Investment Performance as of 6/30/2017

The performance data quoted represents past performance, and is no guarantee of future results. Your returns and the principal value of your investment will fluctuate so that your mutual fund shares and annuity account accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted. For performance current to the most recent month-end, call 800-842-2252 or visit TIAA.org/planinvestmentoptions and enter your plan ID. Performance may reflect waivers or reimbursements of certain expenses. Absent these waivers or reimbursement arrangements, performance results would have been lower. Since Inception performance shown is cumulative for periods less than one year.

<table>
<thead>
<tr>
<th>Equities - Variable Annuity</th>
<th>Morningstar Category</th>
<th>Inception Date</th>
<th>3 Month</th>
<th>YTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year/ Since Inception</th>
<th>Gross</th>
<th>Net</th>
<th>Fee Waiver Expiration</th>
<th>Shareholder Fees &amp; Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREF Stock Account (R2) (QCSTPX)</td>
<td>Large Blend</td>
<td>4/24/2015, 7/31/1952</td>
<td>3.89%</td>
<td>10.88%</td>
<td>19.08%</td>
<td>6.39%</td>
<td>12.12%</td>
<td>9.82%</td>
<td>0.43%</td>
<td>0.43%</td>
<td>$4.30</td>
<td>$4.30</td>
</tr>
<tr>
<td>Benchmark: CREF Stock Account Composite Index</td>
<td></td>
<td></td>
<td>3.86%</td>
<td>10.54%</td>
<td>19.17%</td>
<td>6.72%</td>
<td>12.50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Round Trip: If a round trip is made within 60 calendar days, exchanges into the same account will be restricted for 90 calendar days.</td>
</tr>
<tr>
<td>Benchmark: Russell 3000 Index</td>
<td></td>
<td></td>
<td>3.02%</td>
<td>8.93%</td>
<td>18.51%</td>
<td>9.10%</td>
<td>14.58%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Investment products, insurance and annuity products: are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.
### Money Market - Mutual Fund

<table>
<thead>
<tr>
<th>Money Market - Mutual Fund</th>
<th>Morningstar Category</th>
<th>Inception Date</th>
<th>7-Day Yield*</th>
<th>3 Month</th>
<th>YTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year/Since Inception</th>
<th>Gross</th>
<th>Net</th>
<th>Fee Waiver Expiration</th>
<th>Shareholder Fees &amp; Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard Federal Money Market Fund Investor Shares (VMFXX)</td>
<td>Money Market-Taxable</td>
<td>7/13/1981</td>
<td>0.87%</td>
<td>0.18%</td>
<td>0.30%</td>
<td>0.46%</td>
<td>0.22%</td>
<td>0.14%</td>
<td>0.61%</td>
<td>0.11%</td>
<td>$1.10</td>
<td>0.11%</td>
<td>-</td>
</tr>
<tr>
<td>Benchmark: Citi Treasury Bill 3 Mon USD</td>
<td></td>
<td></td>
<td>0.18%</td>
<td>0.30%</td>
<td>0.46%</td>
<td>0.20%</td>
<td>0.15%</td>
<td>0.51%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You could lose money by investing in a money market fund. Although a money market fund seeks to preserve the value of your investment at $1.00 per share, it cannot guarantee it will do so. An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. A money market fund's sponsor has no legal obligation to provide support to a money market fund, and you should not expect that the sponsor will provide financial support to a money market fund at any time.

* The current yield more closely reflects the earnings of this investment choice.

### Guaranteed - Fixed Annuity

<table>
<thead>
<tr>
<th>Guaranteed - Fixed Annuity</th>
<th>Inception Date</th>
<th>3 Month</th>
<th>YTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year</th>
<th>Since Inception</th>
<th>Rate</th>
<th>Guaranteed Minimum Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA Traditional Annuity - Group Supplemental Retirement Annuity</td>
<td></td>
<td>0.76%</td>
<td>1.57%</td>
<td>3.30%</td>
<td>3.31%</td>
<td>3.34%</td>
<td>3.57%</td>
<td>-</td>
<td>3.25%</td>
<td>3.00%</td>
</tr>
</tbody>
</table>

Additional Information:
The current rate shown applies to premiums remitted during the month of July 2017 and will be credited through 2/28/2018. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.

TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA’s claims paying ability.

For Group Supplemental Retirement Annuity (GSRA) contracts, and subject to the terms of your employer’s plan, lump-sum withdrawals and transfers are available from the TIAA Traditional account without any restrictions or charges. After termination of employment additional income options may be available including income for life, income for a fixed period of time, and IRS required minimum distribution payments.
<table>
<thead>
<tr>
<th>Guaranteed - Fixed Annuity</th>
<th>Inception Date</th>
<th>3 Month</th>
<th>YTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year</th>
<th>Since Inception</th>
<th>Rate</th>
<th>Guaranteed Minimum Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA Traditional Annuity - Retirement Choice Plus 7,8,9</td>
<td>6/1/2006</td>
<td>0.80%</td>
<td>1.66%</td>
<td>3.51%</td>
<td>3.54%</td>
<td>3.56%</td>
<td>3.68%</td>
<td>3.76%</td>
<td>3.50%</td>
<td>1.00%</td>
</tr>
</tbody>
</table>

**Additional Information:**
The current rate shown applies to premiums remitted during the month of July 2017 and will be credited through 2/28/2018. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.

TIAA Traditional guarantees your principal and a minimum annual interest rate. The current guaranteed minimum interest rate is 1.00% for premiums remitted in March 2017 through February 2018, and is effective through February 2018. The account also offers the opportunity for additional amounts in excess of the minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.

For Retirement Choice Plus (RCP) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals and transfers are available from the TIAA Traditional account without any surrender charges. For certain RCP contracts, any transfer from TIAA Traditional to a competing fund must first be directed to a non-competing fund for a period of 90 days. After 90 days, transfers may be made to a competing fund, including transferring back to TIAA Traditional. (TIAA Contract form IGRSP-02-ACC/TIAA Certificate form IGRSP-CERT3-ACC). After termination of employment additional income options may be available including income for life, income for a fixed period of time, and IRS required minimum distribution payments.

The Contractholder (typically your employer as the sponsor of your plan) has the right to remove TIAA Traditional as a plan option. If elected, the contract's entire TIAA Traditional accumulation will be paid out in 60 monthly installments, without any surrender charge and will be reinvested at the direction of your plan sponsor. Please refer to your contract certificate for additional details.

<table>
<thead>
<tr>
<th>Guaranteed - Fixed Annuity</th>
<th>Inception Date</th>
<th>3 Month</th>
<th>YTD</th>
<th>1 Year</th>
<th>3 Year</th>
<th>5 Year</th>
<th>10 Year</th>
<th>Since Inception</th>
<th>Rate</th>
<th>Guaranteed Minimum Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA Traditional Annuity - Supplemental Retirement Annuity 7,8,9</td>
<td>-</td>
<td>0.76%</td>
<td>1.57%</td>
<td>3.30%</td>
<td>3.31%</td>
<td>3.34%</td>
<td>3.57%</td>
<td>-</td>
<td>3.25%</td>
<td>3.00%</td>
</tr>
</tbody>
</table>

**Additional Information:**
The current rate shown applies to premiums remitted during the month of July 2017 and will be credited through 2/28/2018. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.

TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.

For Supplemental Retirement Annuity (SRA) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals and transfers are available from the TIAA Traditional account without any restrictions or charges. After termination of employment additional income options may be available including income for life, income for a fixed period of time, and IRS required minimum distribution payments.
A Note About Risk

Equity funds and variable annuity accounts generally carry a higher degree of risk than fixed income funds and accounts. This risk is heightened for funds and accounts that invest in small and mid-cap stocks and foreign securities. Fixed income funds and variable annuity accounts are not guaranteed and are subject to interest rate, inflation and credit risks. Funds and accounts that invest in non-investment grade securities (i.e. high-yield) present special risks, including significantly higher interest rate and credit risk. Variable annuity accounts that invest in real estate securities are subject to various risks, including fluctuation in property values, higher expenses or lower income than expected, and potential environmental problems and liability. Guaranteed investments offer a guaranteed rate of return but such guarantees are subject to the claims-paying ability of the issuing insurance company. More detailed information on risks applicable to a particular investment option can be found in the prospectus or other product literature.

Fees and Expenses

Fee and expense information for the variable return investment options include the Total Annual Operating Expenses expressed as a percentage and a dollar amount based upon a $1,000 accumulation both as net (after) and gross (before) of expenses. Total Annual Operating Expenses is a measure of what it costs to operate an investment, expressed as a percentage of its assets, as a dollar amount or in basis points. These are costs the investor pays through a reduction in the investment's rate of return.

For more information on the impact of fees and expenses associated with your plan, please visit TIAA.org/fees. Fees are only one of many factors to consider when making an investment decision.

About the Benchmark

A benchmark provides an investor with a point of reference to evaluate an investment's performance. One common type of benchmark used to compare investment performance is called an index. Indexes are unmanaged portfolios of securities designed to track the performance of a particular segment of the market. For example, a large cap stock fund or account will usually be compared to an index that tracks a portfolio of large-cap stocks. Conversely, a bond fund or account is typically compared to an index that tracks a portfolio of bonds that is comparable to the fund or account's portfolio in terms of credit quality, maturity and liquidity. Each mutual fund or account shown in the table includes performance information for an index that the advisor determined provides a fair comparison of the fund or account's investment performance. Indexes are for comparison purposes only. You cannot invest directly in any index. Index returns do not reflect a deduction for fees or expenses.

Data Providers

Unless otherwise noted, data on nonproprietary investment products, including performance, Morningstar Category and expenses, is provided by Morningstar, Inc. All other data provided by Teachers Insurance and Annuity Association of America - College Retirement Equities Fund. Benchmark performance shown across proprietary and nonproprietary funds/accounts is provided by TIAA with the exception of Since Inception periods calculated using a nonproprietary fund's inception date. TIAA reserves the rights to all proprietary data herein, and is not responsible for any damages or losses arising from any use of this information.

Important Information

1 When more than one inception date is shown, the performance displayed for periods prior to the investment's inception date is hypothetical. The second inception date is that of the fund/account to which such performance is based. Please refer to the investment's performance disclosure for more details.

2 Total annual expense deductions, which include investment advisory, administrative, and distribution (12b-1) expenses, and mortality and expense risk charges, are estimated each year based on projected expense and asset levels. Differences between actual expenses and the estimate are adjusted quarterly and are reflected in current investment results. Historically, adjustments have been small.

3 The Account's total annual expense deduction appears in the Account's prospectus, and may be different than that shown herein due to rounding. Please refer to the prospectus for further details.

4 The performance shown for Class R2 that is prior to its inception date is based on the performance of the Account's Class R1. The performance for these periods has not been restated to reflect the lower expenses of Class R2. If these lower expenses had been reflected, the performance of Class R2 for these periods would have been higher.

5 Accruals in funds not managed by TIAA may be subject to administrative charges. These charges are subject to change. Please review current documents related to your plan.

6 Closed to new investors.

7 The TIAA Traditional Annuity guarantees principal and a specified interest rate (based on TIAA's claims paying ability). It also offers the potential for greater growth through additional amounts, which may be declared on a year-by-year basis by the TIAA Board of Trustees. These additional amounts, when declared, remain in effect for the "declaration year" which begins each March 1. Additional amounts are not guaranteed. For more up to date information please visit your employer's microsite or TIAA.org. TIAA Traditional is a guaranteed insurance contract and not an investment for federal securities law purposes.

8 Accumulations are credited with interest based on when contributions and transfers are received, and your performance will reflect your pattern of contributions. The returns shown in the table reasonably represent what an individual making level monthly premiums would have historically earned over the time periods. Returns for different time periods are calculated in two steps: monthly performance returns are calculated from an accumulation created by a series of level monthly premiums over the prior 10 years (or the inception date of the product if later), and those monthly returns are linked together to determine historical performance for each of the return periods shown.

9 The Current Rates, Minimum Guaranteed Rates and Fees (if applicable) shown for guaranteed annuities are the rates in effect as of the first day of the month following quarter end. Depending upon the contract, these may apply to new money only or to both new money and existing accumulations. See your annuity contract or certificate for details.
This material is for informational or educational purposes only and does not constitute a recommendation or investment advice in connection with a distribution, transfer or rollover, a purchase or sale of securities or other investment property, or the management of securities or other investments, including the development of an investment strategy or retention of an investment manager or advisor. This material does not take into account any specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made in consultation with an investor’s personal advisor based on the investor’s own objectives and circumstances.

Mutual funds are offered through your plan sponsor’s retirement plan, which is recordkept by TIAA. Funds are offered at that day’s net asset value (NAV), and the performance is displayed accordingly. Performance at NAV does not reflect sales charges, which are waived through your retirement plan. If included, the sales charges would have reduced the performance as quoted.

Before making your investment choices and completing your enrollment form, you should consider the investment objectives, risks, charges and expenses carefully. Please call 877-518-9161 for paper copies of the product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

Unless otherwise noted, annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. TIAA-CREF Individual & Institutional Services, LLC, Teachers Personal Investors Services, Inc., and Nuveen Securities, LLC, Members FINRA and SIPC, distribute securities products.

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