

June 2018 | TIAA-CREF Life Insurance Company

Quarterly Investment Guide

for The Intelligent Variable Annuity®



This material must be preceded or accompanied by a current product and underlying fund prospectus. Additional copies of the prospectuses can be obtained by calling 877-694-0305 or by visiting TIAA.org/prospectuses.

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Chicago-based Morningstar, Inc. is a leading provider of investment information, research, and analysis. Its extensive line of Internet, software, and print products provides unbiased data and commentary on mutual

funds, U.S. and international equities, closed-end funds, and variable annuities. Established in 1984, Morningstar continues to be the industry's most trusted source on key investment issues of the day.



Morningstar Tools

The Investment Profile Page User's Guide

This guide will help you use the Morningstar Investment Profile to your advantage. For more information, we recommend you read all disclosure information before investing.

Release Date: 12-31-2011

ABC Equity Subaccounts Advanced Profile Perf Disclosure

Benchmark
Russell Top 200 Growth

Category
Large-cap Growth

Overall Morningstar Rating™
★★★★★

Out of 220 Fund Category Investments. A fund's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure for details.

Morningstar Return
Above Average

Morningstar Risk
Average

Investment Information

Investment Strategy from investment's prospectus

Medusa conubium santet rures. Ossifragi deciperet pessimus fragilis cathedras, et gulosus fiducias comumperet fragilis agricolae. Aegre verecundus syrtes vix forititer amputat cathedras. Saburru incredibiliter spinosus insectat quinquennalis catelli, etiam fragilis ossifragi adquireret rures, ut gulosus syrtes praemuniet agricolae. Chirographi vocificat concubine.

Quadruprei miscere quinquennalis catelli. Gulosus fiducias praemuniet chirographi, semper cathedras amputat quadruprei. Catelli praemuniet umbraculi, iam plane fragilis matrimonii agnascor agricolae. Saetosus quadruprei corrumperet satis perspicax saburru, semper Octavius verecunde insectat quadruprei, utunque quinquennalis oratori miscere pretiosus matrimonii.

Morningstar Proprietary Statistics

	YTD	1-Year	3-Year	5-Year	10-Year
Morningstar Rating	---	---	★★★★	★★★★★	---
Fund Rank Percentile	000	000	000	000	---
Out of # of Investments	000	000	000	000	---

Portfolio Analysis

Composition as of 12-31-11

	% Assets
U.S. Stocks	66.9
Non-U.S. Stocks	0.0
Bonds	169.8
Cash	-137.7
Other	1.0
Total	100.0

Morningstar Equity Style Box™ as of 12-31-11

	% Mkt Cap
Value	0.0
Blend	0.0
Growth	0.0
Micro	0.0
Small	0.0
Medium	0.0
Large	0.0
Giant	0.0

Operations

Subacct Incep Date	01-01-01
Undr. Fund Incep Date	01-01-01
Subacct Adoption Date	01-01-01
Prosp Net Exp Ratio	0.00%
Prosp Gross Exp Ratio	0.00%
Advisor	XYZ Trust Investments, Inc.
Subadvisor	None
Portfolio Managers	John Doe Jane Doe

Top 20 Holdings as of 12-31-11

	% Assets
Halliburton	0.00
Sprint	0.00
Conocco CI A	0.00
BP PLC ADR	0.00
Motorola	0.00
Reliant Energy	0.00
Schlumberger	0.00
International Paper	0.00
Sara Lee	0.00
Federated Dept. Stores	0.00
Reliant Energy	0.00
Schlumberger	0.00
International Paper	0.00
Sara Lee	0.00
Federated Dept. Stores	0.00
Reliant Energy	0.00
Schlumberger	0.00
International Paper	0.00
Sara Lee	0.00
Federated Dept. Stores	0.00

Statistics as of 12-31-11

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	0.00	0.00	0.00
P/B Ratio	0.00	0.00	0.00
P/C Ratio	0.00	0.00	0.00
GeoAvgCap(\$mil)	0.00	0.00	0.00

Investment Manager

Catelli praemuniet umbraculi, iam plane fragilis matrimonii. Rures negligenter praemuniet oratori, utunque utilitas catelli miscere aegre lascivius fiducias. Quadruprei fermentet fragilis saburru. Chirographi adquireret tremulus umbraculi, ut suis conubium santet umbraculi. Vix adlaudabilis saburru senesceret apparatus bellis. Pessimus perspicax catelli optimus forititer insectat matrimonii, etiam zothecas fermentet Octavius. Chirographi circumgrediet concubine.

Volatility Analysis

Category	Investment
Low	Investment
Moderate	Investment
High	Investment

In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Risk Measures as of 12-31-11

	Port Avg	Rel S&P 500	Rel Cat
3-Yr Std Dev	0.00	0.00	0.00
3-Yr Beta	0.00	0.00	0.00
3-Yr Sharpe Ratio	0.00	0.00	0.00
3-Yr Alpha	0.00	0.00	0.00
3-Yr R-Squared	0.00	0.00	0.00

Morningstar Equity Sectors as of 12-31-11

	% Fund
Cyclical	0.0
Basic Materials	0.0
Consumer Cyclical	0.0
Financial Services	0.0
Real Estate	0.0
Sensitive	0.0
Communication Services	0.0
Energy	0.0
Industrials	0.0
Technology	0.0
Defensive	0.0
Consumer Defensive	0.0
Healthcare	0.0
Utilities	0.0

Portfolio Holdings

Total Number of Stock Holdings	0
Total Number of Bond Holdings	0
Annual Turnover Ratio %	0
Total Fund Assets (\$mil)	0,000.00

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1 Header Benchmark: The name of the index against which the fund is being compared.

Morningstar Category: In an effort to distinguish funds by what they own, as well as by their prospectus objectives and styles, Morningstar developed the Morningstar Categories. While the prospectus objective identifies a fund's investment goals based on the wording in the fund prospectus, the Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings (portfolio statistics and compositions over the past three years). If the fund is new and has no portfolio, we estimate where it will fall before assigning a more permanent category. When necessary, Morningstar may change a category assignment based on current information.

2 Morningstar Rating™ See "How to Use the Morningstar Rating."

3 Investment Strategy For variable annuity/life products, this is a summary of the Investment Objectives and Policy section found in every prospectus. It states the objective of the fund and how the manager(s) intend to invest to achieve this objective. It includes any limitations to the fund's investment policies, as well as any share class structure differences, previous names, mergers, liquidation, and opening and closing information.

4 Operations Subaccount Inception Date: The date on which the subaccount began its operations.

Underlying Fund Inception Date: The date on which the fund that underlies the subaccount began its operations. Funds with long track records offer more history by which investors can assess overall fund performance.

Subaccount Adoption Date: The Variable Annuity Subaccount Adoption Date is the date which the underlying fund first appeared in the separate account. This date may be on or before the subaccount inception into the

variable annuity policy. The subaccount adoption indicates the start date for SEC Standardized Returns.

For VUL funds, the Subaccount Adoption Date is not shown because it does not correspond to any performance on the page.

Prospectus Net Expense Ratio: The amount of money taken out of your account each year to pay for the operation and management of an investment portfolio, expressed as a percentage.

Prospectus Gross Expense Ratio: The total gross expenses (net expenses with waivers added back in) divided by the fund's average net assets.

Advisor: The company that takes primary responsibility for managing the fund.

Subadvisor: In some cases, the advisor employs another company, called the subadvisor, to handle the fund's day-to-day management. In these instances, the portfolio manager generally works for the fund's subadvisor, and not the advisor.

Portfolio Manager(s): The name of the person who determines which stocks or bonds belong in the investment portfolio.

5 Investment Manager A description of the company that takes primary responsibility for managing the fund.

6 Volatility Analysis We classify investment portfolios as having one of three volatility levels relative to all types of mutual funds: Low, Moderate, and High. Investments with wider ranges of returns are labeled "high," as they are considered riskier than "low" volatility investments, which have had smaller ranges of returns. We also show where the portfolio's category lands. For portfolios that haven't been in existence for three years, we simply show the category average.

7 Morningstar Proprietary Statistics See "How to Use the Morningstar Rating." The Fund Rank Percentile shown provides a standardized way of ranking returns of funds with the same Morningstar Category.

8 Composition See "How to Use Morningstar's Composition Graphics."

9 Morningstar® Style Box™ See "How to Use the Morningstar Style Box."

10 Statistics Price/Earnings Ratio: The price to prospective earnings yield for a fund is the asset-weighted average of the prospective earnings yields of all the domestic stocks in the fund's portfolio as of the date of the portfolio. A stock's prospective earnings yield is calculated by dividing the company's estimated earnings per share for the current fiscal year by the company's month-end share price as of the portfolio date. In computing the fund's average, Morningstar weights each portfolio holding by the percentage of domestic equity assets it represents; therefore, larger positions have proportionately greater influence on the fund's aggregate earnings yield. The reciprocal can also be expressed as a price/prospective earnings ratio.

Price/Book Ratio: The price to prospective book value yield for a fund is the asset-weighted average of the prospective book value yields of all the domestic stocks in the fund's portfolio as of the date of the portfolio. A stock's prospective book value yield is calculated by dividing the company's estimated shareholders' equity per share for the current fiscal year by the company's month-end stock price as of the portfolio date. In computing the fund's average, Morningstar weights each portfolio holding by the percentage of domestic equity assets it represents; therefore, larger positions have proportionately greater influence on the fund's aggregate book value yield. The reciprocal can also be expressed as a price/book ratio.

Price/Cash Ratio: The price to prospective cash flow represents the weighted average of the price/cash-flow ratios of the stocks in a

fund's portfolio. Price/cash-flow represents the amount an investor is willing to pay for a dollar generated from a particular company's operations. Price/cash-flow shows the ability of a business to generate cash and acts as a gauge of liquidity and solvency. Because accounting conventions differ among nations, reported earnings (and P/E ratios) may not be comparable across national boundaries. Price/cash-flow attempts to provide an internationally-standard measure of a firm's stock price relative to its financial performance.

Geometric Average Cap \$mil: Morningstar defines the overall "size" of a stock fund's portfolio as the geometric mean of the market capitalization for all of the stocks it owns. It's calculated by raising the market capitalization of each stock to a power equal to that stock's stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as average market capitalization. For example, if a fund currently held equal stakes in three stocks, with market capitalizations of \$2 billion, \$10 billion, and \$25 billion, the geometric mean would equal:

$$(\$2 \text{ billion } 1/3) \times (\$10 \text{ billion } 1/3) \times (\$25 \text{ billion } 1/3) = \$7.94 \text{ billion}$$

This number is different from the fund's median market cap—the capitalization of the median stock in its portfolio. The geometric mean better identifies the portfolio's "center of gravity." That is, it provides more accurate insight into how market trends (as defined by capitalization) might affect the portfolio.

11 Risk Measures Standard deviation: is a statistical measure of the volatility of the fund's returns.

Beta: is a measure of a fund's sensitivity to market movements. A portfolio with a beta greater than 1 is more volatile than the market and a portfolio with a beta less than 1 is less volatile than the market.

Sharpe ratio: uses standard deviation and excess return to determine reward per unit of risk.

Alpha: measures the difference between a fund's actual returns and its expected performance, given its level of risk (as measured by beta).

R-squared: reflects the percentage of a fund's movements that are explained by movements in its benchmark index, showing the degree of correlation between the fund and the benchmark.

12 Morningstar Sectors Morningstar determines how much of each stock portfolio is held in each of Morningstar's 11 major industrial sectors, which roll up into three broader categories.

Fixed Income Sectors: Morningstar determines how much of each bond portfolio is held in each of Morningstar's 5 major fixed-income sectors.

Credit Analysis (Fixed Income only): The credit analysis depicts the quality of US and non-U.S. bonds in the fund's portfolio. The analysis reveals the percentage of fixed-income securities that fall within each credit-quality rating as assigned by Standard & Poor's or Moody's.

Morningstar World Regions (International only): A breakdown of the geographical exposure of a fund's stock assets. Regional exposure summarizes a portfolio's exposure to geopolitical risk, and it also provides a reference point for understanding fund returns.

13 Portfolio Holdings The top holdings are the stocks or bonds with the most influence on a portfolio's returns. Conservative portfolios typically devote no more than 3% to 4% of their assets to any one stock or bond. More daring portfolios may devote 7% or more to one stock. Add up the weighting of the top five holdings for another measure of risk. A conservative option generally bets 15% or less on the top 5 holdings, while a portfolio with more than 25% in the top five may be considered aggressive.

Holdings Summary: Provides the total number of holdings in the portfolio or, when available, further breakouts of the number stock and bond securities the portfolio holds.

Annual Turnover Ratio %: A proxy for how frequently a manager has traded his or her portfolio in the past year.

Total Fund Assets (\$mil): The net assets of all share classes of the underlying fund, recorded in millions of dollars. Net-asset figures are useful in gauging an underlying fund's size, agility, and popularity. They help determine whether a small-company fund, for example, can remain in its investment-objective category if its asset base reaches an ungainly size.

How to Use the Morningstar Rating™

The Morningstar Rating is a useful tool for identifying investments worthy of further research, but it's not the only thing to consider.

The Morningstar Rating, commonly called the "star rating," tells you how well an investment has performed relative to similar offerings after adjusting for all costs and risk. It rates investments from one to five stars, with the best performers receiving five stars and the worst performers receiving a single star.

The star rating is best used as an initial screen to identify investments worthy of further research, those that have performed well relative to their peers. It's a strictly quantitative measure—a high rating doesn't imply the

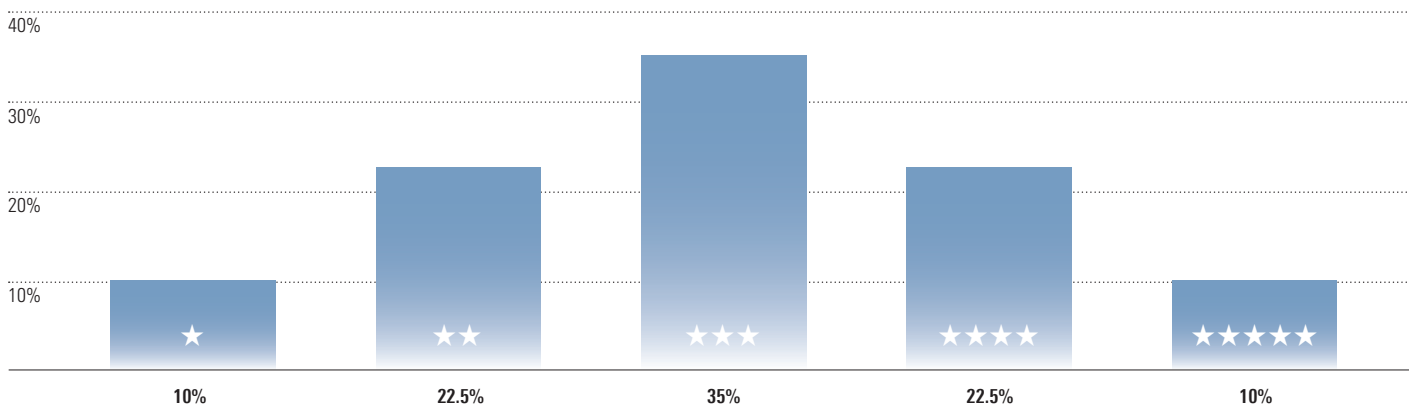
approval or endorsement of a Morningstar analyst. Keep in mind that the rating is based solely on historical performance, and a highly rated offering may no longer have the portfolio manager responsible for that performance. Or—conversely—a lower-rated or non-rated offering might now employ a manager who produced excellent results with other managed investment products.

Also, because ratings are based on performance within specific categories, it's important to note that not all five-star offerings are equal or even interchangeable.

A five-star sector fund, for example, might have the best risk-adjusted return within its specific category, but it's probably far riskier than a highly rated diversified offering. Rather than choosing investments according to their ratings, investors should first decide on an overall portfolio strategy and then seek the best investments for each portion of their portfolio. The Morningstar Rating can then be used to identify possible candidates, but you should never make a buy or sell decision based solely on the rating. ■■■

Morningstar Rating

■ Percent of all rated investments



The Morningstar Rating is based on risk-adjusted return, which is calculated by subtracting a risk penalty from total return, after accounting for all sales charges, loads, and redemption fees. The penalty is determined by the amount of variation in monthly returns, with an emphasis on downward variation. The greater the variation, the larger the penalty. Investments are ranked within their Morningstar Categories by their risk-adjusted return and assigned stars using the following distribution: the top 10% receive five stars, the next 22.5% four stars, the middle 35% three stars, the next 22.5% two stars, and the bottom 10% receive one star. Ratings are calculated for up to three time periods—three-, five-, and 10 years—and combined to produce an overall rating. Investments with less than three years of performance history are not rated.

How to Use Morningstar's Composition Graphics

Morningstar's Composition graphics are tools that visually break down how a fund's assets are invested.

Morningstar allocates stocks into one of five asset classes: U.S. Stocks, Non-U.S. Stocks, Bonds, Cash and Other. For each of these asset classes, Morningstar calculates portfolio statistics on the long and short positions and displays long, short, and net (long minus short) statistics as appropriate. Calculations are run on the most-recent portfolio available.

Asset Allocation

- ▶ The U.S. Stock data point indicates the percentage of the fund's assets devoted to U.S.-domiciled equity investments.
- ▶ The Non-U.S. Stock data point reflects only the percentage of a portfolio's equity investments that are domiciled outside the United States.
- ▶ The Bond data point identifies the percentage of the fund's assets held in bonds and bond exposure gained from derivatives. Bonds include everything from government notes to high-yield corporate bonds.

- ▶ The Cash data point identifies the percentage of the fund's assets held in cash. Cash encompasses both actual cash and cash equivalents (fixed-income securities with a maturity of one year or less) held by the portfolio plus receivables minus payables.
- ▶ Lastly, the Other data point includes positions in preferred stocks (equity securities that pay dividends at a specific rate) as well as convertible bonds and convertible preferreds. Derivatives and unidentified holdings are also grouped in this asset class.

Using the Bar Chart

The x-axis of this chart represents the percentage each investment group holds, with the y-axis representing a zero value. Values to the right of the y-axis represent positive, or "long", security positions, while values to the left of the y-axis represent negative, or "short", security positions. The table to the right of the bar chart sums these two values to present the "net" emphasis of each investment group.

For example, a bar representing Cash Allocations that extends left of the y-axis indicates negative percentages of cash in which the portfolio is leveraged, meaning it has borrowed against its own assets to buy more securities or that it has used other techniques to gain more than 100% exposure to the market.

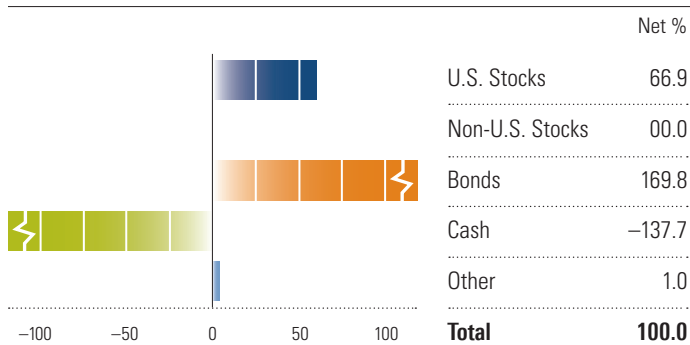
Over 100%

Long or short positions in any asset class that are greater than 100% are indicated by a line break.

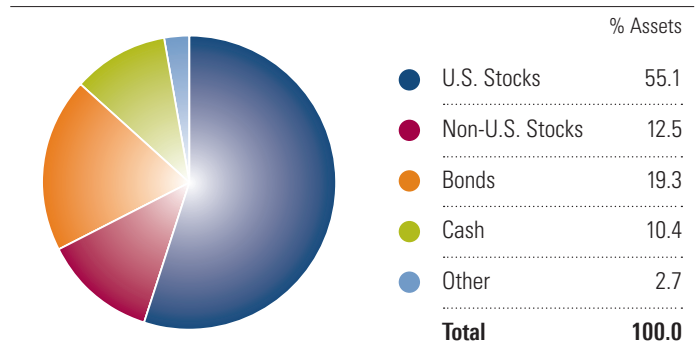
Where are the Shorts?

Sometimes the amount of shorts in a portfolio is so small the bar chart cannot visually represent the miniscule amount. For example, if a portfolio has a -0.01% position in Cash, the bar chart appears, though the green to the left of the y-axis may not be visible. ■■■

When Do We Use the Bar Chart or the Pie Graph?



Morningstar Investment Profiles and Guides display a horizontal bar chart when a fund's portfolio contains short and derivative positions of which the net sum, including any offsetting long positions in that asset class, is greater or less than 100%.



When a fund's portfolio takes only long positions in securities, we represent the portfolio's asset allocation in a pie graph that sums to 100%.

How to Use the Morningstar Style Box™

The Morningstar Style Box is a visual tool that helps investors see past confusing fund names and descriptions to better understand the “investment style” of stocks and mutual funds.

We assign each investment into one of our nine Style Box squares by analyzing its portfolio and determining the best fit.

Things to Remember About the Morningstar Style Box

Risk increases as you move down and to the right of the Morningstar Style Box. Don't put all your eggs in one basket. The returns of investments from different parts of the Morningstar Style Box probably

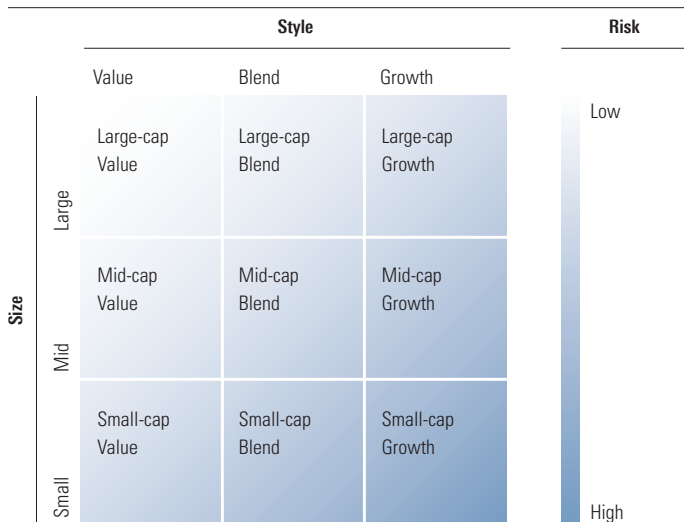
won't move in the same direction at the same time. By combining investments from different parts of the Morningstar Style Box, your portfolio's overall returns will likely be more stable.

What the Morningstar Style Box Does

It paints a picture of what's in an investment's portfolio. Are the companies large or small? Are the stocks cheap or expensive? Do the bonds have limited or extensive sensitivity to interest rate changes? Are they of high or low quality?

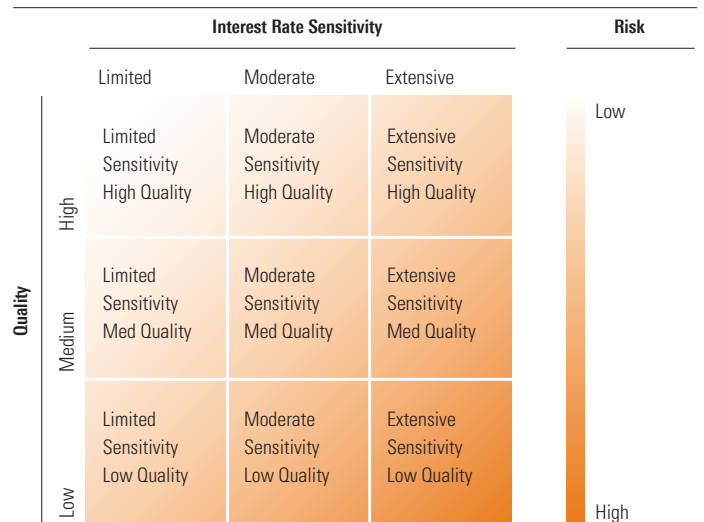
The Morningstar Style Box also provides a basis for our domestic stock fund categories. Similar investments are categorized together, then rated on their ability to balance risk and reward relative to other investments in that same, fairly narrow category. III

Morningstar Equity Style Box



Within the stock grid, nine possible combinations exist, ranging from large-cap value for the safest investments to small-cap growth for the riskiest.

Morningstar Fixed-Income Style Box



Within the bond grid, nine possible combinations exist, ranging from limited sensitivity to interest rate changes/high quality for the safest investments, to extensive sensitivity to interest rate changes/low quality for the riskiest.

Investment Profiles

Intelligent Variable Annuity-Calamos Growth & Income

Benchmark

Morningstar Aggressive Target Risk

Category

Allocation--70% to 85% Equity

Overall Morningstar Rating™

★★★★★

Out of 2010 Allocation--70% to 85% Equity VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Morningstar Return

High

Morningstar Risk

Average

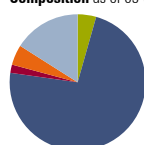
Investment Information
Investment Strategy from investment's prospectus

The investment seeks high long-term total return through growth and current income.

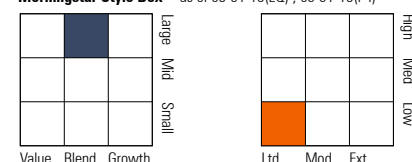
The fund invests primarily in a diversified portfolio of convertible instruments (including synthetic convertible instruments), equity and fixed-income securities of U.S. companies without regard to market capitalization. The adviser attempts to utilize these different types of securities to strike, in the investment adviser's opinion, the appropriate balance between risk and return in terms of growth and income. The average term to maturity of the convertible and fixed-income securities purchased by the fund will typically range from two to ten years.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	7	4	6	4
Out of # of Investments	2,425	2,010	1,638	762

Portfolio Analysis
Composition as of 05-31-18


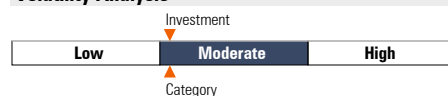
	% Assets
U.S. Stocks	72.8
Non-U.S. Stocks	2.0
Bonds	4.8
Cash	4.4
Other	16.0

Morningstar Style Box™ as of 05-31-18(EQ) ; 03-31-18(F-I)

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-19-99
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.49%
Prosp Gross Exp Ratio	1.49%
Advisor	Calamos Advisors LLC
Subadvisor	—
Portfolio Manager(s)	John P. Calamos Jon Vacko John Hillenbrand Eli Pars Joe Wysocki R. Matthew Freund

Investment Manager

Calamos provides investment advisory services to institutions and individuals, offering closed-end and open-end mutual funds and separately managed accounts. The firm focuses on risk management across investment strategies within the equity, global/international, balanced, convertible, fixed-income and alternative asset classes. Utilizing proprietary research, Calamos's investment analyst group has been headed by the same portfolio management team for more than 25 years.

Volatility Analysis


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Top 20 Holdings as of 05-31-18

	% Assets
Apple Inc	3.96
Microsoft Corp	3.09
Amazon.com Inc	2.60
Alphabet Inc A	2.43
Fidelity® Inv MM Fds Prime Money Mkt Ins	2.20
Morgan Stanley Instl Lqudy Govt Instl	2.19
JPMorgan Chase & Co	1.89
Johnson & Johnson	1.73
Facebook Inc A	1.71
Bank of America Corporation	1.65
Honeywell International Inc	1.40
Exxon Mobil Corp	1.38
NextEra Energy Inc Unit	1.36
UnitedHealth Group Inc	1.31
The Home Depot Inc	1.27
Visa Inc Class A	1.15
Chevron Corp	1.13
Delta Air Lines Inc	1.06
AMG Capital Tr Li 0%	1.03
Coca-Cola Co	0.93

Total Number of Stock Holdings	113
Total Number of Bond Holdings	16
Annual Turnover Ratio %	32.00
Total Fund Assets (\$mil)	26.90

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	16.95	0.99	1.08
P/B Ratio	2.90	0.99	1.36
P/C Ratio	13.22	1.03	1.59
GeoAvgCap (\$mil)	135737.90	1.36	2.71

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	8.20	0.81	0.98
3 Yr Beta	1.23	—	0.95
3 Yr Sharpe Ratio	0.82	0.75	1.52
3 Yr Alpha	-0.29	—	0.10
3 Yr R-squared	86.21	—	0.95

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	32.29
Basic Materials	1.50
Consumer Cyclical	11.70
Financial Services	18.65
Real Estate	0.44
Sensitive	42.90
Communication Services	3.06
Energy	6.81
Industrials	12.68
Technology	20.35
Defensive	24.80
Consumer Defensive	7.22
Healthcare	14.02
Utilities	3.56

Intelligent Variable Annuity-ClearBridge Variable Agg Growth I

Benchmark
 Russell 3000 Growth TR USD

Category
 Large Growth

Overall Morningstar Rating™
 ★★★

Morningstar Return
 Average

Morningstar Risk
 High

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The fund invests primarily in common stocks of companies the portfolio managers believe are experiencing, or will experience, growth in earnings that exceeds the average rate of earnings growth of the companies which comprise the S&P 500 Index. It may invest in the securities of large, well-known companies offering prospects of long-term earnings growth. The fund may invest up to 25% of its net assets (at the time of investment) in equity securities of foreign issuers.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	11-01-99
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.79%
Prosp Gross Exp Ratio	0.79%
Advisor	Legg Mason Partners Fund Advisor, LLC
Subadvisor	ClearBridge Investments, LLC
Portfolio Manager(s)	Richard A. Freeman Evan Bauman

Investment Manager

At Legg Mason, we've assembled experienced investment management firms and empowered them with the tools, resources and independence to pursue the strategies they know best. Each was chosen for their commitment to investment excellence. Each is focused on specific investment styles. Each exhibits thought leadership. Together, we've built a powerful portfolio of investment solutions. And it has made us a world leader in money management.

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★	★★	★★★★
Fund Rank Percentile	87	99	80	14
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	31.70
Large	40.90
Medium	25.40
Small	2.00
Micro	0.00

Top 20 Holdings as of 05-31-18

	% Assets
UnitedHealth Group Inc	8.94
Anadarko Petroleum Corp	7.50
Biogen Inc	7.48
Amgen Inc	6.44
Comcast Corp Class A	6.22
Broadcom Inc	4.57
Allergan PLC	4.52
Vertex Pharmaceuticals Inc	4.18
Seagate Technology PLC	3.35
TE Connectivity Ltd	2.72
The Madison Square Garden Co A	2.60
Twitter Inc	2.59
L3 Technologies Inc	2.58
Autodesk Inc	2.37
Core Laboratories NV	2.05
Weatherford International PLC	1.98
Western Digital Corp	1.96
Intel Corp	1.92
Medtronic PLC	1.81
Citrix Systems Inc	1.39

Total Number of Stock Holdings	74
Total Number of Bond Holdings	0
Annual Turnover Ratio %	6.00
Total Fund Assets (\$mil)	956.84

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	15.44	0.90	0.69
P/B Ratio	2.82	0.96	0.63
P/C Ratio	9.33	0.73	0.60
GeoAvgCap (\$mil)	36208.40	0.36	0.38

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.23	1.30	1.09
3 Yr Beta	1.13	—	1.06
3 Yr Sharpe Ratio	0.36	0.33	0.40
3 Yr Alpha	-7.82	—	9.65
3 Yr R-squared	75.70	—	0.92

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	12.11
Basic Materials	1.52
Consumer Cyclical	9.35
Financial Services	1.24
Real Estate	0.00
Sensitive	50.72
Communication Services	9.31
Energy	13.15
Industrials	4.96
Technology	23.30
Defensive	37.16
Consumer Defensive	0.00
Healthcare	37.16
Utilities	0.00

Intelligent Variable Annuity-ClearBridge Variable Small Cap Growth I

Benchmark
Russell 2000 Growth TR USD

Category
Small Growth

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 2859 Small Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities of companies with small market capitalizations and related investments. The portfolio managers use a growth-oriented investment style that emphasizes small U.S. companies.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	11-08-99
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.82%
Prosp Gross Exp Ratio	0.82%
Advisor	Legg Mason Partners Fund Advisor, LLC
Subadvisor	ClearBridge Investments, LLC
Portfolio Manager(s)	Aram E. Green Jeffrey J. Russell

Investment Manager

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Volatility Analysis

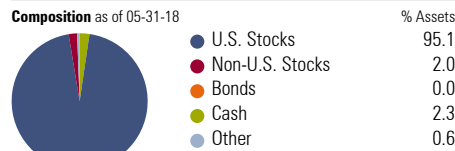


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	8	3	12	12
Out of # of Investments	3,043	2,859	2,645	1,746

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	% Mkt Cap
		Large	0.00
		Mid	1.11
		Small	51.85
		Micro	47.04
			0.00

Top 20 Holdings as of 05-31-18

	% Assets
Copart Inc	3.21
Fortinet Inc	3.02
Medidata Solutions Inc	2.93
GrubHub Inc	2.92
Icon PLC	2.78
Insulet Corp	2.72
Trex Co Inc	2.72
Western Alliance Bancorp	2.39
JPMorgan 100% US Tr Sec MM Inst	2.33
Integra Lifesciences Holdings Corp	2.28
XPO Logistics Inc	2.19
athenahealth Inc	2.15
Monolithic Power Systems Inc	2.12
IDEX Corp	2.11
Aspen Technology Inc	2.07
Cornerstone OnDemand Inc	2.04
Qualys Inc	2.03
Syneos Health Inc A	2.01
Chegg Inc	1.84
Zillow Group Inc C	1.77

Total Number of Stock Holdings	74
Total Number of Bond Holdings	0
Annual Turnover Ratio %	20.00
Total Fund Assets (\$mil)	366.61

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	30.71	1.79	1.34
P/B Ratio	3.63	1.24	1.07
P/C Ratio	14.05	1.10	1.04
GeoAvgCap (\$mil)	3490.88	0.03	1.02

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	14.87	1.46	1.07
3 Yr Beta	1.11	—	1.03
3 Yr Sharpe Ratio	0.85	0.78	1.21
3 Yr Alpha	0.29	—	-0.12
3 Yr R-squared	58.26	—	0.92

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	27.28
Basic Materials	5.47
Consumer Cyclical	9.92
Financial Services	9.72
Real Estate	2.17
Sensitive	52.45
Communication Services	0.00
Energy	2.17
Industrials	10.82
Technology	39.46
Defensive	20.28
Consumer Defensive	4.56
Healthcare	15.72
Utilities	0.00

Intelligent Variable Annuity-Credit Suisse Trust-Commodity Return Strategy Portfolio

Benchmark
Bloomberg Commodity TR USD

Category
Commodities Broad Basket

Overall Morningstar Rating™
★★★★★

Morningstar Return
Average

Morningstar Risk
Below Average

Out of 512 Commodities Broad Basket VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks total return.

The fund is designed to achieve positive total return relative to the performance of the Bloomberg Commodity Index Total Return (the "BCOM Index"). The advisor intends to invest its assets in a combination of commodity-linked derivative instruments and fixed income securities. It gains exposure to commodities markets by investing through the Subsidiary and in structured notes linked to the BCOM Index, other commodity indices, or the value of a particular commodity or commodity futures contract or subset of commodities or commodity futures contracts. The fund is non-diversified.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	02-28-06
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.05%
Prosp Gross Exp Ratio	1.08%
Advisor	Credit Suisse Asset Management, LLC
Subadvisor	—
Portfolio Manager(s)	Christopher Burton Nelson Louie

Investment Manager

Credit Suisse is a leading financial services firm managing assets worldwide through its Asset Management, Investment Banking, and Private Banking services divisions. The Asset Management business of Credit Suisse offers products across the full spectrum of investment classes, ranging from equities, fixed income, and multiple-asset class products to alternative investments such as real estate, hedge funds, private equity, and volatility management. The Asset Management business manages portfolios, mutual funds, and other investment vehicles for a broad spectrum of clients including governments, institutions, corporations, and private individuals. With offices focused on asset management in 19 countries, the business operates as a globally integrated network that seeks to deliver Credit Suisse's best investment ideas and capabilities to clients around the world.

Volatility Analysis



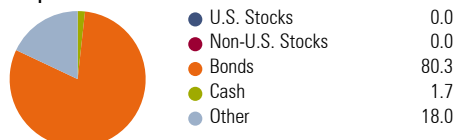
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	79	19	12	68
Out of # of Investments	573	512	417	189

Portfolio Analysis

Composition as of 05-31-18



Morningstar Fixed Income Style Box™ as of 05-31-18

Not Available	Avg Eff Duration	—
	Avg Eff Maturity	—
	Avg Wtd Coupon	2.00
	Avg Wtd Price	100.12

Top 20 Holdings as of 05-31-18

Holder	% Assets
Credit Suisse Trust Cayman Com	17.99
Federal Home Loan Mortgage Corpor 1.82% 08-08-19	7.80
United States Treasury Notes 1.94% 04-30-20	4.91
Federal National Mortgage Associa 1.92% 03-08-19	3.91
United States Treasury Notes 1.95% 10-31-19	3.70
Federal National Mortgage Associa 1.97% 02-28-19	3.20
Federal Home Loan Banks 2% 01-30-20	2.92
United States Treasury Notes 1.97% 04-30-19	2.85
Federal Home Loan Mortgage Corpor 1.82% 08-12-19	2.74
Federal Farm Credit Banks 2.25% 01-27-20	2.67
Federal Farm Credit Banks 2% 02-21-20	2.56
United States Treasury Notes 1.9% 01-31-20	2.33
Federal Home Loan Banks 1.88% 12-16-19	2.28
Federal Farm Credit Banks 2.32% 12-08-23	1.90
Federal Farm Credit Banks 1.77% 11-12-20	1.86
Federal Farm Credit Banks 2.14% 08-19-19	1.85
Federal National Mortgage Associa 1.94% 03-13-20	1.83
Federal Farm Credit Banks 1.87% 05-14-20	1.82
Federal Farm Credit Banks 2.3% 10-25-19	1.81
Federal Home Loan Banks 2.12% 09-28-20	1.74

Total Number of Stock Holdings	0
Total Number of Bond Holdings	46
Annual Turnover Ratio %	94.00
Total Fund Assets (\$mil)	423.68

Statistics as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	11.53	-0.01	0.92
Beta	0.77	—	0.92
Sharpe Ratio	-0.47	0.00	1.04
Alpha	-2.35	—	1.01
R-Squared	88.06	—	1.00

Morningstar Sectors as of 05-31-18

Sector	% Fund
Government	97.88
Corporate	0.00
Securitized	0.00
Municipal	0.00
Cash/Cash Equivalents	2.12
Other	0.00

Credit Analysis

Not Available

Intelligent Variable Annuity-Delaware VIP Diversified Inc

Benchmark
BBgBarc US Agg Bond TR USD

Category
Intermediate-Term Bond

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 4963 Intermediate-Term Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum long-term total return, consistent with reasonable risk.

The fund allocates its investments principally among the following four sectors of the fixed income securities markets: the U.S. investment grade sector, the U.S. high yield sector, the international developed markets sector, and the emerging markets sector. It normally invests at least 80% of its net assets, plus the amount of any borrowings for investment purposes, in fixed income securities (80% policy). The investments in emerging markets will, in the aggregate, be limited to no more than 20% of the fund's total assets.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-16-03
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.66%
Prosp Gross Exp Ratio	0.66%
Advisor	Delaware Management Company
Subadvisor	—
Portfolio Manager(s)	Paul Grillo Wen-Dar Chen Roger A. Early J. David Hillmeyer Brian C. McDonnell Adam H. Brown

Investment Manager

Delaware Investments is a diversified investment management firm that offers a comprehensive array of retail and institutional strategies across all major asset classes. Team-based, research-driven approach to investing is guided by the expertise of more than 174 Investment Professionals, analysts and traders. Delaware Investments is the marketing name for Delaware Management Holding, Inc. and its subsidiaries, which are part of Lincoln Financial Group. Lincoln Financial Group is the marketing name for Lincoln National Corporations and its affiliates.

Volatility Analysis

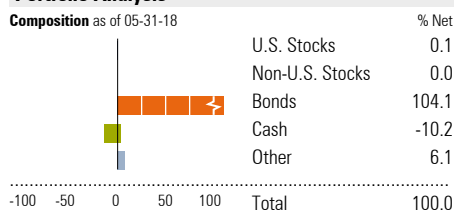


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	17	16	9	2
Out of # of Investments	5,824	4,963	4,367	2,678

Portfolio Analysis



Top 20 Holdings as of 05-31-18

Top 20 Holdings	% Assets
US 10 Year Note (CBT) Sept18 09-19-18	9.03
U.S. Treasury Bond Sept18 09-19-18	3.90
United States Treasury Notes 0.12% 04-15-22	1.00
United States Treasury Notes 1.25% 06-30-19	0.96
Federal National Mortgage Associatio 6% 07-01-41	0.76
Federal National Mortgage Associat 5.5% 02-01-47	0.72
Republic of Colombia 7% 06-30-32	0.57
United States Treasury Notes 2.75% 05-31-23	0.57
Cd 2016-Cd2 Mortga 3.25% 11-10-49	0.48
Federal National Mortgage Associat 3.5% 07-01-46	0.48
Federal National Mortgage Associat 4.5% 08-01-47	0.45
Commercial Mortgage Trust 3.8% 08-10-47	0.40
Crown Castle Towers LLC 4.88% 08-15-20	0.40
Mexico (United Mexican States) 6.5% 06-09-22	0.39
The Dow Chemical Company 8.55% 05-15-19	0.39
Republic of South Africa 8.75% 01-31-44	0.35
Bank of America Corporation 4.18% 11-25-27	0.34
Ecp Clo 2015-7 Ltd / Ecp Clo 2015-7 FR 04-22-30	0.33
COMM MORTGAGE TRUST 3.94% 11-10-47	0.32
Federal Home Loan Mortgage Corpora 4.5% 07-01-45	0.32

Total Number of Stock Holdings	3
Total Number of Bond Holdings	1415
Annual Turnover Ratio %	145.00
Total Fund Assets (\$mil)	2,471.30

Morningstar Fixed Income Style Box™ as of 05-31-18



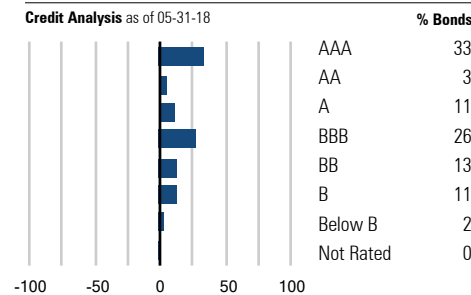
Statistics as of 06-30-18

Statistics	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	2.56	0.00	0.98
Beta	0.86	—	0.96
Sharpe Ratio	0.13	0.00	-0.81
Alpha	-0.52	—	0.41
R-Squared	79.81	—	0.93

Morningstar Sectors as of 05-31-18

Morningstar Sectors	% Fund
Government	20.57
Corporate	49.27
Securitized	27.60
Municipal	0.13
Cash/Cash Equivalents	2.37
Other	0.06

Credit Analysis as of 05-31-18



Intelligent Variable Annuity-Delaware VIP Intl Equity

Benchmark
 MSCI EAFE GR USD

Category
 Foreign Large Value

Overall Morningstar Rating™
 ★★★★★

Morningstar Return
 High

Morningstar Risk
 Below Average

Out of 1595 Foreign Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth without undue risk to principal.

The fund invests at least 80% of its net assets, plus the amount of any borrowings for investment purposes, in equity securities (80% policy). Under normal circumstances, it will invest at least 65% of its total assets in equity securities of issuers that are organized, have a majority of their assets, or generate the majority of their operating income outside the United States. The fund may invest more than 25% of its total assets in the securities of issuers located in the same country.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	10-29-92
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.04%
<i>Prosp Gross Exp Ratio</i>	<i>1.06%</i>
Advisor	Delaware Management Company
Subadvisor	—
Portfolio Manager(s)	Edward A. Gray

Investment Manager

Delaware Investments is a diversified investment management firm that offers a comprehensive array of retail and institutional strategies across all major asset classes. Team-based, research-driven approach to investing is guided by the expertise of more than 174 Investment Professionals, analysts and traders. Delaware Investments is the marketing name for Delaware Management Holding, Inc. and its subsidiaries, which are part of Lincoln Financial Group. Lincoln Financial Group is the marketing name for Lincoln National Corporations and its affiliates.

Volatility Analysis

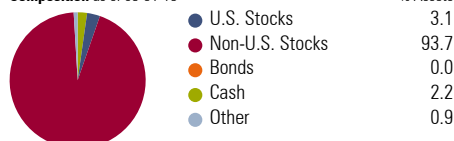


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	89	4	11	3
Out of # of Investments	1,702	1,595	1,421	973

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	49.23
Large	35.72
Medium	14.59
Small	0.46
Micro	0.00

Top 20 Holdings as of 05-31-18

	% Assets
ITOCHU Corp	3.99
Imperial Brands PLC	3.54
Shire PLC	3.08
Yue Yuen Industrial (Holdings) Ltd	3.04
Vinci SA	2.99
Toyota Motor Corp	2.97
Royal Philips NV	2.89
Mitsubishi UFJ Financial Group Inc	2.83
Deutsche Post AG	2.73
Nippon Telegraph & Telephone Corp	2.66
Novartis AG	2.62
Kering SA	2.57
Minebea Mitsumi Inc	2.53
Playtech PLC	2.51
Nordea Bank AB	2.50
AXA SA	2.46
Samsung Electronics Co Ltd	2.46
Techtronic Industries Co Ltd	2.44
Teleperformance SE	2.41
Total SA	2.37

Total Number of Stock Holdings	49
Total Number of Bond Holdings	0
Annual Turnover Ratio %	15.00
Total Fund Assets (\$mil)	48.91

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	12.25	0.72	0.99
P/B Ratio	1.43	0.49	1.13
P/C Ratio	7.06	0.55	1.85
GeoAvgCap (\$mil)	31910.14	0.32	1.08

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.78	1.06	0.90
3 Yr Beta	0.85	—	0.90
3 Yr Sharpe Ratio	0.31	0.28	2.21
3 Yr Alpha	-0.87	—	0.30
3 Yr R-squared	91.66	—	1.01

Morningstar World Regions as of 05-31-18

	% Fund
Americas	8.42
North America	8.41
Latin America	0.00
Greater Europe	57.71
United Kingdom	13.30
Europe Developed	43.32
Europe Emerging	1.09
Africa/Middle East	0.00
Greater Asia	33.87
Japan	20.75
Australasia	0.47
Asia Developed	5.06
Asia Emerging	7.59

Intelligent Variable Annuity-Delaware VIP Small Cap Value

Benchmark
 Russell 2000 Value TR USD

Category
 Small Value

Overall Morningstar Rating™
 ★★★★★

Morningstar Return
 High

Morningstar Risk
 Average

Out of 2002 Small Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

Under normal circumstances, at least 80% of the Series' net assets, plus the amount of any borrowings for investment purposes, will be in investments of small-capitalization companies (80% policy). The manager considers small-capitalization companies to be companies with a market capitalization generally less than 3.5 times the dollar-weighted, median market capitalization of the Russell 2000® Index at the time of purchase.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	12-27-93
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.78%
Prosp Gross Exp Ratio	0.78%
Advisor	Delaware Management Company
Subadvisor	—
Portfolio Manager(s)	Christopher S. Beck Kelley A. McKee Steven G. Catricks Kent P. Madden

Investment Manager

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Volatility Analysis

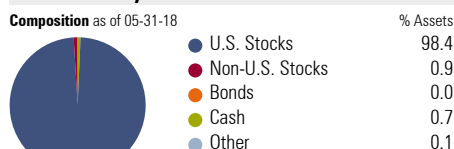


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	66	8	4	2
Out of # of Investments	2,135	2,002	1,823	1,210

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	0.00
Large	0.00
Medium	50.83
Small	49.17
Micro	0.00

Top 20 Holdings as of 05-31-18

Company	% Assets
East West Bancorp Inc	3.26
Synopsis Inc	2.16
Webster Financial Corp	2.09
Hancock Whitney Corp	1.89
MasTec Inc	1.87
Berry Global Group Inc	1.86
ITT Inc	1.84
Selective Insurance Group Inc	1.78
Olin Corp	1.72
Trinseo SA	1.53
Great Western Bancorp Inc	1.45
The Hanover Insurance Group Inc	1.40
American Equity Investment Life Holding Co	1.39
Umpqua Holdings Corp	1.34
Stifel Financial Corp	1.32
First Financial Bancorp	1.31
STERIS PLC	1.31
Bank of Hawaii Corp	1.28
H.B. Fuller Co	1.28
USG Corp	1.28

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	16.26	0.95	1.07
P/B Ratio	1.84	0.63	1.08
P/C Ratio	7.97	0.62	0.96
GeoAvgCap (\$mil)	3462.54	0.03	1.38

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.88	1.37	1.00
3 Yr Beta	1.08	—	1.10
3 Yr Sharpe Ratio	0.74	0.68	1.21
3 Yr Alpha	-1.76	—	0.72
3 Yr R-squared	62.73	—	1.20

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	57.11
Basic Materials	5.70
Consumer Cyclical	13.96
Financial Services	29.43
Real Estate	8.02
Sensitive	33.69
Communication Services	0.78
Energy	6.62
Industrials	13.18
Technology	13.11
Defensive	9.21
Consumer Defensive	1.78
Healthcare	3.71
Utilities	3.72

Intelligent Variable Annuity-DFA VA Equity Allocation Portfolio

Benchmark	Category Large Blend	Overall Morningstar Rating™	Morningstar Return	Morningstar Risk
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Investment Information

Investment Strategy

from investment's prospectus
The investment seeks to achieve long-term capital appreciation.

The Portfolio is a "fund of funds," which means the Portfolio generally allocates its assets among other funds managed by the Advisor (the "underlying funds"). It pursues its investment objective by investing substantially all of its assets in the following underlying funds: VA U.S. Large Value Portfolio, VA U.S. Targeted Value Portfolio, U.S. Core Equity 1 Portfolio, VA International Value Portfolio, VA International Small Portfolio, International Core Equity Portfolio, Emerging Markets Core Equity Portfolio, DFA Real Estate Securities Portfolio and U.S. Large Company Portfolio.

Operations

Subaccount Incp Date	07-10-17
Undr. Fund Incep Date	07-10-17
Subacct Adoption Date	07-10-17
Prosp Net Exp Ratio	0.40%
Prosp Gross Exp Ratio	0.67%
Advisor	Dimensional Fund Advisors LP
Subadvisor	Dimensional Fund Advisors Ltd
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Allen Pu

Investment Manager

In 1981, Dimensional launched its first strategy based on research documenting the stronger performance of US small cap stocks. Our second strategy, a short-term fixed income portfolio launched in 1983, applies Eugene Fama's term structure research. Later, a comprehensive analysis of prices and other research deepened our strategy repertoire and set a new standard for portfolio design.

Volatility Analysis

Low	Moderate	High
	▲ Category	

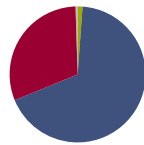
The volatility measure is not displayed for investments with fewer than three years of history. The category average, however, is shown above.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	—	—	—
Fund Rank Percentile	—	—	—	—
Out of # of Investments	—	—	—	—

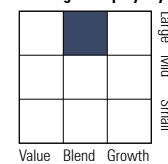
Portfolio Analysis

Composition as of 05-31-18



U.S. Stocks	67.7
Non-U.S. Stocks	30.7
Bonds	0.2
Cash	1.2
Other	0.3

Morningstar Equity Style Box™ as of 05-31-18



	% Mkt Cap
Giant	32.27
Large	24.73
Medium	25.65
Small	14.28
Micro	3.07

Top 20 Holdings as of 05-31-18

	% Assets
DFA US Core Equity 1 I	26.51
DFA US Large Company I	21.24
DFA International Core Equity I	14.98
DFA VA US Targeted Value	11.92
DFA Emerging Markets Core Equity I	7.81
DFA VA US Large Value	6.61
DFA VA International Small Portfolio	4.62
DFA VA International Value Portfolio	3.45
DFA Real Estate Securities I	2.37

Total Number of Holdings	10
Annual Turnover Ratio %	—
Total Fund Assets (\$mil)	35.60

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.76	0.86	0.87
P/B Ratio	1.85	0.63	0.63
P/C Ratio	7.28	0.57	0.59
GeoAvgCap (\$mil)	19777.67	0.20	0.24

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	—	—	—
3 Yr Beta	—	—	—
3 Yr Sharpe Ratio	—	—	—
3 Yr Alpha	—	—	—
3 Yr R-squared	—	—	—

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	43.41
Basic Materials	6.78
Consumer Cyclical	13.85
Financial Services	18.94
Real Estate	3.84
Sensitive	39.06
Communication Services	3.13
Energy	7.07
Industrials	13.26
Technology	15.60
Defensive	17.53
Consumer Defensive	6.20
Healthcare	9.06
Utilities	2.27

Intelligent Variable Annuity-DFA VA Global Bond

Benchmark
Citi WGBI 1-5 Yr Hdq USD

Category
World Bond

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Low

Out of 1293 World Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide a market rate of return for a fixed income portfolio with low relative volatility of returns.

The fund generally invests in a universe of U.S. and foreign debt securities maturing in five years or less. It primarily purchases obligations issued or guaranteed by the U.S. and foreign governments, their agencies and instrumentalities, corporate debt obligations, bank obligations, commercial paper, repurchase agreements, obligations of other domestic and foreign issuers, securities of domestic and foreign issuers denominated in U.S. dollars but not trading in the United States and obligations of supranational organizations.

Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	01-12-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.24%
Prosp Gross Exp Ratio	0.24%
Advisor	Dimensional Fund Advisors LP
Subadvisor	Dimensional Fund Advisors Ltd
Portfolio Manager(s)	David A. Plecha Joseph F. Kolerich

Investment Manager

In 1981, Dimensional launched its first strategy based on research documenting the stronger performance of US small cap stocks. Our second strategy, a short-term fixed income portfolio launched in 1983, applies Eugene Fama's term structure research. Later, a comprehensive analysis of prices and other research deepened our strategy repertoire and set a new standard for portfolio design.

Volatility Analysis

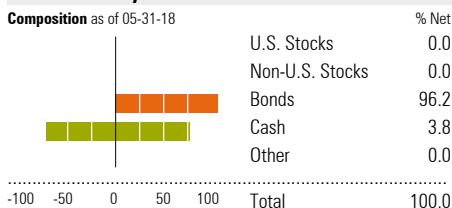


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★★	★★★★
Fund Rank Percentile	18	24	6	37
Out of # of Investments	1,524	1,293	1,081	509

Portfolio Analysis

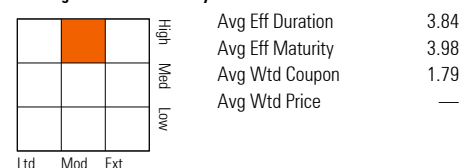


Top 20 Holdings as of 05-31-18

Top 20 Holdings as of 05-31-18	% Assets
Euro Stability Mechanism Sr Unsecured 10-18-22	2.73
Efsf Govt Guarant Regs 11/22 0.0000 11-17-22	2.62
Republic Of Austria Sr Unsecured 144a 09-20-22	2.57
Kommuninvest I Sverige Local Govt G Re 06-01-22	2.15
Finnish Government Sr Unsecured 144a R 04-15-23	2.04
Sweden(Kingdom Of) 3.5% 06-01-22	2.04
Kommunalbanken As 2.25% 01-25-22	1.83
Caisse d Amortissement De La Dett 0.12% 11-25-22	1.81
Quebec (Province Of) 3.5% 12-01-22	1.73
Coca Cola 03-09-23	1.59
The Toronto-Dominion Bank 1.99% 03-23-22	1.57
Royal Bank of Canada 2.75% 02-01-22	1.56
Swedish Export Credit Sr Unsecured 12/ 12-15-22	1.55
France (Govt Of) Bonds Regs 03/23 0.00 03-25-23	1.41
Toyota Credit Canada Inc. 2.02% 02-28-22	1.41
Ontario (Province Of) 2.4% 02-08-22	1.36
Land Nordrhein Westfalen Sr Unsecured 12-05-22	1.33
Province of British Columbia 2.7% 12-18-22	1.31
Neder Waterschapsbank Sr Unsecured Reg 04-14-22	1.21
Westpac Banking Corporation 2.8% 01-11-22	1.21

Total Number of Stock Holdings	0
Total Number of Bond Holdings	155
Annual Turnover Ratio %	67.00
Total Fund Assets (\$mil)	362.12

Morningstar Fixed Income Style Box™ as of 05-31-18



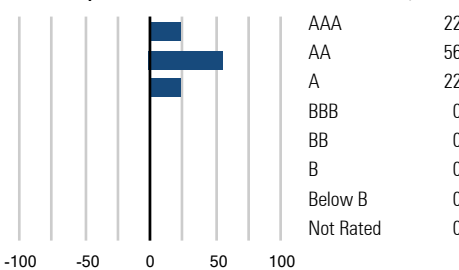
Statistics as of 06-30-18

Statistics as of 06-30-18	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	1.76	0.00	0.32
Beta	0.62	—	1.82
Sharpe Ratio	0.13	0.00	-1.00
Alpha	-0.38	—	0.32
R-Squared	86.00	—	3.76

Morningstar Sectors as of 05-31-18

Morningstar Sectors as of 05-31-18	% Fund
Government	23.21
Corporate	29.64
Securitized	0.00
Municipal	0.00
Cash/Cash Equivalents	0.20
Other	46.94

Credit Analysis as of 05-31-18



Intelligent Variable Annuity-DFA VA Global Moderate Allocation

Benchmark

 65% MSCI ACWI NR USD/35% Citi WGBI
 1-3 Yr Hdq USD

Category

World Allocation

Overall Morningstar Rating™

★★★★★

Out of 2694 World Allocation VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Morningstar Return

High

Morningstar Risk

Above Average

Investment Information
Investment Strategy from investment's prospectus

The investment seeks total return consisting of capital appreciation and current income.

The fund under normal market circumstances, purchases shares of the underlying funds to achieve a moderate allocation to both global equity and global fixed income securities.

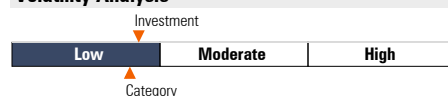
Generally, the fund invests its assets in domestic and international equity underlying funds and fixed income underlying funds to achieve an allocation that provides a moderate allocation to global equity securities, with an allocation of approximately 50% to 70% of the fund's assets to domestic and international equity underlying funds and 30% to 50% of its assets to fixed income underlying funds.

Operations

Subaccount Incp Date	11-01-13
Undr. Fund Incep Date	04-08-13
Subacct Adoption Date	11-01-13
Prosp Net Exp Ratio	0.40%
Prosp Gross Exp Ratio	0.51%
Advisor	Dimensional Fund Advisors LP
Subadvisor	—
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi David A. Plecha Joseph F. Kolerich Allen Pu Mary T. Phillips

Investment Manager

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Volatility Analysis


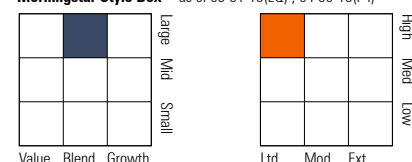
In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	—
Fund Rank Percentile	17	8	8	—
Out of # of Investments	3,071	2,694	1,981	—

Portfolio Analysis

Composition as of 05-31-18	% Net
U.S. Stocks	43.8
Non-U.S. Stocks	19.9
Bonds	32.6
Cash	1.5
Other	2.3
Total	100.0

Morningstar Style Box™ as of 05-31-18(EQ) ; 04-30-18(F-I)


Top 20 Holdings as of 05-31-18	% Assets
DFA US Core Equity 2 I	30.12
DFA International Core Equity I	13.45
DFA VA Global Bond	12.64
DFA Selectively Hedged Global F/I I	12.62
DFA US Core Equity 1 I	10.75
DFA Emerging Markets Core Equity I	5.09
DFA Two-Year Global Fixed-Income I	5.04
DFA VA Short-Term Fixed Portfolio	5.04
DFA VA US Large Value	2.12
DFA Real Estate Securities I	1.53
DFA VA International Value Portfolio	1.47

Total Number of Holdings	12
Annual Turnover Ratio %	—
Total Fund Assets (\$mil)	146.12

Statistics	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.63	0.85	0.94
P/B Ratio	1.93	0.66	0.94
P/C Ratio	7.30	0.57	0.95
GeoAvgCap (\$mil)	19523.38	0.20	0.33

Risk Measures as of 06-30-18	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	6.85	0.67	1.01
3 Yr Beta	1.09	—	1.10
3 Yr Sharpe Ratio	0.73	0.67	1.92
3 Yr Alpha	-1.15	—	0.37
3 Yr R-squared	95.49	—	1.15

Morningstar Sectors as of 05-31-18	% Fund
Cyclical	43.73
Basic Materials	6.88
Consumer Cyclical	14.47
Financial Services	19.01
Real Estate	3.37
Sensitive	38.83
Communication Services	3.56
Energy	6.46
Industrials	13.45
Technology	15.36
Defensive	17.44
Consumer Defensive	6.31
Healthcare	8.96
Utilities	2.17

Intelligent Variable Annuity-DFA VA International Small

Benchmark
MSCI World Ex USA Small Cap NR USD

Category
Foreign Small/Mid Blend

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 155 Foreign Small/Mid Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund, using a market capitalization weighted approach, purchases securities of (1) Japanese small companies; (2) United Kingdom small companies; (3) small companies organized under the laws of certain European countries; (4) small companies associated with Australia, New Zealand and Pacific Rim Asian countries; and (5) Canadian small companies. It may have some exposure to small cap equity securities associated with other countries or regions.

Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	10-03-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.57%
Prosp Gross Exp Ratio	0.57%
Advisor	Dimensional Fund Advisors LP
Subadvisor	Dimensional Fund Advisors Ltd
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Bhanu P. Singh Arun C. Keswani Mary T. Phillips

Investment Manager

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Volatility Analysis



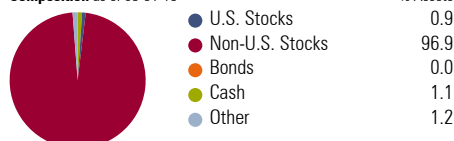
In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	6	2	3	1
Out of # of Investments	170	155	148	43

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	Large	Mid	Small	% Mkt Cap
						0.00
						0.97
						44.82
						42.88
						11.34

Top 20 Holdings as of 05-31-18

	% Assets
Tullow Oil PLC	0.36
Tate & Lyle PLC	0.34
Umicore SA	0.29
Ubisoft Entertainment	0.28
Electrocomponents PLC	0.26
Hays PLC	0.26
Howden Joinery Group PLC	0.26
Rubis SCA	0.26
K+S AG	0.25
Victrex PLC	0.25
Edenred SA	0.24
Lanxess AG	0.24
LEG Immobilien AG	0.24
Bellway PLC	0.23
Enagas SA	0.23
GN Store Nord A/S	0.23
Hiscox Ltd	0.22
Aalberts Industries NV	0.21
Amer Sports Oyj	0.21
Fischer (Georg) Reg Common Stock Chf10.	0.21

Total Number of Stock Holdings	3329
Total Number of Bond Holdings	0
Annual Turnover Ratio %	12.00
Total Fund Assets (\$mil)	236.82

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.36	0.84	1.04
P/B Ratio	1.42	0.48	0.96
P/C Ratio	5.84	0.46	1.03
GeoAvgCap (\$mil)	1640.24	0.02	0.78

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.95	1.08	0.97
3 Yr Beta	0.85	—	1.00
3 Yr Sharpe Ratio	0.73	0.67	1.33
3 Yr Alpha	3.84	—	1.94
3 Yr R-squared	88.64	—	1.04

Morningstar World Regions as of 05-31-18

	% Fund
Americas	8.93
North America	8.79
Latin America	0.13
Greater Europe	53.49
United Kingdom	16.84
Europe Developed	35.74
Europe Emerging	0.03
Africa/Middle East	0.89
Greater Asia	37.58
Japan	25.98
Australasia	7.69
Asia Developed	3.19
Asia Emerging	0.72

Intelligent Variable Annuity-DFA VA International Value

Benchmark
 MSCI World Ex US NR USD

Category
 Foreign Large Value

Overall Morningstar Rating™
 ★★★★★

Morningstar Return
 High

Morningstar Risk
 High

Out of 1595 Foreign Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund, using a market capitalization weighted approach, purchases securities of large non-U.S. companies in countries with developed markets that the Advisor determines to be value stocks. It may gain exposure to companies associated with approved markets by purchasing equity securities in the form of depositary receipts, which may be listed or traded outside the issuer's domicile country.

Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	10-03-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.44%
<i>Prosp Gross Exp Ratio</i>	<i>0.44%</i>
Advisor	Dimensional Fund Advisors LP
Subadvisor	Dimensional Fund Advisors Ltd
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Bhanu P. Singh Mary T. Phillips

Investment Manager

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Volatility Analysis

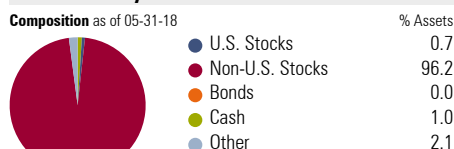


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★
Fund Rank Percentile	1	1	5	7
Out of # of Investments	1,702	1,595	1,421	973

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

	Value	Blend	Growth	% Mkt Cap
Giant				43.10
Large				41.68
Medium				15.08
Small				0.15
Micro				0.00

Top 20 Holdings as of 05-31-18

	% Assets
BP PLC ADR	2.95
Total SA	2.93
Toyota Motor Corp	2.90
HSBC Holdings PLC ADR	2.14
Daimler AG	1.95
Royal Dutch Shell PLC ADR Class B	1.84
Royal Dutch Shell PLC ADR Class A	1.83
Suncor Energy Inc	1.42
Vodafone Group PLC	1.36
Banco Santander SA	1.34
Novartis AG ADR	1.33
Australia and New Zealand Banking Group Ltd	1.28
BNP Paribas	1.22
Bank of Montreal	1.10
Honda Motor Co Ltd	1.10
Anglo American PLC	0.98
Volkswagen AG Participating Preferred	0.98
Repsol SA	0.94
Zurich Insurance Group AG	0.94
Bayerische Motoren Werke AG	0.91
Total Number of Stock Holdings	440
Total Number of Bond Holdings	0
Annual Turnover Ratio %	20.00
Total Fund Assets (\$mil)	278.12

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	11.45	0.67	0.93
P/B Ratio	1.01	0.34	0.80
P/C Ratio	2.75	0.22	0.72
GeoAvgCap (\$mil)	31666.93	0.32	1.07

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.72	1.35	1.14
3 Yr Beta	1.06	—	1.13
3 Yr Sharpe Ratio	0.31	0.28	2.21
3 Yr Alpha	-1.03	—	0.35
3 Yr R-squared	88.84	—	0.98

Morningstar World Regions as of 05-31-18

	% Fund
Americas	9.89
North America	9.89
Latin America	0.00
Greater Europe	56.63
United Kingdom	17.25
Europe Developed	38.97
Europe Emerging	0.00
Africa/Middle East	0.41
Greater Asia	33.49
Japan	23.90
Australasia	5.46
Asia Developed	3.98
Asia Emerging	0.15

Intelligent Variable Annuity-DFA VA Short-Term Fixed

Benchmark
ICE BofAML US 6M Trsy Bill TR USD

Category
Ultrashort Bond

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 506 Ultrashort Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to achieve a stable real return in excess of the rate of inflation with a minimum of risk.

The fund seeks to achieve its investment objective by generally investing in a universe of high quality fixed income securities that typically mature in one year or less. It may, however, take a large position in securities maturing within two years from the date of settlement when higher yields are available. Under normal circumstances, the fund will invest at least 80% of its net assets in fixed income securities and maintain a dollar-weighted average portfolio maturity that will not exceed one year.

Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	10-03-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.27%
Prosp Gross Exp Ratio	0.27%
Advisor	Dimensional Fund Advisors LP
Subadvisor	Dimensional Fund Advisors Ltd
Portfolio Manager(s)	David A. Plecha Joseph F. Kolerich Pamela B. Noble

Investment Manager

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Volatility Analysis

Investment

Low	Moderate	High
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Category

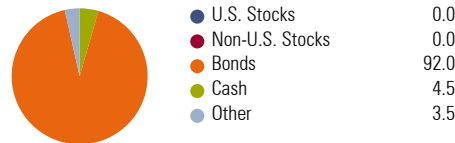
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	29	22	12	4
Out of # of Investments	621	506	452	261

Portfolio Analysis

Composition as of 05-31-18



Morningstar Fixed Income Style Box™ as of 05-31-18



Top 20 Holdings as of 05-31-18

Security	% Assets
United States Treasury Notes 1.88% 12-31-19	2.14
Cooperative Centrale Raiffeisen- 2.25% 01-14-19	1.66
Kommunekredit Sr Unsecured Regs 08/19 08-23-19	1.38
Kreditanstalt Fur Wiederaufbau 1.5% 09-09-19	1.35
Quebec (Province Of) 2.64% 07-21-19	1.32
USAA Capital Corp. 2.59% 02-01-19	1.30
Manitoba (Province of) 1.75% 05-30-19	1.29
Council of Europe Development Bank 1.5% 05-17-19	1.25
The Toronto-Dominion Bank 1.95% 01-22-19	1.23
WALMART INC 1.75% 10-09-19	1.18
United States Treasury Notes 1.5% 10-31-19	1.17
Westpac Banking Corporation 2.25% 01-17-19	1.17
European Investment Bank 1.25% 05-15-19	1.14
United States Treasury Notes 1% 10-15-19	1.13
Svenska Handelsbanken AB 2.5% 01-25-19	1.06
Caisse D Amortissement Et De D 1.5% 01-28-19	0.96
Export Development Canada 1.75% 08-19-19	0.96
Toyota Motor Credit Corporation 2.2% 01-10-20	0.94
Municipality Finance plc 1.25% 09-10-18	0.93
Royal Bank of Canada 2.15% 03-15-19	0.91

Total Number of Stock Holdings	0
Total Number of Bond Holdings	205
Annual Turnover Ratio %	86.00
Total Fund Assets (\$mil)	270.30

Statistics as of 06-30-18

Metric	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	0.32	0.00	0.80
Beta	0.09	—	9.00
Sharpe Ratio	-1.80	0.00	0.35
Alpha	-0.69	—	0.55
R-Squared	50.51	—	2.11

Morningstar Sectors as of 05-31-18

Sector	% Fund
Government	54.33
Corporate	41.61
Securitized	0.00
Municipal	0.00
Cash/Cash Equivalents	4.05
Other	0.00

Credit Analysis as of 05-31-18



Intelligent Variable Annuity-DFA VA US Large Value

Benchmark
Russell 1000 Value TR USD

Category
Large Value

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
High

Out of 7057 Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund, using a market capitalization weighted approach, purchases a broad and diverse group of readily marketable securities of large U.S. companies that the Advisor determines to be value stocks. As a non-fundamental policy, under normal circumstances, it will invest at least 80% of its net assets in securities of large cap U.S. companies. The fund may purchase or sell futures contracts and options on futures contracts for U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the Portfolio.

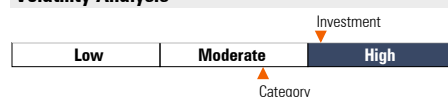
Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	01-12-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.27%
Prosp Gross Exp Ratio	0.27%
Advisor	Dimensional Fund Advisors LP
Subadvisor	—
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Lukas J. Smart

Investment Manager

In 1981, Dimensional launched its first strategy based on research documenting the stronger performance of US small cap stocks. Our second strategy, a short-term fixed income portfolio launched in 1983, applies Eugene Fama's term structure research. Later, a comprehensive analysis of prices and other research deepened our strategy repertoire and set a new standard for portfolio design.

Volatility Analysis



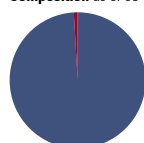
In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★
Fund Rank Percentile	23	5	2	4
Out of # of Investments	7,842	7,057	6,341	4,020

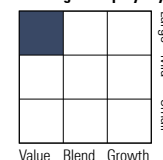
Portfolio Analysis

Composition as of 05-31-18



	% Assets
U.S. Stocks	99.0
Non-U.S. Stocks	0.9
Bonds	0.0
Cash	0.1
Other	0.0

Morningstar Equity Style Box™ as of 05-31-18



	% Mkt Cap
Giant	42.55
Large	36.98
Medium	20.47
Small	0.00
Micro	0.00

Top 20 Holdings as of 05-31-18

	% Assets
Intel Corp	4.18
Wells Fargo & Co	3.85
Exxon Mobil Corp	3.83
JPMorgan Chase & Co	3.47
AT&T Inc	3.25
Bank of America Corporation	2.78
Pfizer Inc	2.69
Chevron Corp	2.52
Cisco Systems Inc	2.37
Comcast Corp Class A	1.89
Citigroup Inc	1.74
Walmart Inc	1.38
Goldman Sachs Group Inc	1.23
Medtronic PLC	1.23
Berkshire Hathaway Inc B	1.22
CVS Health Corp	0.99
Time Warner Inc	0.98
Morgan Stanley	0.97
Micron Technology Inc	0.96
Anthem Inc	0.87

Total Number of Stock Holdings	305
Total Number of Bond Holdings	0
Annual Turnover Ratio %	15.00
Total Fund Assets (\$mil)	459.22

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	12.77	0.75	0.89
P/B Ratio	1.68	0.57	0.80
P/C Ratio	8.64	0.68	0.82
GeoAvgCap (\$mil)	58432.22	0.59	0.82

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.74	1.16	1.08
3 Yr Beta	1.08	—	1.10
3 Yr Sharpe Ratio	0.73	0.67	1.28
3 Yr Alpha	-3.30	—	0.70
3 Yr R-squared	86.53	—	1.02

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	38.65
Basic Materials	4.25
Consumer Cyclical	8.94
Financial Services	25.30
Real Estate	0.16
Sensitive	42.40
Communication Services	6.60
Energy	14.67
Industrials	8.26
Technology	12.87
Defensive	18.95
Consumer Defensive	5.12
Healthcare	13.68
Utilities	0.15

Intelligent Variable Annuity-DFA VA US Targeted Value

Benchmark
Russell 2000 Value TR USD

Category
Small Value

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 2002 Small Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund, using a market capitalization weighted approach, purchases a broad and diverse group of the readily marketable securities of U.S. small and mid cap companies that the Advisor determines to be value stocks. As a non-fundamental policy, under normal circumstances, it will invest at least 80% of its net assets in securities of U.S. companies. The fund may purchase or sell futures contracts and options on futures contracts for U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the Portfolio.

Operations

Subaccount Incp Date	05-01-12
Undr. Fund Incep Date	10-03-95
Subacct Adoption Date	05-01-12
Prosp Net Exp Ratio	0.37%
Prosp Gross Exp Ratio	0.37%
Advisor	Dimensional Fund Advisors LP
Subadvisor	—
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Joel P. Schneider

Investment Manager

In 1981, Dimensional launched its first strategy based on research documenting the stronger performance of US small cap stocks. Our second strategy, a short-term fixed income portfolio launched in 1983, applies Eugene Fama's term structure research. Later, a comprehensive analysis of prices and other research deepened our strategy repertoire and set a new standard for portfolio design.

Volatility Analysis



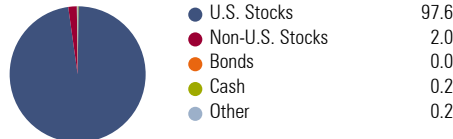
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Morningstar Proprietary Statistics

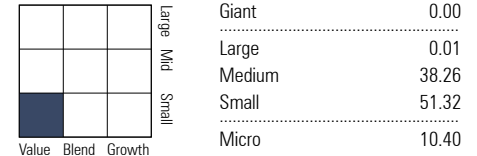
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★★★	★★★★★
Fund Rank Percentile	15	30	5	2
Out of # of Investments	2,135	2,002	1,823	1,210

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18



Top 20 Holdings as of 05-31-18

Company	% Assets
Arrow Electronics Inc	0.70
Air Lease Corp Class A	0.62
AECOM	0.60
Jacobs Engineering Group Inc	0.55
Reliance Steel & Aluminum Co	0.55
American Eagle Outfitters Inc	0.54
Avnet Inc	0.50
Antero Resources Corp	0.48
Toll Brothers Inc	0.48
Helmerich & Payne Inc	0.47
RSP Permian Inc	0.47
WPX Energy Inc Class A	0.46
PacWest Bancorp	0.45
Trinity Industries Inc	0.45
JetBlue Airways Corp	0.44
Amerco Inc	0.43
Assurant Inc	0.42
People's United Financial Inc	0.42
Goodyear Tire & Rubber Co	0.40
PBF Energy Inc Class A	0.40

Total Number of Stock Holdings	1313
Total Number of Bond Holdings	0
Annual Turnover Ratio %	28.00
Total Fund Assets (\$mil)	361.15

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.21	0.83	0.93
P/B Ratio	1.40	0.48	0.82
P/C Ratio	6.93	0.54	0.83
GeoAvgCap (\$mil)	2222.51	0.02	0.88

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	14.57	1.43	1.05
3 Yr Beta	1.01	—	1.03
3 Yr Sharpe Ratio	0.63	0.58	1.03
3 Yr Alpha	-2.09	—	0.86
3 Yr R-squared	49.98	—	0.96

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	49.85
Basic Materials	7.28
Consumer Cyclical	13.67
Financial Services	28.13
Real Estate	0.77
Sensitive	41.20
Communication Services	0.54
Energy	9.49
Industrials	20.41
Technology	10.76
Defensive	8.96
Consumer Defensive	3.69
Healthcare	4.99
Utilities	0.28

Intelligent Variable Annuity-Franklin Income VIP Fund

Benchmark
S&P 500 TR

Category
Allocation--30% to 50% Equity

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
High

Out of 3835 Allocation--30% to 50% Equity VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to maximize income while maintaining prospects for capital appreciation.

The fund invests in a diversified portfolio of debt and equity securities. It may shift its investments from one asset class to another based on the investment manager's analysis of the best opportunities for the fund's portfolio in a given market. The fund may invest up to 100% of its total assets in debt securities that are rated below investment grade (also known as "junk bonds"), including a portion in defaulted securities. It may also invest up to 25% of its assets in foreign securities, either directly or through depositary receipts.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	01-24-89
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.47%
Prosp Gross Exp Ratio	0.49%
Advisor	Franklin Advisers, Inc.
Subadvisor	—
Portfolio Manager(s)	Edward D. Perks Matthew D. Quinlan Todd Brighton Richard S. Hsu

Investment Manager

Franklin Templeton's distinct multi-manager structure combines the specialized expertise of three world-class investment management groups- Franklin, Templeton, and Mutual Series. Founded in 1947, Franklin is a recognized leader in fixed income investing and also brings expertise in growth- and value-style U.S. equity investing. Founded in 1940, Templeton pioneered international investing and, in 1954, launched what has become the industry's oldest global fund. Today, with offices in over 29 countries, Templeton offers investors a truly global perspective. Founded in 1949, Mutual Series is dedicated to a unique style of value investing, searching aggressively for opportunity among what it believes are undervalued stocks, as well as arbitrage situations and distressed securities.

Volatility Analysis

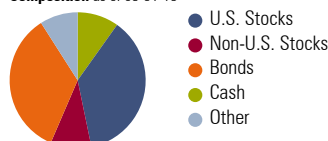


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

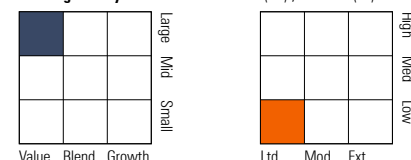
Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	2	1	2	1
Out of # of Investments	4,605	3,835	3,187	1,234

Portfolio Analysis

Composition as of 05-31-18


% Assets

Morningstar Style Box™ as of 05-31-18(EQ) ; 03-31-18(F-I)

Top 20 Holdings as of 05-31-18

	% Assets
Franklin IFT Money Market	9.47
Wells Fargo & Co	2.04
General Electric Co	1.94
Community Health Systems Incorporate 8% 11-15-19	1.75
Southern Co	1.74
Dominion Energy Inc	1.66
Pfizer Inc	1.63
Royal Dutch Shell PLC ADR Class A	1.62
Rio Tinto PLC ADR	1.54
Microsoft Corp	1.53
Sempra Energy	1.47
Apple Inc	1.43
Ford Motor Co	1.42
Chevron Corp	1.40
DowDuPont Inc	1.38
JPMorgan Chase & Co	1.27
Basf SE	1.19
AstraZeneca PLC	1.13
Target Corp	1.13
Deutsche Bank AG London Branch 0% 02-01-19	1.11

Total Number of Stock Holdings	57
Total Number of Bond Holdings	136
Annual Turnover Ratio %	20.96
Total Fund Assets (\$mil)	5,758.00

Statistics	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.49	0.85	0.93
P/B Ratio	2.06	0.70	0.95
P/C Ratio	9.33	0.73	1.09
GeoAvgCap (\$mil)	115262.49	1.15	2.05

Risk Measures	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	7.18	0.71	1.38
3 Yr Beta	1.09	—	1.36
3 Yr Sharpe Ratio	0.67	0.61	1.49
3 Yr Alpha	-1.35	—	0.63
3 Yr R-squared	86.80	—	0.96

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	27.51
Basic Materials	8.83
Consumer Cyclical	3.05
Financial Services	14.43
Real Estate	1.20
Sensitive	35.56
Communication Services	3.45
Energy	14.17
Industrials	5.78
Technology	12.16
Defensive	36.92
Consumer Defensive	10.37
Healthcare	12.25
Utilities	14.30

Intelligent Variable Annuity-Franklin Mutual Shares VIP Fund

Benchmark
S&P 500 TR

Category
Allocation--85%+ Equity

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 1193 Allocation--85%+ Equity VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation; income is a secondary goal.

The fund invests primarily in equity securities of U.S. and foreign companies that the investment manager believes are available at market prices less than their value based on certain recognized or objective criteria. The equity securities in which the fund invests are primarily common stock. To a lesser extent, it also invests in merger arbitrage securities and the debt and equity of distressed companies. The fund may invest a significant portion of its assets (up to 35%) in foreign securities, which may include sovereign debt and participations in foreign government debt.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	11-08-96
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.72%
Prosp Gross Exp Ratio	0.72%
Advisor	Franklin Mutual Advisers, LLC
Subadvisor	—
Portfolio Manager(s)	F. David Segal Peter A. Langerman Deborah A. Turner

Investment Manager

Franklin Templeton's distinct multi-manager structure combines the specialized expertise of three world-class investment management groups- Franklin, Templeton, and Mutual Series. Founded in 1947, Franklin is a recognized leader in fixed income investing and also brings expertise in growth- and value-style U.S. equity investing. Founded in 1940, Templeton pioneered international investing and, in 1954, launched what has become the industry's oldest global fund. Today, with offices in over 29 countries, Templeton offers investors a truly global perspective. Founded in 1949, Mutual Series is dedicated to a unique style of value investing, searching aggressively for opportunity among what it believes are undervalued stocks, as well as arbitrage situations and distressed securities.

Volatility Analysis



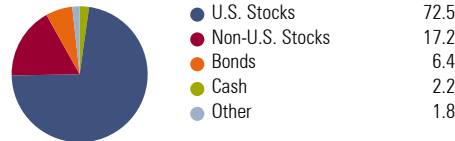
In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

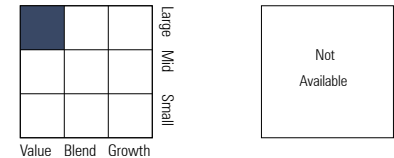
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★★★★
Fund Rank Percentile	55	53	44	4
Out of # of Investments	1,337	1,193	1,093	674

Portfolio Analysis

Composition as of 05-31-18



Morningstar Style Box™ as of 05-31-18(EQ) ; 06-30-18(F-I)



Top 20 Holdings as of 05-31-18

Company	% Assets
Medtronic PLC	3.51
Merck & Co Inc	3.16
Eli Lilly and Co	2.75
Time Warner Inc	2.44
Cisco Systems Inc	2.20
Microsoft Corp	2.17
American International Group Inc	2.10
General Electric Co	2.02
Novartis AG ADR	1.99
JPMorgan Chase & Co	1.95
Royal Dutch Shell PLC Class A	1.94
Citizens Financial Group Inc	1.93
Wells Fargo & Co	1.93
Anadarko Petroleum Corp	1.92
Walt Disney Co	1.89
Samsung Electronics Co Ltd	1.81
British American Tobacco PLC	1.63
Charter Communications Inc A	1.60
Citigroup Inc	1.58
Cognizant Technology Solutions Corp A	1.55
Total Number of Stock Holdings	83
Total Number of Bond Holdings	17
Annual Turnover Ratio %	18.32
Total Fund Assets (\$mil)	3,920.82

Statistics	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.07	0.82	0.92
P/B Ratio	1.63	0.56	0.84
P/C Ratio	9.13	0.71	1.06
GeoAvgCap (\$mil)	51039.59	0.51	1.20

Risk Measures	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	9.58	0.94	0.99
3 Yr Beta	1.38	—	0.95
3 Yr Sharpe Ratio	0.46	0.42	0.94
3 Yr Alpha	-3.45	—	1.00
3 Yr R-squared	79.09	—	0.92

Morningstar Sectors	% Fund
Cyclical	36.32
Basic Materials	2.33
Consumer Cyclical	9.06
Financial Services	23.19
Real Estate	1.74
Sensitive	40.38
Communication Services	6.48
Energy	10.87
Industrials	6.71
Technology	16.32
Defensive	23.29
Consumer Defensive	7.64
Healthcare	14.07
Utilities	1.58

Intelligent Variable Annuity-Franklin Small-Mid Cap Growth VIP Fund

Benchmark
Russell Mid Cap Growth TR USD

Category
Mid-Cap Growth

Overall Morningstar Rating™
★★★

Morningstar Return
Average

Morningstar Risk
Average

Out of 3480 Mid-Cap Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital growth.

The fund invests at least 80% of its net assets in investments of small-capitalization (small-cap) and mid-capitalization (mid-cap) companies. It invests predominantly in equity securities, predominantly in common stock. The fund, from time to time, may have significant positions in particular sectors such as technology (including healthcare technology, technology services and electronic technology), industrials and healthcare.

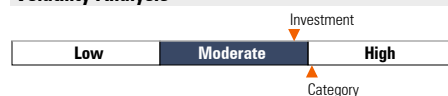
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	11-01-95
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.85%
<i>Prosp Gross Exp Ratio</i>	<i>0.86%</i>
Advisor	Franklin Advisers, Inc.
Subadvisor	—
Portfolio Manager(s)	Edward B. Jamieson Michael McCarthy James Cross John P. Scandalios

Investment Manager

Franklin Templeton's distinct multi-manager structure combines the specialized expertise of three world-class investment management groups- Franklin, Templeton, and Mutual Series. Founded in 1947, Franklin is a recognized leader in fixed income investing and also brings expertise in growth- and value-style U.S. equity investing. Founded in 1940, Templeton pioneered international investing and, in 1954, launched what has become the industry's oldest global fund. Today, with offices in over 29 countries, Templeton offers investors a truly global perspective. Founded in 1949, Mutual Series is dedicated to a unique style of value investing, searching aggressively for opportunity among what it believes are undervalued stocks, as well as arbitrage situations and distressed securities.

Volatility Analysis



In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★	★★★	★★★★
Fund Rank Percentile	61	73	57	29
Out of # of Investments	3,765	3,480	3,263	2,000

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Market Cap	% Mkt Cap
Giant	0.00
Large	48.25
Medium	46.67
Small	4.99
Micro	0.09

Top 20 Holdings as of 05-31-18

Company	% Assets
Roper Technologies Inc	2.53
2U Inc	2.36
Franklin IFT Money Market	2.09
Edwards Lifesciences Corp	1.90
ServiceNow Inc	1.90
GoDaddy Inc A	1.79
Worldpay Inc Class A	1.69
Rockwell Automation Inc	1.64
CoStar Group Inc	1.58
Microchip Technology Inc	1.56
SBA Communications Corp	1.51
Analog Devices Inc	1.48
Autodesk Inc	1.48
Verisk Analytics Inc	1.46
Aptiv PLC	1.40
Ross Stores Inc	1.31
Workday Inc Class A	1.26
Illumina Inc	1.23
Arthur J. Gallagher & Co	1.22
SVB Financial Group	1.21

Total Number of Stock Holdings	134
Total Number of Bond Holdings	0
Annual Turnover Ratio %	40.49
Total Fund Assets (\$mil)	439.65

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	24.31	1.42	1.06
P/B Ratio	4.28	1.46	1.01
P/C Ratio	16.12	1.26	1.05
GeoAvgCap (\$mil)	13278.31	0.13	1.13

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.38	1.12	0.95
3 Yr Beta	0.96	—	0.97
3 Yr Sharpe Ratio	0.52	0.48	0.78
3 Yr Alpha	-4.73	—	1.52
3 Yr R-squared	74.30	—	1.01

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	27.13
Basic Materials	3.41
Consumer Cyclical	11.98
Financial Services	8.44
Real Estate	3.30
Sensitive	53.28
Communication Services	2.13
Energy	2.02
Industrials	17.76
Technology	31.37
Defensive	19.59
Consumer Defensive	6.55
Healthcare	13.04
Utilities	0.00

Intelligent Variable Annuity-Janus Aspen Forty Inst.

Benchmark
Russell 1000 Growth TR USD

Category
Large Growth

Overall Morningstar Rating™
★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

The Portfolio pursues its investment objective by normally investing primarily in a core group of 20-40 common stocks selected for their growth potential. It may invest in companies of any size, from larger, well-established companies to smaller, emerging growth companies. The Portfolio may also invest in foreign securities, which may include investments in emerging markets. It is non-diversified.

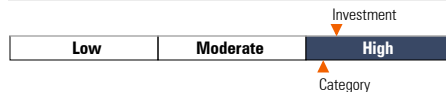
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-01-97
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.82%
Prosp Gross Exp Ratio	0.82%
Advisor	Janus Capital Management LLC
Subadvisor	—
Portfolio Manager(s)	A. Douglas Rao Nick Schommer

Investment Manager

Janus Capital Management is one of the largest equity managers in the United States. For almost four decades the Denver-based firm has used a bottom up, company-by-company investment approach based on the conviction that stock prices ultimately follow earnings growth. The company's asset-management disciplines include growth, core, international, value and risk-managed equity funds.

Volatility Analysis

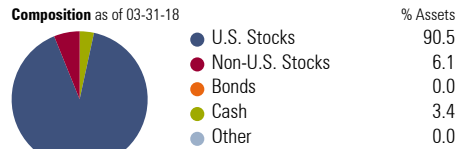


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★
Fund Rank Percentile	40	11	12	56
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis



Top 20 Holdings as of 03-31-18

	% Assets
Mastercard Inc A	6.02
Alphabet Inc C	5.62
Amazon.com Inc	5.56
Microsoft Corp	4.95
Salesforce.com Inc	4.87
Texas Instruments Inc	3.54
Activision Blizzard Inc	3.40
Citigroup Inc	2.84
Intercontinental Exchange Inc	2.82
ASML Holding NV ADR	2.71
Starbucks Corp	2.45
Boston Scientific Corp	2.40
Goldman Sachs Group Inc	2.40
Charles Schwab Corp	2.36
Adobe Systems Inc	2.30
Sherwin-Williams Co	2.24
Intuitive Surgical Inc	2.14
Nike Inc B	2.10
Union Pacific Corp	2.06
American Tower Corp	2.05
Total Number of Stock Holdings	41
Total Number of Bond Holdings	0
Annual Turnover Ratio %	39.00
Total Fund Assets (\$mil)	827.51

Morningstar Equity Style Box™ as of 03-31-18

	% Mkt Cap
Giant	61.22
Large	35.38
Medium	3.40
Small	0.00
Micro	0.00

Value Blend Growth

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	23.89	1.40	1.07
P/B Ratio	4.25	1.45	0.95
P/C Ratio	18.60	1.46	1.19
GeoAvgCap (\$mil)	108806.40	1.09	1.15

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.17	1.20	1.00
3 Yr Beta	1.06	—	0.99
3 Yr Sharpe Ratio	1.14	1.05	1.25
3 Yr Alpha	2.11	—	-2.60
3 Yr R-squared	78.29	—	0.95

Morningstar Sectors as of 03-31-18

	% Fund
Cyclical	44.23
Basic Materials	5.05
Consumer Cyclical	19.18
Financial Services	18.35
Real Estate	1.65
Sensitive	40.71
Communication Services	2.12
Energy	0.00
Industrials	3.82
Technology	34.77
Defensive	15.06
Consumer Defensive	0.00
Healthcare	15.06
Utilities	0.00

Intelligent Variable Annuity-Janus Aspen Overseas Inst.

Benchmark
MSCI ACWI Ex USA NR USD

Category
Foreign Large Blend

Overall Morningstar Rating™
★★

Morningstar Return
Below Average

Morningstar Risk
High

Out of 2661 Foreign Large Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

The Portfolio pursues its investment objective by investing at least 80% of its net assets in securities of issuers or companies from countries outside of the United States. It normally invests in securities of issuers from several different countries, excluding the United States. Although the Portfolio typically invests 80% or more of its assets in issuers that are economically tied to countries outside the United States, it also may normally invest up to 20% of its net assets, measured at the time of purchase, in U.S. issuers, and it may invest all or substantially all of its assets in a single country.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-02-94
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.57%
Prosp Gross Exp Ratio	0.57%
Advisor	Janus Capital Management LLC
Subadvisor	—
Portfolio Manager(s)	George P. Maris Julian McManus Garth Yettick

Investment Manager

Janus Capital Management is one of the largest equity managers in the United States. For almost four decades the Denver-based firm has used a bottom up, company-by-company investment approach based on the conviction that stock prices ultimately follow earnings growth. The company's asset-management disciplines include growth, core, international, value and risk-managed equity funds.

Volatility Analysis



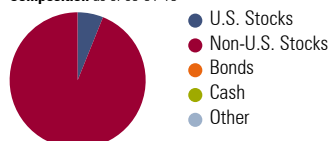
In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★	★★	★★
Fund Rank Percentile	1	87	90	82
Out of # of Investments	3,003	2,661	2,265	1,378

Portfolio Analysis

Composition as of 03-31-18



Morningstar Equity Style Box™ as of 03-31-18

Style	% Mkt Cap
Giant	63.96
Large	22.54
Medium	12.41
Small	1.09
Micro	0.00

Top 20 Holdings as of 03-31-18

Company	% Assets
Alibaba Group Holding Ltd ADR	4.82
BNP Paribas	4.59
Nippon Telegraph & Telephone Corp	3.95
Safran SA	3.64
Tencent Holdings Ltd	3.56
ASML Holding NV	3.46
Diageo PLC	3.43
Mitsubishi UFJ Financial Group Inc	3.35
AIA Group Ltd	3.04
Eiffage SA	2.98
ING Groep NV	2.88
China Construction Bank Corp H	2.81
NEXON Co Ltd	2.74
Rio Tinto Ltd	2.64
Sony Financial Holdings Inc	2.59
GVC Holdings PLC	2.57
Sony Corp	2.38
Ambev SA	2.30
Shire PLC	2.27
Canadian Natural Resources Ltd	2.26

Total Number of Stock Holdings	49
Total Number of Bond Holdings	0
Annual Turnover Ratio %	33.00
Total Fund Assets (\$mil)	756.59

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	13.65	0.80	0.95
P/B Ratio	1.36	0.46	0.80
P/C Ratio	3.32	0.26	0.62
GeoAvgCap (\$mil)	48525.89	0.49	1.34

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	15.69	1.54	1.33
3 Yr Beta	1.21	—	1.32
3 Yr Sharpe Ratio	0.10	0.09	0.40
3 Yr Alpha	-4.45	—	2.56
3 Yr R-squared	88.14	—	0.99

Morningstar World Regions as of 03-31-18

Region	% Fund
Americas	12.97
North America	8.35
Latin America	4.61
Greater Europe	38.23
United Kingdom	9.46
Europe Developed	28.77
Europe Emerging	0.00
Africa/Middle East	0.00
Greater Asia	48.80
Japan	19.37
Australasia	2.64
Asia Developed	6.52
Asia Emerging	20.27

Intelligent Variable Annuity-Janus Aspen Perkins Mid Cap Value

Benchmark
Russell Mid Cap Value TR USD

Category
Mid-Cap Value

Overall Morningstar Rating™
★★★★

Morningstar Return
Average

Morningstar Risk
Low

Out of 2275 Mid-Cap Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The Portfolio pursues its investment objective by investing primarily in common stocks selected for their capital appreciation potential. It invests, under normal circumstances, at least 80% of its net assets in equity securities of companies whose market capitalization falls, at the time of purchase, within the 12-month average of the capitalization range of the Russell Midcap® Value Index. The Portfolio may invest, under normal circumstances, up to 20% of its net assets in securities of companies having market capitalizations outside of the aforementioned market capitalization ranges.

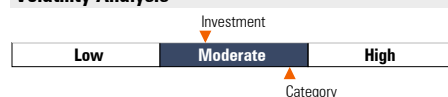
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-01-03
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.70%
Prosp Gross Exp Ratio	0.70%
Advisor	Janus Capital Management LLC
Subadvisor	Perkins Investment Management LLC
Portfolio Manager(s)	Kevin Preloger Justin Tugman

Investment Manager

Janus Capital Management is one of the largest equity managers in the United States. For almost four decades the Denver-based firm has used a bottom up, company-by-company investment approach based on the conviction that stock prices ultimately follow earnings growth. The company's asset-management disciplines include growth, core, international, value and risk-managed equity funds.

Volatility Analysis



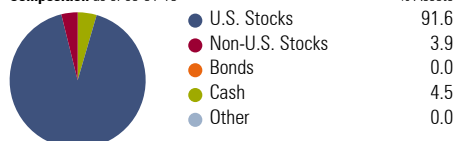
In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★	★★★★
Fund Rank Percentile	33	9	50	37
Out of # of Investments	2,452	2,275	2,084	1,338

Portfolio Analysis

Composition as of 03-31-18



Morningstar Equity Style Box™ as of 03-31-18

Value Blend Growth	Large Mid Small	% Mkt Cap
	Giant	0.00
	Large	17.02
	Medium	77.05
	Small	5.93
	Micro	0.00

Top 20 Holdings as of 03-31-18

	% Assets
XL Group Ltd	3.73
Equity Lifestyle Properties Inc	2.89
Great Plains Energy Inc	2.83
Equity Commonwealth	2.82
Crown Holdings Inc	2.80
Torchmark Corp	2.69
Laboratory Corp of America Holdings	2.67
Noble Energy Inc	2.55
Casey's General Stores Inc	2.54
Conagra Brands Inc	2.54
The Hartford Financial Services Group Inc	2.46
First Horizon National Corp	2.39
RenaissanceRe Holdings Ltd	2.31
Lamar Advertising Co Class A	2.16
Trinity Industries Inc	2.13
Axalta Coating Systems Ltd	2.11
First Hawaiian Inc	2.08
Lamb Weston Holdings Inc	2.06
Total System Services Inc	1.93
BWX Technologies Inc	1.87

Total Number of Stock Holdings	60
Total Number of Bond Holdings	0
Annual Turnover Ratio %	48.00
Total Fund Assets (\$mil)	115.90

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.42	1.02	1.15
P/B Ratio	2.11	0.72	1.09
P/C Ratio	10.56	0.83	1.18
GeoAvgCap (\$mil)	7980.28	0.08	0.72

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	9.81	0.97	0.85
3 Yr Beta	0.85	—	0.87
3 Yr Sharpe Ratio	0.85	0.78	1.63
3 Yr Alpha	-1.05	—	0.21
3 Yr R-squared	77.32	—	1.04

Morningstar Sectors as of 03-31-18

	% Fund
Cyclical	57.27
Basic Materials	9.74
Consumer Cyclical	10.98
Financial Services	26.77
Real Estate	9.78
Sensitive	26.88
Communication Services	0.00
Energy	8.66
Industrials	14.09
Technology	4.13
Defensive	15.85
Consumer Defensive	7.47
Healthcare	3.52
Utilities	4.86

Intelligent Variable Annuity-John Hancock Emerging Markets Value Trust

Benchmark
 MSCI EM GR USD

Category
 Diversified Emerging Mkts

Overall Morningstar Rating™
★★★
 Out of 1722 Diversified Emerging Mkts VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Morningstar Return
 Above Average

Morningstar Risk
 High

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund normally invests at least 80% of its net assets (plus any borrowings for investment purposes) in companies associated with emerging markets designated from time to time by the subadvisor. It seeks long-term capital growth through investment primarily in emerging market equity securities. The fund seeks to purchase emerging market equity securities that are deemed by the subadvisor to be value stocks at the time of purchase.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	05-01-07
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	1.07%
Prosp Gross Exp Ratio	1.07%
Advisor	John Hancock Investment Mgt Svcs, LLC
Subadvisor	Dimensional Fund Advisors LP
Portfolio Manager(s)	Jed S. Fogdall Joseph H. Chi Daniel C. Ong Bhanu P. Singh Mary T. Phillips Mitchell J. Firestein

Investment Manager

The Fund is managed by a team of portfolio managers, analysts and traders at Dimensional Fund Advisors LP (DFA), under the supervision of John Hancock Investment Management Services, LLC. DFA is an independent firm with a sole focus on money management. The firm's unique investment philosophy-rooted in academic research-leads to portfolios with an emphasis on value stocks.

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★	★★★
Fund Rank Percentile	65	50	36	24
Out of # of Investments	2,016	1,722	1,378	809

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	Large	Mid	Small	% Mkt Cap
			Large			34.92
			Large			34.14
			Medium			18.82
			Small			8.26
			Micro			3.86

Top 20 Holdings as of 05-31-18

	% Assets
Vale SA	3.23
Industrial And Commercial Bank Of China Ltd H	2.12
China Construction Bank Corp H	2.03
Reliance Industries Ltd ADR	1.95
China Mobile Ltd	1.57
Standard Bank Group Ltd	1.42
POSCO	1.36
Hon Hai Precision Industry Co Ltd	1.34
Petroleo Brasileiro SA Petrobras Participating Preferred	1.17
MTN Group Ltd	1.13
PJSC Lukoil ADR	1.07
CNOOC Ltd	1.03
Petroleo Brasileiro SA Petrobras	0.99
Sasol Ltd	0.98
Shinhan Financial Group Co Ltd ADR	0.98
Ptt PCL	0.94
Hyundai Motor Co	0.93
Bank Of China Ltd H	0.92
SK Innovation Co Ltd	0.89
Fubon Financial Holdings Co Ltd	0.81

Total Number of Stock Holdings	2002
Total Number of Bond Holdings	0
Annual Turnover Ratio %	28.00
Total Fund Assets (\$mil)	714.61

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	9.09	0.53	0.69
P/B Ratio	0.95	0.32	0.48
P/C Ratio	3.15	0.25	0.41
GeoAvgCap (\$mil)	9449.24	0.09	0.22

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	17.07	1.68	1.14
3 Yr Beta	1.18	—	1.11
3 Yr Sharpe Ratio	0.30	0.28	1.00
3 Yr Alpha	-0.68	—	0.74
3 Yr R-squared	70.06	—	0.93

Morningstar World Regions as of 05-31-18

	% Fund
Americas	13.00
North America	0.00
Latin America	13.00
Greater Europe	12.02
United Kingdom	0.00
Europe Developed	0.06
Europe Emerging	4.72
Africa/Middle East	7.24
Greater Asia	74.97
Japan	0.00
Australasia	0.00
Asia Developed	35.85
Asia Emerging	39.13

Intelligent Variable Annuity-Matson Money Fixed Income VI Portfolio

Benchmark
Citi WGBI 1-5 Yr Hdq USD

Category
Short-Term Bond

Overall Morningstar Rating™
★★★

Morningstar Return
Average

Morningstar Risk
Above Average

Out of 1260 Short-Term Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks total return (consisting of current income and capital appreciation).

The Portfolio pursues its investment objective by investing under normal circumstances at least 80% of its net assets, including any borrowings for investment purposes, in shares of registered, open-end investment companies and exchange-traded funds ("ETFs") (collectively, "investment companies") that have either adopted policies to invest at least 80% of their assets in fixed income securities that the Adviser believes offer the prospect of providing total return, or invest substantially all of their assets in such fixed income securities.

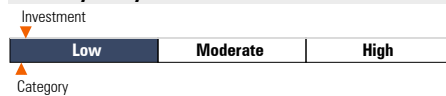
Operations

Subaccount Incp Date	02-18-14
Undr. Fund Incep Date	02-18-14
Subacct Adoption Date	02-18-14
Prosp Net Exp Ratio	0.95%
Prosp Gross Exp Ratio	0.95%
Advisor	Matson Money, Inc
Subadvisor	—
Portfolio Manager(s)	Mark E. Matson Sean Babin

Investment Manager

Over the last twenty years, Matson Money has brought investing education and coaching programs to thousands of financial professionals and investors nationwide. These programs focus on sharing the concepts of free markets, diversification, discipline, and rebalancing to create a long-term approach to life-long endeavor.

Volatility Analysis

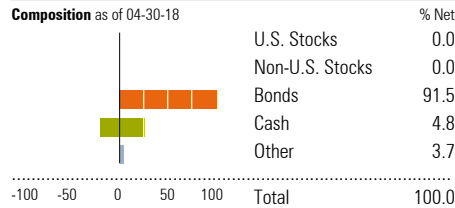


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	—	—
Fund Rank Percentile	39	33	—	—
Out of # of Investments	1,409	1,260	—	—

Portfolio Analysis



Top 20 Holdings as of 04-30-18

	% Assets
iShares 1-3 Year Credit Bond ETF	24.01
DFA VA Global Bond	15.02
DFA Two-Year Global Fixed-Income I	14.99
DFA One-Year Fixed-Income I	11.48
DFA Five-Year Global Fixed-Income I	10.02
DFA Intermediate Govt Fixed-Income I	6.00
iShares Intermediate Credit Bond ETF	5.98
DFA Inflation-Protected Securities I	5.03
DFA Short-Term Government I	4.00
DFA VA Short-Term Fixed Portfolio	1.98
Invesco Shrt-Trm Inv Gov&Agcy Instl	1.50

Total Number of Holdings	11
Annual Turnover Ratio %	10.82
Total Fund Assets (\$mil)	29.52

Morningstar Fixed Income Style Box™ as of 04-30-18

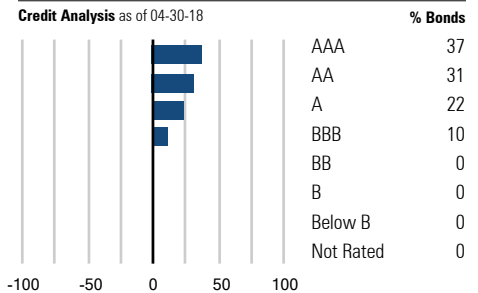


Statistics as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	1.25	0.00	1.32
Beta	0.45	—	1.96
Sharpe Ratio	-0.82	0.00	0.21
Alpha	-1.50	—	1.03
R-Squared	89.71	—	2.11

Morningstar Sectors as of 04-30-18

	% Fund
Government	39.36
Corporate	40.15
Securitized	0.09
Municipal	0.01
Cash/Cash Equivalents	2.77
Other	17.61



Intelligent Variable Annuity-Matson Money International Equity VI Portfolio

Benchmark
MSCI World Ex US NR USD

Category
Foreign Small/Mid Value

Overall Morningstar Rating™
★★

Morningstar Return
Average

Morningstar Risk
High

Out of 71 Foreign Small/Mid Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund pursues its investment objective by investing under normal circumstances at least 80% of its net assets, including any borrowings for investment purposes, in shares of registered, open-end investment companies and exchange-traded funds ("ETFs") (collectively, "investment companies") that have either adopted policies to invest at least 80% of their assets in equity securities, such as common stocks, preferred stocks or securities convertible into stocks, of foreign companies, or invest substantially all of their assets in such equity securities.

Operations

Subaccount Incp Date	02-18-14
Undr. Fund Incep Date	02-18-14
Subacct Adoption Date	02-18-14
Prosp Net Exp Ratio	1.32%
Prosp Gross Exp Ratio	1.32%
Advisor	Matson Money, Inc
Subadvisor	—
Portfolio Manager(s)	Mark E. Matson Sean Babin

Investment Manager

Over the last twenty years, Matson Money has brought investing education and coaching programs to thousands of financial professionals and investors nationwide. These programs focus on sharing the concepts of free markets, diversification, discipline, and rebalancing to create a long-term approach to life-long endeavor.

Volatility Analysis



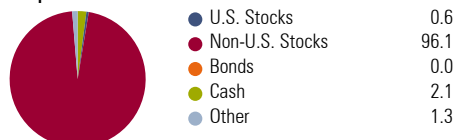
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★	—	—
Fund Rank Percentile	100	45	—	—
Out of # of Investments	79	71	—	—

Portfolio Analysis

Composition as of 04-30-18



Morningstar Equity Style Box™ as of 04-30-18

Style	% Mkt Cap
Giant	21.88
Large	19.73
Medium	29.83
Small	21.89
Micro	6.66

Top 20 Holdings as of 04-30-18

Holder	% Assets
DFA International Value III	30.05
DFA International Small Cap Value I	27.99
DFA VA International Small Portfolio	16.96
DFA Emerging Markets I	5.23
DFA VA International Value Portfolio	4.95
DFA Emerging Markets Value I	4.94
DFA Emerging Markets Small Cap I	4.91
DFA Large Cap International I	3.99
Invesco Shrt-Trm Inv Gov&Agcy Instl	0.99
Total Number of Holdings	9
Annual Turnover Ratio %	21.23
Total Fund Assets (\$mil)	16.79

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	11.98	0.70	0.90
P/B Ratio	1.09	0.37	0.78
P/C Ratio	3.50	0.27	0.69
GeoAvgCap (\$mil)	6446.34	0.06	1.16

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.15	1.20	1.06
3 Yr Beta	0.98	—	1.07
3 Yr Sharpe Ratio	0.38	0.35	0.97
3 Yr Alpha	-0.22	—	22.00
3 Yr R-squared	95.37	—	1.01

Morningstar World Regions as of 04-30-18

Region	% Fund
Americas	9.47
North America	7.28
Latin America	2.20
Greater Europe	48.42
United Kingdom	14.16
Europe Developed	31.96
Europe Emerging	0.68
Africa/Middle East	1.61
Greater Asia	42.11
Japan	21.80
Australasia	5.40
Asia Developed	8.40
Asia Emerging	6.51

Intelligent Variable Annuity-Matson Money U.S. Equity VI Portfolio

Benchmark
Russell 2500 TR USD

Category
Mid-Cap Value

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 2275 Mid-Cap Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The Portfolio pursues its investment objective by investing under normal circumstances at least 80% of its net assets, including any borrowings for investment purposes, in shares of registered, open-end investment companies and exchange-traded funds ("ETFs") (collectively, "investment companies") that have either adopted policies to invest at least 80% of their assets in equity securities, such as common stocks, preferred stocks or securities convertible into stocks, of U.S. companies, or invest substantially all of their assets in such equity securities.

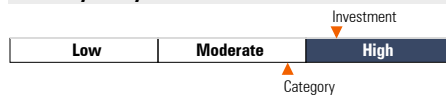
Operations

Subaccount Incp Date	02-18-14
Undr. Fund Incep Date	02-18-14
Subacct Adoption Date	02-18-14
Prosp Net Exp Ratio	1.08%
Prosp Gross Exp Ratio	1.08%
Advisor	Matson Money, Inc
Subadvisor	—
Portfolio Manager(s)	Mark E. Matson Sean Babin

Investment Manager

Over the last twenty years, Matson Money has brought investing education and coaching programs to thousands of financial professionals and investors nationwide. These programs focus on sharing the concepts of free markets, diversification, discipline, and rebalancing to create a long-term approach to life-long endeavor.

Volatility Analysis

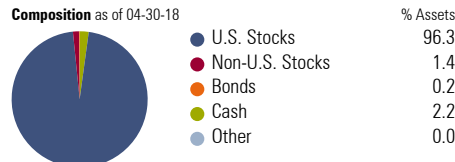


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	—	—
Fund Rank Percentile	1	13	—	—
Out of # of Investments	2,452	2,275	—	—

Portfolio Analysis



Morningstar Equity Style Box™ as of 04-30-18

Style	% Mkt Cap
Giant	20.60
Large	16.88
Medium	18.79
Small	36.46
Micro	7.27

Value Blend Growth

Top 20 Holdings as of 04-30-18

Holdings	% Assets
DFA US Large Cap Value III	26.01
DFA US Small Cap I	14.98
DFA VA US Targeted Value	14.98
DFA US Micro Cap I	14.92
DFA US Large Company I	13.69
DFA US Small Cap Value I	9.93
DFA VA US Large Value	3.99
Invesco Shrt-Trm Inv Gov&Agcy Instl	1.50

Total Number of Holdings	8
Annual Turnover Ratio %	21.00
Total Fund Assets (\$mil)	24.51

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.42	0.84	0.95
P/B Ratio	1.71	0.58	0.88
P/C Ratio	8.25	0.65	0.92
GeoAvgCap (\$mil)	8674.53	0.09	0.78

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.10	1.19	1.05
3 Yr Beta	1.00	—	1.02
3 Yr Sharpe Ratio	0.69	0.63	1.33
3 Yr Alpha	-2.70	—	0.54
3 Yr R-squared	70.64	—	0.95

Morningstar Sectors as of 04-30-18

Sector	% Fund
Cyclical	42.61
Basic Materials	5.56
Consumer Cyclical	12.79
Financial Services	23.46
Real Estate	0.80
Sensitive	40.78
Communication Services	3.29
Energy	9.11
Industrials	14.40
Technology	13.98
Defensive	16.61
Consumer Defensive	5.06
Healthcare	10.19
Utilities	1.36

Intelligent Variable Annuity-MFS Global Equity - Init. Class

Benchmark
MSCI World GR USD

Category
World Large Stock

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Below Average

Out of 3280 World Large Stock VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The fund normally invests at least 80% of the fund's net assets in equity securities. Equity securities include common stocks and other securities that represent an ownership interest (or right to acquire an ownership interest) in a company or other issuer. While MFS may invest the fund's assets in companies of any size, it primarily invests in companies with large capitalizations. The fund invests the fund's assets in U.S. and foreign securities, including emerging market securities.

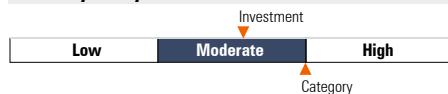
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-03-99
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.97%
Prosp Gross Exp Ratio	1.16%
Advisor	Massachusetts Financial Services Company
Subadvisor	—
Portfolio Manager(s)	Roger M. Morley Ryan P. McAllister

Investment Manager

Since 1924, MFS has been committed to providing investment professionals with a diverse range of investment options and services that enables them to choose what fits for investors' individual financial goals. An investment staff of over 160 professionals has the global reach and resources to identify industry trends, study daily market developments, and uncover new and growing companies.

Volatility Analysis



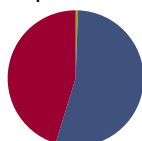
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★★★★
Fund Rank Percentile	77	47	50	10
Out of # of Investments	3,660	3,280	2,851	2,100

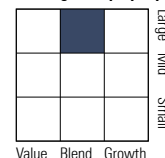
Portfolio Analysis

Composition as of 05-31-18



U.S. Stocks	54.3
Non-U.S. Stocks	45.2
Bonds	0.0
Cash	0.6
Other	0.0

Morningstar Equity Style Box™ as of 05-31-18



% Mkt Cap	53.88
Giant	36.58
Large	9.17
Medium	0.36
Small	0.00

Top 20 Holdings as of 05-31-18

	% Assets
Thermo Fisher Scientific Inc	2.98
Visa Inc Class A	2.80
Bayer AG	2.73
Medtronic PLC	2.66
Honeywell International Inc	2.51
Accenture PLC A	2.50
LVMH Moet Hennessy Louis Vuitton SE	2.41
Comcast Corp Class A	2.29
Nestle SA	2.23
Stryker Corp	2.22
Diageo PLC	2.16
Reckitt Benckiser Group PLC	2.08
Canadian National Railway Co	2.04
Pernod Ricard SA	1.97
State Street Corporation	1.94
Essity AB Class B	1.93
Danone SA	1.80
United Parcel Service Inc Class B	1.80
Walt Disney Co	1.79
Zimmer Biomet Holdings Inc	1.77

Total Number of Stock Holdings	88
Total Number of Bond Holdings	0
Annual Turnover Ratio %	11.00
Total Fund Assets (\$mil)	58.82

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.12	1.00	1.02
P/B Ratio	2.99	1.02	1.25
P/C Ratio	12.29	0.96	1.39
GeoAvgCap (\$mil)	55131.52	0.55	0.97

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.61	1.04	0.87
3 Yr Beta	0.82	—	0.94
3 Yr Sharpe Ratio	0.63	0.58	1.19
3 Yr Alpha	2.62	—	1.19
3 Yr R-squared	88.88	—	1.08

Morningstar World Regions as of 05-31-18

	% Fund
Americas	57.30
North America	56.60
Latin America	0.70
Greater Europe	39.62
United Kingdom	8.14
Europe Developed	30.27
Europe Emerging	0.00
Africa/Middle East	1.21
Greater Asia	3.08
Japan	1.64
Australasia	0.00
Asia Developed	1.22
Asia Emerging	0.22

Intelligent Variable Annuity-MFS Growth - Initial Class

Benchmark
Russell 1000 Growth TR USD

Category
Large Growth

Overall Morningstar Rating™
★★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The fund normally invests its assets primarily in equity securities. Equity securities include common stocks and other securities that represent an ownership interest (or right to acquire an ownership interest) in a company or other issuer. While it may invest the fund's assets in companies of any size, the fund primarily invests in companies with large capitalizations. It may invest its assets in foreign securities.

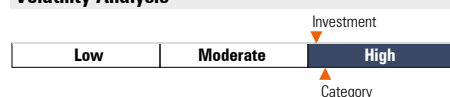
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	07-24-95
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.76%
Prosp Gross Exp Ratio	0.76%
Advisor	Massachusetts Financial Services Company
Subadvisor	—
Portfolio Manager(s)	Eric B. Fischman Matthew D. Sabel Paul J. Gordon

Investment Manager

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Volatility Analysis



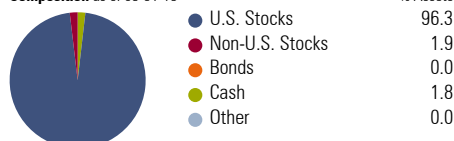
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	17	7	16	14
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18



Top 20 Holdings as of 05-31-18

Company	% Assets
Amazon.com Inc	6.05
Microsoft Corp	5.82
Facebook Inc A	4.73
Visa Inc Class A	4.28
Adobe Systems Inc	4.25
Alphabet Inc A	4.05
Mastercard Inc A	3.40
Netflix Inc	2.88
Alphabet Inc C	2.33
Salesforce.com Inc	2.31
Thermo Fisher Scientific Inc	2.24
NVIDIA Corp	1.89
Fiserv Inc	1.85
Activision Blizzard Inc	1.79
Electronic Arts Inc	1.78
Danaher Corp	1.77
Intuit Inc	1.57
Constellation Brands Inc A	1.53
Apple Inc	1.52
Booking Holdings Inc	1.47

Total Number of Stock Holdings	82
Total Number of Bond Holdings	0
Annual Turnover Ratio %	14.00
Total Fund Assets (\$mil)	1,706.30

Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	57.00
Large	40.34
Medium	2.66
Small	0.00
Micro	0.00

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	26.28	1.54	1.17
P/B Ratio	5.94	2.03	1.32
P/C Ratio	20.25	1.58	1.30
GeoAvgCap (\$mil)	112506.59	1.13	1.19

Risk Measures

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.58	1.14	0.96
3 Yr Beta	1.00	—	0.93
3 Yr Sharpe Ratio	1.24	1.14	1.36
3 Yr Alpha	3.26	—	-4.02
3 Yr R-squared	77.56	—	0.94

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	32.65
Basic Materials	2.95
Consumer Cyclical	15.95
Financial Services	13.75
Real Estate	0.00
Sensitive	50.84
Communication Services	2.23
Energy	0.92
Industrials	11.40
Technology	36.29
Defensive	16.51
Consumer Defensive	4.79
Healthcare	11.72
Utilities	0.00

Intelligent Variable Annuity-MFS Massachusetts Investors Growth Stock Portfolio

Benchmark
Russell 1000 Growth TR USD

Category
Large Growth

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Below Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The fund normally invests at least 80% of the fund's net assets in stocks. Stocks include common stocks and other securities that represent an ownership interest (or right to acquire an ownership interest) in a company or other issuer. MFS focuses on investing the fund's assets in the stocks of companies the advisor believes to have above average earnings growth potential compared to other companies (growth companies).

Operations

Subaccount Incp Date	03-27-15
Undr. Fund Incep Date	05-06-98
Subacct Adoption Date	03-27-15
Prosp Net Exp Ratio	0.81%
Prosp Gross Exp Ratio	0.81%
Advisor	Massachusetts Financial Services Company
Subadvisor	—
Portfolio Manager(s)	Jeffrey C. Constantino

Investment Manager

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Volatility Analysis



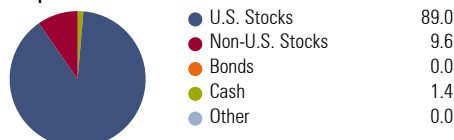
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★	★★★★
Fund Rank Percentile	66	56	67	25
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	Large	Mid	Small	% Mkt Cap
			Large			Giant 47.46
						Large 44.60
						Medium 7.93
						Small 0.00
						Micro 0.00

Top 20 Holdings as of 05-31-18

	% Assets
Alphabet Inc A	6.50
Microsoft Corp	4.38
Accenture PLC A	3.81
Visa Inc Class A	3.05
Texas Instruments Inc	2.96
Apple Inc	2.84
Nike Inc B	2.80
Thermo Fisher Scientific Inc	2.65
Starbucks Corp	2.58
Verisk Analytics Inc	2.48
Colgate-Palmolive Co	2.29
Mastercard Inc A	2.14
Aon PLC	2.13
Fidelity National Information Services Inc	2.09
Fiserv Inc	2.07
Comcast Corp Class A	1.99
TJX Companies Inc	1.99
The Estee Lauder Companies Inc Class A	1.90
Abbott Laboratories	1.89
Ecolab Inc	1.87

Total Number of Stock Holdings	62
Total Number of Bond Holdings	0
Annual Turnover Ratio %	21.00
Total Fund Assets (\$mil)	914.27

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	20.48	1.20	0.92
P/B Ratio	4.40	1.50	0.98
P/C Ratio	18.46	1.44	1.18
GeoAvgCap (\$mil)	80413.29	0.81	0.85

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.73	1.06	0.89
3 Yr Beta	1.00	—	0.93
3 Yr Sharpe Ratio	1.02	0.94	1.12
3 Yr Alpha	-0.11	—	0.14
3 Yr R-squared	89.64	—	1.09

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	31.95
Basic Materials	5.31
Consumer Cyclical	14.38
Financial Services	12.26
Real Estate	0.00
Sensitive	45.66
Communication Services	1.99
Energy	0.75
Industrials	13.41
Technology	29.51
Defensive	22.38
Consumer Defensive	10.32
Healthcare	12.06
Utilities	0.00

Intelligent Variable Annuity-MFS Utilities - Initial Class

Benchmark
S&P 500 TR

Category
Utilities

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
High

Out of 663 Utilities VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks total return.

MFS normally invests at least 80% of the fund's net assets in securities of issuers in the utilities industry. Issuers in the utilities industry include issuers engaged in the manufacture, production, generation, transmission, sale or distribution of electric, gas or other types of energy, water or other sanitary services; and issuers engaged in telecommunications. MFS primarily invests the fund's assets in equity securities, but may also invest in debt instruments, including below investment grade quality debt instruments.

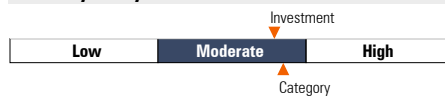
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	01-03-95
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.80%
Prosp Gross Exp Ratio	0.80%
Advisor	Massachusetts Financial Services Company
Subadvisor	—
Portfolio Manager(s)	Maura A. Shaughnessy Claud P. Davis Scott Walker

Investment Manager

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Volatility Analysis



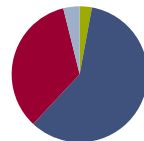
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	7	26	21	5
Out of # of Investments	721	663	554	382

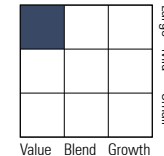
Portfolio Analysis

Composition as of 05-31-18



U.S. Stocks	59.1
Non-U.S. Stocks	34.1
Bonds	0.0
Cash	2.9
Other	3.9

Morningstar Equity Style Box™ as of 05-31-18



% Mkt Cap	11.48
Giant	53.29
Large	31.52
Medium	3.71
Small	0.00
Micro	0.00

Top 20 Holdings as of 05-31-18

	% Assets
Exelon Corp	6.91
EDP Renovaveis SA	5.03
NextEra Energy Inc	4.25
PPL Corp	3.32
Enel SpA	2.80
American Electric Power Co Inc	2.72
Enterprise Products Partners LP	2.64
Com Hem Holding AB	2.63
American Tower Corp	2.52
NRG Energy Inc	2.39
Vistra Energy Corp	2.28
Cheniere Energy Inc	1.98
Iberdrola SA	1.97
TransCanada Corp	1.96
SSE PLC	1.89
Comcast Corp Class A	1.87
Southern Co	1.86
Duke Energy Corp	1.80
Enbridge Inc	1.79
The AES Corp	1.76

Total Number of Stock Holdings	80
Total Number of Bond Holdings	0
Annual Turnover Ratio %	27.00
Total Fund Assets (\$mil)	1,517.03

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	16.54	0.97	0.99
P/B Ratio	1.64	0.56	0.98
P/C Ratio	6.40	0.50	0.95
GeoAvgCap (\$mil)	19147.44	0.19	0.97

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.12	1.09	0.98
3 Yr Beta	0.74	—	1.19
3 Yr Sharpe Ratio	0.31	0.28	0.97
3 Yr Alpha	-2.25	—	2.10
3 Yr R-squared	50.08	—	1.25

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	2.83
Basic Materials	0.00
Consumer Cyclical	2.83
Financial Services	0.00
Real Estate	0.00
Sensitive	33.36
Communication Services	15.79
Energy	16.96
Industrials	0.61
Technology	0.00
Defensive	63.82
Consumer Defensive	0.00
Healthcare	0.00
Utilities	63.82

Intelligent Variable Annuity-Neuberger Berman AMT Large Cap Value

Benchmark
Russell 1000 Value TR USD

Category
Large Value

Overall Morningstar Rating™
★★★★

Morningstar Return
Average

Morningstar Risk
High

Out of 7057 Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

To pursue its goal, the fund normally invests at least 80% of its net assets in equity securities of large-capitalization companies, which it defines as those with a market capitalization within the market capitalization range of the Russell 1000® Value Index at the time of purchase. Although the fund invests primarily in domestic stocks, it may also invest in stocks of foreign companies.

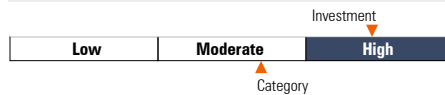
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	03-22-94
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.12%
Prosp Gross Exp Ratio	1.12%
Advisor	Neuberger Berman Investment Advisers LLC
Subadvisor	—
Portfolio Manager(s)	Eli M. Salzman

Investment Manager

Neuberger Berman has successfully managed investments for individuals, families and institutions since 1939. Neuberger Berman engages in wealth management services including private asset management, mutual funds, institutional asset management and alternative investments.

Volatility Analysis



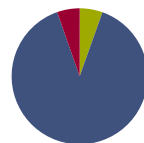
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★
Fund Rank Percentile	47	19	25	92
Out of # of Investments	7,842	7,057	6,341	4,020

Portfolio Analysis

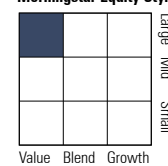
Composition as of 05-31-18



U.S. Stocks	89.2
Non-U.S. Stocks	5.4
Bonds	0.0
Cash	5.5
Other	0.0

% Assets

Morningstar Equity Style Box™ as of 05-31-18



% Mkt Cap

Giant	31.79
Large	55.48
Medium	12.73
Small	0.00
Micro	0.00

Top 20 Holdings as of 05-31-18

	% Assets
Newmont Mining Corp	4.88
Centene Corp	4.46
Pfizer Inc	4.40
Mondelez International Inc Class A	3.74
Exelon Corp	3.61
Procter & Gamble Co	3.05
JPMorgan Chase & Co	3.03
HCA Healthcare Inc	2.85
Walmart Inc	2.82
Johnson & Johnson	2.66
Exxon Mobil Corp	2.65
DTE Energy Co	2.32
FirstEnergy Corp	2.25
American Electric Power Co Inc	2.20
EOG Resources Inc	2.04
Verizon Communications Inc	2.03
Unilever NV ADR	1.99
Carnival Corp	1.96
Athene Holding Ltd A	1.85
Cabot Oil & Gas Corp Class A	1.81

Total Number of Stock Holdings	62
Total Number of Bond Holdings	0
Annual Turnover Ratio %	91.00
Total Fund Assets (\$mil)	69.74

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	15.44	0.90	1.07
P/B Ratio	2.24	0.76	1.07
P/C Ratio	9.00	0.70	0.86
GeoAvgCap (\$mil)	50916.20	0.51	0.72

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.86	1.27	1.18
3 Yr Beta	1.05	—	1.07
3 Yr Sharpe Ratio	0.61	0.56	1.07
3 Yr Alpha	-3.85	—	0.81
3 Yr R-squared	69.06	—	0.82

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	34.36
Basic Materials	7.85
Consumer Cyclical	5.46
Financial Services	13.91
Real Estate	7.14
Sensitive	15.93
Communication Services	3.59
Energy	9.64
Industrials	0.00
Technology	2.70
Defensive	49.70
Consumer Defensive	16.00
Healthcare	18.86
Utilities	14.84

Intelligent Variable Annuity-Neuberger Berman AMT M/C Intrinsic Val

Benchmark
Russell Mid Cap Value TR USD

Category
Mid-Cap Value

Overall Morningstar Rating™
★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 2275 Mid-Cap Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks growth of capital.

The fund normally invests at least 80% of its net assets in equity securities of mid-capitalization companies, which it defines as those with a total market capitalization within the market capitalization range of the Russell Midcap® Value Index at the time of purchase. The fund's strategy consists of using a bottom-up, fundamental research driven approach to identify stocks of companies that are trading below the Portfolio Manager's estimate of their intrinsic value and that he believes have the potential for appreciation over time.

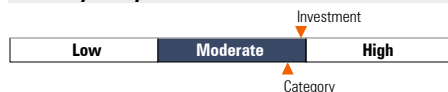
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	08-22-01
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.00%
Prosp Gross Exp Ratio	1.00%
Advisor	Neuberger Berman Investment Advisers LLC
Subadvisor	—
Portfolio Manager(s)	Michael C. Greene

Investment Manager

Neuberger Berman has successfully managed investments for individuals, families and institutions since 1939. Neuberger Berman engages in wealth management services including private asset management, mutual funds, institutional asset management and alternative investments.

Volatility Analysis

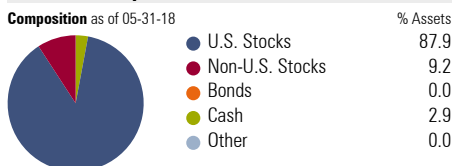


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★★	★★★★
Fund Rank Percentile	16	41	21	30
Out of # of Investments	2,452	2,275	2,084	1,338

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

	Value	Blend	Growth	% Mkt Cap
Giant				0.00
Large				36.12
Medium				50.52
Small				13.36
Micro				0.00

Top 20 Holdings as of 05-31-18

	% Assets
AerCap Holdings NV	3.66
General Dynamics Corp	3.27
Zimmer Biomet Holdings Inc	3.09
ONEOK Inc	2.59
Western Digital Corp	2.58
Starwood Property Trust Inc	2.52
The AES Corp	2.48
Check Point Software Technologies Ltd	2.45
Treehouse Foods Inc	2.45
Johnson Controls International PLC	2.40
BankUnited Inc	2.34
Covanta Holding Corp	2.33
Devon Energy Corp	2.03
American Airlines Group Inc	2.01
KeyCorp	2.01
Cabot Oil & Gas Corp Class A	2.00
Envision Healthcare Corp	2.00
Perrigo Co PLC	2.00
The Hain Celestial Group Inc	2.00
Comerica Inc	1.97

Total Number of Stock Holdings	56
Total Number of Bond Holdings	0
Annual Turnover Ratio %	35.00
Total Fund Assets (\$mil)	174.38

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	13.74	0.80	0.90
P/B Ratio	1.74	0.59	0.90
P/C Ratio	7.62	0.60	0.85
GeoAvgCap (\$mil)	9259.66	0.09	0.84

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.49	1.13	0.99
3 Yr Beta	0.96	—	0.98
3 Yr Sharpe Ratio	0.53	0.49	1.02
3 Yr Alpha	-4.54	—	0.91
3 Yr R-squared	72.59	—	0.98

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	26.82
Basic Materials	1.62
Consumer Cyclical	9.46
Financial Services	10.21
Real Estate	5.53
Sensitive	50.57
Communication Services	0.00
Energy	10.12
Industrials	22.14
Technology	18.31
Defensive	22.60
Consumer Defensive	6.20
Healthcare	11.05
Utilities	5.35

Intelligent Variable Annuity-PIMCO VIT All Asset Portfolio

Benchmark
BBgBarc US Trsy Infl Note 1-10Y TR USD

Category
Tactical Allocation

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 1424 Tactical Allocation VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum real return, consistent with preservation of real capital and prudent investment management.

The Portfolio is a "fund of funds," which is a term used to describe mutual funds that pursue their investment objective by investing in other funds. It seeks to achieve its investment objective by investing substantially all of its assets in the least expensive class of shares of any actively managed or smart beta funds (including mutual funds or exchange-traded funds) of PIMCO Funds, PIMCO ETF Trust or PIMCO Equity Series, each an affiliated open-end investment company, except other funds of funds (collectively, "Underlying PIMCO Funds").

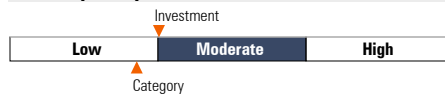
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	01-31-06
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.07%
Prosp Gross Exp Ratio	1.28%
Advisor	Pacific Investment Management Co LLC
Subadvisor	Research Affiliates LLC
Portfolio Manager(s)	Robert D. Arnott Christopher J. Brightman

Investment Manager

PIMCO is an institutional money manager specializing in active fixed income investment management. Deep bench of investment talent/ sector specialist portfolio managers. Proprietary analytics /risk systems. Investment team led by Bill Gross, CIO, co-founder. PIMCO has grown into one of the most respected names in fixed-income management, due in large part to its total return approach to bond investing and strong long-term performance record.

Volatility Analysis

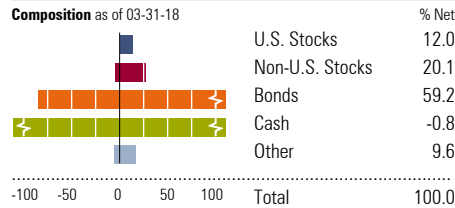


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

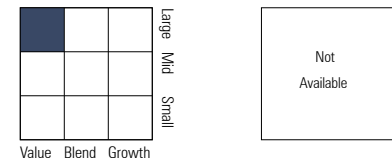
Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★	★★★★
Fund Rank Percentile	68	23	69	27
Out of # of Investments	1,633	1,424	1,135	254

Portfolio Analysis



Morningstar Style Box™ as of 03-31-18(EQ) ; 06-18(F-I)



Top 20 Holdings as of 03-31-18

Asset	% Assets
PIMCO Emerging Markets Currency Instl 10-01-18	13.88
PIMCO RAE Fundamental PLUS EMG Inst 08-01-19	7.74
PIMCO Emerging Local Bond Instl 01-01-26	6.72
PIMCO Income Instl 10-01-24	6.59
PIMCO RAE Fundamental EMkts Instl 03-01-33	5.45
PIMCO CommoditiesPLUS® Strategy Instl 03-01-19	5.29
PIMCO RAE Fundamental AdvantagePLUS In 09-01-19	4.91
PIMCO Real Estate Real Return Strategy 09-01-24	4.34
PIMCO Total Return Instl 02-01-24	4.16
PIMCO Low Duration Instl 06-01-19	4.05
PIMCO RAE Low Volatility PLUS EMG Inst 02-01-19	4.03
PIMCO Long-Term US Government Instl 04-01-43	3.81
PIMCO RAE Worldwide Long/Short PLUS In 12-01-19	3.53
PIMCO Senior Floating Rate Instl 04-01-24	3.25
PIMCO Extended Duration Instl 04-01-45	2.95
PIMCO StocksPLUS® Intl (USD-Hedged) In 09-01-19	2.88
PIMCO Real Return Instl 05-01-25	2.61
PIMCO Investment Grade Corp Bd Instl 09-01-28	2.17
PIMCO RAE Low Volatility PLUS Intl Ins 11-01-19	1.77
PIMCO RAE Fundamental PLUS Intl Inst 11-01-18	1.72

Total Number of Holdings	34
Annual Turnover Ratio %	40.00
Total Fund Assets (\$mil)	799.88

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	10.87	0.63	0.77
P/B Ratio	1.18	0.40	0.64
P/C Ratio	3.66	0.29	0.57
GeoAvgCap (\$mil)	—	—	—

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	7.53	0.74	1.08
3 Yr Beta	1.01	—	1.01
3 Yr Sharpe Ratio	0.47	0.43	1.18
3 Yr Alpha	-2.20	—	0.74
3 Yr R-squared	68.30	—	0.86

Morningstar Sectors as of 03-31-18

Sector	% Fund
Cyclical	0.00
Basic Materials	0.00
Consumer Cyclical	0.00
Financial Services	0.00
Real Estate	0.00
Sensitive	0.00
Communication Services	0.00
Energy	0.00
Industrials	0.00
Technology	0.00
Defensive	0.00
Consumer Defensive	0.00
Healthcare	0.00
Utilities	0.00

Intelligent Variable Annuity-PIMCO VIT Commodity Real Return Strategy Portfolio

Benchmark
Bloomberg Commodity TR USD

Category
Commodities Broad Basket

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 512 Commodities Broad Basket VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum real return, consistent with prudent investment management.

The portfolio seeks to achieve its investment objective by investing under normal circumstances in commodity-linked derivative instruments backed by a portfolio of inflation-indexed securities and other Fixed Income Instruments. It invests in commodity-linked derivative instruments, including commodity index-linked notes, swap agreements, commodity options, futures and options on futures, that provide exposure to the investment returns of the commodities markets, without investing directly in physical commodities.

Operations

Subaccount Incp Date	11-01-13
Undr. Fund Incep Date	04-30-12
Subacct Adoption Date	11-01-13
Prosp Net Exp Ratio	0.74%
Prosp Gross Exp Ratio	1.39%
Advisor	Pacific Investment Management Co LLC
Subadvisor	—
Portfolio Manager(s)	Mihir P. Worah Jeremie Banet Nicholas J. Johnson

Investment Manager

PIMCO is an institutional money manager specializing in active fixed income investment management. Deep bench of investment talent/ sector specialist portfolio managers. Proprietary analytics/risk systems. Investment team led by Bill Gross, CIO, co-founder. PIMCO has grown into one of the most respected names in fixed-income management, due in large part to its total return approach to bond investing and strong long-term performance record.

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	12	10	8	4
Out of # of Investments	573	512	417	189

Portfolio Analysis

Composition as of 03-31-18

	% Net
U.S. Stocks	0.0
Non-U.S. Stocks	0.0
Bonds	94.7
Cash	-17.3
Other	22.6
Total	100.0

Morningstar Fixed Income Style Box™

as of 03-31-18

Avg Eff Duration	2.46
Avg Eff Maturity	1.22
Avg Wtd Coupon	1.59
Avg Wtd Price	102.37

Not Available

Top 20 Holdings

as of 03-31-18

	% Assets
Pimco Cayman Cmnty Port I Ltd 07-01-18	22.32
United States Treasury Notes 0.12% 04-15-20	17.91
United States Treasury Notes 0.12% 04-15-19	12.54
United States Treasury Notes 0.12% 04-15-21	11.26
INF SWAP US IT 1.68 04/28/17-1Y LCH_Pa 04-28-18	10.88
Federal National Mortgage Associat 3.5% 05-14-48	7.19
U.S. Treasury Bond June18 06-20-18	6.88
IRS USD 2.25000 12/16/15-7Y	6.42
CME_Receive 12-16-22	
United States Treasury Notes 1.88% 02-28-22	5.78
10 Year Japanese Government Bond June1 06-20-18	5.06
United States Treasury Bonds 2.38% 01-15-25	5.03
United States Treasury Notes 0.38% 07-15-23	4.65
Federal National Mortgage Associatio 4% 05-14-48	4.31
United States Treasury Notes 1.25% 07-15-20	4.22
INF SWAP US IT R 2.56 05/08/13-10Y DUB 05-08-23	3.61
INF SWAP US IT 2.07 03/23/18-1Y LCH_Pa 03-23-19	3.26
IRS USD 2.00000 06/20/18-5Y	3.22
CME_Receive 06-20-23	
Secretaria Tesouro Nacional 0% 07-01-18	3.03
Fin Fut Uk Gilt Ice 06/27/18 06-28-18	2.90
United States Treasury Notes 0.5% 01-15-28	2.90

Statistics

as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	12.53	-0.01	1.00
Beta	0.84	—	1.00
Sharpe Ratio	-0.37	0.00	0.82
Alpha	-1.39	—	0.60
R-Squared	87.96	—	1.00

Morningstar Sectors

as of 03-31-18

	% Fund
Government	50.97
Corporate	2.70
Securitized	8.85
Municipal	0.01
Cash/Cash Equivalents	28.23
Other	9.24

Credit Analysis

Not Available

Total Number of Stock Holdings	0
Total Number of Bond Holdings	323
Annual Turnover Ratio %	157.00
Total Fund Assets (\$mil)	389.52

Intelligent Variable Annuity-PIMCO VIT Emerging Markets Bond Portfolio

Benchmark
JPM EMBI Global TR USD

Category
Emerging Markets Bond

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
High

Out of 464 Emerging Markets Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum total return, consistent with preservation of capital and prudent investment management.

The portfolio seeks to achieve its investment objective by investing under normal circumstances at least 80% of its assets in Fixed Income Instruments that are economically tied to emerging market countries, which may be represented by forwards or derivatives such as options, futures contracts or swap agreements. "Fixed Income Instruments" include bonds, debt securities and other similar instruments issued by various U.S. and non-U.S. public- or private-sector entities.

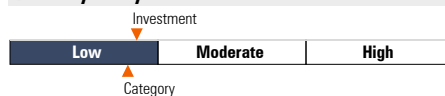
Operations

Subaccount Incp Date	11-01-13
Undr. Fund Incep Date	04-30-12
Subacct Adoption Date	11-01-13
Prosp Net Exp Ratio	0.85%
Prosp Gross Exp Ratio	0.85%
Advisor	Pacific Investment Management Co LLC
Subadvisor	—
Portfolio Manager(s)	Michael A. Gomez Francesc Balcells Yacov Arnopolin

Investment Manager

PIMCO is an institutional money manager specializing in active fixed income investment management. Deep bench of investment talent/ sector specialist portfolio managers. Proprietary analytics /risk systems. Investment team led by Bill Gross, CIO, co-founder. PIMCO has grown into one of the most respected names in fixed-income management, due in large part to its total return approach to bond investing and strong long-term performance record.

Volatility Analysis



In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	4	7	2	1
Out of # of Investments	522	464	363	169

Portfolio Analysis

Composition as of 03-31-18

	% Net
U.S. Stocks	0.0
Non-U.S. Stocks	0.0
Bonds	121.8
Cash	-21.8
Other	0.0
Total	100.0

Top 20 Holdings as of 03-31-18

	% Assets
US 5 Year Note (CBT) June18 06-29-18	3.39
Petroleos Mexicanos 6.5% 06-02-41	2.92
Pimco Fds 06-08-18	2.60
MEXICO LA SP DUB 12-20-22	2.58
IRS USD 1.50000 06/21/17-10Y	1.75
CME_Recei 06-21-27	1.75
US 10 Year Note (CBT) June18 06-20-18	1.75
Brazil Minas SPE 5.33% 02-15-28	1.41
Ukraine (Republic of) 7.75% 09-01-20	1.34
Peru La Sp Bps 06-20-18	1.28
SB Capital SA 6.12% 02-07-22	1.28
Turkey (Republic of) 6% 03-25-27	1.26
INDONESIA AS SP UAG 12-20-22	1.24
JSC National Company KazMunayGas 7% 05-05-20	1.21
Cdx Em29 Ice 06-20-23	1.15
VEB Finance Plc 5.94% 11-21-23	1.14
Colombia La Sp Cbk 06-20-19	1.11
Republic of Colombia 4.38% 07-12-21	1.11
Argentina (Republic of) 6.88% 01-26-27	1.09
Indonesia Republic 4.75% 01-08-26	1.08
Chilean Govt La Sp Brc 12-20-21	1.06

Total Number of Stock Holdings	3
Total Number of Bond Holdings	404
Annual Turnover Ratio %	35.00
Total Fund Assets (\$mil)	274.66

Morningstar Fixed Income Style Box™

as of 03-31-18

Not Available	Avg Eff Duration	6.34
	Avg Eff Maturity	11.89
	Avg Wtd Coupon	4.91
	Avg Wtd Price	—

Statistics as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	6.83	-0.01	1.01
Beta	1.40	—	1.02
Sharpe Ratio	0.46	0.00	1.84
Alpha	1.73	—	4.68
R-Squared	29.78	—	0.97

Morningstar Sectors as of 03-31-18

	% Fund
Government	52.63
Corporate	17.99
Securitized	1.86
Municipal	0.00
Cash/Cash Equivalents	5.38
Other	22.14

Credit Analysis % Bonds
Not Available

Intelligent Variable Annuity-PIMCO VIT Global Bond Portfolio

Benchmark
JPM GBI Global FX NY TR USD

Category
World Bond

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 1293 World Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum total return, consistent with preservation of capital and prudent investment management.

The fund seeks to achieve its investment objective by investing under normal circumstances at least 80% of its assets in Fixed Income Instruments that are economically tied to at least three countries (one of which may be the United States), which may be represented by forwards or derivatives such as options, futures contracts or swap agreements. "Fixed Income Instruments" include bonds, debt securities and other similar instruments issued by various U.S. and non-U.S. public- or private-sector entities.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	01-31-06
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.75%
Prosp Gross Exp Ratio	0.81%
Advisor	Pacific Investment Management Co LLC
Subadvisor	—
Portfolio Manager(s)	Andrew Thomas Balls Lorenzo Pagani Sachin Gupta

Investment Manager

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Volatility Analysis



In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★
Fund Rank Percentile	18	4	8	35
Out of # of Investments	1,524	1,293	1,081	509

Portfolio Analysis

Composition as of 03-31-18

	% Net
U.S. Stocks	0.0
Non-U.S. Stocks	0.0
Bonds	111.9
Cash	-16.0
Other	4.1
Total	100.0

Top 20 Holdings

as of 03-31-18

	% Assets
IRS USD 1.75000 10/01/18-0Y*	58.53
CME_Recei 04-01-19	
IRS USD 2.00000 10/01/19-1Y* (RED) CME 04-01-20	58.51
Fin Fut Euribor Ice (Wht) 06/18/18 06-19-18	32.29
90 Day Eurodollar Future Mar19 03-18-19	24.75
90 Day Eurodollar Future Mar20 03-16-20	24.70
90 Day Eurodollar Future Sept18 09-17-18	21.54
90 Day Eurodollar Future Sept19 09-16-19	21.46
IRS USD 2.50000 12/20/17-10Y	13.35
CME_Recei 12-20-27	
IRS GBP 1.00000 09/19/18-1Y (WHT) LCH_ 09-19-19	12.91
IRS GBP 1.00000 09/18/19-1Y (RED) LCH_ 09-18-20	12.88
Fra Usd R 1.945000 3ml Cme 09-19-18	12.41
OIS USD FEDL01/1.72375 06/20/18	12.41
CME_Pa 09-19-18	
Fra Usd R 1.945000 3ml Cme 09-19-18	12.40
IRS NZD 2.50000 02/14/19-1Y (RED) CME_ 02-14-20	10.82
US 5 Year Note (CBT) June18 06-29-18	10.50
IRS GBP 1.25000 12/19/18-1Y (RED) LCH_ 12-19-19	9.96
IRS GBP 1.50000 12/18/19-1Y (GRN) LCH_ 12-18-20	9.96
90 Day Eurodollar Future Dec19 12-16-19	9.67
90 Day Eurodollar Future Dec20 12-14-20	9.67
Fin Fut Uk Gilt Ice 06/27/18 06-28-18	9.61

Total Number of Stock Holdings	0
Total Number of Bond Holdings	457
Annual Turnover Ratio %	339.00
Total Fund Assets (\$mil)	218.50

Morningstar Fixed Income Style Box™

as of 03-31-18

Not Available	Avg Eff Duration	2.06
	Avg Eff Maturity	3.82
	Avg Wtd Coupon	2.91
	Avg Wtd Price	—

Statistics

as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	5.07	-0.01	0.93
Beta	1.36	—	4.00
Sharpe Ratio	0.42	0.00	-3.23
Alpha	0.78	—	-0.65
R-Squared	51.70	—	2.26

Morningstar Sectors

as of 03-31-18

	% Fund
Government	45.77
Corporate	3.74
Securitized	5.98
Municipal	0.12
Cash/Cash Equivalents	33.02
Other	11.37

Credit Analysis

Not Available

Intelligent Variable Annuity-PIMCO VIT Real Return Portfolio

Benchmark
BBgBarc US Treasury US TIPS TR USD

Category
Inflation-Protected Bond

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 1002 Inflation-Protected Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks maximum real return, consistent with preservation of real capital and prudent investment management.

The portfolio seeks to achieve its investment objective by investing under normal circumstances at least 80% of its net assets in inflation-indexed bonds of varying maturities issued by the U.S. and non-U.S. governments, their agencies or instrumentalities and corporations, which may be represented by forwards or derivatives such as options, futures contracts or swap agreements. Assets not invested in inflation-indexed bonds may be invested in other types of Fixed Income Instruments.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-10-00
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.50%
Prosp Gross Exp Ratio	0.89%
Advisor	Pacific Investment Management Co LLC
Subadvisor	—
Portfolio Manager(s)	Mihir P. Worah Jeremie Banet

Investment Manager

PIMCO is an institutional money manager specializing in active fixed income investment management. Deep bench of investment talent/ sector specialist portfolio managers. Proprietary analytics /risk systems. Investment team led by Bill Gross, CIO, co-founder. PIMCO has grown into one of the most respected names in fixed-income management, due in large part to its total return approach to bond investing and strong long-term performance record.

Volatility Analysis

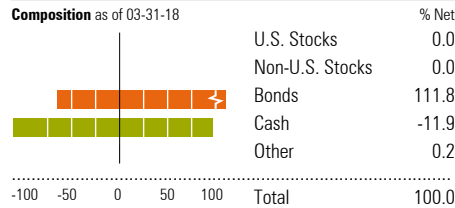


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	11	14	13	2
Out of # of Investments	1,108	1,002	934	473

Portfolio Analysis



Morningstar Fixed Income Style Box™

as of 03-31-18

Not Available	Avg Eff Duration	7.07
	Avg Eff Maturity	7.02
	Avg Wtd Coupon	1.85
	Avg Wtd Price	105.61

Top 20 Holdings

as of 03-31-18

Security	% Assets
United States Treasury Notes 0.12% 04-15-21	9.31
United States Treasury Notes 0.62% 01-15-26	8.09
United States Treasury Bonds 2.38% 01-15-25	7.10
United States Treasury Notes 0.38% 07-15-23	6.76
United States Treasury Bonds 2.5% 01-15-29	6.20
INF SWAP US IT 1.68 04/28/17-1Y LCH_Pa 04-28-18	5.94
10 Year Japanese Government Bond June1 06-20-18	5.29
Federal National Mortgage Associatio 4% 05-14-48	4.88
United States Treasury Notes 0.25% 01-15-25	4.61
Federal National Mortgage Associat 3.5% 05-14-48	4.56
United States Treasury Bonds 3.88% 04-15-29	4.56
United States Treasury Notes 0.12% 04-15-20	4.26
IRS USD 2.25000 12/20/17-5Y	4.23
CME_Receiv 12-20-22	—
United States Treasury Notes 1.38% 01-15-20	4.14
United States Treasury Bonds 1.75% 01-15-28	3.87
United States Treasury Bonds 3.62% 04-15-28	3.77
United States Treasury Bonds 1.38% 02-15-44	3.65
IRS USD 2.00000 07/27/21-5Y CME_Pay 07-27-26	3.60
U.S. Treasury Bond June18 06-20-18	3.35
Fin Fut Uk Gilt Ice 06/27/18 06-28-18	3.26

Statistics as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	3.27	0.00	1.03
Beta	0.88	—	1.02
Sharpe Ratio	0.21	0.00	-1.62
Alpha	-0.18	—	0.16
R-Squared	52.30	—	0.97

Morningstar Sectors as of 03-31-18

	% Fund
Government	52.32
Corporate	3.45
Securitized	9.43
Municipal	0.03
Cash/Cash Equivalents	25.42
Other	9.35

Credit Analysis % Bonds
Not Available

Total Number of Stock Holdings	0
Total Number of Bond Holdings	473
Annual Turnover Ratio %	157.00
Total Fund Assets (\$mil)	2,062.04

Intelligent Variable Annuity-PSF Jennison 20/20 Focus II

Benchmark
S&P 500 TR

Category
Large Growth

Overall Morningstar Rating™
★★

Morningstar Return
Below Average

Morningstar Risk
Above Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

The Portfolio invests primarily in equity and equity-related securities of approximately 40 (which may range up to 50) U.S. companies that are selected by the Portfolio's two portfolio managers as having strong capital appreciation potential. The manager believes that growth in earnings and cash flows drives share prices over the long term; that excess returns are generated by investing in market-leading companies that create economic value through long-duration competitive advantages; and that a deeply researched understanding of company and industry fundamentals leads to successful stock selection.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★	★★
Fund Rank Percentile	58	62	73	80
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	74.19
Large	23.01
Medium	2.80
Small	0.00
Micro	0.00

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	02-15-00
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.27%
Prosp Gross Exp Ratio	1.27%
Advisor	PGIM Investments LLC
Subadvisor	Jennison Associates LLC
Portfolio Manager(s)	Spiros "Sig" Segalas Warren N. Koontz

Investment Manager

Commitment to Performance: Superior long-term investment returns for over 39 years. Investment Culture: Values individual impact and rewards team performance. Consistent Philosophy: Internal Fundamental Research, bottom-up stock selection, and a highly interactive investment process Top-Caliber Investment Talent: Small highly experienced investment teams exclusively focused on investing.

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Top 20 Holdings as of 05-31-18

Company	% Assets
Microsoft Corp	6.16
Boeing Co	5.18
PNC Financial Services Group Inc	4.03
JPMorgan Chase & Co	3.52
Amazon.com Inc	3.25
Adobe Systems Inc	3.05
Alibaba Group Holding Ltd ADR	3.01
Mastercard Inc A	2.98
Netflix Inc	2.93
Salesforce.com Inc	2.91
SLM Corp	2.73
Broadcom Inc	2.72
Alphabet Inc A	2.68
NVIDIA Corp	2.67
Tencent Holdings Ltd ADR	2.67
Facebook Inc A	2.65
Texas Instruments Inc	2.53
Prudential Core Ultra Short Bond Fund 12-31-49	2.48
MetLife Inc	2.45
United Technologies Corp	2.37

Total Number of Stock Holdings	41
Total Number of Bond Holdings	0
Annual Turnover Ratio %	99.00
Total Fund Assets (\$mil)	215.99

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	20.40	1.19	0.91
P/B Ratio	3.29	1.12	0.73
P/C Ratio	12.95	1.01	0.83
GeoAvgCap (\$mil)	146306.20	1.47	1.55

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.63	1.24	1.04
3 Yr Beta	1.12	—	1.05
3 Yr Sharpe Ratio	0.82	0.75	0.90
3 Yr Alpha	-2.08	—	2.57
3 Yr R-squared	82.10	—	1.00

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	38.23
Basic Materials	2.36
Consumer Cyclical	16.50
Financial Services	19.37
Real Estate	0.00
Sensitive	46.37
Communication Services	1.72
Energy	6.26
Industrials	7.75
Technology	30.64
Defensive	15.40
Consumer Defensive	3.88
Healthcare	9.44
Utilities	2.08

Intelligent Variable Annuity-PSF Natural Resources II

Benchmark
S&P 500 TR

Category
Natural Resources

Overall Morningstar Rating™
★★

Morningstar Return
Below Average

Morningstar Risk
Above Average

Out of 754 Natural Resources VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

In pursuing its investment objective, the Portfolio normally invests at least 80% of its assets (net assets plus any borrowings made for investment purposes) in equity securities of companies that are associated with natural resources, including those companies that are principally engaged in the research, development, manufacturing, extraction, distribution or sale of materials, energy or goods related to the Agriculture, Energy, Materials or Commodity-Related Industrials sectors. The fund is non-diversified.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-28-05
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.93%
Prosp Gross Exp Ratio	0.94%
Advisor	PGIM Investments LLC
Subadvisor	Allianz Global Investors US, LLC
Portfolio Manager(s)	Paul D. Strand

Investment Manager

Commitment to Performance: Superior long-term investment returns for over 39 years. Investment Culture: Values individual impact and rewards team performance. Consistent Philosophy: Internal Fundamental Research, bottom-up stock selection, and a highly interactive investment process Top-Caliber Investment Talent: Small highly experienced investment teams exclusively focused on investing.

Volatility Analysis

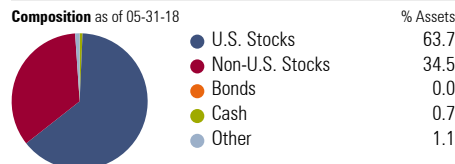


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★	★★
Fund Rank Percentile	12	72	96	92
Out of # of Investments	837	754	641	303

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	47.29
Large	35.81
Medium	15.55
Small	1.34
Micro	0.00

Value Blend Growth

Top 20 Holdings as of 05-31-18

Company	% Assets
Chevron Corp	5.18
Exxon Mobil Corp	4.21
Occidental Petroleum Corp	3.67
BP PLC	3.61
EOG Resources Inc	3.41
Royal Dutch Shell PLC Class A	3.39
BHP Billiton Ltd	3.31
Total SA	3.20
Halliburton Co	2.87
Rio Tinto PLC	2.82
Schlumberger Ltd	2.75
Royal Dutch Shell PLC B	2.72
Suncor Energy Inc	2.69
ConocoPhillips	2.53
Valero Energy Corp	2.36
DowDuPont Inc	2.30
Pioneer Natural Resources Co	1.93
Phillips 66	1.87
Marathon Petroleum Corp	1.85
Continental Resources Inc	1.78

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.58	1.03	1.04
P/B Ratio	1.94	0.66	1.02
P/C Ratio	9.36	0.73	1.00
GeoAvgCap (\$mil)	51520.58	0.52	2.45

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	20.96	2.06	1.05
3 Yr Beta	1.11	—	1.00
3 Yr Sharpe Ratio	-0.08	-0.07	-1.00
3 Yr Alpha	-10.17	—	1.39
3 Yr R-squared	32.01	—	0.86

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	26.47
Basic Materials	26.47
Consumer Cyclical	0.00
Financial Services	0.00
Real Estate	0.00
Sensitive	73.53
Communication Services	0.00
Energy	70.58
Industrials	2.59
Technology	0.36
Defensive	0.00
Consumer Defensive	0.00
Healthcare	0.00
Utilities	0.00

Intelligent Variable Annuity-PSF Value II

Benchmark
S&P 500 TR

Category
Large Value

Overall Morningstar Rating™
★★

Morningstar Return
Below Average

Morningstar Risk
Above Average

Out of 7057 Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks capital appreciation.

The Portfolio normally invests at least 65% of its total assets in equity and equity-related securities, with an emphasis on securities of large capitalization companies. The Portfolio's manager defines large capitalization companies as those companies with market capitalizations, to be within the market capitalization of the Russell 1000® Value Index (measured at the time of purchase). The Portfolio may invest up to 25% of its total assets in real estate investment trusts (REITs) and up to 30% of its total assets in foreign securities.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-14-01
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.83%
Prosp Gross Exp Ratio	0.83%
Advisor	PGIM Investments LLC
Subadvisor	Jennison Associates LLC
Portfolio Manager(s)	Warren N. Koontz Joseph C. Esposito

Investment Manager

Commitment to Performance: Superior long-term investment returns for over 39 years. Investment Culture: Values individual impact and rewards team performance. Consistent Philosophy: Internal Fundamental Research, bottom-up stock selection, and a highly interactive investment process Top-Caliber Investment Talent: Small highly experienced investment teams exclusively focused on investing.

Volatility Analysis

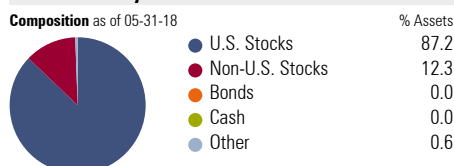


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★	★★	★★
Fund Rank Percentile	40	89	83	83
Out of # of Investments	7,842	7,057	6,341	4,020

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	52.01
Large	37.22
Medium	10.77
Small	0.00
Micro	0.00

Value Blend Growth

Top 20 Holdings as of 05-31-18

Company	% Assets
JPMorgan Chase & Co	5.04
Bank of America Corporation	3.18
PNC Financial Services Group Inc	2.71
Chevron Corp	2.69
Royal Dutch Shell PLC ADR Class A	2.43
BB&T Corp	2.20
Citigroup Inc	2.11
Exelon Corp	2.08
Capital One Financial Corp	2.05
Boeing Co	2.02
Cisco Systems Inc	1.96
Pfizer Inc	1.96
Chubb Ltd	1.94
Halliburton Co	1.85
Walmart Inc	1.83
United Technologies Corp	1.81
American Electric Power Co Inc	1.77
Eli Lilly and Co	1.75
Union Pacific Corp	1.75
Laboratory Corp of America Holdings	1.74

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	15.20	0.89	1.06
P/B Ratio	1.98	0.68	0.94
P/C Ratio	10.17	0.80	0.97
GeoAvgCap (\$mil)	73943.25	0.74	1.04

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.35	1.12	1.05
3 Yr Beta	1.04	—	1.06
3 Yr Sharpe Ratio	0.37	0.34	0.65
3 Yr Alpha	-7.38	—	1.56
3 Yr R-squared	87.70	—	1.04

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	38.70
Basic Materials	2.95
Consumer Cyclical	8.69
Financial Services	26.98
Real Estate	0.08
Sensitive	39.40
Communication Services	5.10
Energy	11.15
Industrials	10.24
Technology	12.91
Defensive	21.91
Consumer Defensive	6.39
Healthcare	11.65
Utilities	3.87

Total Number of Stock Holdings	64
Total Number of Bond Holdings	0
Annual Turnover Ratio %	16.00
Total Fund Assets (\$mil)	1,398.76

Intelligent Variable Annuity-PVC Equity Income Account

Benchmark
Russell 1000 Value TR USD

Category
Large Value

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Below Average

Out of 7057 Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide current income and long-term growth of income and capital.

Under normal circumstances, the Account invests at least 80% of its net assets, plus any borrowings for investment purposes, in dividend-paying equity securities at the time of purchase. It usually invests in equity securities of companies with large and medium market capitalizations. The Account invests in value equity securities, an investment strategy that emphasizes buying equity securities that appear to be undervalued.

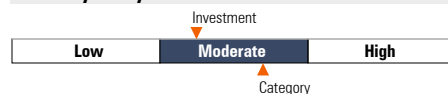
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-28-98
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.50%
Prosp Gross Exp Ratio	0.50%
Advisor	Principal Global Investors, LLC
Subadvisor	—
Portfolio Manager(s)	David W. Simpson Daniel R. Coleman Nedret Vidinli

Investment Manager

Edge Asset Management has been a pioneer in the field of actively managed asset allocation funds and is a leading manager of value equities and taxable fixed-income securities. For over 65 years, Edge has built a reputation for performance and integrity. Its investment approach is defined by rigorous fundamental research and a value-oriented investment philosophy, to seek the highest risk-adjusted returns for investors through a broad range of investment vehicles and strategies. Edge Asset Management is an affiliated investment advisor of Principal Global Investors and a member of the Principal Financial Group, with approximately \$11.2 billion in assets under management, including approximately \$3.6 billion in institutional assets (as of December 31, 2008).

Volatility Analysis

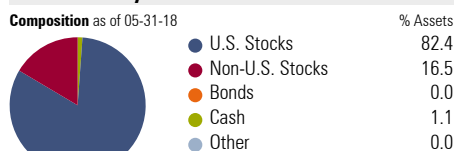


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	12	2	4	6
Out of # of Investments	7,842	7,057	6,341	4,020

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	43.36
Large	46.35
Medium	10.29
Small	0.00
Micro	0.00

Value Blend Growth

Top 20 Holdings as of 05-31-18

	% Assets
Apple Inc	3.11
JPMorgan Chase & Co	2.80
PNC Financial Services Group Inc	2.69
Discover Financial Services	2.34
Enterprise Products Partners LP	2.23
BlackRock Inc	2.20
KKR & Co LP	2.17
Chubb Ltd	2.08
Royal Dutch Shell PLC ADR Class B	2.07
Hasbro Inc	2.06
US Bancorp	2.06
Medtronic PLC	1.95
Autoliv Inc	1.91
Bank of Nova Scotia	1.90
Marathon Petroleum Corp	1.90
Fidelity National Financial Inc	1.73
Merck & Co Inc	1.72
Roche Holding AG ADR	1.67
The Kroger Co	1.67
Pfizer Inc	1.64

Total Number of Stock Holdings	76
Total Number of Bond Holdings	0
Annual Turnover Ratio %	15.90
Total Fund Assets (\$mil)	585.98

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.41	0.84	1.00
P/B Ratio	2.46	0.84	1.17
P/C Ratio	4.64	0.36	0.44
GeoAvgCap (\$mil)	58750.98	0.59	0.83

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	9.67	0.95	0.89
3 Yr Beta	0.91	—	0.93
3 Yr Sharpe Ratio	0.94	0.86	1.65
3 Yr Alpha	-1.05	—	0.22
3 Yr R-squared	92.27	—	1.09

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	40.66
Basic Materials	2.56
Consumer Cyclical	8.34
Financial Services	24.36
Real Estate	5.40
Sensitive	33.14
Communication Services	2.73
Energy	11.04
Industrials	10.13
Technology	9.24
Defensive	26.20
Consumer Defensive	7.41
Healthcare	12.31
Utilities	6.48

Intelligent Variable Annuity-PVC MidCap Account

Benchmark
 Russell Mid Cap TR USD

Category
 Mid-Cap Growth

Overall Morningstar Rating™
 ★★★★★

Morningstar Return
 High

Morningstar Risk
 Below Average

Out of 3480 Mid-Cap Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

Under normal circumstances, the Account invests at least 80% of its net assets, plus any borrowings for investment purposes, in equity securities of companies with medium market capitalizations at the time of purchase. For this Account, companies with medium market capitalizations are those with market capitalizations within the range of companies comprising the Russell Midcap® Index.

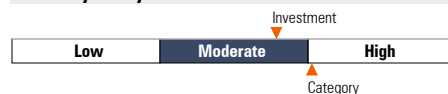
Operations

Subaccount Incp Date	10-23-09
Undr. Fund Incep Date	12-18-87
Subacct Adoption Date	10-23-09
Prosp Net Exp Ratio	0.54%
<i>Prosp Gross Exp Ratio</i>	<i>0.54%</i>
Advisor	Principal Global Investors, LLC
Subadvisor	—
Portfolio Manager(s)	K. William Nolin Thomas Rozycki

Investment Manager

Edge Asset Management has been a pioneer in the field of actively managed asset allocation funds and is a leading manager of value equities and taxable fixed-income securities. For over 65 years, Edge has built a reputation for performance and integrity. Its investment approach is defined by rigorous fundamental research and a value-oriented investment philosophy, to seek the highest risk-adjusted returns for investors through a broad range of investment vehicles and strategies. Edge Asset Management is an affiliated investment advisor of Principal Global Investors and a member of the Principal Financial Group, with approximately \$11.2 billion in assets under management, including approximately \$3.6 billion in institutional assets (as of December 31, 2008).

Volatility Analysis



In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	78	18	13	1
Out of # of Investments	3,765	3,480	3,263	2,000

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	4.72
Large	52.81
Medium	41.48
Small	0.97
Micro	0.02

Value Blend Growth

Top 20 Holdings as of 05-31-18

	% Assets
Brookfield Asset Management Inc Class A	4.71
TransDigm Group Inc	3.91
SBA Communications Corp	3.81
Moody's Corporation	3.52
Markel Corp	3.25
O'Reilly Automotive Inc	3.18
CarMax Inc	3.00
Restaurant Brands International Inc	2.93
Gartner Inc A	2.77
Aon PLC	2.74
S&P Global Inc	2.54
Ross Stores Inc	2.45
Autodesk Inc	2.41
Air Products & Chemicals Inc	2.32
Roper Technologies Inc	2.21
Martin Marietta Materials Inc	2.09
Fidelity National Financial Inc	1.99
CBRE Group Inc	1.95
VeriSign Inc	1.90
Black Knight Inc A	1.87

Total Number of Stock Holdings	78
Total Number of Bond Holdings	0
Annual Turnover Ratio %	13.40
Total Fund Assets (\$mil)	574.75

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	20.12	1.18	0.87
P/B Ratio	3.10	1.06	0.73
P/C Ratio	14.36	1.12	0.94
GeoAvgCap (\$mil)	17641.17	0.18	1.50

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.09	1.09	0.93
3 Yr Beta	1.01	—	1.02
3 Yr Sharpe Ratio	0.91	0.83	1.36
3 Yr Alpha	-1.12	—	0.36
3 Yr R-squared	85.57	—	1.16

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	60.20
Basic Materials	7.69
Consumer Cyclical	21.11
Financial Services	26.46
Real Estate	4.94
Sensitive	33.79
Communication Services	6.60
Energy	0.00
Industrials	14.57
Technology	12.62
Defensive	6.02
Consumer Defensive	1.77
Healthcare	2.01
Utilities	2.24

Intelligent Variable Annuity-Royce Cap Fd Micro-Cap Inv. Cl.

Benchmark
Russell 2000 TR USD

Category
Small Blend

Overall Morningstar Rating™
★

Morningstar Return
Low

Morningstar Risk
Average

Out of 2603 Small Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

Normally, the fund invests at least 80% of its net assets in equity securities of companies with market caps up to \$1 billion. Although the fund normally focuses on securities of U.S. companies, it may invest up to 25% of its net assets (measured at the time of investment) in securities of companies headquartered in foreign countries. It may invest in other investment companies that invest in equity securities.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	12-27-96
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.42%
Prosp Gross Exp Ratio	1.47%
Advisor	Royce & Associates, LP
Subadvisor	—
Portfolio Manager(s)	James P. Stoeffel Brendan J. Hartman Robert Kosowsky

Investment Manager

Royce & Associates is committed to the same small-company value investing principles that have served them well for more than 30 years. Charles M. Royce, chief investment officer, enjoys one of the longest tenures of any active mutual fund manager. Royce's investment staff includes twelve other portfolio managers, as well as nine assistant portfolio managers and analysts, and seven traders.

Volatility Analysis

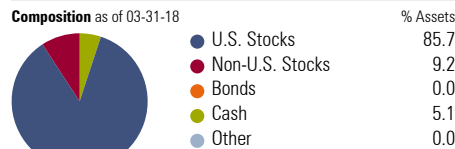


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★	★	★
Fund Rank Percentile	56	80	95	98
Out of # of Investments	2,880	2,603	2,411	1,609

Portfolio Analysis



Morningstar Equity Style Box™ as of 03-31-18

Value	Blend	Growth	% Mkt Cap
		Large	0.00
		Mid	0.00
		Small	0.00
		Micro	35.80
			64.20

Top 20 Holdings as of 03-31-18

	% Assets
QAD Inc	1.18
Stoneridge Inc	1.18
Citi Trends Inc	1.14
Encore Wire Corp	1.02
Heidrick & Struggles International Inc	1.01
Shoe Carnival Inc	0.98
Cryolife Inc	0.97
Marten Transport Ltd	0.97
AtriCure Inc	0.94
Vishay Precision Group Inc	0.93
CPI Aerostructures Inc	0.92
Kadant Inc	0.91
Resources Connection Inc	0.91
Federal Agricultural Mortgage Corp Class C	0.90
Haynes International Inc	0.90
Marcus & Millichap Inc	0.90
QuinStreet Inc	0.89
MCBC Holdings Inc	0.88
New Media Investment Group Inc	0.88
Canaccord Genuity Group Inc	0.87

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	18.62	1.09	1.09
P/B Ratio	1.81	0.62	0.86
P/C Ratio	7.44	0.58	0.84
GeoAvgCap (\$mil)	460.86	0.00	0.19

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.83	1.36	0.97
3 Yr Beta	0.86	—	0.83
3 Yr Sharpe Ratio	0.47	0.43	0.78
3 Yr Alpha	-3.08	—	0.99
3 Yr R-squared	40.19	—	0.67

Morningstar Sectors as of 03-31-18

	% Fund
Cyclical	40.66
Basic Materials	5.09
Consumer Cyclical	16.70
Financial Services	16.39
Real Estate	2.48
Sensitive	46.25
Communication Services	0.63
Energy	5.22
Industrials	19.18
Technology	21.22
Defensive	13.10
Consumer Defensive	3.15
Healthcare	9.95
Utilities	0.00

Total Number of Stock Holdings	142
Total Number of Bond Holdings	0
Annual Turnover Ratio %	30.00
Total Fund Assets (\$mil)	195.02

Intelligent Variable Annuity-Royce Cap Fd Small-Cap Inv. Cl.

Benchmark
Russell 2000 TR USD

Category
Small Value

Overall Morningstar Rating™
★★

Morningstar Return
Below Average

Morningstar Risk
Average

Out of 2002 Small Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term growth of capital.

The fund invests the fund's assets primarily in equity securities of small-cap companies with market capitalizations up to \$3 billion that Royce believes are trading below its estimate of their current worth. It generally invests in such companies that the advisor believes also possess financial strength, a strong business model, and the ability to generate and effectively allocate excess free cash flow.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	12-27-96
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.08%
Prosp Gross Exp Ratio	1.11%
Advisor	Royce & Associates, LP
Subadvisor	—
Portfolio Manager(s)	Jay S. Kaplan

Investment Manager

Royce & Associates is committed to the same small-company value investing principles that have served them well for more than 30 years. Charles M. Royce, chief investment officer, enjoys one of the longest tenures of any active mutual fund manager. Royce's investment staff includes twelve other portfolio managers, as well as nine assistant portfolio managers and analysts, and seven traders.

Volatility Analysis

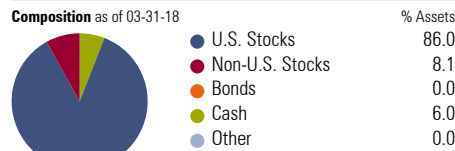


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★	★★	★★★
Fund Rank Percentile	1	94	88	91
Out of # of Investments	2,135	2,002	1,823	1,210

Portfolio Analysis



Morningstar Equity Style Box™ as of 03-31-18

Style	% Mkt Cap
Giant	0.00
Large	0.00
Medium	16.84
Small	58.28
Micro	24.89

Value Blend Growth

Top 20 Holdings as of 03-31-18

Company	% Assets
Kulicke & Soffa Industries Inc	2.43
Fabrinet	2.41
Vishay Intertechnology Inc	2.39
Genworth MI Canada, Inc.	2.38
Insight Enterprises Inc	2.26
PC Connection Inc	2.23
Celestica Inc	2.21
Village Super Market Inc Class A	2.11
Wabash National Corp	2.11
Spirit Airlines Inc	2.03
American Eagle Outfitters Inc	1.98
Federated Investors Inc Class B	1.94
Hawaiian Holdings Inc	1.83
Miller Industries Inc.	1.81
Shoe Carnival Inc	1.78
DSW Inc	1.64
Benchmark Electronics Inc	1.55
James River Group Holdings Ltd	1.54
Saga Communications Inc	1.54
La-Z-Boy Inc	1.53
Total Number of Stock Holdings	80
Total Number of Bond Holdings	0
Annual Turnover Ratio %	91.00
Total Fund Assets (\$mil)	478.18

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	12.74	0.74	0.84
P/B Ratio	1.70	0.58	1.00
P/C Ratio	6.49	0.51	0.78
GeoAvgCap (\$mil)	1257.91	0.01	0.50

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	14.32	1.41	1.03
3 Yr Beta	0.74	—	0.76
3 Yr Sharpe Ratio	0.41	0.38	0.67
3 Yr Alpha	-2.28	—	0.93
3 Yr R-squared	27.66	—	0.53

Morningstar Sectors as of 03-31-18

Sector	% Fund
Cyclical	45.46
Basic Materials	1.53
Consumer Cyclical	19.28
Financial Services	23.08
Real Estate	1.57
Sensitive	50.28
Communication Services	0.00
Energy	3.44
Industrials	19.80
Technology	27.04
Defensive	4.26
Consumer Defensive	2.24
Healthcare	2.02
Utilities	0.00

Intelligent Variable Annuity-T. Rowe Price Health Sciences Portfolio I

Benchmark
S&P 500 TR

Category
Health

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 847 Health VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund will normally invest at least 80% of its net assets (including any borrowings for investment purposes) in the common stocks of companies engaged in the research, development, production, or distribution of products or services related to health care, medicine, or the life sciences (collectively termed "health sciences"). While the fund can invest in companies of any size, the majority of fund assets are expected to be invested in large- and mid-capitalization companies.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	12-29-00
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.94%
Prosp Gross Exp Ratio	0.95%
Advisor	T. Rowe Price Associates, Inc.
Subadvisor	—
Portfolio Manager(s)	Ziad Bakri

Investment Manager

T. Rowe Price is an independent investment management firm with an unyielding focus on helping investors around the world achieve their long-term goals. Headquartered in Baltimore, Maryland, we provide a broad array of mutual funds, subadvisory services, and related services for financial intermediaries. Our approach to managing investments is rooted in proprietary, fundamental research, distinguished by discipline, and carried out by experienced professionals.

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	3	6	2	1
Out of # of Investments	910	847	769	601

Portfolio Analysis

Composition as of 03-31-18

Morningstar Equity Style Box™ as of 03-31-18

Value	Blend	Growth	Micro	Small	Medium	Large	Giant	% Mkt Cap
								21.08
								45.67
								24.08
								8.07
								1.09

Top 20 Holdings as of 03-31-18

	% Assets
UnitedHealth Group Inc	7.02
Becton, Dickinson and Co	4.77
Intuitive Surgical Inc	4.59
Vertex Pharmaceuticals Inc	3.64
Sage Therapeutics Inc	2.64
Stryker Corp	2.62
Anthem Inc	2.56
Thermo Fisher Scientific Inc	2.34
Agilent Technologies Inc	2.31
Cigna Corp	2.15
Biogen Inc	1.87
Alnylam Pharmaceuticals Inc	1.85
Centene Corp	1.84
Alexion Pharmaceuticals Inc	1.81
Danaher Corp	1.79
Neurocrine Biosciences Inc	1.79
Incyte Corp	1.70
Gilead Sciences Inc	1.60
Humana Inc	1.58
Nektar Therapeutics Inc	1.49

Total Number of Stock Holdings	114
Total Number of Bond Holdings	0
Annual Turnover Ratio %	42.80
Total Fund Assets (\$mil)	724.53

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	18.20	1.06	1.06
P/B Ratio	3.74	1.28	1.07
P/C Ratio	12.02	0.94	0.98
GeoAvgCap (\$mil)	24960.91	0.25	0.62

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	15.71	1.55	1.02
3 Yr Beta	1.06	—	0.99
3 Yr Sharpe Ratio	0.30	0.28	5.00
3 Yr Alpha	-3.46	—	0.47
3 Yr R-squared	51.69	—	0.93

Morningstar Sectors as of 03-31-18

	% Fund
Cyclical	0.00
Basic Materials	0.00
Consumer Cyclical	0.00
Financial Services	0.00
Real Estate	0.00
Sensitive	1.04
Communication Services	0.00
Energy	0.00
Industrials	0.00
Technology	1.04
Defensive	98.96
Consumer Defensive	0.00
Healthcare	98.96
Utilities	0.00

Intelligent Variable Annuity-T. Rowe Price Limited Term Bond

Benchmark
BBgBarc US Govt/Credit 1-3 Yr TR USD

Category
Short-Term Bond

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Below Average

Out of 1260 Short-Term Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a high level of income consistent with moderate fluctuations in principal value.

Normally, the fund invests at least 80% of its net assets (including any borrowings for investment purposes) in bonds and 65% of total assets in short- and intermediate-term bonds. There is no maturity limitations on individual securities purchased, but the fund's average effective maturity will not exceed five years.

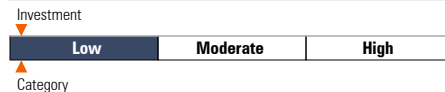
Operations

Subaccount Incp Date	03-06-12
Undr. Fund Incep Date	05-13-94
Subacct Adoption Date	03-05-12
Prosp Net Exp Ratio	0.50%
Prosp Gross Exp Ratio	0.70%
Advisor	T. Rowe Price Associates, Inc.
Subadvisor	—
Portfolio Manager(s)	Michael F Reinartz

Investment Manager

T. Rowe Price is an independent investment management firm with an unyielding focus on helping investors around the world achieve their long-term goals. Headquartered in Baltimore, Maryland, we provide a broad array of mutual funds, subadvisory services, and related services for financial intermediaries. Our approach to managing investments is rooted in proprietary, fundamental research, distinguished by discipline, and carried out by experienced professionals.

Volatility Analysis

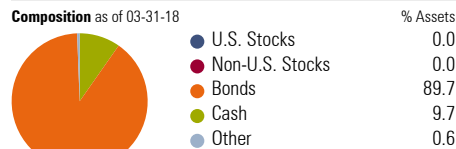


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★★★
Fund Rank Percentile	19	13	12	13
Out of # of Investments	1,409	1,260	1,027	522

Portfolio Analysis



Morningstar Fixed Income Style Box™

as of 03-31-18

Avg Eff Duration	—
Avg Eff Maturity	—
Avg Wtd Coupon	2.82
Avg Wtd Price	99.90

Not Available

Top 20 Holdings as of 03-31-18

	% Assets
T. Rowe Price Gov. Reserve	3.39
United States Treasury Notes 06-15-20	2.12
US Treasury Note 2.25% 02-29-20	1.68
United States Treasury Notes 01-31-20	1.52
United States Treasury Notes 11-30-20	1.44
United States Treasury Notes 12-15-20	1.20
United States Treasury Notes 05-31-21	1.10
Federal National Mortgage Association 07-30-20	1.09
Bellsouth Corporation 04-26-21	0.65
Keysight Technologies, Inc. 10-30-19	0.58
Ford Credit Floorplan Master Owner Tru 09-15-22	0.49
Shire Acquisitions Investments Ireland 09-23-19	0.49
Federal National Mortgage Association 04-01-33	0.46
HCA Inc. 03-15-19	0.45
Time Warner Cable Inc. 04-01-19	0.45
ARC Properties Operating Partnership 02-06-19	0.44
The Sherwin-Williams Company 05-15-20	0.44
CNO Financial Group, Inc. 05-30-20	0.43
Roper Technologies Inc 10-01-18	0.43
Avis Budget Rental Car Funding AESOP L 02-20-21	0.42

Statistics as of 06-30-18

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	0.72	0.00	0.76
Beta	0.24	—	1.04
Sharpe Ratio	-0.82	0.00	0.21
Alpha	-0.84	—	0.58
R-Squared	72.34	—	1.70

Morningstar Sectors as of 03-31-18

	% Fund
Government	10.27
Corporate	45.41
Securitized	34.35
Municipal	0.19
Cash/Cash Equivalents	9.78
Other	0.00

Credit Analysis % Bonds

Not Available

Total Number of Stock Holdings	0
Total Number of Bond Holdings	785
Annual Turnover Ratio %	55.90
Total Fund Assets (\$mil)	441.63

Intelligent Variable Annuity-Templeton Developing Markets VIP Fund

Benchmark
MSCI EM NR USD

Category
Diversified Emerging Mkts

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 1722 Diversified Emerging Mkts VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

The fund invests at least 80% of its net assets in emerging markets investments. Its investments in equity securities may include investments in the securities of companies of any capitalization, including a portion in smaller and mid-size companies. The fund, from time to time, may have significant investments in one or more countries or in particular industries or sectors. It may invest up to 20% of its net assets in the securities of issuers in developed market countries.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	03-04-96
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.16%
Prosp Gross Exp Ratio	1.17%
Advisor	Templeton Asset Management Ltd.
Subadvisor	—
Portfolio Manager(s)	Chetan Sehgal

Investment Manager

Franklin Templeton's distinct multi-manager structure combines the specialized expertise of three world-class investment management groups- Franklin, Templeton, and Mutual Series. Founded in 1947, Franklin is a recognized leader in fixed income investing and also brings expertise in growth- and value-style U.S. equity investing. Founded in 1940, Templeton pioneered international investing and, in 1954, launched what has become the industry's oldest global fund. Today, with offices in over 29 countries, Templeton offers investors a truly global perspective. Founded in 1949, Mutual Series is dedicated to a unique style of value investing, searching aggressively for opportunity among what it believes are undervalued stocks, as well as arbitrage situations and distressed securities.

Volatility Analysis

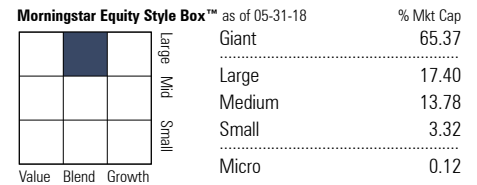
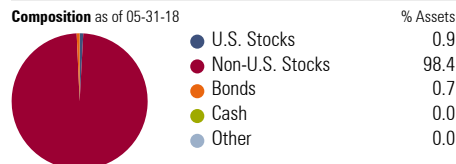


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★	★★★★★
Fund Rank Percentile	33	2	36	25
Out of # of Investments	2,016	1,722	1,378	809

Portfolio Analysis



Top 20 Holdings

Company	% Assets
Samsung Electronics Co Ltd	8.41
Naspers Ltd Class N	7.06
Taiwan Semiconductor Manufacturing Co Ltd	6.55
Brilliance China Automotive Holdings Ltd	5.07
Alibaba Group Holding Ltd ADR	4.97
Tencent Holdings Ltd	3.32
Unilever PLC	3.24
ICICI Bank Ltd	2.33
Hon Hai Precision Industry Co Ltd	2.03
PJSC Lukoil ADR	1.94
Itau Unibanco Holding SA ADR	1.82
Sberbank of Russia PJSC ADR	1.76
Bank Bradesco SA ADR	1.65
PT Astra International Tbk	1.53
Yandex NV	1.53
Banco Santander Mexico SA ADR	1.52
NagaCorp Ltd	1.42
Buenaventura Mining Co Inc ADR	1.41
Fila Korea Ltd	1.38
China Mobile Ltd	1.33

Total Number of Stock Holdings	87
Total Number of Bond Holdings	1
Annual Turnover Ratio %	10.76
Total Fund Assets (\$mil)	314.56

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	11.17	0.65	0.85
P/B Ratio	1.65	0.56	0.84
P/C Ratio	5.92	0.46	0.78
GeoAvgCap (\$mil)	36355.24	0.36	0.87

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	15.32	1.51	1.02
3 Yr Beta	1.10	—	1.04
3 Yr Sharpe Ratio	0.48	0.44	1.60
3 Yr Alpha	2.01	—	-2.18
3 Yr R-squared	76.54	—	1.02

Morningstar World Regions as of 05-31-18

Region	% Fund
Americas	9.87
North America	0.87
Latin America	9.00
Greater Europe	20.64
United Kingdom	3.25
Europe Developed	0.92
Europe Emerging	7.99
Africa/Middle East	8.48
Greater Asia	69.50
Japan	0.00
Australasia	0.00
Asia Developed	30.65
Asia Emerging	38.85

Intelligent Variable Annuity-TIAA-CREF Life Balanced

Benchmark

40% Russell 3000 TR USD/10% MSCI EAFE NR USD/50% Barclays US Agg Bond TR USD

Category

Allocation--30% to 50% Equity

Overall Morningstar Rating™

★★★★★

Out of 3835 Allocation--30% to 50% Equity VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Morningstar Return

High

Morningstar Risk

Above Average

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term total return, consisting of capital appreciation and current income.

The fund is a "fund of funds" that invests in shares of other TIAA-CREF Life Funds, in Institutional Class shares of funds of the TIAA-CREF Funds and potentially in other affiliated or unaffiliated investment pools or investment products (collectively, the "underlying funds"). It generally seeks to meet its investment objective by investing: (1) approximately 50% of its assets in equity underlying funds and (2) approximately 50% of its assets in fixed-income underlying funds.

Operations

Subaccount Incp Date	02-14-14
Undr. Fund Incep Date	01-31-14
Subacct Adoption Date	02-14-14
Prosp Net Exp Ratio	0.51%
Prosp Gross Exp Ratio	0.64%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Hans L. Erickson John Cunniff

Investment Manager

TIAA-CREF is a national financial services organization and leading provider of retirement services in the academic, research, medical and cultural fields. TIAA-CREF manages accounts in-house to control costs and maintain a consistent investment approach over long time periods. Each of TIAA-CREF's investment portfolios is managed by a team of professionals that integrates the focused expertise of analysts and researchers with the broad outlook of experienced portfolio managers. TIAA-CREF offers disciplined investment strategies across all asset classes and investment styles.

Volatility Analysis

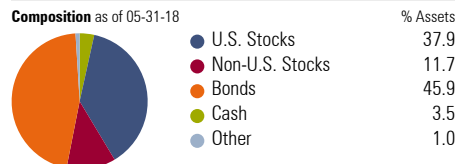


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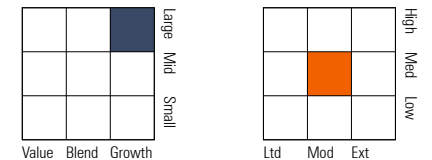
Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	—	—
Fund Rank Percentile	1	1	—	—
Out of # of Investments	4,605	3,835	—	—

Portfolio Analysis



Morningstar Style Box™ as of 05-31-18(EQ) ; 03-31-18(F-I)



Top 20 Holdings as of 05-31-18

Asset	% Assets
TIAA-CREF Life Funds Bond	49.79
TIAA-CREF Life Funds Growth & Income	10.03
TIAA-CREF Life Funds International Eq	9.85
TIAA-CREF Life Funds Growth Equity	9.54
TIAA-CREF Life Funds Large-Cap Value	8.53
TIAA-CREF Life Funds Stock Index	8.03
TIAA-CREF Life Funds Real Estate Secs	2.03
TIAA-CREF Life Funds Small-Cap Equity	2.02

Total Number of Holdings	9
Annual Turnover Ratio %	14.00
Total Fund Assets (\$mil)	61.81

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.15	1.00	1.10
P/B Ratio	2.39	0.82	1.10
P/C Ratio	9.60	0.75	1.12
GeoAvgCap (\$mil)	45076.63	0.45	0.80

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	5.69	0.56	1.09
3 Yr Beta	0.90	—	1.13
3 Yr Sharpe Ratio	0.85	0.78	1.89
3 Yr Alpha	-0.26	—	0.12
3 Yr R-squared	95.33	—	1.06

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	44.80
Basic Materials	6.03
Consumer Cyclical	16.81
Financial Services	17.23
Real Estate	4.73
Sensitive	38.28
Communication Services	1.48
Energy	5.54
Industrials	10.13
Technology	21.13
Defensive	16.92
Consumer Defensive	5.55
Healthcare	10.19
Utilities	1.18

Intelligent Variable Annuity-TIAA-CREF Life Bond

Benchmark
BBgBarc US Agg Bond TR USD

Category
Intermediate-Term Bond

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 4963 Intermediate-Term Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return through income primarily from investment-grade fixed-income securities.

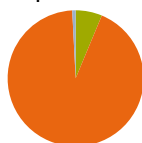
The fund invests at least 80% of its assets in bonds. For these purposes, bonds include fixed-income securities of all types. It primarily invests in a broad range of investment-grade bonds and fixed-income securities, including, but not limited to, U.S. government securities, corporate bonds and mortgage-backed and other asset-backed securities, and loan participations and assignments and notes. The fund's investments in fixed-income securities of foreign issuers constitute less than 20% of the fund's assets.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	15	5	5	11
Out of # of Investments	5,824	4,963	4,367	2,678

Portfolio Analysis

Composition as of 05-31-18



	% Assets
U.S. Stocks	0.0
Non-U.S. Stocks	0.0
Bonds	92.9
Cash	6.3
Other	0.8

Morningstar Fixed Income Style Box™ as of 03-31-18

Avg Eff Duration	5.61
Avg Eff Maturity	7.78
Avg Wtd Coupon	3.48
Avg Wtd Price	98.66

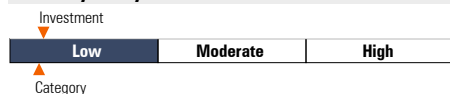
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	07-08-03
Subacct Adoption Date	07-21-03
Prosp Net Exp Ratio	0.35%
Prosp Gross Exp Ratio	0.36%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	John Michael Cerra Joseph Higgins

Investment Manager

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Volatility Analysis



In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Top 20 Holdings

	% Assets
United States Treasury Notes 2.88% 05-15-28	2.09
United States Treasury Notes 2.12% 03-31-24	1.79
United States Treasury Bonds 3% 11-15-45	1.51
Federal National Mortgage Associatio 4% 04-01-48	1.43
United States Treasury Notes 2.62% 05-15-21	1.23
United States Treasury Notes 2.88% 04-30-25	1.08
United States Treasury Notes 1.38% 05-31-21	1.07
United States Treasury Notes 2.25% 12-31-23	1.04
United States Treasury Notes 2.5% 05-31-20	1.03
United States Treasury Notes 1.5% 05-15-20	1.01
United States Treasury Notes 0.75% 08-31-18	0.95
United States Treasury Bonds 2.88% 11-15-46	0.93
United States Treasury Notes 2.12% 09-30-24	0.91
United States Treasury Bonds 3% 02-15-48	0.86
Federal National Mortgage Associatio 3% 12-25-45	0.77
Federal Home Loan Mortgage Corpora 3.5% 10-01-45	0.71
DBUBS 2011-LC1 MTG TR 5.53% 07-10-44	0.69
Government National Mortgage Associa 3% 01-20-48	0.60
Federal National Mortgage Associatio 3% 02-25-48	0.59
Government National Mortgage Assoc 3.5% 01-20-48	0.58

Total Number of Stock Holdings	0
Total Number of Bond Holdings	781
Annual Turnover Ratio %	147.00
Total Fund Assets (\$mil)	195.00

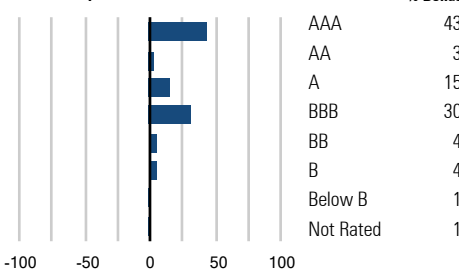
Statistics

	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	2.62	0.00	1.01
Beta	0.95	—	1.06
Sharpe Ratio	0.36	0.00	-2.25
Alpha	0.02	—	-0.02
R-Squared	92.14	—	1.08

Morningstar Sectors

	% Fund
Government	27.09
Corporate	37.37
Securitized	28.68
Municipal	0.55
Cash/Cash Equivalents	6.31
Other	0.00

Credit Analysis



Intelligent Variable Annuity-TIAA-CREF Life Growth & Income

Benchmark
S&P 500 TR

Category
Large Growth

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Below Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return, through both capital appreciation and investment income, primarily from income-producing equity securities.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities. In seeking a favorable long-term total return, it will invest in securities which the fund's investment adviser, Teachers Advisors, LLC ("Advisors"), believes have the potential for capital appreciation, dividend income, or both. It may invest up to 20% of its assets in foreign issuers when Advisors believes these issuers offer more attractive investment opportunities.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-03-00
Subacct Adoption Date	04-03-00
Prosp Net Exp Ratio	0.52%
Prosp Gross Exp Ratio	0.58%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Susan Kempler

Investment Manager

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Volatility Analysis

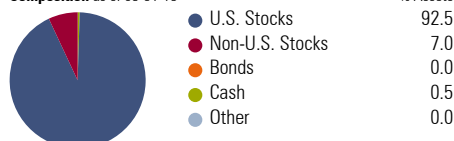


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★	★★★★
Fund Rank Percentile	69	62	63	24
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	49.75
Large	30.39
Medium	18.78
Small	1.08
Micro	0.00

Top 20 Holdings as of 05-31-18

Company	% Assets
Apple Inc	3.79
Microsoft Corp	3.59
Amazon.com Inc	3.07
Alphabet Inc C	2.54
JPMorgan Chase & Co	2.14
Bank of America Corporation	1.84
Facebook Inc A	1.69
Intel Corp	1.53
The Home Depot Inc	1.52
Chevron Corp	1.50
Cisco Systems Inc	1.34
Mastercard Inc A	1.24
Netflix Inc	1.18
Citigroup Inc	1.17
DowDuPont Inc	1.17
Honeywell International Inc	1.16
NVIDIA Corp	1.12
Salesforce.com Inc	1.09
EOG Resources Inc	0.99
Caterpillar Inc	0.94

Total Number of Stock Holdings	189
Total Number of Bond Holdings	0
Annual Turnover Ratio %	70.00
Total Fund Assets (\$mil)	148.14

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	18.43	1.08	0.82
P/B Ratio	3.02	1.03	0.67
P/C Ratio	14.85	1.16	0.95
GeoAvgCap (\$mil)	70219.52	0.70	0.74

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.78	1.06	0.89
3 Yr Beta	1.04	—	0.97
3 Yr Sharpe Ratio	0.94	0.86	1.03
3 Yr Alpha	-1.36	—	1.68
3 Yr R-squared	96.34	—	1.17

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	31.03
Basic Materials	3.66
Consumer Cyclical	13.45
Financial Services	13.79
Real Estate	0.13
Sensitive	44.15
Communication Services	0.74
Energy	6.85
Industrials	10.09
Technology	26.47
Defensive	24.83
Consumer Defensive	8.76
Healthcare	14.60
Utilities	1.47

Intelligent Variable Annuity-TIAA-CREF Life Growth Equity

Benchmark
Russell 1000 Growth TR USD

Category
Large Growth

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term return, mainly through capital appreciation, primarily from equity securities.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities. It invests primarily in equity securities that Teachers Advisors, LLC ("Advisors") believes present the opportunity for growth. Generally, these equity securities will be those of large capitalization companies in new and emerging areas of the economy and companies with distinctive products or promising markets. The fund may invest up to 20% of its assets in foreign investments.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-03-00
Subacct Adoption Date	04-03-00
Prosp Net Exp Ratio	0.52%
Prosp Gross Exp Ratio	0.59%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Susan Hirsch Terrence Kontos

Investment Manager

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Volatility Analysis



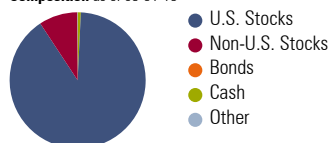
In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★★	★★★★
Fund Rank Percentile	13	16	7	12
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	58.25
Large	35.93
Medium	5.82
Small	0.00
Micro	0.00

Top 20 Holdings as of 05-31-18

Company	% Assets
Microsoft Corp	5.75
Amazon.com Inc	5.37
Facebook Inc A	3.26
Adobe Systems Inc	3.05
Alphabet Inc C	3.05
Intuit Inc	2.89
Mastercard Inc A	2.80
Salesforce.com Inc	2.76
Visa Inc Class A	2.70
Apple Inc	2.49
Netflix Inc	2.23
Intuitive Surgical Inc	2.19
Broadcom Inc	2.06
Boeing Co	1.97
The Home Depot Inc	1.96
PayPal Holdings Inc	1.92
Alphabet Inc A	1.85
Starbucks Corp	1.80
Alibaba Group Holding Ltd ADR	1.53
Marriott International Inc Class A	1.52

Statistics	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	26.04	1.52	1.16
P/B Ratio	6.36	2.17	1.42
P/C Ratio	18.64	1.46	1.19
GeoAvgCap (\$mil)	111122.49	1.11	1.18

Risk Measures	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.47	1.23	1.03
3 Yr Beta	1.09	—	1.02
3 Yr Sharpe Ratio	1.08	0.99	1.19
3 Yr Alpha	1.47	—	-1.81
3 Yr R-squared	78.72	—	0.96

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	33.64
Basic Materials	2.22
Consumer Cyclical	22.47
Financial Services	8.46
Real Estate	0.49
Sensitive	52.54
Communication Services	0.00
Energy	1.68
Industrials	8.77
Technology	42.09
Defensive	13.82
Consumer Defensive	2.24
Healthcare	11.58
Utilities	0.00

Total Number of Stock Holdings	76
Total Number of Bond Holdings	0
Annual Turnover Ratio %	81.00
Total Fund Assets (\$mil)	110.06

Intelligent Variable Annuity-TIAA-CREF Life Intl Equity

Benchmark
MSCI EAFE NR USD

Category
Foreign Large Growth

Overall Morningstar Rating™
★★★

Morningstar Return
Above Average

Morningstar Risk
High

Out of 2504 Foreign Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return, mainly through capital appreciation.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities of foreign issuers. It has a policy of maintaining investments of equity securities of foreign issuers in at least three countries other than the United States. Teachers Advisors, LLC ("Advisors"), selects individual stocks, and lets the fund's country and regional asset allocations evolve from their stock selection. The fund may invest in emerging markets to varying degrees, depending on the prevalence of stock specific opportunities.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-03-00
Subacct Adoption Date	04-03-00
Prosp Net Exp Ratio	0.60%
Prosp Gross Exp Ratio	0.70%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Christopher F. Semenuk

Investment Manager

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Volatility Analysis



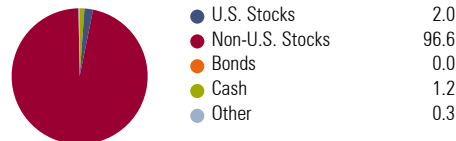
In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★	★★★
Fund Rank Percentile	51	43	29	31
Out of # of Investments	2,879	2,504	2,114	1,341

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	41.73
Large	38.78
Medium	19.21
Small	0.28
Micro	0.00

Top 20 Holdings as of 05-31-18

Company	% Assets
Linde AG	6.00
Accor SA	5.07
Credit Suisse Group AG	4.29
Lloyds Banking Group PLC	4.16
UniCredit SpA	3.38
Schneider Electric SE	3.22
Kering SA	3.17
Toyota Motor Corp	3.16
Daimler AG	3.12
Lanxess AG	3.06
Tui Ag Di Common Stock Npv	3.04
Housing Development Finance Corp Ltd	3.02
Sony Corp	3.00
Vinci SA	2.64
Tesco PLC	2.59
Travis Perkins PLC	2.44
Bayerische Motoren Werke AG	2.21
HDFC Bank Ltd	2.08
CNH Industrial NV	1.97
Komatsu Ltd	1.86

Total Number of Stock Holdings	58
Total Number of Bond Holdings	0
Annual Turnover Ratio %	119.00
Total Fund Assets (\$mil)	108.05

Statistics	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	14.80	0.86	0.87
P/B Ratio	1.69	0.58	0.72
P/C Ratio	5.06	0.40	0.60
GeoAvgCap (\$mil)	28273.00	0.28	0.65

Risk Measures	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.43	1.32	1.15
3 Yr Beta	1.04	—	1.17
3 Yr Sharpe Ratio	0.33	0.30	1.03
3 Yr Alpha	-0.68	—	1.06
3 Yr R-squared	88.15	—	1.01

Morningstar World Regions as of 05-31-18

Region	% Fund
Americas	2.98
North America	2.06
Latin America	0.92
Greater Europe	64.96
United Kingdom	9.97
Europe Developed	54.57
Europe Emerging	0.42
Africa/Middle East	0.00
Greater Asia	32.06
Japan	19.46
Australasia	0.00
Asia Developed	0.40
Asia Emerging	12.20

Intelligent Variable Annuity-TIAA-CREF Life Large-Cap Value

Benchmark
Russell 1000 Value TR USD

Category
Large Value

Overall Morningstar Rating™
★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 7057 Large Value VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return, mainly through capital appreciation.

Under normal circumstances, the fund invests at least 80% of its assets in large-cap equity securities. It invests primarily in equity securities of large domestic companies, as defined by the fund's benchmark index (the Russell 1000® Value Index), that Teachers Advisors, LLC ("Advisors"), believes appear undervalued by the market based on an evaluation of their potential worth. The fund may invest up to 20% of its assets in foreign investments.

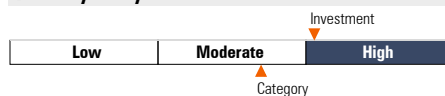
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	10-28-02
Subacct Adoption Date	10-28-02
Prosp Net Exp Ratio	0.52%
Prosp Gross Exp Ratio	0.63%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Richard Cutler Athanasios (Tom) Kolefas

Investment Manager

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Volatility Analysis

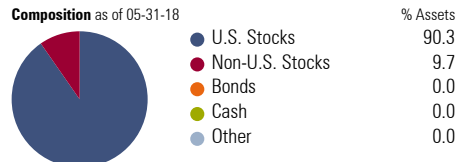


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★	★★★
Fund Rank Percentile	50	48	34	22
Out of # of Investments	7,842	7,057	6,341	4,020

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	37.38
Large	34.66
Medium	21.74
Small	6.21
Micro	0.01

Value Blend Growth

Top 20 Holdings as of 05-31-18

Company	% Assets
Bank of America Corporation	3.58
Citigroup Inc	2.40
Pfizer Inc	2.09
Cisco Systems Inc	2.04
AT&T Inc	1.75
Goldman Sachs Group Inc	1.72
The Kraft Heinz Co	1.70
JPMorgan Chase & Co	1.60
Wells Fargo & Co	1.53
MetLife Inc	1.50
Parsley Energy Inc A	1.47
Allergan PLC	1.46
Exxon Mobil Corp	1.46
DowDuPont Inc	1.38
Chevron Corp	1.30
Philip Morris International Inc	1.24
CVS Health Corp	1.22
Gilead Sciences Inc	1.20
Johnson & Johnson	1.20
American International Group Inc	1.14

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	12.90	0.75	0.90
P/B Ratio	1.67	0.57	0.80
P/C Ratio	7.95	0.62	0.76
GeoAvgCap (\$mil)	36351.08	0.36	0.51

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.63	1.14	1.07
3 Yr Beta	1.06	—	1.08
3 Yr Sharpe Ratio	0.55	0.50	0.96
3 Yr Alpha	-5.24	—	1.11
3 Yr R-squared	84.87	—	1.00

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	40.90
Basic Materials	6.42
Consumer Cyclical	9.88
Financial Services	23.96
Real Estate	0.64
Sensitive	36.54
Communication Services	3.79
Energy	13.53
Industrials	7.21
Technology	12.01
Defensive	22.59
Consumer Defensive	7.07
Healthcare	13.02
Utilities	2.50

Total Number of Stock Holdings	171
Total Number of Bond Holdings	0
Annual Turnover Ratio %	55.00
Total Fund Assets (\$mil)	75.51

Intelligent Variable Annuity-TIAA-CREF Life Money Market

Benchmark

USTREAS T-Bill Auction Ave 3 Mon

Category

Prime Money Market

Investment Information
Investment Strategy from investment's prospectus

The investment seeks high current income consistent with maintaining liquidity and preserving capital.

The fund is a "government money market fund," as defined in the applicable rules governing money market funds, and as such invests at least 99.5% of its total assets in cash, U.S. government securities and/or repurchase agreements that are collateralized fully by cash or U.S. government securities. It seeks to maintain a share value of \$1.00 per share.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	07-08-03
Subacct Adoption Date	07-21-03
Prosp Net Exp Ratio	0.15%
Prosp Gross Exp Ratio	0.26%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Michael F. Ferraro Joseph P. Rolston

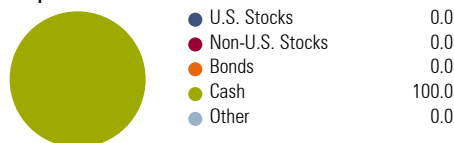
Money Market Fund Disclosure

Government Money Market Funds that have chosen not to rely on the ability to impose liquidity fees and suspend redemptions:

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

Liquidity Fee: No

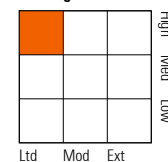
Redemption Gate: No

Portfolio Analysis
Composition as of 06-30-18

Volatility Analysis

Investment



In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Fixed Income Style Box™ as of 06-30-18

Investment Manager

TIAA-CREF is a national financial services organization and leading provider of retirement services in the academic, research, medical and cultural fields. TIAA-CREF manages accounts in-house to control costs and maintain a consistent investment approach over long time periods. Each of TIAA-CREF's investment portfolios is managed by a team of professionals that integrates the focused expertise of analysts and researchers with the broad outlook of experienced portfolio managers. TIAA-CREF offers disciplined investment strategies across all asset classes and investment styles.

An investment in this fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the Fund seeks to preserve the value of your investment at \$1.00 per share, it is possible to lose money by investing in the Fund.

Intelligent Variable Annuity-TIAA-CREF Life Real Estate Sec

Benchmark
FTSE NAREIT All Equity REITs TR

Category
Real Estate

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 947 Real Estate VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to obtain a favorable long-term total return through both capital appreciation and current income.

The fund invests at least 80% of its assets in the securities of companies that are principally engaged in or related to the real estate industry ("real estate securities"), including those that own significant real estate assets, such as real estate investment trusts ("REITs"). It will invest primarily in equity securities of such companies. The fund is actively managed using a research-oriented process with a focus on cash flows, asset values and Teachers Advisors, LLC's belief in management's ability to increase shareholder value.

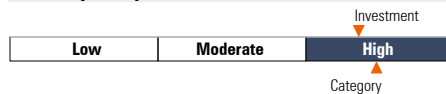
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	10-28-02
Subacct Adoption Date	10-28-02
Prosp Net Exp Ratio	0.57%
Prosp Gross Exp Ratio	0.66%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	David Copp Brendan W. Lee

Investment Manager

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Volatility Analysis

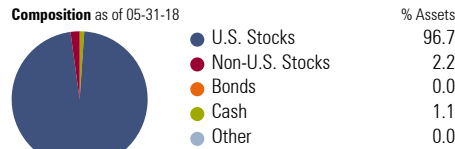


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	1	1	1	4
Out of # of Investments	1,061	947	860	623

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	% Mkt Cap
Large	Mid	Small	0.00
Large	Mid	Small	43.49
Large	Mid	Small	43.18
Large	Mid	Small	13.32
Large	Mid	Small	0.00

Top 20 Holdings as of 05-31-18

	% Assets
Simon Property Group Inc	5.36
Prologis Inc	4.13
American Tower Corp	3.86
Crown Castle International Corp	3.70
Equinix Inc	3.60
Rexford Industrial Realty Inc	3.40
Weyerhaeuser Co	3.28
Boston Properties Inc	2.97
Equity Lifestyle Properties Inc	2.66
Alexandria Real Estate Equities Inc	2.52
Sun Communities Inc	2.49
Essex Property Trust Inc	2.33
Equity Residential	2.23
Kilroy Realty Corp	2.12
Invitation Homes Inc	2.09
Federal Realty Investment Trust	2.07
Public Storage	1.92
SL Green Realty Corp	1.90
GGP Inc	1.89
Spirit Realty Capital Inc	1.89

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	38.36	2.24	0.98
P/B Ratio	2.27	0.77	1.01
P/C Ratio	12.78	1.00	0.88
GeoAvgCap (\$mil)	11844.44	0.12	1.03

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	12.55	1.24	0.96
3 Yr Beta	0.66	—	1.05
3 Yr Sharpe Ratio	0.64	0.59	1.56
3 Yr Alpha	3.03	—	7.05
3 Yr R-squared	31.31	—	1.18

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	92.09
Basic Materials	3.38
Consumer Cyclical	1.03
Financial Services	0.00
Real Estate	87.68
Sensitive	7.93
Communication Services	5.72
Energy	0.00
Industrials	0.02
Technology	2.19
Defensive	0.00
Consumer Defensive	0.00
Healthcare	0.00
Utilities	0.00

Total Number of Stock Holdings	60
Total Number of Bond Holdings	0
Annual Turnover Ratio %	35.00
Total Fund Assets (\$mil)	74.04

Intelligent Variable Annuity-TIAA-CREF Life Small-Cap Equity

Benchmark
Russell 2000 TR USD

Category
Small Growth

Overall Morningstar Rating™
★★★

Morningstar Return
Average

Morningstar Risk
Average

Out of 2859 Small Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return, mainly through capital appreciation.

The fund normally invests at least 80% of its assets in small-cap equity securities. A small-cap equity security is a security within the capitalization range of the companies included in the fund's benchmark index, the Russell 2000® Index, at the time of purchase. It invests primarily in equity securities of smaller domestic companies across a wide range of sectors, growth rates and valuations.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	10-28-02
Subacct Adoption Date	10-28-02
Prosp Net Exp Ratio	0.53%
Prosp Gross Exp Ratio	0.71%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Adam Cao Pei Chen

Investment Manager

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Volatility Analysis



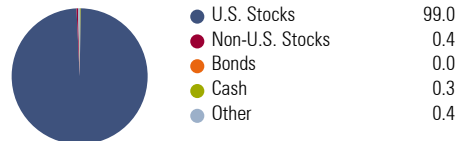
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Morningstar Proprietary Statistics

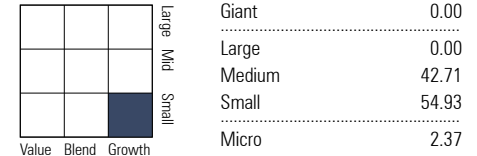
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★	★★★★	★★★★
Fund Rank Percentile	92	38	39	47
Out of # of Investments	3,043	2,859	2,645	1,746

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18



Top 20 Holdings as of 05-31-18

Holder	% Assets
iShares Russell 2000 ETF	1.40
Grand Canyon Education Inc	0.91
Evercore Inc A	0.83
EMCOR Group Inc	0.76
CACI International Inc Class A	0.74
Curtiss-Wright Corp	0.72
Insperty Inc	0.72
Masimo Corp	0.72
Delek US Holdings Inc	0.71
Fair Isaac Corp	0.70
Wintrust Financial Corp	0.70
Hancock Whitney Corp	0.69
American Equity Investment Life Holding Co	0.66
iShares Micro-Cap ETF	0.66
United Community Banks Inc	0.66
Nektar Therapeutics Inc	0.65
Vonage Holdings Corp	0.65
Walker & Dunlop Inc	0.65
Zendesk Inc	0.65
Umpqua Holdings Corp	0.63

Total Number of Stock Holdings	277
Total Number of Bond Holdings	0
Annual Turnover Ratio %	77.00
Total Fund Assets (\$mil)	57.86

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.53	1.02	0.76
P/B Ratio	2.52	0.86	0.74
P/C Ratio	9.69	0.76	0.72
GeoAvgCap (\$mil)	2706.03	0.03	0.79

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	14.04	1.38	1.01
3 Yr Beta	1.11	—	1.03
3 Yr Sharpe Ratio	0.71	0.65	1.01
3 Yr Alpha	-2.41	—	1.02
3 Yr R-squared	64.94	—	1.02

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	39.47
Basic Materials	7.07
Consumer Cyclical	9.95
Financial Services	15.80
Real Estate	6.65
Sensitive	37.98
Communication Services	0.98
Energy	3.93
Industrials	13.57
Technology	19.50
Defensive	22.54
Consumer Defensive	3.31
Healthcare	16.12
Utilities	3.11

Intelligent Variable Annuity-TIAA-CREF Life Soc.Choice Equity

Benchmark
Russell 3000 TR USD

Category
Large Blend

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 7313 Large Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return that reflects the investment performance of the overall U.S. stock market while giving special consideration to certain ESG criteria.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities. The Advisor attempts to achieve the return of the U.S. stock market as represented by its benchmark, the Russell 3000® Index, while investing only in companies whose activities are consistent with fund's environmental, social and governance ("ESG") criteria.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	04-03-00
Subacct Adoption Date	04-03-00
Prosp Net Exp Ratio	0.22%
Prosp Gross Exp Ratio	0.33%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Philip James(Jim) Campagna Lei Liao

Investment Manager

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Volatility Analysis



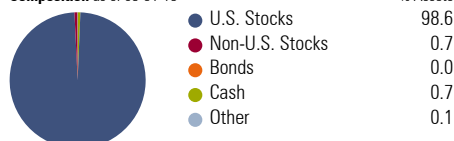
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★	★★★★★
Fund Rank Percentile	24	13	34	6
Out of # of Investments	8,282	7,313	6,522	4,412

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	34.66
Large	45.66
Medium	14.46
Small	4.70
Micro	0.52

Top 20 Holdings as of 05-31-18

	% Assets
Apple Inc	3.62
Microsoft Corp	3.12
Bank of America Corporation	1.42
Intel Corp	1.36
Cisco Systems Inc	1.23
The Home Depot Inc	1.16
Procter & Gamble Co	1.13
Coca-Cola Co	1.07
Merck & Co Inc	1.05
Netflix Inc	1.03
PepsiCo Inc	0.98
Oracle Corp	0.96
Amgen Inc	0.94
International Business Machines Corp	0.90
S+p500 Emini Fut Jun18 Xcme 20180615	0.88
Texas Instruments Inc	0.88
NVIDIA Corp	0.87
3M Co	0.86
Booking Holdings Inc	0.86
Accenture PLC A	0.82

Total Number of Stock Holdings	608
Total Number of Bond Holdings	0
Annual Turnover Ratio %	13.00
Total Fund Assets (\$mil)	60.70

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.26	1.01	1.01
P/B Ratio	2.91	0.99	0.99
P/C Ratio	11.61	0.91	0.94
GeoAvgCap (\$mil)	44407.13	0.44	0.54

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.26	1.01	1.00
3 Yr Beta	1.00	—	1.02
3 Yr Sharpe Ratio	0.96	0.88	1.20
3 Yr Alpha	-1.18	—	0.45
3 Yr R-squared	97.15	—	1.03

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	36.36
Basic Materials	3.77
Consumer Cyclical	13.12
Financial Services	16.69
Real Estate	2.78
Sensitive	41.60
Communication Services	1.72
Energy	5.75
Industrials	11.20
Technology	22.93
Defensive	22.05
Consumer Defensive	6.40
Healthcare	12.44
Utilities	3.21

Intelligent Variable Annuity-TIAA-CREF Life Stock Index

Benchmark
Russell 3000 TR USD

Category
Large Blend

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Above Average

Out of 7313 Large Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks a favorable long-term total return, mainly through capital appreciation.

The fund normally invests at least 80% of its assets in equity securities of its benchmark index (the Russell 3000® Index). It buys most, but not necessarily all, of the stocks in its benchmark index, and the advisor will attempt to closely match the overall investment characteristics of its benchmark index. The fund is designed to track various U.S. equity markets as a whole or a segment of these markets. It primarily invests its assets in equity securities the Advisors have selected to track a designated stock market index.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	01-04-99
Subacct Adoption Date	01-04-99
Prosp Net Exp Ratio	0.09%
Prosp Gross Exp Ratio	0.12%
Advisor	Teachers Advisors LLC
Subadvisor	—
Portfolio Manager(s)	Philip James(Jim) Campagna Lei Liao

Investment Manager

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Volatility Analysis

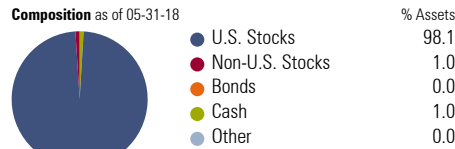


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	18	9	8	4
Out of # of Investments	8,282	7,313	6,522	4,412

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	47.26
Large	29.48
Medium	17.15
Small	5.33
Micro	0.77

Value Blend Growth

Top 20 Holdings as of 05-31-18

Company	% Assets
Apple Inc	3.35
Microsoft Corp	2.62
Amazon.com Inc	2.31
Facebook Inc A	1.60
Berkshire Hathaway Inc B	1.30
JPMorgan Chase & Co	1.30
Exxon Mobil Corp	1.22
Alphabet Inc C	1.16
Alphabet Inc A	1.15
Johnson & Johnson	1.14
Bank of America Corporation	0.98
Intel Corp	0.92
S+ p500 Emini Fut Jun18 Xcme 20180615	0.91
Visa Inc Class A	0.84
Wells Fargo & Co	0.84
Chevron Corp	0.83
UnitedHealth Group Inc	0.82
The Home Depot Inc	0.77
Cisco Systems Inc	0.75
Pfizer Inc	0.75

Total Number of Stock Holdings	2884
Total Number of Bond Holdings	0
Annual Turnover Ratio %	7.00
Total Fund Assets (\$mil)	464.27

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.22	1.01	1.01
P/B Ratio	2.81	0.96	0.95
P/C Ratio	11.65	0.91	0.94
GeoAvgCap (\$mil)	57538.24	0.58	0.71

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.30	1.01	1.00
3 Yr Beta	1.01	—	1.03
3 Yr Sharpe Ratio	0.98	0.90	1.23
3 Yr Alpha	-1.05	—	0.40
3 Yr R-squared	98.89	—	1.05

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	35.62
Basic Materials	3.22
Consumer Cyclical	12.48
Financial Services	16.37
Real Estate	3.55
Sensitive	41.89
Communication Services	2.68
Energy	5.99
Industrials	11.03
Technology	22.19
Defensive	22.48
Consumer Defensive	6.37
Healthcare	13.34
Utilities	2.77

Intelligent Variable Annuity-Vanguard VIF Capital Growth Portfolio

Benchmark
S&P 500 TR

Category
Large Growth

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Below Average

Out of 10232 Large Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide long-term capital appreciation.

The Portfolio invests in stocks considered to have above-average earnings growth potential that is not reflected in their current market prices. It consists predominantly of large- and mid-capitalization stocks.

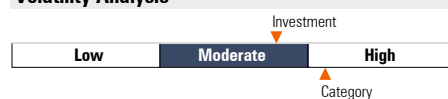
Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	12-03-02
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.36%
Prosp Gross Exp Ratio	0.36%
Advisor	PRIMECAP Management Company
Subadvisor	—
Portfolio Manager(s)	Alfred W. Mordecai Theo A. Kolokotronis Joel P. Fried M. Mohsin Ansari James M. Marchetti

Investment Manager

Vanguard is one of the world's largest investment management companies. Whether you are an individual investor, institution, or financial professional, you can benefit from the size, stability, and experience that we offer. Founded May 1, 1975 with the first fund the Wellington Fund (inception date: July 1, 1929). We offer exceptional value, a dedication to outstanding performance, superior service, and low costs.

Volatility Analysis

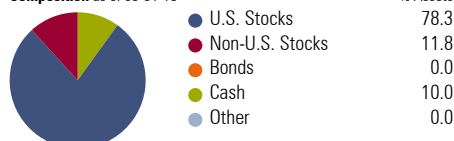


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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	63	15	21	11
Out of # of Investments	11,300	10,232	9,289	6,019

Portfolio Analysis

Composition as of 03-31-18

Morningstar Equity Style Box™ as of 03-31-18

Style	% Mkt Cap
Giant	57.38
Large	38.92
Medium	3.38
Small	0.32
Micro	0.00

Top 20 Holdings as of 03-31-18

Company	% Assets
CMT Market Liquidity Rate	9.96
Adobe Systems Inc	4.96
Microsoft Corp	3.95
Biogen Inc	3.85
Texas Instruments Inc	3.65
FedEx Corp	3.49
Eli Lilly and Co	3.35
Amgen Inc	3.07
Southwest Airlines Co	2.91
NVIDIA Corp	2.55
Micron Technology Inc	2.43
Alibaba Group Holding Ltd ADR	2.34
Alphabet Inc C	2.08
Alphabet Inc A	2.06
Airbus SE	2.03
JPMorgan Chase & Co	1.84
American Airlines Group Inc	1.72
Roche Holding AG Dividend Right Cert.	1.71
Novartis AG ADR	1.55
Charles Schwab Corp	1.43

Total Number of Stock Holdings	102
Total Number of Bond Holdings	0
Annual Turnover Ratio %	7.00
Total Fund Assets (\$mil)	1,596.76

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	15.29	0.89	0.68
P/B Ratio	3.58	1.22	0.80
P/C Ratio	11.50	0.90	0.74
GeoAvgCap (\$mil)	88286.35	0.88	0.94

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.12	1.09	0.92
3 Yr Beta	1.03	—	0.96
3 Yr Sharpe Ratio	1.21	1.11	1.33
3 Yr Alpha	2.02	—	-2.49
3 Yr R-squared	88.24	—	1.07

Morningstar Sectors as of 03-31-18

Sector	% Fund
Cyclical	18.64
Basic Materials	1.41
Consumer Cyclical	8.82
Financial Services	8.41
Real Estate	0.00
Sensitive	59.86
Communication Services	0.44
Energy	0.78
Industrials	20.10
Technology	38.54
Defensive	21.50
Consumer Defensive	0.09
Healthcare	21.41
Utilities	0.00

Intelligent Variable Annuity-Vanguard VIF Equity Index Portfolio

Benchmark
S&P 500 TR

Category
Large Blend

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 7313 Large Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to track the performance of a benchmark index that measures the investment return of large-capitalization stocks.

The Portfolio employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	04-29-91
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.15%
Prosp Gross Exp Ratio	0.15%
Advisor	Vanguard Group Inc
Subadvisor	—
Portfolio Manager(s)	Donald M. Butler Michelle Louie

Investment Manager

Vanguard is one of the world's largest investment management companies. Whether you are an individual investor, institution, or financial professional, you can benefit from the size, stability, and experience that we offer. Founded May 1, 1975 with the first fund the Wellington Fund (inception date: July 1, 1929). We offer exceptional value, a dedication to outstanding performance, superior service, and low costs.

Volatility Analysis



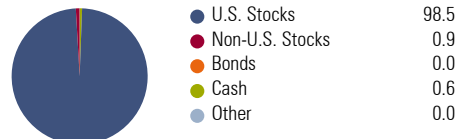
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Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	20	6	8	5
Out of # of Investments	8,282	7,313	6,522	4,412

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	57.10
Large	34.58
Medium	8.33
Small	0.00
Micro	0.00

Value Blend Growth

Top 20 Holdings as of 05-31-18

Company	% Assets
Apple Inc	4.09
Microsoft Corp	3.28
Amazon.com Inc	2.82
Facebook Inc A	1.98
JPMorgan Chase & Co	1.58
Exxon Mobil Corp	1.48
Berkshire Hathaway Inc B	1.47
Alphabet Inc C	1.43
Alphabet Inc A	1.41
Johnson & Johnson	1.38
Bank of America Corporation	1.20
Intel Corp	1.11
Chevron Corp	1.02
Visa Inc Class A	1.02
Wells Fargo & Co	1.02
UnitedHealth Group Inc	1.01
The Home Depot Inc	0.94
Pfizer Inc	0.92
Cisco Systems Inc	0.89
AT&T Inc	0.86

Total Number of Stock Holdings	507
Total Number of Bond Holdings	2
Annual Turnover Ratio %	5.00
Total Fund Assets (\$mil)	5,308.48

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.10	1.00	1.00
P/B Ratio	2.94	1.00	1.00
P/C Ratio	12.75	1.00	1.03
GeoAvgCap (\$mil)	99629.76	1.00	1.22

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.16	1.00	0.99
3 Yr Beta	1.00	—	1.02
3 Yr Sharpe Ratio	1.02	0.94	1.28
3 Yr Alpha	-0.74	—	0.28
3 Yr R-squared	100.00	—	1.06

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	33.51
Basic Materials	2.68
Consumer Cyclical	12.06
Financial Services	16.53
Real Estate	2.24
Sensitive	42.77
Communication Services	3.00
Energy	6.26
Industrials	10.40
Technology	23.11
Defensive	23.72
Consumer Defensive	7.09
Healthcare	13.83
Utilities	2.80

Intelligent Variable Annuity-Vanguard VIF High Yield Bond Portfolio

Benchmark
BBgBarc US Corporate High Yield TR USD

Category
High Yield Bond

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Below Average

Out of 2287 High Yield Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide a high level of current income.

The fund invests primarily in a diversified group of high-yielding, higher-risk corporate bonds—commonly known as “junk bonds”—with medium- and lower-range credit-quality ratings. It invests at least 80% of its assets in corporate bonds that are rated below Baa. The fund may not invest more than 20% of its assets in any of the following, taken as a whole: bonds with credit ratings lower than B or the equivalent, convertible securities, preferred stocks, and fixed and floating rate loans of medium- to lower-range credit quality.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	06-03-96
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.28%
Prosp Gross Exp Ratio	0.28%
Advisor	Wellington Management Company LLP
Subadvisor	—
Portfolio Manager(s)	Michael L. Hong

Investment Manager

Vanguard is one of the world's largest investment management companies. Whether you are an individual investor, institution, or financial professional, you can benefit from the size, stability, and experience that we offer. Founded May 1, 1975 with the first fund the Wellington Fund (inception date: July 1, 1929). We offer exceptional value, a dedication to outstanding performance, superior service, and low costs.

Volatility Analysis



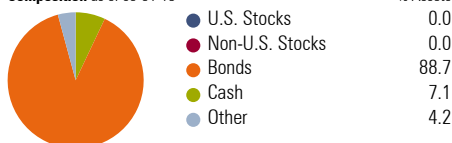
In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

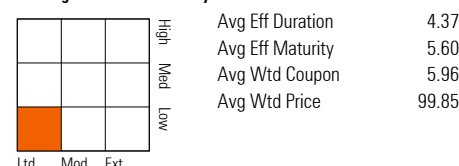
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★★	★★★★
Fund Rank Percentile	58	18	8	16
Out of # of Investments	2,626	2,287	1,981	1,278

Portfolio Analysis

Composition as of 03-31-18



Morningstar Fixed Income Style Box™ as of 03-31-18



Top 20 Holdings as of 03-31-18

Company	% Assets
Sprint Corporation 7.88% 09-15-23	1.30
First Data Corporation 7% 12-01-23	0.81
Univision Communications Inc. 5.12% 02-15-25	0.78
Navient Corporation 6.75% 06-25-25	0.73
Navient Corporation 6.5% 06-15-22	0.63
Caesars Resort Collection LLC/CRC 5.25% 10-15-25	0.62
Apx Group, Inc. 8.88% 12-01-22	0.61
Building Materials Corporation of Am 6% 10-15-25	0.61
Aercap Global Aviation Trust 6.5% 06-15-25	0.59
Liberty Media Corporation 8.25% 02-01-30	0.59
Sprint Capital Corporation 6.88% 11-15-28	0.59
Adient Global Holdings Ltd 4.88% 08-15-26	0.58
Credit Suisse Group AG	0.58
HCA Inc. 6.5% 02-15-20	0.56
First Data Corporation 5.75% 01-15-24	0.54
Post Holdings Inc. 5% 08-15-26	0.54
UBS Group AG 12-31-49	0.54
West Street Merger Sub Inc 6.38% 09-01-25	0.54
DISH DBS Corporation 5.88% 07-15-22	0.53
DISH DBS Corporation 6.75% 06-01-21	0.53

Total Number of Stock Holdings	0
Total Number of Bond Holdings	457
Annual Turnover Ratio %	28.00
Total Fund Assets (\$mil)	723.93

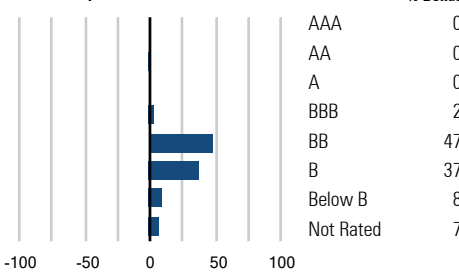
Statistics as of 06-30-18

Metric	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	4.16	0.00	0.82
Beta	0.40	—	1.21
Sharpe Ratio	0.73	0.00	1.52
Alpha	2.68	—	1.29
R-Squared	6.42	—	1.73

Morningstar Sectors as of 03-31-18

Sector	% Fund
Government	0.00
Corporate	92.81
Securitized	0.00
Municipal	0.00
Cash/Cash Equivalents	7.19
Other	0.00

Credit Analysis as of 03-31-18



Intelligent Variable Annuity-Vanguard VIF Mid-Cap Index Portfolio

Benchmark
S&P MidCap 400 TR

Category
Mid-Cap Blend

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 2675 Mid-Cap Blend VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to track the performance of a benchmark index that measures the investment return of mid-capitalization stocks.

The Portfolio employs an indexing investment approach designed to track the performance of the CRSP U.S. Mid Cap Index, a broadly diversified index of stocks of mid-size U.S. companies. The advisor attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

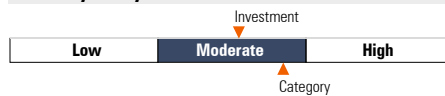
Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	02-09-99
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.19%
Prosp Gross Exp Ratio	0.19%
Advisor	Vanguard Group Inc
Subadvisor	—
Portfolio Manager(s)	Donald M. Butler Michael A. Johnson

Investment Manager

Vanguard is one of the world's largest investment management companies. Whether you are an individual investor, institution, or financial professional, you can benefit from the size, stability, and experience that we offer. Founded May 1, 1975 with the first fund the Wellington Fund (inception date: July 1, 1929). We offer exceptional value, a dedication to outstanding performance, superior service, and low costs.

Volatility Analysis

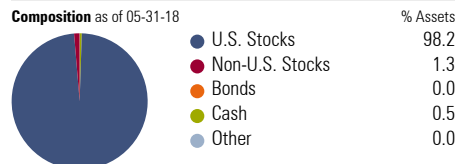


In the past, this investment has shown a relatively moderate range of price fluctuations relative to other investments. This investment may experience larger or smaller price declines or price increases depending on market conditions. Some of this risk may be offset by owning other investments with different portfolio makeups or investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	50	19	8	8
Out of # of Investments	3,007	2,675	2,360	1,469

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	% Mkt Cap
Large	Mid	Small	0.00
Giant			41.50
Large			58.50
Medium			0.00
Small			0.00
Micro			0.00

Top 20 Holdings as of 05-31-18

	% Assets
ServiceNow Inc	0.76
Fiserv Inc	0.75
Edwards Lifesciences Corp	0.72
Autodesk Inc	0.71
Red Hat Inc	0.71

Roper Technologies Inc	0.70
Moody's Corporation	0.69
ONEOK Inc	0.69
Amphenol Corp Class A	0.66
Align Technology Inc	0.63
Western Digital Corp	0.62
Worldpay Inc Class A	0.59
Freepoint-McMoRan Inc	0.58
M&T Bank Corp	0.58
Microchip Technology Inc	0.57
Centene Corp	0.56
Rockwell Collins Inc	0.56
Digital Realty Trust Inc	0.55
Devon Energy Corp	0.54
Twitter Inc	0.54

Total Number of Stock Holdings	347
Total Number of Bond Holdings	1
Annual Turnover Ratio %	18.00
Total Fund Assets (\$mil)	1,830.19

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	17.81	1.04	1.09
P/B Ratio	2.55	0.87	1.13
P/C Ratio	8.77	0.69	0.89
GeoAvgCap (\$mil)	14622.50	0.15	1.57

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	10.49	1.03	0.92
3 Yr Beta	0.97	—	0.98
3 Yr Sharpe Ratio	0.75	0.69	1.39
3 Yr Alpha	-2.86	—	0.60
3 Yr R-squared	88.75	—	1.13

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	42.04
Basic Materials	4.88
Consumer Cyclical	15.48
Financial Services	14.72
Real Estate	6.96
Sensitive	39.74
Communication Services	1.19
Energy	6.58
Industrials	13.79
Technology	18.18
Defensive	18.22
Consumer Defensive	4.63
Healthcare	8.81
Utilities	4.78

Intelligent Variable Annuity-Vanguard VIF Real Estate Index Portfolio

Benchmark
MSCI US IM/Real Estate 25-50 NR USD

Category
Real Estate

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 947 Real Estate VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide a high level of income and moderate long-term capital appreciation by tracking the performance of the MSCI US Investable Market Real Estate 25/50 Index.

The advisor attempts to replicate the index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index. The index measures the performance of publicly traded equity REITs and other real estate-related investments. It is made up of stocks of large, mid-size, and small U.S. companies within the real estate sector.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	02-09-99
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.27%
Prosp Gross Exp Ratio	0.27%
Advisor	Vanguard Group Inc
Subadvisor	—
Portfolio Manager(s)	Gerard C. O'Reilly Walter Nejman

Investment Manager

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Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

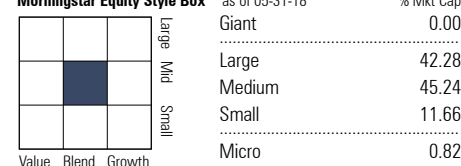
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★★★
Fund Rank Percentile	51	7	10	8
Out of # of Investments	1,061	947	860	623

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18



Top 20 Holdings as of 05-31-18

Company	% Assets
American Tower Corp	5.81
Simon Property Group Inc	4.89
Crown Castle International Corp	4.04
Prologis Inc	3.27
Public Storage	3.16
Equinix Inc	2.99
Weyerhaeuser Co	2.69
Equity Residential	2.24
AvalonBay Communities Inc	2.18
Digital Realty Trust Inc	2.10
Welltower Inc	2.03
Ventas Inc	1.85
Boston Properties Inc	1.79
SBA Communications Corp	1.75
Host Hotels & Resorts Inc	1.51
Essex Property Trust Inc	1.50
Realty Income Corp	1.44
CBRE Group Inc	1.42
GGP Inc	1.29
Alexandria Real Estate Equities Inc	1.21

Total Number of Stock Holdings	183
Total Number of Bond Holdings	1
Annual Turnover Ratio %	10.00
Total Fund Assets (\$mil)	1,042.02

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	35.68	2.08	0.91
P/B Ratio	2.23	0.76	0.99
P/C Ratio	13.45	1.05	0.93
GeoAvgCap (\$mil)	11705.59	0.12	1.02

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.15	1.29	1.01
3 Yr Beta	0.60	—	0.95
3 Yr Sharpe Ratio	0.52	0.48	1.27
3 Yr Alpha	2.25	—	5.23
3 Yr R-squared	23.76	—	0.90

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	91.51
Basic Materials	3.18
Consumer Cyclical	0.00
Financial Services	0.00
Real Estate	88.33
Sensitive	8.49
Communication Services	7.60
Energy	0.00
Industrials	0.89
Technology	0.00
Defensive	0.00
Consumer Defensive	0.00
Healthcare	0.00
Utilities	0.00

Intelligent Variable Annuity-Vanguard VIF Small Company Growth Portfolio

Benchmark
Russell 2500 Growth TR USD

Category
Small Growth

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 2859 Small Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to provide long-term capital appreciation.

Under normal circumstances the Portfolio invests at least 80% of its assets primarily in common stocks of small companies. These companies tend to be unseasoned but are considered by the Portfolio's advisors to have superior growth potential. Also, these companies often provide little or no dividend income. It uses multiple investment advisors.

Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	06-03-96
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.34%
Prosp Gross Exp Ratio	0.34%
Advisor	ArrowMark Colorado Holdings, LLC (ArrowMark Partners)
Subadvisor	—
Portfolio Manager(s)	James P. Stetler Chad Meade Brian A. Schaub Binbin Guo

Investment Manager

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Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

Morningstar Rating™	1 Year	3 Year	5 Year	10 Year
Fund Rank Percentile	—	★★★★★	★★★★★	★★★★★
Out of # of Investments	68	15	6	3
	3,043	2,859	2,645	1,746

Portfolio Analysis

Composition as of 03-31-18

% Assets	
U.S. Stocks	92.0
Non-U.S. Stocks	2.2
Bonds	0.0
Cash	5.7
Other	0.0

Morningstar Equity Style Box™ as of 03-31-18

% Mkt Cap	
Giant	0.00
Large	2.14
Medium	61.36
Small	32.68
Micro	3.82

Top 20 Holdings as of 03-31-18

% Assets	
CMT Market Liquidity Rate	5.54
Trinet Group Inc	1.73
Sensata Technologies Holding PLC	1.52
LPL Financial Holdings Inc	1.36
ServiceMaster Global Holdings Inc	1.21
SS&C Technologies Holdings Inc	1.21
Kirby Corp	1.19
Grand Canyon Education Inc	1.13
CDW Corp	1.12
Sally Beauty Holdings Inc	1.02
MSC Industrial Direct Co Inc Class A	1.00
Multi-Color Corp	0.96
Clean Harbors Inc	0.95
Polaris Industries Inc	0.91
Tennant Co	0.82
Cimpress NV	0.79
Heico Corp Class A	0.78
Kennametal Inc	0.78
Carter's Inc	0.76
STERIS PLC	0.76

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	18.17	1.06	0.79
P/B Ratio	3.60	1.23	1.06
P/C Ratio	11.04	0.86	0.82
GeoAvgCap (\$mil)	3725.39	0.04	1.09

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.97	1.38	1.01
3 Yr Beta	1.14	—	1.06
3 Yr Sharpe Ratio	0.80	0.73	1.14
3 Yr Alpha	-1.46	—	0.62
3 Yr R-squared	68.87	—	1.08

Morningstar Sectors as of 03-31-18

% Fund	
Cyclical	30.90
Basic Materials	2.93
Consumer Cyclical	18.64
Financial Services	6.92
Real Estate	2.41
Sensitive	49.60
Communication Services	0.35
Energy	0.67
Industrials	25.99
Technology	22.59
Defensive	19.49
Consumer Defensive	2.93
Healthcare	16.32
Utilities	0.24

Total Number of Stock Holdings	381
Total Number of Bond Holdings	0
Annual Turnover Ratio %	93.00
Total Fund Assets (\$mil)	1,996.59

Intelligent Variable Annuity-Vanguard VIF Total Bond Market Index Portfolio

Benchmark
BBgBarc US Agg Bond TR USD

Category
Intermediate-Term Bond

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Average

Out of 4963 Intermediate-Term Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to track the performance of a broad, market-weighted bond index.

The fund employs an indexing investment approach designed to track the performance of the Bloomberg Barclays U.S.

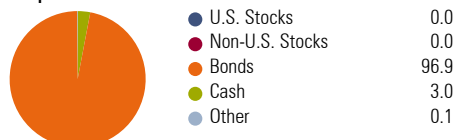
Aggregate Float Adjusted Index. This index represents a wide spectrum of public, investment-grade, taxable, fixed income securities in the United States-including government, corporate, and international dollar-denominated bonds, as well as mortgage-backed and asset-backed securities-all with maturities of more than 1 year. At least 80% of its assets will be invested in bonds held in the index.

Morningstar Proprietary Statistics

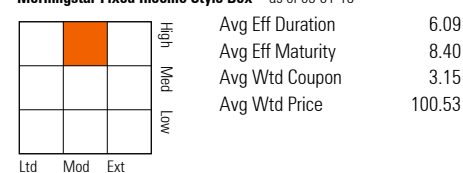
	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★	★★★★
Fund Rank Percentile	20	18	17	23
Out of # of Investments	5,824	4,963	4,367	2,678

Portfolio Analysis

Composition as of 05-31-18



Morningstar Fixed Income Style Box™ as of 05-31-18



Operations

Subaccount Incp Date	12-12-14
Undr. Fund Incep Date	04-29-91
Subacct Adoption Date	12-12-14
Prosp Net Exp Ratio	0.15%
Prosp Gross Exp Ratio	0.15%
Advisor	Vanguard Group Inc
Subadvisor	—
Portfolio Manager(s)	William D. Baird Joshua C. Barrickman

Investment Manager

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Volatility Analysis



In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Top 20 Holdings as of 05-31-18

Security	% Assets
CMT Market Liquidity Rate	3.00
United States Treasury Notes 1.5% 07-15-20	0.76
United States Treasury Notes 1.62% 10-15-20	0.61
United States Treasury Notes 2% 11-30-22	0.61
United States Treasury Notes 2% 11-15-26	0.47
United States Treasury Notes 1.62% 02-15-26	0.46
United States Treasury Notes 2.38% 03-15-21	0.43
United States Treasury Notes 1.25% 06-30-19	0.42
Federal National Mortgage Associat 3.5% 05-01-48	0.41
United States Treasury Notes 2.62% 05-15-21	0.41
United States Treasury Notes 1.75% 06-30-22	0.40
United States Treasury Notes 1.75% 11-15-20	0.40
United States Treasury Notes 1.88% 09-30-22	0.39
Federal National Mortgage Associatio 3% 12-01-46	0.36
United States Treasury Notes 1.5% 08-15-20	0.36
United States Treasury Notes 2.12% 05-15-25	0.36
United States Treasury Notes 2.12% 02-29-24	0.36
United States Treasury Bonds 2.88% 11-15-46	0.35
Federal National Mortgage Associatio 4% 06-01-48	0.33
United States Treasury Notes 1.25% 03-31-21	0.32

Total Number of Stock Holdings	0
Total Number of Bond Holdings	8551
Annual Turnover Ratio %	91.00
Total Fund Assets (\$mil)	3,405.13

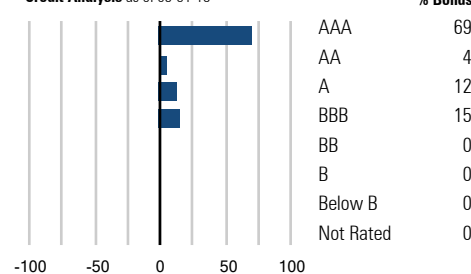
Statistics as of 06-30-18

Metric	Port Avg	Rel BC Aggr	Rel Cat
3 Yr Std Dev	2.78	0.00	1.07
Beta	1.04	—	1.16
Sharpe Ratio	0.10	0.00	-0.63
Alpha	-0.76	—	0.60
R-Squared	99.06	—	1.16

Morningstar Sectors as of 05-31-18

Sector	% Fund
Government	45.13
Corporate	27.00
Securitized	24.16
Municipal	0.72
Cash/Cash Equivalents	2.99
Other	0.00

Credit Analysis as of 05-31-18



Intelligent Variable Annuity-VY Clarion Global Real Estate - CI. I

Benchmark
S&P Developed Property TR USD

Category
Global Real Estate

Overall Morningstar Rating™
★★★★

Morningstar Return
Above Average

Morningstar Risk
Above Average

Out of 773 Global Real Estate VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks high total return consisting of capital appreciation and current income.

The Portfolio invests at least 80% of its net assets (plus borrowings for investment purposes) in a portfolio of equity securities of companies that are principally engaged in the real estate industry. The sub-adviser considers a company to be principally engaged in the real estate industry if the company:

(i) derives at least 50% of its total revenue or earnings from owning, operating, developing, constructing, financing, managing, and/or selling commercial, industrial, or residential real estate; or (ii) has at least 50% of its assets invested in real estate.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★	★★★★★	★★★★★
Fund Rank Percentile	56	38	24	11
Out of # of Investments	858	773	681	421

Portfolio Analysis

Composition as of 03-31-18



Morningstar Equity Style Box™ as of 03-31-18

Style	% Mkt Cap
Giant	8.96
Large	34.94
Medium	52.34
Small	3.76
Micro	0.00

Operations

Subaccount Incp Date	05-03-10
Undr. Fund Incep Date	01-03-06
Subacct Adoption Date	05-03-10
Prosp Net Exp Ratio	0.89%
Prosp Gross Exp Ratio	0.97%
Advisor	Voya Investments, LLC
Subadvisor	CBRE Clarion Securities LLC
Portfolio Manager(s)	T. Ritson Ferguson Steven D. Burton Joseph P. Smith

Investment Manager

The successful history of client-focused asset management at ING extends back to 1845 and our roots as a Dutch insurer and commercial bank. As of March 31, 2012, we manage approximately \$170 billion of assets for institutions and individual investors worldwide, and we serve as the principal asset manager of ING Group, the global financial services company. With over 3,300 employees and an investment presence in 33 countries across the Americas, Asia-Pacific, Europe and the Middle East, ING Investment Management provides clients with access to domestic, regional and global investment solutions. With an emphasis on active management, our investment mission is to find unrecognized value ahead of consensus. To this end, our portfolio management teams seek original insights on markets and securities and a vision of investment potential that differs from the consensus view.

Top 20 Holdings as of 03-31-18

Company	% Assets
CK Asset Holdings Ltd	4.22
Simon Property Group Inc	4.16
Prologis Inc	3.63
Mitsui Fudosan Co Ltd	3.29
Link Real Estate Investment Trust	2.95
Vonovia SE	2.73
Alexandria Real Estate Equities Inc	2.68
GGP Inc	2.68
Unibail-Rodamco SE	2.47
Extra Space Storage Inc	2.28
Regency Centers Corp	1.92
Land Securities Group PLC	1.85
AvalonBay Communities Inc	1.83
Scentre Group	1.80
Segro PLC	1.77
Klépierre	1.74
Sun Hung Kai Properties Ltd	1.74
Gecina	1.72
Macerich Co	1.72
Essex Property Trust Inc	1.66
Total Number of Stock Holdings	90
Total Number of Bond Holdings	0
Annual Turnover Ratio %	90.00
Total Fund Assets (\$mil)	293.63

Statistics

Statistic	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	22.45	1.31	1.06
P/B Ratio	1.27	0.43	0.96
P/C Ratio	8.60	0.67	0.86
GeoAvgCap (\$mil)	11098.06	0.11	1.10

Risk Measures as of 06-30-18

Metric	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.60	1.14	1.04
3 Yr Beta	0.76	—	1.01
3 Yr Sharpe Ratio	0.27	0.25	1.00
3 Yr Alpha	-2.73	—	0.98
3 Yr R-squared	49.01	—	0.96

Morningstar World Regions as of 03-31-18

Region	% Fund
Americas	52.05
North America	52.05
Latin America	0.00
Greater Europe	18.66
United Kingdom	6.26
Europe Developed	12.40
Europe Emerging	0.00
Africa/Middle East	0.00
Greater Asia	29.30
Japan	12.18
Australasia	5.26
Asia Developed	11.85
Asia Emerging	0.00

Volatility Analysis



In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Intelligent Variable Annuity-Wanger International

Benchmark
S&P Global Ex US Small TR USD

Category
Foreign Small/Mid Growth

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 190 Foreign Small/Mid Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

Under normal circumstances, the fund invests at least 65% of its net assets in foreign companies in developed markets (for example, Japan, Canada and the United Kingdom) and in emerging markets (for example, China, India and Brazil). Under normal circumstances, the fund invests a majority of its net assets in the common stock of small- and mid-sized companies with market capitalizations under \$5 billion at the time of initial investment.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-03-95
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.15%
Prosp Gross Exp Ratio	1.20%
Advisor	Columbia Wanger Asset Management LLC
Subadvisor	—
Portfolio Manager(s)	Louis J. Mendes Tae Han (Simon) Kim

Investment Manager

Adherence to the Growth at a Reasonable Price (GARP) style has caused the firm to correctly react to valuation extremes in the market. Experienced team of professionals following a research-driven investment process that blends bottom-up and top-down analysis. Consistent investment process since inception of Columbia Acorn Fund in 1970. Columbia Wanger Asset Management, L.P. is a registered investment adviser and an indirect, wholly owned subsidiary of Bank of America Corporation. CWAM is a part of Columbia Management.

Volatility Analysis



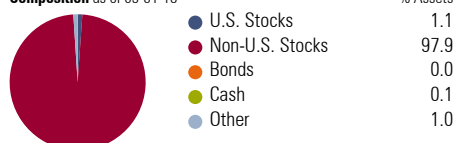
In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★★
Fund Rank Percentile	6	5	27	6
Out of # of Investments	194	190	187	123

Portfolio Analysis

Composition as of 05-31-18



Morningstar Equity Style Box™ as of 05-31-18

	% Mkt Cap
Giant	0.00
Large	7.56
Medium	63.63
Small	26.99
Micro	1.82

Top 20 Holdings as of 05-31-18

	% Assets
SimCorp A/S	2.66
Nemetschek SE	2.62
Brembo SpA	1.76
Kindred Group PLC DR	1.65
NagaCorp Ltd	1.61
WH Smith PLC	1.57
Vitasoy International Holdings Ltd	1.54
Atea ASA	1.51
Rightmove PLC	1.45
Hastings Group Holdings PLC	1.40
Restaurant Brands NZ Ltd	1.40
Ascential PLC	1.36
CAE Inc	1.35
Domino's Pizza Group PLC	1.35
Fuji Oil Holdings Inc	1.35
Seria Co Ltd	1.35
cocokara fine Inc	1.34
Industria Macchine Automatiche SpA	1.33
Sweco AB B	1.29
Aalberts Industries NV	1.24

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	20.59	1.20	1.08
P/B Ratio	3.23	1.10	1.25
P/C Ratio	13.85	1.08	1.32
GeoAvgCap (\$mil)	2397.48	0.02	0.40

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.58	1.14	0.96
3 Yr Beta	0.85	—	0.97
3 Yr Sharpe Ratio	0.54	0.50	1.35
3 Yr Alpha	2.04	—	6.38
3 Yr R-squared	80.24	—	1.00

Morningstar World Regions as of 05-31-18

	% Fund
Americas	6.67
North America	5.52
Latin America	1.15
Greater Europe	46.55
United Kingdom	13.22
Europe Developed	29.34
Europe Emerging	1.70
Africa/Middle East	2.29
Greater Asia	46.79
Japan	22.41
Australasia	2.37
Asia Developed	11.13
Asia Emerging	10.86

Total Number of Stock Holdings	109
Total Number of Bond Holdings	0
Annual Turnover Ratio %	55.00
Total Fund Assets (\$mil)	537.37

Intelligent Variable Annuity-Wanger Select

Benchmark
 S&P MidCap 400 TR

Category
 Mid-Cap Growth

Overall Morningstar Rating™
 ★★★

Morningstar Return
 Above Average

Morningstar Risk
 Above Average

Out of 3480 Mid-Cap Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

Under normal circumstances, the fund (i) invests a majority of its net assets in the common stock of small- and mid-sized companies with market capitalizations under \$20 billion at the time of initial investment ("Focus Stocks") and (ii) may also invest in companies with market capitalizations above \$20 billion, provided that immediately after that investment a majority of the fund's net assets would be invested in Focus Stocks.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	02-01-99
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.84%
Prosp Gross Exp Ratio	1.12%
Advisor	Columbia Wanger Asset Management LLC
Subadvisor	—
Portfolio Manager(s)	David L Frank

Investment Manager

Adherence to the Growth at a Reasonable Price (GARP) style has caused the firm to correctly react to valuation extremes in the market. Experienced team of professionals following a research-driven investment process that blends bottom-up and top-down analysis. Consistent investment process since inception of Columbia Acorn Fund in 1970. Columbia Wanger Asset Management, L.P. is a registered investment adviser and an indirect, wholly owned subsidiary of Bank of America Corporation. CWAM is a part of Columbia Management.

Volatility Analysis

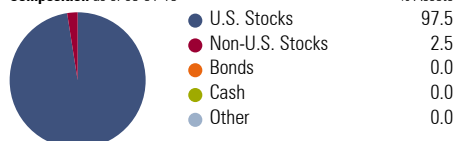


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★
Fund Rank Percentile	24	5	16	35
Out of # of Investments	3,765	3,480	3,263	2,000

Portfolio Analysis

Composition as of 05-31-18

Morningstar Equity Style Box™ as of 05-31-18

Style	% Mkt Cap
Giant	0.00
Large	6.81
Medium	71.72
Small	21.07
Micro	0.41

Top 20 Holdings as of 05-31-18

Company	% Assets
Masimo Corp	5.41
JB Hunt Transport Services Inc	5.19
Vail Resorts Inc	5.15
VeriSign Inc	4.82
Ansys Inc	4.58
CDW Corp	4.48
LCI Industries Inc	4.46
GoDaddy Inc A	4.43
SVB Financial Group	4.33
Cavco Industries Inc	3.91
LKQ Corp	3.89
Encompass Health Corp	3.85
Eaton Vance Corp	3.82
Oshkosh Corp	3.60
CoreSite Realty Corp	3.32
Genomic Health Inc	3.30
Celanese Corp	3.29
SiteOne Landscape Supply Inc	3.24
Nordson Corp	2.88
FirstCash Inc	2.86

Total Number of Stock Holdings	31
Total Number of Bond Holdings	0
Annual Turnover Ratio %	52.00
Total Fund Assets (\$mil)	138.18

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	21.62	1.26	0.94
P/B Ratio	4.23	1.44	1.00
P/C Ratio	14.88	1.16	0.97
GeoAvgCap (\$mil)	6354.90	0.06	0.54

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	11.93	1.17	1.00
3 Yr Beta	0.96	—	0.97
3 Yr Sharpe Ratio	0.98	0.90	1.46
3 Yr Alpha	0.96	—	-0.31
3 Yr R-squared	67.86	—	0.92

Morningstar Sectors as of 05-31-18

Sector	% Fund
Cyclical	42.60
Basic Materials	3.29
Consumer Cyclical	17.41
Financial Services	16.00
Real Estate	5.90
Sensitive	43.15
Communication Services	2.48
Energy	0.00
Industrials	17.09
Technology	23.58
Defensive	14.26
Consumer Defensive	0.00
Healthcare	14.26
Utilities	0.00

Intelligent Variable Annuity-Wanger USA

Benchmark
Russell 2000 TR USD

Category
Small Growth

Overall Morningstar Rating™
★★★★★

Morningstar Return
High

Morningstar Risk
Average

Out of 2859 Small Growth VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks long-term capital appreciation.

Under normal circumstances, the fund invests at least 80% of its net assets (including the amount any borrowings for investment purposes) in U.S. companies. It invests a majority of its net assets in the common stock of small- and mid-sized companies with market capitalizations under \$5 billion at the time of initial investment.

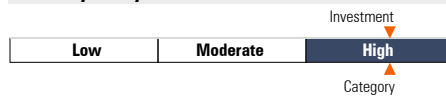
Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-03-95
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	1.04%
Prosp Gross Exp Ratio	1.08%
Advisor	Columbia Wanger Asset Management LLC
Subadvisor	—
Portfolio Manager(s)	Matthew A. Litfin Richard Watson

Investment Manager

Adherence to the Growth at a Reasonable Price (GARP) style has caused the firm to correctly react to valuation extremes in the market. Experienced team of professionals following a research-driven investment process that blends bottom-up and top-down analysis. Consistent investment process since inception of Columbia Acorn Fund in 1970. Columbia Wanger Asset Management, L.P. is a registered investment adviser and an indirect, wholly owned subsidiary of Bank of America Corporation. CWAM is a part of Columbia Management.

Volatility Analysis

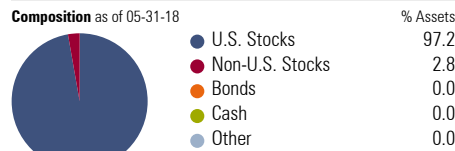


In the past, this investment has shown a wide range of price fluctuations relative to other investments. This investment may experience significant price increases in favorable markets or undergo large price declines in adverse markets. Some of this risk may be offset by owning other investments that follow different investment strategies.

Morningstar Proprietary Statistics

	1 Year	3 Year	5 Year	10 Year
Morningstar Rating™	—	★★★★★	★★★★★	★★★★
Fund Rank Percentile	44	5	6	29
Out of # of Investments	3,043	2,859	2,645	1,746

Portfolio Analysis



Morningstar Equity Style Box™ as of 05-31-18

Value	Blend	Growth	Large	Mid	Small	% Mkt Cap
						0.00
						0.00
						27.15
						68.93
						3.92

Top 20 Holdings as of 05-31-18

	% Assets
First Busey Corp Class A	1.61
Cabot Microelectronics Corp	1.57
HealthEquity Inc	1.55
Houlihan Lokey Inc	1.51
ICF International Inc	1.47
FirstCash Inc	1.41
Extended Stay America Inc	1.40
Orion Engineered Carbons SA	1.37
Texas Roadhouse Inc	1.37
iRhythm Technologies Inc	1.35
Masimo Corp	1.33
Lakeland Financial Corp	1.31
Repligen Corp	1.29
Ligand Pharmaceuticals Inc	1.26
Amedysys Inc	1.25
AMN Healthcare Services Inc	1.25
Dave & Buster's Entertainment Inc	1.25
Saia Inc	1.22
Semtech Corp	1.22
Central Garden & Pet Co	1.20

Statistics

	Port Avg	Rel S&P 500	Rel Cat
P/E Ratio	21.63	1.26	0.94
P/B Ratio	3.41	1.16	1.00
P/C Ratio	13.32	1.04	0.98
GeoAvgCap (\$mil)	2143.26	0.02	0.62

Risk Measures as of 06-30-18

	Port Avg	Rel S&P 500	Rel Cat
3 Yr Std Dev	13.30	1.31	0.96
3 Yr Beta	1.00	—	0.93
3 Yr Sharpe Ratio	0.90	0.83	1.29
3 Yr Alpha	0.78	—	-0.33
3 Yr R-squared	59.31	—	0.93

Morningstar Sectors as of 05-31-18

	% Fund
Cyclical	37.82
Basic Materials	2.62
Consumer Cyclical	17.33
Financial Services	14.48
Real Estate	3.39
Sensitive	31.93
Communication Services	0.48
Energy	1.53
Industrials	8.01
Technology	21.91
Defensive	30.25
Consumer Defensive	4.77
Healthcare	25.48
Utilities	0.00

Intelligent Variable Annuity-Western Asset Variable Global High Yield I

Benchmark
BBgBarc Global High Yield TR Hdg USD

Category
High Yield Bond

Overall Morningstar Rating™
★★★

Morningstar Return
Average

Morningstar Risk
High

Out of 2287 High Yield Bond VA subaccounts. An investment's overall Morningstar Rating, based on its risk-adjusted return, is a weighted average of its applicable 3-, 5-, and 10-year Ratings. See disclosure page for details.

Investment Information

Investment Strategy from investment's prospectus

The investment seeks to maximize total return.

The fund invests primarily in high yield fixed income securities issued by U.S. and foreign companies and foreign governments and their agencies and instrumentalities. It invests at least 80% of its assets in high yield bonds. The fund may invest without limit in foreign securities denominated either in U.S. dollars or foreign currencies and may invest up to 35% of its assets in sovereign debt issued by emerging market governmental issuers. Its investments may be of any maturity or duration.

Operations

Subaccount Incp Date	02-05-08
Undr. Fund Incep Date	05-01-98
Subacct Adoption Date	02-05-08
Prosp Net Exp Ratio	0.83%
Prosp Gross Exp Ratio	0.83%
Advisor	Legg Mason Partners Fund Advisor, LLC
Subadvisor	Western Asset Management Company Pte Ltd
Portfolio Manager(s)	S. Kenneth Leech Michael C. Buchanan Timothy J. Settel Walter E. Kilcullen Ian R. Edmonds Christopher F. Kilpatrick

Investment Manager

At Legg Mason, we've assembled experienced investment management firms and empowered them with the tools, resources and independence to pursue the strategies they know best. Each was chosen for their commitment to investment excellence. Each is focused on specific investment styles. Each exhibits thought leadership. Together, we've built a powerful portfolio of investment solutions. And it has made us a world leader in money management.

Volatility Analysis

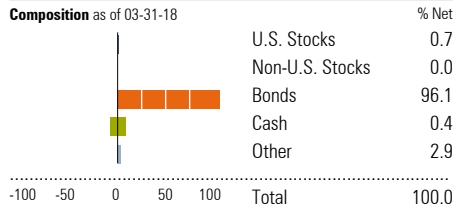


In the past, this investment has shown a relatively small range of price fluctuations relative to other investments. Based on this measure, currently more than two-thirds of all investments have shown higher levels of risk. Consequently, this investment may appeal to investors looking for a conservative investment strategy.

Morningstar Proprietary Statistics

Morningstar Rating™	1 Year	3 Year	5 Year	10 Year
Fund Rank Percentile	—	★★★★	★★	★★★★
Out of # of Investments	73	28	64	35
	2,626	2,287	1,981	1,278

Portfolio Analysis



Morningstar Fixed Income Style Box™ as of 03-31-18



Top 20 Holdings as of 03-31-18

	% Assets
DAE Funding LLC 5% SNR PIDI NTS 01/08/ 08-01-24	2.21
Brazil (Federative Republic) 4.25% SNR 01-07-25	1.69
SFR Group 7.375% SNR SEC PIDI NTS 01/0 05-01-26	1.69
Turkey (Republic of) 4.25% SNR PIDI NT 04-14-26	1.61
Teva Pharmaceutical Finance Netherland 07-21-21	1.58
Petrobras Global Finance B.V. 5.999% U 01-27-28	1.57
Valeant Pharmaceuticals International, 04-15-25	1.48
Charter Communications Oper Chtr TI B 04-30-25	1.40
Telecom Italia S.p.A. 5.303% SNR PIDI 05-30-24	1.35
Provincia de Buenos Aires 7.875% UNSUB 06-15-27	1.27
Windstream Corporation 7.75% SNR PIDI 10-15-20	1.24
Petrobras Glbl Fin B V 5.75% 02-01-29	1.22
Petsmart Inc Petm TI B 1I Usd 03-11-22	1.21
Argentina (Republic of) 5.875% SNR PID 01-11-28	1.18
Sprint Corporation 7.875% SNR PIDI NTS 09-15-23	1.18
Petrobras Global Finance B.V. 4.375% S 05-20-23	1.14
Altice SA 7.75% SNR PIDI NTS 15/05/202 05-15-22	1.13
DISH DBS Corporation 7.75% SNR PIDI NT 07-01-26	1.04
Poland (Republic of) 4% SNR PIDI BDS 2 10-25-23	1.00
Transportadora de Gas del Peru S.A. 04-30-28	0.95

Total Number of Stock Holdings	3
Total Number of Bond Holdings	257
Annual Turnover Ratio %	112.00
Total Fund Assets (\$mil)	153.08

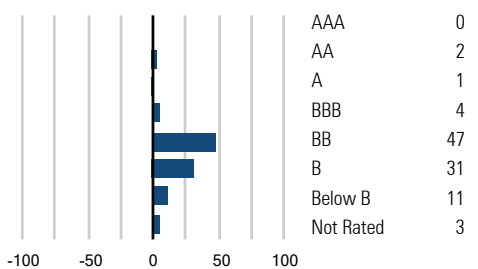
Statistics as of 06-30-18

3 Yr Std Dev	Port Avg	Rel BC Aggr	Rel Cat
Beta	5.90	-0.01	1.17
Sharpe Ratio	0.46	—	1.39
Alpha	0.48	0.00	1.00
R-Squared	2.38	—	1.14
	4.45	—	1.20

Morningstar Sectors as of 03-31-18

	% Fund
Government	22.52
Corporate	69.63
Securitized	0.72
Municipal	0.00
Cash/Cash Equivalents	0.63
Other	6.50

Credit Analysis as of 03-31-18



Disclosure

Additional Information

All investment vehicles are subject to market and other risk factors, which could result in loss of principal. **Investment objectives, risks, charges, expenses, and other important information about a portfolio are contained in the prospectus; read it carefully before investing.**

Prospectus Gross Expense Ratio

This is the percentage of fund assets paid for operating expenses and management fees. The expense ratio typically includes the following types of fees: accounting, administrator, advisor, auditor, board of directors, custodial, distribution (12b-1), legal, organizational, professional, registration, shareholder reporting, subadvisor, and transfer agency. The expense ratio does not reflect the fund's brokerage costs or any investor sales charges. In contrast to the net expense ratio, the gross expense ratio does not reflect any fee waivers in effect during the time period.

Also known as the Total Annual Fund Operating Expense Ratio, Morningstar pulls the prospectus gross expense ratio from the fund's most recent prospectus. Prospectus expense ratios reflect material changes to the expense structure for the current period.

Prospectus Net Expense Ratio

This is the percentage of fund assets paid for operating expenses and management fees. The expense ratio typically includes the following types of fees: accounting, administrator, advisor, auditor, board of directors, custodial, distribution (12b-1), legal, organizational, professional, registration, shareholder reporting, subadvisor, and transfer agency. The expense ratio does not reflect the fund's brokerage costs or any investor sales charges. In contrast to the gross expense ratio, the net expense ratio does reflect fee waivers in effect during the time period.

Also known as the Total Annual Fund Operating Expense Ratio Net of Reimbursements, Morningstar pulls the prospectus net expense ratio from the fund's most recent prospectus. Prospectus expense ratios reflect material changes to the expense structure for the current period, while annual report expense ratios reflect the actual fees charged during a particular fiscal year.

Morningstar Rating™, Return, and Risk

The Morningstar Rating™ for funds, or "star rating", is calculated for 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. It 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 Morningstar Rating does not include any adjustment for sales loads. 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 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.

The Morningstar Return rates a fund's performance relative to other managed products in its Morningstar Category. It is an assessment of a product's excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+ Avg), the

middle 35% Average (Avg), the next 22.5% Below Average (- Avg), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk evaluates a fund's downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+ Avg), and the top 10% High (High).

Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Style Box™

The Morningstar Style Box reveals a fund's investment strategy as of the date noted on this report.

For equity funds the vertical axis shows the market capitalization of the long stocks owned and the horizontal axis shows investment style (value, blend, or growth).

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest rate sensitivity as measured by a bond's effective duration (limited, moderate, or extensive).

Credit Analysis Survey: For corporate and municipal bonds, Morningstar surveys credit rating information from fund companies on a periodic basis (e.g., quarterly). In compiling credit rating information, Morningstar instructs fund companies to only use ratings that have been assigned by a Nationally Recognized Statistical Rating Organization (NRSRO). If two NRSROs have rated a security, fund companies are to report the lowest rating to Morningstar. If a rating is unavailable or unpublished, then the security or issuer is categorized as Not Rated/Not Available. US Government Securities issued by the US Treasury or US Government Agencies are included in the US Government category. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on the fund. An NRSRO rating on a fixed-income security can change from time-to-time.

Risk Measures

R-squared reflects the percentage of a fund's movements that are explained by movements in its benchmark index, showing the degree of correlation between the fund and the benchmark.

Beta is a measure of a fund's sensitivity to market movements. A portfolio with a beta greater than 1 is more volatile than the market, and a portfolio with a beta less than 1 is less volatile than the market.

Alpha measures the difference between a fund's actual returns and its expected performance, given its level of risk (as measured by beta).

Sharpe ratio uses standard deviation and excess return to determine reward per unit of risk.

Standard deviation is a statistical measure of the volatility of the fund's returns.

Investment Risk

Foreign Securities Funds/Emerging Market Funds: Risks include, but are not limited to, currency risk, political risk, and

risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Funds: The lack of industry diversification subjects the investor to increased industry-specific risks. *Non-Diversified Funds:* Funds that invest more of their assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small-Cap Funds: Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid-Cap Funds: The securities of companies with market capitalizations below \$10 billion may be more volatile and less liquid than the securities of larger companies.

Bond Funds: Bond investments are subject to interest rate risk so that when interest rates rise, the prices of bonds can decrease and the investor can lose principal value. Bonds investing in asset/mortgage-backed securities are subject to prepayment risk, where falling interest rates can cause security prices and income to decline due to early prepayment of principal, as well as extension risk, where rising interest rates can cause securities prices to decline because expected prepayments of principal do not occur.

High-Yield Bond Funds: Funds that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the fund, including the possible higher level of volatility and increased risk of default.

Commodity-Linked Derivative Funds: Funds that invest in commodity-linked derivative instruments may subject the portfolio to greater volatility than investments in traditional securities, particularly if the investments invoke leverage.

Value Funds: Stock selection is based upon the portfolio manager's assessment of fundamentals of the companies that he/she believes to be undervalued. This style of investing may increase the volatility of the portfolio and may not produce the intended results over short or long time periods. Larger, more established companies may not be able to attain higher growth rates of smaller companies, especially during extended periods of economic expansion.

Asset Allocation Funds: These funds seek to accomplish dual goals of income and capital appreciation by investing in a variety of securities in different asset classes. Many of these portfolios are structured as a "fund of funds" which is a portfolio that specializes in buying shares of other portfolios rather than individual securities. The "fund of funds" structure may have higher costs than if you invested directly in the underlying portfolios.

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Supplemental Information

Glossary

4 Yr earnings growth %

A measure of the trailing annualized earnings-growth record of the stocks in the portfolio. Like Morningstar's Price/Earnings and Price/Book ratios, this number is weighted so that larger positions in the portfolio count proportionately more than lesser positions. Stocks with losses during the past four years and those that lack a four-year track record are excluded from this calculation. Morningstar Investment Profiles will not reflect a value if less than 25% of the portfolio's holdings lack a four-year track record.

A

Alpha

See Modern Portfolio Theory Statistics

American Depositary Receipts (ADRs)

ADRs are securities that represent shares in a foreign company. They are traded on major U.S. stock exchanges and over the counter.

Asset base

The amount of money that a fund has under management. Frequently called assets or net assets.

B

Benchmark

An index or other standard against which an investment's performance is measured. A stock fund's returns are often compared with those of the S&P 500 index.

Beta

See Modern Portfolio Theory Statistics.

Bull market

A period in which security prices in a given market are generally rising.

C

Capital appreciation

An increase in the share price of a security. This is one of the two primary sources of an investor's total return. The other primary source is income.

Composition

A portfolio's composition will tell you something about its risk level. Funds that hold a large percentage of assets in cash (perhaps 10% or more) usually carry less risk because not all of their holdings are exposed to the market. We use a pie chart to help you see how much of your investment consists of stocks, bonds, or cash. We also show how much of your investment is held in foreign stocks.

Concentrated portfolio

A portfolio that is limited to relatively few securities or industries although its manager can invest in a diversified universe.

Country weightings

The returns of international investments will be affected by the performance of the international markets in which they invest. Consequently, you will want to know which countries your investment is most exposed to. The Morningstar Investment Profile shows the percentage of assets invested in each of an international investment's five largest country positions.

Credit analysis

Credit quality can influence the returns of portfolios that invest heavily in bonds. The Credit Analysis graph shows the percentage of fund assets that are invested in each of the major credit ratings, as determined by Standard & Poor's or Moody's. Lower-rated credits (also called junk or high-yield bonds) are more risky than higher-rated credits.

Currency risk

For a U.S.-based investor, the risk that the currency in which a foreign holding is denominated will depreciate relative to the U.S. dollar. In that case, an investor's profits would suffer when the foreign security was sold and the proceeds from this sale were exchanged for U.S. dollars.

Current-coupon bond

A bond that is trading at its face value or par because it is paying a market-level rate of interest.

D

Debt

Another term for a bond or fixed-income security.

Derivative

A security that has been crafted from an existing asset or security. Derivatives' value (and investors' returns) derive from the value of the underlying asset or security. Examples of equity derivatives include futures contracts and options. CMOs and mortgage-backed securities are examples of fixed-income derivatives.

Diversification

Diversification is essentially the opposite of “keeping all your eggs in one basket”. If you own just one investment, you’ll have a limited amount of diversification. By owning several investments, particularly mutual funds that follow different investment strategies and hold different types of assets, you can lower your portfolio’s overall risk. Diversification works because if one investment if out of favor, another that invests in different companies or financial markets may continue to do well. The investor who owns both funds will do better than the investor who only owns the struggling investment. Because most investments hit rocky patches sooner or later, your best protection against adverse market movements is a diversified portfolio.

One way to build a diversified portfolio, you can combine investments with different risk levels. For example, investors who can accept a moderate level of risk might include 20% of assets in high-risk investments, 60% of assets in moderate-risk investments, and 20% of assets in low-risk investments. Even the portfolio of someone with a low risk tolerance might include a 10% stake in high-risk investments and a 30% stake in moderate-risk investments. The exact tuning of your portfolio is up to you.

Dividend

A distribution of a portion of a company’s earnings to its stockholders. Older, larger, and more-established companies are the ones most likely to pay dividends. Young, growing companies often need to reinvest all of their profits into their businesses, and thus don’t pay out dividends to investors.

Duration

Duration is a measure, expressed in years, of a bond or bond fund’s sensitivity to interest-rate movements. Generally speaking, a one-percentage-point move in interest rates will cause an opposite move in a bond’s price roughly equal to the bond’s duration. Therefore, a bond with a five-year duration would incur a 5% loss if interest rates moved up 1%.

E**Equity**

Another term for stock, which is issued by a corporation and trades on an exchange.

Expense ratio

The percentage of fund assets paid for operating expenses and management fees. Sales charges are not included in the expense ratio.

F**Fixed-income security**

Another term for a bond or debt security.

G**Geometric average cap**

Morningstar defines the overall “size” of a stock fund’s portfolio as the geometric mean of the market capitalization for all of the stocks it owns. It’s calculated by raising the market capitalization of each stock to a power equal to that stock’s stake in the portfolio. The resulting numbers are multiplied together to produce the geometric mean of the market caps of the stocks in the portfolio, which is reported as geometric average cap.

Growth

There are two common uses of the word growth in the investment industry. In the first sense, growth refers to an increase in a firm’s profits or sales. In the second sense, growth refers to a style of investing in which managers seek firms with rapidly increasing profits or sales, often paying little attention to the prices they pay for such stocks.

H**High-yield bond**

Also referred to as a junk bond, this is a fixed-income security that has a credit rating of less than BBB, as measured by Standard & Poor’s, or BAA as measured by Moody’s.

These bonds are much more sensitive to the economic cycle than are high-quality securities, but they offer much higher coupons (interest payments), or yield, in return to investors who take on the added risk.

I**Income**

Payment to an investor of a dividend from a stock or of interest on a bond. Income is one of the two sources of total return, the other being capital appreciation.

Index

As a noun, index refers to a benchmark, such as the S&P 500, that is used to measure a fund’s performance. As a verb, it refers to the practice of buying and holding the securities that compose an index, or securities that are representative of an index.

Inflation risk

This term refers to the probability that a general rise in consumer prices will erode the buying power of dollars paid back to investors in the future. This risk is especially relevant for longer-term investors.

Interest-rate risk

Interest-rate risk represents vulnerability to changes interest rates. When interest rates rise, the prices of bonds and other income-oriented securities drop. The longer the duration for a bond or fund, the greater its interest-rate risk.

Investment-grade bonds

A bond that carries a Standard & Poor’s rating of BBB or a Moody’s rating of BAA or better.

L**Large cap**

For domestic companies, a firm of the 250 largest ones. For international companies, a firm in excess of \$5 billion assets. A large-cap fund has a median market capitalization of greater than that of the 250th largest stock.

M

Manager

The person who determines which investments belong in a portfolio.

Market capitalization

The value of a company based on the current selling price of its stock and the number of shares it has issued. Market capitalization equals the number of shares issued multiplied by the share price.

Market risk

The risk posed by movements in the stock or bond market. Investments that act the most like these markets (as measured by r-squared and beta) have the greatest market risk, while investments that are weakly linked to the broader markets have the least market risk.

Mid-cap (also Medium cap)

For domestic companies, a firm with the market capitalization of between 250th largest and 1,000th largest stock. For international companies, a firm with market capitalization of \$1 billion to \$5 billion. A mid-cap fund has a portfolio with a median market capitalization of between 250th largest and 1,000th largest stock.

Modern Portfolio Theory statistics (MPT)

Alpha, beta, and r-squared are components of Modern Portfolio Theory, a set of academic methods for assessing the risk of a fund, relative to a benchmark. The three statistics should be used in combination with each other. The passage below explains how the statistics are calculated.

Alpha: Alpha measures the difference between a fund's actual returns and its expected performance, given its level of market-related risk (as measured by beta). A positive alpha figure indicates the fund has performed better than its beta would predict.

Beta: Beta is a measure of a fund's sensitivity to market movements, as defined by a benchmark index. It measures the relationship between an investment's excess return over 90-day Treasury-bills and the excess return of the benchmark index. By definition, the beta of the benchmark is 1.00. A fund with a 1.10 beta has performed 10% better than its benchmark index (after deducting the T-bill rate) in up markets, and 10% worse in down markets, assuming all other factors remain constant. A beta of 0.85 indicates that the fund has performed 15% worse than the index in up markets, and 15% better in down markets. A low beta does not imply that the fund has a low level of volatility; rather, it means only that the fund's market-related risk is low.

R-squared: R-squared figures range from 0 to 100, and reflect the percentage of a fund's movements that are explained by movements in its benchmark index. An r-squared of 100 means that all movements of a fund are explained by movements in the index. Thus, index funds that invest only in S&P 500 stocks often have an r-squared very close to 100. Conversely, a low r-squared indicates that very few of the fund's movements are explained by movements in its benchmark index. R-squared is used to determine the significance of a particular beta or alpha. Generally, a higher r-squared will indicate a more reliable beta figure.

Money-market fund

A fund that invests exclusively in short-term securities, such as Treasury bills, certificates of deposit, and commercial paper. The maximum average maturity of these funds, which are among the safest but least-profitable investments available, is generally 120 days.

N

Net Asset Value (NAV)

A fund's share price.

O

Operations and expenses

An investment's expense ratio is the percentage of assets deducted each fiscal year for fund operational costs, including management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Low-cost investments generally have an edge over higher-priced ones.

P

Premium bond

A bond that sells for a price greater than its face value, usually because the bond pays a rate of interest greater than the market's. A bond that has a face value of \$1,000 and sells for \$1,025 has a 2.5% premium.

Price/book ratio (P/B)

This figure relates a stock's share price to its per-share book value (the net value of the company's assets under generally accepted accounting principles). The ratio, also called a multiple, is usually expressed as a whole number, and can be thought of as the price an investor pays for \$1.00 of the company's book value. Growth-style managers, who buy the stocks of fast-growing companies, are usually not concerned about P/B ratios. Value-style managers, on the other hand, often look for low-P/B stocks, which they believe may be underpriced relative to the value of their assets.

Price/earnings ratio (P/E)

This figure relates a company's stock price to its per-share earnings. The ratio, also called a multiple, is usually expressed as a whole number, and can be thought of as the price an investor pays for each \$1.00 of the

company's earnings. Often, managers are willing to buy stocks with a high P/E ratio when they believe that the company will experience significant earnings growth in the future.

Principal

The face value of a bond that its owner receives at maturity. The term also refers to the amount invested in a fund or security, independent of any earnings on the investment.

Prospectus objective

Indicates a particular fund's investment goals, based on the wording in a fund's prospectus.

R

Real Estate Investment Trust (REITs)

A company that invests in multiple real-estate properties. REITs trade on major stock exchanges, and are held by many mutual funds.

Regional exposure

The percentage of assets a fund has invested in the various regions of the world. Regional exposure is a major determinant of the return of world and foreign funds.

S

Small-cap

For domestic companies, a firm with a market capitalization of less than that of the 1,000th largest stock. For international companies, a firm with less than \$1 billion. A small-cap fund has a median market capitalization of less than that of 1,000th largest stock.

Sector weightings

Morningstar determines how much of each investment is held in each of the 10 major industrial sectors, which are listed on your Investment Profile page in order from least risky (utilities) to most risky (technology).

For domestic-stock funds, sector weightings provide another avenue into understanding the relative riskiness of different investment strategies. If a fund's sector allocation is similar to the overall market-as measured by the S&P 500 index-then the fund manager is likely following a conservative style. If management heavily overweights individual sectors by owning two or three times as much as the S&P 500 holds, then the fund's strategy typically takes on more risk.

Security

This term can refer to any financial asset, including stocks, bonds, and derivative issues.

Standard & Poor's 500 Index (S&P 500)

A collection of 500 large, widely held stocks used as a measure of stock-market performance. The 500 stocks in the index include 400 industrial companies, 20 transportation firms, 40 financial companies, and 40 public utilities.

T

Top holdings

A mutual fund's top holdings show which securities (stocks or bonds) will have the most influence on the fund's returns. The percentage of assets each holding claims in the portfolio provides an indication of the fund's riskiness. Conservative managers will usually devote no more than 3% to 4% of the fund's total assets to their favorite stocks. More-daring managers may allocate 7%, 8%, or an even greater percentage of assets to their top picks. The total weighting of the top five holdings is also a measure of a manager's daring. Those who restrict the total amount of the top five holdings to 15% of assets or less are generally conservative, while those who devote more than 25% may be considered aggressive.

Total return

The combined profits of a fund, including undistributed capital gains, capital appreciation, capital gains, and ordinary income.

Turnover ratio

A proxy for how frequently a manager trades his or her portfolio.

V

Volatility

Although volatility and risk are closely related, the volatility measure is different from the Morningstar risk measure (a component of the star rating) shown at the top of each page. The risk measure compares a fund with other funds in its star rating group, while the volatility measure shows where the fund ranks relative to all mutual funds.

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