

Summary Prospectus

OCTOBER 1, 2016



TIAA-CREF Lifecycle Index 2045 Fund of the TIAA-CREF Funds

Class:	Institutional	Advisor	Premier	Retirement
Ticker:	TLXIX	TLMHX	TLMPX	TLMRX

Before you invest, you may want to review the Fund's prospectus, which contains more information about the Fund and its risks. You can find the Fund's prospectus and other information about the Fund online at www.tiaa.org/lcx_pro. You can also get this information at no cost by calling 800-223-1200 or by sending an e-mail request to disclosure@tiaa.org. The Fund's prospectus and Statement of Additional Information ("SAI"), each dated October 1, 2016, as subsequently supplemented, and the sections of the Fund's shareholder report dated May 31, 2016 from "Portfolio of Investments" through "Notes to Financial Statements," are incorporated into this Summary Prospectus by reference and may be obtained free of charge at the website, phone number or e-mail address noted above.

Investment objective

The Lifecycle Index 2045 Fund seeks high total return over time through a combination of capital appreciation and income.

Fees and expenses

This table describes the fees and expenses that you may pay if you buy and hold shares of the Fund.

SHAREHOLDER FEES (fees paid directly from your investment)

	Institutional Class	Advisor Class	Premier Class	Retirement Class
Maximum sales charge imposed on purchases (percentage of offering price)	0%	0%	0%	0%
Maximum deferred sales charge	0%	0%	0%	0%
Maximum sales charge imposed on reinvested dividends and other distributions	0%	0%	0%	0%
Redemption or exchange fee	0%	0%	0%	0%
Maximum account fee	0%	0%	0%	0%

ANNUAL FUND OPERATING EXPENSES (expenses that you pay each year as a percentage of the value of your investment)

	Institutional Class	Advisor Class	Premier Class	Retirement Class
Management fees	0.10%	0.10%	0.10%	0.10%
Distribution (Rule 12b-1) fees	—	—	0.15%	—
Other expenses	0.05%	0.13% ¹	0.05%	0.30%
Acquired Fund fees and expenses ²	0.07%	0.07%	0.07%	0.07%
Total annual Fund operating expenses	0.22%	0.30%	0.37%	0.47%
Waivers and expense reimbursements ^{3,4}	(0.12)%	(0.12)%	(0.12)%	(0.12)%
Total annual Fund operating expenses after fee waiver and/or expense reimbursement	0.10%	0.18%	0.25%	0.35%

¹ Estimate is for the current fiscal year.

² “Acquired Fund fees and expenses” are the Fund’s proportionate amount of the expenses of any investment companies or pools in which it invests. These expenses are not paid directly by Fund shareholders. Instead, Fund shareholders bear these expenses indirectly because they reduce Fund performance. Because “Acquired Fund fees and expenses” are included in the chart above, the Fund’s operating expenses here will not correlate with the expenses included in the Financial highlights in this Prospectus and the Fund’s annual report.

³ Under the Fund’s expense reimbursement arrangements, the Fund’s investment adviser, Teachers Advisors, LLC (“Advisors”), has contractually agreed to reimburse the Fund for any Total annual Fund operating expenses (excluding interest, taxes, brokerage commissions or other transactional expenses, Acquired Fund fees and expenses and extraordinary expenses) that exceed: (i) 0.03% of average daily net assets for Institutional Class shares; (ii) 0.18% of average daily net assets for Advisor Class shares; (iii) 0.18% of average daily net assets for Premier Class shares; and (iv) 0.28% of average daily net assets for Retirement Class shares of the Fund. These expense reimbursement arrangements will continue through at least September 30, 2017, unless changed with approval of the Board of Trustees.

⁴ Advisors has contractually agreed to waive 0.07% of the Fund’s Management fee. This waiver will remain in effect through September 30, 2017, unless changed with the approval of the Board of Trustees.

Example

This example is intended to help you compare the cost of investing in shares of the Fund with the cost of investing in other mutual funds. The example assumes that you invest \$10,000 in the Fund for the time periods indicated and then redeem all your shares at the end of those periods. The example also assumes that your investment has a 5% return each year and that the Fund’s operating expenses, before expense reimbursements, remain the same. The example assumes that the Fund’s fee waiver and/or expense reimbursement agreement will remain in place through September 30, 2017, but that there will be no waiver or expense reimbursement agreement in effect thereafter. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

	Institutional Class	Advisor Class	Premier Class	Retirement Class
1 year	\$ 10	\$ 18	\$ 26	\$ 36
3 years	\$ 59	\$ 84	\$ 107	\$ 139
5 years	\$ 112	\$ 157	\$ 196	\$ 251
10 years	\$ 268	\$ 369	\$ 456	\$ 580

Portfolio turnover

The Fund pays transaction costs, such as commissions, when it buys and sells securities (or “turns over” its portfolio). A higher portfolio turnover rate may indicate higher transaction costs and may result in higher taxes when Fund shares are held in a taxable account. These costs, which are not reflected in annual fund operating expenses or in the example, affect the Fund’s performance. During the fiscal year ended May 31, 2016, the Fund’s portfolio turnover rate was 8% of the average value of its portfolio.

Principal investment strategies

The Fund is a “fund of funds” that invests in Institutional Class shares of other funds of the Trust and potentially in other investment pools or investment products (collectively, the “Underlying Funds”). In general, the Fund is designed for investors who have an approximate target retirement year in mind, and the Fund’s investments are adjusted from more aggressive to more conservative over time as the target retirement year approaches and for approximately seven to ten years afterwards. The Fund invests in Underlying Funds according to an asset allocation strategy designed for investors retiring or planning to retire within a few years of 2045. The Fund has a policy of investing at least 80% of its assets (net assets, plus the amount of any borrowings for investment purposes) in Underlying Funds that are managed to seek investment returns that track particular market indices.

The Fund’s investment adviser, Teachers Advisors, LLC (“Advisors”), expects to allocate approximately 90.75% of the Fund’s assets to equity Underlying Funds and 9.25% of its assets to fixed-income Underlying Funds. These allocations represent targets for equity and fixed-income asset classes. Target allocations will change over time and actual allocations may vary up to ten percentage points from the targets. The target allocations along the investment glidepath, illustrated in the chart below, gradually become more conservative, moving to target allocations of approximately 50.00% equity/50.00% fixed-income in the Fund’s target retirement year of 2045 and reaching the Fund’s final target allocation of approximately 40.00% equity/60.00% fixed-income at some point from 2052 to 2055. Within the equity and fixed-income asset classes, Advisors allocates the Fund’s investments to particular market sectors (U.S. equity, international equity, fixed-income, short-term fixed-income and inflation-protected assets) represented by various Underlying Funds. These market sector allocations may vary by up to 10% from the Fund’s target market sector allocations. The Fund’s current target market sector allocations for June

30, 2017, which will change over time, are approximately as follows: U.S. Equity: 63.53%; International Equity: 27.22%; Fixed-Income: 9.25%; Short-Term Fixed-Income: 0.00%; and Inflation-Protected Assets: 0.00%.

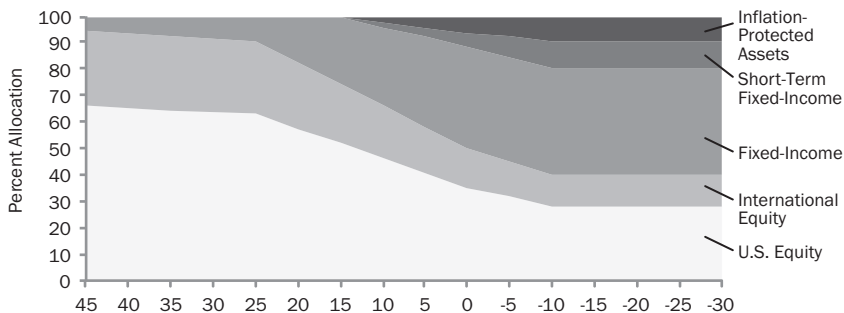
The Fund’s target market sector allocations to Underlying Funds may include the TIAA-CREF Equity Index Fund (U.S. Equity); International Equity Index Fund and Emerging Markets Equity Index Fund (International Equity); Bond Index Fund (Fixed-Income); Short-Term Bond Index Fund (Short-Term Fixed-Income); and Inflation-Linked Bond Fund (Inflation-Protected Assets).

Additional or replacement Underlying Funds for each market sector, as well as additional or replacement market sectors, may be included when making future allocations if Advisors believes that such Underlying Funds and/or market sectors are appropriate in light of the Fund’s desired levels of risk and potential return at the particular time. The Fund’s portfolio management team may also add a new market sector if it believes that will help to achieve the Fund’s investment objective. The relative allocations among Underlying Funds within a market sector may be changed at any time without notice to shareholders. If 10% or more of a Fund’s assets are expected to be invested in any Underlying Fund or market sectors not listed above, shareholders will receive prior notice of such change.

The Fund’s asset class allocations, market sector allocations within each asset class, and Underlying Fund allocations within each market sector, as of June 30, 2016, are listed in the chart below. These allocations will change over time. Underlying Fund allocations in particular may change from year to year.

Asset Class	Allocation	Market Sector	Allocation	Underlying Funds	Allocation
EQUITY	91.03%	U.S. Equity	63.73%	• Equity Index Fund	63.73%
		International Equity	27.30%	• International Equity Index Fund	20.70%
				• Emerging Markets Equity Index Fund	6.60%
FIXED-INCOME	8.97%	Fixed-Income	8.97%	• Bond Index Fund	8.97%
Total	100.00%		100.00%		100.00%

The following chart shows how the investment glidepath for the Fund is expected to gradually move the Fund’s target allocations over time between the different target market sector allocations. The actual market sector allocations of the Fund may differ from this chart. The Fund seeks to achieve its final target market sector allocations approximately seven to ten years following the target date.



The Fund is designed to accommodate investors who invest in a fund up to their target retirement date, and plan to make gradual systematic withdrawals in retirement. In addition, investors should note that the Fund will continue to have a significant level of equity exposure up to, through and after its target retirement date, and this exposure could cause significant fluctuations in the value of the Fund depending on the performance of the equity markets generally.

Approximately seven to ten years after the Fund enters its target retirement year, the Board of Trustees may authorize the merger of the Fund into the Lifecycle Index Retirement Income Fund or other similar fund. Fund shareholders will receive prior notice of any such merger. The Lifecycle Index Retirement Income Fund is designed to maintain a relatively stable allocation among the Underlying Funds reflecting the resting point on the glidepath described in the chart above. More detailed information about the Lifecycle Index Retirement Income Fund is contained in the prospectus for that fund.

Principal investment risks

You could lose money over short or long periods by investing in this Fund. An investment in the Fund, due to the nature of the Fund's portfolio holdings, typically is subject to the following principal investment risks:

- **Asset Allocation Risk**—The risk that the Fund may not achieve its target allocations. In addition, there is the risk that the asset allocations may not achieve the desired risk-return characteristic or that the selection of Underlying Funds and the allocations among them will result in the Fund underperforming other similar funds or cause an investor to lose money.
- **Index Risk**—The risk that the Fund's performance may not correspond to its benchmark index for any period of time and may underperform such index or the overall financial market. Additionally, to the extent that the Fund's investments vary from the composition of its benchmark index, the Fund's performance could potentially vary from the index's performance to a greater extent than if the Fund merely attempted to replicate the index.
- **Underlying Funds Risks**—The Fund is exposed to the risks of the Underlying Funds in which it invests in direct proportion to the amount of assets the Fund allocates to each Underlying Fund.

- **Equity Underlying Funds Risks**—The risks of investing in equity Underlying Funds include risks specific to their investment strategies, as well as risks related to the equity markets in general, such as:
 - market risk—The risk that the price of equity investments may decline in response to general market and economic conditions or events, including conditions and developments outside of the financial markets;
 - issuer risk—The risk that an issuer’s earnings prospects and overall financial position will deteriorate, causing a decline in the value of the issuer’s financial instruments over short or extended periods of time; and
 - foreign investment risk—The increased risks of adverse issuer, political, regulatory, currency, market or economic developments compared to investments in U.S. issuers, which can result in greater market and price volatility.
- **Fixed-Income Underlying Funds Risks**—The risks of investing in fixed-income Underlying Funds include risks specific to their investment strategies, as well as risks related to the fixed-income markets in general, such as:
 - credit risk—The risk that a decline in an issuer’s financial position may prevent it from making principal and interest payments on fixed-income investments held by a Fund when due;
 - interest rate risk—The risk that the value or yield of fixed-income investments may decline if interest rates change, which could adversely affect a Fund’s income or the value of its holdings;
 - income volatility risk—The risk that the level of current income from a Fund’s portfolio of fixed-income securities may decline due to rapid and unpredictable changes in prevailing market interest rates;
 - call risk—The risk that, during periods of falling interest rates, an issuer may call (or repay) a fixed-income security prior to maturity, resulting in a decline in a Fund’s income; and
 - extension risk—The risk that during periods of rising interest rates, borrowers may pay off their mortgage loans later than expected, preventing a Fund from reinvesting principal proceeds at higher interest rates and resulting in less income than potentially available.
- **Active Management Risk**—The risk that the strategy, investment selection or trading execution of Advisors could cause the Fund or an Underlying Fund to underperform its benchmark index or mutual funds with similar investment objectives.
- **Fund of Funds Risk**—The ability of the Fund to achieve its investment objective will depend in part upon the ability of the Underlying Funds to achieve their investment objectives. There can be no guarantee that any Underlying Fund will achieve its investment objective.

There can be no assurances that the Fund will achieve its investment objective. You should not consider the Fund to be a complete investment program. Please see the non-summary portion of the Prospectus for more detailed information about the risks described above, including the risks of the Underlying Funds.

Past performance

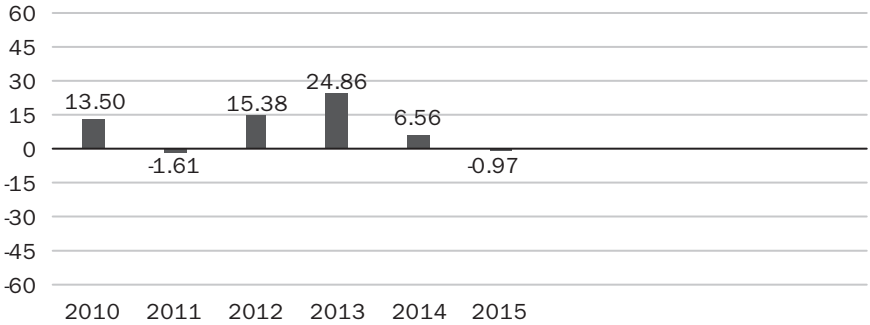
The following chart and table help illustrate some of the risks of investing in the Fund by showing changes in the Fund's performance from year to year. The bar chart shows the annual total returns of the Retirement Class of the Fund, before taxes, in each full calendar year since inception of the class. Because the expenses vary across share classes, the performance of the Retirement Class may vary from the other share classes. Below the bar chart are the best and worst returns of the Retirement Class for a calendar quarter during the full calendar-year periods covered by the bar chart. The performance table following the bar chart shows the Fund's average annual total returns for the Retirement, Institutional and Premier Classes over the applicable one-year, five-year, ten-year and since-inception periods ended December 31, 2015, and how those returns compare to those of certain broad-based securities market indices and a composite index based on the Fund's target allocations. The Advisor Class does not have a full year of performance and is not included in the table. After-tax performance is shown only for the Retirement Class shares, and after-tax returns for the other Classes of shares will vary from the after-tax returns presented for Retirement Class shares.

The returns shown below reflect previous agreements by Advisors to waive or reimburse the Fund and certain Underlying Funds for certain fees and expenses. Without these waivers and reimbursements, the returns of the Fund would have been lower. Past performance of the Fund (before and after taxes) is not necessarily an indication of how it will perform in the future. The indices listed below are unmanaged, and you cannot invest directly in an index. The returns for the indices reflect no deduction for fees, expenses or taxes.

For current performance information of each share class, including performance to the most recent month-end, please visit www.tiaa.org.

ANNUAL TOTAL RETURNS FOR THE RETIREMENT CLASS SHARES (%)†

Lifecycle Index 2045 Fund



† The year-to-date return as of the most recent calendar quarter, which ended on June 30, 2016, was 2.56%.

Best quarter: 11.95%, for the quarter ended September 30, 2010. Worst quarter: -14.77%, for the quarter ended September 30, 2011.

AVERAGE ANNUAL TOTAL RETURNS

For the Periods Ended December 31, 2015

	Inception Date	One Year	Five Years	Since Inception
Retirement Class	9/30/2009			
Return Before Taxes		-0.97%	8.39%	9.56%
Return After Taxes on Distributions		-1.55%	7.87%	9.07%
Return After Taxes on Distributions and Sale of Fund Shares		-0.16%	6.56%	7.61%
Institutional Class	9/30/2009			
Return Before Taxes		-0.71%	8.67%	9.84%
Premier Class	9/30/2009			
Return Before Taxes		-0.85%	8.50%	9.68%
Russell 3000® Index (reflects no deductions for fees, expenses or taxes)		0.48%	12.18%	13.44% [†]
Bloomberg Barclays U.S. Aggregate Bond Index (reflects no deductions for fees, expenses or taxes)		0.55%	3.25%	3.67% [†]
Lifecycle Index 2045 Fund Composite Index [‡] (reflects no deductions for fees, expenses or taxes)		-0.66%	8.79%	10.02% [†]

Current performance of the Fund's shares may be higher or lower than that shown above.

[†] Performance is calculated from the inception date of the Retirement Class.

[‡] As of the close of business on December 31, 2015, the Lifecycle Index 2045 Fund Composite Index consisted of: 63.0% Russell 3000® Index; 27.0% MSCI EAFE + Emerging Markets Index; and 10.0% Bloomberg Barclays U.S. Aggregate Bond Index. The Fund's composite benchmark, the components that make up a composite benchmark and the method of calculating a composite benchmark's performance may vary over time.

After-tax returns are calculated using the historical highest individual federal marginal income tax rates in effect during the periods shown and do not reflect the impact of state and local taxes. Actual after-tax returns depend on the investor's tax situation and may differ from those shown. The after-tax returns shown are not relevant to investors who hold their Fund shares through tax-deferred arrangements such as 401(a), 401(k) or 403(b) plans or Individual Retirement Accounts (IRAs). After-tax returns are shown for only one class, and after-tax returns for other classes will vary.

Portfolio management

Investment Adviser. The Fund's investment adviser is Teachers Advisors, LLC.

Portfolio Managers. The following persons manage the Fund on a day-to-day basis:

Name:	Hans Erickson, CFA	John Cunniff, CFA
Title:	Managing Director	Managing Director
Experience on Fund:	since 2009	since 2009

Purchase and sale of Fund shares

Institutional Class shares are available for purchase directly from the Fund by certain eligible investors (which include employee benefit plans and financial intermediaries). Advisor Class shares are available for purchase through certain

financial intermediaries, employee benefit plans and insurance company separate accounts. Premier Class and Retirement Class shares are generally available for purchase through employee benefit plans or other types of savings plans or accounts.

- The minimum initial investment is \$10 million and the minimum subsequent investment is \$1,000 for Institutional Class shares, unless an investor purchases shares by or through financial intermediaries that have entered into an appropriate agreement with the Fund or its affiliates. Employee benefit plans, fee-based managed account programs (“wrap accounts”), state sponsored 529 college savings plans, collective trust funds, investment companies or other pooled investment vehicles, thrifts, bank and trust companies that have entered into agreements to offer Institutional Class shares held in omnibus accounts on the books of the Fund are exempt from initial and subsequent investment minimums.
- There is no minimum initial or subsequent investment for Advisor Class shares. Advisor Class shares are primarily offered through certain financial intermediaries and employer-sponsored employee benefit plans.
- There is no minimum initial or subsequent investment for Premier Class shares. Premier Class shares are primarily offered through certain financial intermediaries and employer-sponsored employee benefit plans.
- There is no minimum initial or subsequent investment for Retirement Class shares. Retirement Class shares are primarily offered through employer-sponsored employee benefit plans.

Redeeming or Exchanging Shares. You can redeem (sell) or exchange your shares of the Fund on any day that the New York Stock Exchange (“NYSE”) or its affiliated exchanges NYSE Arca Equities or NYSE MKT is open for trading (each such day a “Business Day”). Exchanges may be made for shares of the same share class of other funds offered by the Trust. If your shares are held through a third party, please contact that entity for applicable redemption or exchange requirements. If your shares are held directly with the Fund, contact the Fund directly in writing or by telephone.

Tax information

The Fund intends to make distributions to shareholders that may be taxed as ordinary income or capital gains. Distributions made to tax-exempt shareholders or shareholders who hold Fund shares in a tax-deferred account are generally not subject to income tax in the current year, but redemptions made from tax-deferred accounts may be subject to income tax.

Payments to broker-dealers and other financial intermediary compensation

If you purchase shares of the Fund through a broker-dealer or other financial intermediary (such as a bank), the Fund and/or its related companies may pay

the financial intermediary for providing investor services. The Fund's related companies may also pay the financial intermediary for the sale of Fund shares and related services. These payments may create a conflict of interest by influencing the broker-dealer or other financial intermediary and your salesperson to recommend the Fund over another investment. Ask your salesperson or visit your financial intermediary's website for more information.



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