

TIAA-CREF Funds

Important Information for Shareholders

The following updates and supplements certain information contained in the Proxy Statement (the “Proxy Statement”), dated October 13, 2023, furnished to the shareholders of the TIAA-CREF Funds in connection with the Special Meeting of Shareholders to be held on Monday, November 20, 2023, at 3:30 p.m., Eastern time (the “Meeting”), and at any and all adjournments, postponements or delays thereof.

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Appendix A to the Proxy Statement is updated as follows:

Fund Name	Abbreviated Fund Name	Fiscal Year End	Institutional Class	Premier Class	Retirement Class	Advisor Class	Retail Class	Class W
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund	5-15 Year Laddered Tax-Exempt Bond Fund	3/31	872,832	---	---	33,672	22,376,775	---
TIAA-CREF Short-Term Bond Fund	Short-Term Bond Fund	3/31	54,370,291	334,386	19,672,008	19,211,155	11,708,687	88,489,179
TIAA-CREF Quant Small-Cap Equity Fund	Quant Small-Cap Equity Fund	10/31	98,014,425	1,818,967	23,289,140	53,042	8,424,710	31,349,376
TIAA-CREF Core Impact Bond Fund	Core Impact Bond Fund	3/31	506,619,740	1,314,024	26,759,158	115,753,318	28,844,532	---

nuveen

A TIAA Company

TIAA-CREF FUNDS

Important Notice to Fund Shareholders

October 13, 2023

Although we recommend that you read the complete Proxy Statement, for your convenience, we have provided a brief overview of the proposal to be voted on.

Q. Why am I receiving this Proxy Statement?

A. This year, you and other shareholders of TIAA-CREF Funds (the "Trust"), on behalf of each series of the Trust (each series of the Trust, as identified on Appendix A to the enclosed Proxy Statement, individually a "Fund," and collectively, the "Funds") are being asked to approve the election of board members to serve on your Fund's board of trustees (the "Board" and the trustees, "Board Members"). The list of nominees is contained in the enclosed Proxy Statement.

The Funds and certain other investment companies advised by the investment adviser to the Funds and its affiliates are currently overseen by two separate groups of board members. One of these groups consists of the current board members of the mutual funds advised by Teachers Advisors, LLC that are series of the Trust and the TIAA-CREF Life Funds (collectively referred to herein as the "TC Funds," and the board members thereof as the "TC Board Members"). The other group consists of the current board members of the funds advised by Nuveen Fund Advisors, LLC (referred to herein as the "Nuveen Funds," and board members thereof as the "Nuveen Board Members"). Except as otherwise noted, the TC Funds and the Nuveen Funds are collectively referred to herein as the "Fund Complex."

The TC Board Members and the Nuveen Board Members separately determined to approve the alignment and consolidation of the membership of the boards so that all funds in the Fund Complex are overseen by the same board members. Accordingly, your Board has proposed the election of twelve (12) Board Members. Four (4) of the nominees currently serve as TC Board Members. Eight (8) of the nominees currently serve as Nuveen Board Members.

In connection with the board consolidation, seven (7) of the eleven (11) current TC Board Members are expected to resign as TC Board Members, as of December 31, 2023, and therefore are not standing for re-election. Such resigning TC Board Members will continue to serve as members of the boards of College Retirement Equities Fund ("CREF") and TIAA Separate Account VA-1 ("VA-1"), which are other investment companies advised by Teachers Advisors, LLC or its affiliate and which are not part of the Fund Complex. Relatedly, if elected to the consolidated board of the TC Funds and the Nuveen Funds, the four current TC Board Members who are standing for election will resign from their positions on the boards CREF and VA-1.

Your Fund's Board unanimously recommends that you vote **FOR** each of the nominees.

Your vote is very important. We encourage you as a shareholder to participate in your Fund's governance by returning your vote as soon as possible. If enough shareholders do not cast their votes, your Fund may not be able to hold the meeting or the vote, and additional solicitation costs may need to be incurred in order to obtain sufficient shareholder participation.

Q. Why am I being asked to elect each of the nominees as Board Members?

- A.** Each of the nominees either currently serves as a TC Board Member or a Nuveen Board Member. The election of the nominees is part of the intended alignment and consolidation of the membership of the boards of the TC Funds with membership of the boards of the Nuveen Funds. If shareholders approve the election of all of the nominees, the membership of your Fund's Board will be expanded from eleven (11) to twelve (12) members, including the eight (8) nominees who currently serve as Nuveen Board Members, as well as the four (4) nominees who currently serve as TC Board Members. Each nominee would not be deemed an "interested person" as that term is defined under the Investment Company Act of 1940, as amended.

The election of all of the nominees will bring the membership of the boards of the Fund Complex into alignment such that funds in the Fund Complex are overseen by the same group of board members.

Your Fund's Board has approved the proposal after evaluating the potential benefits of aligning and consolidating the boards of funds in the Fund Complex and considering the background, skills, experience and other attributes of the nominees who would make up the consolidated board.

Please note that separate proxy statements are being sent to shareholders of the other TC Funds and to shareholders of certain Nuveen Funds, who are being asked to vote on the election of the same slate of nominees to the boards of the respective funds.

Q. What will be some of the benefits of the consolidation for shareholders?

- A.** The consolidation of the Board is expected to:
- Generate cost efficiencies and expense savings that would benefit shareholders; Fund management estimates that nearly all identified savings will accrue directly to Fund shareholders.
 - Align the Fund Complex and its Board with Nuveen LLC's operating model to promote growth across new, as well as similar, investment products.
 - Facilitate negotiating with vendors as a unified Fund Complex to obtain expected economies of scale and to standardize servicing.
 - Expand marketing and distribution opportunities associated with presenting the TC Funds and Nuveen Funds to the marketplace as one Fund Complex and grow investor engagement.
 - Eliminate duplicate efforts in Board operations.

Q. What are some examples of the potential economic/cost benefits to shareholders?

- A.** Over time, shareholders of the Funds may experience economic benefits due to reduced or eliminated contractual fees/expenses, including the potential for reduced third-party vendor fees as the result of management being able to renegotiate as one consolidated Fund Complex. Other cost savings may arise due to economies of scale if assets grow as a combined Fund Complex.

Q. Why is this change occurring now?

- A.** As Nuveen LLC's funds business has evolved, Fund management believes that the prospective benefits of the Board consolidation (as noted above) will be advantageous for all Fund shareholders. Fund management also believes that individual investor engagement with the TC Funds and Nuveen Funds can be grown more effectively by presenting the Fund Complex to the marketplace as "one fund family" with one common source of oversight—i.e., a combined Board.

Shareholders are expected to benefit from potential expense reductions, as well as incremental savings from economies of scale and the benefits of asset growth shared across the Fund Complex.

Q. How does the Board consolidation impact my Fund's investment strategy or fees?

- A.** The Board consolidation will not impact any Fund's investment strategy or increase any Fund's fees.

Q. Whom do I call if I have questions?

- A.** If you need any assistance, or have any questions regarding the proposal or how to vote your shares, please call Computershare Fund Services, your Fund's proxy solicitor, at 888-916-1722 with your proxy material.

Q. How do I vote my shares?

- A.** You may vote at the meeting, by mail, by telephone or over the Internet:
- *To vote at the meeting*, please follow the instructions below for attending the meeting, which will be held virtually.
 - *To vote by mail*, please mark, sign, date and mail the enclosed proxy card. No postage is required if mailed in the United States.
 - *To vote by telephone*, please call the toll-free number located on your proxy card and follow the recorded instructions, using your proxy card as a guide.
 - *To vote over the Internet*, go to the Internet address provided on your proxy card and follow the instructions, using your proxy card as a guide.

Q. How can I attend the meeting?

- A.** The meeting will be a completely virtual meeting of shareholders, which will be conducted exclusively by webcast. You are entitled to participate in the meeting only if you were a shareholder of your Fund as of the close of business on October 5, 2023, or if you hold a valid proxy for the meeting. There is no physical location for the meeting.

You will be able to attend the meeting online and submit your questions during the meeting by visiting meetnow.global/M599MNM. You also will be able to vote your shares online by attending the meeting by webcast. To participate in the meeting, you will need to log on using the control number from your proxy card or meeting notice. The control number can be found in the shaded box.

If you hold your shares through an intermediary, such as a bank or broker, you must register in advance using the instructions below.

The online meeting will begin promptly at 3:30 p.m., Eastern time, on November 20, 2023. We encourage you to access the meeting prior to the start time leaving ample time for the check in. Please follow the access instructions as outlined herein.

Q. How do I register to attend the meeting virtually on the Internet?

- A.** If your shares are registered in your name, you do not need to register to attend the meeting virtually on the Internet. If you hold your shares through an intermediary, such as a bank or broker, you must register in advance to attend the meeting virtually on the Internet.

To register to attend the meeting online by webcast, you must submit proof of your proxy power (legal proxy) reflecting your Fund holdings along with your name and email address to Computershare Fund Services. You must contact the bank or broker who holds your shares to obtain your legal proxy. Requests for registration must be labeled as "Legal Proxy" and be received no later than 5:00 p.m., Eastern Time, three business days prior to the meeting date.

You will receive a confirmation of your registration by email after we receive your registration materials.

Requests for registration should be directed to us by emailing an image of your legal proxy to shareholdermeetings@computershare.com.

Q. Will anyone contact me?

- A.** You may receive a call from Computershare Fund Services, the proxy solicitor hired by the Funds, to verify that you received your proxy materials, to answer any questions you may have about the proposal and to encourage you to vote your proxy.

We recognize the inconvenience of the proxy solicitation process and would not impose on you if we did not believe that the matters being proposed were important. Once your vote has been registered with the proxy solicitor, your name will be removed from the solicitor's follow-up contact list.

Q. How does the Board suggest that I vote?

- A.** The Board unanimously recommends that shareholders vote **FOR** the election of each of the nominees named herein.

Notice of Special Meeting of Shareholders to be held on November 20, 2023

TIAA-CREF FUNDS

TIAA-CREF Lifecycle 2010 Fund	TIAA-CREF Lifecycle Index 2030 Fund	TIAA-CREF Lifecycle 2065 Fund	TIAA-CREF Large-Cap Value Index Fund
TIAA-CREF Lifecycle 2015 Fund	TIAA-CREF Lifecycle Index 2035 Fund	TIAA-CREF Lifecycle Index 2065 Fund	TIAA-CREF Large-Cap Growth Fund
TIAA-CREF Lifecycle 2020 Fund	TIAA-CREF Lifecycle Index 2040 Fund	TIAA-CREF Equity Index Fund	TIAA-CREF Emerging Markets Equity Fund
TIAA-CREF Lifecycle 2025 Fund	TIAA-CREF Lifecycle Index 2045 Fund	TIAA-CREF S&P 500 Index Fund	TIAA-CREF Emerging Markets Equity Index Fund
TIAA-CREF Lifecycle 2030 Fund	TIAA-CREF Lifecycle Index 2050 Fund	TIAA-CREF Small-Cap Blend Index Fund	TIAA-CREF International Opportunities Fund
TIAA-CREF Lifecycle 2035 Fund	TIAA-CREF Lifecycle Index 2055 Fund	TIAA-CREF International Equity Index Fund	TIAA-CREF Emerging Markets Debt Fund
TIAA-CREF Lifecycle 2040 Fund	TIAA-CREF Lifecycle 2055 Fund	TIAA-CREF Growth & Income Fund	TIAA-CREF Social Choice International Equity Fund
TIAA-CREF Lifecycle 2045 Fund	TIAA-CREF Lifestyle Aggressive Growth Fund	TIAA-CREF Social Choice Equity Fund	TIAA-CREF Social Choice Low Carbon Equity Fund
TIAA-CREF Lifecycle 2050 Fund	TIAA-CREF Lifestyle Conservative Fund	TIAA-CREF International Equity Fund	TIAA-CREF International Bond Fund
TIAA-CREF Lifecycle Index 2010 Fund	TIAA-CREF Lifestyle Growth Fund	TIAA-CREF Large-Cap Value Fund	TIAA-CREF Quant Small/Mid-Cap Equity Fund
TIAA-CREF Lifecycle Index Retirement Income Fund	TIAA-CREF Lifestyle Income Fund	TIAA-CREF Mid-Cap Growth Fund	TIAA-CREF Quant International Small-Cap Equity Fund
TIAA-CREF Lifecycle Index 2015 Fund	TIAA-CREF Lifestyle Moderate Fund	TIAA-CREF Mid-Cap Value Fund	TIAA-CREF Real Estate Securities Fund
TIAA-CREF Lifecycle Index 2020 Fund	TIAA-CREF Lifecycle 2060 Fund	TIAA-CREF Quant Small-Cap Equity Fund	TIAA-CREF Core Bond Fund

TIAA-CREF Lifecycle Index 2025 Fund	TIAA-CREF Lifecycle Index 2060 Fund	TIAA-CREF Large-Cap Growth Index Fund	TIAA-CREF Inflation-Linked Bond Fund
TIAA-CREF Money Market Fund	TIAA-CREF Short-Term Bond Fund	TIAA-CREF High-Yield Fund	TIAA-CREF Core Plus Bond Fund
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund	TIAA-CREF Bond Index Fund	TIAA-CREF Core Impact Bond Fund	TIAA-CREF Short-Term Bond Index Fund
TIAA-CREF Green Bond Fund	TIAA-CREF Short Duration Impact Bond Fund	TIAA-CREF Lifecycle Retirement Income Fund	TIAA-CREF Managed Allocation Fund

October 13, 2023

To the Shareholders of the Above Funds:

Notice is hereby given that a Special Meeting of Shareholders (the “Meeting”) of TIAA-CREF Funds (the “Trust”), on behalf of each series of the Trust (each series of the Trust, as identified above and on Appendix A to the enclosed Proxy Statement, individually a “Fund,” and collectively, the “Funds”), will be held on Monday, November 20, 2023, at 3:30 p.m., Eastern time, for the following purposes and to transact such other business, if any, as may properly come before the Meeting:

The purposes of the Meeting are:

1. To elect twelve (12) individuals to serve as Board Members for indefinite terms and until their successors shall take office; and
2. To address any other business that may properly come before the Meeting.

All shareholders are cordially invited to attend the Meeting, which will be held on-line as discussed in further detail below. In order to avoid delay and additional expense, and to assure that your shares are represented, please vote as promptly as possible, regardless of whether or not you plan to attend the Meeting. You may vote by mail, telephone or over the Internet. To vote by mail, please mark, sign, date and mail the enclosed proxy card. No postage is required if mailed in the United States. To vote by telephone, please call the toll-free number located on your proxy card and follow the recorded instructions, using your proxy card as a guide. To vote over the Internet, go to the Internet address provided on your proxy card and follow the instructions, using your proxy card as a guide.

Shareholders of record as of the close of business on October 5, 2023 (the “Record Date”) are entitled to notice of, and to vote at, the Meeting or any postponement or adjournment thereof.

The Meeting will be a completely virtual meeting of shareholders, which will be conducted exclusively by webcast. There is no physical location for the meeting. Shareholders will be able to attend the Meeting online and submit their questions during the meeting by visiting meetnow.global/M599MNM. Shareholders will also be able to vote their shares online by attending the Meeting by webcast. To participate in the Meeting, you will need to log on using the control number from your proxy card or meeting notice. The control number can be

found in the shaded box. If you hold your shares through an intermediary, such as a bank or broker, you must register in advance using the instructions contained in the enclosed Proxy Statement.

/s/ Derek B. Dorn

Derek B. Dorn
Senior Managing Director and Corporate Secretary

Proxy Statement

October 13, 2023

This Proxy Statement is first being mailed to shareholders on or about October 13, 2023.

TIAA-CREF FUNDS

TIAA-CREF Lifecycle 2010 Fund	TIAA-CREF Lifecycle Index 2030 Fund	TIAA-CREF Lifecycle 2065 Fund	TIAA-CREF Large-Cap Value Index Fund
TIAA-CREF Lifecycle 2015 Fund	TIAA-CREF Lifecycle Index 2035 Fund	TIAA-CREF Lifecycle Index 2065 Fund	TIAA-CREF Large-Cap Growth Fund
TIAA-CREF Lifecycle 2020 Fund	TIAA-CREF Lifecycle Index 2040 Fund	TIAA-CREF Equity Index Fund	TIAA-CREF Emerging Markets Equity Fund
TIAA-CREF Lifecycle 2025 Fund	TIAA-CREF Lifecycle Index 2045 Fund	TIAA-CREF S&P 500 Index Fund	TIAA-CREF Emerging Markets Equity Index Fund
TIAA-CREF Lifecycle 2030 Fund	TIAA-CREF Lifecycle Index 2050 Fund	TIAA-CREF Small-Cap Blend Index Fund	TIAA-CREF International Opportunities Fund
TIAA-CREF Lifecycle 2035 Fund	TIAA-CREF Lifecycle Index 2055 Fund	TIAA-CREF International Equity Index Fund	TIAA-CREF Emerging Markets Debt Fund
TIAA-CREF Lifecycle 2040 Fund	TIAA-CREF Lifecycle 2055 Fund	TIAA-CREF Growth & Income Fund	TIAA-CREF Social Choice International Equity Fund
TIAA-CREF Lifecycle 2045 Fund	TIAA-CREF Lifestyle Aggressive Growth Fund	TIAA-CREF Social Choice Equity Fund	TIAA-CREF Social Choice Low Carbon Equity Fund
TIAA-CREF Lifecycle 2050 Fund	TIAA-CREF Lifestyle Conservative Fund	TIAA-CREF International Equity Fund	TIAA-CREF International Bond Fund
TIAA-CREF Lifecycle Index 2010 Fund	TIAA-CREF Lifestyle Growth Fund	TIAA-CREF Large-Cap Value Fund	TIAA-CREF Quant Small/Mid-Cap Equity Fund
TIAA-CREF Lifecycle Index Retirement Income Fund	TIAA-CREF Lifestyle Income Fund	TIAA-CREF Mid-Cap Growth Fund	TIAA-CREF Quant International Small-Cap Equity Fund
TIAA-CREF Lifecycle Index 2015 Fund	TIAA-CREF Lifestyle Moderate Fund	TIAA-CREF Mid-Cap Value Fund	TIAA-CREF Real Estate Securities Fund
TIAA-CREF Lifecycle Index 2020 Fund	TIAA-CREF Lifecycle 2060 Fund	TIAA-CREF Quant Small-Cap Equity Fund	TIAA-CREF Core Bond Fund

TIAA-CREF Lifecycle Index 2025 Fund	TIAA-CREF Lifecycle Index 2060 Fund	TIAA-CREF Large-Cap Growth Index Fund	TIAA-CREF Inflation-Linked Bond Fund
TIAA-CREF Money Market Fund	TIAA-CREF Short-Term Bond Fund	TIAA-CREF High-Yield Fund	TIAA-CREF Core Plus Bond Fund
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund	TIAA-CREF Bond Index Fund	TIAA-CREF Core Impact Bond Fund	TIAA-CREF Short-Term Bond Index Fund
TIAA-CREF Green Bond Fund	TIAA-CREF Short Duration Impact Bond Fund	TIAA-CREF Lifecycle Retirement Income Fund	TIAA-CREF Managed Allocation Fund

This Proxy Statement is furnished in connection with the solicitation by the Board of Trustees (the “Board,” and each trustee a “Board Member” and collectively, the “Board Members”) of each of TIAA-CREF Funds (the “Trust”), on behalf of each series of the Trust (each series of the Trust, as identified above and on Appendix A, individually a “Fund,” and collectively, the “Funds”), of proxies to be voted at the Special Meeting of Shareholders to be held (along with the meeting of shareholders of certain other TC Funds and Nuveen Funds, each as defined herein) on Monday, November 20, 2023, at 3:30 p.m., Eastern time (the “Meeting”), and at any and all adjournments, postponements or delays thereof. Appendix A sets forth the name of each Fund and the abbreviated name of each Fund by which such Fund is referred to in this Proxy Statement.

Proposal

1. To elect twelve (12) individuals to serve as Board Members for indefinite terms and until their successors shall take office.

Voting Information

Shareholders of record as of the close of business on October 5, 2023 (the “Record Date”) are entitled to notice of, and to vote at, the Meeting or any postponement or adjournment thereof.

The Meeting will be a completely virtual meeting of shareholders, which will be conducted exclusively by webcast. There is no physical location for the meeting. Shareholders will be able to attend the Meeting online and submit their questions during the meeting by visiting meetnow.global/M599MNM. Shareholders will also be able to vote their shares online by attending the Meeting by webcast. To participate in the Meeting, you will need to log on using the control number from your proxy card or meeting notice. The control number can be found in the shaded box. If you hold your shares through an intermediary, such as a bank or broker, you must register in advance using the instructions contained in this Proxy Statement.

On the proposal coming before the Meeting as to which a choice has been specified by shareholders on the proxy, the shares will be voted accordingly. If a properly executed proxy is returned and no choice is specified, the shares will be voted **FOR** the election of each of the Board Member nominees listed in this Proxy Statement.

Shareholders who execute proxies may revoke them at any time before they are voted by filing a written notice of revocation, by delivering a duly executed proxy bearing a later date, or by attending and voting at the Meeting. A prior proxy can also be revoked by voting again through the toll-free number or the Internet address listed in the proxy card. Merely attending the Meeting, however, will not revoke any previously submitted proxy.

A quorum of shareholders is required to take action at the Meeting. Ten percent of the shares entitled to vote at the Meeting, represented in person (virtually) or by proxy, will constitute a quorum of shareholders at the Meeting. Votes cast by proxy or in person (virtually) at the Meeting will be tabulated by the inspectors of election appointed for the Meeting. The inspectors of election will determine whether or not a quorum is present at the Meeting. The inspectors of election will treat abstentions and “broker non-votes” (i.e., shares held by brokers or nominees, typically in “street name,” as to which (i) instructions have not been received from the beneficial owners or persons entitled to vote and (ii) the broker or nominee does not have discretionary voting power on a particular matter) as present for purposes of determining a quorum.

Broker-dealer firms holding shares of a Fund in “street name” for the benefit of their customers and clients will request the instructions of such customers and clients on how to vote their shares before the Meeting. The Funds understand that, under the rules of the New York Stock Exchange, such broker-dealer firms may for certain “routine” matters, without instructions from their customers and clients, grant discretionary authority to the proxies designated by the Board to vote if no instructions have been received prior to the date specified in the broker-dealer firm’s request for voting instructions. The proposal is a “routine” matter and beneficial owners who do not provide proxy instructions or who do not return a proxy card may have their shares voted by broker-dealer firms in favor of the proposal.

Broker-dealers who are not members of the New York Stock Exchange may be subject to other rules, which may or may not permit them to vote your shares without instruction. We urge you to provide instructions to your broker or nominee so that your votes may be counted.

Certain funds within the TIAA-CREF fund complex (the “Fund of Funds”) invest in shares of other Funds in the Trust (the “Underlying Funds”). Shares of each Underlying Fund held by a Fund of Funds are expected to be voted by the Fund of Funds in the same proportion as the vote of other shareholders of the Underlying Funds (sometimes referred to as “echo” voting).

The details of the proposal to be voted on by the shareholders of each Fund and the vote required for approval of the proposal are set forth under the description of the proposal below.

The vote of the Trust will include each Fund that is a series of the Trust. The shareholders of record as of the Record Date of each of the Funds, voting together, will be entitled to elect the Board Members. Each outstanding full share of a Fund is entitled to one vote and each outstanding fractional share is entitled to a proportionate fractional share of one vote. Fractional votes will be counted.

Shares Outstanding

Appendix A lists the shares of each class of each Fund that were issued and outstanding as of the Record Date.

PROPOSAL ONE: ELECTION OF BOARD MEMBERS

The purpose of the Meeting is to elect members to the Board. Each Board Member will be elected to serve an indefinite term until his or her successor shall take office. The maximum number of Board Members has been fixed at twelve.

Board Consolidation

The Funds and certain other investment companies advised by the investment adviser to the Funds and its affiliates are currently overseen by two separate groups of board members. One of these groups consists of the current board members of the mutual funds advised by Teachers Advisors, LLC that are series of the Trust and TIAA-CREF Life Funds ("TCLF") (collectively referred to herein as the "TC Funds," and the board members thereof as the "TC Board Members"). The other group consists of the current board members of the funds advised by Nuveen Fund Advisors, LLC (referred to herein as the "Nuveen Funds," and board members thereof as the "Nuveen Board Members"). Except as otherwise noted, the TC Funds and the Nuveen Funds are collectively referred to herein as the "Fund Complex."

Each of Teachers Advisors, LLC and Nuveen Fund Advisors, LLC is an indirect, wholly-owned subsidiary of Teachers Insurance and Annuity Association of America ("TIAA"). TIAA is a life insurance company founded in 1918 by the Carnegie Foundation for the Advancement of Teaching and is the companion organization of College Retirement Equities Fund ("CREF"), the first company in the United States to issue a variable annuity.

The TC Board Members and the Nuveen Board Members separately determined to approve the alignment and consolidation of the membership of the boards so that all funds in the Fund Complex are overseen by the same board members. Accordingly, your Board has proposed the election of twelve (12) Board Members. Four (4) of the nominees currently serve as TC Board Members. Eight (8) of the nominees currently serve as Nuveen Board Members.

As noted above, each of the nominees either currently serves as a TC Board Member or a Nuveen Board Member. The election of the nominees is part of the intended alignment and consolidation of the membership of the boards of the TC Funds with membership of the boards of the Nuveen Funds. If shareholders approve the election of all of the nominees, the membership of the TC Funds boards will be expanded from eleven (11) to twelve (12) members, including the eight (8) nominees who currently serve as Nuveen Board Members, as well as the four (4) nominees who currently serve as TC Board Members.

The election of all of the nominees will bring the membership of the boards of the Fund Complex into alignment such that funds in the Fund Complex are overseen by the same group of board members. This alignment and consolidation would provide the opportunity to streamline and optimize board oversight.

The board consolidation is expected to (i) generate cost efficiencies and expense savings that would benefit Fund shareholders; (ii) align the Fund Complex and its Board with Nuveen LLC's ("Nuveen") operating model to promote growth across new, as well as similar, investment products; (iii) facilitate negotiating with vendors as a unified Fund Complex to obtain expected economies of scale and to standardize servicing; (iv) expand marketing and distribution opportunities associated with presenting the TC Funds and Nuveen Funds to the marketplace as one Fund Complex and grow investor engagement; and (v) eliminate duplicate efforts in Board operations.

Fund management believes that the prospective benefits of the board consolidation will be advantageous to all Fund shareholders.

In connection with the board consolidation, seven (7) of the eleven (11) current TC Board Members are expected to resign as TC Board Members, as of December 31, 2023, and therefore are not standing for re-election. Such resigning TC Board Members will continue to serve as members of the boards of CREF and TIAA Separate Account VA-1 ("VA-1"), which are other investment companies advised by Teachers Advisors, LLC or its affiliate and which are not part of the Fund Complex. Relatedly, if elected to the consolidated board of the TC Funds and the Nuveen Funds, the four current TC Board Members who are standing for election will resign from their positions on the boards of CREF and VA-1 as of December 31, 2023.

Your Fund's Board has approved the proposal after evaluating the potential benefits of aligning and consolidating the boards of funds in the Fund Complex and considering the background, skills, experience and other attributes of the nominees who would make up the consolidated board.

Please note that separate proxy statements are being sent to shareholders of the other TC Funds and to shareholders of certain Nuveen Funds, who are being asked to vote on the election of the same slate of nominees to the boards of the respective funds.

Nominees

Twelve (12) nominees, including Joseph A. Boateng, Michael A. Forrester, Thomas J. Kenny and Loren M. Starr, each a TC Board Member, and Amy B. R. Lancellotta, Joanne T. Medero, Albin F. Moschner, John K. Nelson, Matthew Thornton III, Terence J. Toth, Margaret L. Wolff and Robert L. Young, each a current Nuveen Board Member, are standing for election at the Meeting. Nominees for election as Board Members are to be elected by all shareholders of the Trust to serve a term until their successors shall have been duly elected and qualified. Information about each of these twelve nominees is set forth below.

The Board of the Trust is currently composed of eleven (11) Board Members: Forrest Berkley, Joseph A. Boateng, Joseph A. Carrier, Janice C. Eberly, Nancy A. Eckl, Michael A. Forrester, Howell E. Jackson, Nicole Thorne Jenkins, Thomas J. Kenny, James M. Poterba and Loren M. Starr. Mr. Berkley, Mr. Carrier, Prof. Eberly, Ms. Eckl, Prof. Jackson, Dean Jenkins and Prof. Poterba are expected to resign from the Board of the Trust in connection with the board consolidation, effective as of December 31, 2023, and therefore are not standing for re-election, but will continue to serve on the boards of CREF and VA-1.

Mr. Berkley, Mr. Boateng, Prof. Eberly, Ms. Eckl, Mr. Forrester, Prof. Jackson, Mr. Kenny and Prof. Poterba were last elected to the Trust's Board at a special meeting of shareholders held on July 17, 2019. Mr. Starr was appointed to the Trust's Board effective October 1, 2022. Each of Mr. Carrier and Dean Jenkins was appointed to the Trust's Board effective January 1, 2023.

If elected at the Meeting, Ms. Lancellotta, Ms. Medero, Mr. Moschner, Mr. Nelson, Mr. Thornton III, Mr. Toth, Ms. Wolff and Mr. Young are expected to be seated as Board Members of the Trust effective as of January 1, 2024.

It is the intention of the persons named in the enclosed proxy to vote the shares represented thereby for the election of each of the nominees listed above unless the proxy is marked otherwise. Each of the nominees has agreed to serve as a Board Member if elected. However,

should any nominee become unable or unwilling to accept nomination for election, the proxies will be voted for substitute nominees, if any, designated by the Trust's present Board.

All Board Member nominees are not "interested persons" as defined in the Investment Company Act of 1940, as amended (the "1940 Act"), of the Funds or of Teachers Advisors, LLC, the Funds' investment adviser (the "Adviser"), and have never been an employee or director of TIAA, the Adviser's parent company, or any affiliate. Accordingly, such Board Members are deemed "Independent Board Members."

The Board, which is composed entirely of Independent Board Members, unanimously recommends that shareholders vote FOR the election of each of the nominees named herein.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
CURRENT BOARD MEMBERS WHO ARE NOMINEES					
Joseph A. Boateng c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1963	Board Member	Term: Indefinite Length of Service: Since 2019	Chief Investment Officer, Casey Family Programs (since 2007). Director of U.S. Pension Plans, Johnson & Johnson (2002-2006).	88 ⁽³⁾	Board Member, Lumina Foundation (since 2018) and Waterside School (since 2021); Board Member (2012-2019) and Emeritus Board Member (since 2020), Year-Up Puget Sound; Investment Advisory Committee Member and Former Chair (since 2007), Seattle City Employees' Retirement System; Investment Committee Member (since 2012), The Seattle Foundation.
Michael A. Forrester c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1967	Board Member	Term: Indefinite Length of service: Since 2007	Chief Executive Officer (2014-2021) and Chief Operating Officer (2007-2014), Copper Rock Capital Partners, LLC.	88 ⁽³⁾	Trustee Dexter Southfield School (since 2019); Member (since 2020), Governing Council of the IDC.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Thomas J. Kenny c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1963	Chairman and Board Member	Term: Indefinite Length of service: Since 2011. Chairman for term ending June 30, 2024. Chairman since September 13, 2017.	Advisory Director (2010-2011), Partner (2004-2010), Managing Director (1999-2004) and Co-Head of Global Cash and Fixed Income Portfolio Management Team (2002-2010), Goldman Sachs Asset Management.	88 ⁽³⁾	Director (since 2015) and Chair of the Finance and Investment Committee (since 2018), Aflac Incorporated; Director (since 2018), ParentSquare. Former Director (2012-2022) and Finance Committee Chair (2016-2022), Sansum Clinic; former Advisory Board Member (2017-2019), B'Box; former Member (2011-2022), the University of California at Santa Barbara Arts and Lectures Advisory Council; former Investment Committee Member (2012-2020), Cottage Health System; Board Member (2009-2019) and former President of the Board (2014-2018).

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Loren M. Starr c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1961	Board Member	Term: Indefinite Length of service: Since 2022	Independent Consultant/ Advisor (2021-Present). Vice Chair, Senior Managing Director (2020-2021), Chief Financial Officer, Senior Managing Director (2005-2020), Invesco Ltd.	88 ⁽³⁾	Director (since 2023), AMG. Former Chair and Member of the Board of Directors (2014-2021), Georgia Leadership Institute for School Improvement (GLISI); former Chair and Member of the Board of Trustees (2015-2018), Georgia Council on Economic Education (GCEE).

NOMINEES WHO ARE NOT CURRENTLY BOARD MEMBERS

Amy B. R. Lancellotta 333 West Wacker Drive Chicago, IL 60606 1959	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Managing Director, Independent Directors Council ("IDC") (2006-2019) (supports the fund independent director community and is part of the Investment Company Institute ("ICI"), which represents regulated investment companies); formerly, various positions with ICI (1989-2006)	135 ⁽³⁾	President and Member of the Board of Directors (since 2020), Jewish Coalition Against Domestic Abuse (JCADA).
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Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Joanne T. Medero 333 West Wacker Drive Chicago, IL 60606 1954	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Managing Director, Government Relations and Public Policy (2009-2020) and Senior Advisor to the Vice Chairman (2018-2020), BlackRock, Inc. (global investment management firm); formerly, Managing Director, Global Head of Government Relations and Public Policy, Barclays Group (BIM) (investment banking, investment management and wealth management businesses) (2006-2009); formerly, Managing Director, Global General Counsel and Corporate Secretary, Barclays Global Investors (global investment management firm) (1996-2006); formerly, Partner, Orrick, Herrington & Sutcliffe LLP (law firm) (1993-1995); formerly General Counsel, Commodity Futures Trading Commission (government agency overseeing U.S. derivatives markets) (1989-1993); formerly, Deputy Associate Director/Associate Director for Legal and Financial Affairs, Office of Presidential Personnel, The White House (1986-1989).	135 ⁽³⁾	Member (since 2019) of the Board of Directors of the Baltic-American Freedom Foundation.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Albin F. Moschner 333 West Wacker Drive Chicago, IL 60606 1952	None	Term: Indefinite Length of Service: Not Applicable	Founder and Chief Executive Officer, Northcroft Partners, LLC (management consulting) (since 2012); previously, held positions at Leap Wireless International, Inc. (consumer wireless services), including Chief Consultant (2011-2012), Chief Operating Officer (2008-2011) and Chief Marketing Officer (2004-2008); formerly, President Verizon Card Services division of Verizon Communications, Inc. (telecommunication services) (2000-2003); formerly, President, One Point Services at One Point Communications (telecommunication services) (1999-2000); formerly, Vice President of the Board, Diba, Incorporated (internet technology provider) (1996-1997); formerly, various executive positions (1991-1996) and Chief Executive Officer (1995-1996) of Zenith Electronics Corporation (consumer electronics).	135 ⁽³⁾	Formerly, Chairman (2019) and Director (2012-2019), USA Technologies, Inc. (a provider of solutions and services to facilitate electronic payment transactions); formerly, Director, Wintrust Financial Corporation (1996-2016).
John K. Nelson 333 West Wacker Drive Chicago, IL 60606 1962	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Senior External Advisor to the Financial Services practice of Deloitte Consulting LLP (2012-2014); Chief Executive Officer of ABN AMRO Bank N.V., North America, and Global Head of the Financial Markets Division (2007-2008), with various executive leadership roles in ABN AMRO Bank N.V. between 1996 and 2007.	135 ⁽³⁾	Member of the Board of Directors (since 2008) of Core12 LLC. Former Member of the President's Council (2010-2019) of Fordham University; Former Director (2009-2018) of the Curran Center for Catholic American Studies.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Matthew Thornton III 333 West Wacker Drive Chicago, IL 60606 1958	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Executive Vice President and Chief Operating Officer (2018-2019), FedEx Freight Corporation, a subsidiary of FedEx Corporation ("FedEx") (provider of transportation, e-commerce and business services through its portfolio of companies); formerly, Senior Vice President, U.S. Operations (2006-2018), Federal Express Corporation, a subsidiary of FedEx.	135 ⁽³⁾	Member of the Board of Directors (since 2014), The Sherwin-Williams Company (develops, manufactures, distributes and sells paints, coating and related products); Member of the Board of Directors (since 2020), Crown Castle International (provider of communications infrastructure). Former Member of the Board of Directors (2012-2018), Safe Kids Worldwide.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Terence J. Toth 333 West Wacker Drive Chicago, IL 60606 1959	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Co-Founding Partner, Promus Capital (investment advisory firm) (2008-2017); formerly, Director, Quality Control Corporation (manufacturing) (2012-2021); formerly, Director, Fulcrum IT services LLC (information technology services firm to government entities) (2010-2019); formerly, Director, Legal & General Investment Management America, Inc. (asset management) (2008-2013); formerly, CEO and President, Northern Trust Global Investments (financial services) (2004-2007); Executive Vice President, Quantitative Management & Securities Lending (2000-2004); prior thereto, various positions with Northern Trust Company (financial services); formerly, Member, Northern Trust Mutual Funds Board (2005-2007), Northern Trust Global Investments Board (2004-2007), Northern Trust Japan Board (2004-2007) and Northern Trust Hong Kong Board (1997-2004).	135 ⁽³⁾	Chair and Member of the Board of Directors (since 2021), Kehrein Center for the Arts; Member of the Board of Directors (philanthropy) (since 2008), Catalyst Schools of Chicago; Member of the Board of Directors (since 2012) (and Former Investment Committee Chair (2017-2022)), Mather Foundation (philanthropy). formerly, Member, Chicago Fellowship Board (philanthropy) (2005-2016).

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Margaret L. Wolff 333 West Wacker Drive Chicago, IL 60606 1955	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Of Counsel, Skadden, Arps, Slate, Meagher & Flom LLP (legal services) (2005-2014).	135 ⁽³⁾	Member of the Board of Trustees (since 2005) of New York-Presbyterian Hospital. Member of the Board of Trustees (since 2004) (and former Chair (2015-2022)), The John A. Hartford Foundation (philanthropy dedicated to improving the care older adults); formerly, Member (2005-2015) and Vice Chair (2011-2015) of the Board of Trustees of Mt. Holyoke College.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Robert L. Young 333 West Wacker Drive Chicago, IL 60606 1963	None	Term: Indefinite Length of Service: Not Applicable	Formerly, Chief Operating Officer and Director, J.P. Morgan Investment Management Inc. (financial services) (2010-2016); formerly, President and Principal Executive Officer (2013-2016), and Senior Vice President and Chief Operating Officer (2005-2010), of J.P. Morgan Funds; formerly, Director and various officer positions for J.P. Morgan Investment Management Inc. (formerly, JPMorgan Funds Management, Inc. and formerly One Group Administrative Services) and JPMorgan Distribution Services, Inc. (financial services) (formerly, One Group Dealer Services, Inc. (1999-2017).	135 ⁽³⁾	None.

CURRENT BOARD MEMBERS WHO ARE NOT STANDING FOR RE-ELECTION AS NOMINEES

Forrest Berkley ⁽³⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1954	Board Member	Term: Indefinite Length of service: Since 2006	Partner (1990-2005) and Head of Global Product Management (2003-2005), GMO (formerly, Grantham, Mayo, Van Otterloo & Co.) (investment management), and member of asset allocation portfolio management team, GMO (2003-2005).	88	Investment Committee Member, Maine Community Foundation. Former Director, Save the Children Federation, Inc.; Former Investment Committee Member, Elmina B. Sewall Foundation.
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Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Joseph A. Carrier ⁽³⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1960	Board Member	Term: Indefinite Length of Service: Since 2023	Senior Vice President, Enterprise Risk Management, Franklin Resources, Inc. (2020-2022). Senior Managing Director, Chief Risk Officer and Chief Audit Executive, Legg Mason, Inc. (2008-2020).	88	Director, Franklin Templeton Irish Funds; Board Member, Cal Ripken, Sr. Foundation; Advisory Board Member, Loyola University Maryland, Sellinger School of Business and Management. Former Director, ICI Mutual Insurance Company; Former Director, Martin Currie Investment Management, Ltd.; Former Treasurer and Member of the Board of Directors, GB Charities, Inc.; Former Chair and Member of the Board of Visitors, Sacred Heart University Jack Welch College of Business & Technology.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Janice C. Eberly ⁽⁴⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1962	Board Member	Term: Indefinite Length of service: Since 2018	Distinguished Senior Fellow, MIT Sloan and Golub Center for Finance and Policy (since 2023); James R. and Helen D. Russell Professor of Finance at the Kellogg School of Management, Northwestern University (2002-2011 and since 2013), Senior Associate Dean for Strategy and Academics (since 2020) and Chair of the Finance Department (2005-2007). Vice President, American Economic Association (2020-2021). Assistant Secretary for Economic Policy, United States Department of the Treasury (2011-2013).	88	Member of the Board of the Office of Finance, Federal Home Loan Banks; Director, Avant, LLC.
Nancy A. Eckl ⁽⁴⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1962	Board Member	Term: Indefinite Length of service: Since 2007	Vice President (1990-2006), American Beacon Advisors, Inc. and of certain funds advised by American Beacon Advisors, Inc.	88	Independent Director and Audit Committee Chair, The Lazard Funds, Inc., Lazard Retirement Series, Inc. and Lazard Global Total Return and Income Fund, Inc.
Howell E. Jackson ⁽⁴⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1954	Board Member	Term: Indefinite Length of service: Since 2005	Special Adviser, White House Council of Economic Advisers (since 2023). James S. Reid, Jr. Professor of Law (since 2004), Senior Adviser to President and Provost (2010-2012), Acting Dean (2009), Vice Dean for Budget (2003-2006) and on the faculty (since 1989) of Harvard Law School.	88	Director, Build Commonwealth.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Term of Office and Length of Time Served⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽²⁾ Overseen by Board Member/Nominee	Other Directorships Held by Board Member/Nominee During Past Five Years
Nicole Thorne Jenkins ⁽⁴⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1970	Board Member	Term: Indefinite Length of service: Since 2023	John A. Griffin Dean of the McIntire School of Commerce at the University of Virginia (2020-present). Vice Dean (2016-2020), Von Allmen Chaired Professor of Accountancy (2017-2020), Associate Professor and EY Research Fellow (2012-2017), Gatton College of Business and Economics at the University of Kentucky.	88	Trustee and Audit Committee Member, Strada Education Network; Treasurer and Director, The Montpelier Foundation.
James M. Poterba ⁽⁴⁾ c/o Corporate Secretary 730 Third Avenue New York, NY 10017-3206 1958	Board Member	Term: Indefinite Length of service: Since 2006	President and Chief Executive Officer (since 2008) and Program Director (1990-2008), National Bureau of Economic Research. Mitsui Professor of Economics, Massachusetts Institute of Technology ("MIT") (since 1996); Affiliated Faculty Member of the Finance Group, Alfred P. Sloan School of Management (since 2014); Head (2006-2008) and Associate Head (1994-2000 and 2001-2006), Economics Department of MIT.	88	Director, National Bureau of Economic Research; Member, Congressional Budget Office Panel of Economic Advisers. Former Trustee, Alfred P. Sloan Foundation.

- (1) Length of Time Served of the current Board Members indicates the year in which the individual became a Board Member of a TC Fund.
- (2) As used in this table, the Fund Complex consists of the Nuveen Funds and the TC Funds, as well as CREF and VA-1.
- (3) In connection with the board consolidation, each nominee is also standing for election, or expected to be appointed, to oversee additional funds in the Fund Complex. If so elected, the Number of Portfolios in the Fund Complex Overseen by each Board Member will be as follows on January 1, 2024:

Joseph A. Boateng	191
Michael A. Forrester	191
Thomas J. Kenny	214
Amy B.R. Lancellotta	214
Joanne T. Medero	214
Albin F. Moschner	214
John K. Nelson	214
Loren M. Starr	213
Matthew Thornton III	214
Terence J. Toth	214
Margaret L. Wolff	214
Robert L. Young	214

In addition, certain nominees may from time to time prior to the Meeting be appointed or elected to other boards overseeing additional portfolios in the Fund Complex.

- (4) Mr. Berkley, Mr. Carrier, Prof. Eberly, Ms. Eckl, Prof. Jackson, Dean Jenkins and Prof. Poterba are expected to resign from the Board of the Trust effective as of December 31, 2023 in connection with the board consolidation.

Fund Share Ownership

The dollar range of equity securities beneficially owned by each Board Member and nominee in each Fund and all funds in the family of investment companies overseen or to be overseen by the Board Member or nominee as of December 31, 2022 is set forth in Appendix B.

As of December 31, 2022, each Board Member, nominee or executive officer individually, and the Board Members nominees and executive officers as a group, beneficially owned less than 1% of the outstanding shares of each Fund.

Compensation

Compensation is paid to the Board Members based on each Board Member's service as a member of the Board of the Trust, CREF and TCLF and as a member of the Management Committee of VA-1, and Board Member compensation expenses are allocated among each of the Funds of the Trust and TCLF, the Accounts of CREF and the single portfolio of VA-1, as applicable. Effective January 1, 2023, Board Member compensation is based on the following rates: an annual retainer of \$225,000; an annual long-term compensation contribution of \$110,000; an annual committee chair fee of \$20,000 for the Nominating and Governance Committee and \$30,000 for the chairs of the Investment Committee, Operations Committee and Audit and Compliance Committee; an annual Board chair fee of \$136,000; and an annual committee retainer of \$20,000 for the Nominating and Governance Committee and \$30,000 for the Investment Committee, Operations Committee and Audit and Compliance Committee.

Effective January 1, 2022 through December 31, 2022, Board Member compensation was based on the following rates: an annual retainer of \$225,000; an annual long-term compensation contribution of \$110,000; an annual committee chair fee of \$20,000 for the Nominating and Governance Committee and \$30,000 for the chairs of the Investment Committee, Operations Committee and Audit and Compliance Committee; an annual Board chair fee of \$120,000; and an annual committee membership retainer of \$20,000 for the Nominating and Governance Committee and \$30,000 for the Investment Committee, Operations Committee and Audit and Compliance Committee.

The chair and members of the Executive Committee continue to not receive fees for service on that committee. The Board Members may also continue to receive non-standing committee fees, such as special, working group or ad hoc committee fees, or related chair fees, as determined by the Board. These working groups and ad hoc committees of the Board are temporary in nature; compensation associated with membership in such groups and committees is not expected to be long-term or ongoing. The level of compensation is evaluated regularly and is based on a study of compensation at comparable companies, the time and responsibilities required of the Board Members, and the need to attract and retain well-qualified Board Members.

The Trust, TCLF, CREF and VA-1 have a long-term compensation plan for Board Members. Currently, under this unfunded deferred compensation plan, annual contributions equal to \$110,000 are allocated to notional investments in Trust, TCLF, CREF and VA-1 products (such as certain CREF annuities and/or certain TC Funds) selected by each Board Member. As currently structured, after the Board Member leaves this Board, benefits related to service on this Board will be paid in a lump sum or in annual installments over a period of 2 to 20 years, as requested by the Board Member. The Board may waive the mandatory retirement policy for

the Board Members, which would delay the commencement of benefit payments until after the Board Member eventually retires from the Board. Pursuant to a separate deferred compensation plan, Board Members also have the option to defer payments of their basic retainer, additional retainers and/or meeting fees and allocate those amounts to notional investments in certain TC Fund, CREF and VA-1 products (such as CREF annuities and/or TC Funds) selected by each Board Member. Benefits under that plan are also paid in a lump sum or in annual installments over a period of 2 to 20 years, as requested by the Board Member.

Upon consolidation of the Board, it is expected that the new Board will consider Board compensation and approve a compensation structure for the consolidated Board.

The tables set forth in Appendix C show, for each Board Member and nominee, the aggregate compensation paid by each Fund to each Board Member and nominee for its last fiscal year and the aggregate compensation paid by the Nuveen Funds, the Trust, TCLF, CREF and VA-1 to each Board Member and nominee for the calendar year ended December 31, 2022.

The Trust has adopted a mandatory retirement policy for its Board. Under this policy, Board Members shall cease to be members of the Board and resign their positions effective as of no later than the completion of the last scheduled in-person meeting of the Board while such persons are 72 years of age. Such requirement may be waived with respect to one or more Board Members for reasonable time periods upon the unanimous approval and at the sole discretion of the Board, and the Board Members eligible for the waiver are not permitted to vote on such proposal regarding their waiver. Upon consolidation of the Board, it is expected that the Board will consider and adopt a retirement policy for the Trust appropriate for the consolidated Board.

The Trust has no employees. Each officer of the Trust serves without any compensation from the Funds.

Board Leadership Structure and Related Matters

The Board is currently composed of eleven (11) Board Members, all of whom are independent or disinterested, which means that they are not “interested persons” of the Funds as defined in Section 2(a)(19) of the 1940 Act (Independent Board Members). One of the Independent Board Members, Thomas J. Kenny, serves as the Chair of the Board. The Chair’s responsibilities include: coordinating with management in the preparation of the agenda for each meeting of the Board; presiding at all meetings of the Board; and serving as a liaison with other Board Members, the Trust’s officers and other management personnel, and counsel to the Independent Board Members. The Chair also performs such other duties as the Board may from time to time determine. The Principal Executive Officer of the Trust does not serve on the Board.

The Board meets periodically to review, among other matters, the Funds’ activities, contractual arrangements with companies that provide services to the Funds and the performance of the Funds’ investment portfolios. The Board holds regularly scheduled meetings each year and may hold special meetings, as needed, to address matters arising between regular meetings. During a portion of each regularly scheduled meeting and, as the Board may determine, at its other meetings, the Board meets without management present.

The Board has established a committee structure that includes (i) standing committees, each composed solely of Independent Board Members and chaired by an Independent Board Member,

and (ii) non-standing committees (which, when constituted, shall be composed solely of Independent Board Members and chaired by an Independent Board Member). The Board, with the assistance of its Nominating and Governance Committee, periodically evaluates its structure and composition as well as various aspects of its operations. The Board believes that its leadership and operating structure, which includes (i) its committees, (ii) having an Independent Board Member in the position of Chairman of the Board and of each committee, and (iii) having independent counsel to the Independent Board Members, provides for independent oversight of management and is appropriate for the Trust in light of, among other factors, the asset size and nature of the Trust and the Funds, the number of portfolios overseen by the Board, the number of other funds overseen by the Board Members as the trustees of TCLF, CREF and VA-1, the arrangements for the conduct of the Funds' operations, the number of Board Members, and the Board's responsibilities.

Currently, Mr. Kenny serves as the independent Chair of the Board. Upon consolidation of the Board, the Board is expected to consider and adopt Board leadership positions for the consolidated Board.

Board Committees

The Board has appointed the following standing and non-standing committees and, in addition, may from time to time form certain committees on an "ad hoc" basis, each with specific responsibilities for aspects of the Trust's operations. The charters for these committees may be found at www.tiaa.org/public/about-tiaa/corporate-governance-leadership/cref-governors-trustees. Upon consolidation of the Board, the Board is expected to consider and adopt Board leadership positions and committee structures and memberships for the consolidated Board.

- (1) An Audit and Compliance Committee, consisting solely of Independent Board Members, which assists the Board in fulfilling its oversight responsibilities relating to financial reporting, internal controls over financial reporting and certain compliance matters. The Audit and Compliance Committee is charged with, among other matters, approving and/or recommending for Board approval the appointment, compensation and retention (or termination) of the Funds' independent registered public accounting firm. The current members of the Audit and Compliance Committee are Prof. Poterba (chair), Prof. Eberly, Mr. Forrester, Dean Jenkins, Mr. Kenny and Mr. Starr. Mr. Kenny has been designated as an "audit committee financial expert" as defined by the rules of the SEC. The number of Audit and Compliance Committee meetings held during the calendar year ended December 31, 2022 is shown in Appendix D.
- (2) An Investment Committee, consisting solely of Independent Board Members, which assists the Board in fulfilling its oversight responsibilities for the Funds' investment performance, process, strategies and policies, the voting of proxies of the portfolio companies of the Funds and reviewing ESG criteria used by certain Funds. The current members of the Investment Committee are Mr. Boateng (chair), Mr. Berkley, Mr. Carrier, Prof. Eberly, Ms. Eckl, Mr. Forrester, Prof. Jackson, Dean Jenkins, Mr. Kenny, Prof. Poterba and Mr. Starr. The number of Investment Committee meetings held during the calendar year ended December 31, 2022 is shown in Appendix D.

- (3) An Executive Committee, consisting solely of Independent Board Members, which generally is vested with full Board powers for matters that arise between Board meetings. The current members of the Executive Committee are Mr. Kenny (chair), Ms. Eckl, Mr. Forrester, Prof. Jackson and Prof. Poterba. The number of Executive Committee meetings held during the calendar year ended December 31, 2022 is shown in Appendix D.
- (4) A Nominating and Governance Committee, consisting solely of Independent Board Members, which assists the Board in addressing internal governance matters of the Trust, including nominating certain Trust officers and the members of the standing committees of the Board, recommending candidates for election as Board Members, reviewing the qualification and independence of Board Members, conducting evaluations of the Board Members and of the Board and its committees and reviewing proposed changes to the Trust's governing documents. The current members of the Nominating and Governance Committee are Mr. Forrester (chair), Ms. Eckl, Mr. Kenny and Prof. Poterba. The number of Nominating and Governance Committee meetings held during the calendar year ended December 31, 2022 is shown in Appendix D.
- (5) An Operations Committee, consisting solely of Independent Board Members, which assists the Board in fulfilling its oversight responsibilities for certain operational matters of the Trust, including oversight of contracts with various third-party service providers, valuation and certain other finance matters. The current members of the Operations Committee are Ms. Eckl (chair), Mr. Berkley, Mr. Boateng, Mr. Carrier and Prof. Jackson. The number of Operating Committee meetings held during the calendar year ended December 31, 2022 is shown in Appendix D.

Number of Board Meetings. The number of regular quarterly meetings and special meetings held by the Board during the calendar year ended December 31, 2022 is shown in Appendix D.

Board Member Attendance. During each Fund's most recent fiscal year, each Board Member attended 75% or more of each Fund's Board meetings and the committee meetings (if a member thereof) held during the period for which such Board Member was a Board Member.

Qualification of Board Members

The Board believes that each of the Board Members and nominees is qualified to serve as a Board Member of the Trust based on a review of the experience, qualifications, attributes or skills of each Board Member or nominee. The Board bases this view on its consideration of a variety of criteria, no single one of which is controlling. Generally, the Board looks for: character and integrity; ability to review critically, evaluate, question and discuss information provided and exercise effective business judgment in protecting shareholder interests; and willingness and ability to commit the time necessary to perform the duties of a Board Member. Each Board Member's or nominee's ability to perform his or her duties effectively is evidenced by his or her experience in one or more of the following fields: management, consulting, and/or board experience in the investment management industry; academic positions in relevant fields; management, consulting, and/or board experience with public companies in other fields, non-profit entities or other organizations; educational background and professional training; and experience as a Board Member of the Trust and other TC Funds or

as a Board Member of the Nuveen Funds. The Board seeks representative diversity within its membership and generally considers the manner in which an individual's professional experience, education, expertise in relevant matters, general leadership experience and life experiences are complementary and, as a whole, contribute to the ability of the Board to perform its duties.

In determining that a particular nominee was qualified to serve on the Board, the Board considered each nominee's background, skills, experience and other attributes in light of the composition of the Board with no particular factor controlling. The Board believes that Board Members need to have the ability to critically review, evaluate, question and discuss information provided to them, and to interact effectively with Fund management, service providers and counsel, in order to exercise effective business judgment in the performance of their duties, and the Board believes each nominee satisfies this standard. An effective Board Member may achieve this ability through his or her educational background; business, professional training or practice; public service or academic positions; experience from service as a board member or executive of investment funds, public companies or significant private or not-for-profit entities or other organizations; and/or other life experiences. Accordingly, set forth below is a summary of the experiences, qualifications, attributes, and skills that led to the conclusion, as of the date of this document, that each nominee should serve as a Board Member. References to the experiences, qualifications, attributes and skills of each nominee are pursuant to requirements of the Securities and Exchange Commission, do not constitute holding out of the Board or any nominee as having any special expertise or experience and shall not impose any greater responsibility or liability on any such person or on the Board by reason thereof. The standards set forth above may be re-evaluated and modified by the Board following the Board consolidation.

Current Board Members who are Nominees

Joseph A. Boateng. Mr. Boateng has been a TC Board Member since 2019. Since 2007, Mr. Boateng has served as the Chief Investment Officer for Casey Family Programs. He was previously Director of U.S. Pension Plans for Johnson & Johnson from 2002-2006. Mr. Boateng is a board member of the Lumina Foundation and Waterside School, an emeritus board member of Year Up Puget Sound, member of the Investment Advisory Committee and former Chair for the Seattle City Employees' Retirement System, and an Investment Committee Member for The Seattle Foundation. Mr. Boateng received a B.S. from the University of Ghana and an M.B.A. from the University of California, Los Angeles.

Michael A. Forrester. Mr. Forrester has been a TC Board Member since 2007. From 2007 to 2021, he held various positions with Copper Rock Capital Partners, LLC ("Copper Rock"), including Chief Executive Officer (2014-2021), Chief Operating Officer ("COO") (2007-2014) and Board Member (2007-2021). Mr. Forrester is currently a member of the Independent Directors Council Governing Council of the Investment Company Institute. He also serves on the Board of Trustees of the Dexter Southfield School. Mr. Forrester has a B.A. from Washington and Lee University.

Thomas J. Kenny. Mr. Kenny has been a TC Board Member since 2011. Mr. Kenny served as an Advisory Director (2010-2011), Partner (2004-2010), Managing Director (1999-2004) and Co-Head (2002-2010) of Goldman Sachs Asset Management's Global Cash and Fixed Income

Portfolio Management team, having worked at Goldman Sachs since 1999. Mr. Kenny is a Director and the Chair of the Finance and Investment Committee of Aflac Incorporated and a Director of ParentSquare. He is a Former Director and Finance Committee Chair for the, Sansum Clinic; Former Advisory Board Member, B'Box; Former Member of the University of California at Santa Barbara Arts and Lectures Advisory Council; Former Investment Committee Member, Cottage Health System; and Former President of the Board of Crane Country Day School. He received a B.A. from the University of California, Santa Barbara, and an M.S. from Golden Gate University. He is a Chartered Financial Analyst and has served as Chairman of CREF since 2017.

Loren M. Starr. Mr. Starr has been a TC Board Member since 2022. Mr. Starr was Vice Chair, Senior Managing Director from 2020 to 2021, and Chief Financial Officer, Senior Managing Director from 2005 to 2020, for Invesco Ltd. Mr. Starr is also a Director for AMG. He is former Chair and member of the Board of Directors, Georgia Leadership Institute for School Improvement (GLISI); former Chair and member of the Board of Trustees, Georgia Council on Economic Education (GCEE). Mr. Starr received a B.A. and a B.S. from Columbia College, an M.B.A. from Columbia Business School, and an M.S. from Carnegie Mellon University.

Nominees who are not Currently Board Members

Amy B. R. Lancellotta. Ms. Lancellotta has been a Nuveen Board Member since 2021. After 30 years of service, Ms. Lancellotta retired at the end of 2019 from the Investment Company Institute (ICI), which represents regulated investment companies on regulatory, legislative and securities industry initiatives that affect funds and their shareholders. From November 2006 until her retirement, Ms. Lancellotta served as Managing Director of ICI's Independent Directors Council (IDC), which supports fund independent directors in fulfilling their responsibilities to promote and protect the interests of fund shareholders. At IDC, Ms. Lancellotta was responsible for all ICI and IDC activities relating to the fund independent director community. In conjunction with her responsibilities, Ms. Lancellotta advised and represented IDC, ICI, independent directors and the investment company industry on issues relating to fund governance and the role of fund directors. She also directed and coordinated IDC's education, communication, governance and policy initiatives. Prior to serving as Managing Director of IDC, Ms. Lancellotta held various other positions with ICI beginning in 1989. Before joining ICI, Ms. Lancellotta was an associate at two Washington, D.C. law firms. In addition, since 2020, she has been a member of the Board of Directors of the Jewish Coalition Against Domestic Abuse (JCADA), an organization that seeks to end power-based violence, empower survivors and ensure safe communities. Ms. Lancellotta received a B.A. degree from Pennsylvania State University in 1981 and a J.D. degree from the National Law Center, George Washington University (currently known as George Washington University Law School) in 1984.

Joanne T. Medero. Ms. Medero has been a Nuveen Board Member since 2021. Ms. Medero has over 30 years of financial services experience and, most recently, from December 2009 until her retirement in July 2020, she was a Managing Director in the Government Relations and Public Policy Group at BlackRock, Inc. (BlackRock). From July 2018 to July 2020, she was also Senior Advisor to BlackRock's Vice Chairman, focusing on public policy and corporate governance issues. In 1996, Ms. Medero joined Barclays Global Investors (BGI), which merged with BlackRock in 2009. At BGI, she was a Managing Director and served as Global General Counsel and Corporate Secretary until 2006. Then, from 2006 to 2009, Ms. Medero was a Managing Director and Global Head of Government Relations and Public Policy at Barclays

Global Investors (BGI), which merged with BlackRock in 2009. At BGI, she was a Managing Director and served as Global General Counsel and Corporate Secretary until 2006. Then, from 2006 to 2009, Ms. Medero was a Managing Director and Global Head of Government Relations and Public Policy at Barclays Group (IBIM), where she provided policy guidance and directed legislative and regulatory advocacy programs for the investment banking, investment management and wealth management businesses. Before joining BGI, Ms. Medero was a Partner at Orrick, Herrington & Sutcliffe LLP from 1993 to 1995, where she specialized in derivatives and financial markets regulation issues. Additionally, she served as General Counsel of the Commodity Futures Trading Commission (CFTC) from 1989 to 1993 and, from 1986 to 1989, she was Deputy Associate Director/Associate Director for Legal and Financial Affairs at The White House Office of Presidential Personnel. Further, from 2006 to 2010, Ms. Medero was a member of the CFTC Global Markets Advisory Committee and she has been actively involved in financial industry associations, serving as Chair of the Steering Committee of the SIFMA (Securities Industry and Financial Markets Association) Asset Management Group (2016-2018) and Chair of the CTA (Commodity Trading Advisor), CPO (Commodity Pool Operator) and Futures Committee of the Managed Funds Association (2010-2012). Ms. Medero also chaired the Corporations, Antitrust and Securities Practice Group of The Federalist Society for Law and Public Policy (from 2010 to 2022 and 2000 to 2002). In addition, since 2019, she has been a member of the Board of Directors of the Baltic-American Freedom Foundation, which seeks to provide opportunities for citizens of the Baltic States to gain education and professional development through exchanges in the United States. Ms. Medero received a B.A. degree from St. Lawrence University in 1975 and a J.D. degree from the National Law Center, George Washington University (currently known as George Washington University Law School) in 1978.

Albin F. Moschner. Mr. Moschner has been a Nuveen Board Member since 2016. Mr. Moschner is a consultant in the wireless industry and, in July 2012, founded Northcroft Partners, LLC, a management consulting firm that provides operational, management and governance solutions. Prior to founding Northcroft Partners, LLC, Mr. Moschner held various positions at Leap Wireless International, Inc., a provider of wireless services, where he was a consultant from February 2011 to July 2012, Chief Operating Officer from July 2008 to February 2011, and Chief Marketing Officer from August 2004 to June 2008. Before he joined Leap Wireless International, Inc., Mr. Moschner was President of the Verizon Card Services division of Verizon Communications, Inc. from 2000 to 2003, and President of One Point Services at One Point Communications from 1999 to 2000. Mr. Moschner also served at Zenith Electronics Corporation as Director, President and Chief Executive Officer from 1995 to 1996, and as Director, President and Chief Operating Officer from 1994 to 1995. Mr. Moschner was Chairman of the Board (2019) and a member of the Board of Directors (2012-2019) of USA Technologies, Inc. and, from 1996 until 2016, he was a member of the Board of Directors of Wintrust Financial Corporation. In addition, he is emeritus (since 2018) of the Advisory Boards of the Kellogg School of Management (1995-2018) and the Archdiocese of Chicago Financial Council (2012-2018). Mr. Moschner received a Bachelor of Engineering degree in Electrical Engineering from The City College of New York in 1974 and a Master of Science degree in Electrical Engineering from Syracuse University in 1979.

John K. Nelson. Mr. Nelson has been a Nuveen Board Member since 2013. Mr. Nelson is on the Board of Director of Core12, LLC (since 2008), a private firm that develops branding, marketing, and communications strategies for clients. Mr. Nelson has extensive experience in global banking and markets, having served in several senior executive positions with ABN

AMRO Holdings N.V. and its affiliated entities and predecessors, including LaSalle Bank Corporation from 1996 to 2008, ultimately serving as Chief Executive Officer of ABN AMRO N.V. North America. During his tenure at the bank, he also served as Global Head of its Financial Markets Division, which encompassed the bank's Currency, Commodity, Fixed Income, Emerging Markets, and Derivatives businesses. He was a member of the Foreign Exchange Committee of the Federal Reserve Bank of the United States and during his tenure with ABN AMRO served as the bank's representative on various committees of The Bank of Canada, European Central Bank, and The Bank of England. Mr. Nelson previously served as a senior, external advisor to the financial services practice of Deloitte Consulting LLP (2012-2014). At Fordham University, he served as a director of The President's Council (2010- 2019) and previously served as a director of The Curran Center for Catholic American Studies (2009-2018). He served as a trustee and Chairman of The Board of Trustees of Marian University (2011-2013). The President's Council and as a director of The Curran Center for Catholic American Studies. Mr. Nelson is a graduate of Fordham University, holding a B.A. in Economics and an M.B.A. in Finance.

Matthew Thornton III. Mr. Thornton has been a Nuveen Board Member since 2020. Mr. Thornton has over 40 years of broad leadership and operating experience from his career with FedEx Corporation ("FedEx"), which, through its portfolio of companies, provides transportation, e-commerce and business services. In November 2019, Mr. Thornton retired as Executive Vice President and Chief Operating Officer of FedEx Freight Corporation (FedEx Freight), a subsidiary of FedEx, where, from May 2018 until his retirement, he had been responsible for day-to-day operations, strategic guidance, modernization of freight operations and delivering innovative customer solutions. From September 2006 to May 2018, Mr. Thornton served as Senior Vice President, U.S. Operations at Federal Express Corporation (FedEx Express), a subsidiary of FedEx. Prior to September 2006, Mr. Thornton held a range of positions of increasing responsibility with FedEx, including various management positions. In addition, Mr. Thornton currently (since 2014) serves on the Board of Directors of The Sherwin-Williams Company, where he is a member of the Audit Committee and the Nominating and Corporate Governance Committee, and the Board of Directors of Crown Castle International (since 2020), where he is a member of the Strategy Committee and the Compensation Committee. Formerly (2012-2018), he was a member of the Board of Directors of Safe Kids Worldwide®, a non-profit organization dedicated to the prevention of childhood injuries. Mr. Thornton is a member (since 2014) of the Executive Leadership Council (ELC), the nation's premier organization of global black senior executives. He is also a member of the National Association of Corporate Directors (NACD). Mr. Thornton has been recognized by Black Enterprise on its 2017 list of the Most Powerful Executives in Corporate America and by Ebony on its 2016 Power 100 list of the world's most influential and inspiring African Americans. Mr. Thornton received a B.B.A. degree from the University of Memphis in 1980 and an M.B.A. from the University of Tennessee in 2001.

Terence J. Toth. Mr. Toth, the Nuveen Funds' Independent Chair, has been a Nuveen Board Member since 2008. Mr. Toth was a Co-Founding Partner of Promus Capital (2008-2017). From 2012 to 2021, he was a Director of Quality Control Corporation, from 2010 to 2019, he was a Director of Fulcrum IT Service LLC and from 2012 to 2016, he was a Director of LogicMark LLC. From 2008 to 2013, he was a Director of Legal & General Investment Management America, Inc. From 2004 to 2007, he was Chief Executive Officer and President of Northern Trust Global Investments, and Executive Vice President of Quantitative Management & Securities Lending from 2000 to 2004. He also formerly served on the Board of the Northern Trust Mutual Funds.

He joined Northern Trust in 1994 after serving as Managing Director and Head of Global Securities Lending at Bankers Trust (1986 to 1994) and Head of Government Trading and Cash Collateral Investment at Northern Trust from 1982 to 1986. He currently serves as Chair of the Board of the Kehrein Center for the Arts (since 2021) and is on the Board of Catalyst Schools of Chicago (since 2008). He is on the Mather Foundation Board (since 2012) and was Chair of its Investment Committee from 2017 to 2022. Mr. Toth graduated with a Bachelor of Science degree from the University of Illinois, and received his MBA from New York University. In 2005, he graduated from the CEO Perspectives Program at Northwestern University.

Margaret L. Wolff. Ms. Wolff has been a Nuveen Board Member since 2016. Ms. Wolff retired from Skadden, Arps, Slate, Meagher & Flom LLP in 2014 after more than 30 years of providing client service in the Mergers & Acquisitions Group. During her legal career, Ms. Wolff devoted significant time to advising boards and senior management on U.S. and international corporate, securities, regulatory and strategic matters, including governance, shareholder, fiduciary, operational and management issues. From 2013 to 2017, she was a Board member of Travelers Insurance Company of Canada and The Dominion of Canada General Insurance Company (each of which is a part of Travelers Canada, the Canadian operation of The Travelers Companies, Inc.). Ms. Wolff has been a trustee of New York-Presbyterian Hospital since 2005 and, since 2004, she has served as a trustee of The John A. Hartford Foundation (a philanthropy dedicated to improving the care of older adults) where she formerly served as Chair from 2015 to 2022. From 2005 to 2015, she was a trustee of Mt. Holyoke College and served as Vice Chair of the Board from 2011 to 2015. Ms. Wolff received her Bachelor of Arts from Mt. Holyoke College and her Juris Doctor from Case Western Reserve University School of Law.

Robert L. Young. Mr. Young has been a Nuveen Board Member since 2017. Mr. Young has more than 30 years of experience in the investment management industry. From 1997 to 2017, he held various positions with J.P. Morgan Investment Management Inc. (“J.P. Morgan Investment”) and its affiliates (collectively, “J.P. Morgan”). Most recently, he served as Chief Operating Officer and Director of J.P. Morgan Investment (from 2010 to 2016) and as President and Principal Executive Officer of the J.P. Morgan Funds (from 2013 to 2016). As Chief Operating Officer of J.P. Morgan Investment, Mr. Young led service, administration and business platform support activities for J.P. Morgan’s domestic retail mutual fund and institutional commingled and separate account businesses, and co-led these activities for J.P. Morgan’s global retail and institutional investment management businesses. As President of the J.P. Morgan Funds, Mr. Young interacted with various service providers to these funds, facilitated the relationship between such funds and their boards, and was directly involved in establishing board agendas, addressing regulatory matters, and establishing policies and procedures. Before joining J.P. Morgan, Mr. Young, a former Certified Public Accountant (CPA), was a Senior Manager (Audit) with Deloitte & Touche LLP (formerly, Touche Ross LLP), where he was employed from 1985 to 1996. During his tenure there, he actively participated in creating, and ultimately led, the firm’s midwestern mutual fund practice. Mr. Young holds a Bachelor of Business Administration degree in Accounting from the University of Dayton and, from 2008 to 2011, he served on the Investment Committee of its Board of Trustees.

Board Members who are not Standing for Reelection as Nominees.

Forrest Berkley. Mr. Berkley is a retired partner of GMO (formerly, Grantham, Mayo, Van Otterloo & Co.), an investment management firm, since 2006. He was a partner of GMO from 1990

to 2005, and Head of Global Product Management from 2003 to 2005. He is an Investment Committee member of the Maine Community Foundation. He is a former Director of Save the Children Federation, Inc. and a former Investment Committee Member of the Elmina B. Sewall Foundation. Mr. Berkley received a B.A. from Yale University and an M.B.A. and a law degree from Harvard University.

Joseph A. Carrier. Joseph A. Carrier served as Senior Vice President, Enterprise Risk Management for Franklin Resources, Inc., from 2020 to 2022. He was previously Senior Managing Director, Chief Risk Officer and Chief Audit Executive at Legg Mason, Inc., from 2008 to 2020. He currently serves on the boards of the Franklin Templeton Irish Funds, Cal Ripken, Sr. Foundation, and Loyola University Maryland, Sellinger School of Business and Management, Department of Management and Organizations. He is a former Director of ICI Mutual Insurance Company and a former Director of Martin Currie Investment Management, Ltd. Mr. Carrier is also the former Treasurer and Member of the Board of Directors, GB Charities, Inc.; and the former Chair and member of the Board of Visitors, Sacred Heart University Jack Welch College of Business & Technology. Mr. Carrier received a B.A. from Loyola University Maryland.

Janice C. Eberly. Professor Eberly is the James R. and Helen D. Russell Professor of Finance at the Kellogg School of Management at Northwestern University (since 2013, and previously from 2002-2011). She has been the Senior Associate Dean for Strategy and Academics since 2020, and served as the Chair of the Finance Department from 2005 to 2007. In 2023, Professor Eberly was appointed as the Distinguished Senior Fellow at the Golub Center for Finance and Policy at MIT and the Sloan School. She is the past Vice President of the American Economics Association (2020-2021). Professor Eberly served as Assistant Secretary for Economic Policy at the United States Department of the Treasury from 2011 to 2013. Additionally, she serves as a Board Member of the Office of Finance of the Federal Home Loan Banks, and as a Director of Avant, LLC. Professor Eberly received a B.S. from the University of California at Davis and a Ph.D. from Massachusetts Institute of Technology.

Nancy A. Eckl. Ms. Eckl was Vice President of American Beacon Advisors, Inc., an investment management firm, and of the American Beacon Funds (open-end investment companies) from 1990 to 2006. Ms. Eckl also served as Vice President of certain other funds advised by American Beacon Advisors, Inc.. Ms. Eckl is an Independent Director and Audit Committee Chair of The Lazard Funds, Inc., Lazard Retirement Series, Inc. (both open-end investment companies), and Lazard Global Total Return and Income Fund, Inc. (a New York Stock Exchange listed closed-end fund). Ms. Eckl received a B.B.A. from the University of Notre Dame, and is licensed as a Certified Public Accountant in the State of Texas.

Howell E. Jackson. Professor Jackson has been James S. Reid, Jr., Professor of Law of Harvard Law School since 2004 and on the faculty since 1989. He is currently serving as a Special Adviser for the White House Council of Economic Advisers. He is a Director of Commonwealth, a non-profit organization that promotes financial innovations to enhance the opportunities and security of financially vulnerable people. Professor Jackson has a B.A. degree from Brown University and a joint J.D./M.B.A. from Harvard University.

Nicole Thorne Jenkins. Dean Jenkins has been the John A. Griffin Dean of the McIntire School of Commerce at the University of Virginia since 2020. She was previously the Vice Dean (2016-2020), Von Allmen Chaired Professor of Accountancy (2017-2020), and Associate Professor and EY Research Fellow (2012-2017) at Gatton College of Business and Economics

at the University of Kentucky, as well as Treasurer and Director of the Montpelier Foundation.. She currently serves as a Trustee and Chair of the Audit & Finance Committee of the Strada Education Network. Dean Jenkins received a B.S. from Drexel University and a Ph.D. from the University of Iowa. She is a licensed Certified Public Accountant in the State of Maryland.

James M. Poterba. Professor Poterba has been President and CEO and a member of the Board of Directors of the National Bureau of Economic Research since 2008. He has been the Mitsui Professor of Economics at the Massachusetts Institute of Technology ("MIT") since 1996, and an Affiliated Faculty Member of the Finance Group at the Alfred P. Sloan School of Management since 2014. Professor Poterba was the Head of the Economics Department from 2006 until 2008 at MIT, where he has taught since 1983. From 1994 to 2000 and 2001 to 2006 he was Associate Head of the Economics Department at MIT. He was the Director of the Public Economics Research Program at the National Bureau of Economic Research from 1990 to 2008. He is a member of the Congressional Budget Office Panel of Economic Advisers. Professor Poterba is a former Trustee of the Alfred P. Sloan Foundation. He holds an A.B. from Harvard College and an M.Phil. and a D.Phil. from Oxford University, where he was a Marshall Scholar.

Each of Mr. Berkley, Mr. Carrier, Prof. Eberly, Ms. Eckl, Prof. Jackson, Dean Jenkins and Prof. Poterba is expected to resign from the Board, effective as of December 31, 2023, and therefore is not standing for election at the Meeting. If the Board consolidation is approved, each of these TC Board Members will resign from the TC Funds boards, but will continue to serve as members of the boards of CREF and VA-1. Relatedly, if elected to the consolidated board of the TC Funds and the Nuveen Funds, Mr. Boateng, Mr. Forrester, Mr. Kenny and Mr. Starr will resign from their positions on the boards of CREF and VA-1 as of December 31, 2023.

Risk Oversight

Day-to-day management of the various risks relating to the administration and operation of the Trust and the Funds is the responsibility of management, which includes professional risk management staff. The Board oversees this risk management function consistent with and as part of its oversight responsibility. The Board performs this risk management oversight directly and, as to certain matters, through its standing committees (which are described below) and, at times, through its use of non-standing committees. The following provides an overview of the principal, but not all, aspects of the Board's oversight of risk management for the Trust and other TC Funds. The Board recognizes that it is not possible to identify all of the risks that may affect the Trust and the Funds or to develop procedures or controls that eliminate the Trust's and the Funds' exposure to all of these risks.

In general, a Fund's risks include, among others, market risk, credit risk, derivatives risk, liquidity risk, valuation risk, operational risk, reputational risk, regulatory compliance risk and cyber security risk. The Board has adopted, and periodically reviews, policies and procedures designed to address certain (but not all) of these and other risks to the Trust and the Funds. In addition, under the general oversight of the Board, Advisors, the investment adviser and administrator for each Fund as well as the administrator of the Funds' Liquidity Risk Program, and other service providers to the Funds have themselves adopted a variety of policies, procedures and controls designed to address particular risks to the Funds. Different processes, procedures and controls are employed with respect to different types of risks.

The Board, with advice of counsel to the Independent Board Members, also oversees risk management for the Trust and the Funds through receipt and review by the Board or its committee(s) of regular and special reports, presentations and other information from officers of the Trust and other persons, including from the Chief Risk Officer or other senior risk management personnel for Advisors and its affiliates. Senior officers of the Trust, senior officers of Advisors and its affiliates, and the Funds' CCO regularly report to the Board and/or one or more of the Board's committees on a range of matters, including those relating to risk management. The Board also regularly receives reports, presentations and other information from Advisors with respect to the investments and securities trading of the Funds. At least annually, the Board receives a report from the Funds' CCO regarding the effectiveness of the Funds' compliance program. Also, on an annual basis, the Board receives reports, presentations and other information from TIAA in connection with the Board's consideration of the renewal of each of the Trust's investment management agreements with Advisors and the Trust's distribution plans under Rule 12b-1 under the 1940 Act. In addition, on an annual basis, Advisors, in its capacity as Liquidity Risk Program administrator pursuant to applicable SEC regulations, provides the Board with a written report that addresses the operation, adequacy and effectiveness of the Funds' Liquidity Risk Program. The Board provides oversight of the Funds' use of derivatives in accordance with Rule 18f-4 under the 1940 Act. As required by Rule 18f-4, with respect to each of the Funds that is not classified as a "limited derivatives user fund" (as defined in Rule 18f-4) or a Money Market Fund (each a "Full Compliance Fund"), the Trust has implemented a Derivatives Risk Management Program, which is reasonably designed to manage the Full Compliance Funds' derivatives risks and to reasonably segregate the functions associated with the Program from the portfolio management of such Funds. The Board approved the designation of one or more Derivatives Risk Managers (each, a "DRM"), which are responsible for administering the Derivatives Risk Management Program for the Full Compliance Funds. To facilitate the Board's oversight, the Board reviews, no less frequently than annually, a written report on the effectiveness of the Derivatives Risk Management Program and also more frequent reports regarding certain derivatives risk matters. With respect to each Fund that is classified as a limited derivatives user fund (each a "LDU Fund"), the Board oversees the Fund's derivatives risks through, among other things, receiving written reports by a DRM regarding any LDU Fund's exceedance of the derivatives exposure threshold set forth in Rule 18f-4. Additionally, as required by Rule 18f-4, the Trust has implemented written policies and procedures reasonably designed to manage the LDU Funds' derivatives risks.

Officers of the Trust and officers and personnel of TIAA and its affiliates also report regularly to the Audit and Compliance Committee on the Trust's internal controls over financial reporting and accounting and financial reporting policies and practices. The Funds' CCO reports regularly to the Audit and Compliance Committee on compliance matters, and the TIAA Chief Auditor reports regularly to the Audit and Compliance Committee regarding internal audit matters. In addition, the Audit and Compliance Committee receives regular reports from the Trust's independent registered public accounting firm on internal control and financial reporting matters.

The Operations Committee receives regular reports, presentations and other information from Trust officers and from Fund management personnel regarding valuation and certain other operational matters. In addition to regular reports, presentations and other information from Advisors and other TIAA personnel, the Operations Committee receives reports, presentations and other information regarding certain other service providers to the Trust, either directly or

through the Trust's officers, Advisors personnel or other TIAA personnel, on a periodic or regular basis.

The Investment Committee regularly receives reports, presentations and other information from Advisors with respect to the investments, securities trading, portfolio liquidity, voting of proxies of the Funds' portfolio companies, ESG criteria used by certain Funds and other portfolio management aspects of the Funds.

The Nominating and Governance Committee routinely monitors various aspects of the Board's structure and oversight activities, including reviewing matters such as the workload of the Board, the balance of responsibilities delegated among the Board's committees and the relevant skill sets of Board members. On an annual basis, the Nominating and Governance Committee reviews the independent status of each Board Member under the 1940 Act and the independent status of counsel to the Independent Board Members.

Note that the risk oversight process set forth above may change post-Board consolidation.

The Officers

The following table sets forth information with respect to each officer of the Trust. Officers receive no compensation from the Funds. The officers are elected by the Board on an annual basis to serve until successors are elected and qualified. Certain officers of the Trust may be changed by the Board following the Board consolidation.

Name, Business Address and Year of Birth	Position(s) Held with Funds	Length of Time Served with Funds in the Fund Complex⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽¹⁾ Served by Officer
Richard S. Biegen TIAA 730 Third Avenue New York, NY 10017-3206 1962	Chief Compliance Officer	Term: Annual Length of Service: Chief Compliance Officer since 2008	Senior Managing Director, TIAA. Chief Compliance Officer of the TIAA-CREF Fund Complex.	88
Claire Borelli TIAA 730 Third Avenue New York, NY 10017-3206 1960	Executive Vice President	Term: Annual Length of Service: Executive Vice President since 2023	Senior Executive Vice President, Chief People Officer of TIAA and Executive Vice President of the TIAA-CREF Fund Complex. Formerly, Senior Vice President, Chief Diversity & Talent Officer, TIAA. Prior to joining TIAA, Ms. Borelli served as Chief Human Resources Officer for the Consumer Bank and Wealth Management sectors of JPMorgan Chase & Co.	88
Derek B. Dorn TIAA 730 Third Avenue New York, NY 10017-3206 1976	Senior Managing Director and Corporate Secretary	Term: Annual Length of Service: Senior Managing Director and Corporate Secretary since 2020	Senior Managing Director and Corporate Secretary of TIAA and the TIAA-CREF Fund Complex. Formerly, Managing Director, Special Assistant to the CEO and Managing Director, Regulatory Affairs, TIAA. Prior to joining TIAA, Mr. Dorn served as a partner at Davis & Harman LLP and an adjunct professor of Law at Georgetown University Law Center.	88

Name, Business Address and Year of Birth	Position(s) Held with Funds	Length of Time Served with Funds in the Fund Complex ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽¹⁾ Served by Officer
John L. Douglas TIAA 730 Third Avenue New York, NY 10017-3206 1950	Executive Vice President and Chief Legal, Risk and Compliance Officer	Term: Annual Length of Service: Executive Vice President since 2021 and Chief Legal, Risk and Compliance Officer since 2022.	Senior Executive Vice President, Chief Legal, Risk and Compliance Officer of TIAA. Executive Vice President, Chief Legal, Risk and Compliance Officer of the TIAA-CREF Fund Complex. Formerly, Senior Executive Vice President, Senior Advisor to the CEO, and Senior Executive Vice President, Chief Advocacy & Oversight Officer, TIAA. Prior to joining TIAA, Mr. Douglas was a partner at Davis Polk & Wardwell LLP.	88
W. Dave Dowrich TIAA 730 Third Avenue New York, NY 10017-3206 1967	Executive Vice President	Term: Annual Length of Service: Executive Vice President since 2022.	Senior Executive Vice President and Chief Financial Officer of TIAA. Executive Vice President of the TIAA-CREF Fund Complex. Prior to joining TIAA, Mr. Dowrich served as Chief Financial Officer, International Businesses at Prudential Financial, Inc.	88

Name, Business Address and Year of Birth	Position(s) Held with Funds	Length of Time Served with Funds in the Fund Complex ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽¹⁾ Served by Officer
Bradley Finkle TIAA 730 Third Avenue New York, NY 10017-3206 1973	Principal Executive Officer and President	Term: Annual Length of Service: Principal Executive Officer and President since 2017.	Executive Vice President, Head of Complementary Businesses and Chief Administrative Officer of the Chief Operating Office, TIAA. Principal Executive Officer and President of the TIAA-CREF Funds and TIAA-CREF Life Funds. Formerly, Executive Vice President, Chief Operating Officer, Nuveen; President and Chief Executive Officer of CREF and TIAA Separate Account VA-1; and Senior Managing Director, Co-Head Nuveen Equities & Fixed Income and President of TIAA Investments.	88
Jose Minaya TIAA 730 Third Avenue New York, NY 10017-3206 1971	Executive Vice President	Term: Annual Length of Service: Executive Vice President since 2018.	Chief Executive Officer, Nuveen. Executive Vice President of the TIAA-CREF Fund Complex. Formerly, Executive Vice President, President and Chief Investment Officer, Nuveen; Executive Vice President, Chief Investment Officer and President, Nuveen Global Investments; and Senior Managing Director, President, Global Investments, TIAA.	88

Name, Business Address and Year of Birth	Position(s) Held with Funds	Length of Time Served with Funds in the Fund Complex ⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex ⁽¹⁾ Served by Officer
Colbert Narcisse TIAA 730 Third Avenue New York, NY 10017-3206 1965	Executive Vice President	Term: Annual Length of Service: Executive Vice President since 2022.	Senior Executive Vice President, Chief Product and Business Development Officer of TIAA. President and Chief Executive Officer of CREF and TIAA Separate Account VA-1. Executive Vice President of TIAA-CREF Funds and TIAA-CREF Life Funds. Formerly, Executive Vice President and Head of Advisory and Corporate Solutions, TIAA. Prior to joining TIAA, Mr. Narcisse served as Managing Director and Head of International Wealth Management and Head of Traditional and Alternative Investment Products at Morgan Stanley.	88
David G. Nason TIAA 730 Third Avenue New York, NY 10017-3206 1970	Executive Vice President	Term: Annual Length of Service: Executive Vice President since 2020.	Senior Executive Vice President, Chief Operating Officer of TIAA. Executive Vice President of the TIAA-CREF Fund Complex. Formerly, Senior Executive Vice President, Chief Legal, Risk and Compliance Officer of TIAA. Executive Vice President, Chief Risk and Compliance Officer, TIAA. Prior to joining TIAA, Mr. Nason served as President and CEO of GE Energy Financial Services.	88

Name, Business Address and Year of Birth	Position(s) Held with Funds	Length of Time Served with Funds in the Fund Complex⁽¹⁾	Principal Occupation(s) During Past Five Years	Number of Portfolios in Fund Complex⁽¹⁾ Served by Officer
E. Scott Wickerham TIAA 730 Third Avenue New York, NY 10017-3206 1973	Principal Financial Officer, Principal Accounting Officer and Treasurer	Term: Annual Length of Service: Principal Financial Officer, Principal Accounting Officer and Treasurer since 2017.	Senior Managing Director, Head of Finance for Equities and Fixed Income, Nuveen. Principal Financial Officer, Principal Accounting Officer and Treasurer of the TIAA-CREF Fund Complex; and Vice President and Controller of the Nuveen Funds. Formerly, Senior Managing Director, Head, Public Investment Finance, Nuveen, and Managing Director, Head, TC Fund Administration, Nuveen.	223

⁽¹⁾ As used in this table, the Fund Complex consists of the Nuveen Funds and the TC Funds, as well as CREF and VA-1.

Independent Registered Public Accounting Firm

The Independent Board Members have unanimously selected PricewaterhouseCoopers LLP ("PwC") as the independent registered public accounting firm to audit the books and records of each Fund for each such Fund's current fiscal year. In making its selection, the Audit and Compliance Committee discussed with PwC issues involving relationships among PwC, TIAA, Nuveen, LLC, Nuveen Finance, LLC and the Trust, TCLF, CREF and VA-1, and their affiliates that could reasonably be thought to bear on PwC's independence. PwC confirmed its independence to the Audit and Compliance Committee. As part of this process, the Audit and Compliance Committee considered that while PwC would also serve as the Independent Auditor for TIAA, Nuveen, LLC and Nuveen Finance, LLC, it relied upon PwC's determination that this would not compromise its independence. The Audit and Compliance Committee considered that this arrangement would produce a more cost-effective audit.

PwC has informed each Fund that it has no direct or indirect material financial interest in the Funds, the Adviser or any other investment company sponsored by the Adviser or its affiliates.

A representative of PwC will be invited to be present at the Meeting if they so desire, and if present will have the opportunity to make a statement and/or answer questions if they desire to do so.

Audit and Related Fees

The tables set forth in Appendix E provide the aggregate fees billed during each Fund's last two fiscal years by each Fund's independent registered public accounting firm for engagements directly related to the operations and financial reporting of each Fund including those relating (i) to each Fund for services provided to the Fund and (ii) to the Adviser and certain entities controlling, controlled by, or under common control with the Adviser that provide ongoing services to each Fund ("Adviser Entities").

Audit Committee Pre-Approval Policies and Procedures

The Audit and Compliance Committee has adopted a Preapproval Policy for External Audit Firm Services ("Policy"). The Policy describes the types of services that may be provided by the Independent Auditor to the Trust without impairing the Independent Auditor's independence. Under the Policy, the Audit and Compliance Committee (or its designated member) is required to preapprove certain services to be performed by the Trust's Independent Auditor in an effort to ensure that such services do not impair the Independent Auditor's independence.

The Policy requires the Audit and Compliance Committee to appoint the Independent Auditor to perform the financial statement audit for the Trust, including approving the terms of the engagement. The Policy also requires the Audit and Compliance Committee (or, with respect to non-audit services, its designated member) to preapprove the audit, audit-related and tax services to be provided by the Independent Auditor and the fees to be charged for provision of such services from year to year.

All services provided by the Independent Auditor for the Trust and certain non-audit services provided by the Independent Auditor to the Trust's adviser or its affiliates for each of the two most recently ended fiscal years were preapproved by the Audit and Compliance Committee (or its designated member, as appropriate) pursuant to the Policy.

There were no amounts that were approved by the Audit and Compliance Committee pursuant to the de minimis exception under Rule 2-01(c)(7)(i)(c) of Regulation S-X.

Shareholder Approval

The affirmative vote of a plurality of the shares present and entitled to vote at the Meeting will be required to elect the Board Members. This means that the nominees receiving the highest number of affirmative votes cast at the Meeting will be elected to serve as Board Members. For purposes of determining the approval of the proposal to elect nominees for the Trust, withheld votes, abstentions and broker non-votes will have no effect on the election of Board Members.

The Board unanimously recommends that shareholders of each Fund vote FOR the election of each nominee of the Board.

Additional Information

Attending the Meeting

The Meeting will be held in a virtual meeting format only. There is no physical location for the meeting. Shareholders may participate in the Meeting at meetnow.global/M599MNM by entering the control number found on the shareholder's proxy card at the date and time of the Meeting. Shareholders may vote during the Meeting by following the instructions that will be available on the Meeting website during the Meeting.

If your shares are registered in your name, you do not need to register to attend the Meeting virtually on the Internet. If you hold your shares through an intermediary, such as a bank or broker, you must register in advance to attend the Meeting virtually on the Internet.

To register to attend the Meeting online by webcast, you must submit proof of your proxy power (legal proxy) reflecting your Fund holdings along with your name and email address to Computershare Fund Services. You must contact the bank or broker who holds your shares to obtain your legal proxy. Requests for registration must be labeled as "Legal Proxy" and be received no later than 5:00 p.m., Eastern Time, three business days prior to the Meeting date.

You will receive a confirmation of your registration by email after we receive your registration materials.

Requests for registration should be directed to us by emailing an image of your legal proxy to shareholdermeetings@computershare.com.

Principal Shareholders

As of the Record Date, the record owners of the specified Fund and class set forth on Appendix F held the share amounts and corresponding percentages indicated therein, which were owned either (i) beneficially by such persons or (ii) of record by such persons on behalf of customers who are the beneficial owners of such shares.

To the knowledge of the Funds, as of the Record Date, no shareholder owned, beneficially or of record, more than 5% of any class of shares of any Fund, except as provided in Appendix F.

Beneficial owners of 25% or more of a class of shares of a Fund are presumed to be in control of the class for purposes of voting on certain matters submitted to shareholders.

Information About the Adviser and Distributor

The Adviser

Teachers Advisors, LLC ("Teachers Advisors") manages the assets of the Trust, under the supervision of the Board. Teachers Advisors is an indirect wholly owned subsidiary of TIAA. Teachers Advisors is registered as an investment adviser with the SEC under the Investment Advisers Act of 1940. Teachers Advisors also manages the investments of TIAA Separate Account VA-1 and TIAA-CREF Life Funds. Through an affiliated investment adviser, TIAA-CREF Investment Management, LLC ("TCIM"), certain personnel of Teachers Advisors also manage the investment accounts of CREF. As of June 30, 2023, Teachers Advisors and TCIM together had approximately \$361 billion of assets under management. Teachers Advisors is located at 730 Third Avenue, New York, NY 10017-3206.

The Distributor

Nuveen Securities, LLC, 333 West Wacker Drive, Chicago, Illinois 60606, serves as the distributor for the Funds' shares.

Shareholder Proposals

The Trust generally does not hold annual shareholders' meetings, but will hold special meetings as required or deemed desirable. Because the Trust does not hold regular shareholders' meetings, the anticipated date of the next special shareholders' meeting (if any) cannot be provided. Shareholders wishing to submit proposals for inclusion in a proxy statement for a subsequent meeting of shareholders of the Trust should send their written proposal to the Trust at 730 Third Avenue, New York, NY 10017-3206. Proposals must be received a reasonable time before the Trust begins to print and mail its proxy materials for the meeting.

Shareholder Communications

Letters or emails from shareholders addressed to the Board or individual Board Member may be sent c/o Corporate Secretary, 730 Third Avenue, New York, NY 10017-3206 or via email to: trustees@tiaa.org. Certain communications will be forwarded to the Board's Chair in accordance with established policies concerning Shareholder communications that have been approved by a majority of Independent Board Members.

Board Member Attendance at Shareholder Meetings

The Trust is not required to and does not typically hold annual meetings of Shareholders. Consequently, the Trust does not have a policy with regard to a Board Member's attendance at Shareholder meetings.

Expenses of Proxy Solicitation

The cost of preparing, printing and mailing the enclosed proxy, accompanying notice and Proxy Statement and all other costs in connection with the solicitation of proxies will be paid by the Funds (allocated among the Funds based on relative net assets). The expenses are included in the administrative expenses that are paid for from the net assets of the Trust. Solicitation may be made by letter or telephone by officers or employees of Nuveen or the Adviser, or by dealers and their representatives. The Funds have engaged Computershare Fund Services to assist in the solicitation of proxies and expect to pay an estimated fee of \$786,000 and reimburse Computershare Fund Services for its reasonable expenses in connection with its solicitation of proxies.

Fiscal Year

The fiscal year end of each Fund is set forth on Appendix A.

Shareholder Report Delivery

Each Fund's most recent annual and semi-annual shareholder reports are available at the Funds' website at tiaa.org. Each Fund will furnish, without charge, a copy of its annual report and/or semi-annual report as available upon request. Such requests should be directed to such Fund at tiaa.org. In addition, copies of each Fund's most recent annual report and/or semi-annual report are available at the TIAA website at www.tiaa.org/prospectuses, or by using our online request form to order print versions electronically.

Please note that only one annual report, semi-annual report or proxy statement may be delivered to two or more shareholders of a Fund who share an address, unless the Fund has received instructions to the contrary. To request a separate copy of an annual report, semi-annual report or proxy statement, or for instructions as to how to request a separate copy of such documents or as to how to request a single copy if multiple copies of such documents are received, shareholders should contact the applicable Fund at the address and phone number set forth above.

Important Notice Regarding the Availability of Proxy Materials for the Shareholder Meeting To Be Held on November 20, 2023

This Proxy Statement, each Fund's most recent annual report to shareholders, the form of proxy and the Notice of Special Meeting are available at <https://www.tiaa.org/public/about-tiaa/corporate-governance-leadership/document-library>. For more information, shareholders may also contact the applicable Fund at the address and phone number set forth above.

General

Management does not intend to present and does not have reason to believe that any other items of business will be presented at the Meeting. However, if other matters are properly presented to the Meeting for a vote, the proxies will be voted by the persons acting under the proxies upon such matters in accordance with their judgment of the best interests of the Funds.

A list of shareholders entitled to be present and to vote at the Meeting may be available for inspection by any shareholder to the extent required by applicable state law.

Failure of a quorum to be present at the Meeting will necessitate adjournment and may subject your Fund to additional expense. The persons named in the enclosed proxy may also move for an adjournment of the Meeting to permit further solicitation of proxies with respect to any proposal if they determine that adjournment and further solicitation is reasonable and in the best interests of the Funds. An adjournment of a meeting with respect to a matter requires the affirmative vote of a majority of the votes cast on the matter. The persons named in the enclosed proxy card will vote in favor of any such adjournment if they believe the adjournment and additional proxy solicitation are reasonable and in the best interests of shareholders.

IF YOU CANNOT BE PRESENT AT THE MEETING (VIRTUALLY), YOU ARE REQUESTED TO FILL IN, SIGN AND RETURN THE ENCLOSED PROXY PROMPTLY. NO POSTAGE IS REQUIRED IF MAILED IN THE UNITED STATES.

Derek B. Dorn
Senior Managing Director and Corporate Secretary
October 13, 2023

FUND INFORMATION

Shares of Each Class Outstanding as of the Record Date

Fund Name	Abbreviated Fund Name	Fiscal Year End	Institutional Class	Premier Class	Retirement Class	Advisor Class	Retail Class	Class W
TIAA-CREF Lifecycle 2010 Fund	Lifecycle 2010 Fund	5/31	56,581,215	3,702,287	20,070,487	15,236	—	—
TIAA-CREF Lifecycle 2015 Fund	Lifecycle 2015 Fund	5/31	92,986,365	5,375,243	29,396,452	44,945	—	—
TIAA-CREF Lifecycle 2020 Fund	Lifecycle 2020 Fund	5/31	207,642,252	11,819,256	51,178,674	77,881	—	—
TIAA-CREF Lifecycle 2025 Fund	Lifecycle 2025 Fund	5/31	312,692,938	18,684,397	64,818,136	96,774	—	—
TIAA-CREF Lifecycle 2030 Fund	Lifecycle 2030 Fund	5/31	363,080,881	21,743,792	66,136,022	66,192	—	—
TIAA-CREF Lifecycle 2035 Fund	Lifecycle 2035 Fund	5/31	382,005,946	21,062,003	61,188,751	68,569	—	—
TIAA-CREF Lifecycle 2040 Fund	Lifecycle 2040 Fund	5/31	456,975,698	23,670,772	67,840,395	43,062	—	—
TIAA-CREF Lifecycle 2045 Fund	Lifecycle 2045 Fund	5/31	262,994,373	13,342,773	50,235,780	51,187	—	—
TIAA-CREF Lifecycle 2050 Fund	Lifecycle 2050 Fund	5/31	201,713,996	9,209,820	35,132,606	28,967	—	—
TIAA-CREF Lifecycle Index 2010 Fund	Lifecycle Index 2010 Fund	5/31	34,733,881	1,214,183	3,388,967	74,824	—	—
TIAA-CREF Lifecycle Index Retirement Income Fund	Lifecycle Index Retirement Income Fund	5/31	41,919,265	225,471	2,386,768	158,113	—	—
TIAA-CREF Lifecycle Index 2015 Fund	Lifecycle Index 2015 Fund	5/31	55,513,354	1,769,390	5,176,032	77,375	—	—
TIAA-CREF Lifecycle Index 2020 Fund	Lifecycle Index 2020 Fund	5/31	151,463,435	4,359,405	11,356,137	562,883	—	—
TIAA-CREF Lifecycle Index 2025 Fund	Lifecycle Index 2025 Fund	5/31	253,162,367	6,148,685	19,690,999	1,059,270	—	—
TIAA-CREF Money Market Fund	Money Market Fund	3/31	1,008,128,219	40,065,894	613,680,096	37,278,831	288,641,521	—
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund	5-15 Year Laddered Tax-Exempt Bond Fund	3/31	872,832	—	—	33,672	23,283,280	—
TIAA-CREF Green Bond Fund	Green Bond Fund	3/31	8,632,614	100,000	1,510,984	3,844,360	799,462	—
TIAA-CREF Lifecycle Index 2030 Fund	Lifecycle Index 2030 Fund	5/31	299,482,160	7,261,601	20,557,462	1,500,304	—	—
TIAA-CREF Lifecycle Index 2035 Fund	Lifecycle Index 2035 Fund	5/31	283,290,912	7,572,430	17,595,960	1,083,118	—	—
TIAA-CREF Lifecycle Index 2040 Fund	Lifecycle Index 2040 Fund	5/31	276,075,960	7,494,754	15,642,106	1,019,732	—	—
TIAA-CREF Lifecycle Index 2045 Fund	Lifecycle Index 2045 Fund	5/31	217,128,208	4,326,775	12,186,696	997,025	—	—
TIAA-CREF Lifecycle Index 2050 Fund	Lifecycle Index 2050 Fund	5/31	179,405,587	3,359,793	10,214,601	709,910	—	—
TIAA-CREF Lifecycle Index 2055 Fund	Lifecycle Index 2055 Fund	5/31	129,701,713	1,910,423	6,883,765	747,370	—	—
TIAA-CREF Lifecycle 2055 Fund	Lifecycle 2055 Fund	5/31	83,112,988	3,852,538	13,925,184	26,229	—	—
TIAA-CREF Lifestyle Aggressive Growth Fund	Lifestyle Aggressive Growth Fund	5/31	3,239,182	20,200	3,164,582	296,008	6,358,344	—
TIAA-CREF Lifestyle Conservative Fund	Lifestyle Conservative Fund	5/31	4,505,621	21,687	4,108,198	284,934	17,169,108	—
TIAA-CREF Lifestyle Growth Fund	Lifestyle Growth Fund	5/31	2,823,970	20,596	3,433,905	262,948	12,077,611	—
TIAA-CREF Lifestyle Income Fund	Lifestyle Income Fund	5/31	1,216,536	36,837	1,567,827	10,249	45,13,947	—
TIAA-CREF Lifestyle Moderate Fund	Lifestyle Moderate Fund	5/31	5,950,554	20,000	8,204,325	589,940	25,622,142	—
TIAA-CREF Lifecycle 2060 Fund	Lifecycle 2060 Fund	5/31	37,395,499	1,312,087	5,835,528	34,264	—	—
TIAA-CREF Lifecycle Index 2060 Fund	Lifecycle Index 2060 Fund	5/31	87,935,641	1,416,786	4,305,882	634,445	—	—
TIAA-CREF Short-Term Bond Fund	Short-Term Bond Fund	3/31	54,300,291	334,386	19,672,008	19,211,155	11,708,687	88,484,179

Shares of Each Class Outstanding as of the Record Date

Fund Name	Abbreviated Fund Name	Fiscal Year	Year End	Institutional Class	Premier Class	Retirement Class	Advisor Class	Retail Class	Class W
TIAA-CREF Bond Index Fund	Bond Index Fund	3/31	3/31	994,883,883	2,502,697	52,471,793	2,686,458	2,832,140	1,228,747,544
TIAA-CREF Short Duration Impact Bond Fund	Short Duration Impact Bond Fund	3/31	3/31	6,487,363	100,000	656,914	193,803	333,102	—
TIAA-CREF Lifecycle 2065 Fund	Lifecycle 2065 Fund	5/31	5/31	3,742,610	202,586	888,057	52,891	—	—
TIAA-CREF Lifecycle Index 2065 Fund	Lifecycle Index 2065 Fund	5/31	5/31	15,251,297	185,298	531,973	237,482	—	—
TIAA-CREF Equity Index Fund	Equity Index Fund	10/31	10/31	414,329,908	1,396,089	21,550,975	405,346	42,346,166	729,360,996
TIAA-CREF S&P-500 Index Fund	S&P-500 Index Fund	10/31	10/31	121,589,911	—	45,419,231	2,911,403	—	—
TIAA-CREF Small-Cap Blend Index Fund	Small-Cap Blend Index Fund	10/31	10/31	118,738,500	—	30,043,557	577,824	—	—
TIAA-CREF International Equity Index Fund	International Equity Index Fund	10/31	10/31	488,917,972	6,700,204	58,995,585	24,076,620	—	407,201,722
TIAA-CREF Growth & Income Fund	Growth & Income Fund	10/31	10/31	95,099,756	382,621	28,228,676	257,338	62,928,578	141,802,125
TIAA-CREF Social Choice Equity Fund	Social Choice Equity Fund	10/31	10/31	174,852,634	1,663,072	30,556,002	1,895,960	27,526,567	—
TIAA-CREF International Equity Fund	International Equity Fund	10/31	10/31	201,574,803	3,056,926	35,721,658	169,592	30,018,959	268,038,644
TIAA-CREF Large-Cap Value Fund	Large-Cap Value Fund	10/31	10/31	94,173,485	1,516,080	25,351,124	60,648	7,604,630	105,885,482
TIAA-CREF Mid-Cap Growth Fund	Mid-Cap Growth Fund	10/31	10/31	29,374,243	800,302	15,991,844	10,402	10,020,680	—
TIAA-CREF Mid-Cap Value Fund	Mid-Cap Value Fund	10/31	10/31	65,361,433	1,749,520	27,366,606	26,923	12,615,117	—
TIAA-CREF Quant Small-Cap Equity Fund	Quant Small-Cap Equity Fund	10/31	10/31	98,014,425	1,818,967	23,289,140	53,042	8,424,710	31,349,376
TIAA-CREF Large-Cap Growth Index Fund	Large-Cap Growth Index Fund	10/31	10/31	209,353,262	—	18,917,649	3,708,602	—	—
TIAA-CREF High-Yield Fund	High-Yield Fund	3/31	3/31	142,020,051	1,803,531	25,457,533	806,920	24,522,787	44,441,583
TIAA-CREF Core Impact Bond Fund	Core Impact Bond Fund	3/31	3/31	506,619,740	1,314,024	26,759,158	115,763,318	679,290,774	—
TIAA-CREF Lifecycle Retirement Income Fund	Lifecycle Retirement Income Fund	5/31	5/31	16,146,324	1,033,154	12,448,826	29,824	11,656,767	—
TIAA-CREF Large-Cap Value Index Fund	Large-Cap Value Index Fund	10/31	10/31	308,455,884	—	60,028,810	4,539,388	—	—
TIAA-CREF Large-Cap Growth Fund	Large-Cap Growth Fund	10/31	10/31	68,069,945	361,832	16,710,963	175,364	54,424,987	114,836,544
TIAA-CREF Emerging Markets Equity Fund	Emerging Markets Equity Fund	10/31	10/31	27,148,207	623,640	8,980,902	13,982	914,372	173,224,662
TIAA-CREF Emerging Markets Equity Index Fund	Emerging Markets Equity Index Fund	10/31	10/31	107,201,379	920,067	58,455,585	438,622	1,739,861	395,106,809
TIAA-CREF International Opportunities Fund	International Opportunities Fund	10/31	10/31	9,912,458	190,681	6,401,163	2,470,789	2,729,815	146,997,285
TIAA-CREF Emerging Markets Debt Fund	Emerging Markets Debt Fund	10/31	10/31	10,295,200	25,473	2,135,818	1,360,422	1,551,797	—
TIAA-CREF Social Choice International Equity Fund	Social Choice International Equity Fund	10/31	10/31	61,271,879	70,182	54,475,498	1,022,251	2,472,451	—
TIAA-CREF Social Choice Low Carbon Equity Fund	Social Choice Low Carbon Equity Fund	10/31	10/31	26,006,767	299,423	33,944,525	273,219	3,326,459	—
TIAA-CREF International Bond Fund	International Bond Fund	10/31	10/31	88,741	10,285	574,450	135,420	184,963	46,920,615
TIAA-CREF Quant Small/Mid-Cap Equity Fund	Quant Small/Mid-Cap Equity Fund	10/31	10/31	6,469,480	10,000	28,027,074	2,361,250	1,638,604	47,367,242
TIAA-CREF Quant International Small-Cap Equity Fund	Quant International Small-Cap Equity Fund	10/31	10/31	6,836,550	7,326	773,935	8,383	93,194	109,690,497
TIAA-CREF Real Estate Securities Fund	Real Estate Securities Fund	3/31	3/31	119,405,474	1,473,106	29,654,297	4,289,501	20,312,217	—
TIAA-CREF Core Bond Fund	Core Bond Fund	3/31	3/31	547,923,543	362,838	13,576,988	73,003,865	8,088,988	435,222,932
TIAA-CREF Inflation-Linked Bond Fund	Inflation-Linked Bond Fund	3/31	3/31	54,638,161	140,538	12,291,016	7,686,570	12,192,093	183,650,069
TIAA-CREF Core Plus Bond Fund	Core Plus Bond Fund	3/31	3/31	184,605,980	383,769	31,441,194	9,341,476	25,174,872	269,175,433
TIAA-CREF Short-Term Bond Index Fund	Short-Term Bond Index Fund	3/31	3/31	7,720,232	52,650	56,121,570	60,532	261,048	113,253,658
TIAA-CREF Managed Allocation Fund	Managed Allocation Fund	5/31	5/31	1,599,494	—	6,119,987	—	66,095,519	—

CURRENT BOARD MEMBERS

NOMINEES

Fund	Berkley	Boateng	Carrier	Eberly	Eckl	Forrester	Jackson	Jenkins	Kenny	Poterba	Starr	Lancellotta	Medero	Moschmer	Nelson	Thomton	Toft	Wolff	Young
Money Market Fund	\$0	\$0	\$0	\$0	Over \$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5-15 Year Laddered Tax-Exempt Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Green Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2030 Fund	\$0	\$0	\$0	\$0	\$0	Over \$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2035 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2040 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2045 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2050 Fund	\$0	\$0	\$0	\$0	\$0	Over \$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2055 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2055 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Aggressive Growth Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Conservative Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Growth Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Income Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Moderate Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2060 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2060 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bond Index Fund	\$0	\$0	\$0	\$0	\$0	\$50,001-\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short Duration Impact Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2065 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2065 Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

CURRENT BOARD MEMBERS

NOMINEES

Fund	Berkley	Boateng	Carrier	Eberly	Eckl	Forester	Jackson	Jenkins	Kenny	Poterba	Starr	Lancellotta	Medero Moschner	Nelson	Thomton	Troft	Wolff	Young
Equity Index Fund	\$0	\$0	\$0	\$0	\$10,001-\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
S&P 500 Index Fund ..	\$0	\$0	\$0	\$0	\$0	\$10,001-\$50,000	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small-Cap Blend Index Fund	\$0	\$0	\$0	\$0	Over	\$1-\$10,000	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Equity Index Fund	Over	\$0	\$0	\$0	\$100,000	\$10,001-\$50,000	\$0	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Growth & Income	\$0	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice Equity Fund	\$0	\$0	\$0	\$0	\$100,000	\$50,001-\$100,000	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Equity Fund	Over	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Fund	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mid-Cap Growth Fund	\$0	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mic-Cap Value Fund ..	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant Small-Cap Equity Fund	\$0	\$0	\$0	\$0	\$10,001-\$50,000	\$0	\$0	\$0	\$50,001-\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Growth Index Fund	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High-Yield Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Core Impact Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Retirement Income Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Index Fund	\$0	\$0	\$0	\$0	\$10,001-\$50,000	\$0	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Growth Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Equity Fund	\$0	\$10,001-\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Equity Index Fund	\$0	\$0	\$0	\$0	Over	\$1-\$10,000	\$0	\$0	Over	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Opportunities Fund	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Debt Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Fund	CURRENT BOARD MEMBERS											NOMINEES							
	Berkley	Boateng	Carrier	Eberly	Eckl	Forester	Jackson	Jenkins	Kenny	Poterba	Starr	Lancellotta	Medero	Moschmer	Nelson	Thomton	Toft	Wolff	Young
Social Choice International Equity Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice Low Carbon Equity Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant Small/Mid-Cap Equity Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant International Small-Cap Equity Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Real Estate Securities Fund	\$0	\$10,001-\$50,000	\$0	\$0	\$1-\$10,000	\$0	\$1-\$10,000	\$0	Over \$100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Core Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Inflation-Linked Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Core Plus Bond Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Bond Index Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Managed Allocation Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Aggregate Range of Securities in All Registered Investment Companies Overseen by Board/Member or Nominee in Family of Investment Companies ⁽¹⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$100,000 ⁽²⁾	Over \$10,001-\$50,000 ⁽²⁾	Over \$50,001-\$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000	Over \$100,000

(1) As used in this table, the Family of Investment Companies includes the Nuveen Funds and the TC Funds, as well as CREF and VA-1.

(2) Includes notional amounts allocated under both the long-term compensation plan and optional deferred compensation plan.

The table below presents information on Trustees and Nominees who own securities in companies (other than investment companies) that are advised by entities that are under common control with the Funds' investment adviser(s) as of December 31, 2022:

Name of Trustee/Nominee	Name of Owners/Relationships to Trustee/Nominee	Companies⁽²⁾	Title of Class	Value of Securities⁽³⁾	Percent of Class⁽⁴⁾
Thomas J. Kenny	Thomas Joseph Kenny 2021 Trust (Mr. Kenny is Initial Trustee and Settlor.)	Global Timber Resources LLC	None	\$61,063	0.01%
	KSHFO, LLC ⁽¹⁾	Global Timber Resources Investor Fund, LP	None	\$ 3,593	0.39%
	KSHFO, LLC ⁽¹⁾	Global Agriculture II Investor Fund LP	None	\$ 9,448	0.67%

(1) Mr. Kenny owns 6.6% of KSHFO, LLC.

(2) The investment advisers to the Funds, as well as the investment advisers to these Companies, are indirectly commonly controlled by Nuveen, LLC.

(3) These amounts reflect the current value of holdings as of December 31, 2022.

(4) These percentages reflect the overall amount committed to invest in the Companies, not current ownership percentages.

BOARD MEMBER COMPENSATION

Aggregate Compensation from the Funds

The following table sets forth, for each Board Member and nominee, the aggregate compensation paid by each Fund to each Board Member and nominee for its last fiscal year and the aggregate compensation paid by all funds in the Fund Complex to each Board Member and nominee for the calendar year ended December 31, 2022.⁽¹⁾

Fund	CURRENT BOARD MEMBERS										NOMINEES					FORMER TRUSTEES		
	Boateng Carrier ⁽²⁾	Eherly	Eckl	Forester	Jackson Jenkins ⁽²⁾	Kenny	Peterba	Starr ⁽³⁾	Lancellotta Medero Meschner	Nelson Thornton	Toft	Wolff	Young	Sloan ⁽⁴⁾	Starks ⁽⁵⁾			
Lifecycle 2010 Fund	\$388	\$439	\$411	\$414	\$489	\$388	N/A	\$560	\$414	\$300	N/A	N/A	N/A	N/A	\$95	N/A		
Lifecycle 2015 Fund	\$844	\$1,005	N/A	\$942	\$844	N/A	\$1,284	\$950	\$710	\$300	N/A	N/A	N/A	N/A	\$198	N/A		
Lifecycle 2020 Fund	\$24	\$28	N/A	\$26	\$24	N/A	\$36	\$26	\$20	\$20	N/A	N/A	N/A	N/A	\$5	N/A		
Lifecycle 2025 Fund	\$98	\$89	N/A	\$86	\$71	N/A	\$89	\$86	\$33	\$33	N/A	N/A	N/A	N/A	\$11	N/A		
Lifecycle 2030 Fund	\$89	\$82	N/A	\$77	\$88	N/A	\$104	\$77	\$54	\$54	N/A	N/A	N/A	N/A	\$20	N/A		
Lifecycle 2035 Fund	\$256	\$307	N/A	\$287	\$289	N/A	\$313	\$289	\$202	\$202	N/A	N/A	N/A	N/A	\$73	N/A		
Lifecycle 2040 Fund	\$426	\$510	N/A	\$478	\$460	N/A	\$521	\$460	\$337	\$337	N/A	N/A	N/A	N/A	\$120	N/A		
Lifecycle 2045 Fund	\$275	\$269	N/A	\$253	\$274	N/A	\$275	\$269	\$178	\$178	N/A	N/A	N/A	N/A	\$63	N/A		
Lifecycle 2050 Fund	\$167	\$200	N/A	\$188	\$204	N/A	\$167	\$204	\$133	\$133	N/A	N/A	N/A	N/A	\$46	N/A		
Lifecycle Index 2010 Fund	\$504	\$801	N/A	\$564	\$571	N/A	\$504	\$567	\$408	\$408	N/A	N/A	N/A	N/A	\$133	N/A		
Lifecycle Index Retirement Income Fund	\$477	\$570	N/A	\$534	\$537	N/A	\$478	\$537	\$382	\$382	N/A	N/A	N/A	N/A	\$130	N/A		
Lifecycle Index 2015 Fund	\$850	\$1,016	N/A	\$957	\$1,038	N/A	\$1,286	\$957	\$676	\$676	N/A	N/A	N/A	N/A	\$236	N/A		
Lifecycle Index 2020 Fund	\$2,395	\$2,863	N/A	\$2,683	\$2,985	N/A	\$3,652	\$2,688	\$1,909	\$1,909	N/A	N/A	N/A	N/A	\$660	N/A		
Lifecycle Index 2025 Fund	\$4,112	\$4,913	N/A	\$4,633	\$5,019	N/A	\$5,769	\$4,633	\$3,313	\$3,313	N/A	N/A	N/A	N/A	\$1,101	N/A		
Money Market Fund	\$1,236	\$1,431	N/A	\$1,383	\$1,463	N/A	\$1,236	\$1,463	\$714	\$714	N/A	N/A	N/A	N/A	\$839	N/A		
5-15 Year Laddered Tax-Exempt Bond Fund	\$202	\$233	N/A	\$228	\$242	N/A	\$300	\$228	\$106	\$106	N/A	N/A	N/A	N/A	\$110	N/A		
Green Bond Fund	\$59	\$108	N/A	\$102	\$93	N/A	\$139	\$105	\$80	\$80	N/A	N/A	N/A	N/A	\$40	N/A		
Lifecycle Index 2030 Fund	\$4,975	\$5,941	N/A	\$5,567	\$6,068	N/A	\$7,353	\$5,567	\$4,038	\$4,038	N/A	N/A	N/A	N/A	\$1,365	N/A		
Lifecycle Index 2035 Fund	\$4,853	\$5,793	N/A	\$5,429	\$5,919	N/A	\$7,396	\$5,429	\$3,950	\$3,950	N/A	N/A	N/A	N/A	\$1,262	N/A		
Lifecycle Index 2040 Fund	\$4,997	\$5,996	N/A	\$5,630	\$6,095	N/A	\$7,497	\$5,630	\$4,071	\$4,071	N/A	N/A	N/A	N/A	\$1,297	N/A		
Lifecycle Index 2045 Fund	\$3,851	\$4,307	N/A	\$4,338	\$4,686	N/A	\$5,688	\$4,338	\$3,150	\$3,150	N/A	N/A	N/A	N/A	\$887	N/A		
Lifecycle Index 2050 Fund	\$3,200	\$3,819	N/A	\$3,656	\$3,932	N/A	\$4,677	\$3,656	\$2,623	\$2,623	N/A	N/A	N/A	N/A	\$816	N/A		
Lifecycle Index 2055 Fund	\$1,739	\$2,075	N/A	\$1,960	\$2,120	N/A	\$2,739	\$1,960	\$1,440	\$1,440	N/A	N/A	N/A	N/A	\$430	N/A		
Lifecycle 2055 Fund	\$1,100	\$1,314	N/A	\$1,231	\$1,348	N/A	\$1,676	\$1,231	\$883	\$883	N/A	N/A	N/A	N/A	\$297	N/A		
Lifecycle Aggressive Growth Fund	\$3,149	\$3,786	N/A	\$3,530	\$3,848	N/A	\$4,803	\$3,548	\$2,492	\$2,492	N/A	N/A	N/A	N/A	\$885	N/A		
Lifestyle Conservative Fund	\$3,803	\$4,552	N/A	\$4,265	\$4,581	N/A	\$5,803	\$4,265	\$2,982	\$2,982	N/A	N/A	N/A	N/A	\$1,085	N/A		
Lifestyle Growth Fund	\$4,649	\$5,561	N/A	\$5,237	\$5,681	N/A	\$7,092	\$5,237	\$3,661	\$3,661	N/A	N/A	N/A	N/A	\$1,322	N/A		
Lifestyle Income Fund	\$3,435	\$4,112	N/A	\$3,870	\$4,200	N/A	\$5,242	\$3,870	\$2,680	\$2,680	N/A	N/A	N/A	N/A	\$1,000	N/A		
Lifestyle Moderate Fund	\$3,913	\$4,682	N/A	\$4,408	\$4,783	N/A	\$5,970	\$4,408	\$3,069	\$3,069	N/A	N/A	N/A	N/A	\$1,125	N/A		
Lifecycle 2060 Fund	\$674	\$805	N/A	\$759	\$824	N/A	\$1,027	\$759	\$565	\$565	N/A	N/A	N/A	N/A	\$188	N/A		
Lifecycle 2065 Fund	\$755	\$904	N/A	\$847	\$924	N/A	\$1,153	\$851	\$587	\$587	N/A	N/A	N/A	N/A	\$222	N/A		
Short-Term Bond Fund	\$1,521	\$1,758	N/A	\$1,670	\$1,821	N/A	\$2,263	\$1,713	\$810	\$810	N/A	N/A	N/A	N/A	\$814	N/A		
Bond Index Fund	\$16,005	\$19,494	N/A	\$18,031	\$19,188	N/A	\$23,804	\$18,031	\$8,581	\$8,581	N/A	N/A	N/A	N/A	\$8,520	N/A		
Short Duration Impact Bond Fund	\$42	\$49	N/A	\$47	\$50	N/A	\$82	\$47	\$27	\$27	N/A	N/A	N/A	N/A	\$18	N/A		

CURRENT BOARD MEMBERS

FORMER TRUSTEES

NOMINEES

Fund	Bankley	Boateng	Carrier ⁽²⁾	Eberly	Eckl	Forrester	Jackson	Jenkins ⁽²⁾	Kenny	Peterba	Starr ⁽³⁾	Lancellotta	Medero	Meschner	Nelson	Thornton	Toth	Wolff	Young	Sloan ⁽⁴⁾	Starks ⁽⁵⁾
Lifecycle 2065 Fund	\$1,071	\$1,282	N/A	\$1,202	\$1,206	\$1,310	\$1,071	N/A	\$1,634	\$1,206	\$833	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lifecycle Index 2065 Fund	\$2,356	\$2,821	N/A	\$2,644	\$2,655	\$2,756	\$2,356	N/A	\$2,898	\$2,655	\$1,836	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Equity Index Fund	\$26,327	\$29,193	N/A	\$27,207	\$28,533	\$29,772	\$25,327	N/A	\$36,654	\$26,533	\$6,652	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$888
S&P 500 Index Fund	\$6,607	\$6,712	N/A	\$6,004	\$6,572	\$6,807	\$5,672	N/A	\$8,091	\$6,316	\$1,397	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$20,291
Small-Cap Blend Index Fund	\$2,839	\$3,142	N/A	\$3,038	\$3,189	\$3,226	\$2,939	N/A	\$4,094	\$3,199	\$683	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4,570
International Equity Index Fund	\$13,210	\$14,705	N/A	\$14,193	\$15,531	\$13,210	\$13,210	N/A	\$19,121	\$14,883	\$3,381	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$2,338
Growth & Income Fund	\$4,432	\$4,906	N/A	\$4,744	\$4,993	\$5,183	\$4,432	N/A	\$6,393	\$4,993	\$1,054	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$10,667
Social Choice Equity Fund	\$5,091	\$5,649	N/A	\$5,458	\$5,738	\$5,974	\$5,091	N/A	\$7,355	\$5,738	\$1,251	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,660
International Equity Fund	\$4,407	\$4,895	N/A	\$4,728	\$4,965	\$5,174	\$4,407	N/A	\$6,370	\$4,965	\$1,099	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,867
Large-Cap Value Fund	\$3,836	\$4,272	N/A	\$4,123	\$4,322	\$4,511	\$3,836	N/A	\$5,554	\$4,322	\$779	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4,164
Mid-Cap Growth Fund	\$1,042	\$1,145	N/A	\$1,174	\$1,216	\$1,242	\$1,042	N/A	\$1,496	\$1,174	\$230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$3,988
Mid-Cap Value Fund	\$1,472	\$1,635	N/A	\$1,579	\$1,659	\$1,728	\$1,472	N/A	\$2,128	\$1,659	\$368	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,199
Quant Small-Cap Equity Fund	\$2,085	\$2,235	N/A	\$2,216	\$2,326	\$2,425	\$2,085	N/A	\$2,986	\$2,326	\$536	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,660
Large-Cap Growth Index Fund	\$7,363	\$8,178	N/A	\$7,897	\$8,295	\$8,643	\$7,363	N/A	\$10,641	\$8,295	\$1,895	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$5,940
High-Yield Fund	\$2,141	\$2,344	N/A	\$2,344	\$2,460	\$2,441	\$2,141	N/A	\$3,175	\$2,441	\$1,107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,182
One-Inst Bond Fund	\$5,074	\$5,797	N/A	\$5,513	\$6,020	\$5,024	N/A	N/A	\$7,465	\$5,660	\$2,602	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$2,762
Lifecycle Retirement Income Fund	\$390	\$463	N/A	\$438	\$440	\$478	\$390	N/A	\$595	\$440	\$305	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$113
Large-Cap Value Index Fund	\$6,390	\$7,110	N/A	\$6,864	\$7,199	\$7,511	\$6,390	N/A	\$9,247	\$7,199	\$1,621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$5,174
Large-Cap Growth Fund	\$4,282	\$4,725	N/A	\$4,574	\$4,824	\$5,007	\$4,282	N/A	\$6,164	\$4,824	\$959	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$3,962
Emerging Markets Equity Fund	\$1,102	\$1,223	N/A	\$1,181	\$1,242	\$1,239	\$1,102	N/A	\$1,592	\$1,242	\$275	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$884
Emerging Markets Equity Index Fund	\$3,781	\$4,271	N/A	\$4,068	\$4,280	\$4,451	\$3,781	N/A	\$5,480	\$4,280	\$997	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$3,024
International Opportunities Fund	\$1,616	\$1,791	N/A	\$1,731	\$1,820	\$1,956	\$1,616	N/A	\$2,333	\$1,820	\$390	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,329
Emerging Markets Debt Fund	\$416	\$465	N/A	\$448	\$468	\$490	\$416	N/A	\$603	\$468	\$114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$328
Social Choice International Equity Fund	\$809	\$908	N/A	\$874	\$912	\$956	\$809	N/A	\$1,177	\$912	\$230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$630
Social Choice Low Carbon Equity Fund	\$803	\$886	N/A	\$864	\$904	\$945	\$803	N/A	\$1,163	\$904	\$217	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$637
International Bond Fund	\$348	\$386	N/A	\$373	\$392	\$408	\$348	N/A	\$503	\$392	\$85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$285
Quant Small/Mid-Cap Equity Fund	\$816	\$911	N/A	\$897	\$919	\$980	\$816	N/A	\$1,182	\$919	\$244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$625
Quant International Small-Cap Equity Fund	\$1,019	\$1,130	N/A	\$1,092	\$1,148	\$1,199	\$1,019	N/A	\$1,472	\$1,148	\$247	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$937
Real Estate Securities Fund	\$733	\$3,212	N/A	\$3,058	\$3,147	\$3,293	\$733	N/A	\$4,141	\$3,147	\$387	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,595
One Bond Fund	\$7,749	\$8,949	N/A	\$8,507	\$9,280	\$9,749	\$7,749	N/A	\$11,520	\$9,280	\$4,049	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4,226
Inflation-Linked Bond Fund	\$2,328	\$2,681	N/A	\$2,551	\$2,622	\$2,786	\$2,328	N/A	\$3,455	\$2,622	\$1,201	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,285
One Plus Bond Fund	\$3,763	\$4,341	N/A	\$4,129	\$4,509	\$4,739	\$3,763	N/A	\$5,590	\$4,509	\$1,919	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$2,068
Short-Term Bond Index Fund	\$1,094	\$1,267	N/A	\$1,203	\$1,233	\$1,313	\$1,094	N/A	\$1,646	\$1,233	\$609	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$661
Managed Allocation Fund	\$2,391	\$2,858	N/A	\$2,678	\$2,893	\$2,920	\$2,391	N/A	\$3,646	\$2,893	\$1,903	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$561
Total Compensation from funds in the Fund Complex⁽⁶⁾ Paid to Board Members/ Nominees for calendar year ended December 31, 2022	\$430,007⁽⁶⁾	\$495,000⁽⁶⁾	\$425,000⁽⁶⁾	\$430,007⁽⁶⁾	\$450,000⁽⁶⁾	\$472,500⁽⁶⁾	\$430,007⁽⁶⁾	—	\$683,750⁽⁶⁾	\$480,000⁽⁶⁾	\$98,750⁽⁶⁾	\$80,250	\$429,000	\$371,848	\$402,906	\$56,950	\$396,076	\$443,950	\$416,325	\$307,491⁽⁶⁾	\$5,487⁽⁶⁾

- (1) Includes deferred fees. Pursuant to a deferred compensation agreement with certain of the Funds, deferred amounts are treated as though an equivalent dollar amount has been invested in shares of one or more Participating Funds. Total deferred fees for the Funds (including the return from the assumed investment in the Participating Funds) payable are set forth in the following table.
- (2) Effective January 1, 2023 Mr. Carrier and Dean Jenkins were elected to serve as Trustees; Mr. Starr and Dean Jenkins received no compensation for the fiscal year ended December 31, 2022.
- (3) Effective October 1, 2022, Mr. Starr was elected to serve as a Trustee.

- (4) Effective September 13, 2022, Mr. Sloan no longer serves as a Trustee of the Funds.
- (5) Effective January 6, 2022, Laura T. Starks no longer serves as a Trustee of the Funds.
- (6) As used in this table, the Family of Investment Companies consists of the Nuveen Funds, the TC Funds, CREF and VA-1.
- (7) Compensation figures include cash and amounts deferred under both the long-term compensation plan and optional deferred compensation plan described below, as well as amounts related to special, ad hoc working groups that are temporary in nature and not expected to be long-term, ongoing compensation.
- (8) A portion of this compensation was not actually paid based on the prior election of the Trustee to defer receipt of payment in accordance with the provisions of a deferred compensation plan for non-officer Trustees described below. For the fiscal year ended October 31, 2022, Mr. Berkley elected to defer \$319,999, Prof. Eberly elected to defer \$319,999, Mr. Forrester elected to defer \$340,000, Prof. Jackson elected to defer \$36,250, Prof. Poterba elected to defer \$369,999 and Prof. Starks elected to defer \$3,959 of total compensation from the TC Funds, CREF and VA-1.

Deferred Fees for the Funds

Fund	Berkley	Bontang	Carrier	Eberly	Eckl	Forrester	Jackson	Jenkins	Kenny	Poterba	Starr	Lancelotta	Madero	Moschmer	Nelson	Thornton	Toth	Wolff	Young	Sloan	Starks	
Lifecycle 2010 Fund	\$368	\$102	N/A	\$412	\$102	\$449	\$129	N/A	\$102	\$414	\$79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$19	N/A
Lifecycle 2015 Fund	\$844	\$235	N/A	\$942	\$235	\$1,027	\$296	N/A	\$235	\$950	\$185	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$40	N/A
Lifecycle 2020 Fund	\$24	\$7	N/A	\$26	\$7	\$29	\$8	N/A	\$7	\$26	\$5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1	N/A
Lifecycle 2025 Fund	\$58	\$16	N/A	\$65	\$16	\$71	\$21	N/A	\$16	\$66	\$14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$2	N/A
Lifecycle 2030 Fund	\$88	\$19	N/A	\$77	\$19	\$84	\$24	N/A	\$19	\$77	\$14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4	N/A
Lifecycle 2035 Fund	\$256	\$71	N/A	\$287	\$71	\$313	\$90	N/A	\$71	\$289	\$53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$15	N/A
Lifecycle 2040 Fund	\$426	\$119	N/A	\$478	\$119	\$521	\$149	N/A	\$119	\$480	\$88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$25	N/A
Lifecycle 2045 Fund	\$225	\$63	N/A	\$252	\$63	\$274	\$79	N/A	\$63	\$253	\$47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$13	N/A
Lifecycle 2050 Fund	\$167	\$47	N/A	\$187	\$47	\$204	\$59	N/A	\$47	\$188	\$35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$9	N/A
Lifecycle Index 2010 Fund	\$504	\$140	N/A	\$564	\$140	\$614	\$177	N/A	\$140	\$567	\$107	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$27	N/A
Lifecycle Index Retirement Income Fund	\$477	\$133	N/A	\$534	\$133	\$582	\$167	N/A	\$133	\$537	\$100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$27	N/A
Lifecycle Index 2015 Fund	\$950	\$237	N/A	\$952	\$237	\$1,038	\$298	N/A	\$237	\$957	\$177	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$48	N/A
Lifecycle Index 2020 Fund	\$2,395	\$667	N/A	\$2,683	\$667	\$2,925	\$940	N/A	\$667	\$2,688	\$500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$135	N/A
Lifecycle Index 2025 Fund	\$4,112	\$1,145	N/A	\$4,603	\$1,145	\$5,019	\$1,442	N/A	\$1,145	\$4,633	\$867	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$225	N/A
Money Market Fund	\$1,236	\$344	N/A	\$1,358	\$344	\$1,483	\$433	N/A	\$344	\$1,393	\$189	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$140	N/A
5-15 Year Laddered Tax-Exempt Bond Fund	\$202	\$56	N/A	\$222	\$56	\$242	\$71	N/A	\$56	\$228	\$28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$25	N/A
Green Bond Fund	\$93	\$26	N/A	\$102	\$26	\$112	\$33	N/A	\$26	\$105	\$16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$9	N/A
Lifecycle Index 2030 Fund	\$4,975	\$1,395	N/A	\$5,567	\$1,395	\$6,069	\$1,744	N/A	\$1,395	\$5,605	\$1,057	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$266	N/A
Lifecycle Index 2035 Fund	\$4,863	\$1,351	N/A	\$5,429	\$1,351	\$5,919	\$1,701	N/A	\$1,351	\$5,467	\$1,033	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$258	N/A
Lifecycle Index 2040 Fund	\$4,897	\$1,392	N/A	\$5,591	\$1,392	\$6,095	\$1,752	N/A	\$1,392	\$5,630	\$1,065	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$265	N/A
Lifecycle Index 2045 Fund	\$3,851	\$1,072	N/A	\$4,307	\$1,072	\$4,696	\$1,350	N/A	\$1,072	\$4,338	\$824	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$201	N/A
Lifecycle Index 2050 Fund	\$3,200	\$891	N/A	\$3,579	\$891	\$3,902	\$1,122	N/A	\$891	\$3,605	\$686	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$166	N/A
Lifecycle Index 2055 Fund	\$1,739	\$484	N/A	\$1,943	\$484	\$2,120	\$610	N/A	\$484	\$1,960	\$376	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$88	N/A
Lifecycle 2055 Fund	\$1,100	\$306	N/A	\$1,231	\$306	\$1,342	\$386	N/A	\$306	\$1,239	\$231	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$61	N/A
Lifecycle Aggressive Growth Fund	\$3,149	\$877	N/A	\$3,530	\$877	\$3,848	\$1,104	N/A	\$877	\$3,548	\$653	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$181	N/A
Lifestyle Conservative Fund	\$3,803	\$1,059	N/A	\$4,295	\$1,059	\$4,650	\$1,334	N/A	\$1,059	\$4,295	\$782	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$224	N/A

Fund	Berkley	Boateng	Carrier	Eberly	Eckl	Forrester	Jackson	Jenkins	Kenny	Potebha	Starr	Lancellotta	Medero	Moschmer	Nelson	Thornton	Toth	Wolff	Young	Shoan	Starks	
Lifestyle Growth Fund	\$4,649	\$1,295	N/A	\$5,212	\$1,295	\$5,681	\$1,630	N/A	\$1,295	\$5,237	\$960	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$271	N/A
Lifestyle Income Fund	\$3,435	\$957	N/A	\$3,853	\$957	\$4,200	\$1,204	N/A	\$957	\$3,870	\$703	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$205	N/A
Lifestyle Moderate Fund	\$3,913	\$1,080	N/A	\$4,388	\$1,080	\$4,783	\$1,372	N/A	\$1,080	\$4,408	\$805	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$231	N/A
Lifecycle 2060 Fund	\$674	\$1,886	N/A	\$755	\$1,886	\$823	\$236	N/A	\$1,886	\$759	\$140	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$38	N/A
Lifecycle Index 2060 Fund	\$755	\$210	N/A	\$847	\$210	\$924	\$265	N/A	\$210	\$851	\$154	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$46	N/A
Short-Term Bond Fund	\$1,521	\$423	N/A	\$1,670	\$423	\$1,824	\$533	N/A	\$423	\$1,713	\$215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$188	N/A
Bond Index Fund	\$16,005	\$4,457	N/A	\$17,572	\$4,457	\$19,188	\$5,612	N/A	\$4,457	\$18,031	\$2,280	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$195	N/A
Short Duration Impact Bond Fund	\$42	\$12	N/A	\$46	\$12	\$50	\$15	N/A	\$12	\$47	\$7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4	N/A
Lifecycle 2065 Fund	\$1,071	\$298	N/A	\$1,202	\$298	\$1,310	\$375	N/A	\$298	\$1,206	\$219	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$64	N/A
Lifecycle Index 2065 Fund	\$2,356	\$656	N/A	\$2,644	\$656	\$2,828	\$828	N/A	\$656	\$2,655	\$482	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$141	N/A
Equity Index Fund	\$25,327	\$7,053	N/A	\$27,207	\$7,053	\$29,772	\$8,881	N/A	\$7,053	\$28,533	\$1,852	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$4,866	\$336
S&P 500 Index Fund	\$5,607	\$1,561	N/A	\$6,004	\$1,561	\$6,572	\$1,986	N/A	\$1,561	\$6,316	\$389	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,101	\$83
Small-Cap Blend Index Fund	\$2,839	\$791	N/A	\$3,038	\$791	\$3,326	\$996	N/A	\$791	\$3,199	\$194	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$564	\$42
International Equity Index Fund	\$13,210	\$3,679	N/A	\$14,193	\$3,679	\$15,531	\$4,632	N/A	\$3,679	\$14,883	\$941	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$2,560	\$181
Growth & Income Fund	\$4,432	\$1,234	N/A	\$4,744	\$1,234	\$5,193	\$1,554	N/A	\$1,234	\$4,983	\$394	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$984	\$65
Social Choice Equity Fund	\$5,091	\$1,418	N/A	\$5,498	\$1,418	\$5,974	\$1,785	N/A	\$1,418	\$5,736	\$348	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,003	\$73
International Equity Fund	\$4,407	\$1,227	N/A	\$4,728	\$1,227	\$5,174	\$1,545	N/A	\$1,227	\$4,965	\$306	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$863	\$63
Large-Cap Value Fund	\$3,836	\$1,068	N/A	\$4,123	\$1,068	\$4,511	\$1,345	N/A	\$1,068	\$4,322	\$273	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$744	\$51
Mid-Cap Growth Fund	\$1,042	\$290	N/A	\$1,110	\$290	\$1,216	\$365	N/A	\$290	\$1,174	\$84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$214	\$17
Mid-Cap Value Fund	1,472	410	N/A	1,579	410	1,728	516	N/A	410	1,659	102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$288	\$21
Quant Small-Cap Equity Fund	\$2,065	\$575	N/A	\$2,216	\$575	\$2,425	\$724	N/A	\$575	\$2,326	\$149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$399	\$28
Large-Cap Growth Index Fund	\$7,363	\$2,050	N/A	\$7,897	\$2,050	\$8,643	\$2,582	N/A	\$2,050	\$8,295	\$528	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,428	\$105
High-Yield Fund	\$2,141	\$596	N/A	\$2,344	\$596	\$2,540	\$751	N/A	\$596	\$2,412	\$294	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$275	N/A
Core Impact Bond Fund	\$5,024	\$1,399	N/A	\$5,513	\$1,399	\$6,020	\$1,761	N/A	\$1,399	\$5,660	\$693	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$639	N/A
Lifecycle Retirement Income Fund	\$391	\$109	N/A	\$438	\$109	\$478	\$137	N/A	\$109	\$440	\$80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$23	N/A
Large-Cap Value Index Fund	\$6,390	\$1,779	N/A	\$6,884	\$1,779	\$7,511	\$2,241	N/A	\$1,779	\$7,199	\$451	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$1,242	\$85
Large-Cap Growth Fund	\$4,282	\$1,192	N/A	\$4,574	\$1,192	\$5,007	\$1,501	N/A	\$1,192	\$4,824	\$277	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$862	\$66
Emerging Markets Equity Fund	\$1,102	\$307	N/A	\$1,181	\$307	\$1,293	\$386	N/A	\$307	\$1,242	\$78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$215	\$16
Emerging Markets Equity Index Fund	\$3,781	\$1,053	N/A	\$4,068	\$1,053	\$4,451	\$1,326	N/A	\$1,053	\$4,260	\$179	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$724	\$50
International Opportunities Fund	\$1,616	\$450	N/A	\$1,731	\$450	\$1,895	\$567	N/A	\$450	\$1,820	\$108	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$320	\$23
Emerging Markets Debt Fund	\$416	\$116	N/A	\$448	\$116	\$490	\$146	N/A	\$116	\$468	\$32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$78	\$5
Social Choice International Equity Fund	\$809	\$225	N/A	\$874	\$225	\$956	\$284	N/A	\$225	\$912	\$84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$150	\$9
Social Choice Low Carbon Equity Fund	\$803	\$224	N/A	\$864	\$224	\$948	\$281	N/A	\$224	\$904	\$60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$152	\$10
International Bond Fund	\$348	\$97	N/A	\$373	\$97	\$408	\$122	N/A	\$97	\$392	\$24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$69	\$5
Quant Small/Mid-Cap Equity Fund	\$816	\$227	N/A	\$877	\$227	\$960	\$286	N/A	\$227	\$919	\$88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$149	\$10
Quant International Small-Cap Equity Fund	\$1,019	\$284	N/A	\$1,092	\$284	\$1,196	\$357	N/A	\$284	\$1,148	\$69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$202	\$15
Real Estate Securities Fund	\$7,749	\$2,793	N/A	\$8,058	\$2,793	\$8,740	\$979	N/A	\$2,793	\$3,147	\$369	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$371	N/A
Core Bond Fund	\$7,749	\$2,158	N/A	\$8,507	\$2,158	\$9,289	\$2,717	N/A	\$2,158	\$8,730	\$1,077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$976	N/A
Inflation-Linked Bond Fund	\$2,328	\$648	N/A	\$2,551	\$648	\$2,786	\$816	N/A	\$648	\$2,622	\$319	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$298	N/A
Core Plus Bond Fund	\$3,763	\$1,048	N/A	\$4,129	\$1,048	\$4,509	\$1,319	N/A	\$1,048	\$4,239	\$511	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$486	N/A
Short-Term Bond Index Fund	\$1,094	\$305	N/A	\$1,203	\$305	\$1,313	\$384	N/A	\$305	\$1,233	\$162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$129	N/A
Managed Allocation Fund	\$2,391	\$666	N/A	\$2,678	\$666	\$2,920	\$838	N/A	\$666	\$2,693	\$499	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$135	N/A

With respect to the nominees who are Nuveen Board Members, aggregate compensation figures paid by the Nuveen Funds include cash and amounts deferred under an optional deferred compensation plan, as well as amounts related to special, ad hoc working groups that are temporary in nature and not expected to be long-term, ongoing compensation. Currently, under this deferred compensation plan, Nuveen Board Members have the option to defer payments of their basic retainer, additional retainers and/or meeting fees and allocate those amounts to certain participating Nuveen Funds selected by each board member. Benefits under that plan are also paid in a lump sum or in annual installments over a period of five years, as requested by the board member.

**TC FUND BOARD AND COMMITTEE MEETINGS
HELD DURING CALENDAR YEAR ENDED DECEMBER 31, 2022**

Regular Board Meetings	Special Board Meetings	Audit and Compliance Committee	Investment Committee	Executive Committee	Nominating and Governance Committee	Operations Committee
11	1	4	6	0	7	5

Information is presented on a calendar year basis, as the Funds have different fiscal year ends.

Fiscal Year End	Audit Fees ⁽¹⁾						Audit Related Fees ⁽²⁾						Tax Fees ⁽³⁾						All Other Fees ⁽⁴⁾										
	Funds			Adviser and Related Entities			Funds			Adviser and Related Entities			Funds			Adviser and Related Entities			Funds			Adviser and Related Entities							
	Fiscal Year Ended	Year Ended	2022	Fiscal Year Ended	Year Ended	2023	Fiscal Year Ended	Year Ended	2022	Fiscal Year Ended	Year Ended	2023	Fiscal Year Ended	Year Ended	2022	Fiscal Year Ended	Year Ended	2022	Fiscal Year Ended	Year Ended	2023	Fiscal Year Ended	Year Ended	2022	Fiscal Year Ended	Year Ended	2023		
	5/31		\$15,992			\$14,541			\$0			\$0			\$0			\$0			\$0			\$0			\$0		
	5/31		\$14,504			\$14,541			\$0			\$0			\$0			\$0			\$0			\$0			\$0		
	3/31		\$46,104			\$50,028			\$0			\$0			\$0			\$0			\$0			\$0			\$44		
	3/31		\$78,308			\$81,441			\$0			\$0			\$0			\$0			\$0			\$0			\$463		
	3/31		\$45,531			\$47,352			\$0			\$0			\$0			\$0			\$0			\$0			\$1		
	5/31		\$14,482			\$14,541			\$0			\$0			\$0			\$0			\$0			\$0			\$0		
	5/31		\$58,137			\$60,462			\$0			\$0			\$0			\$0			\$0			\$0			\$69		
	3/31		\$45,269			\$47,580			\$0			\$0			\$0			\$0			\$0			\$0			\$152		
	5/31		\$15,995			\$14,541			\$0			\$0			\$0			\$0			\$0			\$0			\$0		
	3/31		\$39,557			\$41,139			\$0			\$0			\$0			\$0			\$0			\$0			\$2		
	3/31		\$54,493			\$57,172			\$0			\$0			\$0			\$0			\$0			\$0			\$231		
	3/31		\$38,151			\$40,717			\$0			\$0			\$0			\$0			\$0			\$0			\$73		
	3/31		\$56,779			\$59,550			\$0			\$0			\$0			\$0			\$0			\$0			\$116		
	3/31		\$48,036			\$49,957			\$0			\$0			\$0			\$0			\$0			\$0			\$30		
	5/31		\$14,910			\$13,403			\$0			\$0			\$0			\$0			\$0			\$0			\$0		

(1) "Audit Fees" are the aggregate fees billed for professional services for the audit of the Fund's annual financial statements and services provided in connection with statutory and regulatory filings or engagements.

(2) "Audit Related Fees" are the aggregate fees billed for assurance and related services reasonably related to the performance of the audit or review of financial statements that are not reported under "Audit Fees".

(3) "Tax Fees" are the aggregate fees billed for professional services for tax advice, tax compliance, and tax planning. These fees include: all global withholding tax services; excise and state tax reviews; capital gain, tax equalization and taxable basis calculation performed by the principal accountant.

(4) "All Other Fees" are the aggregate fees billed for products and services other than "Audit Fees", "Audit-Related Fees" and "Tax Fees".

	Audit Fees ⁽¹⁾						Audit Related Fees ⁽²⁾						Tax Fees ⁽³⁾						All Other Fees ⁽⁴⁾								
	Funds			Funds			Funds			Funds			Funds			Funds			Funds			Funds			Funds		
	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	Fiscal Year Ended	
Equity Index Fund	10/31	\$49,273	\$50,873	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
S&P 500 Index Fund	10/31	\$31,670	\$32,566	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small-Cap Blend Index Fund	10/31	\$46,893	\$47,877	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Equity Index Fund	10/31	\$54,930	\$56,756	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Growth & Income Fund	10/31	\$44,840	\$43,662	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice Equity Fund	10/31	\$47,744	\$48,763	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Equity Fund	10/31	\$38,366	\$37,449	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Fund	10/31	\$44,657	\$43,992	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mid-Cap Growth Fund	10/31	\$44,632	\$43,446	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mid-Cap Value Fund	10/31	\$45,690	\$44,546	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant Small-Cap Equity Fund	10/31	\$37,797	\$36,338	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Growth Index Fund	10/31	\$29,937	\$28,883	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Index Fund	10/31	\$28,655	\$28,910	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Growth Fund	10/31	\$44,096	\$42,889	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Equity Fund	10/31	\$54,228	\$53,425	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Equity Index Fund	10/31	\$57,355	\$58,757	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Opportunities Fund	10/31	\$47,333	\$46,775	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emerging Markets Debt Fund	10/31	\$60,452	\$62,870	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice International Equity Fund	10/31	\$47,244	\$48,763	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice Low Carbon Equity Fund	10/31	\$36,366	\$37,449	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
International Bond Fund	10/31	\$63,268	\$63,719	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant Small/Mid-Cap Equity Fund	10/31	\$43,157	\$41,912	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant International Small-Cap Equity Fund	10/31	\$49,050	\$50,121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

- (1) "Audit Fees" are the aggregate fees billed for professional services for the audit of the Fund's annual financial statements and services provided in connection with statutory and regulatory filings or engagements.
- (2) "Audit Related Fees" are the aggregate fees billed for assurance and related services reasonably related to the performance of the audit or review of financial statements that are not reported under "Audit Fees".
- (3) "Tax Fees" are the aggregate fees billed for professional services for tax advice, tax compliance, and tax planning. These fees include: all global withholding tax services; excise and state tax reviews; capital gain, tax equalization and taxable basis calculation performed by the principal accountant.
- (4) "All Other Fees" are the aggregate fees billed for products and services other than "Audit Fees", "Audit-Related Fees" and "Tax Fees".

	Fiscal Year End	Total Non-Audit Fees Billed to Fund		Total Non-Audit Fees Billed to Adviser and Adviser Entities (Engagements Related Directly to the Operations and Financial Reporting of Fund)		Total Non-Audit Fees Billed to Adviser and Adviser Entities (All Other Engagements)		Total	
		Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023
		\$	\$	\$	\$	\$	\$	\$	\$
Lifecycle 2010 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2015 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2020 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2025 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2030 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2035 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2040 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2045 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2050 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2010 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index Retirement Income Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2015 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2020 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2025 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Money Market Fund	3/31	\$0	\$32	\$0	\$0	\$0	\$0	\$0	\$32
5-15 Year Laddered Tax-Exempt Bond Fund	3/31	\$0	\$6	\$0	\$0	\$0	\$0	\$0	\$6
Green Bond Fund	3/31	\$0	\$42	\$0	\$0	\$0	\$0	\$0	\$42
Lifecycle Index 2030 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2035 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2040 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2045 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2050 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2055 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Aggressive Growth Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Conservative Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Growth Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Income Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifestyle Moderate Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2060 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle Index 2060 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Bond Fund	3/31	\$0	\$44	\$0	\$0	\$0	\$0	\$0	\$44

	Fiscal Year-End	Total Non-Audit Fees Billed to Fund		Total Non-Audit Fees Billed to Adviser and Adviser Entities (Engagements Related Directly to the Operations and Financial Reporting of Fund)		Total Non-Audit Fees Billed to Adviser and Adviser Entities (All Other Engagements)		Total	
		Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023	Fiscal Year Ended 2022	Fiscal Year Ended 2023
Bond Index Fund	3/31	\$0	\$463	\$0	\$0	\$0	\$0	\$0	\$463
Short Duration Impact Bond Fund	3/31	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$1
Lifecycle 2065 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lifecycle 2065 Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
High-Yield Fund	3/31	\$0	\$79	\$0	\$0	\$0	\$0	\$0	\$79
Core Impact Bond Fund	3/31	\$0	\$192	\$0	\$0	\$0	\$0	\$0	\$192
Lifecycle Retirement Income Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Real Estate Securities Fund	3/31	\$0	\$92	\$0	\$0	\$0	\$0	\$0	\$92
Core Bond Fund	3/31	\$0	\$231	\$0	\$0	\$0	\$0	\$0	\$231
Inflation-Linked Bond Fund	3/31	\$0	\$73	\$0	\$0	\$0	\$0	\$0	\$73
Core Plus Bond Fund	3/31	\$0	\$126	\$0	\$0	\$0	\$0	\$0	\$126
Short-Term Bond Index Fund	3/31	\$0	\$30	\$0	\$0	\$0	\$0	\$0	\$30
Managed Allocation Fund	5/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

	Fiscal Year-End	Total Non-Audit Fees Billed to Fund		Total Non-Audit Fees Billed to Adviser and Adviser Entities (Engagements Related Directly to the Operations and Financial Reporting of Fund)		Total Non-Audit Fees Billed to Adviser and Adviser Entities (All Other Engagements)		Total	
		Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022
Equity Index Fund	10/31	\$0	\$20	\$0	\$0	\$0	\$0	\$0	\$20
S&P 500 Index Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Small-Cap Blend Index Fund	10/31	\$0	\$10	\$0	\$0	\$0	\$0	\$0	\$10
International Equity Index Fund	10/31	\$72,653	\$93,780	\$0	\$0	\$0	\$0	\$72,653	\$93,780
Growth & Income Fund	10/31	\$7,811	\$1,953	\$0	\$0	\$0	\$0	\$7,811	\$1,953
Social Choice Equity Fund	10/31	\$6,144	\$34,459	\$0	\$0	\$0	\$0	\$6,144	\$34,459
International Equity Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Fund	10/31	\$9,699	\$74	\$0	\$0	\$0	\$0	\$9,699	\$74
Mid-Cap Growth Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

	Fiscal Year End	Total Non-Audit Fees Billed to Fund		Total Non-Audit Fees Billed to Adviser and Adviser Entities (Engagements Related Directly to the Operations and Financial Reporting of Fund)		Total Non-Audit Fees Billed to Adviser and Adviser Entities (All Other Engagements)		Total	
		Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022	Fiscal Year Ended 2021	Fiscal Year Ended 2022
Mid-Cap Value Fund	10/31	\$1,406	\$0	\$0	\$0	\$0	\$0	\$1,406	\$0
Quant Small-Cap Equity Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Growth Index Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Large-Cap Value Index Fund	10/31	\$0	\$10	\$0	\$0	\$0	\$0	\$0	\$10
Large-Cap Growth Fund	10/31	\$8,001	\$2,565	\$0	\$0	\$0	\$0	\$8,001	\$2,565
Emerging Markets Equity Fund	10/31	\$1,735	\$3,165	\$0	\$0	\$0	\$0	\$1,735	\$3,165
Emerging Markets Equity Index Fund	10/31	\$42,841	\$1,809	\$0	\$0	\$0	\$0	\$42,841	\$1,809
International Opportunities Fund	10/31	\$18,455	\$5,552	\$13,500	\$0	\$0	\$0	\$31,955	\$5,552
Emerging Markets Debt Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Social Choice International Equity Fund	10/31	\$1,010	\$2,426	\$0	\$0	\$0	\$0	\$1,010	\$2,426
Social Choice Low Carbon Equity Fund	10/31	\$0	\$10	\$0	\$0	\$0	\$0	\$0	\$10
International Bond Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant Small/Mid-Cap Equity Fund	10/31	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Quant International Small-Cap Equity Fund	10/31	\$8,339	\$4,732	\$0	\$0	\$0	\$0	\$8,339	\$4,732

APPENDIX F

LIST OF HOLDERS OF MORE THAN 5% OF ANY CLASS OF SHARES IN EACH FUND

As of the Record Date, the following record owners of the specified Fund and class held the share amounts and corresponding percentages indicated below, which were owned either (i) beneficially by such persons or (ii) of record by such persons on behalf of customers who are the beneficial owners of such shares. Beneficial owners of 25% or more of a class of a Fund are presumed to be in control of the class for purposes of voting on certain matters submitted to shareholders.

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Core Impact Bond Fund — Retail Class	Raymond James Omnibus for Mutual Funds Attn: Courney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	15,975,406.355	55.38%
	Charles Schwab & Co. Inc. Attn Mutual Funds 211 Main St. San Francisco, CA 94105-1901	6,563,340.141	22.75%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,773,343.670	6.15%
TIAA-CREF International Opportunities Fund — Retail Class	Charles Schwab & Co. Inc. Attn Mutual Funds 211 Main St. San Francisco, CA 94105-1901	583,812.743	21.39%
	Charles Schwab & Co. Inc. Special Custody A/C FBO Customers Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	352,340.163	12.91%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	261,434.192	9.58%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	159,391.015	5.84%
	American Enterprise Investment Services Inc. 707 2 nd Ave. S. Minneapolis, MN 55402-2405	152,926.240	5.60%
	National Financial Services LLC For the Exclusive Benefit of our Customers Attn Mutual Fund Dept 4th Floor	141,750.564	5.19%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	499 Washington Blvd Jersey City, NJ 07130-1995		
	Wells Fargo Clearing Services LLC Special Custody Acct for the Exclusive Benefit of Customer 2801 Market St Saint Louis, MO 63103-2523	140,913.920	5.16%
TIAA-CREF International Equity Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	3,257,623.979	10.85%
TIAA-CREF Social Choice Equity Fund — Retail Class	Charles Schwab & Co. Inc. Attn Mutual Funds 211 Main St. San Francisco, CA 94105-1901	6,963,056.101	25.30%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	3,754,400.208	13.64%
	National Financial Services LLC For the exclusive benefit of our customers Attn Mutual Fund Dept 4 th Floor 499 Washington Blvd. Jersey City, NJ 07310-1995	2,080,095.068	7.56%
TIAA-CREF Growth & Income Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	6,163,277.480	9.79%
	Charles Schwab & Co. Inc. 211 Main St. San Francisco, CA 94105-1901	3,429,320.049	5.45%
TIAA-CREF Equity Index Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	8,248,792.518	19.48%
TIAA-CREF Core Bond Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	2,161,252.968	26.69%
TIAA-CREF Emerging Markets Equity Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	185,358.359	20.27%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	88,766.561	9.71%
	National Financial Services LLC For the exclusive benefit of our customers Attn Mutual Fund Dept 4 th Floor 499 Washington Blvd. Jersey City, NJ 07310-1995	77,128.459	8.44%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Large Cap Growth Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	5,115,163.430	9.40%
TIAA-CREF Emerging Markets Equity Index Fund — Retail Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	530,744.856	30.50%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	360,874.694	20.74%
TIAA-CREF Lifecycle Retirement Income Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	3,719,226.869	31.91%
TIAA-CREF Lifestyle Income Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,793,396.189	39.73%
TIAA-CREF Lifestyle Conservative Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	8,469,406.776	49.33%
TIAA-CREF Lifestyle Moderate Fund	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	12,691,254.891	49.53%
	Charles Schwab & Co. Inc. Special Custody A/C FBO Customers Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	2,791,612.475	10.90%
TIAA-CREF Large-Cap Value Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07399-0002	1,370,152.221	18.02%
TIAA-CREF Mid-Cap Growth Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,023,217.112	10.21%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	620,504.321	6.19%
TIAA-CREF Mid-Cap Value Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,426,814.622	11.31%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	936,217.746	7.42%
TIAA-CREF Quant Small Cap Equity Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,122,810.806	13.33%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	1,099,850.654	13.06%
TIAA-CREF Real Estate Securities Fund — Retail Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	5,931,485.804	29.20%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	2,178,382.491	10.72%
TIAA-CREF Inflation-Linked Bond Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,941,747.282	15.93%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E. Orchard Rd. 2T2 Greenwood Vlg. Co. 8011-5002	786,548.496	6.45%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	671,376.692	5.51%
TIAA-CREF Bond Index Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	824,775.352	29.12%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	181,280.440	6.40%
TIAA-CREF Lifestyle Growth Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	4,635,061.240	38.38%
	Charles Schwab & Co. Inc. Special Custody A/C FBO Customers Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	2,219,196.438	18.37%
TIAA-CREF Lifestyle Aggressive Growth Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	2,486,824.325	39.11%
	Charles Schwab & Co. Inc. Special Custody A/C FBO Customers Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	935,952.368	14.72%
TIAA-CREF High Yield Fund — Retail Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	7,724,401.930	31.50%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	2,528,116.086	10.31%
	National Financial Services LLC For the Exclusive Benefit of our Customers Attn Mutual Fund Dept 4th Floor 499 Washington Blvd Jersey City, NJ 07130-1995	1,314,865.048	5.36%
TIAA-CREF Core Plus Bond Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	2,877,903.371	11.43%
TIAA-CREF Short-Term Bond Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	1,786,386.980	15.26%
TIAA-CREF 5-15 Year Tax-Exempt Bond Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	4,663,680.547	20.84%
TIAA-CREF Managed Allocation Fund — Retail Class	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	8,054,126.706	12.19%
TIAA-CREF International Opportunities Fund — Institutional Class	TIAA-CREF Managed Allocation II AC Attn TIAA-CREF Mutual Fund Ops 730 3 rd Ave. New York, NY 10017-3206	3,238,959.382	32.68%
	TIAA-CREF Lifestyle Moderate Fund Attn TIAA-CREF Mutual Fund Ops 730 3 rd Ave. New York, NY 10017-3206	2,080,762.819	20.99%
	TIAA-CREF Lifestyle Growth Fund Attn TIAA-CREF Mutual Fund Ops 730 3 rd Ave. New York, NY 10017-3206	1,450,989.779	14.64%
	TIAA-CREF Lifestyle Aggressive Growth Fund Attn TIAA-CREF Mutual Fund Ops 730 3 rd Ave. New York, NY 10017-3206	1,418,224.950	14.31%
	TIAA-CREF Lifestyle Conservative Fund Attn TIAA-CREF Mutual Fund Ops 730 3 rd Ave. New York, NY 10017-3206	794,896.012	8.02%
TIAA-CREF Large-Cap Value Fund — Institutional Class	TIAA Trust, N.A. as Cust/Ttee of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	44,209,352.982	46.94%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Individual & Institutional Serv Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	22,830,164.668	24.24%
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	16,921,461.517	17.97%
TIAA-CREF Mid-Cap Growth Fund — Institutional Class	TIAA Trust, N.A. as Cust/Ttee of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	18,512,495.517	63.02%
	TIAA-CREF Individual & Institutional Serv Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	10,038,727.743	34.18%
TIAA-CREF Mid-Cap Value Fund — Institutional Class	TIAA Trust, N.A. as Cust/Ttee of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	34,677,944.851	53.06%
	TIAA-CREF Individual & Institutional Serv Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	25,688,521.155	39.30%
TIAA-CREF Real Estate Securities Fund — Institutional Class	TIAA Trust, N.A. as Cust/Ttee of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	34,677,944.581	53.06%
	TIAA-CREF Individual & Institutional Serv Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	25,688,521.155	39.30%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	41,046,654.795	34.38%
	MAC & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15129-2502	23,102,837.373	19.35%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Pershing LLC P.O. Box 2052 Jersey City, NJ 07303-2052	9,998,381.971	8.37%
TIAA-CREF Inflation-Linked Bond Fund — Institutional Class	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	21,405,028.990	38.96%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	16,510,985.516	30.05%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	4,883,251.730	8.89%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	3,510,527.635	6.39%
TIAA-CREF S&P 500 Index Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	61,964,393.778	50.97%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	17,527,444.707	14.42%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	12,332,852.664	10.14%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	6,754,105.872	5.56%
TIAA-CREF Large-Cap Growth Index Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	75,696,975.907	36.16%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	18,177,552.520	8.68%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	16,907,789.479	8.08%
	Pims/Prudential Retirement as Nominee for the Trustee/Custodian Pl. 010 State of Connecticut Deferred 165 Capitol Avenue Hartford, CT 06106-1659	14,201,204.855	6.78%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	10,498,986.186	5.01%
TIAA-CREF Large-Cap Value Index Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	136,318,196.425	44.19%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	54,210,085.281	17.57%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	29,397,071.861	9.53%
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	25,617,726.110	8.31%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	40,894,726.400	34.44%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	26,389,343.004	22.22%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	John Hancock Life Insurance Company USA Attn: Jhrps Trading Ops St6 200 Berkeley Street Boston, MA 02116-5022	9,660,827.899	8.14%
TIAA-CREF Int'l Equity Index Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	167,816,884.432	34.32%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn: Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	50,631,711.281	10.36%
	Mac & Co. Attn: Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	45,716,655.532	9.35%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	36,262,248.818	7.42%
TIAA-CREF Growth & Income Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	23,396,014.124	82.88%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	2,727,386.010	9.66%
TIAA-CREF Social Choice Equity Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	24,069,271.239	78.77%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	4,125,436.553	13.50%
TIAA-CREF International Equity Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	12,783,347.730	49.70%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	11,865,729.752	46.13%
TIAA-CREF Large-Cap Value Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	16,641,522.441	65.64%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	7,333,347.134	28.93%
TIAA-CREF Mid-Cap Growth Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	11,497,822.770	71.90%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,361,105.995	21.02%
	JPMorgan Custodian TIAA-CREF Trust Co Non ERISA TDA C/O JPMorgan Chase Bank Attn: DC Plan Service Team TIAA 4 New York Plz. Fl. 12 New York, NY 10004-2413	898,448.146	5.62%
TIAA-CREF Mid-Cap Value Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	18,273,820.761	66.77%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	7,540,137.299	27.55%
TIAA-CREF Real Estate Securities Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	24,192,133.325	81.58%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,408,759.888	11.49%
TIAA-CREF S&P 500 Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	34,075,956.118	75.03%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	6,474,514.398	14.26%
TIAA-CREF Large-Cap Growth Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz Fl. 17 New York, NY 10004-2413	12,993,102.920	68.68%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,265,807.650	6.69%
TIAA-CREF Large-Cap Value Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	50,406,053.969	83.97%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	5,591,705.782	9.32%
TIAA-CREF Small-Cap Blend Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	22,308,775.650	74.25%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	5,756,235.583	19.16%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF International Equity Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	44,994,853.945	76.28%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	8,938,749.247	15.15%
TIAA-CREF Quant Small Cap Equity Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	12,037,528.695	51.69%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,412,299.062	40.41%
	JPMorgan Custodian TIAA-CREF Trust Co. Non ERISA TDA C/O JPMorgan Chase Bank Attn: DC Plan Service Team TIAA 4 New York Plz. Fl. 12 New York, NY 10004-2413	1,602,739.804	6.88%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	61,242,238.284	62.48%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	17,269,066.790	17.62%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	6,320,193.806	6.45%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	6,174,200.545	6.30%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Emerging Markets Equity Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	7,629,270.837	88.91%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	448,809.566	5.23%
TIAA-CREF Emerging Markets Equity Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	53,825,670.120	92.08%
TIAA-CREF Lifestyle Income Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	1,407,195.067	89.75%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	129,508.057	8.26%
TIAA-CREF Lifestyle Conservative Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,530,444.225	85.94%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	440,254.282	10.72%
TIAA-CREF Lifestyle Moderate Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	7,016,644.083	85.52%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,066,569.585	13.00%
TIAA-CREF Lifestyle Growth Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,077,057.229	89.62%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	266,788.215	7.77%
TIAA-CREF Lifestyle Aggressive Growth Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	2,751,259.543	86.94%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	278,962.975	8.82%
TIAA-CREF Core Impact Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	23,638,362.871	88.34%
TIAA-CREF International Opportunities Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	5,996,433.854	93.68%
TIAA-CREF International Equity Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	82,498,923.336	40.93%
	TIAA Trust N.A. as Custodian/Trustee Of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	44,666,747.461	22.16%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	41,950,491.129	20.81%
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	10,256,146.608	5.09%
TIAA-CREF Growth and Income Fund — Institutional Class	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	37,647,981.849	39.59%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA Trust N.A. as Custodian/Trustee Of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	22,200,363.890	23.34%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	16,579,894.620	17.43%
TIAA-CREF Equity Index Fund — Institutional Class	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	76,883,864.888	18.56%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	69,954,853.695	16.88%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	60,605,866.837	14.63%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	57,001,574.110	13.76%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	36,614,243.378	8.84%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	31,830,404.009	7.68%
TIAA-CREF Social Choice Equity Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	72,363,226.886	41.39%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	National Financial Services LLC For the Exclusive Benefit of our Customers Attn: Mutual Funds Dept. Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	18,496,762.274	10.58%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	11,590,225.084	6.63%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St San Francisco, CA 94104-4151	10,973,575.559	6.28%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	10,790,752.239	6.17%
	Vanguard Fiduciary Trust Company PO Box 2900 Valley Forge, PA 19482-2900	9,193,603.754	5.26%
TIAA-CREF Core Bond Fund — Institutional Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	208,787,396.578	38.11%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	100,005,656.368	18.25%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	99,391,048.195	18.14%
	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	65,052,950.735	11.87%
TIAA-CREF Money Market Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	765,153,601.507	75.90%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	124,332,443.110	12.33%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave New York, NY 10017-3206	62,708,877.100	6.22%
TIAA-CREF Core Impact Bond Fund — Institutional Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	94,724,533.082	18.70%
	National Financial Services LLC For the Exclusive Benefit of our Customers Attn: Mutual Funds Dept. Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	91,265,769.095	18.01%
	Morgan Stanley Smith Barney LLC For the Exclusive Benefit of its Customers 1 New York Plz. Fl. 12 New York, NY 10004-1965	59,643,063.704	11.77%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	50,146,721.709	9.90%
	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	44,773,484.874	8.84%
TIAA-CREF Lifecycle 2010 Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	9,693,904.860	48.30%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	6,724,518.988	33.50%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,100,241.606	15.45%
TIAA-CREF Lifecycle 2010 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	44,760,718.870	79.11%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Individual & Institutional Serv. Inc For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	10,677,093.521	18.87%
TIAA-CREF Lifecycle 2015 Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	15,967,470.213	54.37%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,543,677.314	32.50%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,042,500.947	10.36%
TIAA-CREF Lifecycle 2015 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	72,600,341.165	78.10%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	17,362,050.948	18.68%
TIAA-CREF Lifecycle 2020 Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	23,932,222.380	46.76%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	20,681,586.809	40.41%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	4,622,554.585	9.03%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2020 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	157,529,485.887	75.87%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	43,095,405.502	20.75%
TIAA-CREF Lifecycle 2025 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	30,151,156.281	46.52%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	26,607,129.286	41.05%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	5,046,615.566	7.79%
TIAA-CREF Lifecycle 2025 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	234,714,361.063	75.06%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	63,044,534.710	20.16%
TIAA-CREF Lifecycle 2030 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	33,104,779.429	50.06%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	24,440,611.931	36.96%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	4,616,683.371	6.98%
TIAA-CREF Lifecycle 2030 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	274,251,558.563	75.53%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	72,603,209.690	20.00%
TIAA-CREF Lifecycle 2035 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	33,149,514.951	54.18%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	21,561,406.467	35.24%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,269,864.360	5.34%
TIAA-CREF Lifecycle 2035 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	289,939,125.210	75.90%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	77,046,514.019	20.17%
TIAA-CREF Lifecycle 2040 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	40,003,886.394	58.97%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	22,111,459.396	32.59%
TIAA-CREF Lifecycle 2040 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	352,435,830.688	77.12%
	TIAA-CREF Individual & Institutional Serv. Inc. for Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	91,983,667.436	20.13%
TIAA-CREF Lifecycle 2045 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	30,322,402.435	60.36%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	16,031,871.659	31.91%
TIAA-CREF Lifecycle 2045 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	197,377,617.985	75.05%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	57,173,936.266	21.74%
TIAA-CREF Large-Cap Growth Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	22,202,876.220	32.62%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	18,847,837.156	27.69%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	8,135,440.892	11.95%
TIAA-CREF Managed Allocation Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,137,771.498	71.13%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	325,192.013	20.33%
TIAA-CREF Lifestyle Income Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	625,740.606	51.44%
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	317,221.156	26.08%
	Ascensus Trust Company FBO Jescar Profit Sharing Plan P.O. Box 10758 Fargo, ND 58106-0758	159,466.632	13.11%
TIAA-CREF Equity Index Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	17,697,895.193	82.12%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,639,784.521	7.61%
TIAA-CREF Inflation-Linked Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	11,240,656.003	91.45%
TIAA-CREF Large-Cap Growth Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	12,081,583.353	72.30%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Voya Institutional Trust Company One Orange Way B3N Windsor, CT 06095-4773	1,047,105.680	6.27%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	994,997.982	5.95%
	JPMorgan Custodian TIAA-CREF Trust Co Non ERISA TDA C/O JPMorgan Chase Bank Attn: DC Plan Service Team TIAA 4 New York Plz. Fl. 12 New York, NY 10004-2413	970,905.424	5.81%
TIAA-CREF Managed Allocation Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	5,607,172.187	91.62%
TIAA-CREF Money Market Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	469,344,250.550	76.48%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	70,372,575.750	11.47%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	53,378,767.660	8.70%
TIAA-CREF Core Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	11,098,838.260	81.75%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,045,938.084	7.70%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF High-Yield Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	39,749,974.664	27.99%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	17,723,146.682	12.48%
	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	16,330,056.898	11.50%
	National Financial Services Corp. For Exclusive Benefit of Our Customers Russ Lennon 499 Washington Blvd. Fl. 5 Jersey City, NJ 07310-2010	15,907,844.103	11.20%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	14,130,213.170	9.95%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	10,953,492.520	7.71%
	TIAA-CREF High-Yield Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	19,201,313.647
TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500		2,488,384.964	9.77%
JPMorgan Custodian TIAA-CREF Trust Co Non ERISA TDA C/O JPMorgan Chase Bank Attn: DC Plan Service Team TIAA 4 New York Plz. Fl. 12 New York, NY 10004-2413		2,234,454.999	8.78%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Core Plus Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	26,673,784.830	84.84%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,934,461.793	12.51%
TIAA-CREF Core Plus Bond Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	40,476,420.531	24.59%
	TIAA-CREF Managed Allocation II AC Attn TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3207	36,768,110.679	22.34%
	TIAA-CREF Lifestyle Moderate Fund Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	23,557,717.120	14.31%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	13,021,836.523	7.91%
	TIAA-CREF Individual & Institutional Serv Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	10,545,561.295	6.41%
	TIAA-CREF Lifestyle Conservative Fd. Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	10,161,151.925	6.17%
	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	14,322,815.703	26.34%
TIAA-CREF Short-Term Bond Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	14,218,524.621	26.15%
	TIAA-CREF Lifestyle Conservative Fd. Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	6,031,762.690	11.09%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	4,245,340.972	7.81%
	Capinco C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	3,395,312.366	6.24%
	TIAA-CREF Lifestyle Income Fund Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	2,998,783.300	5.52%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	18,260,229.284	92.82%
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	776,355.197	88.95%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	47,006.589	5.39%
TIAA-CREF Lifecycle Retirement Income Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,487,734.294	58.76%
	TIAA-CREF Individual & Institutional Serv Inc For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	4,646,504.506	28.78%
TIAA-CREF Lifecycle Retirement Income Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	9,662,715.534	77.62%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,780,676.205	14.30%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Emerging Markets Equity Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	10,669,429.427	39.30%
	TIAA-CREF Managed Allocation II AC Attn TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3207	3,824,046.850	14.09%
	TIAA-CREF Lifestyle Moderate Fund Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	2,457,132.239	9.05%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	2,130,609.020	7.85%
	TIAA-CREF Lifestyle Growth Fund Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	1,712,462.219	6.31%
	Capinco C/O US Bank NA 1555 N Rivercenter Dr. Ste. 302 Milwaukee, WI 53212-3958	1,706,665.579	6.29%
	TIAA-CREF Lifestyle Aggressive Growth Fund Attn: TIAA-CREF Mutual Fund Ops 730 3rd Ave. New York, NY 10017-3206	1,672,718.720	6.16%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	1,456,749.651	5.37%
TIAA-CREF Emerging Markets Equity Index Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	24,013,780.032	22.40%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	23,282,644.356	21.72%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	15,196,900.911	14.18%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	12,184,267.144	11.37%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	9,225,000.563	8.61%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	6,396,734.408	5.97%
	World Health Organization Attn Treasury Avenue Appia 20 Geneva 27 Switzerland 1211	6,177,729.253	5.76%
TIAA-CREF Lifestyle Conservative Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	2,467,989.147	54.78%
	DCGT as Trustee and/or Custodian FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001	635,954.455	14.11%
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	369,776.142	8.21%
TIAA-CREF Lifestyle Moderate Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	2,957,273.825	49.70%
	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	1,373,618.105	23.08%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg, CO 80111-5002	357,726.421	6.01%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifestyle Growth Fund — Institutional Class	SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	855,252.297	30.29%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	666,145.741	23.59%
	Voya Institutional Trust Company One Orange Way B3N Windsor, CT 06095-4773	209,793.472	7.43%
	AUL American Grp Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	207,656.168	7.35%
	John Hancock Trust Company LLC 200 Berkeley St. Ste. 7 Boston, MA 02116-5038	200,643.417	7.11%
	State Street Bank Trustee Custodian FBO ADP Access Product 1 Lincoln St. Boston, MA 02111-2901	167,267.813	5.92%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg, CO 80111-5002	158,043.745	5.60%
	TIAA-CREF Lifestyle Aggressive Growth Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	647,399.094
Voya Institutional Trust Company One Orange Way B3N Windsor, CT 06095-4773		457,503.140	14.12%
AUL American Grp Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368		427,191.108	13.19%
SEI Private Trust Company C/O TIAA-SWP 1 Freedom Valley Drive Oaks, PA 19456-9989		295,166.717	9.11%
Empower Trust FBO Employee Benefits Clients 401K 8515 E. Orchard Rd. 2T2 Greenwood Vlg, CO 80111-5002		222,980.032	6.88%
Mid Atlantic Trust Company 1251 Waterfront Place Suite 525 Pittsburgh, PA 15222-4228		213,385.554	6.59%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2050 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	22,298,492.547	63.47%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	10,558,434.625	30.05%
TIAA-CREF Lifecycle 2050 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	146,087,475.794	72.42%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	49,761,965.234	24.67%
TIAA-CREF Lifecycle 2055 Fund — Retirement Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,273,241.532	66.59%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Custodian for IRA Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	3,663,988.611	26.31%
TIAA-CREF Lifecycle 2055 Fund — Institutional Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	63,207,625.519	76.05%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	16,982,896.511	20.43%
TIAA-CREF Emerging Markets Debt Fund — Institutional Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	3,220,258.355	31.28%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Capinco C/O US Bank NA 1555 N Rivercenter Dr. Ste. 302 Milwaukee, WI 53212-3958	1,553,879.827	15.09%
	Mac & Co. Attn: Mutual Fund Operations 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	1,394,082.040	13.54%
	Morgan Stanley Smith Barney LLC For the Exclusive Benefit of its Custodian 1 New York Plz. Fl. 12 New York, NY 10004-1965	1,058,846.378	10.28%
	Pershing LLC P. O. Box 2052 Jersey City, NJ 07303-2052	877,864.603	8.53%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	565,606.147	5.49%
TIAA-CREF Lifecycle Index 2010 Fund — Premier Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	400,544.132	32.99%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	384,086.725	31.63%
	State Street Bank & Trust Co. FBO Various Retirement Plans Transamerica Retirement Solutions Harrison, NY 10528	240,082.311	19.77%
	Reliance Trust Co. Trustee ADP Access Large Market 401K 1100 Abernathy Rd. Atlanta, GA 30328-5620	121,118.542	9.98%
	Merrill Lynch Pierce Fenner & Smith Inc. For The Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville FL 32246-6484	68,351.515	5.63%
TIAA-CREF Growth & Income Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	341,496.991	89.25%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	30,132.379	7.88%
TIAA-CREF Social Choice Equity Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,361,306.539	81.85%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	124,523.361	7.49%
TIAA-CREF International Equity Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,056,926.847	100.00%
TIAA-CREF Large-Cap Value Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,515,029.519	99.93%
TIAA-CREF Lifecycle Index 2015 Fund — Premier Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for RHSP Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	941,220.683	53.19%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	361,397.962	20.42%
	State Street Bank & Trust Co. FBO Various Retirement Plans Transamerica Retirement Solutions Harrison, NY 10528	176,070.177	9.95%
	Reliance Trust Co. Trustee ADP Access Large Market 401K 1100 Abernathy Rd. Atlanta, GA 30328-5620	144,432.851	8.16%
	Merrill Lynch Pierce Fenner & Smith Inc. For The Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	140,387.033	7.93%
TIAA-CREF Bond Index Fund — Institutional Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	598,150,981.796	60.12%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	195,423,073.866	19.64%
	Mac & Co. Attn Mutual Fund Operation 500 Grant Street Room 151-1010 Pittsburgh, PA 15219-2502	81,237,749.136	8.17%
TIAA-CREF Mid-Cap Growth Fund — Premier Class	TIAA Trust N.A. as Custodian Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	793,318.452	99.13%
TIAA-CREF Mid-Cap Value Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,745,081.790	99.75%
TIAA-CREF Real Estate Securities Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,148,244.104	77.95%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	141,958.764	9.64%
TIAA-CREF Lifecycle Index 2020 Fund — Premier Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Trustee/ Custodian for Rhsp Clients Attn: DC Plan Service Team 4 New York Plz. Fl. 17 New York, NY 10004-2413	2,141,146.679	49.12%
	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	850,582.717	19.51%
	Reliance Trust Co. Trustee 1100 Abernathy Rd. Atlanta, GA 30328-5620	604,310.662	13.86%
	Merrill Lynch Pierce Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	574,209.983	13.17%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF International Equity Index Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	4,833,198.402	72.14%
	Empower Trust FBO Alabamaretire Deferred Compensation C/O Fascore LLC 8515 E. Orchard Rd. 2T2 Greenwood Vlg, CO 80111-5002	1,707,080.232	25.48%
TIAA-CREF Quant Small Cap Equity Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,811,990.611	99.62%
TIAA-CREF Equity Index Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,302,291.068	93.28%
TIAA-CREF Inflation-Linked Bond Fund — Premier Class	TIAA Trust N.A. as Custodian/Trustee of Retirement Plans Record kept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	123,091.615	87.59%
	Ascensus Trust Company P.O. Box 10758 Fargo, ND 58106-0758	16,983.436	12.08%
TIAA-CREF Lifecycle Index 2035 Fund — Retirement Class	TIAA Trust , N.A. AS Cust/TTEE Of Retirement Plans Recordkept By TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,244,185.806	52.54%
	AUL American Grp. Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	3,007,098.307	17.09%
	AUL American Grp. Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	2,048,960.789	11.64%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,327,341.928	7.54%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as TTEE/Cust. for RHSP Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	933,874.997	5.31%
TIAA-CREF Lifecycle Index 2040 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	8,792,348.950	56.21%
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	2,071,198.985	13.24%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,693,849.544	10.83%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,664,133.366	10.64%
TIAA-CREF Lifecycle Index 2045 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	6,734,495.017	55.26%
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,785,064.507	14.65%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,413,370.775	11.60%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,310,533.871	10.75%
TIAA-CREF Lifecycle Index 2050 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	5,460,636.858	53.46%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,613,615.227	15.80%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,394,405.485	13.65%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,119,264.467	10.96%
TIAA-CREF Lifecycle Index 2055 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,533,162.558	51.33%
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,183,682.779	17.20%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	1,128,550.943	16.39%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	539,538.772	7.84%
TIAA-CREF Lifecycle Index 2065 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	154,662.094	29.07%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	130,814.945	24.59%
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	125,537.128	23.60%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave., Ste. 2A New York, NY 10017-3207	50,000.000	9.40%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle Index 2060 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,613,614.329	37.47%
	AUL American GRP Retirement Annuity Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	916,175.089	21.28%
	AUL American Unit Investment Trust Attn: Separate Accounts PO Box 368 Indianapolis, IN 46206-0368	724,365.093	16.82%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	677,652.908	15.74%
TIAA-CREF Short-Term Bond Index Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	27,650.113	52.52%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	25,000.000	47.48%
TIAA-CREF Social Choice International Equity Fund — Institutional Class	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	14,214,837.321	23.20%
	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	14,181,630.769	23.15%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	11,098,853.819	18.11%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	10,548,910.354	17.22%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn: Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	9,306,937.940	15.19%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Social Choice Low Carbon Equity Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	11,664,899.387	44.85%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	6,694,592.010	25.74%
	SEI Private Trust Company C/O TIAA SWP 1 Freedom Valley Drive Oaks, PA 19456-9989	3,999,520.401	15.38%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn: Patrick Nelson 730 3rd Ave. New York, NY 10017-3206	1,439,856.112	5.54%
TIAA-CREF Green Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,329,447.088	87.99%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	6.62%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	78,813.869	5.22%
TIAA-CREF Green Bond Fund — Premier Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	100.00%
TIAA-CREF Green Bond Fund — Institutional Class	TIAA Global Public Investments LLC Series CAT Attn: Emilia Wiener 730 3 rd Ave. New York, NY 10017-3206	4,943,906.802	57.27%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	2,100,000.000	24.33%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	727,621.203	8.43%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Short Duration Impact Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	549,373.435	83.63%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	15.22%
TIAA-CREF Short Duration Impact Bond Fund — Premier Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	100.00%
TIAA-CREF Short Duration Impact Bond Fund — Institutional Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	2,100,000.000	32.37%
	Morgan Stanley Smith Barney LLC For the Exclusive Bene. of its Cust. 1 New York Plz., Fl. 12 New York, NY 10004-1965	1,760,866.765	27.14%
	Bank of American NA PO Box 843869 Dallas, TX 75284-3869	1,545,307.918	23.82%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	818,879.214	12.62%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	417,257.504	52.19%
TIAA-CREF Green Bond Fund — Retail Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	12.51%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	110,896.324	33.29%
TIAA-CREF Short Duration Impact Bond Fund — Retail Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	30.02%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	72,136.119	21.66%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	R Neil Vance Susan K. Zimmerman JT TEN 202 Louise Dr. Morrisville, PA 19067-4830	21,423.889	6.43%
TIAA-CREF Lifecycle 2010 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,669,104.522	99.10%
TIAA-CREF Social Choice International Equity Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	30,203.446	43.04%
	Heartland Bank and Trust Company Asset Management & Trust Services 200 West College Avenue Normal, IL 61761-2577	22,734.280	32.39%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,302.326	13.25%
	Interactive Brokers LLC 2 Pickwick Plaza Greenwich, CT 06830-5576	7,942.934	11.32%
TIAA-CREF Social Choice Low Carbon Equity Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	269,610.516	90.04%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	25,000.000	8.35%
TIAA-CREF Lifecycle 2025 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	18,550,426.422	98.34%
TIAA-CREF Lifecycle 2030 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	21,398,047.476	98.41%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2035 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	20,569,238.015	97.66%
TIAA-CREF Lifecycle Retirement Income Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	906,849.235	87.77%
	VRSCO FBO AIGFSB Cust. TTEE FBO Roger Williams Univ. 403B 2727-A Allen Parkway, 4-D1 Houston, TX 77019-2107	89,373.335	8.65%
TIAA-CREF Lifecycle 2040 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	23,290,633.658	98.39%
TIAA-CREF Lifecycle 2045 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	13,068,797.009	97.95%
TIAA-CREF Lifecycle 2050 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,016,382.255	97.90%
TIAA-CREF Lifecycle 2055 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,780,825.491	98.14%
TIAA-CREF Lifecycle 2065 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	152,237.523	75.15%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	50,000.000	24.68%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2060 Fund — Premier Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	1,267,637.759	96.61%
TIAA-CREF Lifecycle Index 2010 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	21,264,841.521	61.22%
	Mid Atlantic Trust Company FBO MATC Omnibus Div. Reinvest. LTCG — RE 1251 Waterfront Place, Suite 525 Pittsburgh, PA 15222-4228	2,233,711.520	6.43%
TIAA-CREF Lifecycle Index 2015 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	31,808,518.980	57.30%
TIAA-CREF Lifecycle Index 2020 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	74,517,621.876	49.20%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	8,188,059.235	5.41%
	DCGT as TTEE and/or Cust. FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001	7,857,327.846	5.19%
TIAA-CREF Lifecycle Index 2025 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500		
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484		

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	DCGT as TTEE and/or Cust. FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001 John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022		
TIAA-CREF Lifecycle Index 2030 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	127,848,831.843	42.69%
	DCGT as TTEE and/or Cust. FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001 John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	17,918,544.685	5.98%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	16,193,235.248	5.41%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	15,768,570.477	5.27%
TIAA-CREF Lifecycle Index Retirement Income Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	9,449,917.481	22.54%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	4,055,251.421	9.67%
	PIMS/Prudential Retirement As Nominee for the TTEE/Cust. PL 940 Oakland County 401(A) 2100 Pontiac Lake Road Waterford, MI 48328-2762	3,742,809.945	8.93%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	2,952,251.918	7.04%
TIAA-CREF Lifecycle Index 2035 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	128,070,446.148	45.21%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	15,605,356.432	5.51%
TIAA-CREF Lifecycle Index 2040 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	144,766,711.976	52.44%
TIAA-CREF Lifecycle Index 2045 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	106,681,620.543	49.13%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	11,046,619.398	5.09%
TIAA-CREF Lifecycle Index 2050 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	84,179,472.580	46.92%
	Mid Atlantic Trust Company 1251 Waterfront Place, Suite 525 Pittsburgh, PA 15222-4228	10,507,234.851	5.86%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	9,359,470.415	5.22%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle Index 2055 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	52,705,633.300	40.64%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	9,441,244.026	7.28%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	8,094,350.640	6.24%
TIAA-CREF Lifecycle Index 2060 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	25,300,303.823	28.77%
	Mid Atlantic Trust Company 1251 Waterfront Place, Suite 525 Pittsburgh, PA 15222-4228	7,891,537.050	8.97%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	7,664,483.495	8.72%
	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	7,655,221.361	8.71%
	Nationwide Trust Company, FSB C/O IPO Portfolio Accounting P.O. Box 182029 Columbus, OH 43218-2029	5,376,255.583	6.11%
TIAA-CREF Lifecycle 2060 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	27,289,486.057	72.98%
	TIAA-CREF Individual & Institutional Serv. Inc. For Exclusive Benefit of Customers Attn: Patrick Nelson 730 3 rd Ave. New York, NY 10017-3206	7,947,629.717	21.25%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Social Choice International Equity Fund — Retail Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	1,712,800.858	69.28%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	314,495.020	12.72%
TIAA-CREF Social Choice Low Carbon Equity Fund — Retail Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,543,843.750	46.41%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 101 Montgomery St. San Francisco, CA 94104-4151	428,397.398	12.88%
TIAA-CREF Lifecycle 2065 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	595,063.925	69.35%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	162,709.189	18.96%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	50,000.000	5.83%
TIAA-CREF Lifecycle 2060 Fund — Retirement Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,777,945.600	64.74%
	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	1,570,458.685	26.91%
TIAA-CREF Lifecycle Index 2065 Fund — Institutional Class	John Hancock Life Insurance Company U S A Attn: JHRPS Trading OPS ST6 200 Berkeley Street Boston, MA 02116-5022	3,361,390.790	22.04%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,092,844.308	20.28%
	DCGT as TTEE and/or Cust. FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001	1,326,060.924	8.69%
	Diversified Investment Advisors FBO TRS FBO Various Ret. Plan Transamerica Retirement Solutions Harrison, NY 10528	1,154,783.187	7.57%
	Nationwide Trust Company, FSB C/O IPO Portfolio Accounting P.O. Box 182029 Columbus, OH 43218-2029	1,056,865.958	6.93%
TIAA-CREF Emerging Markets Debt Fund — Retail Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	1,152,616.763	74.28%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	141,630.259	9.13%
TIAA-CREF Short-Term Bond Index Fund — Retail Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	66,604.820	25.51%
	Ann H. Crowe TOD Subject to TOD Rules 369 Meadow Valley Rd. Lexington, KY 40511-8620	17,660.893	6.77%
	Paul Tessmer POA FBO Kathleen M. Tessmer TTEE Kathleen M. Tessmer Family Trust UA DTD 02/24/2003 105 North St. Madison, WI 53704-4916	16,250.894	6.23%
TIAA-CREF Lifecycle 2065 Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	3,104,590.912	82.95%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	350,000.000	9.35%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Retail Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	526,064.280	32.10%
TIAA-CREF International Bond Fund — Retail Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	71,879.103	38.86%
	Robert P. Sticca Celeste A. Sticca JT TEN 1230 5 th St. N. Fargo, ND 58102-2715	15,414.874	8.33%
	Karan J Kuntz TTEE Karan Kuntz Trust 3910 Lakeview Blvd. Lake Oswego, OR 97035-5549	11,153.635	6.03%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	27,818,569.626	99.26%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Institutional Class	Brown Brothers Harriman & Co. C/O Brown Brothers & Co. Attn: Mutual Fd. Svcs. 140 Broadway New York, NY 10005	2,249,718.361	34.67%
	TIAA-CREF Managed Allocation II AC Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3207	1,056,496.047	16.28%
	TIAA-CREF Lifestyle Moderate Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	672,503.950	10.36%
	DCGT as TTEE and/or Cust. FBO PLIC Various Retirement Plans Omnibus Attn: NPIO Trade Desk 711 High Street Des Moines, IA 50392-0001	657,287.159	10.13%
	TIAA-CREF Lifestyle Growth Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	470,988.568	7.26%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifestyle Aggressive Growth Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	459,655.313	7.08%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Premier Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave., Ste. 2A New York, NY 10017-3207	10,000.000	100.00%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,410,739.451	59.75%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	849,454.769	35.97%
TIAA-CREF International Bond Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	562,489.756	97.92%
TIAA-CREF International Bond Fund — Institutional Class	TIAA Trust, N.A. as Cust./TTEE Of Retirement Plans Recordkept by TIAA Attn: Fund Operations 8500 Andrew Carnegie Blvd. Charlotte, NC 28262-8500	63,552.346	71.61%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	23,870.225	26.90%
TIAA-CREF International Bond Fund — Premier Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave., Ste. 2A New York, NY 10017-3207	10,285.132	100.00%
TIAA-CREF International Bond Fund — Advisor Class	JP Morgan Securities LLC FBO: 096-06018-13 4 Chase Metrotech Ctr. Brooklyn, NY 11245-0001	69,654.289	51.44%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	44,797.795	33.08%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave., Ste. 2A New York, NY 10017-3207	10,274.669	7.59%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	8,982.813	6.63%
TIAA-CREF Quant International Small-Cap Equity Fund — Retail Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	18,629.988	19.99%
	Geeta A. Sangani POA FBO Ashok S. Sangani Geeta A. Sangani JT TEN 6896 Page Hollow Pl. Fayetteville, NY 13066-9797	16,828.739	18.06%
	Christine E. Kane 103 Gainsborough St. Apt. 203 Boston, MA 02115-4238	11,022.466	11.83%
	Gerald A. Wempner TOD 636 River Rd. W. Plains, MT 59859-9354	5,123.161	5.50%
TIAA-CREF Quant International Small-Cap Equity Fund — Institutional Class	TIAA-CREF Managed Allocation II AC Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3207	2,433,270.992	35.59%
	TIAA-CREF Lifestyle Moderate Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	1,554,968.302	22.74%
	TIAA-CREF Lifestyle Growth Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	1,087,220.266	15.90%
	TIAA-CREF Lifestyle Aggressive Growth Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	1,062,500.519	15.54%
	TIAA-CREF Lifestyle Conservative Fd. Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	594,433.045	8.69%
TIAA-CREF Quant International Small-Cap Equity Fund — Retirement Class	JPMorgan Chase Bank NA FBO TIAA-CREF Trust Co. as Cust. for IRA Clients Attn: DC Plan Service Team 4 New York Plz., Fl. 17 New York, NY 10004-2413	767,275.414	99.14%
TIAA-CREF Quant International Small-Cap Equity Fund — Premier Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave., Ste. 2A New York, NY 10017-3207	7,326.892	100.00%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Quant International Small-Cap Equity Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	7,320.998	87.32%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading 4707 Executive Dr. San Diego, CA 92121-3091	1,062.753	12.68%
TIAA-CREF Emerging Markets Equity Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	11,892.946	85.05%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,045.375	7.48%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	898.711	6.43%
TIAA-CREF International Equity Fund — Advisor Class	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	143,440.356	84.58%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,784.194	5.77%
TIAA-CREF International Opportunities Fund — Advisor Class	Band & Co C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	430,565.699	17.43%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	287,331.744	11.63%
	RBC Capital Markets LLC Borgan Shultes TTEES MN Bakers Union Pension Fund PO Box 509046 San Diego, CA 92150-9046	271,895.071	11.00%
	National Financial Services LLC For the Exclusive Benefit of Our Customers Attn: Mutual Funds Dept., Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	174,877.752	7.08%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Charles Schwab & Co. Inc. Special Custody A/C FBO Customers Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	165,281.263	6.69%
	Morgan Stanley Smith Barney LLC For the Exclusive Bene. of its Cust. 1 New York Plz., Fl. 12 New York, NY 10004-1965	140,773.346	5.70%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	138,984.422	5.63%
TIAA-CREF Social Choice International Equity Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	709,110.040	69.37%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	130,736.711	12.79%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	61,429.405	6.01%
TIAA-CREF Emerging Markets Debt Fund — Advisor Class	UBS WM USA 000 11011 6100 Omni Account M/F Spec. CDY A/C EBOC UBSFSI 1000 Harbor Blvd. Weehawken, NJ 07086-6761	637,002.660	46.82%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	365,901.375	26.90%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	225,343.672	16.56%
TIAA-CREF Growth & Income Fund — Advisor Class	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	105,189.518	40.88%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	54,392.711	21.14%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	20,773.124	8.07%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	19,090.776	7.42%
TIAA-CREF Large-Cap Growth Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	62,229.848	35.49%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	32,655.460	18.62%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	19,345.355	11.03%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	17,761.318	10.13%
TIAA-CREF Large-Cap Value Fund — Advisor Class	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	8,544.920	27.88%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	7,074.180	23.08%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	6,327.135	20.64%
	RBC Capital Markets LLC Jon Kennedy 2260 Woodchuck Ct. White Bear Lk., MN 55110-1060	5,277.896	17.22%
	RBC Capital Markets LLC Jon Kennedy Peggy Kennedy JT TEN/WR0S 2260 Woodchuck Ct. White Bear Lk., MN 55110-1060	2,105.239	6.87%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Mid-Cap Growth Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	5,163.023	49.63%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	3,014.114	28.98%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,627.183	15.64%
TIAA-CREF Mid-Cap Value Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	9,504.450	35.30%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	4,930.399	18.31%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	4,206.538	15.62%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	3,506.442	13.02%
	Morgan Stanley Smith Barney LLC For the Exclusive Bene. of its Cust. 1 New York Plz., Fl. 12 New York, NY 10004-1965	2,113.120	7.85%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,453.264	5.40%
	TIAA-CREF Quant Small-Cap Equity Fund — Advisor Class	UBS WM USA 000 1101 6100 Omni Account M/F Spec. CDY A/C EBOC UBSFSI 1000 Harbor Blvd. Weehawken, NJ 07086-6761	20,457.765
Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102		15,401.874	29.04%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned	
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	8,212.340	15.48%	
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	6,279.208	11.84%	
	TIAA-CREF Social Choice Equity Fund — Advisor Class	VRSCO FBO AIGFSB Cust. TTEE FBO Glens Falls Hospital 403B 2727-A Allen Parkway, 4-D1 Houston, TX 77019-2107	476,528.153	25.13%
	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	373,192.894	19.68%	
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	339,235.082	17.89%	
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	258,863.236	13.65%	
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	212,535.166	11.21%	
	State Street Bank & Trust Co. FBO Various Retirement Plans Transamerica Retirement Solutions Harrison, NY 10528	117,810.070	6.21%	
	TIAA-CREF Social Choice Low Carbon Equity Fund — Advisor Class	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	141,907.624	51.94%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	60,309.614	22.07%	
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	34,648.388	12.68%	

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Equity Index Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	167,514.133	41.33%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	108,880.704	26.86%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	72,638.361	17.92%
	RBC Capital Markets LLC 24 Dykeman Road Delmar, NY 12054-2934	37,570.101	9.27%
TIAA-CREF Large-Cap Growth Index Fund — Advisor	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	2,309,719.558	62.28%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,046,538.882	28.22%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	247,968.351	6.69%
TIAA-CREF Large-Cap Value Index Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	2,485,490.033	54.75%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,917,936.328	42.25%
TIAA-CREF S&P 500 Index Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	2,189,042.493	75.19%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	666,262.716	22.88%
TIAA-CREF Small-Cap Blend Index Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	470,153.983	81.37%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	93,877.540	16.25%
Emerging Markets Equity Index Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	410,730.295	93.43%
TIAA-CREF International Equity Index Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	20,521,740.656	85.24%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	1,959,024.143	8.14%
	SEI Private Trust Company C/O GWP US Advisors 1 Freedom Valley Drive Oaks, PA 19456-9989	1,491,687.987	6.20%
TIAA-CREF Core Bond Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	69,769,073.517	95.57%
TIAA-CREF Bond Index Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	2,637,396.892	98.17%
TIAA-CREF Core Plus Bond Fund — Advisor Class	Band & Co C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	4,097,723.623	43.87%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	1,901,326.876	20.35%
	Washinton & Co. C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	484,814.833	5.19%
	National Financial Services LLC For the Exclusive Benefit of Our Customers Attn: Mutual Funds Dept., Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	478,297.590	5.12%
TIAA-CREF Inflation-Linked Bond Fund — Advisor Class	Band & Co C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	1,680,652.944	21.86%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Vantagepoint Traditional IRA C/O Missionsquare Retirement 777 North Capital Street, NE Washington, DC 20002-4239	1,138,137.261	14.81%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	878,690.662	11.43%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	437,788.408	5.70%
TIAA-CREF Money Market Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	36,941,204.690	99.09%
TIAA-CREF Short-Term Bond Fund — Advisor Class	Band & Co C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	5,476,640.458	28.51%
TIAA-CREF Short-Term Bond Index Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	39,708.303	65.60%
	Charles Schwab & Co. Inc. Attn: Mutual Funds 211 Main St. San Francisco, CA 94105-1901	10,750.259	17.76%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,039.187	16.58%
TIAA-CREF Core Impact Bond Fund — Advisor Class	Merrill Lynch, Pierce, Fenner & Smith Inc. For the Sole Benefit of its Customers 4800 Deer Lake Dr. E. Jacksonville, FL 32246-6484	55,805,701.354	48.21%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	27,435,201.545	23.70%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	10,710,528.201	9.25%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-110	6,893,726.337	5.96%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF 5-15 Year Laddered Tax-Exempt Bond Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	13,558.583	40.27%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	10,709.567	31.80%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,404.809	27.93%
TIAA-CREF Real Estate Securities Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	1,981,328.902	46.19%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	1,378,498.174	32.14%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-110	663,072.504	15.46%
TIAA-CREF Lifestyle Aggressive Growth Fund — Advisor Class	Band & Co C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	53,671.612	18.13%
	National Financial Services LLC For the Exclusive Benefit of Our Customers Attn: Mutual Funds Dept., Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	33,919.835	11.46%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	33,297.645	11.25%
	Matrix Trust Company Trustee American Federation of Teachers 717 17 th Street Suite 1300 Denver, CO 80202-3304	24,195.578	8.17%
	Washington & Co. C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	20,671.673	6.98%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	Capinco C/O US Bank PO Box 1787 Milwaukee, WI 53201-1787	20,117.539	6.80%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	17,698.779	5.98%
	Matrix Trust Company Trustee City of Hartford 717 17th Street Suite 1300 Denver, CO 80202-3304	14,929.331	5.04%
TIAA-CREF Lifestyle Growth Fund — Advisor Class	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	55,236.672	21.01%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	41,180.012	15.67%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	38,343.808	14.59%
	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	26,441.603	10.06%
	Matrix Trust Company Trustee American Federation of Teachers 717 17th Street Suite 1300 Denver, CO 80202-3304	23,186.578	8.82%
	National Financial Services LLC For the Exclusive Benefit of Our Customers Attn: Mutual Funds Dept., Fl. 4 499 Washington Blvd. Jersey City, NJ 07310-1995	14,263.710	5.43%
TIAA-CREF Lifestyle Moderate Fund — Advisor Class	Empower Trust FBO Employee Benefits Clients 401K 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	216,042.135	36.62%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	88,114.663	14.94%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	33,731.383	5.72%
	Wells Fargo Clearing Services LLC Special Custody Acct. for the Exclusive Benefit of Customer 2801 Market St. Saint Louis, MO 63103-2523	30,516.350	5.17%
TIAA-CREF Lifestyle Conservative Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	29,659.106	10.41%
	Matrix Trust Company as Agent For Advisor Trust, Inc. Sienna Systems Corp. 401K Plan 717 17 th St. Ste. 1300 Denver, CO 80202-3304	29,178.895	10.24%
	Empower Trust FBO Retirement Plans 8515 E Orchard Rd. 2T2 Greenwood Vlg., CO 80111-5002	21,411.807	7.51%
	Matrix Trust Company Trustee St. Francis ISD 15 717 17th Street Suite 1300 Denver, CO 80202-3304	20,940.811	7.35%
	Lincoln Investment Planning LLC FBO Lincoln Customers 601 Office Center Dr, Ste. 300 Fort Washington, PA 19034-3275	18,435.190	6.47%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	15,523.360	5.45%
	Morgan Stanley Smith Barney LLC For the Exclusive Bene. of its Cust. 1 New York Plz., Fl. 12 New York, NY 10004-1965	15,316.767	5.38%
TIAA-CREF Lifestyle Income Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,459.709	92.29%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	789.621	7.70%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle Retirement Income Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	13,391.495	44.90%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,423.628	31.60%
	Raymond James Omnibus for Mutual Funds Attn: Courtney Waller 880 Carillon Parkway St. Petersburg, FL 33716-1102	7,009.140	23.50%
TIAA-CREF Lifecycle 2010 Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,386.123	61.60%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	5,850.348	38.40%
TIAA-CREF Lifecycle 2015 Fund — Advisor Class	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	34,301.664	76.32%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,643.603	23.68%
TIAA-CREF Lifecycle 2020 Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	41,401.433	53.16%
	Morgan Stanley Smith Barney LLC For the Exclusive Bene. of its Cust. 1 New York Plz., Fl. 12 New York, NY 10004-1965	18,775.830	24.11%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,478.008	13.45%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	28,401.815	29.35%
TIAA-CREF Lifecycle 2025 Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	22,536.939	23.29%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	RBC Capital Markets LLC 218 Fisher Road Grosse Pte. Frms., MI 48230-1213	12,567.070	12.99%
	RBC Capital Markets LLC 5088 Westchester Court Clarkston, MI 48348-5037	12,223.398	12.63%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,472.577	10.82%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17 th Street Suite 1300 Denver, CO 80202-3304	8,123.544	8.39%
TIAA-CREF Lifecycle 2030 Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	24,303.997	36.72%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17 th Street Suite 1300 Denver, CO 80202-3304	18,573.313	28.06%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	12,703.701	19.19%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,545.453	15.93%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	34,837.675	52.33%
TIAA-CREF Lifecycle 2035 Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,528.061	15.82%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	9,066.465	13.62%
	Matrix Trust Company as Agent For Advisor Trust, Inc. Delaware Valley School District 717 17 th Street, Suite 1300	6,465.327	9.71%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2040 Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	12,378.549	28.75%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	10,792.083	25.06%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,520.119	24.43%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	6,677.060	15.51%
	Matrix Trust Company as Agent For Tuscaloosa County Parking & 717 17 th Street, Suite 1300 Denver, CO 80202-3304	2,694.789	6.26%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	35,519.276	69.39%
TIAA-CREF Lifecycle 2045 Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,795.808	19.14%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	5,753.793	11.24%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	9,806.236	33.85%
TIAA-CREF Lifecycle 2050 Fund — Advisor Class	RBC Capital Markets LLC Isabelle J. Wittebot 9940 Sashabaw Road Clarkston, MI 48348-2035	9,253.521	31.94%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	3,367.258	11.62%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	3,256.047	11.24%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	1,760.109	6.08%
	RBC Capital Markets LLC 1030 Parrotts Cove Rd. Greensboro, GA 30642-4824	1,524.482	5.26%
TIAA-CREF Lifecycle 2055 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	11,664.480	44.47%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	8,731.596	33.29%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	5,094.030	19.42%
TIAA-CREF Lifecycle 2060 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	13,302.853	38.82%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	10,000.000	29.18%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	8,127.500	23.72%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	2,834.169	8.27%
TIAA-CREF Lifecycle 2065 Fund — Advisor Class	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	50,000.000	94.53%
	Matrix Trust Company Trustee FBO Strait Mechanical, LLC 401(K) Plan 717 17th Street Suite 1300 Denver, CO 80202-3304	2,891.506	5.47%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle Index Retirement — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	85,605.837	54.14%
	Pershing LLC PO Box 2052 Jersey City, NJ 07303-2052	33,876.395	21.43%
	Reliance Trust Company FBO Integrated Fin PO Box 78446 Atlanta, GA 30357	30,791.036	19.47%
TIAA-CREF Lifecycle 2010 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	67,355.270	90.02%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	7,469.170	9.98%
TIAA-CREF Lifecycle 2015 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	69,687.594	90.06%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	7,239.510	9.36%
TIAA-CREF Lifecycle 2020 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	518,532.401	92.12%
TIAA-CREF Lifecycle 2025 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	1,026,143.046	96.87%
TIAA-CREF Lifecycle 2030 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	1,475,803.276	98.37%
TIAA-CREF Lifecycle 2035 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	1,025,594.202	94.69%
TIAA-CREF Lifecycle 2040 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	1,002,038.483	98.26%
TIAA-CREF Lifecycle 2045 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	910,870.732	97.21%
TIAA-CREF Lifecycle 2050 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	690,693.557	97.29%
TIAA-CREF Lifecycle 2055 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	737,083.527	98.62%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle 2060 Fund — Advisor Class	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	621,616.151	97.98%
TIAA-CREF Core Bond Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	84,146,887.572	19.33%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	83,449,619.969	19.17%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	69,366,186.563	15.94%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	59,344,169.085	13.64%
	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	52,068,724.075	11.96%
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	27,941,583.982	6.42%
	TIAA-CREF Bond Index Fund — Class W	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	248,194,133.979
TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206		217,628,047.251	17.71%
TIAA-CREF Lifecycle Index 2035 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206		210,916,446.809	17.17%
TIAA-CREF Lifecycle Index 2040 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206		153,842,892.284	12.52%
TIAA-CREF Lifecycle Index 2020 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206		125,354,923.399	10.20%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifecycle Index 2045 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	81,955,696.077	6.67%
TIAA-CREF Core Plus Bond Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	52,008,396.413	19.32%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	51,583,350.815	19.16%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	42,861,941.553	15.92%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	36,736,276.827	13.65%
	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	32,253,481.812	11.98%
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	17,259,729.430	6.41%
Emerging Markets Debt Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	8,469,549.449	19.05%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	8,391,600.723	18.88%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	6,979,229.457	15.70%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	5,980,290.994	13.45%
	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	5,248,316.079	11.81%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
Emerging Markets Equity Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	2,812,909.862	6.33%
	TIAA-CREF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	34,622,837.486	19.99%
	TIAA-CREF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	26,555,041.642	15.33%
	TIAA-CREF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	24,787,360.679	14.31%
	TIAA-CREF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	21,384,946.187	12.35%
	TIAA-CREF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	19,887,207.221	11.48%
	TIAA-CREF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	14,508,514.119	8.38%
	TIAA-CREF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	10,536,296.319	6.08%
TIAA-CREF Emerging Markets Equity Index Fund — Class W	TIAA-CREF Lifecycle Index 2040 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	63,802,484.255	16.15%
	TIAA-CREF Lifecycle Index 2045 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	56,008,243.935	14.18%
	TIAA-CREF Lifecycle Index 2035 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	53,646,780.372	13.58%
	TIAA-CREF Lifecycle Index 2050 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	48,522,484.832	12.28%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	45,626,522.639	11.55%
	TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	30,964,231.363	7.84%
	TIAA-CREF IMF Lifecycle Index Fund 2055 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	28,547,864.785	7.23%
TIAA-CREF Equity Index Fund — Class W	TIAA-CREF Lifecycle Index 2040 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	126,120,781.111	17.29%
	TIAA-CREF Lifecycle Index 2045 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	110,733,050.319	15.18%
	TIAA-CREF Lifecycle Index 2035 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	106,075,207.841	14.54%
	TIAA-CREF Lifecycle Index 2050 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	95,950,715.586	13.16%
	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	90,181,862.309	12.36%
	TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	61,175,822.373	8.39%
	TIAA-CREF IMF Lifecycle Index Fund 2055 Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	56,451,936.549	7.74%
TIAA-CREF Growth & Income Fund — Class W	TIAA-CREF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	28,629,844.031	20.19%
	TIAA-CREF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	21,930,021.306	15.47%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	20,456,928.941	14.43%
	TIAA-CREF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	17,665,105.297	12.46%
	TIAA-CREF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	16,432,492.198	11.59%
	TIAA-CREF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	11,966,596.634	8.44%
	TIAA-CREF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	8,731,028.318	6.16%
TIAA-CREF High-Yield Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	8,464,001.677	19.05%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	8,399,119.789	18.90%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	6,990,598.520	15.73%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	5,973,784.692	13.44%
	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	5,259,019.531	11.83%
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	2,810,399.887	6.32%
TIAA-CREF Inflation-Linked Bond Fund — Class W	TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	28,193,764.383	15.35%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	22,461,429.227	12.23%
	TIAA-CREF Lifecycle Index 2020 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	21,211,463.407	11.55%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	19,952,166.161	10.86%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	18,164,403.467	9.89%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	14,315,398.376	7.79%
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	10,611,613.549	5.78%
	TIAA-CREF Lifecycle Index 2015 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	9,305,992.803	5.07%
TIAA-CREF International Bond Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	9,048,583.572	19.28%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	9,028,022.412	19.24%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	7,467,096.290	15.91%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	6,420,013.909	13.68%
	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	5,637,329.161	12.01%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	3,004,985.237	6.40%
TIAA-CREF International Equity Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	53,686,971.891	20.03%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	41,149,522.567	15.35%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	38,426,668.910	14.34%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	33,144,219.002	12.37%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	30,840,992.720	11.51%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	22,388,510.763	8.35%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	16,335,581.134	6.09%
International Equity Index Fund — Class W	TIAA-CREF Lifecycle Index 2040 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	70,426,595.351	17.30%
	TIAA-CREF Lifecycle Index 2045 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	61,804,781.824	15.18%
	TIAA-CREF Lifecycle Index 2035 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	59,212,819.762	14.54%
	TIAA-CREF Lifecycle Index 2050 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	53,558,210.958	13.15%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	50,363,563.537	12.37%
	TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	34,149,432.533	8.39%
	TIAA-CREF IMF Lifecycle Index Fund 2055 Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	31,510,522.742	7.74%
TIAA-CREF International Opportunities Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	29,372,375.272	19.98%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	22,533,321.320	15.33%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	21,052,422.045	14.32%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	18,154,739.456	12.35%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	16,930,956.386	11.52%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	12,307,192.664	8.37%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	8,989,883.436	6.12%
TIAA-CREF Quant International Small-Cap Equity Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	21,995,523.529	20.05%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	16,844,996.586	15.36%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	15,733,978.940	14.34%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	13,566,166.760	12.37%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	12,639,630.109	11.52%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	9,215,474.320	8.40%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	6,673,696.754	6.08%
TIAA-CREF Large-Cap Growth Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	23,175,168.892	20.18%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	17,771,462.324	15.48%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	16,565,042.444	14.42%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	14,322,407.317	12.47%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	13,311,051.939	11.59%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	9,700,136.449	8.45%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	7,067,074.739	6.15%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Large-Cap Value Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	21,332,233.156	20.15%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	16,347,911.909	15.44%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	15,248,861.123	14.40%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	13,168,909.667	12.44%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	12,249,365.098	11.57%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	8,914,897.644	8.42%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	6,485,488.922	6.13%
TIAA-CREF Short-Term Bond Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	20,827,114.761	23.54%
	TIAA-CREF IMF Lifecycle Fund #2020 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	18,960,850.329	21.43%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	14,947,541.890	16.89%
	TIAA-CREF IMF Lifecycle Fund #2015 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	11,082,689.772	12.52%
	TIAA-CREF IMF Lifecycle Fund #2010 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	11,004,078.889	12.44%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	6,183,840.440	6.99%
TIAA-CREF Short-Term Bond Index Fund — Class W	TIAA-CREF Lifecycle Index 2025 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3 rd Ave. New York, NY 10017-3206	30,622,131.232	27.04%
	TIAA-CREF Lifecycle Index 2030 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	24,376,891.761	21.52%
	TIAA-CREF Lifecycle Index 2020 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	22,940,426.205	20.26%
	TIAA-CREF Lifecycle Index 2015 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	10,052,503.776	8.88%
	TIAA-CREF Lifecycle Index 2035 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	9,760,632.305	8.62%
	TIAA-CREF Lifecycle Index 2010 Fund Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	8,585,942.991	7.58%
	TIAA-CREF Lifecycle Indx. Ret. Inc. Fd. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave. New York, NY 10017-3206	6,915,129.987	6.11%
TIAA-CREF Quant Small/Mid-Cap Equity Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	9,569,143.373	20.20%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	7,329,101.673	15.47%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	6,837,515.631	14.44%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	5,908,169.886	12.47%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	5,488,710.924	11.59%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	3,993,924.818	8.43%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	2,907,379.921	6.14%
TIAA-CREF Quant International Small-Cap Equity Fund — Class W	TIAA-CREF IMF Lifecycle Fund #2040 Attn: TIAA-CREF Mutual Fund Ops. 730 3 rd Ave. New York, NY 10017-3206	6,329,261.831	20.19%
	TIAA-CREF IMF Lifecycle Fund #2045 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	4,848,425.503	15.47%
	TIAA-CREF IMF Lifecycle Fund #2035 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	4,523,937.547	14.43%
	TIAA-CREF IMF Lifecycle Fund #2050 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	3,907,191.652	12.46%
	TIAA-CREF IMF Lifecycle Fund #2030 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	3,633,296.373	11.59%
	TIAA-CREF IMF Lifecycle Fund #2025 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	2,648,044.302	8.45%
	TIAA-CREF IMF Lifecycle Fund #2055 Attn: TIAA-CREF Mutual Fund Ops. 730 3rd Ave. New York, NY 10017-3206	1,925,439.109	6.14%
TIAA-CREF Green Bond Fund — Advisor Class	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	3,578,615.968	93.09%
TIAA-CREF Short Duration Impact Bond Fund — Advisor Class	Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	100,000.000	51.60%

Fund and Class	Shareholder Name and Address	Number of Shares Owned	Percentage Owned
TIAA-CREF Lifecycle Index 2065 Fund — Advisor Class	UBS WM USA 000 1101 6100 Omni Account M/F Spec. CDY A/C EBOC UBSFSI 1000 Harbor Blvd. Weehawken, NJ 07086-6761	48,705.899	25.13%
	JP Morgan Securities LLC Omnibus Account For the Exclusive Benefit of Customers 4 Chase Metrotech Center 3 rd Floor Mutual Fund Department Brooklyn, NY 11245-0003	22,797.262	11.76%
	LPL Financial Omnibus Customer Account Attn: Mutual Fund Trading PO Box 509046 San Diego, CA 92150-9046	10,869.006	5.61%
	Minnesota Life Insurance Company 400 Robert Street North Saint Paul, MN 55101-2099	171,443.151	72.19%
	Teachers Insurance & Annuity Assoc. Attn: TIAA-CREF Mutual Funds Ops. 730 3rd Ave., Ste. 2A New York, NY 10017-3207	50,000.000	21.05%

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