

Optional Retirement Program Performance Report

State Retirement and Pension System of Maryland

(As of December 31, 2018)

Investment Options					Average Annual Rates of Return				
Ticker	Money Market	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
VUSXX	TIAA-CREF Vanguard Treasury Money Market Fund		0.09%	0.09%	1.80%	1.29%	0.95%	0.71%	0.57%
	<i>Citigroup 3-month Treasury Bill Index</i>				<i>1.86%</i>	<i>1.35%</i>	<i>0.99%</i>	<i>0.75%</i>	<i>0.60%</i>
	Stable Value	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
N/A	TIAA-CREF Traditional Retirement Annuity		N/A	N/A	3.86%	3.83%	3.92%	3.92%	3.95%
	<i>Citigroup 3-month Treasury Bill Index + 1.25%</i>				<i>3.11%</i>	<i>2.60%</i>	<i>2.24%</i>	<i>2.00%</i>	<i>1.85%</i>
	Core Fixed Income/ Intermediate-Term Bond	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FXNAX	Fidelity U.S Bond Index (I)	Passive	0.03%	0.03%	0.03%	1.74%	2.00%	1.66%	2.51%
VBPIX	TIAA-CREF Vanguard Total Bond Market Index Fund	Passive	0.04%	0.04%	-0.01%	1.76%	2.04%	1.63%	2.47%
WATFX	Western Asset Core Bond Fund (I)	Active	0.46%	0.56%	-0.63%	2.25%	2.87%	2.45%	3.42%
N/A	TIAA-CREF Bond Market Account	Active	0.31%	0.31%	-0.17%	1.96%	2.46%	1.97%	2.67%
	<i>BC US Aggregate Bond Index</i>				<i>0.01%</i>	<i>1.76%</i>	<i>2.06%</i>	<i>1.68%</i>	<i>2.52%</i>
	Inflation-Linked Bond	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FIPDX	Fidelity Inflation Protected Bond Index	Passive	0.05%	0.05%	-1.37%	0.78%	2.13%	1.15%	1.66%
VIPIX	Vanguard Inflation-Protected Securities Fund (Instl Shares)	Passive	0.07%	0.07%	-1.40%	0.76%	2.04%	1.10%	1.68%
	<i>Barclays US TIPS Index</i>				<i>-1.26%</i>	<i>0.85%</i>	<i>2.11%</i>	<i>1.21%</i>	<i>1.69%</i>
	Balanced	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FBAKX	Fidelity Balanced Fund (K)	Active	0.45%	0.45%	-3.94%	5.84%	6.27%	4.79%	5.91%
N/A	TIAA-CREF Social Choice Account (R3)	Active	0.27%	0.27%	-4.30%	4.58%	5.51%	3.88%	4.46%
	<i>60% Russell 1000/40% BC Aggregate Bond Index</i>				<i>-5.35%</i>	<i>2.69%</i>	<i>5.30%</i>	<i>3.38%</i>	<i>4.46%</i>
	U.S Large-Cap Equity	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FXAIX	Fidelity 500 Index (I)	Passive	0.02%	0.02%	-4.40%	7.91%	9.25%	7.23%	8.48%
VINIX	TIAA-CREF Vanguard Institutional Index	Passive	0.04%	0.04%	-4.42%	7.89%	9.22%	7.20%	8.46%
FCNKX	Fidelity Contrafund (K)	Active	0.65%	0.65%	-2.07%	13.84%	10.28%	9.34%	9.40%
	<i>S&P 500 Index</i>				<i>-4.38%</i>	<i>7.93%</i>	<i>9.26%</i>	<i>7.23%</i>	<i>8.49%</i>

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Ticker	U.S. Large-Cap Equity (cont'd)	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
N/A	TIAA-CREF Stock	Active	0.31%	0.31%	-9.66%	5.62%	6.79%	4.83%	5.14%
	<i>Russell 3000 Index</i>				<i>-5.24%</i>	<i>7.14%</i>	<i>8.97%</i>	<i>6.78%</i>	<i>7.91%</i>
FBGKX	Fidelity Blue Chip Growth Fund (K)	Active	0.62%	0.62%	1.16%	17.38%	11.91%	10.50%	11.34%
N/A	TIAA-CREF Growth	Active	0.26%	0.26%	-2.46%	13.39%	9.78%	8.95%	9.87%
	<i>Russell 1000 Growth Index</i>				<i>-1.51%</i>	<i>13.24%</i>	<i>11.15%</i>	<i>9.75%</i>	<i>10.40%</i>
MADVX	BlackRock Equity Dividend Fund	Active	0.73%	0.73%	-7.17%	4.11%	8.00%	5.91%	6.59%
RWMGX	TIAA-CREF American Funds Washington Mutual (R6)	Active	0.29%	0.29%	-2.66%	8.32%	10.09%	7.51%	8.30%
	<i>Russell 1000 Value Index</i>				<i>-8.27%</i>	<i>2.11%</i>	<i>6.95%</i>	<i>4.15%</i>	<i>5.95%</i>
	U.S. Mid-Cap Equity	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FKMCX	Fidelity Mid Cap Stock Fund (K)	Active	0.51%	0.51%	-6.36%	5.47%	8.59%	5.57%	5.90%
VMCPX	TIAA-CREF Vanguard Mid-Cap Index Fund (IP)	Passive	0.03%	0.03%	-9.21%	4.06%	6.40%	4.42%	6.23%
	<i>Russell Mid Cap Index</i>				<i>-9.06%</i>	<i>3.82%</i>	<i>7.04%</i>	<i>4.59%</i>	<i>6.26%</i>
	U.S. Small-Cap Equity	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
DFSTX	Fidelity DFA U.S. Small Cap Portfolio (I)	Active	0.37%	0.37%	-13.13%	-1.57%	6.17%	3.72%	3.87%
FSSNX	Fidelity Small Cap Index Fund	Passive	0.03%	0.03%	-10.88%	1.17%	7.58%	4.49%	4.63%
TISEX	TIAA-CREF Quant Small Cap Equity (I)	Active	0.41%	0.41%	-11.97%	0.62%	6.70%	5.02%	5.40%
TISBX	TIAA-CREF Small-Cap Blend Index Fund	Passive	0.06%	0.06%	-10.84%	1.19%	7.57%	4.52%	4.64%
	<i>Russell 2000 Index</i>				<i>-11.01%</i>	<i>1.00%</i>	<i>7.36%</i>	<i>4.29%</i>	<i>4.41%</i>
	International/Global Equity	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FSGGX	Fidelity Global ex- U.S. Index Fund	Passive	0.06%	0.06%	-13.91%	4.73%	4.68%	2.01%	0.68%
VTSNX	TIAA-CREF Vanguard Total International Stock Index Fund	Passive	0.09%	0.09%	-14.39%	4.50%	4.56%	2.29%	0.97%
	<i>MSCI ACWI ex US (Net)</i>				<i>-14.20%</i>	<i>4.47%</i>	<i>4.48%</i>	<i>1.84%</i>	<i>0.68%</i>
FKIDX	Fidelity Diversified International K6 Fund	Active	0.60%	0.60%	-15.20%	3.74%	1.24%	1.73%	0.76%
REGX	TIAA-CREF American Funds EuroPacific Growth R6	Active	0.49%	0.49%	-14.91%	5.65%	4.08%	2.92%	1.86%
	<i>MSCI EAFE Index (Net)</i>				<i>-13.79%</i>	<i>3.82%</i>	<i>2.87%</i>	<i>1.94%</i>	<i>0.53%</i>

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Ticker	International/Global Equity (cont'd)	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
AQGRX	AQR Global Equity Fund	Active	0.71%	0.78%	-14.41%	3.67%	4.78%	4.30%	N/A
N/A	TIAA-CREF Global Equities	Active	0.34%	0.34%	-12.36%	4.59%	4.77%	3.47%	3.61%
	<i>MSCI All-Country World Index Free</i>				<i>-9.41%</i>	<i>5.97%</i>	<i>6.60%</i>	<i>4.28%</i>	<i>4.26%</i>
	Socially Responsible	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
VFTSX	Vanguard FTSE Social Index Fund	Passive	0.18%	0.18%	-3.45%	9.47%	9.73%	7.52%	9.12%
	<i>S&P 500 Index</i>				<i>-4.38%</i>	<i>7.93%</i>	<i>9.26%</i>	<i>7.23%</i>	<i>8.49%</i>
N/A	TIAA-CREF Social Choice Account	Active	0.27%	0.27%	-4.30%	4.58%	5.51%	3.88%	4.46%
	<i>60% Russell 3000/40% BC Aggregate Bond Index</i>				<i>-2.87%</i>	<i>5.14%</i>	<i>6.34%</i>	<i>4.91%</i>	<i>5.90%</i>

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Ticker	Investment Options			Average Annual Rates of Return					
	Lifecycle Funds	Active/ Passive	Net Expense Ratio	Gross Expense Ratio	1 Year	2 Year	3 Year	4 Year	5 Year
FNSHX	Fidelity Freedom Income K	Active	0.42%	0.42%	-1.88%	3.05%	3.75%	2.70%	2.93%
FSNJX	Fidelity Freedom 2005 K	Active	0.44%	0.44%	-2.46%	3.74%	4.45%	3.24%	3.49%
FSNKX	Fidelity Freedom 2010 K	Active	0.47%	0.47%	-3.52%	4.15%	4.90%	3.58%	3.83%
FSNLX	Fidelity Freedom 2015 K	Active	0.50%	0.50%	-4.38%	4.51%	5.35%	3.90%	4.15%
FSNOX	Fidelity Freedom 2020 K	Active	0.54%	0.54%	-5.16%	4.70%	5.55%	4.07%	4.32%
FSNPX	Fidelity Freedom 2025 K	Active	0.57%	0.57%	-5.81%	4.86%	5.72%	4.22%	4.50%
FSNQX	Fidelity Freedom 2030 K	Active	0.61%	0.61%	-6.92%	5.54%	6.40%	4.72%	4.91%
FSNUX	Fidelity Freedom 2035 K	Active	0.64%	0.64%	-8.29%	5.70%	6.67%	4.91%	5.07%
FSNVX	Fidelity Freedom 2040 K	Active	0.64%	0.64%	-8.89%	5.50%	6.52%	4.81%	4.99%
FSNZX	Fidelity Freedom 2045 K	Active	0.64%	0.64%	-8.90%	5.51%	6.52%	4.81%	5.00%
FNSBX	Fidelity Freedom 2050 K	Active	0.64%	0.64%	-8.85%	5.54%	6.56%	4.82%	5.01%
FNSDX	Fidelity Freedom 2055 K	Active	0.64%	0.64%	-8.86%	5.54%	6.54%	4.81%	5.00%
FNSFX	Fidelity Freedom 2060 K	Active	0.64%	0.64%	-8.83%	5.46%	6.50%	4.78%	N/A
TLRIX	TIAA-CREF Lifecycle Retirement Income (I)	Active	0.37%	0.52%	-3.84%	3.82%	4.56%	3.46%	3.67%
TCTIX	TIAA-CREF Lifecycle 2010 (I)	Active	0.37%	0.49%	-3.92%	4.09%	4.79%	3.67%	3.85%
TCNIX	TIAA-CREF Lifecycle 2015 (I)	Active	0.38%	0.50%	-4.41%	4.32%	5.01%	3.84%	4.03%
TCWIX	TIAA-CREF Lifecycle 2020 (I)	Active	0.39%	0.50%	-5.18%	4.68%	5.34%	4.09%	4.24%
TCYIX	TIAA-CREF Lifecycle 2025 (I)	Active	0.41%	0.52%	-6.05%	5.02%	5.68%	4.32%	4.43%
TCRIX	TIAA-CREF Lifecycle 2030 (I)	Active	0.42%	0.53%	-7.09%	5.25%	5.94%	4.52%	4.56%
TCIIX	TIAA-CREF Lifecycle 2035 (I)	Active	0.43%	0.54%	-8.04%	5.53%	6.19%	4.67%	4.67%
TCOIX	TIAA-CREF Lifecycle 2040 (I)	Active	0.44%	0.55%	-8.92%	5.81%	6.46%	4.83%	4.79%
TTFIX	TIAA-CREF Lifecycle 2045 (I)	Active	0.45%	0.56%	-9.59%	5.72%	6.49%	4.87%	4.81%
TFTIX	TIAA-CREF Lifecycle 2050 (I)	Active	0.45%	0.57%	-9.82%	5.76%	6.54%	4.91%	4.85%
TTRIX	TIAA-CREF Lifecycle 2055 (I)	Active	0.45%	0.59%	-9.86%	5.82%	6.63%	4.97%	4.89%
TLXNX	TIAA-CREF Lifecycle 2060 (I)	Active	0.45%	0.79%	-10.06%	5.78%	6.64%	4.99%	N/A

Source: FactSet, TIAA-CREF, Fidelity

Notes:

1. All returns are reported net of all expenses.
2. Returns greater than one year are annualized.
3. Indexes are listed in *red italics*. They are intended to reflect the performance of the overall market in each investment category, and should be used for comparison purposes only.
4. Gross expense ratio is the total annual fund or class operating expenses (before waivers or reimbursements) paid by the fund and stated as a percent of the fund's total net assets. Net expense ratios are calculated after waivers and reimbursements.

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Other Notes:

TIAA CREF

1. Variable annuities include a Mortality & Expense in the expense ratios shown above which pays for the guaranteed death benefits and annuity payments upon annuitization of the contract for the life of the annuitant. Please contact a vendor representative for a more complete explanation. R3 Class began operations on April 24, 2015.

Performance shown for periods prior to the inception of the R3 Class reflects the performance of R1 Class. Total returns have not been restated to reflect any expense differential between any of the classes. Had the expense differential been reflected, total returns for the R3 Classes would have been higher.

2. For further information on investment options including disclosures please visit the following sites:

University System of Maryland - www.tiaa-cref.org/usmd

All other colleges and universities - www.tiaa-cref.org/marylandcc

Fidelity

Fund line-up as of 1/29/2018

Last categorization update date 12/31/2018

Total returns are historical and include change in share value and reinvestment of dividends and capital gains, if any. Cumulative total returns are reported as of the period indicated. Life of Fund figures are reported as of the inception date to the period indicated. These figures do not include the effect of sales charges, if any, as these charges are waived for contributions made through your company's employee benefit plans. If sales charges were included, returns would have been lower.

The returns shown above for Fidelity Freedom class K funds are for a different class of funds. Returns and expenses prior are those of the Freedom (retail) class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Indices are unmanaged and you cannot invest directly in an index.

Morningstar, Inc., provided data on the non-Fidelity mutual funds. Although the data is gathered from reliable sources, accuracy and completeness cannot be guaranteed by Morningstar.

The Morningstar Category Average is the average return for the peer group based on the returns of each individual fund within the group, for the period shown. This average assumes reinvestment of dividends and capital gains, if any, and excludes sales charges.

*The current yield of the money market mutual fund listed above reflects the current earnings of the fund, while the total return refers to a specific past holding period.

% Rank in Category is the fund's total-return percentile rank relative to all funds that have the same Morningstar Category. The highest (or most favorable) percentile rank is one and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of one. The number in parentheses represents the number of funds in the category. % Rank in Category is based on total returns, which include reinvested dividends and capital gains, if any, and exclude sales charges.

With the exception of domestic equity mutual funds, investment options have been assigned to investment categories based on Fidelity's analysis. Fidelity has verified the accuracy of the placement of certain third party non-mutual funds with either the plan sponsor or the plan sponsor's consultant. Within Domestic Equities, mutual funds are listed according to their actual Morningstar categories as of the date indicated. Morningstar categories are based on a fund's style as measured by its underlying portfolio holdings over the past 3 years and may change at any time. These style calculations do not represent the funds' objectives and do not predict the funds' future styles.

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Fidelity® Small Cap Index Fund - Premium Class: As of June 14, 2016, this fund changed its name from Spartan Small Cap Index Fund - Fidelity Advantage Class.

Fidelity® Global ex U.S. Index Fund - Premium Class: As of June 14, 2016, this fund changed its name from Spartan Global ex U.S. Index Fund - Fidelity Advantage Class.

Fidelity® 500 Index Fund - Institutional Class: As of June 14, 2016, this fund changed its name from Spartan® 500 Index Fund - Institutional Class.

Fidelity® U.S. Bond Index Fund - Institutional Class: As of June 14, 2016, this fund changed its name from Spartan® U.S. Bond Index Fund - Institutional Class.

Fidelity® Inflation-Protected Bond Index Fund - Premium Class: As of June 14, 2016, this fund changed its name from Spartan Inflation-Protected Bond Index Fund - Fidelity Advantage Class.

Franklin Mutual Global Discovery Fund Class R6: The analysis on these pages may be based, in part, on adjusted historical returns for periods prior to the class's actual inception of 05/01/2013. These calculated returns reflect the historical performance of the oldest share class of the fund, with an inception date of 12/31/1992, adjusted to reflect the fees and expenses of this share class (when this share class's fees and expenses are higher.) Please refer to a fund's prospectus for information regarding fees and expenses. These adjusted historical returns are not actual returns. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

BlackRock Equity Dividend Fund Institutional Shares: The analysis on these pages may be based, in part, on adjusted historical returns for periods prior to the class's actual inception of 11/29/1988. These calculated returns reflect the historical performance of the oldest share class of the fund, with an inception date of 11/25/1987, adjusted to reflect the fees and expenses of this share class (when this share class's fees and expenses are higher.) Please refer to a fund's prospectus for information regarding fees and expenses. These adjusted historical returns are not actual returns. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

Fidelity® 500 Index Fund - Institutional Class: Returns prior to May 4, 2011 are those of the Premium Class and reflect the Premium Class' expense ratio. Had the Institutional Class' expense ratio been reflected, total returns would have been higher.

Fidelity® U.S. Bond Index Fund - Institutional Class: Returns prior to May 4, 2011 are those of the Investor Class and reflect the Investor Class' expense ratio. Had the Institutional Class' expense ratio been reflected, total returns would have been higher.

Fidelity® Balanced Fund - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Fidelity® Blue Chip Growth Fund - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Fidelity® Contrafund® - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Fidelity® Diversified International Fund - Class K, Fidelity® Mid-Cap Stock Fund - Class K: On May 9, 2008, an initial offering of the retirement (K) class took place. Returns and expenses prior to that date are those of the non-K, non-advisor class. Had K class expenses been reflected in the returns shown, total returns would have been higher.

Expense Ratio Footnotes

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For a mutual fund, the expense ratio is the total annual fund or class operating expenses (before waivers or reimbursements) paid by the fund and stated as a percent of the fund's total net assets. Where the investment option is not a mutual fund, the figure displayed in the expense ratio field is intended to reflect similar information. However, it may have been calculated using methodologies that differ from those used for mutual funds. Mutual fund data has been drawn from the most recent prospectus. For non-mutual fund investment options, the information has been provided by the trustee or plan sponsor. When no ratio is shown for these options it is due to the fact that none was available. Nevertheless, there may be fees and expenses associated with the investment option.

Expense Ratio after Reduction is the total annual operating expense from the fund's most recent prospectus after any fee waiver and/or expense reimbursements that will reduce any fund operating expenses for no less than one year from the effective date of the fund's registration statement. This number does not include any fee waiver arrangement or expense reimbursement that may be terminated without agreement of the fund's board of trustees during the one-year period.

Morningstar Category Expense Ratio: This figure represents average gross expense ratio paid by the funds in the Morningstar category. The information is based on the gross expense ratio as reported in each fund's most current prospectus and is provided by Morningstar.

Morningstar Category Expense Ratio: This figure represents average net expense ratio paid by the funds in the Morningstar category. The information is based on the net expense ratio as reported in each fund's most current prospectus and is provided by Morningstar.

Western Asset Core Bond Fund Class I: Contractual Expense Ratio Waiver of 0.09 subject to Expiration Date of 12/31/2018. Expense Waiver is the amount that the fund company waives or assumes of the expenses borne by the fund, until the expiration date, in order to lower the fund's actual expenses. After the expiration date, the expense waiver may be terminated or revised, which may lower the fund's yield and return.

Before investing, consider the funds' investment objectives, risks, charges, and expenses. Contact Fidelity for a prospectus or, if available, a summary prospectus containing this information. Read it carefully.

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