

Third Quarter 2017

# Quarterly Commentary

Inv Manager or Sub-Advisor	Benchmark	Morningstar Category	Investment Objective
Principal Global Investors	Standard & Poor's 500 Index	Large Blend	Growth and Income

## 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>

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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:

Large-Cap S&P 500 was in line with the S&P 500 index. The investment option uses an indexing strategy and does not attempt to manage market volatility, use defensive strategies, or reduce the effect of any long-term periods of negative stock market performance. 10 of the 11 economic sectors in the index posted positive returns with the energy and information technology sectors providing the best returns. NRG Energy, Gap, and Micron Technology contributed.

#### During last 12 months:

Large-Cap S&P 500 was in line with the S&P 500 index. The investment option uses an indexing strategy and does not attempt to manage market volatility, use defensive strategies, or reduce the effect of any long-term periods of negative stock market performance. 10 of the 11 economic sectors posted positive returns with the financials and information technology sectors providing the largest positive returns. NVIDIA, Micron Technology, and Boeing contributed.

### Negative Contributors

#### During last quarter:

The consumer staples and consumer discretionary sectors detracted the most. Mattel, Foot Locker, and Envision Healthcare detracted.

#### During last 12 months:

The energy and telecommunication services sectors recorded the worst returns. Foot Locker, Range Resources, and Under Armour detracted.

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

No material changes occurred in the portfolio structure.

## 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	01/01/1990
LargeCap S&P 500 Index Separate Account-R6	4.39	13.95	18.21	10.44	13.83	7.10	9.28	Ext. Perf. Inc. Date	12/31/1989
Standard & Poor's 500 Index	4.48	14.24	18.61	10.81	14.22	7.44	-	Total Inv. Exp Gross	0.31
Large Blend Category	4.19	13.19	17.65	9.03	12.91	6.58	-	Total Inv Exp Net	0.31
Morningstar Percentile Ranking	-	-	49	28	35	37	-	Waiver Date	-
Total Funds in Category	1509	1435	1396	1218	1083	799	-	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 S&P 500 Index 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 S&P 500 Index Separate Account-R6	-0.32	1.00	100.00	1.01	-8.93	10.06	25	11	2.13	-2.40	98.61	101.18
Standard & Poor's 500 Index	N/A	N/A	N/A	N/A	N/A	N/A	26	10	2.16	-2.38	100.00	100.00
	5 Year						5 Year					
LargeCap S&P 500 Index Separate Account-R6	-0.33	1.00	100.00	1.39	-11.36	9.54	43	17	2.36	-2.28	98.68	101.16
Standard & Poor's 500 Index	N/A	N/A	N/A	N/A	N/A	N/A	44	16	2.39	-2.26	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	3.90
Microsoft Corp	2.63
Facebook Inc A	1.85
Amazon.com Inc	1.77
Johnson & Johnson	1.63
Berkshire Hathaway Inc B	1.57
Exxon Mobil Corp	1.48
JPMorgan Chase & Co	1.47
Alphabet Inc A	1.30
Alphabet Inc C	1.28
<b>Total % in Top 10</b>	<b>18.88</b>

## LargeCap S&P 500 Index Separate Account-R6

Manager(s)	Start Date	Degree	Alma Mater
Thomas L. Kruchten	03/01/2011	B.A.	University of Northern Iowa

### Investment Strategy

The investment option normally invests the majority of assets in common stocks of companies that compose the S&P 500 Index. Management attempts to mirror the investment performance of the index by allocating assets in approximately the same weightings as the S&P 500 Index. Over the long-term, management seeks a very close correlation between the performance of the Separate Account before expenses and that of the S&P 500 Index.

### About Principal Global Investors

Principal Global Investors - a member of the Principal Financial Group® - uses a unified investment philosophy and process that seeks to emphasize independent fundamental research and superior stock selection. The firm's capabilities encompass large-, mid-, and small-cap stocks in developed and emerging markets worldwide.

## 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.

Each index based investment option is invested in the stocks or bonds of the index it tracks. Performance of indexes reflects the unmanaged results for the market segment the selected stocks or bonds represent. There is no assurance an index based investment option will match the performance of the index tracked.

### 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

The risks associated with derivative investments include that the underlying security, interest rate, market index, or other financial asset will not move in the direction the Investment Adviser and/or Sub-Advisor anticipated, the possibility that there may be no liquid secondary market, the risk that adverse price movements in an instrument can result in a loss substantially greater than a fund's initial investment, the possibility that the counterparty may fail to perform its obligations; and the inability to close out certain hedged positions to avoid adverse tax consequences.

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Standard & Poor's 500 Index is a market capitalization-weighted index of 500 widely held stocks often used as a proxy for the stock market.

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.

### **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.



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## Important Notes

\*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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