Supervisor	Contact Center Quality Assurance Monitoring	Technology Highlights			

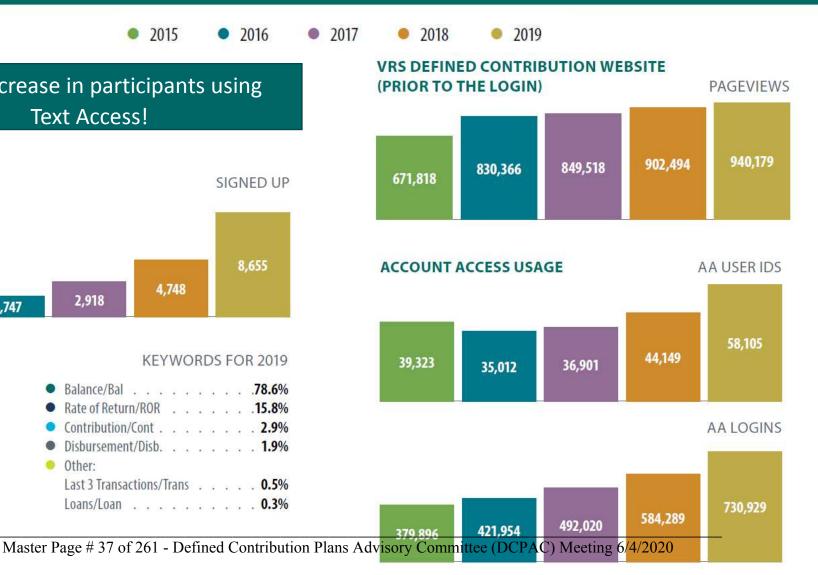
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ICMA-RC 2019 Annual Service Review **Participant Contact Highlights**





۲	Balance/Bal				ŝ	.78.6%
٠	Rate of Return/ROR .					.15.8%
•	Contribution/Cont	•				. 2.9%
	Disbursement/Disb					
•	Other:					
	Last 3 Transactions/Tran	15			a.	. 0.5%
	Loans/Loan		×	•	×	. 0.3%



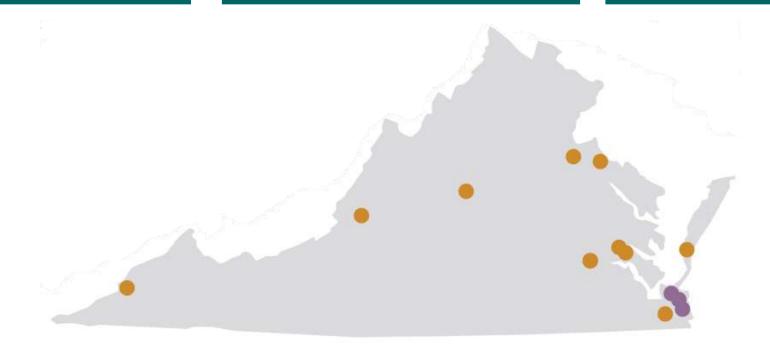
ICMA-RC 2019 Annual Service Review Adoptions & Conversions



7 new COV 457 plan adoptions

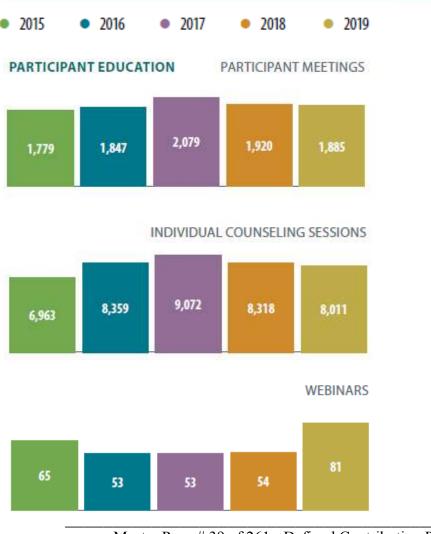
\$314M in assets and over6,500 participant accountsconverted across 3 plans

3 new VRS employers (Hybrid coverage only)



ICMA-RC 2019 Annual Service Review **Participant Education Highlights**





22

DC Plans Retirement Specialists



Steven Scott **Plan Manager**



Sharon Bradley **Plan Coordinator**



Lauren Hand Southwestern



Vainy Gleveckas



Mackenzie Moss Tidewater



Steven McGregor



Sherrel Addison South Central



Janice Parker Western

Master Page # 39 of 261 - Defined Contribution Plans Ad MS6the Committee (DCPAG) Meeting 6/4/2020 *Reflects staffing in 2019. Staffing changes have occurred and as necessary, territories realigned.

ICMA-RC 2019 Annual Service Review Technology Highlights



Hybrid Auto-Escalation Enhancements



Hybrid Voluntary Contribution Splash Screen



COV Paycheck Calculator

Account Access Landing Page Checklist



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ICMA-RC 2019 Annual Service Review: Future Initiative Highlights



Refresh Hybrid Voluntary Contributions Toolkit	Plan/Investment Cost Webpage	COV 457 Plan Employer Adoption Webpage
Interactive Meet Your DC Plans Specialist Tool (ORPHE website)	<i>Bridging The Gap</i> retiree income brochure	COV 457 Plan Eligibility Notice Postcard
	Savings Syllabus video for ORPHE webpage	

Benchmarking: Public Retirement Research Lab

Virginia Retiremen System

- The **Public Retirement Research Lab (PRRL)** will create a national database for public sector defined contribution plan information
- Collaboration between the National Association of Government Defined Contribution Administrators (NAGDCA) and the Employee Benefits Research Institute (EBRI)

Completely New Data Resource

Consistent Comparison

Less Time and Effort

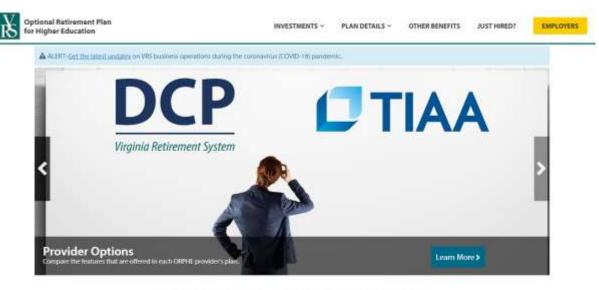
Deeper Insights

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26



ORPHE Totals*				
	12/31/2019^	3/31/2020	% Change	
Assets	\$1,090,996,778	\$874,533,781	-20%	
Participants	11,200	10,801	-4%	
Average Balance	\$97,410	\$80,968	-17%	



Welcome to the Optional Retirement Plan for Higher Education (ORPHE). Take this opportunity to lay the foundation for your retirement.



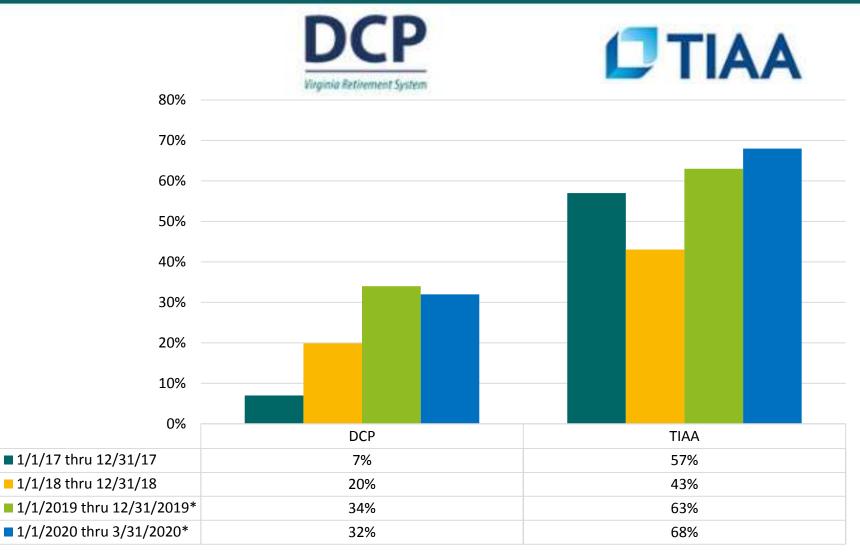
DCP			
	12/31/2019	3/31/2020	% Change
Assets	\$3,980,923	\$99,369,516	2396%
Participants	284	2,430	756%
Average Balance	\$14,017	\$40,893	192%
TIAA*			
	12/31/2019	3/31/2020	% Change
Assets	\$837,673,144	\$775,164,265	-7%
Participants	7,946	8,371	5%
Average Balance	\$105,421	\$92,601	-12%
Deselected P	roviders**		
	12/31/2019	3/31/2020	% Change
Assets	\$51,023,796	\$116,222,889	128%
Participants	685	1,566	129%

26% are active⁺

*Includes assets in GRA/RA and RC contracts.

**Fidelity becamest depelget#dprovides eff Devint a Control of the plants of the plant

Administrative Summary ORPHE New Hire Provider Selections



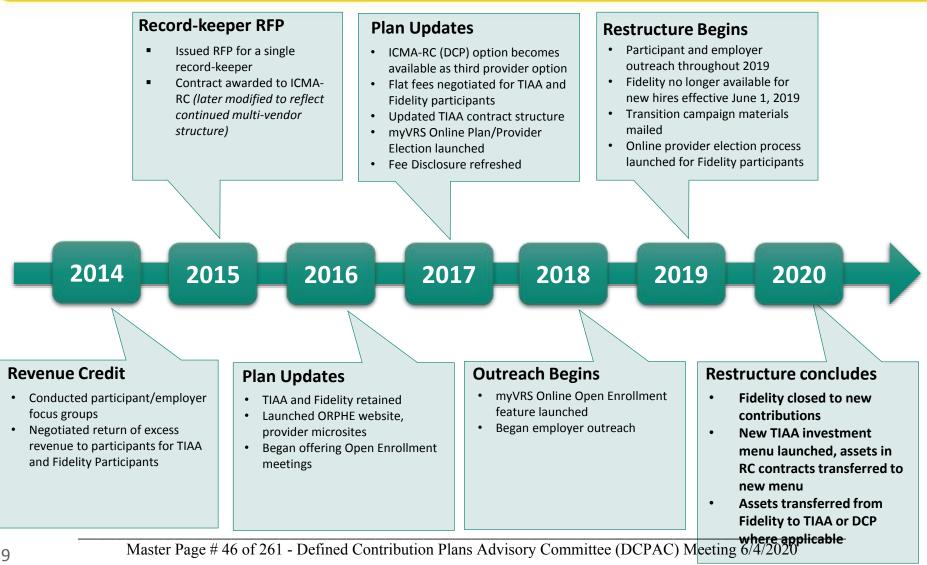
Virginia Retirement

vstem

Note: The DCP option became available January 1, 2017. The myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS online plan election and provider selection tool became available on December 1, 2013; the myVRS on Dece

ORPHE Timeline Overview





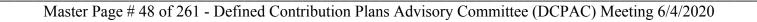


Thank You!

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2020 Legislative Update





The Setting Every Community Up for Retirement Enhancement (SECURE) Act



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Selected SECURE Act Provisions Applicable to Governmental Plans - signed into law on December 20, 2019



SECURE ACT PROVISION	PLAN TYPE AFFECTED	EFFECTIVE DATE	IMPACT AND COMMENTS
Distributions & Withdrawals			
Required Minimum Distribution (RMD) commencement age raised from 70½ to72	401(a)/401(k)/403(b)/457(b)/IRA/ Defined Benefit Plans	RMDs required to be made after 12/31/19, for individuals who reach age 70½ after that date	Participants who retire (or active employees who are 5% owners) and turned age 70½ in 2019, will still need to take an RMD for 2019 by 4/1/2020, and for 2020 by 12/31/2020.
"Stretch IRA" (ability to stretch required minimum distributions over the lifetime of a beneficiary) restricted to 10 years, with certain exceptions	401(a)/401(k)/403(b)/ governmental 457(b)/IRA	Participants who die after 12/31/19(12/31/21 for governmental plan participants; 12/31/21 or date of contract termination, if earlier, for collectively bargained employees)	The "Stretch IRA" provision was popular among large account balances holders to avoid passing along a tax burden to their beneficiaries. That provision has now been restricted, except for spouses, minor children (for whom a 10- year clock starts after they are no longer minors), disabled/chronically ill individuals, and beneficiaries less than 10 years younger than the employee.
Birth/adoption-related distributions of up to \$5,000 permitted with 10% premature distribution tax penalty waived	401(a)/401(k)/403(b)/governme ntal 457(b)/IRA	Distributions for qualifying birth/adoption expenses made after 12/31/2019	This is an optional provision; plan sponsors are not required to elect it. Distributions are taxable, but exempt from the 10% premature distribution penalty. Distributions can also be repaid to the plan as a rollover contribution (and would then be treated as a rollover for tax purposes) to avoid taxation.
Disaster-related 10% premature distribution tax penalty waived	401(a)/401(k)/403(b)/457(b)/IRA	Distributions for disaster losses incurred from 1/1/2018 to 2/20/2020	This was actually NOT part of the SECURE Act, but a separate bill also included in the year-end appropriations bill. Other favorable retirement plan treatment applies to these individuals as well, such as repayment of distributions and increase in loan limits.
Lowering of in-service distribution age to 59½ for certain retirement plans	Defined benefit plans, 401(a) money purchase plans, governmental 457(b) plans	2020 and later plan years	This was actually NOT part of the SECURE Act, but a separate bill also included in the year-end appropriations bill. Previously, the minimum age for in-service distributions for governmental plans was 70½, and 62 for defined benefit and money purchase plans. Most other plan types already allow for inservice distributions at age 59½. Plan sponsors can elect not to allow in corvice distributions

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3



The Coronavirus Aid, Relief, and Economic Security (CARES) Act



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Coronavirus Aid, Relief, and Economic Security (CARES) Act Provisions Applicable to Governmental Plans -signed into law on March 27, 2020



PROVISION	SUMMARY	APPLICATION
<section-header></section-header>	 A CRD is a new category of distribution made from an eligible retirement plan or IRA to a qualified individual on or after January 1, 2020, and before December 31, 2020, up to an aggregate limit of \$100,000. An individual is a "qualified individual" if: Either the individual or his or her spouse or dependent has a confirmed diagnosis of COVID-19; The individual has experienced adverse financial consequences as a result of being quarantined, furloughed, laid off, having work hours reduced, the inability to work due to a lack of childcare, the close or reduction of a business, or other factors determined by the Secretary of the Treasury. An individual who receives a CRD may repay the CRD within three years of the distribution in one or more payments Unless the individual elects otherwise, the amount of a CRD is taxed ratably over a three-year period. CRDs are not subject to the 10% early distribution penalty tax. CRDs made from a retirement plan are not subject to mandatory 20% withholding. 	 This provision is <u>optional</u>. This provision applies to: 401(a) plans (including 401(k) plans) 403(b) plans Governmental 457(b) plans IRAs This provision creates a new in-service distribution right for 401(k), 403(b), and governmental 457(b) plans. It does not create a new in- service distribution right for defined benefit plans and money purchase pension plans (MPPs) which are otherwise prohibited from allowing in- service distributions before age 59 ½. However, CRDs can be made in-service from a defined benefit plan or MPP for participants who have attained age 59 ½. A plan sponsor could choose to permit CRDs under its retirement plan, but adopt a lower dollar limit than \$100,000 or allow CRDs only from specific money sources, such as a participant's elective deferral account. However, some retirement plan vendors have indicated that they do not have the capacity to administer deviations from the general CRD rules.

Coronavirus Aid, Relief, and Economic Security (CARES) Act Provisions Applicable to Governmental Plans -signed into law on March 27, 2020



PROVISION	SUMMARY	APPLICATION
Suspension of Required Minimum Distributions (RMDs) paid in 2020 CARES Act § 2203 Effective January 1, 2020 through December 31, 2020	 The CARES Act waives RMDs for calendar year 2020. The waiver applies to: RMDs required to be paid in 2020 by December 31, 2020; and RMDs required to be paid for 2019 by April 1, 2020, which were not paid by December 31, 2019. The five-year distribution period that applies to certain beneficiaries will be determined without regard to calendar year 2020. If an eligible rollover distribution paid in 2020 would have been a RMD for 2020 but for the waiver, the distribution is not subject to the direct rollover rules, 20% mandatory withholding does not apply, and the 402(f) special tax notice is not required. Accordingly, 10% withholding will apply, unless the participant elects out of withholding. 	 Plan sponsors have <u>options</u> regarding implementation of this provision. This provision applies to: Defined contribution 401(a) plans (including 401(k) plans) 403(b) plans Governmental 457(b) plans IRAs Plan sponsors that are subject to the RMD waiver may choose to: Suspend payment of 2020 RMDs unless the participant elects to receive payment; Continue payment of the 2020 RMDs unless the participant elects to suspend payment; or Take approach #1 with respect to all participants except those who are receiving their RMD as part o schedules installment payments, in which case take approach #2.



Approved Bills



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VRS-Requested Bills		
Bill Number	Patron	Description
HB 536 SB 109	Carr Ruff	VRS Board of Trustees requested bill. To reflect statutory changes to the Virginia College Savings Plan and Internal Revenue Code, the bill changes the formula for determining the amount of the college savings account for children of VRS members who die in service as a result of a felonious assault.



Return to Work/Critical Shortage

Bill Number	Patron	Description
HB 1495 SB 54	Torian Cosgrove	Allows law enforcement officers to collect a retirement benefit and return to work as a school security officer after a one-year break in service. No additional service is earned, and employers must pay contributions. Requires an actuarial study of the impact of the provision every four years. Effective July 1, 2020.



Return to Work/Critical Shortage

Bill Number	Patron	Description
HB 351 SB 324	Bell Deeds	Allows school bus drivers to be designated critical shortage under certain conditions and return to work as a retiree; one-year break in service and no employer contributions. Also changes <i>Code</i> to specify one-year break in service for Teacher critical shortage (currently "a certain period of time"). Provision is effective July 1, 2020 and sunsets in 2025.



LODA Bills		
Bill Number	Patron	Description
HB 51 SB 40	Knight DeSteph	Children born or adopted after the death/disability of LODA-covered individual become eligible for health insurance. Covers children born or adopted after date of death or disability but before July 1, 2017.



HIC		
Bill Number	Patron	Description
HB 1513	McQuinn	Requires school divisions that provide VRS benefits to support staff to provide \$1.50 health insurance credit to non-teacher school division employees. Allows school divisions to elect an additional \$1 benefit. Legislation goes into effect July 1, 2020, but delayed effective date of July 1, 2021 for the initial payment of benefits.



Bill Number	Patron	Description
HB 438 SB 561	Heretick, Murphy Vogel, McPike, Cosgrove	Adds PTSD as a compensable disorder for law enforcement officers and firefighters (new <i>Code</i> section). Legislation is prospective ("an incident or exposure occurring in the line of duty on or after July 1, 2020).
HB 169 SB 345	Tyler Bell	Adds correctional officers and full-time sworn members of enforcement division of DMV to presumption for infectious diseases. HB 169 (not prospective) SB 345 (prospective)



Workers'	Compensation
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Bill Number	Patron	Description
HB 783 SB 9	Askew Saslaw	Adds brain, colon and testicular cancers as presumptions for firefighters and certain employees, lowers the service requirement for cancer presumptions to 5 years, removes the need for contact with a toxic substance, and adds a 5 year service requirement for hypertension and heart disease presumptions. The presumption is only for diagnoses after July 1, 2020.



Collective Bargaining for Public Employees

Bill Number	Patron	Description
HB 582 SB 939	Guzman Saslaw	Provides that counties, cities, or towns may recognize bargaining agents if permitted by a local ordinance or resolution. Provides that striking is prohibited, irrespective of local ordinance. Governor's amendments to the bill delay the implementation to May 1, 2021.



Minimum Wage		
Bill Number	Patron	Description
HB 395 SB 7	Ward Saslaw	Prior to May 1, 2021, requires employers to pay not less than the federal minimum wage.
		 Beginning May 1, 2021, requires every employer to pay not less than the federal minimum wage or 75% of the Virginia minimum wage, whichever is greater; and: \$9.50 per hour effective May 1, 2021; \$11 per hour effective January 1, 2022; \$12 per hour effective January 1, 2023; \$13.50 per hour effective January 1, 2025; \$15 per hour effective January 1, 2026; The measure also provides that the Virginia minimum wage applies to public employees. Conference report agreed to 3/8 includes an enactment clause that the increases to \$13.50 and \$15.00 shall not become effective unless reenacted by a regular or special session of the General Assembly prior to July 1, 2024. Governor's amendments changed implementation dates from January 2021 to May 2021.

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Approved Budget



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Budget Changes Related to HB 1495 & SB 54: SSO Return to Work



- General Assembly included additional funding for the higher SPORS and VaLORS rates in the final budget
- All other rates were funded at 100% of VRS Board-certified rates

Employer Group	6/30/2019 Valuation Results	With Impact of HB 1495 / SB 54	Change in Employer Rate
SPORS	26.26%	26.33%	0.07%
VaLORS	21.88%	21.90%	0.02%
Locals in Aggregate	10.73%	10.74%	0.01%

Employer Contribution Rates

Budget Changes to LODA Premium



• General Assembly provided funding for increased premium of \$717.31 in the final budget

LODA Premium for FY 2021/2022

	Premium per FTE
Result of 6/30/2019 Valuation	
- Board Certified Rate	\$695.18
Include natural or adopted	
children who were previously	
covered	\$14.03
Correctional Officers & DMV	
Infectious Diseases	\$1.25
Add Cancers of Colon, Brain,	
or Testes	\$6.85
Add Post-Traumatic Stress	No Immediate Increase
Disorder	Determined
Adjusted LODA Premium Rate	\$717.31

2020 Budget Amendments—Funding Related to Legislation that Affects VRS



Budget Amendment	
HB 29- Item 488 #1c: NGF administrative funding for VRS to implement HB 1495, HB 1513, HB 351	 \$699,000 NGF in FY 2020 to implement legislation adopted.
HB 30- Item 494 #1c: NGF administrative funding for VRS to implement HB 1495/SB 54	 \$785,000 in FY 2021 and \$106,000 in FY 2022 to implement HB 1495/SB 54.
HB 30- Item 477 #1c: adjust GF funding for LODA to reflect HB 169, HB 438, & HB 783	 \$78,811 GF each year for increased Line of Duty Act premiums pursuant to the passage of HB 169/SB 345, HB 783/SB 9, and HB 438/SB 561 (Workers' comp. bills). Increases premium from \$709.21 in introduced budget to \$717.30.
HB 30- Item 477 #6c: GF for HB 1495	 \$144,000 GF each year for retirement contributions pursuant to HB 1495/SB 54.

2020 Budget Amendments that Impact HIC



Budget Amendment	
State HIC HB 30- Item 477 #3c: GF to reduce amortization period—funds unalloted	 \$3.9 million GF in FY 2021 and \$4.1 million GF in FY 2022 to decrease the amortization period for the legacy unfunded liability for state employee retiree health credit by 5 years. Item 482.10- unallots spending increases to reduce the state employee retiree HIC amortization period.
Non-Teacher HIC HB 30- Item 145 #8c: GF for HB 1513	State share of funding to implement HB 1513, which provides a HIC of \$1.50 per year for services to retired non-teacher school division employees having at least 15 years of total creditable service.

2020 Budget Amendments Related to Compensation (FUNDS UNALLOTED)



Budget Amendment	House
Teacher compensation	Salary adjustments, contingent on revenues.
HB 30- Item 145 #21c: GF & NGF for two 2% increases	Funding for the state share of a 2% pay raise each year for instructional and support positions
	Item 146.10, Item 482.10- unallots spending increases to support compensation actions for various employees
Other employee groups compensation	
HB30 Item 2 #1c: GF for APA	-Funding for the APA to develop a compensation plan to address recruiting and retention (not contingent).
HB 30- Item 400 #1c: language- increase minimum salary for correctional officers, sergeants, captains, lieutenants, & majors	-Language-only amendment sets out the funding including in the introduced budget to increase salaries for correctional officers, sergeants, captains, lieutenants, & majors.
	Item 75.10, Item 482.10- unallots spending increases to

Master Page # 69 of 261 - Defined Coupport Compensation dations for evarious employees

2020 Budget Amendments Related to Compensation (FUNDS UNALLOTED)



Budget Amendment	House
State employee compensation	Bonus, contingent on revenues.
HB 30- Item 477 #5c: GF for compensation package for state employees and state-supported local employees	 -3% bonus for all classified employees of the Executive Branch and other full-time employees of the Commonwealth, except elected officials and certain other employees. Must be employed on April 1, 2020 and remain employed until at least November 24, 2020. Paid on December 1, 2020. Executive Branch employees must have a performance rating of at least "Meets Expectations" and no active written notices within the preceding 12 months. Institutions of higher education may provide the bonus to faculty and university
	 staff. -Adjunct faculty at Virginia two-year and four-year public colleges and universities receive a 3% bonus on December 1, 2020. -State supported local employees receive a 2% bonus in FY 2021. Item 482.10- unallots spending increases to support compensation actions for various employees

2020 Budget Amendments Related to Compensation (FUNDS UNALLOTED)



Budget Amendment	House
State employee compensation	Salary adjustments, contingent on revenues.
HB 30- Item 477 #5c: GF for compensation package for state employees and state-supported local employees	-3% salary increase on June 10, 2021. Executive Branch employees must have a performance rating of at least "Contributor."
	-Increases the minimum and maximum salary within each pay band.
	-Base rates of pay and related benefits for wage employees may be increase by up to 3% no earlier than June 10, 2021.
	-Institutions of higher education may provide a salary adjustment, as long as the increases d not exceed 3%.
	-Adjunct faculty at Virginia two-year and four-year public colleges and universities receive a 3% increase in base pay, effective June 10, 2021.
	-State supported local employees receive a 3% salary increase on July 1, 2021.
	 -Sworn officers of the State Police will receive: Base salary increase of 2%, effective August 10, 2020, prior to the compression adjustment. Compression adjustment of \$110 per year of service (must have 3 years of service) effective August 10, 2020.
	Item 482.10- unallots spending increases to support compensation actions for

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2020 Budget- Governor's Recommendations



Budget Amendment	
FOIA Electronic Meeting Language	Allows public bodies to hold electronic meetings to conduct regular business without a physical quorum. In both the caboose budget and the FY21-22 budget, but onl for the duration of the pandemic or until June 2021. Requires the public body to accept public comment, record meetings and post the recording. All other requirements in FOIA for meetings and electronic meetings apply.



Bills Failed, Carried Over or Amended to not impact VRS



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Private Employer Retirement Plan

Bill Number	Patron	Description
HB 775	Ayala	Creates the My Virginia Plan to allow employees of private employers in the Commonwealth to contribute to a defined contribution retirement plan. Re-referred to HAC; reported with amendment 1/29, puts in Title 51.1 with VA529 administering. Passed House 2/6. SFAC substitute removes from Title 51.1, Virginia529 to conduct study. Passed Senate 2/21

Hazardous Duty Mandatory Retirement

Bill Number	Patron	Description
SB 338	Stuart	Allows exception to compulsory retirement at age 70 for SPORS and local hazardous duty members with permission of supervisor. Passed Senate 2/3. HAC Compensation & General Government subcommittee laid on table.

2020 VRS-Related Bills



Family and Medical Leave

Bill Number	Patron	Description
HB 693	Simonds	Requires each school board to establish a paid maternity leave benefit policy granting 12 weeks of paid sick leave. Failed to report from Education.
HB 825	Carroll-Foy	Requires the Virginia Employment Commission to establish and administer a paid family and medical leave program, capped at 12
SB 770	Boysko & Hashmi	weeks of paid leave in any application year, beginning January 1, 2023. HB 825 left in HAC. SB 770 PBId with letter 2/4.

2020 VRS-Related Bills



LODA Bills			
В	ill Number	Patron	Description
н	B 845	Krizek	Adds special agents of Washington Metropolitan Area Transit Authority to definition of law enforcement officer. Substitute reported & referred to HAC 1/23; Substitute that removes officers from LODA engrossed 2/10. Carried over to 2021 in Senate Transportation Committee
SI	B 168	DeSteph	Requires medical review by Virginia licensed health practitioner. Amended in SFAC to include those licensed in D.C. or contiguous states. Passed Senate 2/3 & referred to HAC. On 2/25 Compensation & General Government subcommittee failed to report (5-3).



JRS

Bill Number	Patron	Description
HB 556	Knight	Removes JRS retirement allowance cap of 78 percent under certain conditions. Laid on table in Compensation & General Government.
SB 606	McDougle	Increases retirement multiplier for certain judges who participate in the Hybrid Retirement Plan. Carried over to 2021 in Finance & Appropriations.



Return to V	Nork/Critica	I Shortage
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Bill Number	Patron	Description
HB 986 HB 1368	Batten Leftwich	Allows law enforcement officers to collect a retirement benefit and return to work as a school security officer. HAC incorporated into HB 1495. Identical to SB 54.
HB 1493	Helmer	Allows law enforcement officers to collect a retirement benefit and return to work as a school security officer or school resource officer. HAC incorporated into HB 1495.
SB 671	Mason	Allows up to two retirees at a time to return to work in full-time positions for a locality and collect retirement benefits; requires employer contributions. Amended in SFAC to require a one-year break in service and an appropriation. Passed Senate 1/30. Left in HAC (clause, no budget amendment).

2020 VRS-Related Bills



Workers'	Compensation
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Bill Number	Patron	Description
HB 52	Knight	Adds Virginia Beach EMTs to presumption for hypertension, heart disease. Stricken in Labor & Commerce.
HB 649	Campbell	Adds full-time salaried police dispatchers to presumption for hypertension, heart disease. Laid on table in Labor & Commerce.
HB 1542	Convirs-Fowler	Adds full-time sworn members of enforcement division of DMV to presumption for hypertension, heart disease. Carried over to 2021 in Compensation & General Government.
HB 1596	Murphy	Adds psychological injuries as a new presumption. Labor & Commerce subcommittee recommended on 2/4 to report & refer to HAC. Incorporated into HB 438.
SB 741	McPike	Adds PTSD as a presumption for law enforcement officers, firefighters, hazardous materials officers, animal protection officers and 911 dispatchers. Rolled into SB 561 in Finance & Appropriations but does not apply to 911 dispatchers.



Other		
Bill Number	Patron	Description
HB 480	Subramanyam	Prospectively adds local 911 dispatchers to those eligible for enhanced retirement benefits. Referred to HAC; subcommittee recommended reporting 1/28; Tabled in HAC 2/7.
SB 202	Peake	Relief for Jack Anthony Maxwell. Passed by indefinitely in Finance & Appropriations.

2020 VRS-Related Bills



VaLORS		
Bill Number	Patron	Description
HB 1350	Mullin	Adds sworn member of DMV law enforcement division to VaLORS. Referred to HAC, subcommittee laid on table 2/4.
SB 790	Deeds	Adds conservation officers to VaLORS for prospective service. Amended in SFAC to require appropriation. Passed Senate 2/5. Left in HAC (clause, no budget amendment).
SB 1019	Stanley, Ruff	Changes the cutoff age from 65 to Social Security retirement age for VaLORS supplement payments. Amended in SFAC to require appropriation. Passed Senate 1/31. Left in HAC (clause, no budget amendment).



HIC		
Bill Number	Patron	Description
SB 1057	Stanley, Ruff	For retirees with at least 30 years of service, increases the HIC annually by the Plan 2 COLA, for retirees on or after 1/1/2021. Substitute bill also increases the HIC for constitutional officers, general registrars, and local social service employees from \$1.50 to \$4 beginning 7/1/2020, and requires an appropriation. Passed Senate 2/5. Left in HAC (clause, no budget amendment).

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



Reappointment of DCPAC Member.

Requested Action

The Board reappoints Ravindra Deo to the Defined Contribution Plans Advisory Committee (DCPAC) for a two-year term ending June 20, 2022.

Rationale for Requested Action

Ravindra Deo currently serves on the DCPAC and is willing to be reappointed for another two-year term. Mr. Deo is Executive Director of the Federal Retirement Thrift Investment Board.

Authority for Requested Action

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

The above action is approved.

O'Kelly E. McWilliams, Chairman VRS Board of Trustees

Date

Page 1 of 1 June 11, 2020

VRS Defined Contribution Plans Quarterly Review

As of 1st Quarter 2020



Master Page # 85 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020



VRS Defined Contribution Plans



DC Plan Assets and Accounts

Note: All data is as of 3/31/2020 unless otherwise stated.

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Assets and Participants – Eight VRS Unbundled Defined Contribution Plans



Note: Includes Beneficiary Plans and Forfeiture Accounts

	March 31,	, 2018	March 31,	2019	2018	to 2019	March 31, 20	020	2019 t	to 2020
	Assets	Accounts	Assets	Accounts	(%) Change in Assets	(%) Change in Accounts	Assets	Accounts		(%) Change in Accounts
457 Deferred Compensation ¹	\$2,631,604,018	79,090	\$2,794,441,366	80,337	6.19%	1.58%	\$2,894,643,618	87,394	3.59%	8.78%
401(a) Cash Match	\$446,369,003	70,709	\$467,253,067	71,346	4.68%	0.90%	\$440,431,016	72,540	-5.74%	1.67%
ORP Political Appointees	\$14,881,074	359	\$16,308,239	376	9.59%	4.74%	\$16,034,439	384	-1.68%	2.13%
ORP School Superintendents	\$230,930	2	\$218,963	2	-5.18%	0.00%	\$211,077	2	-3.60%	0.00%
Supplemental Retirement	\$132,091	2	\$137,960	2	4.44%	0.00%	\$120,573	2	-12.60%	0.00%
ORP Higher Education	\$858,023	54	\$1,705,504	139	98.77%	157.41%	\$99,369,516	2,430	5,726.40%	1,648.20%
Hybrid 401 ²	\$205,293,768	109,971	\$322,795,898	137,501	57.24%	25.03%	\$404,514,218	163,057	25.32%	18.59%
Hybrid 457	\$81,378,698	58,397	\$137,565,650	64,090	69.04%	9.75%	\$186,045,475	116,416	35.24%	81.64%
Total	\$3,380,747,604	318,584	3,740,426,647	353,793	10.64%	11.05%	\$4,041,369,932	442,225	8.05%	25.00%

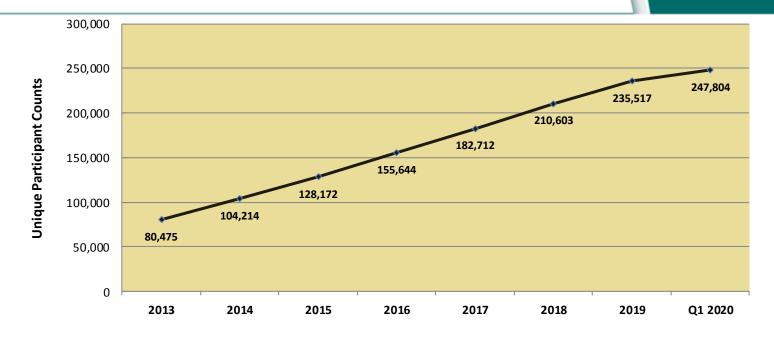
¹ Includes reserve account

² Includes 779 forfeiture accounts with balances = \$2,973,897.99

Unique Participant Count – All Plans



Note: Forfeiture Accounts Excluded

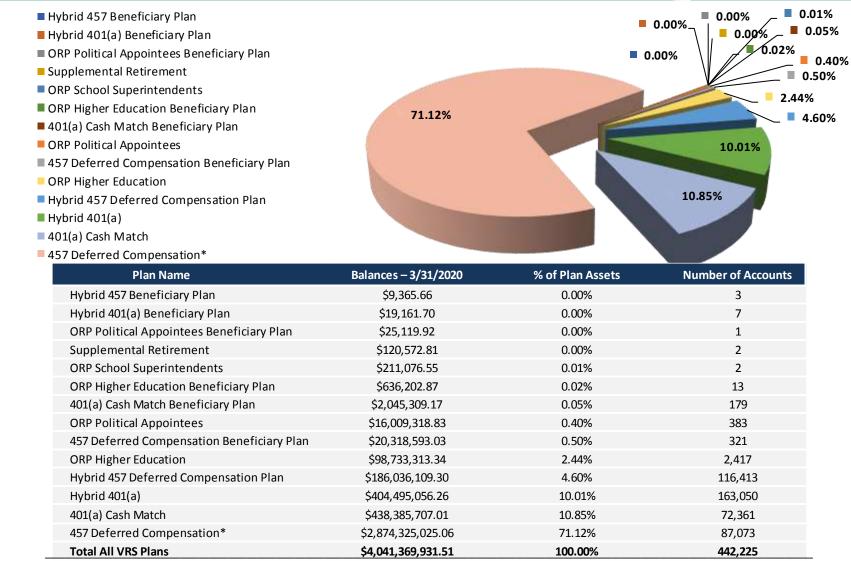


Period	Unique Participant Counts
2013	80,475
2014	104,214
2015	128,172
2016	155,644
2017	182,712
2018	210,603
2019	235,517
Q1 2020	247,804

Assets and Accounts – All Plans

Note: Includes Forfeiture Accounts

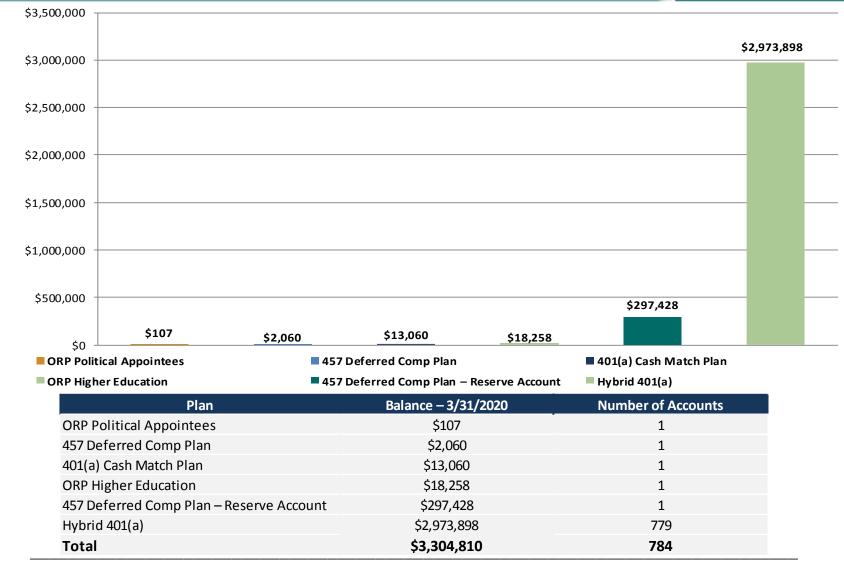
Virginia Retirement System



* Includes reserve Master Reserve & 200 h 261an Defined Grantsibution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 5

Forfeiture & Reserve Accounts – Balances and Counts

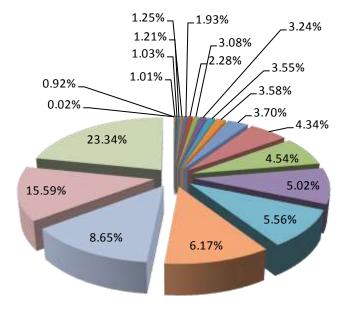




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Plan Assets by Fund – All Plans

Virginia Retirement System



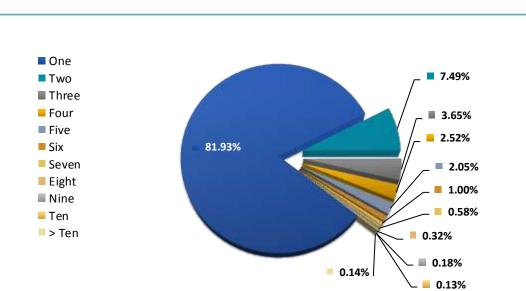
- Target Date 2065 Portfolio
- High-Yield Bond Fund
- TD Ameritrade
- Global Real Estate Fund
- Target Date 2050 Portfolio
- Target Date 2055 Portfolio
- Target Date 2040 Portfolio
- Target Date 2035 Portfolio
- Target Date 2025 Portfolio
- Retirement Portfolio
- Stock Fund

- VRS Investment Portfolio
- Inflation-Protected Bond Fund
- Target Date 2060 Portfolio
- Money Market Fund
- Target Date 2045 Portfolio
- International Stock Fund
- Bond Fund
- Target Date 2030 Portfolio
- Small/Mid-Cap Stock Fund
- Stable Value Fund

Fund Name	Fund Balance 3/31/2020	% of Plan Assets
Target Date 2065 Portfolio	\$627,237.11	0.02%
VRS Investment Portfolio	\$37,138,754.60	0.92%
High-Yield Bond Fund	\$40,845,903.75	1.01%
Inflation-Protected Bond Fund	\$41,696,320.11	1.03%
TD Ameritrade	\$48,952,307.78	1.21%
Target Date 2060 Portfolio	\$50,327,857.26	1.25%
Global Real Estate Fund	\$78,065,358.34	1.93%
Money Market Fund	\$92,316,246.19	2.28%
Target Date 2050 Portfolio	\$124,498,473.48	3.08%
Target Date 2045 Portfolio	\$130,895,366.02	3.24%
Target Date 2055 Portfolio	\$143,575,413.09	3.55%
International Stock Fund	\$144,498,060.07	3.58%
Target Date 2040 Portfolio	\$149,333,883.56	3.70%
Bond Fund	\$175,227,077.21	4.34%
Target Date 2035 Portfolio	\$183,660,811.57	4.54%
Target Date 2030 Portfolio	\$202,944,678.93	5.02%
Target Date 2025 Portfolio	\$224,633,903.97	5.56%
Small/Mid-Cap Stock Fund	\$249,234,868.83	6.17%
Retirement Portfolio	\$349,660,485.82	8.65%
Stable Value Fund	\$630,023,403.05	15.59%
Stock Fund	\$943,213,520.77	23.34%
Total	\$4,041,369,931.51	100.00%

Number of Investments Held By Participants

Note: Includes All Plans; Forfeiture and Reserve Accounts Excluded



Number of Investments Held	Number of Participants	% of Participants
One	203,015	81.93%
Two	18,555	7.49%
Three	9,056	3.65%
Four	6,257	2.52%
Five	5,072	2.05%
Six	2,485	1.00%
Seven	1,441	0.58%
Eight	785	0.32%
Nine	453	0.18%
Ten	328	0.13%
>Ten	357	0.14%
Total	247,804	100.00%

100.00%

Ρ

Virginia Retirement System

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COV 457 and Hybrid 401(a) Plans – Participants Invested In a Single Fund



Note: Beneficiary Plans and Forfeiture Accounts Excluded

COV 457 Deferred Compensation Plan			
Fund Name	# of Accounts	% of Total	
Bond Fund	257	0.46%	
Global Real Estate Fund	132	0.24%	
High-Yield Bond Fund	81	0.15%	
Inflation-Protected Bond Fund	63	0.11%	
International Stock Fund	173	0.31%	
Money Market Fund	509	0.91%	
Small/Mid-Cap Stock Fund	296	0.53%	
Stable Value Fund	7,705	13.84%	
Stock Fund	2,675	4.80%	
TD Ameritrade	12	0.02%	
VRS Investment Portfolio	60	0.11%	
All Target Date Portfolio	43,710	78.51%	
Retirement Portfolio	4,299		
Target Date 2025 Portfolio	4,046		
Target Date 2030 Portfolio	4,516		
Target Date 2035 Portfolio	4,952		
Target Date 2040 Portfolio	5,024		
Target Date 2045 Portfolio	6,109		
Target Date 2050 Portfolio	6,759		
Target Date 2055 Portfolio	5,544		
Target Date 2060 Portfolio	2,375		
Target Date 2065 Portfolio	86		
Participants With Single Fund	55,673	100.00%	

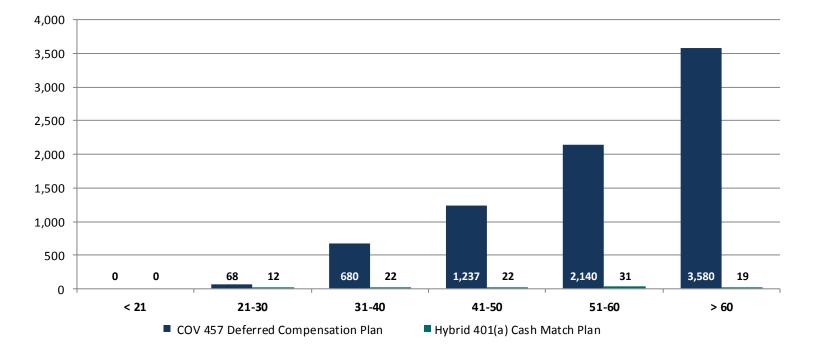
Hybrid 401(a) Cash Match Plan				
Fund Name	# of Accounts	% of Total		
Bond Fund	15	0.01%		
Global Real Estate Fund	15	0.01%		
High-Yield Bond Fund	9	0.01%		
Inflation-Protected Bond Fund	10	0.01%		
International Stock Fund	9	0.01%		
Money Market Fund	53	0.03%		
Small/Mid-Cap Stock Fund	54	0.03%		
Stable Value Fund	106	0.07%		
Stock Fund	430	0.27%		
TD Ameritrade	1	0.00%		
VRS Investment Portfolio	1	0.00%		
All Target Date Portfolio	157,364	99.56%		
Retirement Portfolio	6,000			
Target Date 2025 Portfolio	8,790			
Target Date 2030 Portfolio	12,021			
Target Date 2035 Portfolio	14,768			
Target Date 2040 Portfolio	15,409			
Target Date 2045 Portfolio	17,952			
Target Date 2050 Portfolio	22,135			
Target Date 2055 Portfolio	35,107			
Target Date 2060 Portfolio	24,863			
Target Date 2065 Portfolio	319			
Participants With Single Fund	158,067	100.00%		

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COV 457 and Hybrid 401(a) Plans – Stable Value as Sole Fund Held – Age Ranges



Note: Forfeiture Accounts Excluded



COV 457 Deferr	ed Compensation Plan	Hybrid 401(a	a) Cash Match Plan
Age Range	Number of Participants	Age Range	Number of Participants
<21	0	<21	0
21-30	68	21-30	12
31-40	680	31-40	22
41-50	1,237	41-50	22
51-60	2,140	51-60	31
>60	3,580	>60	19
Total	7,705	Total	106

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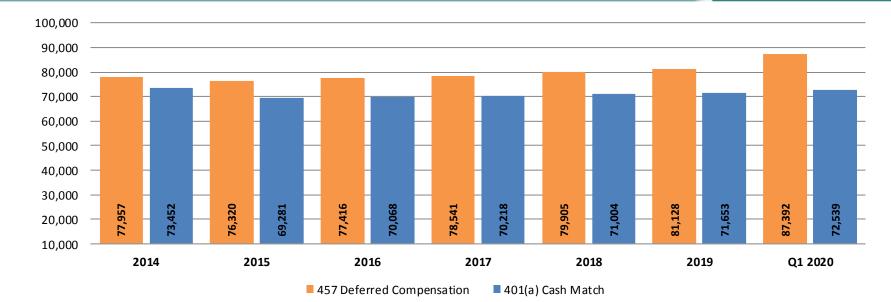
Commonwealth of Virginia 457 Deferred Compensation Plan 401(a) Cash Match Plan

Note: All data is as of 3/31/2020 unless otherwise stated. Master Page # 95 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 11

457 and 401(a) Cash Match Plans – Number of Participant Accounts



Note: Includes Beneficiary Plans; Forfeiture Accounts and 457 Reserve Account Excluded

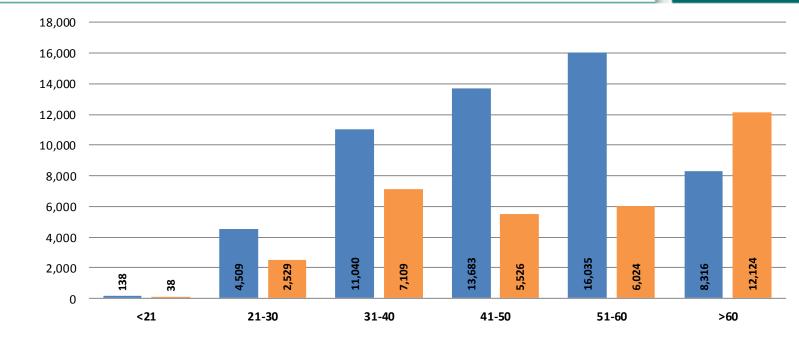


Period	457 Deferred Compensation	401(a) Cash Match	Total
2014	77,957	73,452	151,409
2015	76,320	69,281	145,601
2016	77,416	70,068	147,484
2017	78,541	70,218	148,759
2018	79,905	71,004	150,909
2019	81,128	71,653	152,781
Q1 2020	87,392	72,539	159,931



457 Plan – Participant Status Count by Age

Note: Beneficiary Plan Accounts, Forfeiture Account and Reserve Account Excluded



Active Terminated

Age Range	Active	Terminated	Total
<21	138	38	176
21-30	4,509	2,529	7,038
31-40	11,040	7,109	18,149
41-50	13,683	5,526	19,209
51-60	16,035	6,024	22,059
>60	8,316	12,124	20,440
Total	53,721	33,350	87,071

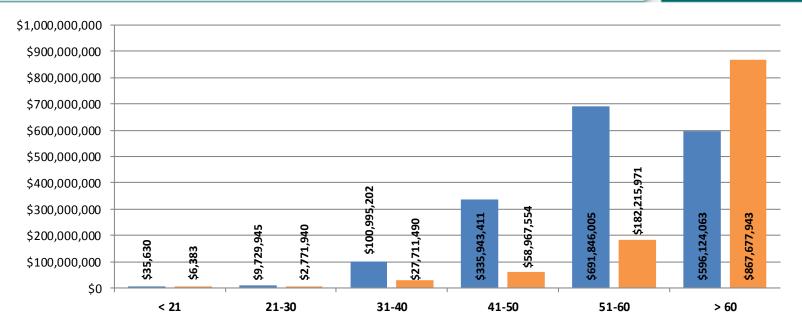
* Active Participants do not have a termination date on file and may not have made a contribution during the quarter. Terminated Participants have a terminate date on file.

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457 Plan – Participant Status Assets by Age

Note: Beneficiary Plan Accounts, Forfeiture Account and Reserve Account Excluded



Active Terminated

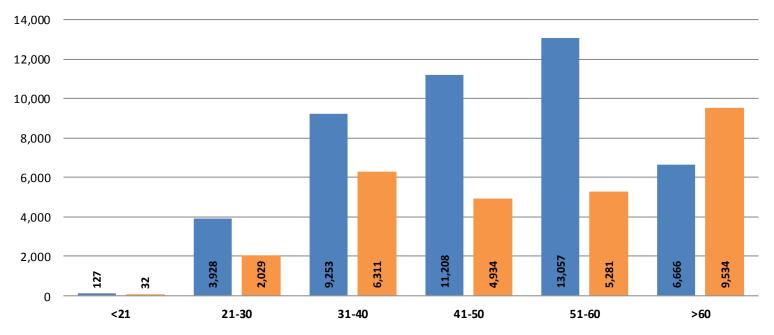
Age	Active	Terminated	Total
< 21	\$35,630	\$6,383	\$42,013
21-30	\$9,729,945	\$2,771,940	\$12,501,885
31-40	\$100,995,202	\$27,711,490	\$128,706,692
41-50	\$335,943,411	\$58,967,554	\$394,910,965
51-60	\$691,846,005	\$182,215,971	\$874,061,976
> 60	\$596,124,063	\$867,677,943	\$1,463,802,006
Total	\$1,734,674,257	\$1,139,351,280	\$2,874,025,537

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401(a) Cash Match Plan – Participant Status Count by Age



Note: Beneficiary Plan and Forfeiture Account Excluded



Active Terminated

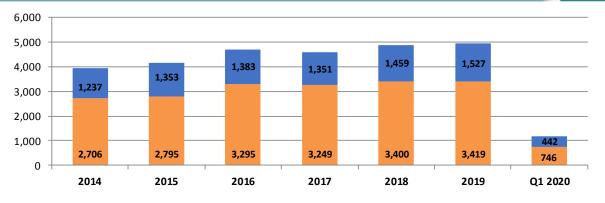
Age Range	Active	Terminated	Total
<21	127	32	159
21-30	3,928	2,029	5,957
31-40	9,253	6,311	15,564
41-50	11,208	4,934	16,142
51-60	13,057	5,281	18,338
>60	6,666	9,534	16,200
Total	44,239	28,121	72,360

* Active Participants do not have a termination date on file and may not have made a contribution during the quarter. Terminated Participants have a terminate date on file.

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457 Plan – New Enrollments

Note: Auto-enrolled category includes participants designated as auto-enroll eligible on incoming indicative data files during the quarter as well as those auto-enrolled during the quarter



Virginia Retirement System

Auto-Enrolled Self-Enrolled

Period	Auto-Enrolled	Self-Enrolled	Total Enrolled
2014	2,706	1,237	3,943
2015	2,795	1,353	4,148
2016	3,295	1,383	4,678
2017	3,249	1,351	4,600
2018	3,400	1,459	4,859
2019	3,419	1,527	4,946
Q1 2020	746	442	1,188

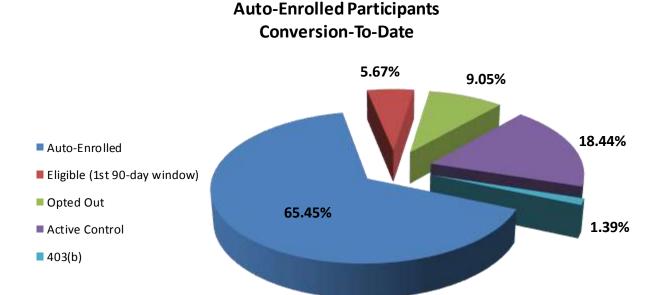
Period	Schools		Political Sub-Divisions		State Agencies		Total
Penou	Auto-Enrolled	Self-Enrolled	Auto-Enrolled	Self-Enrolled	Auto-Enrolled	Self-Enrolled	Enrolled
2019	n/a	209	n/a	195	3,419	1,123	4,946
Q1 2020	n/a	62	n/a	80	746	300	1,188

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457 Plan – Automatic Enrollment Snapshot

Note: Chart shows current status of active participants set up as auto-enroll eligible after plan conversion, January 6, 2014; excludes terminated participants



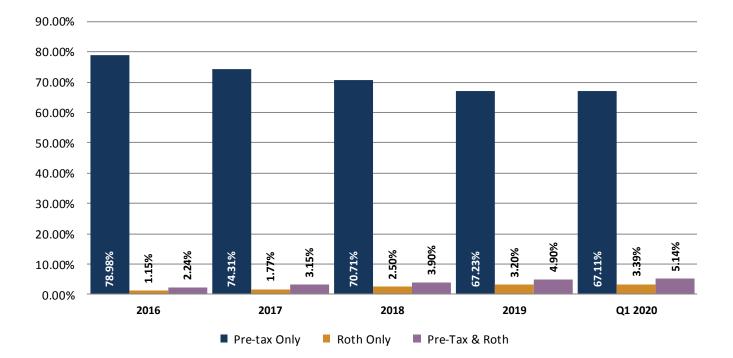


Enrollment Category	Active	% of Active Participants
Auto-Enrolled	7,201	65.45%
Eligible (1st 90-day window)	624	5.67%
Opted Out	996	9.05%
Active Control	2,029	18.44%
403(b)	153	1.39%

457 Plan – Deferral Types

Note: Active count — all active participants, including participants who do not have a balance in the plan





Period	Active Participants	Pre-tax Only	Roth Only	Pre-Tax & Roth	% of Participants With Deferrals
2016	57,510	78.98%	1.15%	2.24%	82.37%
2017	59,104	74.31%	1.77%	3.15%	79.23%
2018	60,399	70.71%	2.50%	3.90%	77.11%
2019	61,554	67.23%	3.20%	4.90%	75.33%
Q1 2020	65,228	67.11%	3.39%	5.14%	75.64%

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457 and 401(a) Cash Match Plans – Contributions



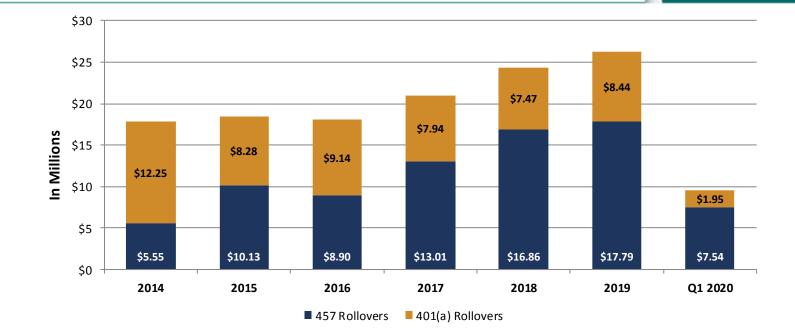


■ 457 Contributions ■ 401(a) Contributions

Period	457 Contributions	401(a) Contributions	Total
2014	\$129.95	\$17.49	\$147.44
2015	\$134.94	\$16.78	\$151.72
2016	\$133.29	\$16.20	\$149.49
2017	\$136.96	\$15.87	\$152.83
2018	\$143.15	\$15.66	\$158.82
2019	\$149.55	\$15.40	\$164.95
Q1 2020	\$43.84	\$3.83	\$47.67

457 and 401(a) Cash Match Plans – Incoming Rollovers



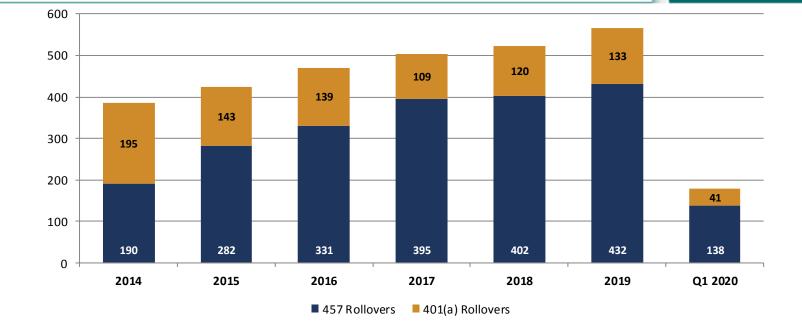


Period	457 Rollovers	401(a) Rollovers	Total
2014	\$5.55	\$12.25	\$17.81
2015	\$10.13	\$8.28	\$18.41
2016	\$8.90	\$9.14	\$18.04
2017	\$13.01	\$7.94	\$20.95
2018	\$16.86	\$7.47	\$24.33
2019	\$17.79	\$8.44	\$26.23
Q1 2020	\$7.54	\$1.95	\$9.49

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457 and 401(a) Cash Match Plans – Incoming Rollovers – Counts





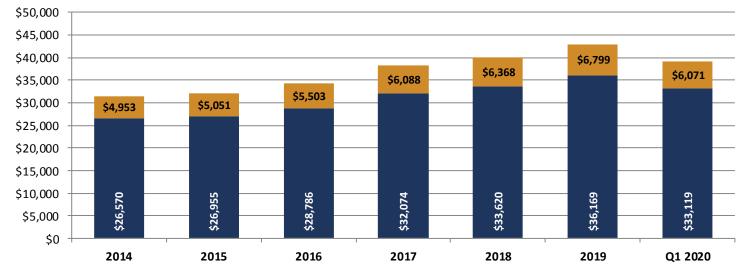
Period	457 Rollovers	401(a) Rollovers	Total
2014	190	195	385
2015	282	143	425
2016	331	139	470
2017	395	109	504
2018	402	120	522
2019	432	133	565
Q1 2020	138	41	179

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457 and 401(a) Cash Match Plans – Participant Average Account Balance



Note: Includes Beneficiary Plans



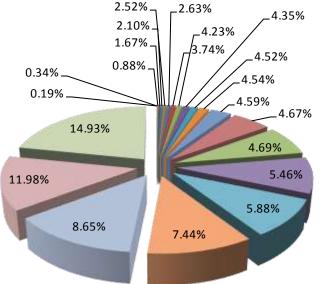
■ 457 Deferred Compensation ■ 4

📕 401(a) Cash Match

Period	457 Deferred Compensation	401(a) Cash Match	Total
2014	\$26,570.18	\$4,953.42	\$31,523.60
2015	\$26,954.62	\$5,051.05	\$32,005.67
2016	\$28,786.34	\$5,502.95	\$34,289.28
2017	\$32,073.51	\$6,087.86	\$38,161.37
2018	\$33,619.62	\$6,367.88	\$39,987.50
2019	\$36,168.70	\$6,798.54	\$42,967.24
Q1 2020	\$33,119.10	\$6,071.46	\$39,190.56

457 Plan – Participant Use of Funds

Note: Includes Beneficiary Plan



- Target Date 2065 Portfolio
 VRS Investment Portfolio
 Inflation-Protected Bond Fund
- Money Market Fund
- Target Date 2040 Portfolio
- Target Date 2030 Portfolio
- Target Date 2035 Portfolio
- Target Date 2050 Portfolio
- Bond Fund
- Small/Mid-Cap Stock Fund
- Stock Fund

- TD Ameritrade
- Target Date 2060 Portfoli
- High-Yield Bond Fui
 - Target Date 2055 Portfolio
 - Target Date 2025 Portfolio
 - Global Real Estate Fund
 - Target Date 2045 Portfolio
 - Retirement Portfolio
 - International Stock Fund
 - Stable Value Fund

.67%	Target Date 2065 Portfolio	228	324	0.19%
	TD Ameritrade	537	573	0.34%
	VRS Investment Portfolio	1,484	1,479	0.88%
	Target Date 2060 Portfolio	2,660	2,805	1.67%
	Inflation-Protected Bond Fund	3,496	3,527	2.10%
6%	High-Yield Bond Fund	4,243	4,222	2.52%
	Money Market Fund	4,278	4,407	2.63%
	Target Date 2055 Portfolio	5,969	6,264	3.74%
	Target Date 2040 Portfolio	6,654	7,091	4.23%
	Target Date 2025 Portfolio	6,945	7,294	4.35%
	Target Date 2030 Portfolio	7,106	7,572	4.52%
	Global Real Estate Fund	7,681	7,603	4.54%
	Target Date 2035 Portfolio	7,165	7,695	4.59%
Portfolio und Portfolio	Target Date 2045 Portfolio	7,388	7,836	4.67%
	Target Date 2050 Portfolio	7,536	7,868	4.69%
	Retirement Portfolio	9,147	9,147	5.46%
	Bond Fund	8,361	9,859	5.88%

12/31/2019

10,721

12,492

16,339

22,461

Fund Name

International Stock Fund

Stable Value Fund

Stock Fund

Small/Mid-Cap Stock Fund



3/31/2020

7.44%

8.65%

11.98%

14.93%

%

Change

42.11%

6.70%

-0.34%

5.45%

0.89%

-0.49% 3.02%

4.94%

6.57% 5.03% 6.56% -1.02% 7.40% 6.06%

4.41%

0.00%

17.92%

16.38%

16.08%

22.87%

11.43%

Participant Count Participant Count % of Participants

3/31/2020

12,477

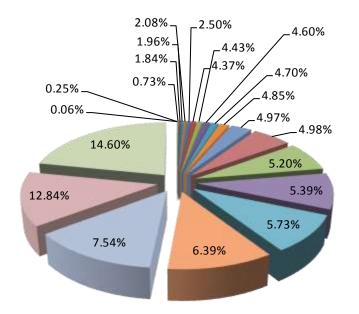
14,501

20,076

25,028

401(a) Cash Match – Participant Use of Funds

Note: Includes Beneficiary Plan



- TD Ameritrade VRS Investment Portfolio Target Date 2060 Portfolio Money Market Fund Global Real Estate Fund Target Date 2025 Portfolio Target Date 2035 Portfolio Target Date 2045 Portfolio Retirement Portfolio Small/Mid-Cap Stock Fund
- Stock Fund

Target Date 2065 Portfolio	
Inflation-Protected Bond Fund	
High-Yield Bond Fund	
Target Date 2055 Portfolio	
Target Date 2040 Portfolio	
Target Date 2030 Portfolio	
Bond Fund	
Target Date 2050 Portfolio	
International Stock Fund	

- International Stock Fund
- Stable Value Fund

Fund Name	Participant Count 12/31/2019	Participant Count 3/31/2020	% of Participants 3/31/2020	% Change
TD Ameritrade	74	76	0.06%	2.70%
Target Date 2065 Portfolio	229	313	0.25%	36.68%
VRS Investment Portfolio	903	904	0.73%	0.11%
Inflation-Protected Bond Fund	2,253	2,273	1.84%	0.89%
Target Date 2060 Portfolio	2,300	2,430	1.96%	5.65%
High-Yield Bond Fund	2,585	2,571	2.08%	-0.54%
Money Market Fund	3,007	3,090	2.50%	2.76%
Target Date 2055 Portfolio	5,251	5,406	4.37%	2.95%
Global Real Estate Fund	5,558	5,489	4.43%	-1.24%
Target Date 2040 Portfolio	5,633	5,702	4.60%	1.22%
Target Date 2025 Portfolio	5,816	5,820	4.70%	0.07%
Target Date 2030 Portfolio	5,968	6,011	4.85%	0.72%
Target Date 2035 Portfolio	6,069	6,150	4.97%	1.33%
Bond Fund	5,991	6,163	4.98%	2.87%
Target Date 2045 Portfolio	6,335	6,440	5.20%	1.66%
Target Date 2050 Portfolio	6,557	6,677	5.39%	1.83%
Retirement Portfolio	7,254	7,093	5.73%	-2.22%
International Stock Fund	7,814	7,918	6.39%	1.33%
Small/Mid-Cap Stock Fund	9,218	9,335	7.54%	1.27%
Stable Value Fund	15,631	15,906	12.84%	1.76%
Stock Fund	17,994	18,075	14.60%	0.45%

Virginia Retirement System

457 and 401(a) Cash Match Plans – Distributions



Note: Beneficiary Plans Excluded



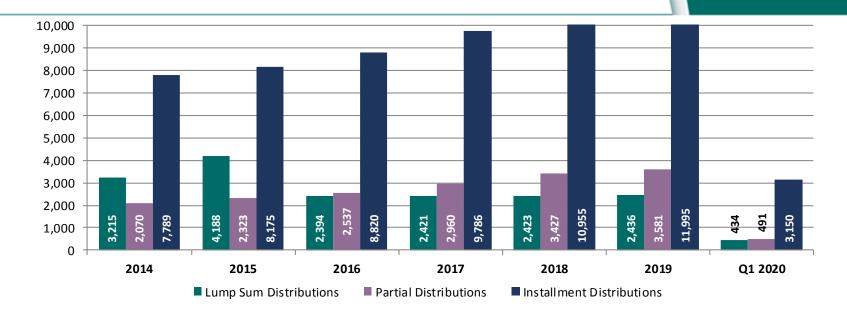
■ 457 Deferred Compensation ■ 40

401(a) Cash Match

Period	457 Deferred Compensation	401(a) Cash Match	Total
2014	\$109.14	\$19.27	\$128.41
2015	\$108.91	\$22.85	\$131.77
2016	\$123.20	\$21.73	\$144.93
2017	\$129.62	\$23.39	\$153.01
2018	\$147.91	\$25.59	\$173.50
2019	\$155.13	\$25.64	\$180.77
Q1 2020	\$44.36	\$6.87	\$51.24

457 Plan – Distributions by Type

Note: Beneficiary Plan Excluded; Rollover Distributions Excluded and Reported on Subsequent Pages



Virginia Retirement System

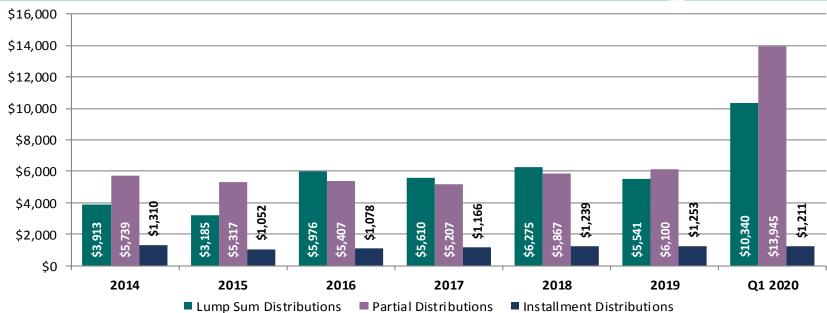
Period	Lump Sum Distributions*	Partial Distributions	Installment Distributions
2014	3,215	2,070	7,789
2015	4,188	2,323	8,175
2016	2,394	2,537	8,820
2017	2,421	2,960	9,786
2018	2,423	3,427	10,955
2019	2,436	3,581	11,995
Q1 2020	434	491	3,150

* Includes EACA distributions.

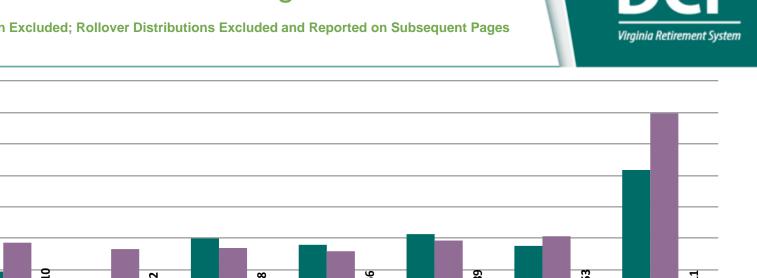
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457 Plan – Distribution Average Amounts

Note: Beneficiary Plan Excluded; Rollover Distributions Excluded and Reported on Subsequent Pages



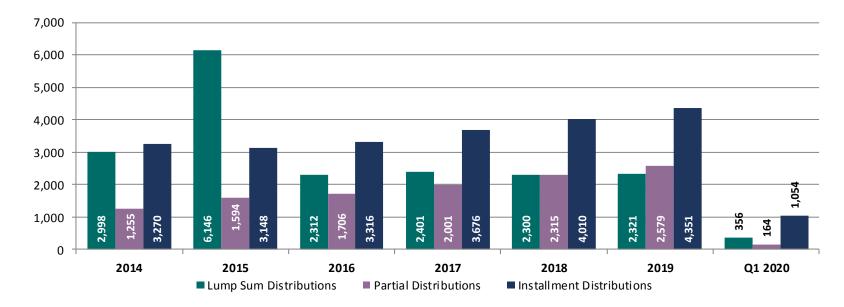
Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2014	\$3,913	\$5,739	\$1,310
2015	\$3,185	\$5,317	\$1,052
2016	\$5,976	\$5,407	\$1,078
2017	\$5,610	\$5,207	\$1,166
2018	\$6,275	\$5,867	\$1,239
2019	\$5,541	\$6,100	\$1,253
Q1 2020	\$10,340	\$13,945	\$1,211



401(a) Cash Match – Distributions by Type

Note: Beneficiary Plan Excluded; Rollover Distributions Excluded and Reported on Subsequent Pages



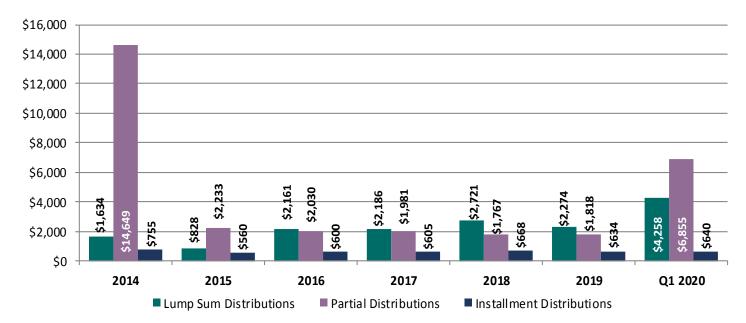


Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2014	2,998	1,255	3,270
2015	6,146	1,594	3,148
2016	2,312	1,706	3,316
2017	2,401	2,001	3,676
2018	2,300	2,315	4,010
2019	2,321	2,579	4,351
Q1 2020	356	164	1,054

401(a) Cash Match Plan – Distribution Average Amounts



Note: Beneficiary Plan Excluded; Rollover Distributions Excluded and Reported on Subsequent Pages

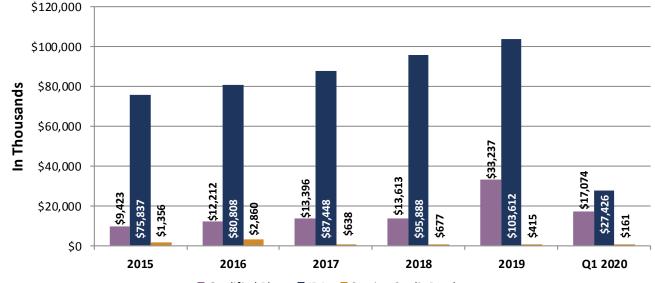


Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2014	\$1,634	\$14,649	\$755
2015	\$828	\$2,233	\$560
2016	\$2,161	\$2,030	\$600
2017	\$2,186	\$1,981	\$605
2018	\$2,721	\$1,767	\$668
2019	\$2,274	\$1,818	\$634
Q1 2020	\$4,258	\$6,855	\$640

457 and 401(a) Plans – Rollover Distribution Destinations – Total Amounts



Note: Beneficiary Plan Excluded



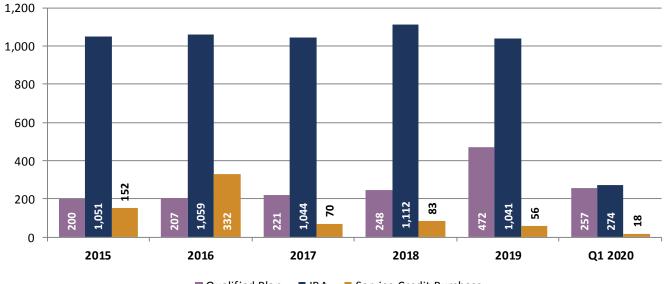
■ Qualified Plan ■ IRA ■ Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Total
2015	\$9,423	\$75,837	\$1,356	\$86,616
2016	\$12,212	\$80,808	\$2,860	\$95,880
2017	\$13,396	\$87,448	\$638	\$101,481
2018	\$13,613	\$95,888	\$677	\$110,178
2019	\$33,237	\$103,612	\$415	\$137,264
Q1 2020	\$17,074	\$27,426	\$161	\$44,661

457 Plan – Rollover Distribution Destinations



Note: Beneficiary Plan Excluded



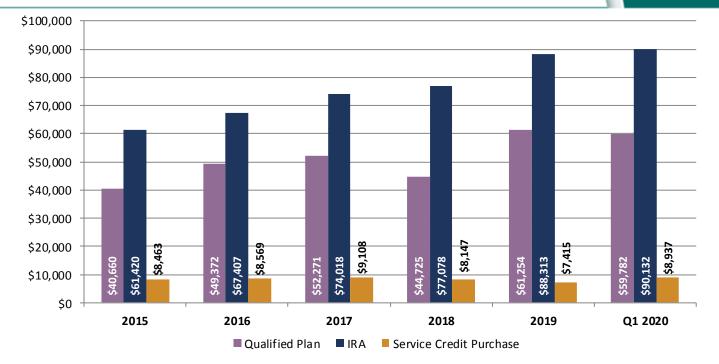
■ Qualified Plan ■ IRA ■ Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Total Rollover Distributions
2015	200	1,051	152	1,403
2016	207	1,059	332	1,598
2017	221	1,044	70	1,335
2018	248	1,112	83	1,443
2019	472	1,041	56	1,569
Q1 2020	257	274	18	549

457 Plan – Rollover Distribution Average Amounts



Note: Beneficiary Plan Excluded

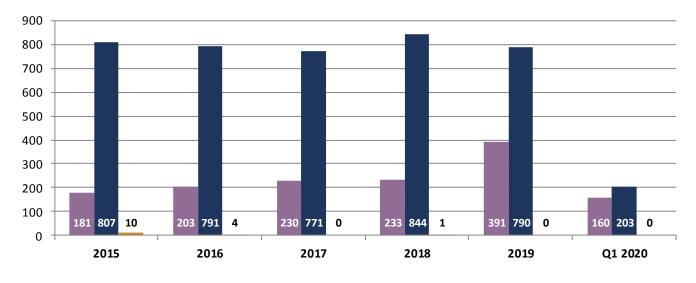


Period	Qualified Plan	IRA	Service Credit Purchase	Average Rollover Distribution
2015	\$40,660	\$61,420	\$8,463	\$52,855
2016	\$49,372	\$67,407	\$8,569	\$52,847
2017	\$52,271	\$74,018	\$9,108	\$67,015
2018	\$44,725	\$77,078	\$8,147	\$67,553
2019	\$61,254	\$88,313	\$7,415	\$77,285
Q1 2020	\$59,782	\$90,132	\$8,937	\$73,262

401(a) Cash Match Plan – Rollover Distribution Destinations



Note: Beneficiary Plan Excluded



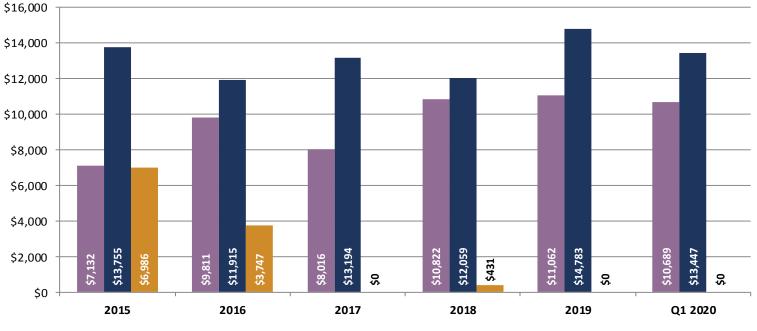
■ Qualified Plan ■ IRA ■ Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Total Rollover Distributions
2015	181	807	10	998
2016	203	791	4	998
2017	230	771	0	1,001
2018	233	844	1	1,078
2019	391	790	0	1,181
Q1 2020	160	203	0	363

401(a) Cash Match Plan – Rollover Distribution Average Amounts



Note: Beneficiary Plan Excluded



Qualified Plan

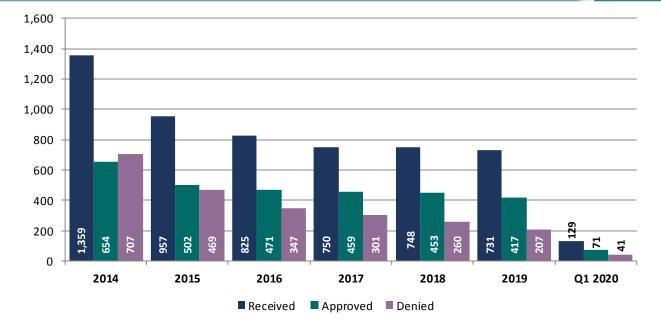
Period	Qualified Plan	IRA	Service Credit Purchase	Average Rollover Distribution
2015	\$7,132	\$13,755	\$6,986	\$12,486
2016	\$9,811	\$11,915	\$3,747	\$11,454
2017	\$8,016	\$13,194	\$0	\$12,005
2018	\$10,822	\$12,059	\$431	\$11,781
2019	\$11,062	\$14,783	\$0	\$13,551
Q1 2020	\$10,689	\$13,447	\$0	\$12,231

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457 Plan – Unforeseeable Emergency Withdrawals



Note: Reporting for Withdrawal Reasons Started In 2015



Withdrawals Approved and Paid						
Withdrawal Reason	2015	2016	2017	2018	2019	Q1 2020
Eviction	121	118	98	103	122	23
Foreclosure	48	52	50	29	24	4
Funeral Expenses	14	14	11	9	12	2
Lost Wages*	0	0	5	29	33	7
Medical Bills	312	279	288	269	215	34
Property Damage	7	8	7	14	11	1
Total Paid	502	471	459	453	417	71

* New category added in October 2017.

VRS Defined Contribution Plans



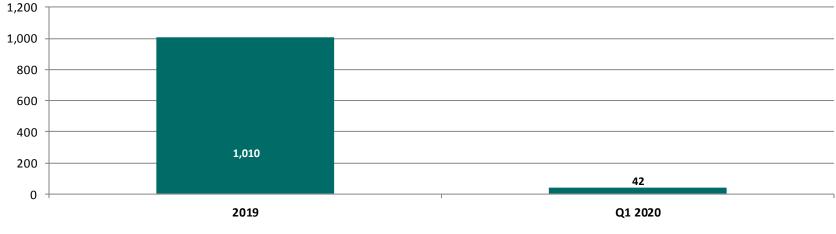
ORP for Higher Ed

Note: All data is as of 3/31/2020 unless otherwise stated. Master Page # 120 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020

020 36

ORPHE Plan – New Enrollments





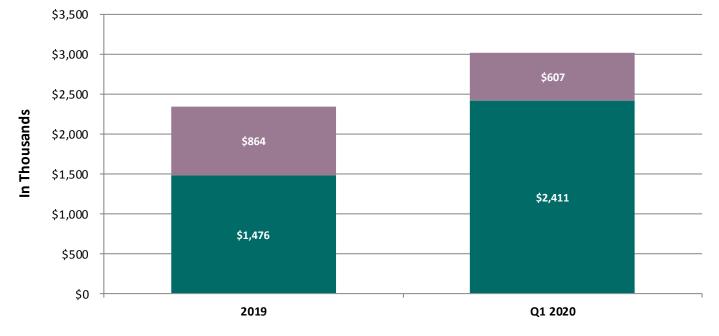
	Total	ORPHE	Enrol	lments
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Period	Total ORPHE Enrollments
2019	1,010
Q1 2020	42

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ORPHE Plan – Contributions and Incoming Rollovers





ORPHE Contributions ORPHE Rollovers

Period	ORPHE Contributions	ORPHE Rollovers	Total
2019	\$1,476.42	\$864.47	\$2,340.89
Q1 2020	\$2,410.65	\$607.12	\$3,017.77

ORPHE Plan – Incoming Rollovers – Counts





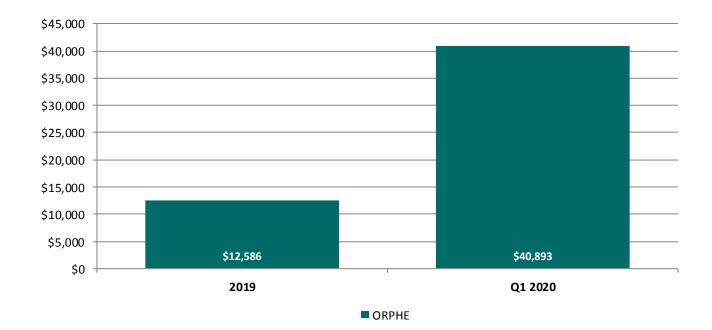


Period	ORPHE Rollovers
2019	10
Q1 2020	6

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ORPHE Plan – Participant Average Account Balance



Period	ORPHE
2019	\$12,586
Q1 2020	\$40,893

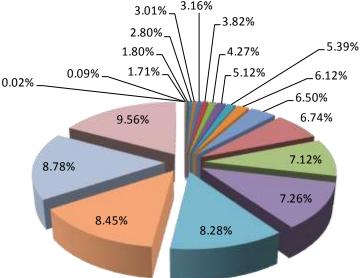
ORPHE – Participant Use of Funds



3/31/2020

%

Change



Target Date 2050 Portfolio

Small/Mid-Cap Stock Fund

Stock Fund

- Target Date 2065 Portfolio Stable Value Fund Target Date 2060 Portfolio High-Yield Bond Fund Global Real Estate Fund Target Date 2055 Portfolio Target Date 2045 Portfolio Target Date 2030 Portfolio
- Target Date 2040 Portfolio
- Retirement Portfolio

1 1		1				-
	^{5.12%} 6.12%	Target Date 2065 Portfolio	0	1	0.02%	n/a
П.	6.50%	TD Ameritrade	0	4	0.09%	n/a
	6.74%	Stable Value Fund	4	72	1.71%	1,700.00%
		Inflation-Protected Bond Fund	6	76	1.80%	1,166.67%
Ļ	7.12%	Target Date 2060 Portfolio	48	118	2.80%	145.83%
F	7.1270	Bond Fund	7	127	3.01%	1,714.29%
	7.26%	High-Yield Bond Fund	4	133	3.16%	3,225.00%
	7.2078	Money Market Fund	10	161	3.82%	1,510.00%
8.	28%	Global Real Estate Fund	13	180	4.27%	1,284.62%
-		Target Date 2025 Portfolio	9	216	5.12%	2,300.00%
		Target Date 2055 Portfolio	65	227	5.39%	249.23%
		International Stock Fund	17	258	6.12%	1,417.65%
		Target Date 2045 Portfolio	29	274	6.50%	844.83%
_		Target Date 2035 Portfolio	11	284	6.74%	2,481.82%
	TD Ameritrade	Target Date 2030 Portfolio	11	300	7.12%	2,627.27%
	Bond Fund	Target Date 2050 Portfolio	46	306	7.26%	565.22%
	Money Market Fund	Target Date 2040 Portfolio	20	349	8.28%	1,645.00%
	Target Date 2025 Portfolio	Small/Mid-Cap Stock Fund	29	356	8.45%	1,127.59%
	International Stock Fund	Retirement Portfolio	16	370	8.78%	2,212.50%
	Target Date 2035 Portfolio	Stock Fund	35	403	9.56%	1,051.43%

12/31/2019

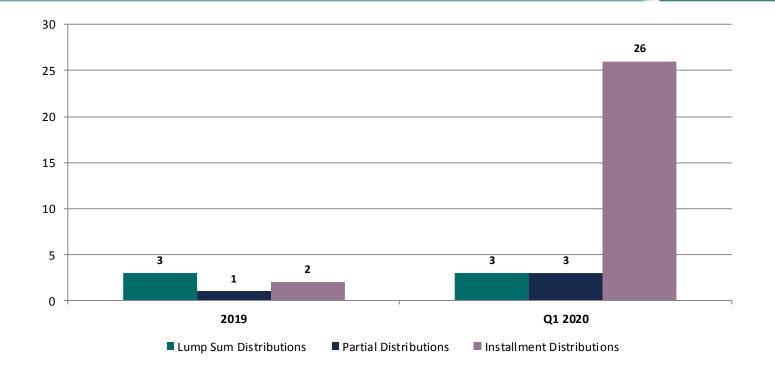
Participant Count Participant Count % of Participants

3/31/2020

Fund Name

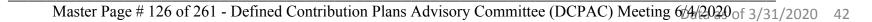
ORPHE Plan – Distributions by Type

Note: Rollover Distributions Excluded and Reported on Subsequent Pages



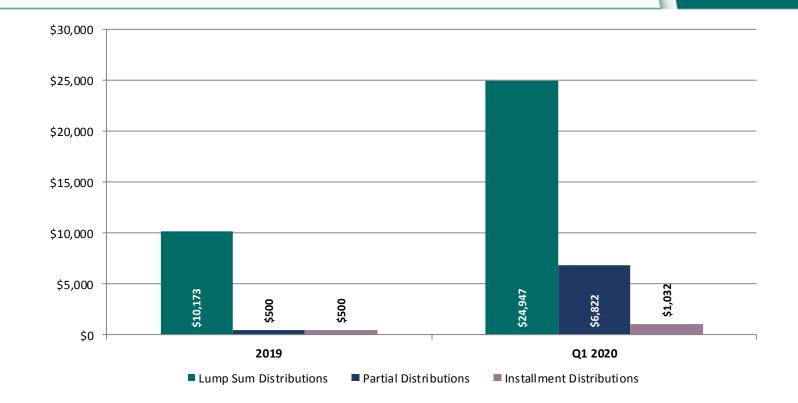
Virginia Retirement System

Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2019	3	1	2
Q1 2020	3	3	26



ORPHE Plan – Average Distribution Amount

Note: Rollover Distributions Excluded and Reported on Subsequent Pages



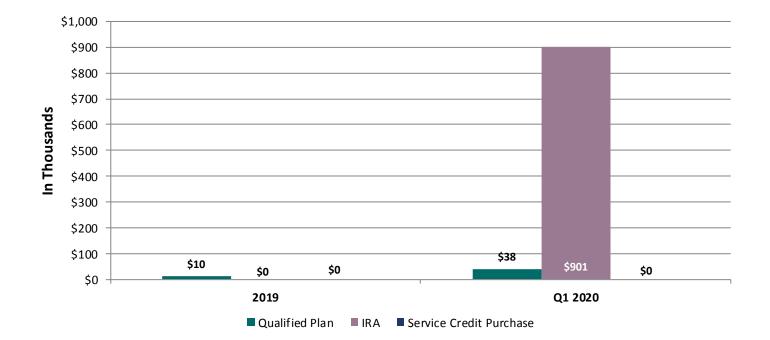
Virginia Retirement System

Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2019	\$10,173	\$500	\$500
Q1 2020	\$24,947	\$6,822	\$1,032

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ORPHE Plan – Rollover Distribution Destinations – Total Amounts



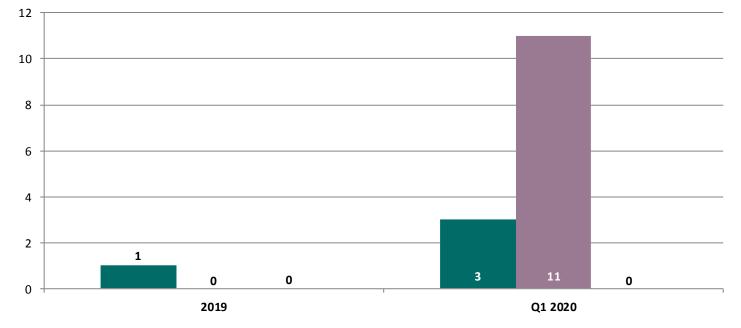


Period	Qualified Plan	IRA	Service Credit Purchase	Total	
2019	\$10	\$0	\$0	\$10	
Q1 2020	\$38	\$901	\$0	\$939	

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ORPHE Plan – Rollover Distribution Destinations

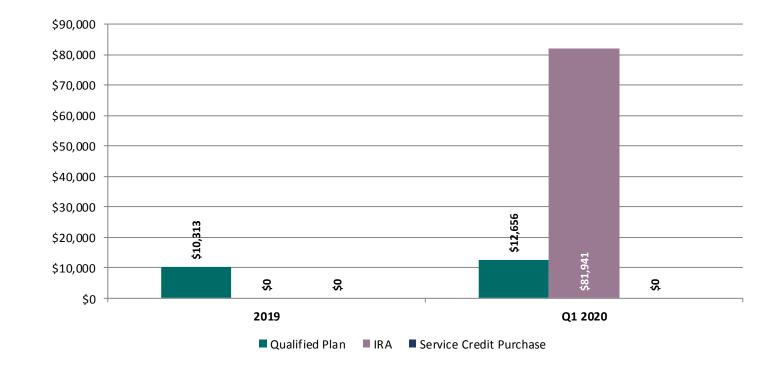




■ Qualified Plan ■ IRA ■ Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Total Rollover Distributions
2019	1	0	0	1
Q1 2020	3	11	0	14

ORPHE Plan – Rollover Distribution Average Virginia Retirement System



Amounts

Period	Qualified Plan	IRA	Service Credit Purchase	Average Rollover Distribution
2019	\$10,313	\$0	\$0	\$10,313
Q1 2020	\$12,656	\$81,941	\$0	\$67,095

Master Page # 130 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 46 **VRS Defined Contribution Plans**



Hybrid Retirement Plan

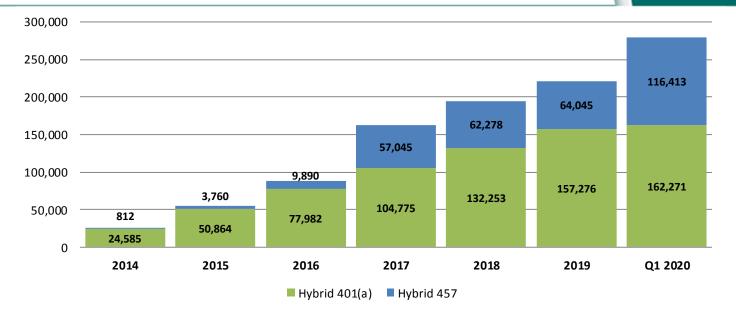
Note: All data is as of 3/31/2020 unless otherwise stated.

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Hybrid 401(a) & 457 Plans – Number of Participant Accounts

DCP Virginia Retirement System

Note: Beneficiary Plans excluded; Forfeiture Accounts excluded starting in 2015; Counts include Active and Terminated Members

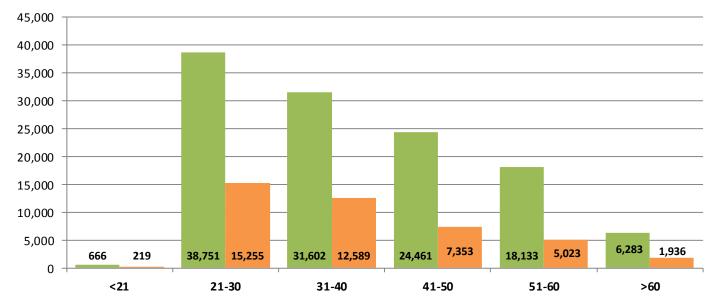


Period	Hybrid 401(a)	Hybrid 457	Total
2014	24,585	812	25,397
2015	50,864	3,760	54,624
2016	77,982	9,890	87,872
2017	104,775	57,045	161,820
2018	132,253	62,278	194,531
2019	157,276	64,045	221,321
Q1 2020	162,271	116,413	278,684

Hybrid 401(a) Plan – Participant Status Count by Age



Note: Beneficiary Plans and Forfeiture Accounts Excluded



Hybrid 401(a) Active Hybrid 401(a) Terminated

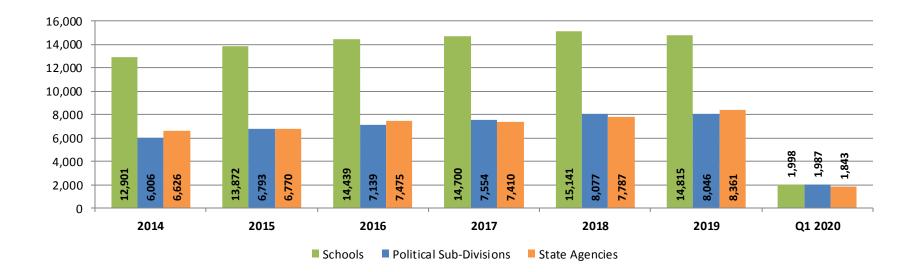
A co Ponco	Hybrid 401(a)*			
Age Range	Active	Terminated	Total	
<21	666	219	885	
21-30	38,751	15,255	54,006	
31-40	31,602	12,589	44,191	
41-50	24,461	7,353	31,814	
51-60	18,133	5,023	23,156	
>60	6,283	1,936	8,219	
Total	119,896	42,375	162,271	

* Chart shows Hybrid 401(a) counts only, since all participants in the Hybrid 457 counts are included in the Hybrid 401(a) counts.

** Active Participants do not have a termination date on file and may not have made a contribution during the quarter. Terminated Participants have a terminate date on file - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 49

Hybrid 401(a) Plan – New Enrollments

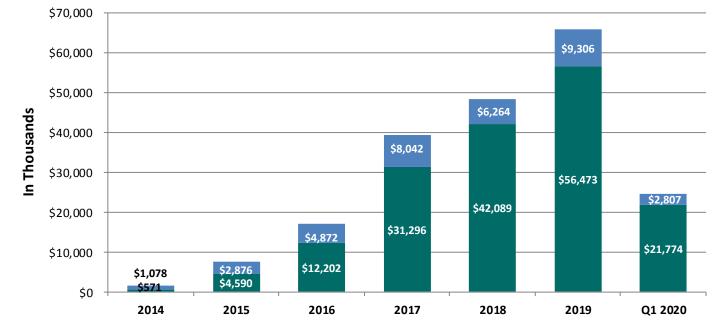




Period	Schools	Political Sub-Divisions	State Agencies	Total Hybrid Enrollments
2014	12,901	6,006	6,626	25,533
2015	13,872	6,793	6,770	27,435
2016	14,439	7,139	7,475	29,053
2017	14,700	7,554	7,410	29,664
2018	15,141	8,077	7,787	31,005
2019	14,815	8,046	8,361	31,222
Q1 2020	1,998	1,987	1,843	5,828

Hybrid 457 Plan – Contributions and Incoming Rollovers





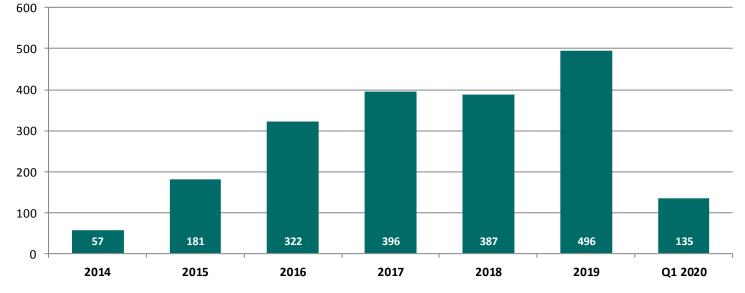
457 Contributions 457 Rollovers

Period	457 Contributions	457 Rollovers	Total
2014	\$571.04	\$1,078.49	\$1,649.53
2015	\$4,590.00	\$2,876.02	\$7,466.02
2016	\$12,202.01	\$4,872.44	\$17,074.45
2017	\$31,295.56	\$8,042.46	\$39,338.02
2018	\$42,088.69	\$6,264.32	\$48,353.01
2019	\$56,472.59	\$9,305.69	\$65,778.28
Q1 2020	\$21,773.85	\$2,807.32	\$24,581.16

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Hybrid 457 Plan – Incoming Rollovers – Counts





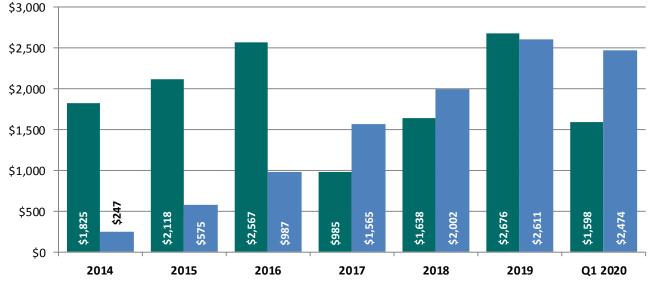
Hybrid 457 Rollovers

Period	Hybrid 457 Rollovers
2014	57
2015	181
2016	322
2017	396
2018	387
2019	496
Q1 2020	135

Hybrid 401(a) & 457 Plans – Participant Average Account Balance



Note: Beneficiary Plans Included; Forfeiture Accounts Excluded Starting 2015



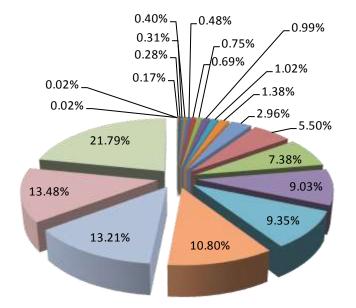
Hybrid 457 Hybrid 401(a)

Period	Hybrid 457	Hybrid 401(a)
2014	\$1,825	\$247
2015	\$2,118	\$575
2016	\$2,567	\$987
2017	\$985	\$1,565
2018	\$1,638	\$2,002
2019	\$2,676	\$2,611
Q1 2020	\$1,598	\$2,474

Hybrid 401(a) Plan – Participant Use of Funds

Note: Includes Beneficiary Plan





TD Ameritrade

Stock Fund

Stable Value Fund

High-Yield Bond Fund

International Stock Fund

Target Date 2065 Portfolio

Target Date 2025 Portfolio

Target Date 2035 Portfolio

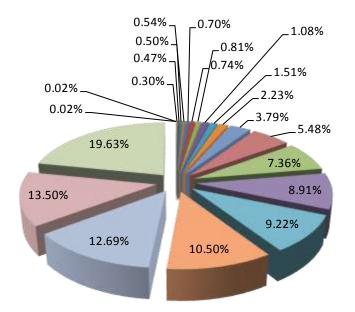
Target Date 2045 PortfolioTarget Date 2060 Portfolio

- VRS Investment Portfolio
 Inflation-Protected Bond Fund
 Bond Fund
 Global Real Estate Fund
 Money Market Fund
 Small/Mid-Cap Stock Fund
 Retirement Portfolio
 Target Date 2030 Portfolio
 Target Date 2040 Portfolio
- Target Date 2050 PortfolioTarget Date 2055 Portfolio

Fund Name	Participant Count 12/31/2019	Participant Count 3/31/2020	% of Participants 3/31/2020	% Change
VRS Investment Portfolio	26	29	0.02%	11.54%
TD Ameritrade	34	42	0.02%	23.53%
Inflation-Protected Bond Fund	274	294	0.17%	7.30%
Stable Value Fund	440	491	0.29%	11.59%
Bond Fund	508	554	0.32%	9.06%
High-Yield Bond Fund	631	670	0.39%	6.18%
Global Real Estate Fund	790	839	0.49%	6.20%
International Stock Fund	1,100	1,144	0.66%	4.00%
Money Market Fund	1,146	1,208	0.70%	5.41%
Target Date 2065 Portfolio	848	1,560	0.91%	83.96%
Small/Mid-Cap Stock Fund	1,571	1,650	0.96%	5.03%
Stock Fund	2,249	2,430	1.41%	8.05%
Retirement Portfolio	6,223	6,295	3.65%	1.16%
Target Date 2025 Portfolio	8,801	9,058	5.26%	2.92%
Target Date 2030 Portfolio	11,990	12,339	7.16%	2.91%
Target Date 2035 Portfolio	14,667	15,089	8.76%	2.88%
Target Date 2040 Portfolio	15,288	15,740	9.14%	2.96%
Target Date 2045 Portfolio	17,813	50,000	10.64%	2.87%
Target Date 2050 Portfolio	21,938	22,541	13.09%	2.75%
Target Date 2060 Portfolio	25,216	26,352	15.30%	4.51%
Target Date 2055 Portfolio	34,852	35,581	20.66%	2.09%

Hybrid 457 Plan – Participant Use of Funds

Note: Includes Beneficiary Plan



VRS Investment Portfolio Inflation-Protected Bond Fund Stable Value Fund High-Yield Bond Fund Global Real Estate Fund Small/Mid-Cap Stock Fund Retirement Portfolio Target Date 2030 Portfolio Target Date 2040 Portfolio Target Date 2050 Portfolio Target Date 2055 Portfolio

	TD Ameritrade
d	Money Market Fund
	Bond Fund
	Target Date 2065 Portfolio
	International Stock Fund
	Stock Fund
	Target Date 2025 Portfolio
	Target Date 2035 Portfolio
	Target Date 2045 Portfolio

Target Date 2060 Portfolio

Fund Name	Participant Count 12/31/2019	Participant Count 3/31/2020	% of Participants 3/31/2020	% Change
VRS Investment Portfolio	14	20	0.02%	42.86%
TD Ameritrade	27	28	0.02%	3.70%
Inflation-Protected Bond Fund	339	371	0.30%	9.44%
Money Market Fund	508	587	0.47%	15.55%
Stable Value Fund	557	627	0.50%	12.57%
Bond Fund	611	671	0.54%	9.82%
High-Yield Bond Fund	808	872	0.70%	7.92%
Target Date 2065 Portfolio	40	924	0.74%	2,210.00%
Global Real Estate Fund	920	1,010	0.81%	9.78%
International Stock Fund	1,275	1,358	1.08%	6.51%
Small/Mid-Cap Stock Fund	1,773	1,897	1.51%	6.99%
Stock Fund	2,528	2,794	2.23%	10.52%
Retirement Portfolio	2,962	4,749	3.79%	60.33%
Target Date 2025 Portfolio	4,117	6,870	5.48%	66.87%
Target Date 2030 Portfolio	5,503	9,227	7.36%	67.67%
Target Date 2035 Portfolio	6,445	11,172	8.91%	73.34%
Target Date 2040 Portfolio	6,452	11,561	9.22%	79.18%
Target Date 2045 Portfolio	7,352	13,166	10.50%	79.08%
Target Date 2050 Portfolio	9,192	15,906	12.69%	73.04%
Target Date 2060 Portfolio	5,993	16,924	13.50%	182.40%
Target Date 2055 Portfolio	14,815	24,597	19.63%	66.03%

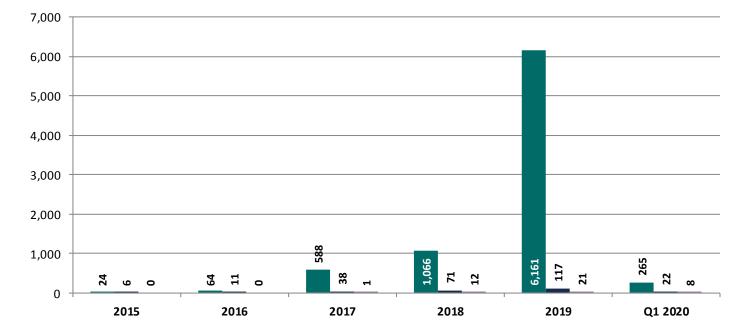


55

Hybrid 457 Plan – Distributions by Type



Note: Rollover Distributions Excluded and Reported on Subsequent Pages



Lump Sum Distributions

Partial Distributions

Installment Distributions

Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2015	24	6	0
2016	64	11	0
2017	588	38	1
2018	1,066	71	12
2019	6,161	117	21
Q1 2020	265	22	8

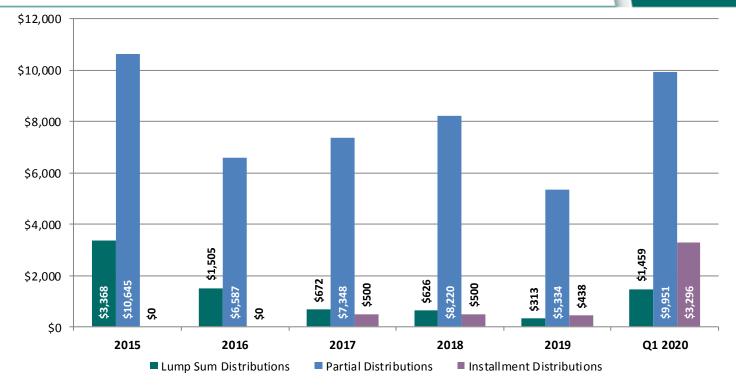
Note: Data not available for 2014. Tracking started in 2015.

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Virginia Retirement System

Hybrid 457 Plan – Average Distribution Amount

Note: Rollover Distributions Excluded and Reported on Subsequent Pages



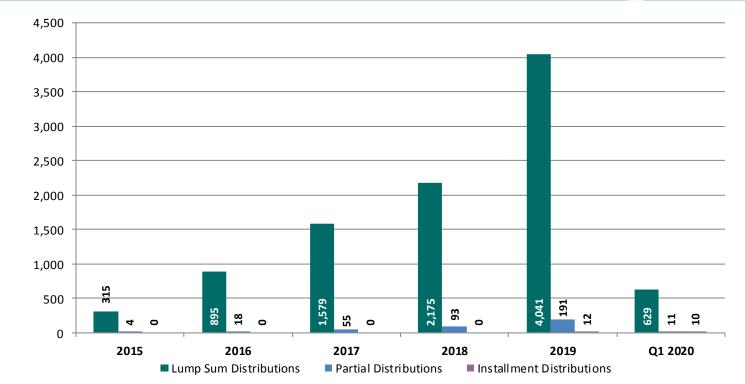
Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2015	\$3,368	\$10,645	\$0
2016	\$1,505	\$6,587	\$0
2017	\$672	\$7,348	\$500
2018	\$626	\$8,220	\$500
2019	\$313	\$5,334	\$438
Q1 2020	\$1,459	\$9,951	\$3,296

Note: Data not available for 2014. Tracking started in 2015. Master Page # 141 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 57

Hybrid 401(a) Plan – Distributions by Type



Note: Rollover Distributions Excluded and Reported on Subsequent Pages



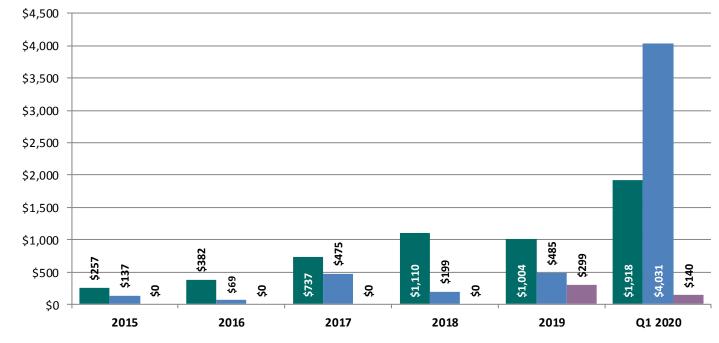
Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2015	315	4	0
2016	895	18	0
2017	1,579	55	0
2018	2,175	93	0
2019	4,041	191	12
Q1 2020	629	11	10

Note: Data not available for 2014. Sr Marstan Ress # July 3ton feeting 6/4/2020 of 3/31/2020 58



Hybrid 401(a) Plan – Average Distribution Amount

Note: Rollover Distributions Excluded and Reported on Subsequent Pages



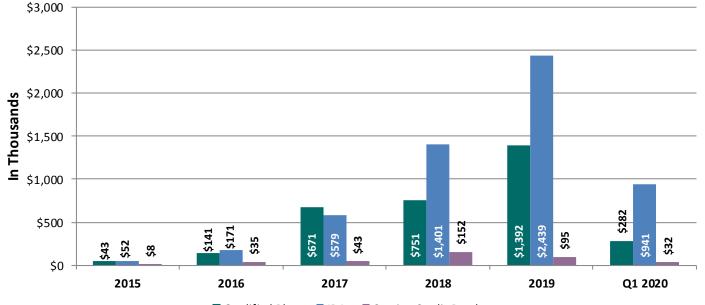
Lump Sum Distributions Partial Distributions Installment Distributions

Period	Lump Sum Distributions	Partial Distributions	Installment Distributions
2015	\$257	\$137	\$0
2016	\$382	\$69	\$0
2017	\$737	\$475	\$0
2018	\$1,110	\$199	\$0
2019	\$1,004	\$485	\$299
Q1 2020	\$1,918	\$4,031	\$140

-Note: Data not available for 2014. Master Page # 143 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 59

Hybrid 401(a) & 457 Plans – Rollover Distribution Destinations – Total Amounts





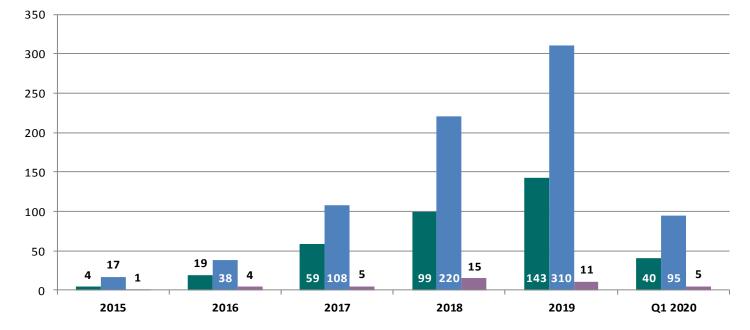
Qualified Plan	IRA 🖉	Service Credit Purchase
----------------	-------	-------------------------

Period	Qualified Plan	IRA	Service Credit Purchase	Total
2015	\$43	\$52	\$8	\$103
2016	\$141	\$171	\$35	\$347
2017	\$671	\$579	\$43	\$1,293
2018	\$751	\$1,401	\$152	\$2,305
2019	\$1,392	\$2,439	\$95	\$3,926
Q1 2020	\$282	\$941	\$32	\$1,255

Note Data not available for 20161 Tracking started in 2015 in Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 60

Hybrid 457 Plan – Rollover Distribution Destinations





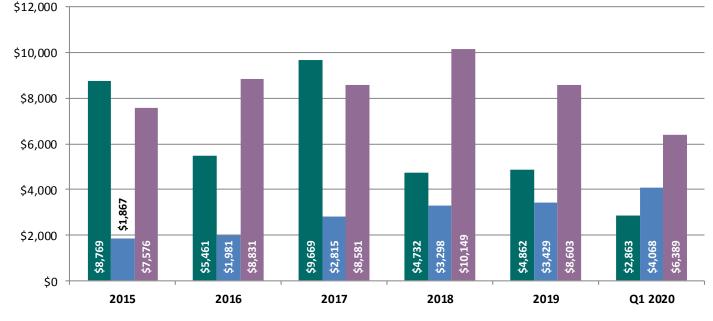
■ Qualified Plan ■ IRA ■ Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Total Rollover Distributions
2015	4	17	1	22
2016	19	38	4	61
2017	59	108	5	172
2018	99	220	15	334
2019	143	310	11	464
Q1 2020	40	95	5	140

Note: Data Page # 145 for 2814- Toefined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 61

Hybrid 457 Plan – Rollover Distribution Average Amounts





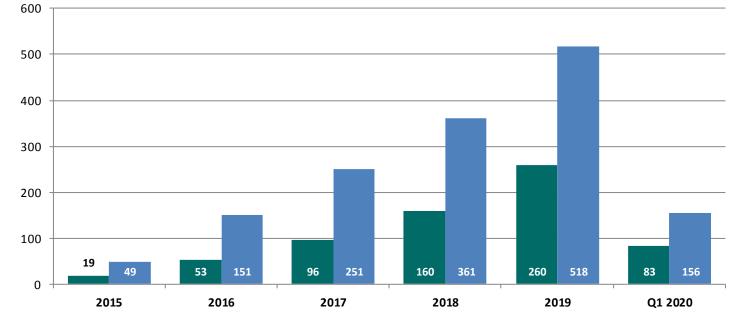
Qualified Plan IRA Service Credit Purchase

Period	Qualified Plan	IRA	Service Credit Purchase	Average Rollover Distribution
2015	\$8,769	\$1,867	\$7,576	\$3,381
2016	\$5,461	\$1,981	\$8,831	\$3,514
2017	\$9,669	\$2,815	\$8,581	\$5,334
2018	\$4,732	\$3,298	\$10,149	\$4,031
2019	\$4,862	\$3,429	\$8,603	\$3,993
Q1 2020	\$2,863	\$4,068	\$6,389	\$3,807

Note: Data not available for 2014. Tracking started in 2015. Master Page # 146 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 62

Hybrid 401(a) Plan – Rollover Distribution Destinations





Qualified Plan IRA

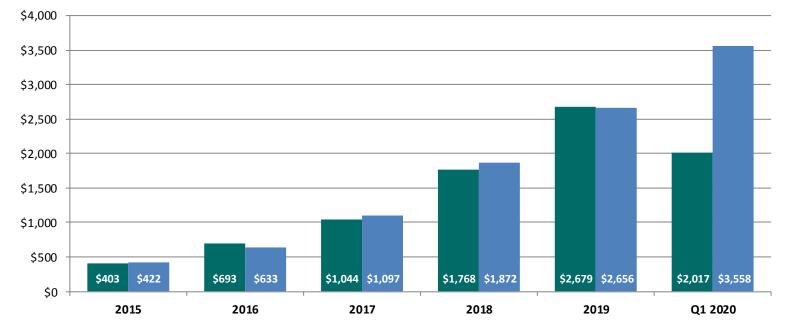
Period	Qualified Plan	IRA	Total Rollover Distributions*
2015	19	49	68
2016	53	151	204
2017	96	251	347
2018	160	361	521
2019	260	518	778
Q1 2020	83	156	239

* Service Credit Purchases are not allowed from the Hybrid 401 plan.

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DCP Virginia Retirement System

Hybrid 401(a) Plan – Rollover Distribution Average Amounts



Qualified Plan IRA

Period	riod Qualified Plan IRA		Average Rollover Distribution*
2015	\$403	\$422	\$416
2016	\$693	\$633	\$648
2017	\$1,044	\$1,097	\$1,083
2018	\$1,768	\$1,872	\$1,840
2019	\$2,679	\$2,656	\$2,664
Q1 2020	\$2,017	\$3,558	\$3,023

* Service Credit Purchases are not allowed from the Hybrid 401 plan.

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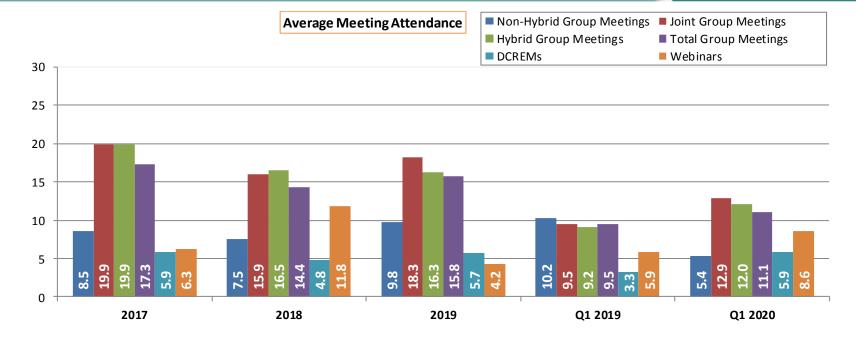


Field Education Services

Note: All data is as of 3/31/2020 unless otherwise stated.

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Virginia Service Center – 2020 Activity



	20)17	20	18	2019		2019		2019 Q1-2019		Q1-2020	
Туре	Number of Meetings	Attendance										
Non-Hybrid Group Meetings	480	4,087	396	2,968	409	3,998	103	1,051	76	407		
Joint Group Meetings	976	19,463	972	15,503	877	16,007	215	2,033	200	2,582		
Hybrid Group Meetings	623	12,424	552	9,085	599	9,739	121	1,108	80	962		
Total Group Meetings	2,079	35,974	1,920	27,556	1,885	29,744	439	4,192	356	3,951		
DCREM (Publicly Scheduled)	252	1,487	235	1,135	185	1,049	36	118	16	94		
Webinars	53	332	54	638	81	344	24	141	9	77		

Master Page # 150 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 66



Individual Counseling Sessions/Office Activity							
Period	Number of Counseling		Virginia Service Center Calls Handled	Virginia Service Center Walk-ins			
Q1 2020	Non-Hybrid Hybrid	1,447 709	633	45*			
2019	Non-Hybrid Hybrid	4,601 3,410	2,042	221			
2018	Non-Hybrid Hybrid	5,248 3,070	1,734	151			
2017	Non-Hybrid Hybrid	5,947 3,125	1,552	201			
2016	Non-Hybrid Hybrid	5,720 2,639	1,693	251			
2015	Non-Hybrid Hybrid	5,483 1,480	2,390	177			
2014	Non-Hybrid Hybrid	5,619 202	1,733	141			

* Virginia Service Center closed to participants for Walk-ins on March 23, 2020 due to the COVID-19 pandemic. Reopen TBD.

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Survey Highlights – Q1 2020

- Audience
 - COV 457 Presentations (76 group meetings)
 - Hybrid Presentations (80 group meetings)
 - Joint Group Presentations (200)
 - Individual Meetings (1,447 Non-Hybrid, 709 Hybrid)
 - Survey: 119 Respondents (79 Non-Hybrid, 40 Hybrid)
- Responses Meetings
 - 100% strongly agreed or agreed: presenter was professional, prepared, clearly explained concepts, kept employees engaged and met employee's expectations
 - 100% strongly agreed or agreed: seminar provided a clear understanding of the content, was of value, was recommendable to a co-worker, and met their expectations
- Responses Individual Consultations
 - 99% of participants who met individually with reps strongly agreed or agreed: presenter was
 professional, prepared, knowledgeable, allowed ample time, and met their overall
 expectations
 - 94% of participants who met individually with reps strongly agreed or agreed: their concerns were addressed, the presenter provided value, they would recommend to a co-worker, and the personalized consultation met their expectations

Survey Highlights – Q1 2020



Actions taken as result of meetings:	Hybrid	Non-Hybrid
 Enrolled in the retirement program 	n/a	0.0%
 Began making voluntary contributions 	8.0%	n/
 Increased contributions 	25.0%	20.09
 Reviewed my investment options 	50.0%	45.09
- Reallocated my account	8.0%	35.09
- Signed up for standard catch-up	n/a	5.09
– Signed up for eDelivery	8.0%	0.0
- Updated beneficiary information	8.0%	25.09
– Took no action	25.0%	35.09
– Other*	17.0%	10.0

• Actions taken as result of the individual consultations:	Hybrid	Non-Hybrid
 Enrolled in the retirement program 	n/a	2.0%
 Began making voluntary contributions 	19.0%	n/a
 Increased contributions 	26.0%	29.0%
 Reviewed my investment options 	37.0%	52.0%
 Reallocated my account 	19.0%	14.0%
 Signed up for standard catch-up 	n/a	0.0%
 Signed up for eDelivery 	4.0%	0.0%
 Updated beneficiary information 	22.0%	22.0%
 Took no action 	19.0%	26.0%
– Other*	15.0%	16.0%

*"Other" includes inquiries such as: Indicative Data, Account Access or Disbursements.

Note: Survey totals may equal less than 100% because respondents may not complete all sections of the survey. Survey totals

may exceed 100% because participants chose multiple items. Master Page # 153 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 69

VRS Defined Contribution Plans



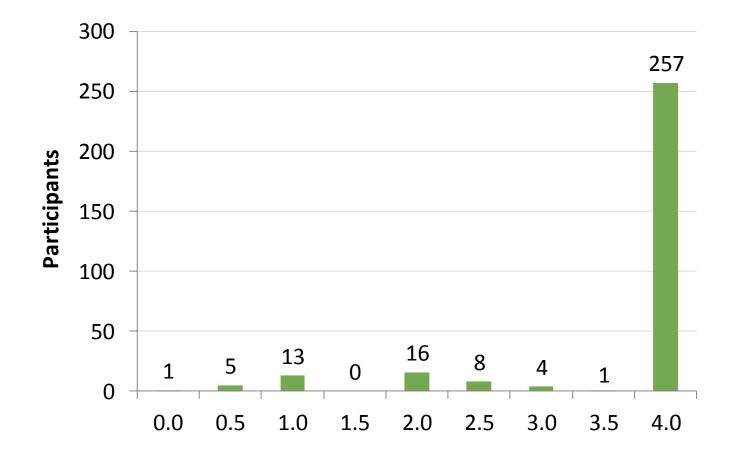
Online Resources

Note: All data is as of 3/31/2020 unless otherwise stated.

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Hybrid Voluntary Preset

Since Inception: June 2018



Hybrid Voluntary Deferral %

Virginia Retirement System

Hybrid 457 Splash Screen Launched December 17, 2019



Take Action With Voluntary Contributions!

As a Hybrid Retirement Plan member, you are eligible for an employer match on your voluntary contributions. When you contribute 4 percent, your employer contributes 2.5 percent. The sooner you start saving, the better prepared you'll be for your future.

To take full advantage of the employer match, make the maximum 4 percent voluntary contribution to your Hybrid 457 Deferred Compensation Plan before contributing to the Commonwealth of Virginia 457 Deferred Compensation Plan or any other supplemental retirement plan offered by your employer. Also, contributions to multiple 457 plans count toward the IRS annual contribution limit.

MEET YOUR MATCH Contribute 4% for a 2.5% savings match!

Save 4 percent now



Select One:

I'm ready to save 4 percent and maximize my hybrid voluntary contributions. I want to increase my hybrid voluntary contributions by a different amount. I am not interested in saving more for my future at this time.

Choose an amount to save

Wait to save

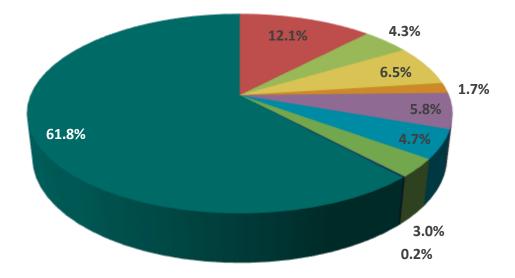
Members Who Saw the Splash Screen & Subsequent Action



Since Launch of Latest Campaign: December 17, 2019

Hybrid members who were not maxing out their contributions at 4% and saw the splash screen

	Button Options:					
Action	Save 4% Now	Choose an amount to save	Wait to Save			
Increased Contributions	200	112	123			
Decreased Contributions	3	21	68			
Remained the Same	8	0	1			



■ 0.0 ■ 0.5 ■ 1.0 ■ 1.5 ■ 2.0 ■ 2.5 ■ 3.0 ■ 3.5 ■ 4.0

Master Page # 157 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 73

- Launched November 2018
 - 944 Participants have signed up
 - Average Pre-Tax SmartStep Election \$59
 - Average Roth SmartStep Election \$17

SmartStep – Hybrid Plan

- Launched October 2017
 - 1,920 Members have signed up
 - Average SmartStep Election 1.08%
 - 51.20% of members elected 0.5%
 - 27.76% of members elected 1.0%

VRS Defined Contribution Plans ORPHE Quarterly Review



Reports for Quarter ending March 31, 2020 These reports are prepared by the providers and presented by DC Plans Administration.

- Financial Transactions Report TIAA
- Participant Use of Funds TIAA
 - All Funds
 - Selected Funds

ORPHE – TIAA Financial Transactions

Prepared by TIAA as of March 31, 2020 (Page 1 of 2)

DCP	
Virginia Retirement Systen	7

		12/31/	2019 Prior Closing	g Balances				Incoming Rollovers/		Transfer Alterna		
Account Name	GRA	RA	RC	Other**	Grand Total	Contribu	itions	Transfers		Carrie	r	Net Transfers
American EuroPac Growth R6	\$ -	\$ -	\$ 13,091,865.17	\$ -	\$ 13,091,865.17	\$	- \$		\$	-	\$	(13,233,271.44
BlackRock Equity Index Fund J	\$.	\$ -	\$ -	\$ -	\$ -	\$ 795,57	8.50 \$	125,722.17	\$	-	\$	15,688,144.82
BlackRock LifePath Index 2025O	s -	s -	\$ -	\$ -	s -	\$ 361,31	9.78 \$	101,892.71	\$	-	s	14,278,857.24
BlackRock LifePath Index 20300	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 494,86	4.04 \$	525,926.35	Ś	-	\$	16,192,987.78
BlackRock LifePath Index 2035D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 482,03	7.43 \$	1.00	\$	-	s	11,622,676.05
BlackRock LifePath Index 20400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 441,22	2.52 \$		\$	-	s	13,702,450.33
BlackRock LifePath Index 2045D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 561,11	3.18 \$	54,762.37	\$	-	s	12,116,050.28
BlackRock LifePath Index 20500	s -	s -	\$ -	\$ -	s -	\$ 387,22	3.04 \$	18,849.31	s	-	s	6,334,454.45
BlackRock LifePath Index 20550	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 230,36	8.95 \$	1. A A A A A A A A A A A A A A A A A A A	\$	-	\$	2,560,390.76
BlackRock LifePath Index 2060D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 69,99	7.84 \$	1,834.54	\$	-	S	393,643.32
BlackRock LifePath Index 2065O	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$		\$	-	s	35,499.24
BlackRock LifePath Index Ret O	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 474,62	0.67 \$	6,466.03	\$	-	\$	21,793,909.33
BlackRock MS AC IMI Idx NoLe M	s -	s -	s -	5 -	s -	\$ 1,663,82	1.55 \$	268,410.86	S	-	s	26,645,462.85
BlackRock MSCIACWlexUSIMIIM	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 249,99	1.84 \$	4,607.03	Ś	-	\$	13,346,361.44
BlackRock Russell 2500 Index M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,58	4.16 \$	55,704.22	\$	-	s	870,615.91
BlackRock Sh Term Investment W	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140,67	5.41 \$	2,438.35	Ś	-	s	4,013,651.43
BlackRock US Debt Ind M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 305,70	3.05 \$	154,250.44	\$	-	\$	5,485,183.16
BlackRock US Tre Inf Pro Sec M	s -	s -	\$ -	\$ -	s -	\$ 162,78	6.47 \$	23,660.24	\$	-	s	2,894,971.24
CREF Bond Market R3	\$ 25,371,126.36	\$ 1,226,481.04	\$ 4,481,276.12	\$ -	\$ 31,078,883.52	\$	- \$	2.4	Ś	-	\$	(3,489,692.76
CREF Equity Index R3	\$ 68,882,483.71	\$ 2,576,892.02	\$ 13,390,142.06	5 -	\$ 84,849,517.79	5	- 5	2. .	\$	-	\$	(14,965,477.59
CREF Global Equities R3	\$ 43,363,160.68	\$ 1,834,699.11	\$ 6,797,606.87	\$ -	\$ 51,995,466.66	\$	- \$		\$	-	s	(7,547,530.47
CREF Inflation-Linked Bond R3	\$ 13,455,483.66	\$ 1,005,877.70	\$ 2,472,330.80	\$ -	\$ 16,933,692.16	\$	- \$		\$	-	\$	(2,287,901.69
CREF Money Market R3	\$ 12,709,011.06	\$ 1,257,773.24	\$ 3,062,214.82	\$ 55,553.00	\$ 17,084,552.12	S	- 5		s	-	s	(130,866.91
CREF Stock R3	\$ 180,361,170.93	\$ 27,300,059.49	\$ 20,313,033.05	\$ -	\$ 227,974,263.47	\$	- \$	2.47	Ś	-	\$	(23,970,768.33
DFA Intl Small Company I	\$ -	\$ -	\$ 376,585.02	\$ -	\$ 376,585.02	S	- \$	2. * 2.	\$	-	s	(379,175.23
TIAA Real Estate	\$ 32,986,558.78	\$ 2,011,400.77	\$ 6,030,121.85	\$ -	\$ 41,028,081.40	\$ 381,44	4.16 \$	68,802.03	\$	-	s	(211,646.58
TIAA Traditional	\$ 164,417,067.10	\$ 36,216,940.64	\$ 13,535,796.56	\$ 9,054,209.98	\$ 223,224,014.28	\$ 891,79	1.38 \$	48,895.83	\$	-	\$	1,701,191.10
TIAA-CREF Self Directed Acct	s -	s -	\$ 493,445.87	\$ -	\$ 493,445.87	\$	- \$		\$	-	s	131,901.30
Vanguard Balanced Idx Inst	\$ -	\$ -	\$ 102,395,576.33	\$ -	\$ 102,395,576.33	\$ 9,71	0.56 \$		Ś	-	\$	(102,976,638.34
Total	\$ 541,546,062.28	\$ 73,430,124.0	\$ 186,439,994.52	\$ 9,109,762.98	\$ 810,525,943.79	\$ 8,135,85	4.53 \$	1,462,222.48	\$		\$	615,432.69
CREF Growth R3	\$ 15,941,682.08	\$ 1,395,707.37	s -	\$ -	\$ 17,337,389.45	s	- 5		s	-	s	(400,041.24
CREF Social Choice R3	\$ 9,638,620.23			s -	\$ 9,809,810.48	S	- 5	2.47	Ś	-	ŝ	(215,391.45
Total	\$ 25,580,302.31			\$ -	\$ 27,147,199.93	100	- \$	1.7.1	\$	1	\$	(615,432.69
Grand Total	\$567,126,364.59	\$ 74,997,021.6	\$186,439,994.52	\$ 9,109,762.98	\$837,673,143.72	\$ 8,135,85	4.53 \$	1,462,222.48	\$	9	\$	(0.00

** Other - represent balances in TPA and Interest Only products under the TIAA Traditional fund and Forfeiture/Revenue Credit Account balances in the CREF Money Market fund and BlackRock Sh Term Investment

"" Other Activity - represent Plan Servicing Credits of \$9, 154.31, Conversions In and Dut of \$47,061,680.23 and (\$64,408.41) plus External

> Master Page # 161 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 58

ORPHE – TIAA Financial Transactions

Prepared by TIAA as of March 31, 2020 (Page 2 of 2)

DC	Ρ
Virginia Retiremen	t System

	Earnings - 3/31/2020 Closing Balances																
						Other											
Account Name		Distribution	Fees	Dividends	A	ctivity ~	(Gains/Losses	GRA		RA		RC		Other**	G	irand Total
American EuroPac Growth PI6	\$	- \$		\$	\$		\$	141,406.27 \$		\$	- 5	\$. 5.	\$	- 5	\$.*
BlackRock Equity Index Fund J	\$	(77,510.00) \$	(6,036.52)	\$-	\$	4,113,760.03	\$	(4,105,525.65) \$	-	\$		\$	16,534,133.35	\$		5	16,534,133.35
BlackRock LifePath Index 2025O	\$	(2,135.45) \$	(4,411.40) \$	s -	S	3,666,390.03	s	(2,189,710.57) \$	÷	\$		\$	16,212,202.34	\$		\$	16,212,202.34
BlackRock LifePath Index 2030O	\$	(193,750.69) \$	(5,778.66)	\$-	\$	6,411,070.81	\$	(3,511,163.05) \$	*	\$	- 5	\$	19,914,156.58	\$	- 5	ŝ	19,914,156.58
BlackRock LifePath Index 2035D	\$	(73,798.45) \$	(5,629.03)	5 -	\$	5,313,598.91	\$	(3,171,562.13) \$		\$	- 5	\$	14,167,322.78	\$	- 1	5	14,167,322.78
BlackRock LifePath Index 2040O	\$	(20,807.64) \$	(6,374.74) \$	\$-	\$	5,167,499.68	\$	(3,830,804.83) \$		\$		\$	15,453,185.32	\$		\$	15,453,185.32
BlackRock LifePath Index 2045C)	\$	(86,013.27) \$	(6,818.56)	\$ -	\$	2,493,225.32	\$	(3,351,642.95) \$	-	\$	- 4	\$	11,780,676.37	\$		\$	11,780,676.37
BlackRock LifePath Index 2050O	\$	(16,317.80) \$	(5,559.28)	s -	S	1,273,164.98	s	(1,794,290.88) \$	÷	\$		ŝ	6,197,523.82	\$		\$	6,197,523.82
BlackRock LifePath Index 2055O	\$	(19,449.56) \$	(3,643.73)	\$-	\$	595,372.78	\$	(746,335.96) \$	*	\$		\$	2,616,703.24	\$		\$	2,616,703.24
BlackRock LifePath Index 20600	\$	(1,923.76) \$	(1,334.85)	s -	\$	67,862.74	\$	(113,251.61) \$	5	\$		\$	416,828.22	\$	- 1	5	416,828.22
BlackRock LifePath Index 2065O	\$	(144.61) \$	(15,43)	\$ -	\$		\$	(8,045.40) \$		\$	- 5	\$	27,293.80	\$		\$	27,293.80
BlackRock LifePath Index Ret D	\$	(830,329.60) \$	(6,759.54)	\$ -	\$	6,167,663.48	\$	(2,370,657.20) \$	-	\$		\$	25,234,913.17	\$		\$	25,234,913.17
BlackRock MS AC IMI Idx NoLe M	\$	(275,347.61) \$	(10,323.65)	s -	S	747,646.74	s	(6,597,486.18) \$		\$		ŝ	22,442,184.56	\$		\$	22,442,184.56
BlackRock MSCIACWIexUSIMIIM	\$	(161,541.89) \$	(6,842.57)	\$ -	\$	1,479,674.13	\$	(3,664,236.60) \$	*	\$		\$	11,248,013.38	\$	- 5	\$	11,248,013.38
BlackRock Russell 2500 Index M	\$	(2,167.10) \$	(844.18)	5 -	\$	5,496,380.20	\$	(1,907,983.74) \$	-	\$		\$	4,543,289.47	\$	- 1	5	4,543,289.47
BlackRock Sh Term Investment W	\$	(819,394.18) \$	(1,690.10)	\$ 17,230.57	\$	2,504,190.21	s	- \$		\$	- 5	\$	5,853,636.10	\$	3,465.59	\$	5,857,101.69
BlackRock US Debt Ind M	\$	(147,462.22) \$	(2,523.69)	\$ -	\$	853,138.22	\$	175,969.03 \$	-	\$		ŝ	6,824,257.99	\$		\$	6,824,257.99
BlackRock US Tre Inf Pro Sec M	\$	(18,408.81) \$	(1,306.15)	s -	S	320,428.96	s	31,328.77 \$	÷.	\$	- 5	ŝ	3,413,460.72	\$		\$	3,413,460.72
CREF Bond Market R3	\$	(879,215.65) \$		\$ -	\$	(10,055.77)	\$	58,056.62 \$	25,485,343.07	\$	1,272,632.89	\$	-	\$	- 5	\$	26,757,975.96
CREF Equity Index R3	\$	(605,691.01) \$		5 -	S	(143,486.49)	s	(14,333,269.00) \$	53,102,611.85	Ś	1,698,981.85	\$		s	- 1	5	54,801,593.70
CREF Global Equities R3	\$	(428,711.66) \$	- 5	\$ -	\$	(43,478.98)	s	(9,585,091.52) \$	32,982,085.56	\$	1,408,568.47	\$	-	\$		\$	34,390,654.03
CREF Inflation-Linked Bond R3	\$	(71,854.30) \$		\$ -	\$	2	\$	80,274.59 \$	13,539,750.25	\$	1,114,460.51	Ś		\$		\$	14,654,210.76
CREF Money Market R3	\$	(232,751.97) \$	- 5	s -	S	(86.28)	s	47,505.59 \$	15,080,181.23	S	1,633,763.01	ŝ	43,305.72	S	11,102.59	\$	16,768,352.55
CREF Stock R3	\$	(2,653,408.42) \$		\$ -	\$	(135,747.39)	\$	(45,738,544.64) \$	135,360,018.70	\$	20,115,775.99	ŝ	-	\$		ŝ	155,475,794.69
DFA Inti Small Company I	\$	- \$	- 5	5 -	S	0 - S _ N	s	2,590.21 \$	20-22 8	\$	- 1	\$	5	\$	- 1	5	
TIAA Real Estate	Ś	(319,827.07) \$	(2,874.51) \$	s -	S	(17,762.60)	S	42,074.67 \$	32,256,333.37	\$	1,982,570.44	ŝ	6,729,387.69	\$	- 5	\$	40,968,291.50
TIAA Traditional	\$	(2,913,586.80) \$	(8,835.84)	\$ -	\$	5,401.29	\$	2,201,437.04 \$	164,420,390.60	\$	35,584,439.44	ŝ	15,511,793.83	\$	9,633,684.41	5	225,150,308.28
TIAA-CREF Self Directed Acct	\$	- \$	- 5	s -	S		s	(82,852.92) \$	25 - 20 (20 - 20 - 20 - 20 - 20 - 20 - 20	S	- 5	ŝ	542,494.25	S		\$	542,494.25
Vanguard Balanced Idx Inst	\$	(2,731.58) \$		\$ -	\$	÷.	ŝ	574,083.03 \$	-	\$	- 5	ŝ	-	\$	- 5	ŝ	
Total	\$	(10,854,281.10) \$	(87,602.43) \$	17,230.57	\$ 4	46,325,851.00	\$	(103,747,729.01) \$	472,226,714.63	\$	64,811,192.60	\$	205,706,762.70	\$	9,648,252.59	\$	752,392,922.52
CREF Growth R3	s	(53,722.87) \$		s -	s	(11,122.49)	s	(2,325,460.50) \$	13.356.514.86	S	1,190,527,49	s	23	s	14 13	5	14.547.042.35
CREF Social Choice R3	Ś	(96,262.86) \$			Ś		ŝ	(1,273,855.79) \$	8,093,999.05		130,301.33		14.5	ŝ			8,224,300.38
Total	\$	(149,985.73) \$			\$	(11,122.49)	\$	(3,599,316.29) \$	21,450,513.91	10.0	1,320,828.82	200	50	\$			22,771,342.73
Grand Total	\$	(11,004,266.83) \$	(87,602.43)	\$ 17,230.57	\$ 4	46,314,728.51	\$	(107,347,045.30) \$	493,677,228.54	\$	66,132,021.42	\$	205,706,762.70	\$	9,648,252.59	\$	775,164,265.25

*** Other - represent balances in TPA and Interest Only products under the TIAA Traditional fund and ForfeitureRevenue Credit Account balances in the CREF Meney Market fund and

** Other Activity - represent Plan Servicing Credits of \$9,154.31, Conversions In and Out of \$47,061,680.23 and [\$64,408.41] plus External

ORPHE – TIAA Participant Use of Funds (All Funds)



7946

100%

6,156

35.989

Prepared by TIAA as of March 31, 2020 (Page 1 of 2)

TOTAL PARTICIPANTS

		PARTICIF AS O PLAN	VIRGINIA ORP PANT COUNT F DF MARCH 31, 2 N - 101850 & 500 INES OF BUSIN	2020 1964							
FUND NAME	GRA CONTRACTS	INTEREST ONLY CONTRACTS	RA CONTRACTS	RETIREMENT CHOICE (84)	TPA CONTRACTS	RETIREMENT CHOICE TPA [84]	NUMBER OF PARTICIPANTS	Percentage of account holders	Prior Quarter - 4th QTR 2019	7/1/2004	% Change from 7/1/04 to Current Quarter
BlackRock Equity Index Fund J				1259			1259	15.0%	0	0	N/A
BlackRock LifePath Index 2025O				352			352	4.2%	0	0	N/A
BlackRock LifePath Index 2030O				452			452	5.4%	0	0	N/A
BlackRock LifePath Index 2035O				466			466	5.6%	0	0	N/A
BlackRock LifePath Index 2040O				493			493	5.9%	0	0	N/A
BlackRock LifePath Index 2045O				521			521	6.2%	0	0	N/A
BlackRock LifePath Index 2050O				389			389	4.6%	0	0	N/A
BlackRock LifePath Index 2055O				253			253	3.0%	0	0	N/A
BlackRock LifePath Index 2060O				86			86	1.0%	0	0	N/A
BlackRock LifePath Index 2065O			l l l l l l l l l l l l l l l l l l l	1			1	0.0%	0	0	N/A
BlackRock LifePath Index Ret O				549			549	6.6%	0	0	N/A
BlackRock MS AC IMI Idx NoLe M			, in the second s	1821			1821	21.8%	0	0	N/A
BlackRock MSCIACWIexUSIMIIM			í l	1022			1022	12.2%	0	0	N/A
BlackRock Russell 2500 Index M				159			159	1.9%	0	0	N/A
BlackRock Sh Term Investment W				411			411	4.9%	0	0	N/A
BlackRock US Debt Ind M			i i i	1010			1010	12.1%	0	0	N/A
BlackRock US Tre Inf Pro Sec M				675			675	8.1%	0	0	N/A
American EuroPac Growth R6							0	0.0%	880	0	N/A
CREF Bond Market R3	1727		95				1822	21.8%	1946	971	87.64%
CREF Equity Index R3	1919		82				2001	23.9%	2207	1,049	90.75%
CREF Global Equities R3	2113		93				2206	26.4%	2342	1,799	22.62%
CREF Growth R3	844		47				891	10.6%	885	2,038	-56.28%
CREF Inflation-Linked Bond R3	1216		69				1285	15.4%	1348	379	239.05%
CREF Money Market R3	1284		148				1432	17.1%	1419	793	80.58%
CREF Social Choice R3	443		17				460	5.5%	465	1,004	-54.18%
CREF Stock R3	3387		531				3918	46.8%	3866	3,677	6.55%
DFA Intl Small Company I							0	0.0%	98	0	N/A
TIAA Real Estate	2640		132	1455			4227	50.5%	2951	1,396	202.79%
TIAA Traditional	4038	32	851	1519	259	8	6707	80.1%	4775	3,589	86.88%
TIAA-CREF Self Directed Acct				14			14	0.2%	13	0	N/A
Vanguard Balanced Idx Inst							0	0.0%	2991	0	N/A
TOTAL INACTIVE PARTICIPANTS							5113	61%	5129	3,168	61.40%
TOTAL ACTIVE PARTICIPANTS							3258	39%	2817	2,988	9.04%
TOTAL DADTICIDANTS								1000/	70.40	0.450	05 000/

*NOTE - Number of actions will excet a baricipant number since Contribution Plans, Advisory, Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 60

8371

ORPHE – TIAA Participant Use of Selected Funds

DCP Virginia Retirement System

Prepared by TIAA as of March 31, 2020 (Page 2 of 2)

	EX	A: Pi ALI	VIRGINIA ORI ICIPANT COUNT S OF MARCH 31, LAN - 101850 & 50 L LINES OF BUS GROWTH AND C	REPORT 2020 00964	DICE			·			
FUND NAME	GRA CONTRACTS	INTEREST ONLY CONTRACTS	RA CONTRACTS	RETIREMENT CHOICE (84)	TPA CONTRACTS	RETIREMENT CHOICE TPA (84)	NUMBER OF PARTICIPANTS	Percentage of account holders	Prior Quarter - 4th QTR 2019	7/1/2004	% Change from 7/104 to Current Quarter
BlackRock Equity Index Fund J				1259			1259	15.0%	0	0	N/A
BlackRock LifePath Index 2025O				352			352	4.2%	0	0	N/A
BlackRock LifePath Index 2030O				452			452	5.4%	0	0	N/A
BlackRock LifePath Index 2035O				466			466	5.6%	0	0	N/A
BlackRock LifePath Index 20400				493			493	5.9%	0	0	N/A
BlackRock LifePath Index 20450		, ,	· · · · · · · · · · · · · · · · · · ·	521	1		521	6.2%	0	0	N/A
BlackRock LifePath Index 2050O				389			389	4.6%	0	0	N/A
BlackRock LifePath Index 2055O				253	j i		253	3.0%	0	0	N/A
BlackRock LifePath Index 2060O				86			86	1.0%	0	0	N/A
BlackRock LifePath Index 2065O		[1	1			1	0.0%	0	0	N/A
BlackRock LifePath Index Ret O				549			549	6.6%	0	0	N/A
BlackRock MS AC IMI Idx NoLe M				1821			1821	21.8%	0	0	N/A
BlackRock MSCIACWIexUSIMIIM				1022			1022	12.2%	0	0	N/A
BlackRock Russell 2500 Index M				159			159	1.9%	0	0	N/A
BlackRock Sh Term Investment W				411			411	4.9%	0	0	N/A
BlackRock US Debt Ind M			· · · ·	1010	ę. – – – – – – – – – – – – – – – – – – –		1010	12.1%	0	0	N/A
BlackRock US Tre Inf Pro Sec M				675			675	8.1%	0	0	N/A
American EuroPac Growth R6		i i i i i i i i i i i i i i i i i i i					0	0.0%	880	0	N/A
CREF Bond Market R3	1727		95				1822	21.8%	1946	971	87.64%
CREF Equity Index R3	1919		82		[2001	23.9%	2207	1,049	90.75%
CREF Global Equities R3	2113		93				2206	26.4%	2342	1,799	22.62%
CREF Inflation-Linked Bond R3	1216		69				1285	15.4%	1348	379	239.05%
CREF Money Market R3	1284		148				1432	17.1%	1419	793	80.58%
CREF Stock R3	3387		531				3918	46.8%	3866	3,677	6.55%
DFA Intl Small Company I							0	0.0%	98	0	N/A
TIAA Real Estate	2640		132	1455			4227	50.5%	2951	1,396	202.79%
TIAA Traditional	4038	32	851	1519	259	8	6707	80.1%	4775	3,589	86.88%
TIAA-CREF Self Directed Acct				14			14	0.2%	13	0	N/A
Vanguard Balanced Idx Inst							0	0.0%	2991	0	N/A
TOTAL INACTIVE PARTICIPANTS							5113	61%	5129	3,168	61.40%
TOTAL ACTIVE PARTICIPANTS					_		3258	39%	2817	2,988	9.04%
TOTAL PARTICIPANTS							8371	100%	7946	6,156	35.98%

*NOTE - Number of accounts will exceed participant numbers since a participant may invest in more than one fund Master Page # 164 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020 of 3/31/2020 61

VRS Defined Contribution Plans End of Quarterly Review





Master Page # 165 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020



VRS Defined Contribution Plans Record Keeper 2019 Report



Master Page # 166 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020

Agenda

DAY 1: APRIL 30 1:00 p.m. – 4:00 p.m.



By the Numbers

Overall Relationship and 2019 Accomplishments

- Performance Standards
- Employer Support
- Plan Conversions and Adoptions
- Operational Highlights: State Plan Services Team (SPST)
- Call Center Quality Assurance Monitoring

DAY 2: MAY 11

1:00 p.m. – 4:00 p.m.





Overall Relationship and 2019 Accomplishments (Continued)

- Technology
- Defined Contribution Plans Retirement Specialists Activity
- Communications

Future Initiatives

- Communications
- Technology
- Defined Contribution Plans Retirement Specialists
- Enhanced Rollin Process

Service Team

Senior Leadership



David Tanguay Sr. VP, Chief Client Services Officer



Joe Teague Acting Senior Vice President, Chief Sales Officer

Relationship Management



Angela Greenleaf Vice President, Client Services



Kathleen Wilson Director, Relationship Management

Employer Support



Mireya Lacey Relationship Manager, Client Services



Victoria Curington Coordinator, Client Services



Ashley Velazquez Coordinator, Client Services

Plan Administration



Maria Pruner Sr. Manager, Client Services

Project Management & Reporting



Bob Jacoby Relationship Manager, Client Services



Alev Cakmak Manager, State Plan Service Team



Severin Aiken Operations Supervisor

Educational Support



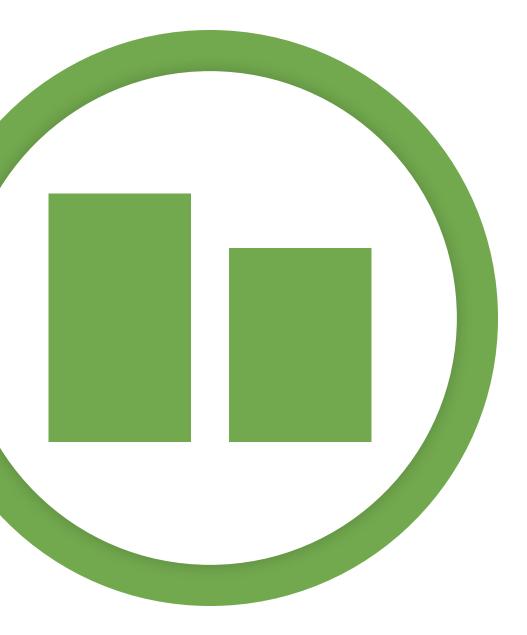
Steve Scott Plan Manager, Field Sales

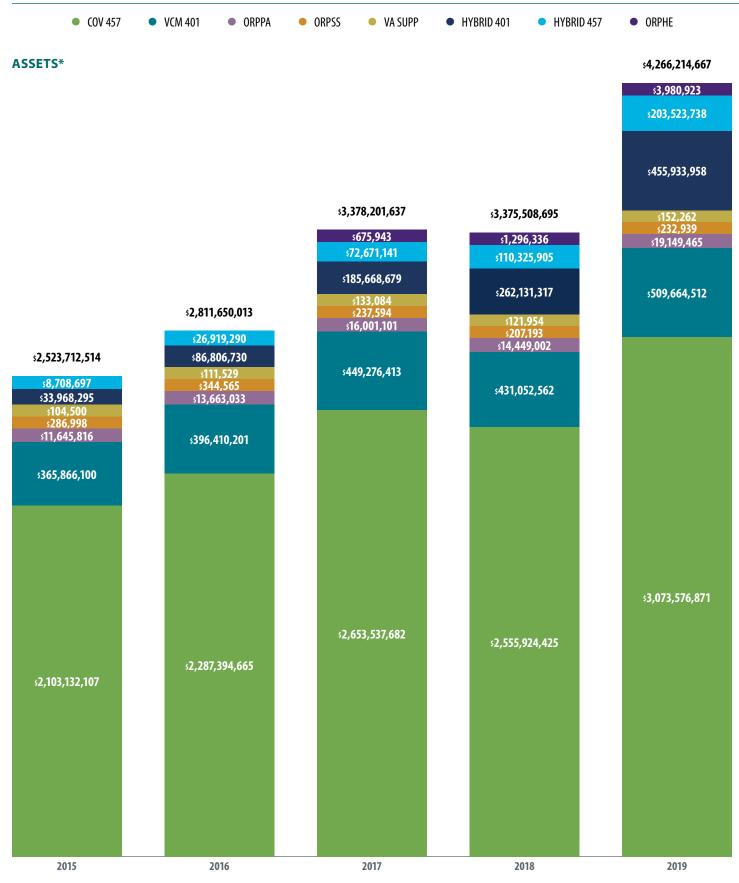


Dawn Cullen Sr. Education Manager, Marketing

By the Numbers

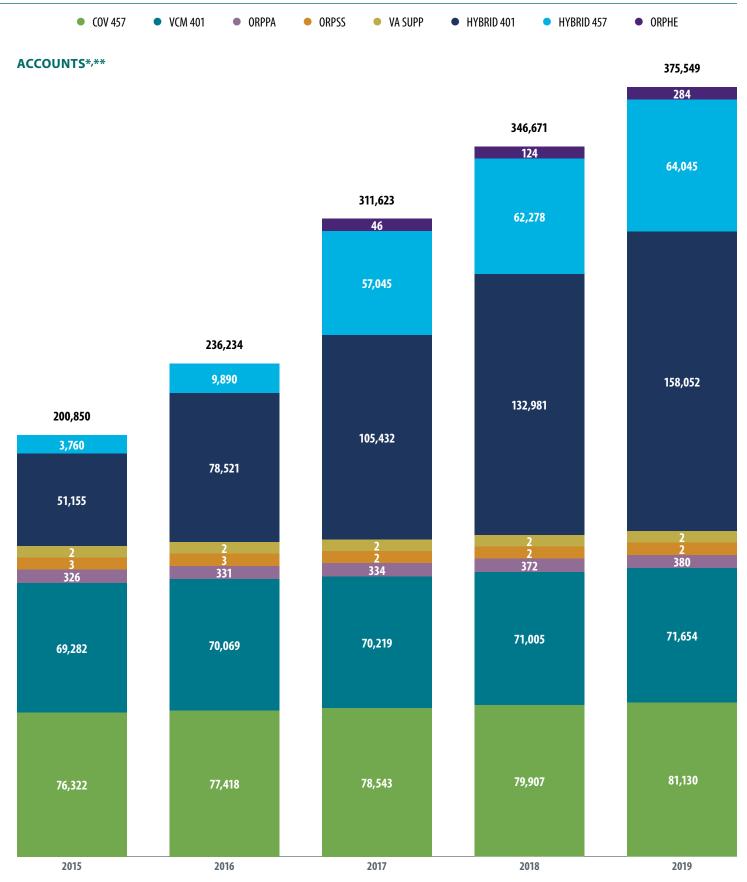
For the Year Ending December 31, 2019





* Includes beneficiary plans, forfeiture accounts and reserve account.

Data generated by ICMA-RC and may differ from results reported by VRS.



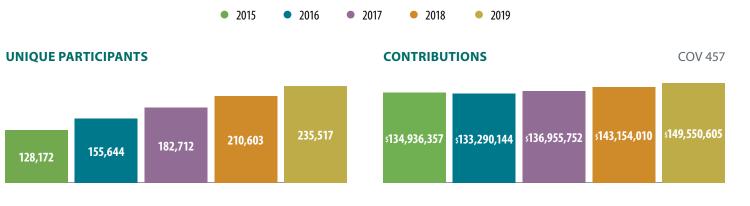
* With balances; includes active and terminated.

3

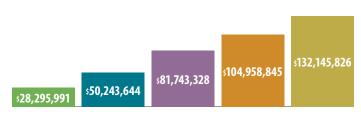
** Includes beneficiary plans, forfeiture accounts and reserve account.

Data generated by ICMA-RC and may differ from results reported by VRS.

2,795

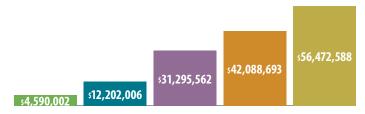


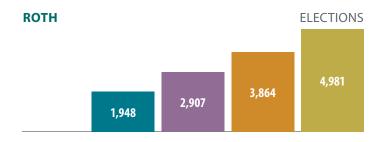
HYBRID 401



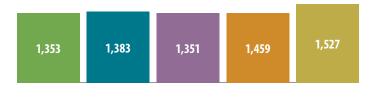
COV 457 AUTO-ENROLLED **ENROLLMENTS** 3,400 3,419 3,295 3,249

HYBRID 457

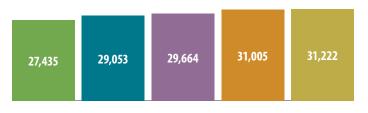




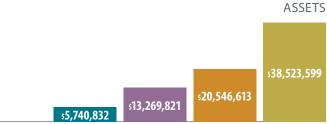
COV 457 SELF-ENROLLED



HYBRID 401

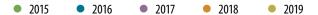






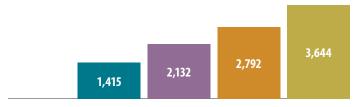
Data generated by ICMA-RC and may differ from results reported by VRS.

4

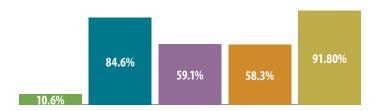


HYBRID PLAN — ACTIVE PARTICIPANTS IN COV 457

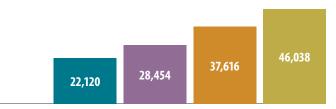
HYBRID 457 AND COV 457





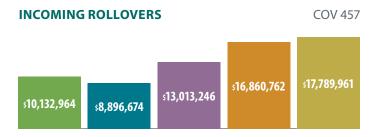


HYBRID 457 ELIGIBLE FOR COV 457



HYBRID 457/COV 457 PARTICIPATION RATE

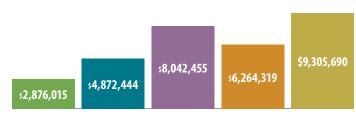




HYBRID PLAN VOLUNTARY DEFERRALS

4%	3,844	8,960	13,804	19,703	27,452
3.5%	15	222	211	190	638
3%	110	208	443	630	886
2.5%	43	513	586	699	1,348
2%	274	362	764	1,119	906
1.5%	50	513	501	578	1,258
1%	270	380	776	1,131	19,123
0.5%	65	43,976	32,252	24,074	52,813
0%	39,507	10,065	34,534	51,365	13,489

HYBRID 457



HYBRID 457 — 4% MAXIMUM DEFERRAL



*2016 & 2019 figures increased due to auto-escalation deferrals captured during October - December opt-out window. Data generated by ICMA-RC and may differ from results reported by VRS.



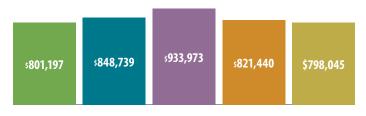
AVERAGE PARTIAL DISTRIBUTION \$



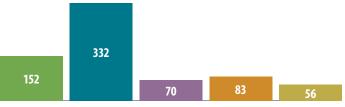
AVERAGE INSTALLMENTS \$



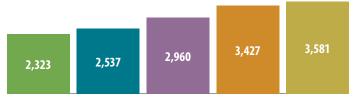
EMERGENCY WITHDRAWALS \$



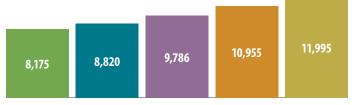
PURCHASE OF SERVICE CREDITS



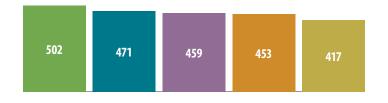
PARTIAL DISTRIBUTION



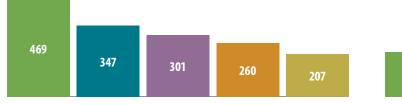
INSTALLMENTS



EMERGENCIES PAID



EMERGENCY REQUESTS DENIED



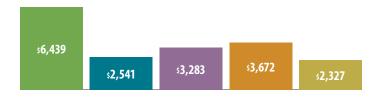
Data generated by ICMA-RC and may differ from results reported by VRS.

6

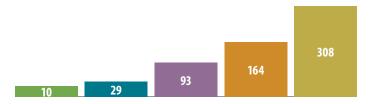
BY THE NUMBERS



AVERAGE PARTIAL DISTRIBUTION \$



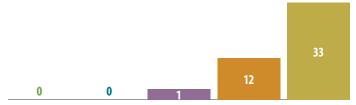
PARTIAL DISTRIBUTION



AVERAGE INSTALLMENTS \$



INSTALLMENTS



7



* Does not include 56 Purchase of Service Credits (PSC) Rollouts (\$415,243). ** Does not include 11 Purchase of Service Credits (PSC) Rollouts (\$94,628). Data generated by ICMA-RC and may differ from results reported by VRS.

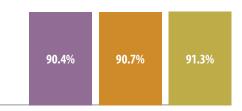
2017 2018 2019

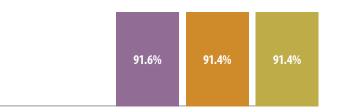
RETENTION: COV 457

On 12/31/2018:

25,781 COV 457 account balances were greater than \$1,000 and the participants were eligible to take a distribution. The total sum of the eligible participants' account balances totaled \$1,172,849,493.

COV 457 RETENTION RATE (ACCOUNTS)





COV 457 RETENTION RATE (\$)

RETENTION: HYBRID 401 AND 457 PLANS

On 12/31/2018:

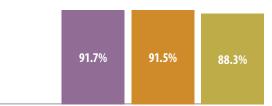
19,426 Hybrid account balances were greater than \$1,000 and the participants were eligible to take a distribution.

The total sum of the eligible participants' account balances totaled \$69,373,127.

HYBRID 401 & 457 RETENTION RATE (ACCOUNTS)



HYBRID 401 & 457 RETENTION RATE (\$)



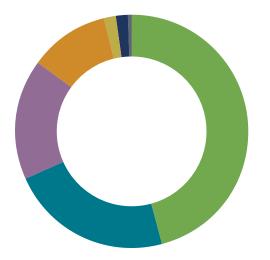
Data generated by ICMA-RC and may differ from results reported by VRS.

9

• 2015 • 2019 • 2016 • 2017 • 2018

CALL CENTER ACTIVITY

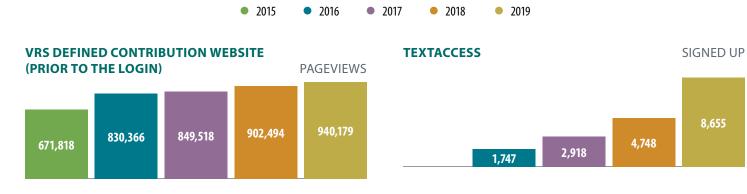
	CALLS TO 800#	68,965	79,131	85,968	81,385	94,630
	TAKEN BY PARTICIPANT SERVICES ASSOCIATES	44,008	46,383	52,026	54,406	61,384
D	DURING BUSINESS HOURS (8:30 A.M. TO 9:00 P.M.)	19,675	17,754	20,378	20,920	24,686
VRU	AFTER HOURS (9:00 P.M. TO 8:30 A.M.)	5,282	11,994	13,564	6,059	8,560
	AVERAGE SPEED OF ANSWER (ASA)*	0:34	0:39	0:26	0:28	0:32
	AVERAGE CALL LENGTH	5:24	6:08	6:09	6:26	7:44



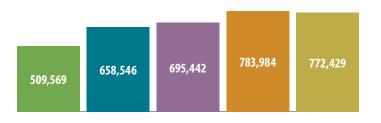
	Disbursement Inquiries	.94 %
ullet	General Inquiries	.45%
	Indicative Data Update/Inquiries	.78%
	Account Access Assistance	. 12 %
	Request Fulfillment/Form Request	.73%
	Transactions (FTF, MF, Allocation)	.61%
	Other:	
	VRU PIN Assistance).17%
	Research	.08%
	Fund Performance Inquiries	.07%
	Fraud Research	.04%
	Spanish Language Services) .01 %
	Advice/Planning**	.00%
	Balance Inquiries	.00%
	Statement Related	.00%

* Annual ASA calculation excluding top 1%. ** Represents Advisory Services Inquiries. Data generated by ICMA-RC and may differ from results reported by VRS.

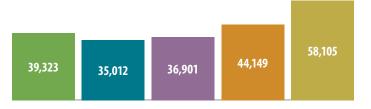
BY THE NUMBERS



UNIQUE PAGEVIEWS



ACCOUNT ACCESS USAGE



AA LOGINS

AA USER IDS



LOGINS FOR 2019

	Online							88%
•	Mobile		•					12%

KEYWORDS FOR 2019

•	Balance/Bal				. 78.6 %
•	Rate of Return/ROR .				.15.8%
•	Contribution/Cont				. 2.9 %
•	Disbursement/Disb				. 1.9%
•	Other:				
	Last 3 Transactions/Tra	ns			. 0.5%
	Loans/Loan				. 0.3%

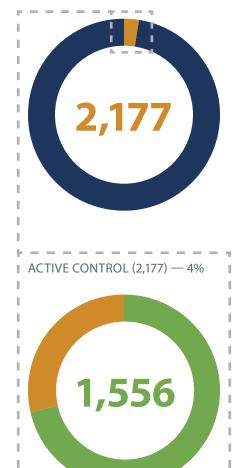
Data generated by ICMA-RC and may differ from results reported by VRS.

AUTO-ESCALATION



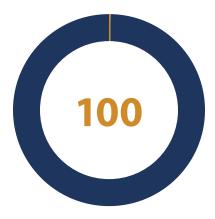
AUTO-ESCALATION GROUP 86,004 ELIGIBLE BASE AS OF 10/1/19

FINAL AUTO-ESCALATION RESULTS ACTIVE CONTROL

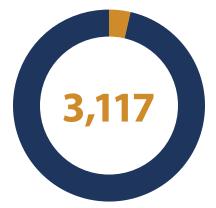


168





TERMINATED EMPLOYMENT



OPT-OUT

ACTIVE "AGREE"



Data generated by ICMA-RC and may differ from results reported by VRS.

Accomplishments



Performance Standards For the Year Ending December 31, 2019

Investment Monthly Reports

MONTHLY	MET
Investment Accounting Report	
Participant Fee Reconciliation	
Administrative Reports	
MONTHLY	МЕТ
Field Activity Calendar	
Plan Summary Report	
Web Usage Activity Report	
Call Center Report	
Agency Participation and Visits Report	
Distribution Activity*	
QUARTERLY	МЕТ
Service Review	
Participant Counts by Employer Code	
ANNUAL	МЕТ
Check Float	
Phone Statistics	
ANNUAL	МЕТ
Abandoned Call Rate (Less than 5%)	2.16%
Average Speed of Answer (35 seconds)	32 seconds**

Informational Meetings

ANNUAL	MET
Group Meetings (1,000 meetings per year)	1,885
Individual Counseling Sessions (3,600 per year)	8,011
Participant Statements	
QUARTERLY	MET
Quarterly Statement Mailing Confirmation (99% of participants' quarterly statements mailed within 15 business days and 100% within 18 business days following quarter end)	
Additional Standards	
ANNUALLY	МЕТ
VRS and Participant Internet System Downtime	
Automatic Enrollment Notice	
1099-R Reporting	
SOC 1/SSAE-16 Report	
Audited Financial Statement	
Proof of Fidelity Bonds	
Security Conformance Statement	

Business Continuity Exercise Report (Semi-annual)

* The monthly Distribution Activity Report is no longer needed. The last report provided to VRS was as of 6/30/2018.

** Annual ASA calculation excluding top 1%.

● 2015 ● 2016 ● 2017 ● 2018 ● 2019

Employer Support

The Defined Contribution Plans Employer Support Team serves all decentralized employers with their administrative needs.

Interaction — The team answered 2,859 calls from employers throughout the year, including 1,967 calls made via the toll-free number and over 800 calls directly to team members' phone extensions. We also responded to more than 2,500 emails.

Auto-Escalation Employer Outreach — In 2019, ICMA-RC partnered with VRS to customize an employer outreach campaign. We sent over 2,800 targeted email messages to 891 employers. In addition, ICMA-RC placed 145 educational calls to large school divisions, employers new to auto-escalation, and employers that were late on submitting their contributions in the past three years.

ACH Debit Process — The team now supports 553 Divisions, utilizing ACH Debit to fund contributions. In 2019, ICMA-RC processed 42 ACH Debit forms to update bank account information.

Cash Imbalances — The team resolved 562 cash imbalances that required outreach and follow-up. The Employer team also contacted employers to resolve over 1,800 scenarios where ICMA-RC received funds but was missing the enrollment data (PNOF: Participant Not on File).

Hybrid Reconciliation — The team collaborates with VRS to assist with the Hybrid Reconciliation and contact employers that are late submitting their contributions to ICMA-RC. Due to our joint outreach and educational efforts, only an average of four employers needed to be escalated to VRS.

COV 457 Reconciliation — The team contacts the decentralized VRS Universities regarding reconciliation issues, including participant data clean-up and research.

EZLink Access — The team enhanced our internal process by creating our VRS EZLink work queue. The work queue allows the team to improve turnaround time frames and have direct communication with our Information Security team. In 2019, the team processed 195 VRS EZLink forms and updated 354 EZLink IDs.

Team Kudos

"I must say that my experience calling in yesterday was awesome and I believe her name was Victoria she was so helpful understanding and walked me through everything. That's something to be pointed out it's not often you get such great customer service like she provided me yesterday."

- Christy Newsome, Town of Windsor

"Ashley Velazquez with ICMA-RC spent a considerable amount of time with me this morning updating contribution submissions in mandatory sources for payroll..... Ms. Velazquez also gave me instructions on completing the Request For Adjustment Review form to correct records...I really appreciate [her] guiding me through this process and being so helpful. Thank you so much."

— Melissa Boucher, Brunswick Industrial Development Authority

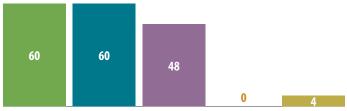


EMPLOYER CALLS ANSWERED

EMAILS ANSWERED



ROUNDTABLES



- ADOPTED THE COV 457 PLAN
- ADOPTED THE VA CASH MATCH PLAN
 - NEW VRS-COVERED EMPLOYER (HYBRID PLAN ONLY)

Plan Conversions & Adoptions

PLAN ADOPTIONS

- Wise County School Board (40197/55597)
- Effective 3/1/2019 •
- Peumansend Creek Regional Jail Authority (55858)
- Effective 5/1/2019 •
- Town of Buchanan (55263)
- Effective 6/1/2019 ●
- Town of Eastville (55264)
- Effective 7/1/2019 ●
- Prince George County (55174)
- Effective 7/1/2019
- Colonial Behavior Health (55425)
- Effective 8/1/2019
- Town of Colonial Beach (55309)
- Effective 8/1/2019
- Chesapeake City Public Schools (40233/55533)
- Effective 8/1/2019
- Town of Scottsville (55245)
- Effective 10/1/2019
- Colonial Soil & Water Conservation District (55938)
- Effective 11/1/2019 •

PLAN CONVERSIONS

City of Virginia Beach (55234)

 Transitioned \$285,177,949.31 in assets and 4,870 accounts on January 14 from Empower.

Virginia Beach Schools (40234/55534)

 Transitioned \$25,610,973.29 in assets and 1,163 accounts on January 14 from Empower.

Virginia Beach Sheriffs (55234)

 Transitioned \$3,612,672.82 in assets and 503 accounts on January 14 from Empower.

Optional Retirement Plan for Higher Ed (108732)

• Transitioned \$115,306,665.32 in assets and 2,057 on February 7, 2020, from Fidelity.

Operational Highlights: State Plan Services Team (SPST)

SPST has a dedicated group of associates and analysts processing VRS participant/member and employer transactions.

Deposits — The team received and processed 29,403 deposits, totaling \$390,956,714.21 in contributions and rollovers.

Participants Not on File — The team researched 1,882 individual contributions for participants not yet enrolled (in which 1,839 were Hybrid-related).

Distributions — 17,695 distribution requests were processed. We adopted additional enhanced security protocols for distributions specifically focused on in-service withdraw requests and requests meeting specific thresholds.

Emergency Distributions — 417 emergency distributions were paid out, totaling \$798,045.31

Amendments — 11,264 documents were processed.

Research/Adjustments/Corrections — 2,794 total corrections were processed, including:

- 2,215 corrections for the Hybrid Plan
- 495 for the COV 457 and VCM Plans

Forfeiture Usage — 270 decentralized employers used forfeiture assets to fund their December employer contributions. 160 CIPPS agencies used forfeitures funds in June, for a 2019 total of \$2,256,333.82.

Small Balance Payouts —

- Completed small balance payout in Q2 and Q4 for all participants in 2019. In 2019 the VRS Hybrid Plans were included in the small balance payments and responsible for the increase in small balance payouts in 2019 vs. prior years.
- 7,011 small balance payouts were processed for the COV 457, Virginia Cash Match Plans, the Hybrid 401 and 457 in June and 962 in December for a total of 7,973.

Administrative Guide — Semi-annual reviews were completed.

SPST Projects

The SPST, Quality Manager, Employer Support Team, Communications Manager, ICMA-RC Information Technology and VRS partnered to enhance plan administration and completed or initiated a number of projects in 2019. Here are some of these enhancements:

- Completed 52% for the Deceased Participates with DCP Balances Project.
- Moved all beneficiary accounts under the main plans to the beneficiary plan (those without existing installments.) (Those with installments are a Q1 2020 Initiative).
- Suppressed termination dates on the monthly file to DOA.
- Enhanced VNAV Hybrid 403(b) Elect/Deferral Allow Indicator for participants who are changing employers to allow for deferral updates.
- Enhanced reporting by adding the Annual Review of Age 50+ Report to identify participants turning age 50 to check for missing employee IDs.
- Assisted in the online ACH Information initiative to help encourage participants to enter the banking information securely online and reduce banking information sent via regular mail by participants.
- Partnered with Cardinal on the initial phase of the Cardinal Project.
- Assisted with the City of Virginia Beach, Virginia Beach Public Schools and ORPHE Conversions.
- Assisted with the data management and clean up for the 2020 Auto-Escalation initiative.

2019 ACCOMPLISHMENTS

2015
 2016
 2017
 2018
 2019

OPERATIONAL SUPPORT

	PARTICIPANTS NOT ON FILE (PNOFs)	1,157	959	1,764	3,096	1,882
	CASH IMBALANCES	301	322	359	537	562
	DEPOSITS	18,641	22,903	28,447	28,648	29,403
	ACH DEBIT USERS	495	511	533	566	553
	FORFEITURE ACCOUNTS	190	539	661	731	769
	NON-CIPPS FORFEITURE USERS	97	173	201	304	270
	CIPPS FORFEITURE USERS	58	95	142	156	160
	ADJUSTMENTS	2,600	3,954	4,384	4,118	2,794
NTS	HYBRID ADJUSTMENTS				1,269	1,364
ADJUSTMENTS	COV/CM ADJUSTMENTS (MOFs)				50	67
ADJ	ORPPA ADJUSTMENTS				1	0
	DISTRIBUTIONS PAID	28,591	25,042	28,554	32,864	42,170
	DISTRIBUTIONS REQUESTED	11,341	12,447	13,717	18,054	17,695
	AMENDMENTS	10,082	10,787	11,538	11,845	11,264

Cash Imbalances — Represents occurrences in which ICMA-RC received funding that could not post on the same business day. For example, received funding but did not receive the payroll

file on the same day.

Adjustments — Prior to 2018, Mistake of Fact numbers were represented by COV MOFs and Hybrid Adjustments. Total annual numbers were: 2015 – 500; 2016 – 733; 2017 – 572. For these years, ICMA-RC reported numbers for parent MOFs. **Distribution Request** — Includes full and partial lump sum payouts, initial setup of installment payments, rollovers, unforeseen emergency withdrawals, de minimis distributions, requested RMD payments, purchase of service credits, and beneficiary distributions.

Distributions Paid — In addition to the Distribution Requests, Distributions Paid also includes reoccurring installment payments, small balance payouts and RMD payments. **Amendments** — Represents nonfinancial transactions, such as adding beneficiary information to account(s), updating indicative data on wage accounts, etc.

* 2018 figure increased due to a change in capturing MOFs at the participant level.

Call Center Quality Assurance Monitoring

ICMA-RC's Contact Center received 61,384 calls from VRS participants in 2019. It is critical that we provide accurate plan information while expressing empathy to them during these calls.

Kathleen Wilson, Director, and Angela Greenleaf, Vice President for the National Relationship Management Team, along with Fred Gatty, Participant Services Senior Manager for the Quality Assurance Program, are currently leading the quality enhancement effort for the Contact Center.

Training

ICMA-RC has implemented the following training opportunities for Contact Center team members to ensure they are knowledgeable in all aspects of the VRS plans.

- **10 team members** trained on the COV 457, Cash Match and Optional Retirement Plans
- Five team members trained on the Hybrid 401(a) and 457 (b) Plans
- Four training sessions for Contact Center team members
- One training session for Financial Planning Team
- Upgraded Salesforce to Lightning
- Continued to make updates to Plan Help in Salesforce
- Utilized the VRS DCP Participant Services Distribution List to send out quick updates based upon trends taking place in the Contact Center

Monitoring

The following meetings and tools have been put into place to monitor the quality of the service being provided by the Contact Center team members:

- Leadership Meetings
- Call Calibration Meetings
- Repeat Call Monitoring
- Call Monitoring Form

Talent

- Team consists of managers to provide coaching, senior specialists to provide plan-specific mentoring and specialists to develop succession planning
- Statement period queue alignment:
 - Equivalent of 13.3 Contact Center team members dedicated to the VRS general queue and Hybrid Plan queue
- Non-statement period queue alignment:
 - Equivalent of five Contact Center team members dedicated to the VRS general queue and Hybrid Plan queue

Wow Calls — Feedback from VRS Participants

The VRS participant wanted to provide kudos regarding Tejan's interaction with her. She mentioned that he was very knowledgeable and help her out a great deal. She mentioned that Tejan helped her setup her online account which she had difficulty doing so in the past. Tejan's instructions were crystal clear, as he was patient and very fabulous with his service. The participant knows great service when she sees it because in a former life, she was actually the director of the Defined Contribution Plan for VRS.

> Feedback provided by a participant to an ICMA-RC manager

Ms. Kerry-Ann Clark just provided excellent assistance to me as I was making changes to my investment allocations. Not only did she help me set up a new User and Password she also patiently helped me change current and future investments. Ms. Clark was courteous, patient and very professional and she helped me achieve my objective...Thank you very much..

> Feedback provided by a participant via email to our Contact Center

Technology

Participant Resources

Hybrid Auto-Escalation Enhancements were made in Account Access including a refresh of the splash screen to use Enhanced Active Choice (EAC) and updates to the Auto Escalation page to accommodate SmartStep that was rolled out after the 2017 Auto-Escalation.



The **Hybrid Voluntary Contribution Splash Screen** was updated with new imagery for participants who were contributing less than 4% to the Hybrid 457 plan.

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COV 457 Welcome letter enhanced to include SmartStep information on it.

	-				
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ELLEN GAMPLE 123 ROAD STREET ANYTOWN, USA 12345	Employer Name:	COV 457 DEFERRED CO	OMP PLAN		
	Matte				
	Primary Beneficary:		Relationship to Participont	Percetinge	
	JOHN SAMPLE		to Participent	and ge	Date of Birth
6 m	Contingent/Secondar	Pure	SPOUSE	100%	
RE: Account Setup Dear ELLEN SAMPLE-	MARK SAMPA	y Deneficary(ieg):			08/03/1960
t and to inform you that we have establish	JANE SAMPLE		NON-SPOUSE NON-SPOUSE	50%	06/14/2002
Compensation contributing in the 45/ Full.	avvesiment Allocation for F	uture Contributions	6	50%	06/13/2002
retirement by participe of The 457 Plan can help you realize your retirement	Fund Fund Mame 3304 Targee Date :				
The 45/ ram -				Percent 100.00%	
Automatic Contributions - Your cont we contribution.	Investment Allocations for Fo	iture Roll-ins		100.00%	
	Fund Fund Nome 3304 Target Date 20	10 h			
Cash Match - As long as you are actively on the second secon				Percent 100.00%	
	Investment Allocation for Fatu Fund Fund Name	tre Roth Contributions		100.00%	
 Rollovers into the 457 Plan - Yo traditional IRA to your new 457 P 	3304 Target Date 20				
		- Controllo		Percent 100.00%	
 Contribute other compensation 	Contribution Amount				
 Online account management- fund performance, and take adv www.varetite.org/457. 	You have selected the follow	ving amount(s) to be deducte	d per pay period:		
1	Pre-Tax				
If you have any questions, please call y between 8:30 a.m. and 9:00 p.m. Mo	You are not currently using a may want to consider using a each year.	he SmateStep attention			
	each year.	his feature, which will autom	rral increase feature. If	you have not terminate t	
Once again, welcome to VRS, we we record keeper, to assist you with ma	rou are not currently using a may want to consider using a each year.		and and the set of the	eferrals by a set amount in	a specified manual
					a contraction of the second se
Sincerdy,					
Virginia Revirement System					

COV Paycheck Calculator links were added to the Enrollment and Contribution Change pages in Account Access.

DCP	Defined Contribution	e Fland		PROFESSION DESIGNATION OF THE	accentral con	NAME OF A	
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ACH Direct Deposit Option provides an added layer of security for participants who are requesting distributions with the ACH payment option.

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Roth Allocation by Source enhancement to statements displays Roth allocation for future pre-tax and Roth contributions to participants.

DCP			inancial Report	t for /A 457 Delerrer	/ Camp	mation Pan	
		anuary 1, 2020	March 21, 202	0			
Investment Elections for Patare	Contributions	and the second second					
Beartmant .		Bratian		Robert			
W.B. Steel Street Ford						1815	
Apart Albertow Target Data 2020 Particle		1075		107%			
Total		1975		1475		-	
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One-time passcode implementation in the contact center for participants with an email address or mobile phone number on file allows our contact center to promptly authenticate participants and reduces call time. Account Access Landing Page Checklist rolled out to encourage participants to review personal information and sign up for key tools and resources.

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Plan Sponsor & Employer Resources

Created **Auto-Escalation Report** to display historical details about participant engagement during auto-escalation window.

Updated **DOA File Indicator** to correct the functionality of the indicative-allow flag for wage participants within the DOA file.

Implemented **Status Change Suppression** to prevent status change from 04 to 00 when an indicative data change is made.

Improved EZLink Search Functionality so a search only returns participants within the plan that is being searched.

Enhanced 2019 Daily Maintenance File:

- Keep the current deferral on file if a JOBC record is received and the employer code is updated at ICMA-RC
- Process ISEP records and treat them as SEPA
- Process leave without pay statuses and assign a specific status code to it

Provided feedback on the design documentation for the **Cardinal Payroll System**.

Infrastructure

Transitioned to a **new data center** located in Ashburn, VA that is a best-in-class, purpose-built data center.

Defined Contribution Plans Retirement Specialists Activity

Educational Support

The Education Team added a new member to the team, covering the Southwestern Territory. The Plan Manager with assistance from the team provided Educational Support in the Southwestern territory until the new specialist took over the responsibilities in the fourth quarter of 2019.

In 2019, a total of 37,755 participants and members received educational support from ICMA-RC through group meetings, individual meetings and webinars.

GROUP MEETING ACTIVITY

The team of six Defined Contribution Plans Retirement Specialists and the Plan Manager conducted 1,885 group meetings throughout the Commonwealth in 2019. They consisted of:

- 409 non-Hybrid Plan group meetings attended by 3,998 participants
- 599 Hybrid Plan group meetings attended by 9,739 members
- 877 joint Hybrid Plan and non-Hybrid Plan group meetings attended by 16,007 participants and members

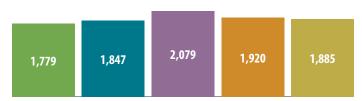
These group meetings consisted of:

- Benefits fairs
- New hire orientations
- Plan overviews
- Plan investment reviews
- Distribution strategies
- Optional Retirement Plan for Higher Education (ORPHE) overview
- Regional education seminars

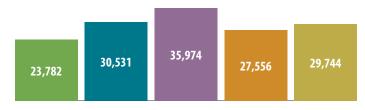
Occasionally, these meetings took place during the weekend and evening hours.

PARTICIPANT EDUCATION



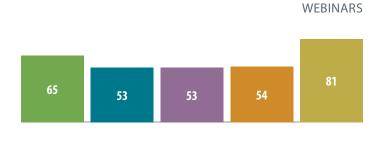


MEETING ATTENDEES

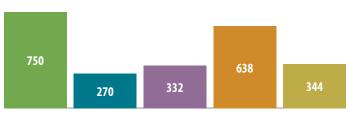


WEBINARS

Webinar topics included plan overviews, a review of the plan investments, distribution strategies and ORPHE overview and Hybrid Features and Benefits overview.



ATTENDEES

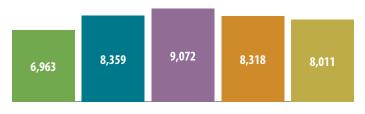


2015
 2016
 2017
 2018
 2019

INDIVIDUAL MEETING ACTIVITY

The team conducted 8,011 total individual meetings, including 4,601 individual meetings with non-Hybrid Plan participants and 3,410 individual meetings with Hybrid Plan members.

INDIVIDUAL COUNSELING SESSIONS



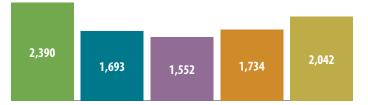
VIRGINIA SERVICE CENTER

The Virginia Service Center of ICMA-RC fielded 2,042 phone calls and assisted with 221 walk-in sessions.

WALK-IN SESSIONS



CALLS TO SERVICE CENTER



Survey Comments

SHERREL ADDISON:

"As I have come to expect from you, your presentation was detailed, organized and informative. I could tell from the employees that they were very interested in the information that was presented and found it to be full of valuable retirement preparation resources and tools. I believe they all gained important knowledge on how best to proceed with respect to saving/preparing for retirement.



I also appreciate your suggestion to invite your VRS counterpart to partner with you in the presentation. The two of you presented information that was relevant and will be useful to the employees as they consider the full range of VRS/ICMA-RC benefits available to meet their future retirement needs. I also appreciate your referral to Rebecca Crites for our Plan 1 and 2 VRS member retirement presentation.

You exceeded my expectations Sherrel so I thank you so much for your time, expertise and professionalism on behalf of our HYBRID Interstate Audit staff."

SHARON BRADLEY:

"Sharon was extremely helpful and courteous and in fact stayed a little bit late outside of working hours to complete what we had started as she walked me through the rollover process step by step. Also, in general your staff (in person as well as over the phone) has been a pleasure to work and deal with. Thank you so much!!"



VAINY GLEVECKAS:

"It was a great consultation. Vainy took time to answer all my questions thoroughly and was very knowledgeable about all processes. I appreciated his advice and overall patience and professionalism. I have recommended to these consultations to a few of my coworkers! Thank you!"



LAUREN HAND:

Lauren is the newest member of the team taking over field responsibilities in the Southwestern Territory in the fourth quarter of 2019. "Ms. Hand did an excellent job in presenting to me and my staff. She was very helpful and provided needed information. I've recommended her to my co-workers in other offices."



STEVE MCGREGOR:

"Steve is always a pleasure to work with. He is friendly, personable and most importantly, knowledgeable. He listens, asks good questions and makes smart suggestions without being pushy. He is an excellent rep."



MACKENZIE MOSS:

"Mackenzie is extremely knowledgeable about 457 accounts and always very professional when she comes out to York County. Mackenzie is a pleasure to work with and always followsup with additional information, educational tools and updates when trouble-shooting issues. We are very lucky to have Mackenzie as our representative."



JANICE PARKER:

"Janice has always been eager to provide assistance, dedicated to making sure you understand the DC arena and always available to help in anyway. She is more like family here than not. Thanks Janice, outstanding job!"



STEVEN SCOTT (PLAN MANAGER):

"Mr. Scott was great. He did a wonderful job and was super to work with!"



Communications For the Year Ending December 31, 2019

In 2019, our education and communication efforts included:

- Engaging Hybrid Plan members to save with voluntary contributions to receive their full employer match
- Introducing participants and plan sponsors to the features and benefits of the COV 457 Plan
- Providing clarity and support to participants and higher education institutions during and after ORPHE changes
- Encouraging the use of online tools and technology for account management
- Promoting events that encourage an active role in retirement readiness
- · Revitalizing our education resources for onsite education, investment changes and annual updates

Communication Highlights

HYBRID 457 PLAN

In 2019, our hybrid 457 plan initiatives focused on encouraging hybrid members to save more with voluntary contributions, including starting early and saving the full 4% to receive their full employer match. Members looking for a more gradual approach were educated about the benefits of the automatic 0.5% increase from autoescalation and the ability to step up automatic saving at their own pace with SmartStep.

Voluntary Contributions

Our Hybrid Plan communications encouraged participants to increase their voluntary contributions and included:

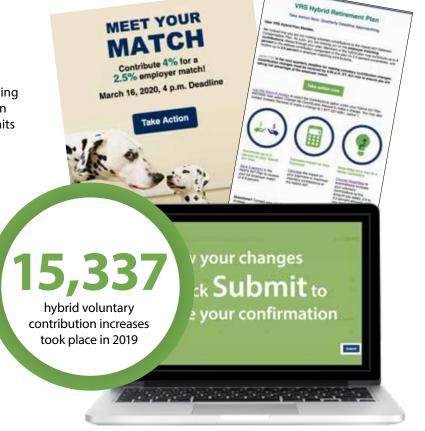
- Member tutorial video "How to Increase Your Voluntary Contributions"
- Quarterly contribution deadline reminder emails
- Crossover emails, account messages and newsletter articles on the benefits of strategically contributing using hybrid voluntary contributions with supplemental plan contributions to maximize match and contribution limits
- Milestone education site page to explain
 "Maximizing Contributions"
- Website, account and statement messages
- Newsletter articles in April and October promoting SmartStep, the paycheck calculator and matching contributions
- Countdown clock with voluntary contribution deadline updated on websites with "Meet Your Match" dalmatian theme and action button

9% decrease in views to the hybrid employer site

- 26% increase in views to the Voluntary Contributions page
- **20% increase** in views to the Voluntary Contributions Toolkit page
- 103% increase in views to the Admin page

11% increase in views to the hybrid member site

- **7% increase** in views to the Voluntary Contributions page
- Mid-quarter increase in views to the new Maximizing Your Contributions page (1,300+ page views)
- 29% increase in views to the Education page
- **16% increase** in views to the Calculators page (steady Paycheck Calculator usage)



of eligible members chose to opt out of auto-escalation

T THE GOOD TIMES ROLL

DCP

(Compared to 3.1% in 2016)

of members actively increased their voluntary contributions (Compared to 3.6% in 2016)

Auto-Escalation

Our "Let the Good Times Roll" themed communications educated employers and members on the benefits of saving more with auto-escalation. Employers were provided tools and resources to help them explain auto-escalation to members, along with resources for processing member contributions and support and assistance with questions. Members were encouraged to take an active savings role now to maximize their voluntary contributions to 4% to receive the full match. The campaign included:

- Bi-weekly planning calls
- Opt-out process, including member Account Access splash screen
- Member postcard mailer, newsletter articles, website education, education handout, Facebook promotions, account and statement reminders
- Employer email, newsletter articles, website education, job aid, EZLink messages and outbound calls
- Employer roundtable discussions and new online administrative resources
- · On-site education presentations
- Contact center assistance
- · Personalized confirmation letters

Enhanced Active Choice Splash Screen

uto-Escalation Goes Into Effect January

Let the Good Times

In October 2019, we updated the hybrid member Account Access splash screen with a "Let the Good Times Roll" auto-escalation opt out experience. Members were provided enhanced active messaging allowing them to opt out of auto-escalation, increase their voluntary contributions or decline action. The process was promoted in member postcards and employer communications.

0%

increase in views to the

hybrid member and employer

websites (Compared to 60% in 2016)

In December 2019, we refreshed the hybrid member Account Access splash screen with a new engaging "Meet Your Match" theme and dalmatian imagery. The enhanced active choice messaging enticed members saving less than 4% in voluntary contributions to take immediate action to receive their full employer matching contribution. We continue to encourage members to log in with our quarterly member emails, newsletter articles, website and statement messaging.

²⁶ Master Page # 195 of 261 - Defined Contribution Plans Advisory Committee (DCPAC) Meeting 6/4/2020

68%

decrease in member opt outs versus the prior auto-escalation period.

COV 457 PLAN

In 2019, we created new plan tools and communications, showcasing the plan features and benefits, increasing plan engagement and improving plan adoption and participant retirement readiness.

Plan Adoption

We rolled out new resources to assist plans considering adopting the COV 457. Materials explained why plans adopt the COV 457, the cash match option, plan consolidation, low fees, account accessibility and the seamless adoption and transition process. Resources included:

- Plan adoption flyer
- Participating employer flyer
- Plan adoption page for the DCP Resource Center (in progress)

Virginia Beach Transition

During 2019 we educated Virginia Beach City and Public Schools employees on their upcoming transition from Empower to their new COV 457 Plan. Our transition communications included:

- Transition websites
- Newsletter mailings **V**
- Postcard reminders
- On-site presentations
- FAQs

Transition website views:

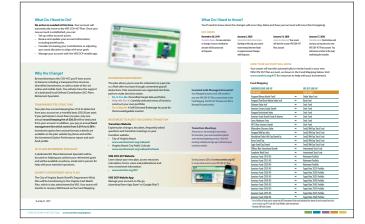
- 746 Virginia Beach City transition site views
- 466 Virginia Beach Public Schools transition site views



SmartStep

We began educating COV 457 employers and participants about the benefits and ease of saving more over time using the SmartStep feature of the plan. Our communications encouraged participants to opt in to SmartStep as a convenient way to increase contributions gradually, with less impact to their paycheck. Communications included:

- Employer newsletter articles and website education
- · Plan Features and Highlights enhancement
- · On-site education presentation slide
- Flyers promoting the new feature (in progress)
- 1% decrease in views to the COV 457 site
- 2% decrease in views to the Contributions page
- 13% increase in views to the Contact Us page







ORPHE

In 2019, we educated ORPHE participants on upcoming plan changes.

2020 Transition

During open enrollment, ORPHE participants were provided details on plan changes coming in 2020. Participants were able to choose between DCP and TIAA for their ongoing contributions. Transition communications included:

- TIAA transition letters and brochures
- Fidelity to DCP fund mapping
- Installment letter
- Welcome letter for participants transitioning to DCP
- On-site DCP education presentations pre and post open enrollment
- Flyer promoting the DCP onsite presentations
- DCP website education and updates
- Transition to DCP Brainshark video **A**
- DCP Overview Brainshark video (in progress)

93% increase in views to the ORPHE DCP website

- 94% increase in views to the Contributions page
- 144% increase in views to the Investments page
- 268% increase in views to the Education page

ONLINE ENGAGEMENT

Our high-tech tools continued to improve online plan engagement.

DCP Mobile App

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In 2019, the DCP app continued to reach and retain new users. Participants downloaded the free app to manage their



accounts, boost their investment knowledge and contact their local DC Plans Specialist. The app is available for IOS, Androids and tablets.

Account Access

We encouraged participants to log in to claim their online account, keep their account information up to date including beneficiaries and engage with our easy access features like TextAccess, Account Aggregation and e-delivery. Communications included:

- Website education, newsletter articles, account and statement messages
- Quick and Easy Access to Your Account brochure refresh ▼
- Navigating Account Access Brainshark refresh
 (in progress)



EVENTS

Our 2019 engagement events encouraged employees to take a more active role in retirement and included America Saves Week, the RealizeRetirement[®] Tour and National Retirement Security Week.

RealizeRetirement® Time Machine Tour

Our exciting, mobile time machine adventure made its way through the Commonwealth last year, visiting several worksites from April through October, helping employees think about retirement in new and exciting ways and save for their future. Escape room teams competed against each other for bragging rights as winners of the fastest escape time.

Our tour set-up, experience and communications included:

- Logistics including site scheduling, permits, planning, customizing the sign-in experience, DCP branded giveaways and education materials
- Tour website (www.varetire.org/rrtour) with event schedule and promotional materials



- Employer email with customizable promotional flyer and email
- Participant newsletter articles, website messages and VRS Facebook posts
- Video highlighting the event and peer savings interviews
- Post-event survey and thank you email

Our tour survey indicated:

- 97% would recommend the tour to others
- 56% were more engaged
- Intended follow-up action as a result of the tour:
 - Enroll **7**%
 - Save More 40%
 - Asset Allocation 49%
 - Meet with DC Plans Retirement Specialist 19%
 - Other 9%

(Note: Do not equal 100% due to select all, multiple responses)



National Retirement Security Week (October 20-26, 2019)

We continued our *Your Whole Story* campaign, helping VRS employers inspire their employees to save during their journey toward retirement. Award-winning NAGDCA messaging explained that saving for retirement does not have to be complicated or difficult. Our educational resources and communications included:

- Your Whole Story employer email, newsletter articles and website with resources to educate employees
- Participant newsletter articles ▼, website slider promoting NAGDCA savings videos and account messaging
- Your Whole Story field note flyers to email, post and share
- VRS Facebook posts



EDUCATION RESOURCES

In 2019, we refreshed our educational resources including onsite outreach, investment materials, forms, publications and presentations. Updates included:

DC Plans Specialists Outreach

We updated our materials for new DC Plan Specialist team changes and to promote new on-site education initiatives.

- Summer Savings Series promoted throughout the Commonwealth School Districts
- Territory coverage changes
- Revised DC Plans Specialist contact sheet, flyers, bios and contact information on the website and DCP mobile app
- DCREM meeting flyer (in progress)



Investment Changes and Notifications

- Brainshark investment video series:
 - Reach Your Retirement Goals
 - Investing Made Simple
 - Do-It-For-Me Investing
 - Help-Me-Do-It Investing
 - Do-It-Myself Investing
 - Market Volatility
- Elimination of the fee to establish a Self-Directed Brokerage Account (SDBA)



- Target date portfolio changes to add the 2065 Portfolio and collapse the 2020 Portfolio including website education, newsletter article, statement and account messages
- Monthly Investment Option Performance updates
 including benchmark changes

- Quarterly fund profile updates
- Target date asset allocation flyer updates
- Investment Guide refresh



Newsletters and Social Media — Plan News

- FOCUS Newsletter (COV 457 and Hybrid inserts)
- Employer Update
- Member News
- VRS Facebook

Forms, Publications and Presentations — Annual Updates and New Features

- Brochures
- Employer Guides
- Forms
- Plan Features and Highlights
- Presentations
- Special Tax Notices

AWARDS

Thank you for the continued opportunity to partner with your hard-working and dedicated team. Once again you have achieved outstanding results for your retirement plans. Congratulations on your 2019 NAGDCA Leadership Award for the Hybrid 457 Voluntary Contributions Savings Initiative! This award celebrates your success with increasing voluntary contributions using GoHybrid, the Enhanced Active Choice Splash Screen, SmartStep and the Paycheck Calculator.

Future Initiatives



Communications

Asset Retention

We will continue to target pre-retirees and retirees to promote the benefits of staying in the plan after separation of service. Campaign communications will include:

- Presentations
 - Distribution Strategies presentation for pre-retirees
 - *Managing Retirement* Income presentation for retirees and spouses
- Distribution and rollover forms customization (in progress)
- Distribution kits
- Income distribution flyer (in progress)
- Bridging the Gap retiree income brochure
- Email communications, statement and account messages to promote retiree seminars and resources including the Retirement Withdrawal and RMD Calculators
- Retiree event

Investment Education

We will roll out new investment resources to make decisionmaking easier. Communications will include:

- Investment cost website page
- Presentations
 - COV 457 Enrollment Post Plan Adoption/Conversion
 - Women in Investing
 - Budgeting Today for Tomorrow
 - Advanced Investing

Higher Education Communications

We will create a responsive web page for our higher education plans, showcasing COV 457 Plan saving in addition to their 403(b) option that will include:

- Savings Syllabus Brainshark Video (complete)
- Learn More (COV 457 Plan website)
- Meet Your DC Plans Specialist (interactive tool)
- Enroll Now (Account Access)

New promotions will bring awareness to the site, including:

- Targeted email, handout, account and statement messages
- Employer email, newsletter article and roundtable discussions

SECURE Act

We will update plan materials impacted by changes from the SECURE act. Revisions will include:

- Website footnote updates
- Leaving Employment Guides
- RMD flyer and calculator
- Account Access messages
- Presentation updates (complete)
- Necessary forms

Hybrid Voluntary Contributions

Discuss and plan new initiatives for 2020:

- Employer toolkit refresh
- Maximizing Contributions milestone page for employer site (phase II changes)
- · Onboarding checklist update
- Retiree milestone page

COV 457 Participation Initiative

Discuss and plan new initiatives for 2020 including:

- Splash screen engagement
- · Postcard for eligible employees
- Employer toolkit and email communications
- Brainshark video
- · Interactive game or event
- Auto-enrollees saving less than their match

National Retirement Security Week

We will create new educational materials for employers to use during National Retirement Security Week, using the latest NAGDCA campaign as a foundation for our communication efforts. Deliverables will include:

- Employer website (www.varetire.org/yourwholestory) refresh with new theme and resources
- E-flyer communications with tips and resources for employers to customize and share

FOCUS Newsletter

Brainstorm new potential topics for 2020 newsletters:

- DCP mobile app
- How to read your statement

DCP Mobile App

In March 2020, we will update the VRS DCP mobile app with a new user experience to make managing accounts on the go even easier. DCP app 2.0 will include:

- A simplified app layout
- Enhanced design elements
- Embedded video
- Facial and touch
 recognition
- New analytics features

Mobile app promotions will include:

- Promotional flyer
- Media kit
- Presentation slide
- Newsletter articles
- Website slider



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RealizeRetirement® TRIVIA: Get Your Ducks in a Row



- · Can be utilized at plan sponsor events
- Six financial/retirement questions per game that increase in difficulty as the game advances
- Play the game as an individual or as part of a team.
 Scores are based a combination of correct answers, speed in answering questions and level of difficulty.
- Featured leaderboard shows the top three individual scores and the top three team scores. Participants will be able to toggle between individual and team screens.
- The game will have the ability to upload a plan sponsor logo to appear on both the registration and leaderboard screens.

Screenshots are in development and may change.





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Technology

Participant Resources

- Online Withdrawals will help participants manage their withdrawals online.
- COV 457 Splash Screen using Enhanced Active Choice will encourage participants to maximize savings in the COV 457 plan.
- COV Plan SmartStep Enhancements include:
 - Create a pop-up message for the *Change Contributions* section for deferral amounts per pay period that are above a certain threshold, which would require participants to confirm the deferral amount reflects their desired outcome
 - Improve the contribution bullets that appear on the Contribution Change Page to better explain annual IRS contribution maximums, payroll frequency and Age 50 Catch-up opportunities
 - Develop smarter programming that assesses account payroll frequency based upon division code and Age 50+ Catch-Up Contribution Provision
 - Update SmartStep Auto Increase Report with option to include either a Social Security number or VNAV ID for participants in the report

Plan Sponsor & Employer Resources

- Update the VRS Quarterly Deferral Report to keep data static and only show changes made from the division accessing the information
- Modify the naming convention of the labels in the Employer Source Contribution Breakdowns in the EZLink view and downloadable reports to include the employer mandatory and employer match contributory sources
- Develop an efficient process to prevent inadvertent contributions from posting to member's accounts by using status 10 and 12.
- Align VRS and ICMA-RC systems to provide the most accurate vesting details for member's forfeitures.

Defined Contribution Plans Retirement Specialists

- Conduct Regional Workshops for DCP retirees.
 Workshops will be conducted in a centralized location in each of the seven territories.
- Partner with Employer Support team to conduct "Adoption Events" for employers adopting/transitioning to COV.

Enhanced Rollin Process

- Launch enhanced Rollin Support Services to VRS participants via Account Access.
 - Automatically generated Letter of Acceptance to accompany other recordkeepers rolloverout paperwork.
 - Email reminders for participants who started the rollover-in process and have not completed it.
 - Outbound calls to current recordkeepers with the participant and ICMA-RC team member on the phone.
- Continued assistance available from local service team and the contact center.



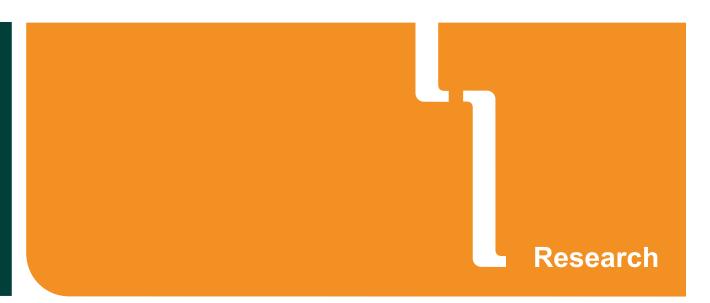






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2020 Defined Contribution Trends Survey

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Research | Education | Dialogue 1

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Key Findings

86%

Callan conducted our 13th annual Defined Contribution (DC) Trends Survey in the fall of 2019. The survey incorporates responses from 114 plan sponsors, including both Callan clients and other organizations. We highlight key themes and findings from 2019 and expectations for 2020.



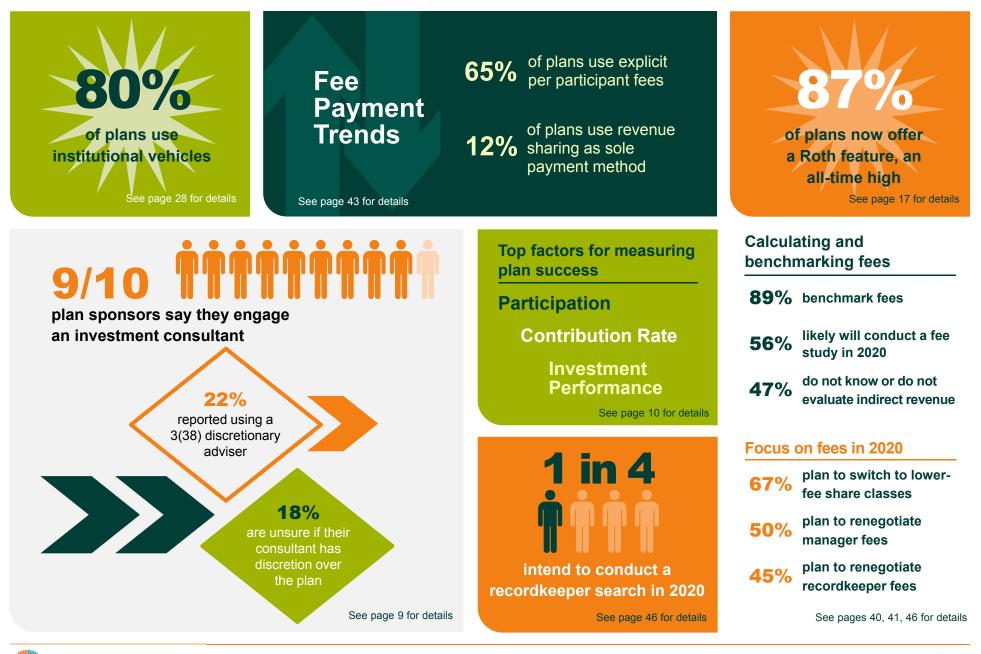
Callan Institute

Research | Education | Dialogue

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2

Key Findings



Callan Institute

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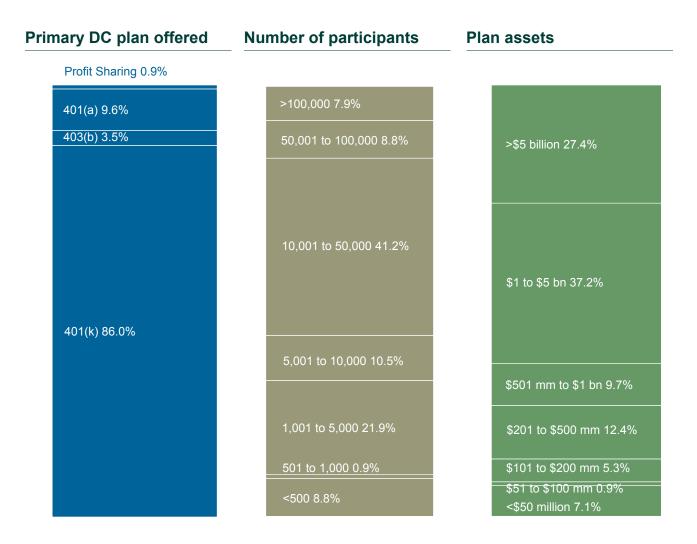
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Respondent Characteristics

Callan conducted our 13th annual *Defined Contribution (DC) Trends Survey* online in September and October of 2019. The survey incorporates responses from 114 DC plan sponsors, including both Callan clients and other organizations.

As in prior surveys, the majority of respondents offered a 401(k) plan as the primary DC plan. The proportion of 401(k) plans in the survey remained largely the same as last year—85.8% in 2018 and 86.0% in 2019.

More than 90% of plans in the survey had over \$100 million in assets; moreover, 64.6% were "mega plans" with more than \$1 billion in assets, a slight increase from 2018.



Note: Throughout the survey, charts may not sum to 100% due to rounding.



Research | Education | Dialogue 4

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Respondent Characteristics (continued)

About 3 in 10 (29.8%) DC plan sponsors surveyed offered an open defined benefit (DB) plan, compared to 35.8% in 2018. Both figures, however, are significantly lower than the 46.0% figure in 2017, largely explained by the exclusion of governmental entities since then.

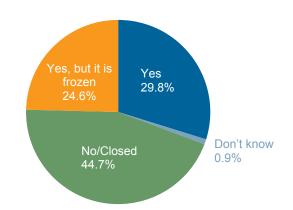
Respondents spanned a wide range of industries; the top were health care, financial services, energy/utilities, technology, and manufacturing.



Sponsors' industry Health Care 14.0% Financial Services 14.0% Energy/Utilities 13.2% Technology 9.6% Manufacturing 9.6% Professional services 5.3% Not for Profit 5.3% Insurance 5.3% Retail 4.4% Aerospace/Defense 4.4% Construction/Mining 2.6% Automotive 2.6% Additional categories: Education (2.6%), transportation (2.6%), other (2.6%),

telecommunications (1.8%).

Does employer also offer a DB plan?



Callan Institute

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Plan Structure: Bundled vs. Unbundled Arrangements

Plan structure

While the proportion of plans that were at least partially bundled rose from last year, the number of plans that identified themselves as being fully bundled (11.5%) was the lowest in survey history. This reflects a larger unbundling trend we have observed over time.

Fewer than 1 in 10 (6.8%) mega plans (assets greater than \$1 billion) had a fully bundled structure. Conversely, 56.2% of mega plans were unbundled. About half of mid-sized plans (\$100-\$500 million in assets) reported using a partially bundled structure, whereas 25.0% indicated they utilized a fully bundled structure, up from 15.0% in 2018.

0.9% 100% Multiple recordkeepers and/or custodians 42.5% 75% Unbundled 31.0% Fully unbundled but use same vendor for multiple functions 50% Fully unbundled 45.1% 56.6% 25% Partially bundled Bundled 11.5% Fully bundled 0% 2012 2013 2014 2015 2016 2017 2018 2019

Fully bundled: The recordkeeper and trustee are the same, and all of the investment funds are managed by the recordkeeper.

Partially bundled: The recordkeeper and trustee are the same, but not all of the investment funds are managed by the recordkeeper.

Fully unbundled: The recordkeeper and trustee are independent, and none of the investment funds are managed by the recordkeeper.



Research | Education | Dialogue 6

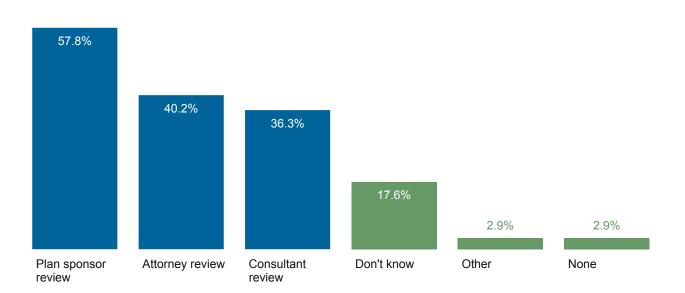
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ERISA Section 404(c) Compliance

Nearly 4 in 5 (79.5%) DC plan sponsors said they took steps within the past 12 months to ensure ERISA Section 404(c) compliance.

More than half of respondents (57.8%) personally reviewed compliance. Many plans engaged third parties to review 404(c) compliance, including their attorney (40.2%) and their consultant (36.3%).

While the percentage that did not know what steps had been taken to ensure compliance increased from 10.6% in 2018 to 17.6% in 2019—the proportion of respondents that took no action at all fell by more than half (6.4% in 2018 vs. 2.9% in 2019).



Steps in past year to ensure ERISA Section 404(c) compliance*

79.5% took steps to ensure compliance

*Multiple responses were allowed.



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Investment Policy Statement

The overwhelming majority of DC plans maintained an investment policy statement (IPS) in 2019 (93.8%), a slight increase from 2018 (90.5%).

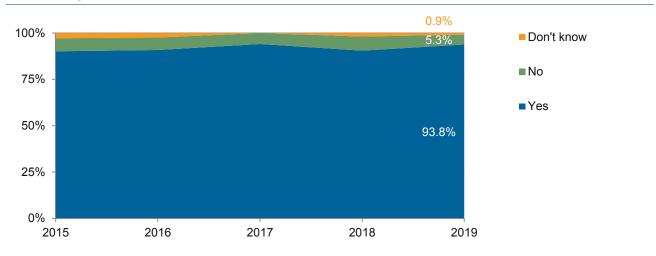
About two-thirds of respondents with an IPS indicated it included a watch list, while the other one-third indicated that it did not.

Additionally, about two-thirds (66.7%) of plan sponsors reviewed their IPS in the past 12 months, and half reviewed and updated it over that same time period. Although the percentage of sponsors that reviewed their IPS during this timeframe increased from 2018 (64.8%), the percentage that also updated the IPS slightly decreased (52.4%).

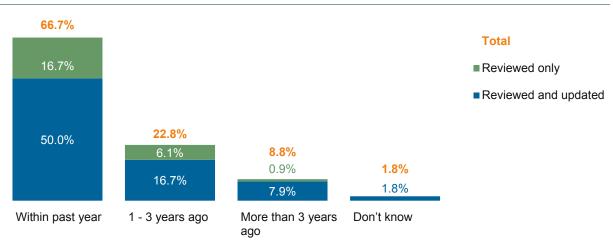
Best practice dictates a review of the IPS on a regular basis (i.e., once per year), particularly if changes are made to the DC plan.

67.0% of those with an IPS include a watch list

Does DC plan have an IPS?



Last time the IPS was reviewed or reviewed and updated





Research | Education | Dialogue

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Fee Policy and Use of Investment Consultants

More than 6 in 10 (62.0%) plan sponsors surveyed had a written fee payment policy in place, either as part of their investment policy statement (32.4%) or as a separate document (29.6%). This number is up considerably from the 46.0% that reported having a written fee policy in 2018.

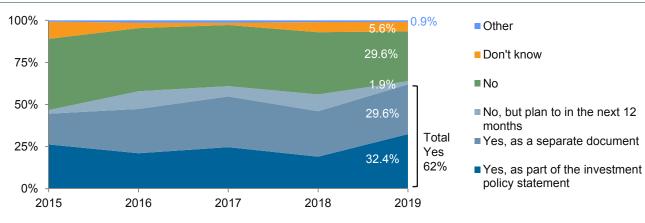
Nearly 9 in 10 (89.2%) plan sponsors said they engage an investment consultant. This figure is up from 2018 (84.1%) and is the highest in survey history. Of those that utilize an investment consultant, 60.2% reported using only a 3(21) non-discretionary adviser. The percentage of sponsors that used a 3(38) discretionary adviser, either exclusively or partially, rose from 15.9% in 2018 to 21.6% in 2019.

A notable portion of sponsors (18.2%) were unsure which type of consultant they use.

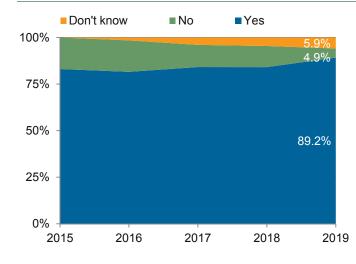
3(38) discretionary consultant: Selects and monitors funds and acts as a co-fiduciary (also known as OCIO).

3(21) non-discretionary consultant: Monitors and recommends changes as a co-fiduciary, while the plan sponsor selects investments.

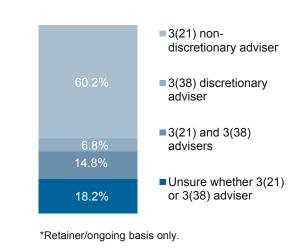
Do you have a written fee payment policy documenting your approach to payment of plan fees?



Do you use an investment consultant (either project or retainer)?



Type of consultant used*



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DC Plan Measurement

In line with the past three years, plan sponsors rated participation rate/plan usage as the most important determinant for measuring the success of their DC plan.

Contribution/savings rate was the second most important factor, followed by investment performance and cost effectiveness.

Criteria to measure plan success

2016	2017	2018	2019	Rating
Participation rate/ plan usage	Participation rate/ plan usage	Participation rate/ plan usage	Participation rate/ plan usage	4.4
Contribution/ savings rate	Investment performance	Contribution/ savings rate	Contribution/ savings rate	3.7
Investment performance	Contribution/ savings rate	Cost-effectiveness	Investment performance	3.3
Cost-effectiveness	Cost-effectiveness	Investment performance	Cost-effectiveness	3.2
Investment diversification	Retirement income adequacy	Employee satisfaction	Ability to attract/retain employees	3.1
Retirement income adequacy	Investment diversification	Retirement income adequacy	Investment diversification	3.0
Employee satisfaction	Employee satisfaction	Investment diversification	Retirement income adequacy	3.0
Avoidance of fiduciary issues	Avoidance of fiduciary issues	Avoidance of fiduciary issues	Employee satisfaction	3.0
Benchmark against other plans	Benchmark against other plans	Ability to attract/retain employees	Benchmark against other plans	2.9
Ability to attract/ retain employees	Ability to attract/ retain employees	Benchmark against other plans	Avoidance of fiduciary issues	2.9

(5=Most important. Total rating is weighted average score.)

Additional categories (2019): Simple to administer (2.0); other (0.6) don't measure (0.3); don't know (0.2).



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Fiduciary Positioning

For the fourth year in a row, plan sponsors ranked reviewing plan fees as the most important step they took over the past 12 months to improve the fiduciary position of their DC plan. This action ranked significantly higher than any other activity undertaken.

Implementing, updating, or reviewing the investment policy statement came in second. Conducting formal fiduciary training ranked third, followed by replacing fund manager(s), conducting a plan audit, and reviewing compliance.

Rank of actions taken to improve fiduciary positioning

2016	2017	2018	2019 Ra	anking
Reviewed plan fees	Reviewed plan fees	Reviewed plan fees	Reviewed plan fees	4.0
Updated or reviewed IPS	Updated or reviewed IPS	Implemented, updated or reviewed IPS	Implemented, updated, or reviewed IPS	2.1
Reviewed compliance	Conducted formal fiduciary training	Conducted plan audit	Conducted formal fiduciary training	1.9
Conducted formal fiduciary training	Changed investment menu	Changed investment menu	Replaced fund manager(s)	1.7
Changed investment menu	Conducted plan audit	Conducted formal fiduciary training	Conducted plan audit	1.5
Replaced fund manager(s)	Reviewed compliance with fiduciary rule	Reviewed compliance	Reviewed compliance	1.2
Other (e.g., plan audit, operational processes)	Replaced fund manager(s)	Replaced fund manager(s)	Changed investment menu	1.1
Reviewed/changed QDIA	Audited security protocols	Audited security protocols	Audited security protocols	0.8
Audited security protocols	Changed/hired investment consultant	Reviewed/changed QDIA	Reviewed/changed QDIA	0.6
Changed communi- cation approach	Reviewed/changed QDIA	Changed/hired investment consultant	Other (e.g., operational processes)	0.6

(5=Most important. Total ranking is weighted average score.)

Additional categories (2019): Changed/hired investment consultant (0.4); evaluated/implemented 3(38) discretionary services (0.3); implemented a written fee payment policy statement (0.2); changed recordkeeper (0.1); changed trustee/custodian (0.1).



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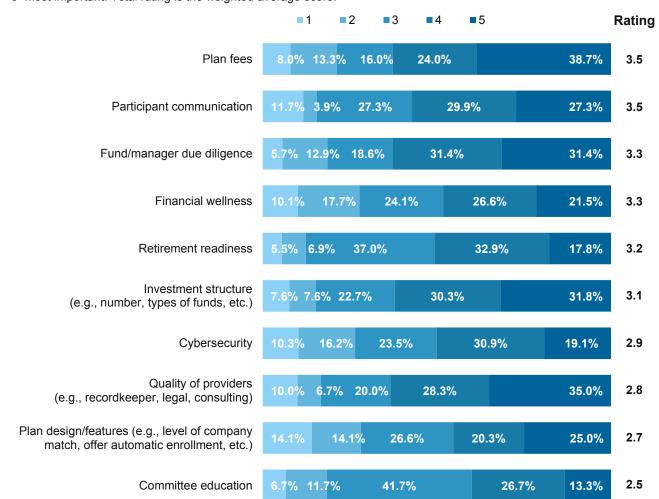
Areas of Focus

Plan fees and participant communication are the most likely primary areas of focus over the next 12 months. These two areas were also rated first and second in last year's survey.

Fund/manager due diligence and financial wellness were the next two highest areas of focus for 2020, followed closely by retirement readiness and investment structure.

Cybersecurity, a newsworthy topic, increased slightly in priority from last year.

Rating of primary areas of focus over the next 12 months



5=most important. Total rating is the weighted average score.



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Company Match

In 2019, 13.8% of plan sponsors made a change to their company match policy, which was down from last year's figure (21.7%). Of those that made a change, the most common action was restructuring the match (41.7%).

Nearly a third anticipate making a change in 2020. While many are unsure what that change will be, 16.7% plan to increase the match. In contrast, no plans reported that they plan to eliminate or reduce the match.

Among those that plan to change to a stretch match, one reported a stretch match formula of a 50% match up to 8%.

13.8% made changes in 2019

29.3% expect to make a change in 2020

Company match actions*

Past 12 months		Next 12 months		
Restructured	41.7%	Don't know	54.2%	
Made one-time employer contribution	25.0%	Increase	16.7%	
Added match true-up feature	25.0%	Change to stretch match	16.7%	
Reinstated	16.7%	Make one-time employer contribution	12.5%	
Increased	16.7%	Add match true-up feature	12.5%	
Changed to stretch match	16.7%	Reinstate	4.2%	
Reduced	8.3%	Restructure	4.2%	
Changed timing	8.3%	Change timing	4.2%	
Other	8.3%	Other	4.2%	

Additional categories with 0.0% (2019): Eliminated, moved to safe harbor design, don't know. Additional categories with 0.0% (2020): Eliminate, reduce, move to safe harbor design.

*Percentages out of those taking steps with respect to the company match. Multiple responses were allowed.



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Automatic Enrollment

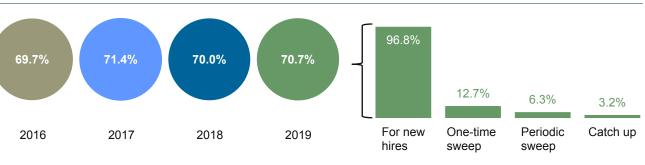
Automatic enrollment has seemingly reached saturation, remaining at around 7 in 10 plans for the past four years. Automatic enrollment is most prevalent in the telecommunications, manufacturing, and technology industries.

Of those that do not automatically enroll employees, 5.6% report that they are very likely to implement this feature in 2020. The plans that do not offer auto enrollment span plan sizes and industries.

Unsurprisingly, most plans with auto enrollment use it for new hires (96.8%). However, nearly 20% had auto-enrolled existing employees either through a one-time or periodic sweep.

Key reasons for not implementing automatic enrollment included: not being perceived as necessary, the potential cost impact, or not being a high priority.

Plans offering automatic enrollment

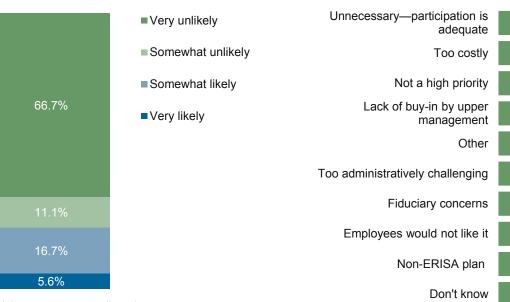


enrollment*

Note: Multiple responses were allowed.

Reasons for not offering automatic

If automatic enrollment is not used, will it be in 2020?



*Multiple responses were allowed.

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40.9%

22.7%

22.7%

13.6%

9.1%

4.5%

4.5%

4.5%

18.2%

18.2%

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Automatic Contribution Escalation

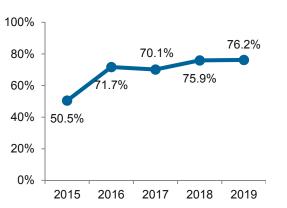
Plans with automatic enrollment were more likely to offer automatic contribution escalation—while 76.2% of all DC plans offered automatic escalation, that figure was 81.9% for plans that also had automatic enrollment, compared to 60.1% of plans without automatic enrollment.

After rising sharply from 2015 to 2016, the prevalence of automatic contribution escalation has remained at about 7 in 10 for the past four years.

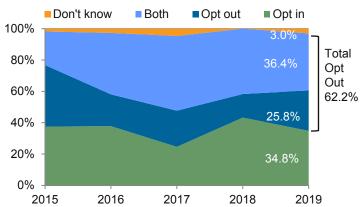
The percentage of plans with automatic contribution escalation that use an opt-out approach came in at 62.2% in 2019, returning to similar levels as previous years (2016: 59.5%, 2015: 60.7%, and 2014: 52.8%), after increasing markedly in 2017 (70.8%).

A notable 47.0% of plans without automatic contribution escalation are somewhat or very likely to adopt this feature in 2020. The top reasons for not offering automatic contribution escalation were that employees would not like it or it was not a high priority.

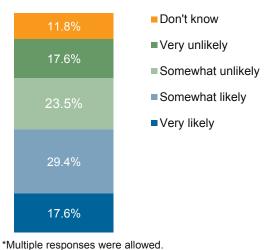
Plans offering automatic contribution escalation



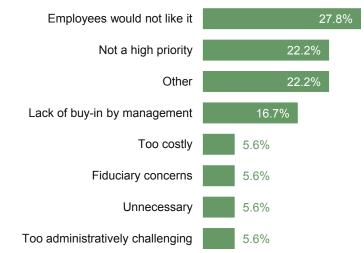
Approach for automatic escalation



If automatic escalation is not used, will it be in 2020?



Reasons for not offering automatic escalation*





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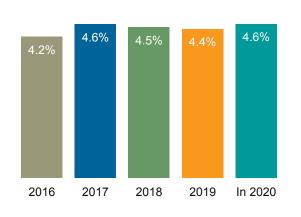
Automatic Features: Rates and Caps

In 2019, default contribution rates for automatic enrollment ranged from 1% to 8%, with the average holding steady at 4.4% and median staying at a 4.0% rate. Consistent with the prior two years, the most common reasons behind the selection of the default rate were allowing participants to maximize the company match and being most palatable to participants.

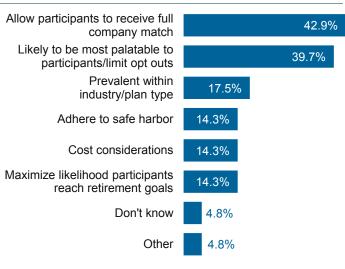
Similar to prior years, plans with opt-out automatic contribution escalation most frequently had an annual increase rate of 1% (93% report this level, with the remainder reporting a 2% automatic escalation rate).

The average cap on automatic contribution escalation declined somewhat in 2019 to 23.3% from 28.2% in 2018. The median cap remained steady at 10% in 2019. The most common reason behind the selection of the cap was being most palatable to participants. Maximizing the likelihood that participants will reach their retirement goals came in second.

Default contribution rate over time

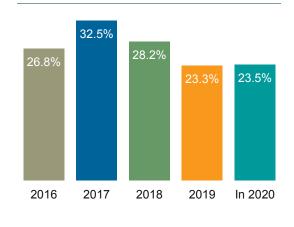


Reasons for selecting the default rate*

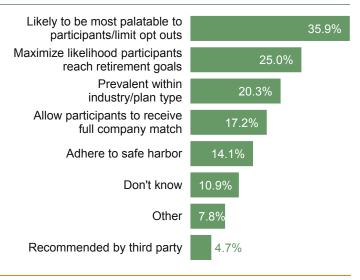


Escalation cap over time

*Multiple responses were allowed.



Reasons for selecting escalation cap*





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Roth Features

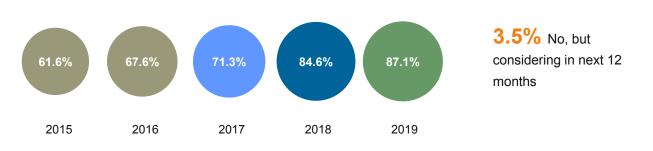
The prevalence of Roth accounts in DC plans increased notably over the past few years from 61.6% in 2015 to 87.1% in 2019.

While only 7.1% of sponsors did not allow and are not considering Roth-designated accounts, 3.5% are considering allowing them in the coming year. The most common reason for waiting to add a Roth feature or not offering one was due to the complexity of a participant communication campaign to describe the feature.

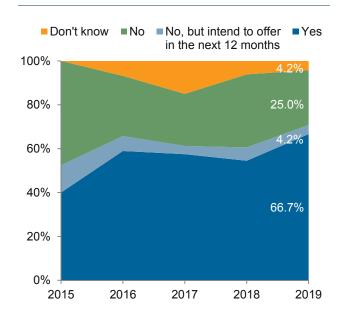
The percentage of plans allowing in-plan Roth conversions continued to increase, now at 66.7%, with an additional 4.2% that intend to offer it in the next year.

The most common type of in-plan Roth conversions offered allow for the conversion of both pretax and after tax monies, at 45.8% of respondents.

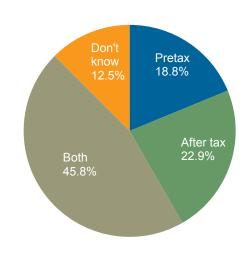
DC plans allowing Roth-designated accounts



DC plans allowing in-plan Roth conversions



Type of in-plan Roth conversions offered





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Company Stock Prevalence

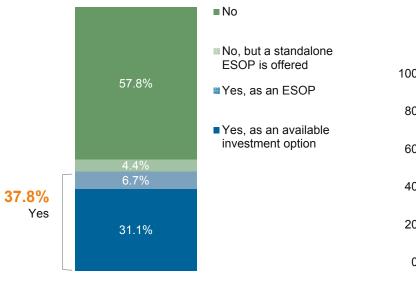
The share of sponsors that offer company stock either as an available investment option or as an ESOP within the plan remained consistent with prior years, except for 2017, which appears to be an aberration.

Most plans that do not offer company stock indicated the plan has never done so (74.4%). However, approximately 20% of respondents indicated that the plan once offered company stock but has since eliminated it.

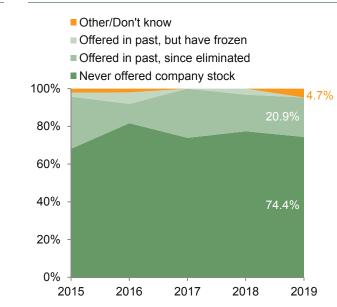
Plans offering company stock



Is company stock offered?



Plan's experience with company stock, if not now offered



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Limiting Company Stock Liability

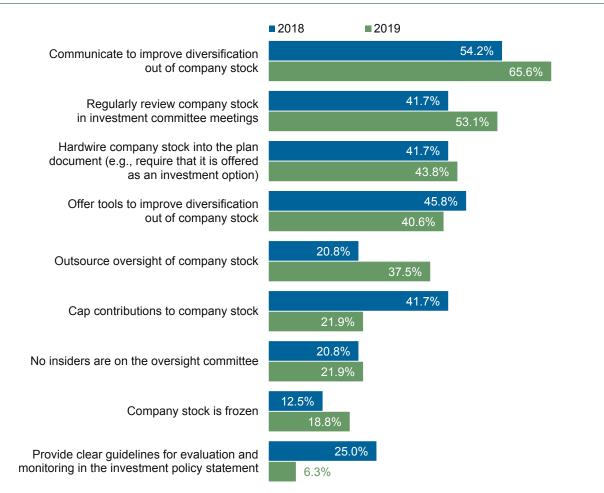
All plan sponsors with company stock took some steps to limit their liability, with an average of three actions being taken. The most common was to communicate diversification principles (65.6%), down from a record high of 75.8% in 2017. About 53% of respondents indicated that company stock was regularly reviewed in investment committee meetings and 43.8% indicated that company stock was hardwired into the plan document.

Offering tools to help improve diversification out of company stock somewhat declined, with 4 in 10 respondents taking this approach (40.6%).

Outsourcing oversight of company stock to a third-party fiduciary nearly doubled in 2019 from the 20.8% of plan sponsors that reported engaging a third party in 2018.

Those capping company stock decreased to 21.9% after fluctuating from 18.2% in 2017 to 41.7% in 2018.

Actions to limit potential liability for company stock*



Additional categories (2018/2019): Other (0.0%/6.3%); sunset the company stock and will remove it as an investment option (0.0%/0.0%); nothing (0.0%/0.0%).

*Multiple responses were allowed.



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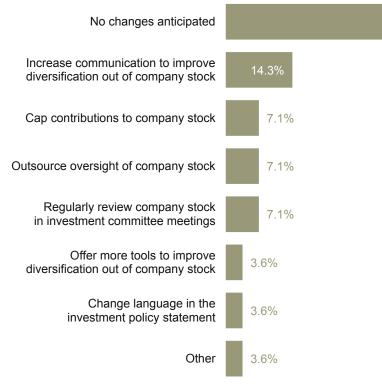
Anticipated Changes to Company Stock

More than 4 in 5 respondents (85.7%) anticipate no changes to their company stock in the coming year, which represents an increase over prior years (81.8% in 2018, 66.7% in 2016, 72.7% in 2014).

Next year, 14.3% of plan sponsors will increase communication around participant diversification away from company stock.

Similar to last year's findings, no respondents indicated that they intend to eliminate company stock in 2020, in contrast to 2.8% in 2016 and 6.3% in 2017.

Changes regarding company stock next year*



Additional categories with 0.0%: Eliminate insiders from investment committee; hardwire company stock into the plan document; waiting to make decision pending the outcome of recent stock drop lawsuits; freeze company stock; eliminate company stock as a plan option.

*Multiple responses were allowed.



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85.7%

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Default Investments

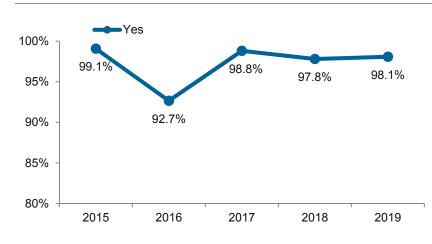
Most DC plans had a qualified default investment alternative (QDIA) as the default investment fund (98.1%).

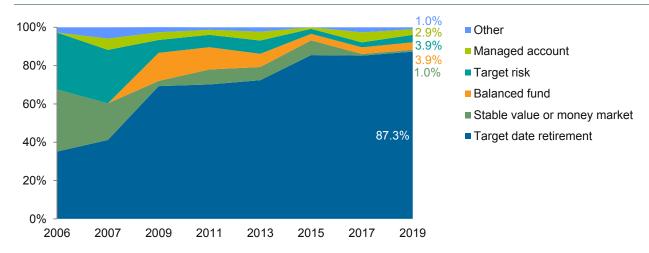
A key provision of the Pension Protection Act (PPA) provides relief to DC fiduciaries that default participant assets into QDIAs under regulation 404(c)(5). Plan sponsors complying with this provision are responsible for the prudent selection and monitoring of the plan's QDIA, but are not liable for any loss incurred by participants invested in the QDIA.

In 2019, 87.3% of plans used a target date fund as their default for non-participant directed monies, in line with recent years. Usage of other QDIA types also stayed fairly static.

Before the PPA, target date fund usage as a QDIA was only 35.1% in 2006, with money market/stable value making up 30% and risk-based funds at 27.5%. The PPA paved the way for a major uptick in the adoption of target date funds as QDIAs.

Is the default investment fund a QDIA?





Current default investment alternative for non-participant directed monies



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Target Date Fund Landscape

Nearly every DC plan offered target date funds (93.3%). Continuing a long-observed trend, those offering their recordkeeper's target date option continued to drop—from more than 50% in 2012 to 21.4% in 2019. As with last year, there is more uncertainty over what approaches will be used going forward, as evidenced by the 5.3% that do not know which target date fund (TDF) approach they will use in 2020.

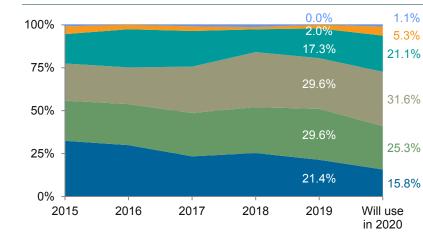
The prevalence of custom target date solutions witnessed a modest increase (from 13.3% to 17.3%) during the past year. Further, 21.1% expect to use a custom approach in the coming year. Those offering custom solutions cited access to best-in-class underlying funds, better cost structure, and control over the glidepath as the top motivations.

The majority (60.8%) of those using a custom solution reported that the plan sponsor acts as a fiduciary. This is still down historically. For comparison the figure stood at 77% and 84%, respectively in 2016 and 2015.

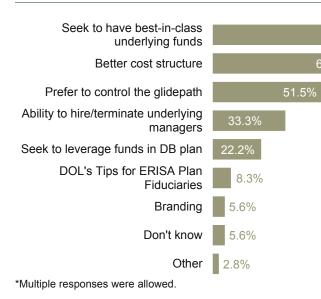
93.3% of plans offer a target date fund in their lineup

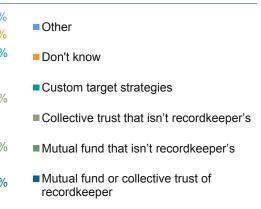
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Approach used for target date funds

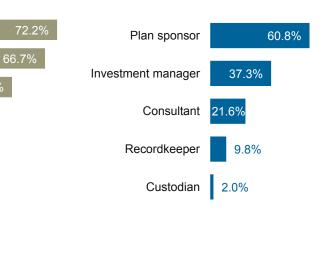


Reason for custom TDF*





Custom TDF fiduciary*



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Target Date Fund Landscape (continued)

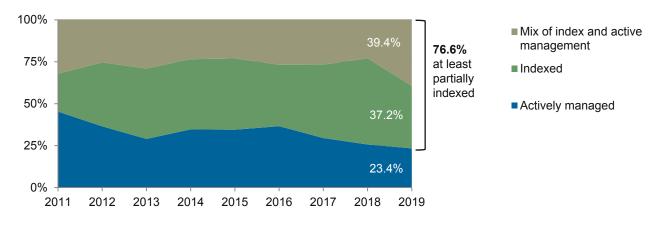
Among those that offered TDFs, nearly 77% used an implementation that was at least partially indexed. The share of mixed (or blended) strategies increased year-over-year from 23.0% to 39.4%. This sharp increase came largely at the expense of purely passive implementations, which witnessed a decline from 51.4% to 37.2%.

Over half (56.2%) of plan sponsors took some sort of action with regard to their TDFs in 2019. Of those taking action, evaluating the glidepath suitability maintained its place as the most prevalent course of action (80.5%). Changing the share class of the TDF (19.5%) and replacing the TDF (12.2%) rounded out the top three.

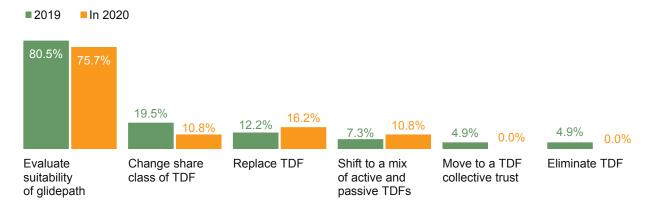
56.2% took action

43.8% took no action with respect to their target date fund

Target date fund investment approach



TDF actions taken or planned*



*Percentages out of those taking/expecting to take action with their target date fund. Multiple responses were allowed.



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Target Date Fund Selection

While the order was different, priorities remained the same as previous years. The top three reasons for selecting or retaining target date funds in 2019 were: portfolio construction, fees, and performance.

2016	2017	2018	2019 R	anking
Performance	Portfolio construction	Performance	Portfolio construction	5.2
Fees	Fees	Portfolio construction	Fees	5.1
Portfolio construction	Performance	Fees	Performance	4.8
Risk	Risk	Number, type, and quality of underlying funds	Ability to achieve pre- specified retirement goa	2. 8 al
Number, type, and quality of underlying funds	Ability to achieve pre- specified retirement goal	Risk	Risk	2.8
Ability to achieve pre- specified retirement goal	Number, type, and quality of underlying funds	Active vs. passive	Active vs. passive	2.3
Active vs. passive	Active vs. passive	Usage of tactical asset allocation	Number, type, and quality of underlying funds	2.3
Usage of tactical asset allocation	Usage of tactical asset allocation	Name recognition	Usage of tactical asset allocation	1.3
Name recognition	Name recognition	Whether the funds are proprietary to the recordkeeper	Name recognition	1.3
Whether the funds are proprietary to the recordkeeper	Whether the funds are proprietary to the recordkeeper	Ability to achieve pre- specified retirement goal	Whether the funds are proprietary to the recordkeeper	0.6

Criteria for selecting or retaining target date funds

(7=Most important. Total ranking is weighted average score.)



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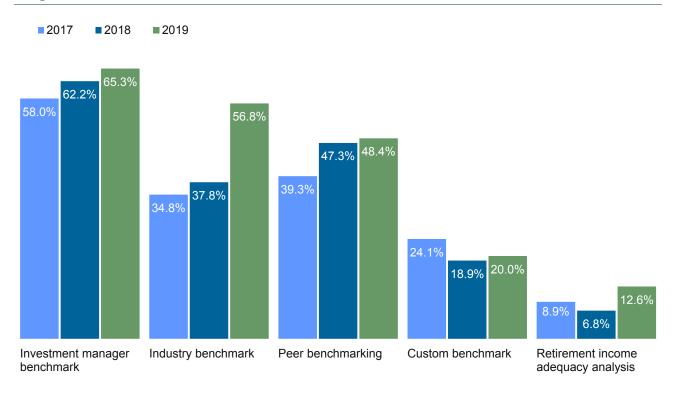
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Target Date Fund Benchmarking

Over three-quarters of plan sponsors (77%) reported using multiple benchmarks to monitor their target date funds. Surprisingly, 2.1% of respondents indicated they do not benchmark their TDFs.

Manager benchmarks continued to be the most common means of measurement and have shown increased acceptance over the past few years. Industry benchmarks as well as peer benchmarks also experienced increased acceptance over time, indicating the possibility of plan sponsors taking a more varied approach.

Target date fund benchmarks*



Additional categories (2019 data): Do not benchmark (2.1%); don't know (2.1%); other (2.1%). *Multiple responses were allowed.



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Investment Menu

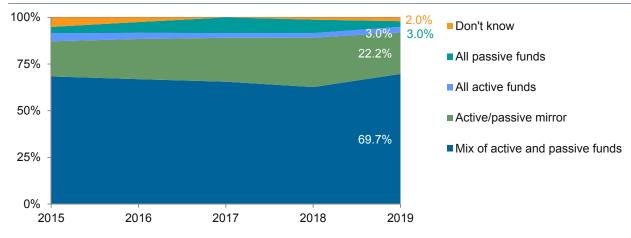
The vast majority of DC plans had a mix of active and passive investment funds (92%). Purely active (3.0%) or passive (3.0%) remain a rarity.

Most plan sponsors (76.9%) did not change the proportion of active versus passive funds in their plan in 2019. For those making changes, far more increased the proportion of passive funds than active funds in 2019 (17.9%) and plan to do so in 2020 (7.3%).

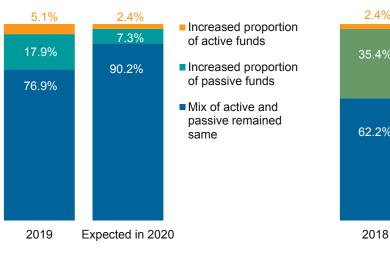
The use of a tiered investment structure climbed yet again, reaching a high of 69.8%, representing a marked increase from 48.3% in 2016. Most described their tiered structure as being comprised of some form of asset allocation fund tier, core fund tier, and specialty fund tier.

Tiered investment structure: Allows plan sponsors to build fund lineups for a heterogeneous participant base that includes "doit-for-me" (tier 1), "do-it-myself" (tier 2), and "investment savvy" participants (tier 3).

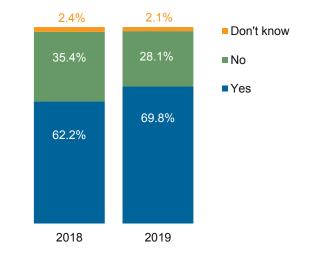




Active/passive mix changes



Use of tiered investment structure





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Investment Menu (continued)

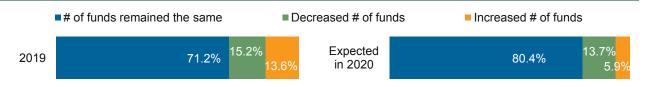
The majority of plan sponsors did not change the number of funds in their DC plan in 2019. When changes did occur, more plans decreased the number of funds, which is consistent with the stated intentions in last year's survey.

U.S. small/mid cap equity and global ex-U.S. equity were the most commonly added funds in 2019 while emerging market funds were the most commonly removed. For 2020, 5.3% plan on adding a target date fund, which is likely referring to the addition of a new vintage (e.g., 2065 fund).

53.1% of plans mapped assets in eliminated funds to similar funds

31.3% mapped to the default fund15.6% mapped to both

Changes to the number of funds



Types of funds added or eliminated

	Added/will	ladd	Eliminated/w	ill eliminate
	ln 2019	In 2020	In 2019	In 2020
Alternatives		1.8%		
Brokerage window		1.8%		
Commodity			3.5%	
U.S. fixed income	7.0%			
.S. large cap equity	1.8%	1.8%	3.5%	
.S. smid cap equity	8.8%	1.8%	1.8%	
.S./global balanced			1.8%	
merging mkt equity	3.5%		5.3%	
High yield fixed				1.8%
obal ex-U.S. equity	8.8%		1.8%	
Global ex-U.S. fixed		1.8%	3.5%	1.8%
Money market			1.8%	
REITs	1.8%		1.8%	
ESG*	5.3%	3.5%		
Specialty/sector			1.8%	
Stable value	1.8%			
Target date	3.5%	5.3%	1.8%	
TIPS			1.8%	
Other	5.6%	3.5%	1.8%	

*Environmental, social, and governance.



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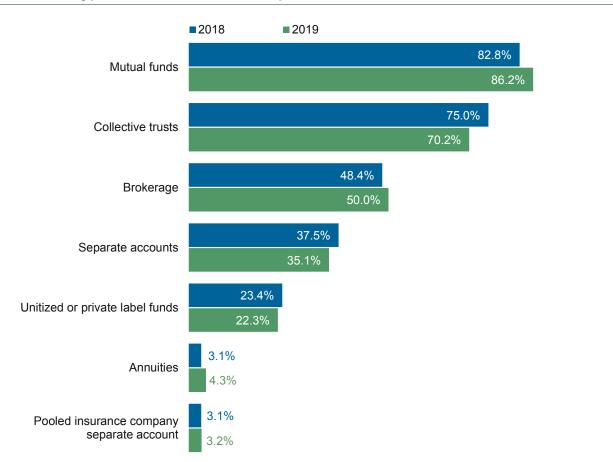
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Investment Vehicles

Use of mutual funds and collective trusts continues to be the most prevalent, at 86.2% and 70.2%, respectively. More often, plans used collective trusts for non-stable value options rather than the stable value option. The use of separate accounts in 2019 remained similar to the levels seen in 2018, at 35.1%.

The proportion of plans using unitized funds also remained similar from 2018 to 2019. Of those using unitized funds, 90.5% had over \$1 billion in plan assets.

Use of a brokerage window rose slightly in 2019, to 50.0%. Of those offering a brokerage window, 74% offer a full window while 26% offer only mutual funds.



Investment types within the fund lineup*

*Multiple responses were allowed. Some respondents offer multiple asset classes in each vehicle type (e.g., both stable value and another asset class are offered as a collective trust and/or separate account).



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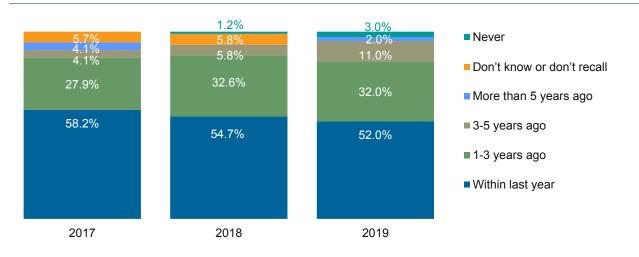
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Investment Structure Evaluation

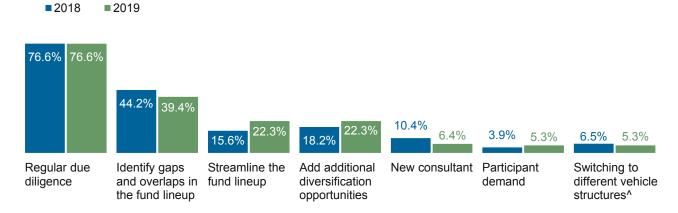
As in recent years, the majority of plan sponsors (52.0%) conducted an investment structure evaluation within the past year.

Regular due diligence remained the most common reason for conducting an investment structure evaluation. The next most common reasons were to identify gaps and overlaps in the fund lineup (39.4%), streamline the fund lineup (22.3%), and to add additional diversification opportunities (22.3%).

Timing of investment structure evaluation



Reasons for most recent investment structure evaluation*



Additional categories (2018/2019 data): New recordkeeper (2.6%/3.2%); other (7.8%/2.1%). ^e.g., unitization, separate accounts, collective trusts

*Multiple responses were allowed.



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Investment Criteria

As in 2018, investment performance stood as the top-ranking criteria for evaluating and selecting investment funds. Likewise cost and fees remained the second most-important criteria.

Participant request continues to be a low-ranking attribute in the evaluation and selection of investment funds.

Fund evaluation and selection criteria

		Ranking
ant	Investment performance	3.9
Most importan	Cost and fees	3.4
Most	Fills style or strategy gap	2.7
	Investment management team stability	2.1
	Style consistency	1.2
	Quality of service to plan sponsor	0.5
	Ease of integration with recordkeeping system	0.4
	Brand name/market image	0.3
rtant	Participant communication and educational support	0.2
-east Important	Leverages existing pension fund managers	0.2
Leas	Participant request	0.1

(5=Most important. Total ranking is weighted average score.)



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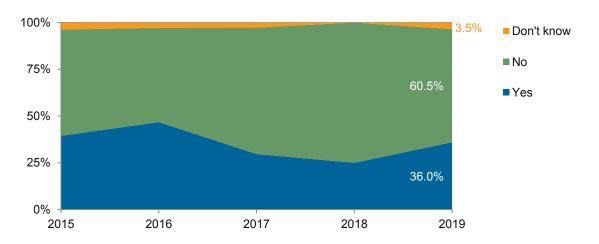
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Fund Replacement

In 2019, more than one-third of plan sponsors reported replacing funds in the past year because of performance-related reasons. This was a notable increase from the 25% that replaced a fund in 2018.

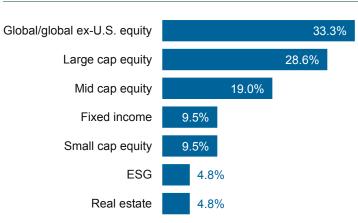
Global/global ex-U.S. equity was the most commonly replaced fund type, which could partially be a result of plan sponsors' decision to switch from developed to more broad non-U.S. mandates (e.g., MSCI ACWI ex-USA). Contrary to last year, large cap equity was replaced relatively often, whereas small cap equity was not.

Of the fund changes made, 19.0% were for mid cap equity, a notable increase from 2018 (9.8%).



Plans replacing funds due to performance-related reasons





*Percentages are out of just those that made changes. Multiple responses were allowed.



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Re-enrollment

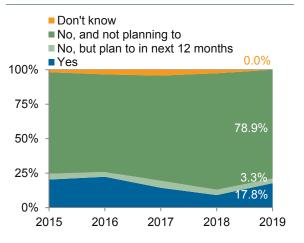
In 2019, 17.8% of plan sponsors indicated they had ever conducted an asset re-enrollment defined as requiring all participants in the plan to make a new fund selection or else be defaulted into the default investment option. This represented a considerable increase from 2018, when 9.1% of sponsors said they had conducted a re-enrollment.

Of the plans that had engaged in a reenrollment, 68.8% did so more than 12 months ago, versus 31.2% that either engaged in a reenrollment within the past 12 months or have had multiple re-enrollments.

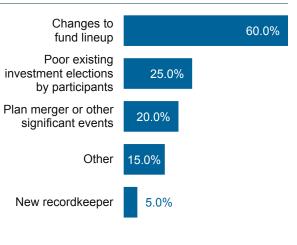
"Changes to the fund lineup" was the most common motivation for re-enrollment (60.0%), followed by poor existing investment elections by participants (25.0%).

Most plans are not planning a re-enrollment primarily because plan sponsors believe that it is not necessary, that participants would object, or that it is not a priority.

Have you conducted an asset reenrollment?



Re-enrollment reasons*



Reasons for not conducting re-enrollment

	Ranking
Not necessary	5.4
Participants would object to re-enrollment	5.1
Not a priority	4.8
Too much potential fiduciary liability	3.2
Too many administrative complexities	2.8
Too difficult to communicate	2.7
Objections from senior management	2.3
Too costly	1.7
Already re-enrolled participants	0.8
Other	0.6
Too many employers to coordinate with to be feasible	0.5
7=Most important. Total ranking is weighted ave	rage sco

*Multiple responses were allowed



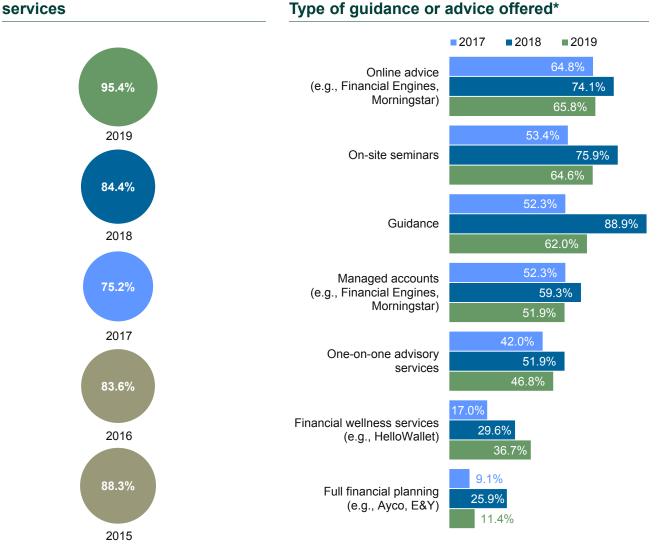
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Investment Advisory Services: Prevalence

Up notably in recent years, the vast majority of DC plan sponsors (95.4%) offered some form of investment guidance or advisory service to participants. In many cases, sponsors provided a combination of different advisory services, with 3.4 provided on average. This is up from two on average last year.

Online advice was the most commonly offered service (65.8%). On-site seminars were the next most common (64.6%), followed closely by guidance (62.0%). While financial wellness services were among the least commonly offered, it was the only service that saw an uptick from last year (29.6% in 2018 vs. 36.7% in 2019).



Plans offering guidance/advisory

*Percentages out of those offering advisory services. Multiple responses were allowed.



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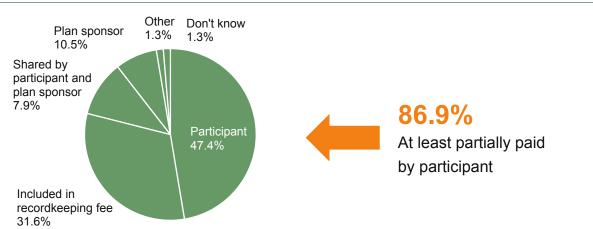
Investment Advisory Services: Enrollment and Payment

It remained most common for participants to pay for advisory services, either explicitly or as part of the overall recordkeeping costs.

The percentage of plan sponsors that paid the full expense of investment advisory services came in at 10.5% in 2019, a level similar to that of 2017 (13.3%).

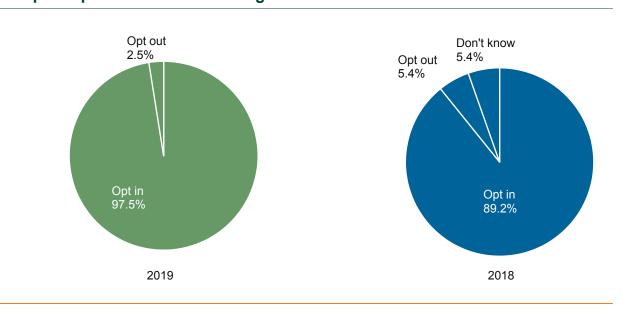
For plan sponsors that offered managed accounts, the vast majority (97.5%) offered them as an opt-in feature whereby participants must elect to use the feature. This is significantly up from 2016 (78.2%).

By comparison, few plans enrolled participants on an opt-out basis (2.5%). Plan sponsors cited the associated fees as the top reason for not offering opt-out enrollment.



Included in recordkeeping fee 31.6% How are participants enrolled in managed accounts?

Who pays for investment advisory services?





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Investment Advisory Services: Satisfaction

Satisfaction with investment advisory services was generally high. On-site seminars received the highest marks, with 100% of respondents very or somewhat satisfied. Guidance and oneon-one advisory services also ranked highly, at 98.0% and 97.2%, respectively.

While the majority of plan sponsors were satisfied with their full financial planning services, 25% expressed some level of dissatisfaction.

In the coming year, for sponsors that plan to add advisory services, financial wellness (50.0%) and full financial planning (50.0%) are the most likely to be added.

Few plan sponsors are likely to eliminate investment advisory services—only one respondent noted this expected action.

Low participant demand, being a lower priority, and cost were the top three reasons plan sponsors will not offer advice.

Types of advisory services expected to be added in 2020*



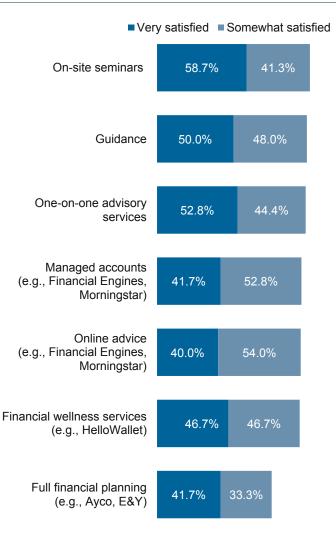
Reasons for eliminating/not offering advisory services

	Ranking
Low participant demand/potential utilization	4.3
Not a high priority	4.0
Too costly to participants	3.6
Unsure how to do so in current regulatory environment	3.5
(6-Most important Total ranking is weighted a	

(6=Most important. Total ranking is weighted average score.) Additional categories: Dissatisfied with available products (2.8); too costly to plan sponsor (1.5).

*Multiple responses were allowed.

Satisfaction ratings of guidance or advisory service





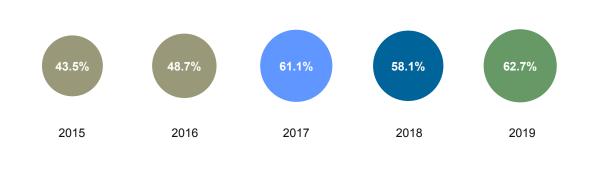
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Post-Employment Assets

The percentage of plan sponsors that have a policy for retaining retiree/terminated participant assets remained similar to 2017 and 2018 findings, still a notable increase from 43.5% in 2015. Among plan sponsors that had a policy, more seek to retain assets than not.

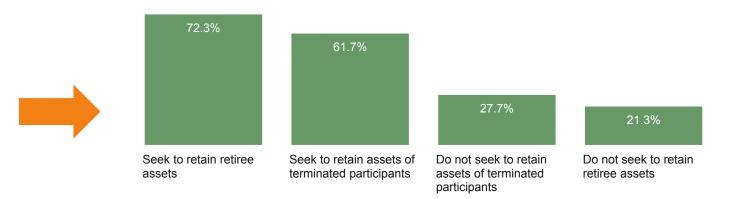
Many of the plans seeking to retain assets offer an institutional structure that is more cost effective than what is available in the retail market.



Plans with a policy for retaining retiree/terminated assets

Types of retention policies*

74.5% sought to retain assets in 2019



*Percentages out of those with a policy. Multiple responses were allowed.



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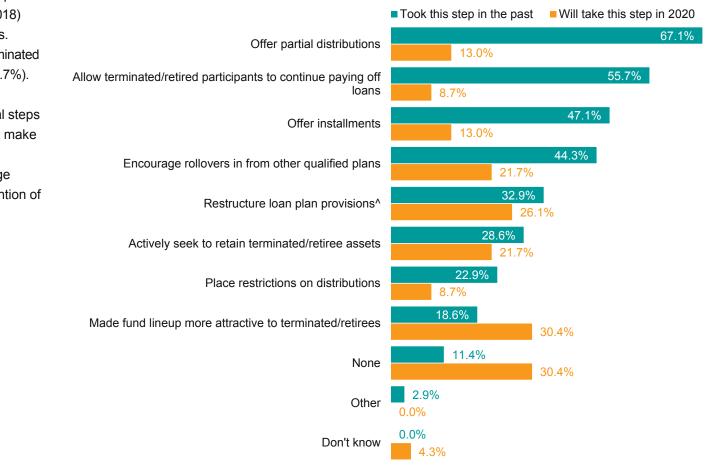
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Plan Leakage

Most plan sponsors (88.6%) have taken steps to prevent plan leakage. This included offering partial distributions (67.1% in 2019 vs. 56.7% in 2018) and installment payments (47.1% in 2019 vs. 44.8% in 2018). More than half allowed terminated participants to continue paying off loans (55.7%).

In 2020, 65.3% anticipate taking additional steps to prevent plan leakage—most notably, to make the fund lineup more attractive to retirees, restructure loan plan provisions, encourage rollovers into the plan, or support the retention of assets.

Steps taken to prevent plan leakage*



^e.g., reduce number of loans allowed, change loan frequency

*Multiple responses were allowed.



88.6% have taken steps to

prevent plan leakage

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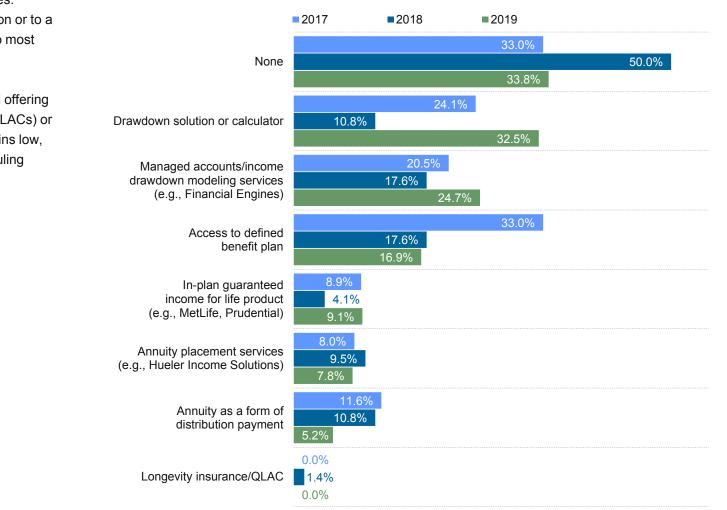
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Retirement Income Solutions

Two-thirds of plans (66.2%) offered some sort of retirement income solution to employees. Providing access to a drawdown solution or to a managed account service were the two most common.

The rate of plan sponsors that reported offering qualified longevity annuity contracts (QLACs) or longevity insurance in their plans remains low, despite a 2014 Treasury Department ruling making it easier to do so.

Retirement income solutions offered*



*Multiple responses were allowed.



retirement income solution

66.2% offered a

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Reasons for Not Offering Annuities

Plan sponsors cited a number of reasons to explain why they are unlikely to offer an annuitytype product in the near term.

Plan sponsors reported being uncomfortable or unclear about the fiduciary implications, and that an annuity-type product is unnecessary or not a priority. Respondents also indicated that a lack of participant need or demand, concern over insurer risk, and concern over cost drove the decision to not offer these products.

fiduciary implications Most important 3.4 No participant need or demand 3.2 Concerned about insurer risk 3.0 Too costly to plan 2.3 sponsors/participants Difficult to communicate to 2.1 participants Uncomfortable with available 2.1 products Too administratively complex 2.0 Availability of DB plan 2.0 Products are not portable 1.8 ast Importani Lack of product knowledge 1.5

Uncomfortable/unclear about

(5=Most important. Total rating is weighted average score.)



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If you will not offer an annuity-type product, please rate the reasons for not doing so

Rating

3.6

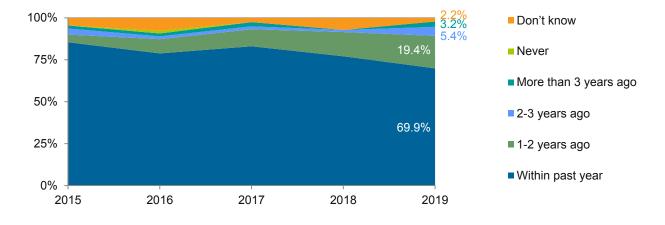
Fee Calculation

The percentage of plan sponsors that calculated their all-in DC plan fees within the past 12 months came in at nearly 70% in 2019. Another 19.4% have done so in the past one to two years. Only 2.2% were unsure of the last time all-in fees were calculated, down from last year.

A combination of entities are generally responsible for calculating plan fees. In 2019, fees were most frequently calculated by the consultant, followed by the plan sponsor and/or recordkeeper.

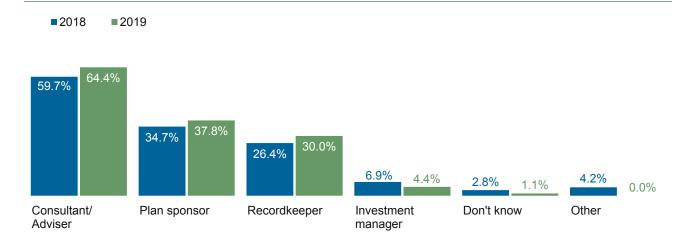
52.6% evaluated indirect revenue

21.8% did not know if it was



Last time all-in plan fees were calculated*

Who handled your fee calculation?**



*All-in fees include all applicable administration, recordkeeping, trust/custody, and investment management fees. **Multiple responses were allowed.



when calculating fees

evaluated

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Fee Benchmarking

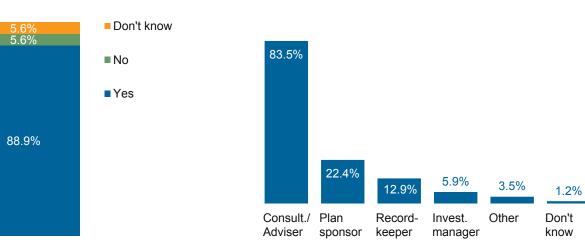
Nearly 9 in 10 plan sponsors (88.9%) benchmarked the level of plan fees as part of their fee evaluation process, up from last year (83.3%). The percentage of plan sponsors that did not know whether plan fee levels were benchmarked (5.6%) was down slightly from 6.4% in 2018.

In the majority of cases, the consultant/adviser conducted the benchmarking (83.5%), which was consistent with last year.

Plan sponsors tend to use multiple data sources in benchmarking. Consultant databases (60.8%) were the most heavily used method. Data from the recordkeeper (24.1%), general benchmarking data (24.1%), and RFIs (21.5%) were the next most frequently cited.

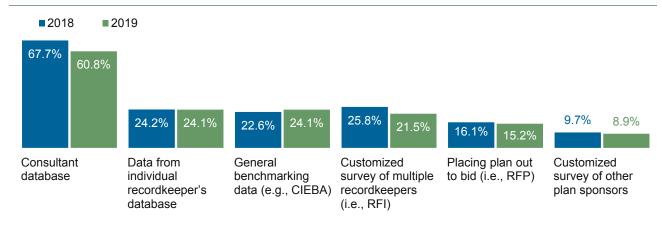
62.4% both calculated and benchmarked plan fees within the past 12 months





Who handled the benchmarking?*

How benchmarking was done*



*Multiple responses were allowed.

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Fee Calculation and Benchmarking Outcomes

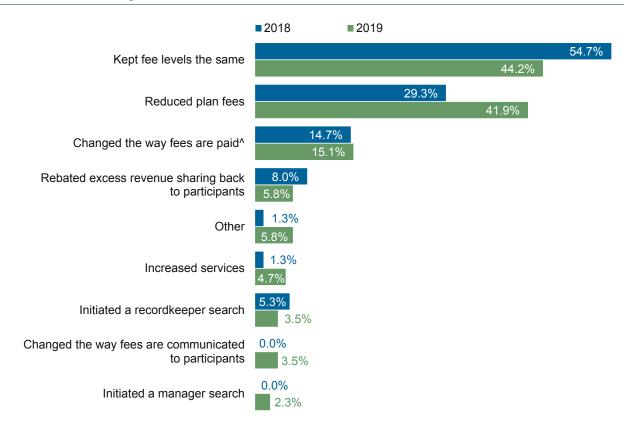
Less than half of plan sponsors kept fees the same following their most recent fee review (44.2%), while nearly the same proportion (41.9%) reduced fees.

After reducing fees, the next most common activity resulting from a fee assessment in 2019 was changing the way fees were paid (15.1%). This remains down significantly from 2016 potentially reflecting the fact that many plan sponsors have already changed their fee payment model.

In last year's survey, plan sponsors rated fees as a lower priority communication topic. This panned out as expected for the year with few plan sponsors (3.5%) having changed the way fees are communicated to participants as a result of their fee review.

Of those selecting "Other," one changed its recordkeeper as a result of its fee assessment. The majority of the others were still in progress with their assessment and had not determined the outcome.

Outcome of fee analysis*



Additional categories (2018/2019): Don't know (2.7%/2.3%); implemented an ERISA-type account (0.0%/0.0%).

^e.g., change from use of revenue sharing to an explicit participant fee

*Multiple responses were allowed.



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Fee Payment

Investment management fees were most often entirely paid by participants (78.0%), and almost always at least partially paid by participants (91.2%). In contrast, nearly half (45.7%) of all administrative fees were paid entirely by participants, up from last year, but still down significantly from 62.7% in 2017. Most plan sponsors (83.7%) noted that at least some administrative fees were participant-paid.

In a modest decrease from last year, 27.3% of participants paid administrative fees either solely through revenue sharing or through a combination of revenue sharing and some type of out-of-pocket fees. Only 11.7% paid solely through revenue sharing (vs. 13.8% in 2018).

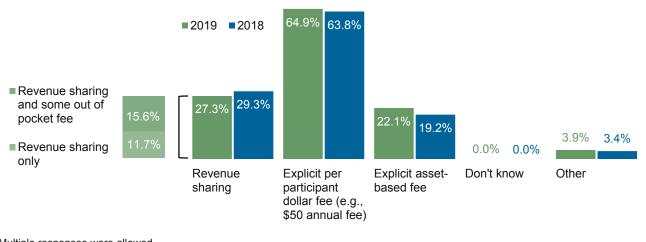
Of those paying through an explicit fee, using a per-participant fee continued to be more popular than an asset-based fee (64.9% vs. 22.1%).



How investment management fees are paid

How administrative fees are paid

How participants pay for plan administration*



*Multiple responses were allowed

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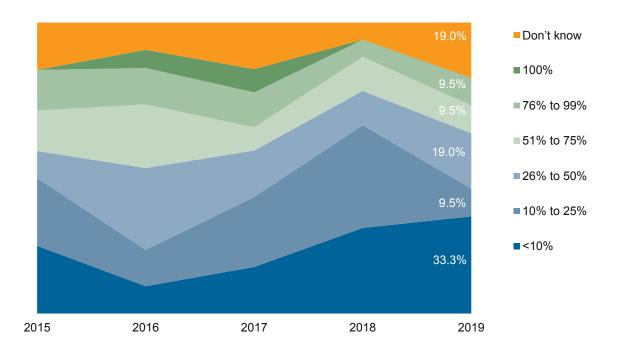
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Revenue Sharing

Of plans with revenue sharing (or some kind of administrative allocation back from the investment fund), none reported that all of the funds in the plan provided revenue sharing, similar to 2018. The most common was to have less than 10% of funds paying revenue sharing, a change from 2018 in which between 10% and 25% of funds was the most common response.

Plan sponsors that are not sure what percentage of the funds in the plan offer revenue sharing increased markedly from 5.9% in 2018 to 19.0% in 2019.

Percentage of funds that have revenue sharing





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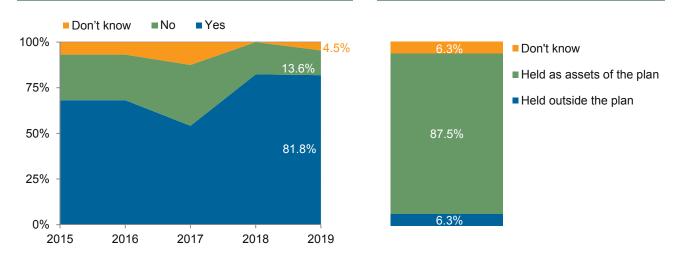
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ERISA Accounts for Plans with Revenue Sharing

Eight out of 10 plan sponsors with revenue sharing had an ERISA account. This was consistent with 2018 (82.4%). Up from last year, 4.5% of plan sponsors responded that they did not know if they had an ERISA account, though still down notably from 12.5% in 2017.

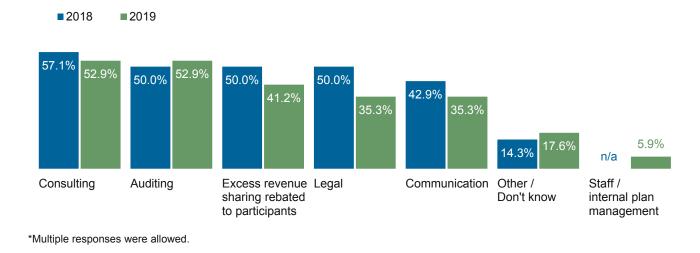
In most cases (87.5%), reimbursed administrative fees were held as a plan asset.

Consulting and auditing fees were the most commonly paid expense through the ERISA account (52.9% for each). In 2019, the ERISA account was used less frequently for legal- and communication-related fees.



Do you have an ERISA expense reimbursement account?

Expenses paid through the ERISA account*





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Where are ERISA account assets held?

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Fee Initiatives in 2020

Two-thirds of plan sponsors are either somewhat or very likely to switch to lower-fee share classes in 2020 (66.7%).

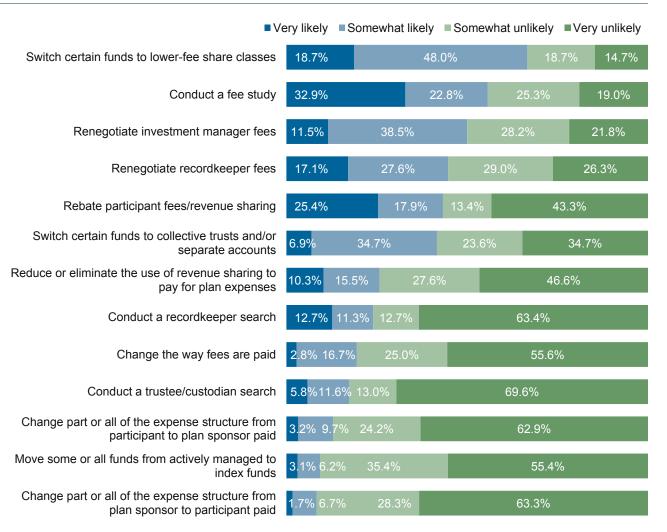
Falling from the most likely step last year, 55.7% of plan sponsors are likely to conduct a fee study in 2020.

Other somewhat or very likely actions include renegotiating investment manager and recordkeeper fees (50.0% and 44.7%, respectively).

In a similar effort to reduce fees, 41.6% of plan sponsors intend to switch to more institutional vehicles such as collective trusts or separate accounts.

Recordkeeper search activity is likely to continue in 2020, with 24.0% saying they are very or somewhat likely to conduct a search, up from last year, and close to the record high of 25.5% in 2016.

Types of fee initiatives planned for 2020





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Participant Communication

For the third year in a row, financial wellness ranked as the number one upcoming area of communication focus. Plan participation came in second, up from fifth place last year. Investing fell from second to fifth place.

While plan sponsors are heavily focused on managing plan fees, they are not as focused on communicating them, according to their lower ranking.

In terms of media channels, email continued to be among the most used channels with all plan sponsors now using it. The recordkeeper's website came in second, pushing postal mail into third for 2019. Mobile apps saw a notable increase from last year (19.0% in 2018 vs. 34.5% in 2019). Text messaging, blogs, and social media still are not widely used.

Areas of communication focus in 2020

	Ranking
Financial wellness	5.3
Plan participation	4.2
Contribution levels	4.0
Retirement income adequacy	3.9
Investing (e.g., market activity, use of funds, diversification, market timing)	3.6
Managing income in retirement	2.9
Fees	2.7

(7=Most focus. Total ranking is weighted average score.) Additional categories: Loans (1.8); withdrawals/distributions (1.8); company stock (0.8).

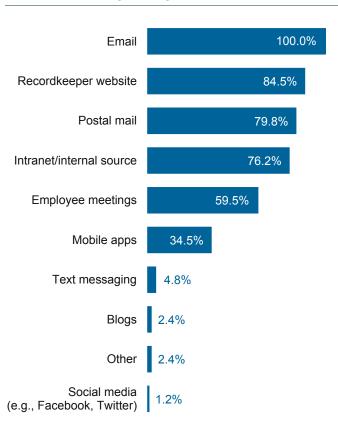
*Multiple responses were allowed.

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Media channels used to communicate plan information to participants*



About the Authors



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