

Third Quarter 2017

# Quarterly Commentary

Inv Manager or Sub-Advisor	Benchmark	Morningstar Category	Investment Objective
Columbus Circle Investors	Russell 1000 Growth Index	Large Growth	Growth

## Economic Overview

The global economic recovery that began in early 2016 appears to have reached self-sustaining velocity. The consensus now recognizes the evidence: strong industrial production, robust growth, and improved capital spending. Plus, business and consumer confidence is surging to high or record levels. Bank indices had better returns than the overall market. Mildly rising interest rates also suggest that investors appreciate some of the more recent worries (i.e., risks of deflation, political turmoil in Europe, or a China hard landing) have fallen significantly.

Economic sentiment in the Eurozone is within a whisker of a 17-year high. Confidence improved in every sector and country. Even Italian CEOs have the most optimistic outlook in a decade. The final survey of manufacturing purchasing managers was the highest in over six and a half years. The flash composite of service and manufacturing indices rose. Private demand is driving growth in both consumer spending and investment. In September, inflation stayed modest. Unemployment is falling and job gains are healthy. The 5.6% jobless rate in Germany is the lowest it's been since reunification in the early 1990s. Even Brexit fears can't keep the UK economy from expanding, or household spending from growing. Purchasing manager indices from the National Bureau of Statistics suggest that both manufacturing and service businesses are improving in China. The private-sector gauge from Caixin/Markit slipped a bit, but still shows growth. The People's Bank of China revealed a targeted cut in required reserves for banks that increase lending to small and very small enterprises, so while fiscal stimulus has faded some, there will be plenty of liquidity. Growth is not accelerating, but no near-term hard landing seems anywhere in sight. The U.S. economy has been strong and steady. Real economic growth averaged 2.2%, matching the rate over the entire expansion. Confidence is high, job growth is robust, and inflation is subdued. Profit growth is rebounding, and capital spending is picking up. We expect third-quarter growth to be cut a few tenths by the tragedies that came with Hurricanes Harvey, Irma, and Maria. Rebuilding efforts could add a bit to growth in following quarters.

As the synchronized global economic expansion continues robust and unabated, central banks are re-evaluating the extraordinary policies put in place after the financial crisis. Robust world growth, higher oil prices, and rising investor confidence in the self-sustaining expansion, pushed government bond yields higher, reversing their July-August dip.

## Large U.S. Equity

U.S. equities again reached new highs. The S&P 500 was up during the quarter with a 4.48% total return. The information technology sector was the top performer, while the consumer staples sector lagged. U.S. large-cap stocks underperformed small-caps. From a style perspective, growth outperformed value - a continuation of the first half of 2017.<sup>1</sup>

**Not FDIC or NCUA insured**

May lose value • Not a deposit • No bank or credit union guarantee  
Not insured by any Federal government agency

## Performance Contributors

### Positive Contributors

#### During last quarter:

Allocation to Applied Materials contributed due the proliferation of organic light-emitting diode (OLED) technology, on devices such as upcoming iPhone X, which benefits the company as the innovation leader. Allocation to Albemarle Corporation contributed due to strong lithium pricing as demand for battery storage and electric vehicles surpassed expectations. Allocation to Lam Research contributed due to strong memory spending for mobile devices, data center equipment, and personal computers driving the need for further capacity expansion.

#### During last 12 months:

Allocation to Lam Research, which benefited from strong shipments associated with memory customer spending, particularly within segment focused on next generation 3D NAND technology, contributed. Allocation to Micron Technology contributed due to industry supply constraints and robust end market demand within handset and computing products. Allocation to Applied Materials contributed due to stronger than expected semiconductor equipment spending, particularly for memory semiconductors and organic light-emitting diode (OLED) display technology that is increasingly used in televisions and mobile devices such as the upcoming iPhone X.

### Negative Contributors

#### During last quarter:

Allocation to Ulta Beauty detracted as it suffered from competitive concerns (potential infringement from Amazon), and worries about promotional pricing (department stores discounting and Ulta increasing the number of products included in its yearly Fall sales events). Hurricane damages to resin supplier facilities was a cause of the detraction by Newell Brands, as the company's profit margins were pressured by the need to seek higher cost alternative sources of key raw materials. Investors also questioned the growth sustainability of Elmer's Brand Glue franchise which has benefitted from the slime craze among young consumers. Lack of allocation to Boeing Company detracted was strong based on an inflection in cashflow growth and outline of several cost savings initiatives such as automation, factory optimization and supplier cost reductions.

#### During last 12 months:

Allocation to Edwards Lifesciences detracted due to less magnitude of positive surprise and a modest deceleration in heart procedure growth. The company has also been engaged in mutual patent infringement litigation with Boston Scientific for its key cardiac devices. Allocation to Fleetcor Technologies detracted due to concerns about its organic growth calculation and billing procedures, foreign currency headwinds that pressured revenue growth, and modest delays in some European growth initiatives that more than offset bookings strength and merger synergies. Allocation to Activision Blizzard detracted due to the underwhelming launch of its latest key franchise Call of Duty game title, and the greater than expected price discounting because of the lackluster debut.

#### Changes to the investment option's structure or portfolio:

No material changes occurred in the portfolio structure.

# LargeCap Growth Separate Account-R6

## Performance

*Investment results shown represent historical performance and do not guarantee future results. Investment returns and principal values fluctuate with changes in interest rates and other market conditions so the value, when redeemed, may be worth more or less than original costs. Current performance may be lower or higher than the performance data shown. For more performance information, including most recent month-end performance, visit [www.principal.com](http://www.principal.com), contact your representative of the Principal Financial Group®, or contact our participant contact center at 1-800-547-7754.*

*In situations where the net and gross expense figures are different, the investment manager has contractually agreed to limit the investment option's expense. Differences may also be shown due to the investment manager choosing to pay certain expenses that would normally be payable by the investment option. The gross total investment expense figure does not reflect any waivers or caps on the mutual fund or underlying mutual fund in which a Separate Account invests. Returns displayed are always based on net total investment expense.*

Average Annual Total Returns (%) as of 09/30/2017	QTR	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Inception Date	06/01/1995
LargeCap Growth Separate Account-R6	7.76	25.15	18.76	8.74	13.02	6.45	7.75	Ext. Perf. Inc. Date	05/31/1995
Russell 1000 Growth Index	5.90	20.72	21.94	12.69	15.26	9.08	-	Total Inv. Exp Gross	0.71
Large Growth Category	5.29	19.85	19.75	10.36	13.70	7.55	-	Total Inv Exp Net	0.71
Morningstar Percentile Ranking	-	-	62	77	65	77	-	Waiver Date	-
Total Funds in Category	1478	1416	1398	1259	1125	800	-	Contractual Cap Date	-

**Past performance is no guarantee of future results.** Market indices have been provided for comparison purposes only. They are unmanaged and do not reflect fees or expenses. Individuals cannot invest directly in an index.

# LargeCap Growth Separate Account-R6

## Statistics Summary as of 09/30/2017

	Risk and Return Statistics Summary						Upside/Downside Capture Ratio					
	Alpha	Beta	R2	Sharpe Ratio	Info Ratio	Std Dev	# of Months		Avg Returns %		Benchmark %	
							Up	Down	Up	Down	Up	Down
	3 Year						3 Year					
LargeCap Growth Separate Account-R6	-3.43	0.99	86.32	0.76	-0.94	11.41	20	16	2.64	-2.21	91.73	121.21
Russell 1000 Growth Index	N/A	N/A	N/A	N/A	N/A	N/A	22	14	2.87	-1.82	100.00	100.00
	5 Year						5 Year					
LargeCap Growth Separate Account-R6	-2.28	1.03	85.13	1.13	-0.52	11.24	35	25	3.04	-2.08	99.75	123.30
Russell 1000 Growth Index	N/A	N/A	N/A	N/A	N/A	N/A	37	23	3.05	-1.69	100.00	100.00

Risk and return statistical data is calculated by Morningstar, Inc. Please see Important Notes section for definitions of Risk and Return Statistics.

## Top Ten Holdings as of 08/31/2017

Security	Net Assets (%)
Apple Inc	5.23
Facebook Inc A	4.32
Alphabet Inc A	4.31
Amazon.com Inc	4.17
Visa Inc Class A	3.17
Microsoft Corp	2.91
Applied Materials Inc	2.83
Caterpillar Inc	2.83
Intuitive Surgical Inc	2.73
Celgene Corp	2.54
<b>Total % in Top 10</b>	<b>35.03</b>

## LargeCap Growth Separate Account-R6

Manager(s)	Start Date	Degree	Alma Mater
Anthony Rizza	01/01/2005	B.S.	University of Connecticut
Thomas J. Bisighini	03/01/2009	M.B.A.	Fordham University

### Investment Strategy

The investment option primarily invests in common stocks of large capitalization companies with strong earnings growth potential. It normally invests the majority of assets in companies with large market capitalizations at the time of purchase. Management places strong emphasis on companies it believes are guided by high quality management teams. It also attempts to identify those companies that are market leaders possessing the ability to control pricing and margins in their respective industries. It may invest up to 25% of assets in foreign securities.

### About Columbus Circle Investors

Principal Global Investors offers expertise in the management of growth equity portfolios through its affiliate, Columbus Circle Investors (CCI). CCI provides a strong history in growth-oriented equity investment management - with a consistent emphasis on independent, fundamental research and bottom-up stock selection. CCI's investment philosophy is straightforward and easy to understand. It is based on the premise that companies doing better than expected will have rising securities prices, while companies producing less than expected results will not.

## Important Notes

Separate Accounts are available through a group annuity contract with Principal Life Insurance Company. Insurance products and plan administrative services, if applicable, are provided by Principal Life Insurance Company, a member of the Principal Financial Group, Des Moines, IA 50392. See the fact sheet for the full name of the Separate Account. Certain investment options may not be available in all states or U.S. commonwealths. Principal Life Insurance Company reserves the right to defer payments or transfers from Principal Life Separate Accounts as described in the group annuity contracts providing access to the Separate Accounts or as required by applicable law. Such deferment will be based on factors that may include situations such as: unstable or disorderly financial markets; investment conditions which do not allow for an orderly investment transactions; or investment, liquidity, and other risks inherent in real estate (such as those associated with general and local economic conditions). If you elect to allocate funds to a Separate Account, you may not be able to immediately withdraw them.

**Before directing retirement funds to a separate account, investors should carefully consider the investment objectives, risks, charges and expenses of the separate account as well as their individual risk tolerance, time horizon and goals. For additional information contact us at 1-800-547-7754 or by visiting principal.com.**

The value of the investment options will fluctuate so that when redeemed, shares or units may be worth more or less than the original cost.

Returns shown for periods of less than one year are not annualized. All returns displayed here are after Total Investment Expense of the investment option. Any operating expenses of a mutual fund or underlying mutual fund that are part of net Total Investment Expense are obtained from the mutual fund's most recent prospectus. The operating expenses shown as part of the Total Investment Expense include voluntary expense limits and fee credit.

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Investment manager/sub-advisor means either the Investment Advisor or Sub-Advisor to the investment option or the underlying asset(s). Principal Life Insurance Company is the Investment Manager as defined by ERISA, with regard to the assets of the Separate Accounts. Principal Global Investors is a member of the Principal Financial Group.

Russell 1000 Growth Index is a market-capitalization weighted index of those firms in the Russell 1000 with higher price-to-book ratios and higher forecasted growth values.

Extended Performance Inception Date (Ext. Perf. Inc. Date) - Inception date of the oldest share class of the fund, or underlying fund of the Separate Account.

### About Principal Financial Group



The Principal Financial Group® (The Principal®) is a leading global financial company offering businesses, individuals and institutional clients a wide range of financial products and services. Our range of products and services includes retirement solutions, life and health insurance, wellness programs, and investment and banking products through our diverse family of financial services companies and national network of financial professionals.

## Important Notes

### **Risk and Return Statistics:**

**Alpha** - The difference between an investment's actual returns and its expected performance, given its level of risk (as measured by beta).

**Beta** - An investment's sensitivity to market movements.

**R-squared** - Ranges from 0 to 100 and reveals how closely an investment's returns track those of a benchmark index.

**Standard Deviation** - Measures how much an investment's returns are likely to fluctuate.

**Sharpe Ratio** - Measures how an investment balances risks and rewards. The higher the Sharpe ratio, the better the investment's historical risk-adjusted performance.

**Information Ratio** - A risk-adjusted measure commonly used to evaluate an active manager's involvement skill. It's defined as the manager's excess return divided by the variability or standard deviation of the excess return.

**Up-Market Capture Ratio** - A statistical measure of an investment option's performance relative to a comparative index in months in which that index has risen. An up-market capture ratio of greater than 100 would indicate that the investment option performed better than the comparative index during months in which the index had risen over a specified time period.

**Down-Market Capture Ratio** - A statistical measure of an investment option's performance relative to a comparative index in months in which that index has fallen. A down-market capture ratio of greater than 100 would indicate that the investment option performed worse than the comparative index during months in which the index had fallen over a specified time period.

\*Unless otherwise stated, all data from Bloomberg

<sup>1</sup>U.S. large-cap equities: Russell 1000 Index; U.S. mid-cap equities: Russell Midcap Index; U.S. small-cap equities: Russell 2000 Index; international emerging markets: MSCI Emerging Markets Index; international developed markets: MSCI EAFE Index

This report is not complete unless all pages, as noted below, are included.



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