

Summary Prospectus May 1, 2020 (as revised August 1, 2020)



# American Century Investments<sup>®</sup> VP Capital Appreciation Fund

**Class I:** AVCIX  
**Class II:** AVCWX  
**Class Y:** AVCYX

Before you invest, you may want to review the fund's prospectus, which contains more information about the fund and its risks. You can find the fund's prospectus, reports to shareholders, and other information about the fund online at the web addresses listed below. You can also get this information at no cost by calling or sending an email request. The fund's prospectus and other information are also available from insurance companies through which shares of the fund may be purchased or sold.

Beginning on January 1, 2021, as permitted by regulations adopted by the Securities and Exchange Commission, you may not be receiving paper copies of the fund's shareholder reports from the insurance company that offers your contract unless you specifically request paper copies from your insurance company or from your financial intermediary. Instead, the shareholder reports will be made available on a website, and your insurance company will notify you by mail each time a report is posted and provide you with a website link to access the report. Instructions for requesting paper copies will be provided by your insurance company.

If you already elected to receive shareholder reports electronically, you will not be affected by this change and you need not take any action. You may elect to receive shareholder reports and other communications from your insurance company electronically by following the instructions provided by your insurance company.

You may elect to receive all future reports in paper free of charge from your insurance company. If your insurance company informs you that future reports will be delivered via web access, you can inform your insurance company that you wish to continue receiving paper copies of your shareholder reports by following the instructions provided by your insurance company or by contacting your financial intermediary. Your election to receive reports in paper will apply to all portfolio companies available under your contract.

#### **Retail Investors**

americancentury.com/vp-prospectus  
1-800-345-2021 or 816-531-5575  
prospectus@americancentury.com

#### **Financial Professionals**

americancentury.com/fa-prospectus  
1-800-345-6488  
advisor\_prospectus@americancentury.com

This summary prospectus incorporates by reference the fund's [prospectus and statement of additional information](#) (SAI), each dated May 1, 2020 (as supplemented at the time you receive this summary prospectus), as well as the Report of Independent Registered Public Accounting Firm and the financial statements included in the fund's [annual report](#) to shareholders, dated December 31, 2019. The fund's SAI and annual report may be obtained, free of charge, in the same manner as the prospectus.

## **Investment Objective**

This fund seeks capital growth.

## Fees and Expenses

The following table describes the fees and expenses you may pay if you buy and hold shares of the fund. The table does not include the fees and expenses associated with your variable annuity or variable life insurance contract. Had they been included, fees and expenses presented below would have been higher. For information regarding the fees and expenses associated with your variable annuity or variable life insurance contract, please refer to your insurance product prospectus.

| <b>Annual Fund Operating Expenses</b> (expenses that you pay each year as a percentage of the value of your investment) |                |                 |                |
|---|----------------|-----------------|----------------|
|   | <i>Class I</i> | <i>Class II</i> | <i>Class Y</i> |
| Management Fee  | 1.00%          | 0.90%           | 0.65%          |
| Distribution and Service (12b-1) Fees   | None           | 0.25%           | None           |
| Other Expenses  | 0.00%          | 0.00%           | 0.00%          |
| Total Annual Fund Operating Expenses  | 1.00%          | 1.15%           | 0.65%          |
| Fee Waiver <sup>1</sup>   | 0.07%          | 0.07%           | 0.07%          |
| Total Annual Fund Operating Expenses After Fee Waiver   | 0.93%          | 1.08%           | 0.58%          |

<sup>1</sup> The advisor has agreed to waive 0.07 percentage points of the fund's management fee. The advisor expects this waiver to continue until July 31, 2021 and cannot terminate it prior to such date without the approval of the Board of Directors.

## Example

The example below is intended to help you compare the costs of investing in the fund with the costs of investing in other mutual funds. The example does not include fees and expenses associated with your variable annuity or variable life insurance contract. Had they been included, fees and expenses would have been higher. The example assumes that you invest \$10,000 in the fund for the time periods indicated and then redeem all of your shares at the end of those periods and that you earn a 5% return each year. The example also assumes that the fund's operating expenses remain the same, except that it reflects the rate and duration of any fee waivers noted in the table above. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

|          | <i>1 year</i> | <i>3 years</i> | <i>5 years</i> | <i>10 years</i> |
|----------|---------------|----------------|----------------|-----------------|
| Class I  | \$95          | \$312          | \$546          | \$1,218         |
| Class II | \$110         | \$359          | \$627          | \$1,391         |
| Class Y  | \$59          | \$201          | \$356          | \$804           |

## Portfolio Turnover

The fund pays transaction costs, such as commissions, when it buys and sells securities (or "turns over" its portfolio). A higher portfolio turnover rate may indicate higher transaction costs. These costs, which are not reflected in annual fund operating expenses or in the example, affect the fund's performance. During the most recent fiscal year, the fund's portfolio turnover rate was 94% of the average value of its portfolio.

## Principal Investment Strategies

The portfolio managers look for stocks of medium-sized companies they believe will increase in value over time, using an investment strategy developed by the fund's investment advisor. In implementing this strategy, the portfolio managers make their investment decisions based primarily on their analysis of individual companies, rather than on broad economic forecasts. Management of the fund is based on the belief that durable franchises in a growing industry can sustain above average earnings growth. Under normal market conditions, the fund's portfolio will primarily consist of securities of companies with attractive returns on invested capital that are demonstrating business improvement. Analytical indicators helping to identify signs of business improvement could include accelerating earnings or revenue growth rates, increasing cash flows, or other indications of the relative strength of a company's business. These techniques help the portfolio managers buy or hold the stocks of companies they believe have favorable growth prospects and sell the stocks of companies whose characteristics no longer meet their criteria.

The fund will usually purchase common stocks of companies that are medium-sized at the time of purchase, but it will purchase securities of smaller- and larger-sized companies as well.

Also, although the portfolio managers intend to invest the fund's assets primarily in U.S. securities, the fund may invest in securities of foreign companies when these securities meet the portfolio managers' standards of selection.

The fund may write covered calls on a portion of the fund's holdings in common stock when the portfolio managers believe call premiums are attractive relative to the price of the underlying security.

## Principal Risks

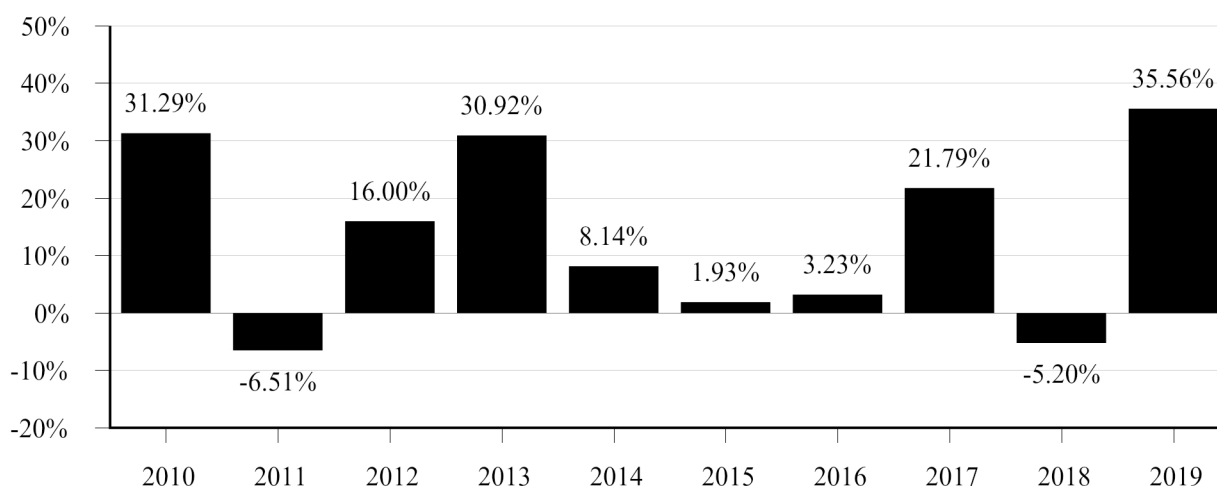
- **Growth Stocks** – Investments in growth stocks may be more volatile than other stocks and the overall stock market. These stocks are typically priced higher than other stocks because of their growth potential, which may or may not be realized.
- **Mid Cap Stocks** – The fund invests in mid-sized and smaller companies, which may be more volatile and subject to greater risk than larger companies. Smaller companies may have limited financial resources, product lines and markets, and their securities may trade less frequently and in more limited volumes than the securities of larger companies, which could lead to higher transaction costs.
- **Style Risk** – If at any time the market is not favoring the fund’s growth investment style, the fund’s gains may not be as big as, or its losses may be bigger than, those of other equity funds using different investment styles.
- **Foreign Securities** – The fund may invest in foreign securities, which can be riskier than investing in U.S. securities. Securities of foreign issuers may be less liquid, more volatile and harder to value than U.S. securities.
- **Covered Call Risk** – Writing covered calls may limit the fund’s ability to participate in price increases of the underlying securities and could lower the fund’s return.
- **Price Volatility** – The value of the fund’s shares may fluctuate significantly in the short term.
- **Market Risk** – The value of the fund’s shares will go up and down based on the performance of the companies whose securities it owns and other factors generally affecting the securities market. Market risks, including political, regulatory, economic and social developments, can affect the value of the fund’s investments. Natural disasters, public health emergencies, terrorism and other unforeseeable events may lead to increased market volatility and may have adverse long-term effects on world economies and markets generally.
- **Redemption Risk** – The fund may need to sell securities at times it would not otherwise do so in order to meet shareholder redemption requests. Selling securities to meet such redemptions may cause the fund to experience a loss or increase the fund’s transaction costs. To the extent that an insurance company has a large position in the fund, the fund may experience relatively large redemptions if such insurance company reallocates its assets.
- **Principal Loss** – At any given time your shares may be worth less than the price you paid for them. In other words, it is possible to lose money by investing in the fund.

An investment in the fund is not a bank deposit, and it is not insured or guaranteed by the Federal Deposit Insurance Corporation (FDIC) or any other government agency.

## Fund Performance

The following bar chart and table provide some indication of the risks of investing in the fund. The bar chart shows changes in the fund’s performance from year to year for Class I shares. The table shows how the fund’s average annual returns for the periods shown compared with those of a broad measure of market performance. Fees associated with your variable annuity or variable life insurance contract are not reflected in the chart or table below. Had they been included, returns presented below would have been lower. The fund’s past performance is not necessarily an indication of how the fund will perform in the future.

### Calendar Year Total Returns



**Highest Performance Quarter (1Q 2019): 19.77%**

**Lowest Performance Quarter (3Q 2011): -20.18%**

| <b>Average Annual Total Returns</b><br><i>For the calendar year ended December 31, 2019</i> | <i>1 year</i> | <i>5 years</i> | <i>10 years</i> | <i>Since Inception</i> | <i>Inception Date</i> |
|---|---------------|----------------|-----------------|------------------------|-----------------------|
| <b>Class I</b>  | 35.56%        | 10.49%         | 12.74%          | —                      | 11/20/1987            |
| <b>Class II<sup>1</sup></b>   | 35.32%        | 10.31%         | 12.57%          | —                      | 04/25/2014            |
| <b>Class Y</b>  | 36.02%        | —              | —               | 15.25%                 | 09/22/2017            |
| Russell Midcap® Growth Index<br>(reflects no deduction for fees, expenses or taxes)         | 35.47%        | 11.60%         | 14.23%          | —                      | —                     |

<sup>1</sup> Historical performance for Class II prior to its inception is based on the performance of Class I shares. Class II performance has been adjusted to reflect differences in expenses between classes.

## **Portfolio Management**

### **Investment Advisor**

American Century Investment Management, Inc.

### **Portfolio Managers**

**Rob Brookby**, Vice President and Senior Portfolio Manager, has been a member of the team that manages the fund since 2018.

**Nalin Yogasundram**, Portfolio Manager, has been a member of the team that manages the fund since 2013.

## **Purchase and Sale of Fund Shares**

The fund only offers shares through insurance company separate accounts. For instructions on how to purchase and redeem shares through your separate account, read the prospectus provided by your insurance company. Orders for fund shares will be priced at the net asset value next determined after the order is received in the form required by the agreement between the fund, its investment advisor and/or its distributor and the insurance company from which you have purchased your separate account. There are no sales commissions or redemption charges. However, certain sales or deferred sales charges and other charges may apply to the variable annuity or life insurance contracts. Those charges are disclosed in the separate account prospectus.

## **Tax Information**

Consult the prospectus of your insurance company separate account for a discussion of the tax status of your variable contract.

## **Payments to Broker-Dealers and Other Financial Intermediaries**

The fund is offered as an underlying investment option for variable annuity or life insurance contracts. The fund and its related companies pay the sponsoring insurance company and its related companies for distribution and other services. These payments may influence the insurance company to include the fund over another investment as an option in its products. Ask your salesperson or visit your insurance company's website for more information.