

CREF Growth Account

Class R1

Equities

As of 3/31/2019

| | | | | | |
|--|------------------------------------|---------------------------|-------------------------|--|---|
| Account Net Assets \$26.62 Billion | Inception Date 4/29/1994 | CUSIP 194408209 | Symbol QCGRRX | Benchmark Index Russell 1000 Growth TR USD | Estimated Annual Expenses^{1,2} 0.53% |
|--|------------------------------------|---------------------------|-------------------------|--|---|

Investment Description

The Account seeks a favorable long-term rate of return, mainly through capital appreciation, primarily by investing in a diversified portfolio of common stocks that present the opportunity for exceptional growth. Under normal circumstances, the Account invests at least 80% of its assets in common stocks and equity securities. The Account invests primarily in large, well-known, established companies, especially those that have new or innovative products, services or processes that may enhance future earnings prospects. The Account is managed using three different investment strategies - active management, quantitative and indexing. The Account may invest up to 20% of its assets in foreign securities.

Morningstar Category

Large Growth

Morningstar Rating™

| Overall | 3 Years | 5 Years | 10 Years |
|---------|---------|---------|----------|
| ★★★★ | ★★★ | ★★★★ | ★★★★ |
| 1,256 | 1,256 | 1,114 | 805 |

The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics.

Learn More

For more information please contact:
800-842-2252
 Weekdays, 8 a.m. to 10 p.m. (ET),
 Saturdays, 9 a.m. to 6 p.m. (ET),
 or visit TIAA.org

Performance

| | Total Return | | Average Annual Total Return | | | | |
|----------------------------------|--------------|--------|-----------------------------|---------|---------|----------|-----------------|
| | 3 Months | YTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Inception |
| CREF Growth Account | 16.85% | 16.85% | 11.33% | 15.97% | 13.02% | 16.94% | 8.89% |
| Russell 1000 Growth TR USD | 16.10% | 16.10% | 12.75% | 16.53% | 13.50% | 17.52% | 9.75% |
| Morningstar Large Growth Average | 15.67% | 15.67% | 10.71% | 15.35% | 11.26% | 15.94% | - |

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 accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may differ from figures shown. For performance current to the most recent month-end, call 800-842-2252. Performance may reflect waivers or reimbursements of certain expenses. Absent these waivers or reimbursement arrangements, performance may be lower.

¹ 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.

² 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.

Hypothetical Growth of \$10,000

The chart illustrates the performance of a hypothetical \$10,000 investment on March 31, 2009 and redeemed on March 31, 2019.

| | |
|------------------------------|----------|
| — CREF Growth Account | \$47,841 |
| — Russell 1000 Growth TR USD | \$50,230 |



The total returns are not adjusted to reflect sales charges, the effects of taxation or redemption fees, but are adjusted to reflect actual ongoing expenses, and assume reinvestment of dividends and capital gains, net of all recurring costs.



| Portfolio Composition (As of 3/31/19) | | Top 10 Holdings ⁴ (As of 3/31/19) | | Portfolio Statistics | | |
|---|-----------------|--|-----------------|---|-----------|-----------|
| Sector | % of Net Assets | Holding | % of Net Assets | | Portfolio | Benchmark |
| Information Technology | 34.14% | Alphabet Inc | 5.99% | Alpha (3 Yr)* | -0.94 | - |
| Communication Services | 15.85% | Microsoft Corp | 5.98% | Beta (3 Yr)* | 1.03 | - |
| Consumer Discretionary | 15.83% | Amazon.com Inc | 5.38% | EPS Growth (1 Yr Forecast) | 11.13% | 8.52% |
| Health Care | 12.48% | Apple Inc | 3.96% | Market Cap – \$-Weighted Median | \$106.10 | \$115.95 |
| Industrials | 9.30% | Facebook Inc | 3.83% | Market Cap – \$-Wtd Avg – \$ billions | \$272.27 | \$291.06 |
| Consumer Staples | 4.49% | Visa Inc | 2.93% | P/E Ratio (1 Yr Forecast) | 26.59 | 22.32 |
| Financials | 3.93% | Intuit Inc | 2.77% | Price/Book | 6.18 | 7.42 |
| Materials | 2.10% | salesforce.com Inc | 2.70% | R Squared (3 Yr)* | 0.99 | - |
| Energy | 0.76% | PayPal Holdings Inc | 2.52% | Return on Equity (5 Yr Average) | 21.43% | 25.10% |
| Real Estate | 0.61% | Mastercard Inc | 1.73% | Sharpe Ratio (3 Yr)* | 1.17 | 1.26 |
| Short-Term Investments, Other Assets & Liabilities, Net | 0.51% | | | Standard Deviation (3 Yr Annualized)* | 12.66 | 12.19 |
| | | Holdings by Company Size (As of 3/31/19) | | Turnover As of 12/31/17 | 48.0% | - |
| | | % of Equity Investments | | # Holdings | 595 | - |
| | | Over \$50 Billion | 61.91% | Please refer to Portfolio Statistics Definitions section. | | |
| | | \$15 Billion - \$50 Billion | 27.80% | *risk statistic | | |
| | | \$2 Billion - \$15 Billion | 10.22% | | | |
| | | \$300 Million - \$2 Billion | 0.07% | | | |
| | | Under \$300 Million | 0.00% | | | |
| Current Asset Allocation ³ (As of 3/31/19) | | | | | | |
| | % of Net Assets | | | | | |
| U.S. Equity | 93.38% | | | | | |
| International Equity | 6.11% | | | | | |
| Short-Term Investments, Other Assets & Liabilities, Net | 0.51% | | | | | |

About the Benchmark

The index measures the performance of the large-cap growth segment of the US equity securities. It includes the Russell 1000 index companies with higher price-to-book ratios and higher forecasted growth values. It is market-capitalization weighted. Russell Investment Group is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group. Index returns do not reflect a deduction for fees or expenses. You cannot invest directly in any index.

Important Information

³ Securities lending may be utilized, and in such cases the collateral is included in the Short-Term assets shown.
⁴ The top 10 holdings are subject to change and may not be representative of the fund's current or future investments. The holdings listed only include the fund's long-term investments and may exclude any temporary cash investments and equity index products. Top holdings by issuer (for other than Fixed Income) includes the underlying ordinary shares combined with any depositary receipts, preferred shares, contract for differences (CFDs), rights, options and warrants as applicable. The holdings listed should not be considered a recommendation to buy or sell a particular security.

College Retirement Equities Fund (CREF), New York, NY, issues annuity contracts and certificates.

This material is for informational or educational purposes only and does not constitute investment advice under ERISA. 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 based on the investor's own objectives and circumstances.

Investment, 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.

TIAA-CREF Individual & Institutional Services, LLC, Teachers Personal Investors Services, Inc., and Nuveen Securities, LLC, Members FINRA and SIPC, distribute securities products. You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877-518-9161 for a prospectus that contains this and other information. Please read the prospectus carefully before investing.

Morningstar Disclosure

Morningstar Rating and Morningstar Style Box (if shown), category information and risk disclosures provided by Morningstar, Inc. ©2019 Morningstar, Inc. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Neither TIAA nor its affiliates has independently verified the accuracy or completeness of this information.

The Morningstar Category classifies a fund based on its investment style as measured by underlying portfolio holdings (portfolio statistics and compositions over the past three years). If the fund is new and has no portfolio, Morningstar estimates where it will fall before assigning a more permanent category. When necessary, Morningstar may change a category assignment based on current information.

The Morningstar Rating™– or “star rating”– is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. The rating is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods. Where applicable, ratings are based on linked performance that considers the differences in expense ratios. The Morningstar Rating™ is for individual share classes only. Other classes may have different performance characteristics.

A Note About Risks

This variable annuity account is subject to a number of risks, which include the following:

Active Management: The investment is actively managed and subject to the risk that the advisor's usage of investment techniques and risk analyses to make investment decisions fails to perform as expected, which may cause the portfolio to lose value or underperform investments with similar objectives and strategies or the market in general. **Event-Driven Investment/Arbitrage Strategies:** Arbitrage strategies involve investment in multiple securities with the expectation that their prices will converge at an expected value. These strategies face the risk that the advisor's price predictions will not perform as expected. Investing in event-driven or merger arbitrage strategies may not be successful if the merger, restructuring, tender offer, or other major corporate event proposed or pending at the time of investment is not completed on the terms contemplated. **Foreign Securities:** Investments in foreign securities may be subject to increased volatility as the value of these securities can change more rapidly and extremely than can the value of U.S. securities. Foreign securities are subject to increased issuer risk because foreign issuers may not experience the same degree of regulation as U.S. issuers do and are held to different reporting, accounting, and auditing standards. In addition, foreign securities are subject to increased costs because there are generally higher commission rates on transactions, transfer taxes, higher custodial costs, and the potential for foreign tax charges on dividend and interest payments. Many foreign markets are relatively small, and securities issued in less-developed countries face the risks of nationalization, expropriation or confiscatory taxation, and adverse changes in investment or exchange control regulations, including suspension of the ability to transfer currency from a country. Economic, political, social, or diplomatic developments can also negatively impact performance. **Growth Investing:** Growth securities may be subject to increased volatility as the value of these securities is highly sensitive to market fluctuations and future earnings expectations. These securities typically trade at higher multiples of current earnings than do other securities and may lose value if it appears their earnings expectations may not be met. **Index Correlation/Tracking Error:** A portfolio that tracks an index is subject to the risk that certain factors may cause the portfolio to track its target index less closely, including if the advisor selects securities that are not fully representative of the index. The portfolio will generally reflect the performance of its target index even if the index does not perform well, and it may underperform the index after factoring in fees, expenses, transaction costs, and the size and timing of shareholder purchases and redemptions. **Issuer:** A stake in any individual security is subject to the risk that the issuer of that security performs poorly, resulting in a decline in the security's value. Issuer-related declines may be caused by poor management decisions, competitive pressures, technological breakthroughs, reliance on suppliers, labor problems or shortages, corporate restructurings, fraudulent disclosures, or other factors. Additionally, certain issuers may be more sensitive to adverse issuer, political, regulatory, market, or economic developments. **Large Cap:** Concentrating assets in large-capitalization stocks may subject the portfolio to the risk that those stocks underperform other capitalizations or the market as a whole. Large-cap companies may be unable to respond as quickly as small- and mid-cap companies can to new competitive pressures and may lack the growth potential of those securities. Historically, large-cap companies do not recover as quickly as smaller companies do from market declines. **Long-Term Outlook and Projections:** The investment is intended to be held for a substantial period of time, and investors should tolerate fluctuations in their investment's value. **Loss of Money:** Because the investment's market value may fluctuate up and down, an investor may lose money, including part of the principal, when he or she buys or sells the investment. **Market/Market Volatility:** The market value of the portfolio's securities may fall rapidly or unpredictably because of changing economic, political, or market conditions, which may reduce the value of the portfolio. **Mid-Cap:** Concentrating assets in mid-capitalization stocks may subject the portfolio to the risk that those stocks underperform other capitalizations or the market as a whole. Mid-cap companies may be subject to increased liquidity risk compared with large-cap companies and may experience greater price volatility than do those securities because of more-limited product lines or financial resources, among other factors. **Not FDIC Insured:** The investment is not a deposit or obligation of, or guaranteed or endorsed by, any bank and is not insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other U.S. governmental agency. **Quantitative Investing:** Holdings selected by quantitative analysis may perform differently from the market as a whole based on the factors used in the analysis, the weighting of each factor, and how the factors have changed over time. **Small Cap:** Concentrating assets in small-capitalization stocks may subject the portfolio to the risk that those stocks underperform other capitalizations or the market as a whole. Smaller, less-seasoned companies may be subject to increased liquidity risk compared with mid- and large-cap companies and may experience greater price volatility than do those securities because of limited product lines, management experience, market share, or financial resources, among other factors.

Portfolio Statistics Definitions

Alpha (3 Yr) is a risk statistic used to measure performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of an investment and compares its risk-adjusted performance to a benchmark. The risk-adjusted excess return of the investment relative to the return of the benchmark is an investment's alpha.

Beta (3 Yr) is a risk statistic used to measure the magnitude of past share-price fluctuations in relation to the ups and downs of the overall market (or appropriate market index). If a security has a beta greater than 1, that security's price can be expected to be more volatile than the market.

EPS Growth (1 Yr Forecast) is the rate at which earnings per share are projected to grow during the upcoming twelve months. This forecast is not indicative of the investment's future performance.

Market Cap – \$-Weighted Median is a measure of the market value of a portfolio's investments using the median (middle) holding as determined by dollars invested. Half of the portfolio's assets are invested in companies larger than the median, and half are in companies smaller than the median. Holdings with a larger percentage of net assets in the portfolio are assigned a greater weight.

MarketCap – \$-Wtd Avg – \$ billions is a measure of the size of the portfolio's equity holdings using the average holding as determined by dollars invested. Holdings with a larger percentage of net assets in the portfolio are assigned a greater weight.

P/E Ratio (1 Yr Forecast) is the price of a stock divided by its forecasted earnings per share for the next 12-month period.

Price/Book is the ratio of a stock's total market capitalization to the company's net assets.

R Squared (3 Yr) is a risk statistic that measures how much of an investment's performance can be explained by the returns from the overall market (or benchmark index). If an investment's total return precisely matched that of the overall market or benchmark, its R squared would be 1.00. If an investment's return bore no relationship to the market's returns, its R squared would be 0.

Return on Equity (5 Yr Average) relates a company's profitability to its shareholders' equity. A high ROE indicates that the portfolio is invested in companies that historically have been quite profitable, though care should be taken when using this number because it can be impacted, positively or negatively, by how much a firm's assets are financed with debt as opposed to equity.

Sharpe Ratio (3 Yr) is a risk statistic used to measure the excess return per unit of risk in an investment asset. The higher the Sharpe ratio, the better the return. Excess return is the rate of return above and beyond the risk-free rate, which is usually the T-bill rate, or in excess of a market measure, such as an index fund.

Standard Deviation (3 Yr Annualized) is a risk statistic that measures an investment's past volatility, based on a sample. The higher the standard deviation, the higher the volatility. It is not a measure of performance and should not be considered relative to an investment's annual returns. Please note that past standard deviation is not a predictor of future volatility or risk.

Turnover is calculated by dividing the lesser of purchases or sales by the average value of portfolio assets during a period. Turnover is based on the portfolio's fiscal year end and is not annualized if the reporting period covers less than 12 months. If a turnover rate is not shown, it typically indicates a newly operational fund that has not yet been required to report turnover in its regulatory filings or, more rarely, the turnover rate was 0.00%.

Holdings refers to the total number of individual security positions held in a portfolio on a given date.