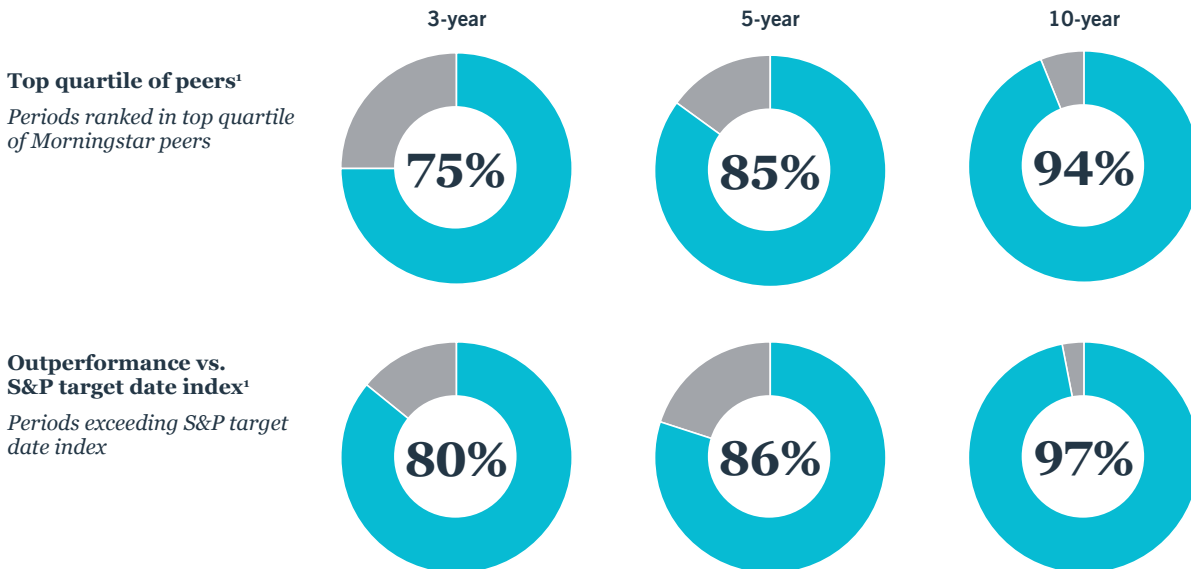


## TIAA-CREF LIFECYCLE FUNDS

# The active edge

*By leveraging our 100-year history of providing retirement outcomes, combined with an award-winning lineup of actively-managed underlying funds and a distinctive glidepath, the TIAA-CREF Lifecycle Funds have secured their status as among the leaders in the target-date industry.*

### Rolling performance since inception



*While glidepath design and asset allocation are active decisions, a target-date provider may choose underlying funds that are passively- or actively-managed to implement their strategy. TIAA-CREF Lifecycle Funds consist of 100% active underlying funds, enabling investors to benefit from:*

- Alpha generation** – a track record of outperformance
- Direct Real Estate** – a unique portfolio of commercial properties
- Diversified equity approaches** – the sum is greater than the parts
- Fixed Income flexibility** – outperforming the index in all markets

<sup>1</sup> Performance and ranks calculated from inception of the institutional share class for each fund in the series. Rolling periods are monthly. Morningstar peer universes used based on each respective target date. For example, the 2020 TIAA-CREF fund uses a Morningstar peer group of competing funds most closely aligned with the 2020 retirement date. Data as of 30 Dec 2018.

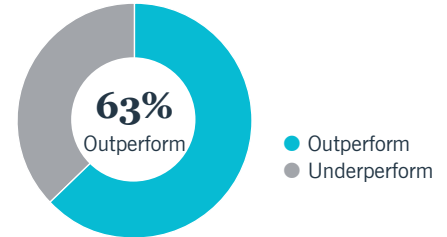
# 1 Alpha generation

## A track record of outperformance

The TIAA-CREF Lifecycle Fund portfolios select actively-managed funds from a broad lineup of fund managers.

- 63% of 19 underlying funds held in the TIAA-CREF Lifecycle Funds have outperformed their respective benchmarks since the inception of the current manager, highlighting consistent alpha generation.<sup>2</sup>
- Consistency is aided by an average underlying manager tenure of eight years.

### Outperformance of underlying funds<sup>2</sup>



Winner of the **Thomson Reuters Lipper Best Mixed Assets Large Fund Company** Award for three consecutive years.

- Leveraging the underlying investment platform which has been awarded the **Thomson Reuters Lipper Best Overall Large Fund Company** for six consecutive years



### THOMSON REUTERS LIPPER FUND AWARDS

**2016–2018**  
**Best Mixed Assets**  
**Large Fund Company**  
*3 consecutive years*

**2013–2018**  
**Best Overall**  
**Large Fund Company**  
*6 consecutive years*

The Thomson Reuters Lipper Large Fund Awards are based on a review of 36 companies 2012, 48 companies 2013 and 2014, 37 companies 2015, 34 companies 2016 and 34 companies 2017 risk-adjusted performance. The Mixed Assets Large Fund Award is based on a review of 39 companies 2015, 36 companies 2016 and 35 companies 2017 risk-adjusted performance.

<sup>2</sup> Source: Morningstar Direct as of 31 Dec 2018. Performance of each underlying fund calculated relative to their prospectus benchmark since inception of their current portfolio manager. Due to portfolio manager change in November 2018, Large-Cap Value is excluded from analysis.

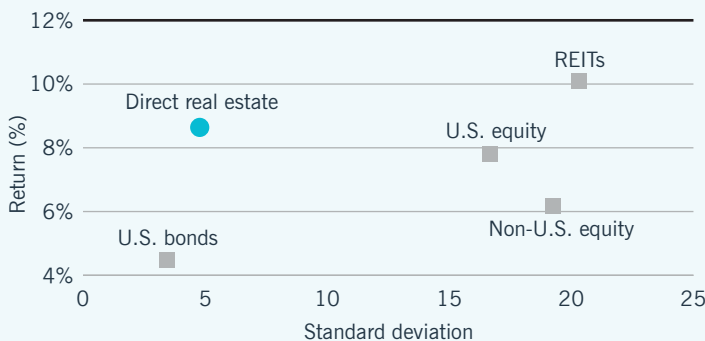
# 2 Direct real estate

## A unique portfolio of commercial properties

TIAA-CREF Lifecycle Funds are the only target-date mutual fund series to hold direct commercial real estate.<sup>3</sup> Potential benefits of adding direct real estate include:

- Improvement to risk-adjusted performance
- Low correlations to equity and fixed income
- Reduced volatility
- Inflation hedge

### 20-year asset class risk and return<sup>4</sup>



### 20-year correlation to major asset classes<sup>4</sup>

	Direct real estate	REITs
U.S. equities	0.20	0.64
Non-U.S. equities	0.15	0.57
U.S. bonds	-0.11	0.06
REITs	0.27	1.00
Direct real estate	1.00	0.27

<sup>3</sup> Based on an internal survey of U.S. target-date mutual funds as described in publicly available prospectuses. The TIAA-CREF Real Property Fund LP is a private fund and is not available for sale to individual investors. <sup>4</sup> Asset classes reflect returns for the following indexes: Russell 3000 (U.S. equity); MSCI ACWI-ex USA IMI (non-U.S. equity); Bloomberg Barclays U.S. Aggregate Bond (U.S. Bonds); NCREIF Property Index-Open End Funds (NPI-OE) (Direct Real Estate); NAREIT All Equity REITs (REITs). It is not possible to invest in an index. Performance for indexes does not reflect investment fees or transaction costs. Results may be significantly different for other time periods. Source: Morningstar Direct, NCREIF as of 31 Dec 2018.

# 3 Diversified equity approaches

## The sum is greater than the parts

### Investing in both Fundamental and Quantitative strategies may enhance risk adjusted returns

- Historically, outperformance of fundamental and quantitative investment approaches have not moved in unison (low correlation of excess returns).
- Over the past 10 years, their annualized returns have been similar, but relative performance has come at different times.

### Correlation of excess returns<sup>5</sup>

	Fundamental U.S. Equity	Quantitative U.S. Equity	Fundamental Int'l Equity
Quantitative U.S. Equity	0.00		
Fundamental Int'l Equity	0.58	0.19	
Quantitative Int'l Equity	0.20	0.01	0.36

**Fundamentally-managed funds** assess a company's health based on expectations of revenue, earnings, cash flow, and other financial and economic indicators

**Quantitatively-managed funds** use mathematical models that examine factors such as valuation, growth, quality, price momentum, and market sentiment

### Fundamental vs. Quant relative performance<sup>6</sup>



<sup>5</sup> Correlations of monthly alphas of underlying funds relative to their respective benchmarks. Time Period: Trailing 6 years through 31 Dec 2018. Fund categories are comprised of the underlying mutual funds in the TIAA Lifecycle suite. <sup>6</sup> Source: Morningstar Direct as of 31 Dec 2018. Relative calendar year performance of TIAA-CREF Large-Cap Growth Fund (fundamentally-managed) and TIAA-CREF Quant Large-Cap Growth Fund (quantitatively-managed); institutional share class.

# 4 Fixed income flexibility

## Outperforming the index in all markets

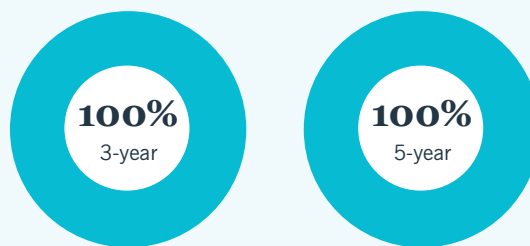
Active fixed income managers have the ability to adjust their portfolios through sector allocation, yield curve positioning, and security selection. This flexibility has allowed our active managers to outperform broad-based bond indexes, in various market conditions.

Bill Martin (TIAA-CREF Bond Plus Fund) and Joe Higgins (TIAA-CREF Bond Fund) were named portfolio managers of their respective strategies in August 2011. Since this time, the Bond and Bond Plus Funds have:

- Outperformed the Bloomberg Barclays U.S. Aggregate Bond Index (the "Agg") in 100% of monthly rolling 3- and 5-year periods
- Preserves capital better than the "Agg" in falling markets, as measured by downside capture ratio.

### Outperformance vs. Bloomberg Barclays U.S. Aggregate Bond Index<sup>7</sup>

Periods exceeding Bloomberg Barclays U.S. Aggregate Bond Index



	Capture ratio <sup>7</sup>	
	Up	Down
TIAA-CREF Bond Fund	111%	90%
TIAA-CREF Bond Plus Fund	113%	81%

<sup>7</sup> Period analyzed from 1 Sep 2011 through 31 Dec 2018. Upside (downside) capture ratios for funds are calculated by taking the fund's monthly return during months when the benchmark had a positive (negative) return and dividing it by the benchmark return during that same month. An upside (downside) capture ratio over (under) 100 indicates a fund has generally outperformed the benchmark during periods of positive (negative) returns for the benchmark. Source: Morningstar Direct. **Past performance is no guarantee of future results.**

## TIAA-CREF Lifecycle Funds Institutional class returns (%) as of 31 Dec 2018

Name	Ticker	Inception date	YTD	1 year	3 year	5 year	10 year	Since inception	Net expense ratio
Lifecycle 2010 Fund <sup>9</sup>	TCTIX	17 Jan 07	-3.92	-3.92	4.79	3.85	7.56	5.34	0.38
Lifecycle 2015 Fund <sup>9</sup>	TCNIX	17 Jan 07	-4.41	-4.41	5.01	4.03	8.08	5.52	0.39
Lifecycle 2020 Fund <sup>9</sup>	TCWIX	17 Jan 07	-5.18	-5.18	5.34	4.24	8.66	5.66	0.40
Lifecycle 2025 Fund <sup>9</sup>	TCYIX	17 Jan 07	-6.05	-6.05	5.68	4.43	9.23	5.82	0.41
Lifecycle 2030 Fund <sup>9</sup>	TCRIX	17 Jan 07	-7.09	-7.09	5.94	4.56	9.73	5.89	0.42
Lifecycle 2035 Fund <sup>9</sup>	TCIIX	17 Jan 07	-8.04	-8.04	6.19	4.67	10.17	6.12	0.43
Lifecycle 2040 Fund <sup>9</sup>	TCOIX	17 Jan 07	-8.92	-8.92	6.46	4.79	10.39	6.42	0.44
Lifecycle 2045 Fund	TTFIX	30 Nov 07	-9.59	-9.59	6.49	4.81	10.38	4.57	0.45
Lifecycle 2050 Fund	TFTIX	30 Nov 07	-9.82	-9.82	6.54	4.85	10.37	4.57	0.45
Lifecycle 2055 Fund	TTRIX	29 Apr 11	-9.86	-9.86	6.63	4.89		6.91	0.45
Lifecycle 2060 Fund	TLXNX	26 Sep 14	-10.06	-10.06	6.64			5.01	0.45
Lifecycle Retirement Income Fund	TLRIX	30 Nov 07	-3.84	-3.84	4.56	3.67	6.86	4.37	0.38

## As per exhibits 3 and 4, Institutional class returns (%) as of 31 Dec 2018

Name	Ticker	Inception date	YTD	1 year	3 year	5 year	10 year	Since inception	Net expense ratio
TIAA-CREF Large-Cap Growth Fund	TILGX	31 Mar 06	0.04	0.04	10.09	10.14	15.19	9.03	0.43
TIAA-CREF Quant Large-Cap Growth Fund	TLIIX	30 Nov 07	-3.44	-3.44	10.62	9.81	14.65	8.37	0.33
TIAA-CREF Bond Fund	TIBDX	01 Jul 99	-0.38	-0.38	2.74	2.95	4.08	4.91	0.30
TIAA-CREF Bond Plus Fund	TIBFX	31 Mar 06	-0.25	-0.25	3.04	3.1	4.84	4.35	0.30

The returns quoted represent past performance, which is no guarantee of future results. The value of your investment will fluctuate so that your shares, when redeemed, may be worth more or less than their original cost. Returns do not reflect the taxes that a shareholder would pay on fund distributions or on redemptions of fund shares. The Expense Ratio and performance return of these funds reflect a contractual arrangement that limits certain fees and/or expenses. Had fees/expenses not been limited (capped), currently or in the past, returns would have been lower. Expense Cap Expiration Date: For Lifecycle is 30 Sep 2019; Large-Cap Growth is 28 Feb 2019; Bond Funds is 31 Jul 2019. Current performance may differ from that shown above. For performance current to the most recent month-end, and important net expense ratio information, visit [nuveen.com](http://nuveen.com).

<sup>8</sup> The fund's Retirement Class began operations on 15 Oct 2004. Performance shown prior to the inception of the Institutional Class is based on the performance of the fund's Retirement Class. Performance has not been restated to reflect the lower expenses of the Institutional Class. If the expense differential had been reflected, performance for these periods would have been higher.

In 2014, TIAA and Nuveen came together to expand our capabilities across all investment types. Today, our customers fully benefit from our combined history of stability, retirement leadership and innovation.<sup>9</sup>

### For more information, contact your TIAA Representative or visit [TIAA.org](http://TIAA.org).

<sup>9</sup> Reference to financial stability does not apply to the investment products offered.

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell, or hold a security or an investment strategy, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Financial professionals should independently evaluate the risks associated with products or services and exercise independent judgment with respect to their clients.

The principal value of the fund(s) is not guaranteed at any time, including at the target-date.

The Lipper Large Fund and the Mixed-Assets Large Fund Awards are given to the group with the lowest average decile ranking of three years' Consistent Return for eligible funds over the three-year period with at least five equity, five bond, or three mixed-asset portfolios. Note these awards pertain to mutual funds within the TIAA-CREF group of mutual funds; other funds distributed by Nuveen Securities were not included. From Thomson Reuters Lipper Awards, © 2018 Thomson Reuters. All rights reserved. Used by permission and protected by the Copyright Laws of the United States. The printing, copying, redistribution, or retransmission of this Content without express written permission is prohibited. Certain funds may have fee waivers in effect. Past performance does not guarantee future results.

*Mutual fund investing involves risk; principal loss is possible. There is no guarantee the Funds' investment objectives will be achieved and the target-date is an approximate date when investors may begin withdrawing from the Funds. Target-date mutual funds are actively managed, so the asset allocation is subject to change and may vary from that shown and after the target-date has been reached, the Funds may be merged into another with a more stable asset allocation. The*

*Fund is a fund of funds subject to the risks of its underlying funds in proportion to each Fund's allocation. These risks include those of fixed-income underlying funds risks which may be susceptible to general movements in the bond market and are subject to credit and interest rate risks as well as those of equity underlying funds risks, such as foreign investment and issuer risks. Credit risk arises from an issuer's ability to make interest and principal payments when due, as well as the prices of bonds declining when an issuer's credit quality is expected to deteriorate. Interest rate risk occurs when interest rates rise causing bond prices to fall. The Fund's income could decline during periods of falling interest rates. Non-U.S. investments involve risks such as currency fluctuation, political and economic instability, lack of liquidity and differing legal and accounting standards. These fixed-income underlying funds risks, such as call, extension, and income volatility risks as well as other risk considerations, such as active management risk, equity underlying funds risks and direct real estate risks, are described in detail in the Fund's prospectus.*

**Before investing, please advise your clients to carefully consider fund investment objectives, risks, charges and expenses. For this and other information that should be read carefully, please request a prospectus or summary prospectus from your Advisor Consultant at 800.752.8700 or visit [nuveen.com](http://nuveen.com).**

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