# Third Quarter 2017 Quarterly Commentary

Inv Manager or Sub-Advisor	Benchmark	Morningstar Category	Investment Objective	
Mellon Capital Mgmt	Bloomberg Barclays Aggregate Bond Index	Intermediate-Term Bond	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.

### Fixed Income

Spreads continued their nearly uninterrupted tightening trend due to the combination of an improved macroeconomic backdrop and strong corporate fundamentals. In addition, reduced-expectations of monetary tightening helped risk assets outperform because central banks took a more-dovish tone due to weak inflation data. Despite escalating tension with North Korea, volatility remained exceptionally low. The Treasury curve flattened during the quarter with short-term interest rates rising faster than longer-term rates. The two-year U.S. Treasury rate rose 0.10% while the five-year U.S. Treasury rate rose 0.05%. The ten-year and thirty-year rates each increased 0.03%. The slope of the two-to-ten-year Treasury curve fell from 0.92% to 0.85%.<sup>1</sup>

The Bloomberg Barclays U.S. Aggregate Index, a proxy for the overall fixed income market, had an excess return of 0.41% for the quarter when compared to similar-duration U.S. Treasury securities. The best-performing sectors were emerging market debt, below investment-grade corporate bonds, and investment-grade corporate bonds with excess returns of 1.86%, 1.60%, and 0.87%, respectively. Mortgage-backed securities (MBS) also outperformed with an excess return of 0.47%. Commercial mortgage-backed securities (CMBS), asset-backed securities (ABS), and U.S. agencies outperformed similar duration U.S. Treasury securities but underperformed the Bloomberg Barclays U.S. Aggregate Index with excess returns of 0.34%, 0.14%, and 0.05%, respectively.<sup>2</sup>

#### Not FDIC or NCUA insured

### Performance Contributors

### **Positive Contributors**

### During last quarter:

The Bloomberg Barclays Aggregate Bond Index rose, driven by narrowing corporate spreads. U.S. corporate bonds posted positive returns as encouraging signs of global economic growth, strong earnings, and robust investor demand overcame the Federal policy normalization and record corporate issuance. Treasury yields rose, narrowing corporate spreads helped the Aggregate Index post excess returns, the corporate sector rose on a total return basis. Among corporates sectors utilities provided the best excess returns.

### During last 12 months:

The U.S. bond market produced a modest gain for the past year as measured by the Barclays Aggregate Index. After falling early in the period following Donald Trump's election, bond prices recovered on expectations that the Federal Reserve would be patient raising interest rates, while U.S. bonds global attractiveness also aided demand. Corporate spreads narrowed on improving fundamentals and a general risk-on tone. Industrials were the best performers on an excess return basis while financials rose the most on a total return basis.

### **Negative Contributors**

### During last quarter:

Higher quality bonds underperformed. Within the corporate sector intermediate maturities underperformed long maturities on both an excess and total return basis. Shorter maturities underperformed longer maturities.

### During last 12 months:

Treasurys declined on a total return basis over the past year at all maturity levels. Higher quality bonds underperformed. The securitized sector underperformed duration-neural Treasurys.

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

No material changes occurred in the portfolio structure.

### Bond Market Index 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, contact your representative of the Principal Financial Group<sup>®</sup>, 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 (%)	QTR	YTD	1 Year	3 Year	5 Year	10 Year		Inception Date	12/30/2009
as of 09/30/2017							Inception	Ext. Perf. Inc. Date	12/30/2009
Bond Market Index Separate Account-R6	0.71	2.75	-0.45	2.18	1.53	-	3.10	Total Inv. Exp Gross	0.41
Bloomberg Barclays Aggregate Bond	0.85	3.14	0.07	2.71	2.06	4.27	-	Total Inv Exp Net	0.41
Index								Waiver Date	-
Intermediate-Term Bond Category	0.88	3.40	0.83	2.51	2.12	4.26	-		
Morningstar Percentile Ranking	-	-	90	72	82	-	-	Contractual Cap Date	
Total Funds in Category	1032	1006	985	852	773	546	-		

**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.

# Bond Market Index Separate Account-R6

# Statistics Summary as of 09/30/2017

	Risk and Return Statistics Summary					Upside/Downside Capture Ratio						
	Alpha	Beta	R2	Sharpe	Info	Std Dev	# of Months		Avg Returns %		Benchmark %	
				Ratio	Ratio		Up	Down	Up	Down	Up	Down
	3 Year						3 Year					
Bond Market Index Separate Account-R6	-0.52	1.00	99.94	0.65	-7.92	2.86	20	16	0.66	-0.57	93.79	108.65
Bloomberg Barclays Aggregate Bond Index	N/A	N/A	N/A	N/A	N/A	N/A	22	14	0.70	-0.52	100.00	100.00
	5 Year							5 ۲	′ear			
Bond Market Index Separate Account-R6	-0.52	1.00	99.91	0.47	-6.13	2.86	33	27	0.64	-0.63	93.66	107.64
Bloomberg Barclays Aggregate Bond Index	N/A	N/A	N/A	N/A	N/A	N/A	36	24	0.68	-0.58	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 (%)
Govt Natl Mtg Asso 3.5%	1.05
Fed Natl Mort Assc 4%	0.94
FHLMC 3.5%	0.93
US Treasury Note 2.375%	0.71
Fed Natl Mort Assc 3.5%	0.62
GNMA	0.49
US Treasury Note 2.5%	0.48
FHLMC 3%	0.47
Govt Natl Mtg Asso 3%	0.47
FHLMC 4%	0.44
Total % in Top 10	6.61

Statistics as of 08/31/2017	
Average Eff Duration (yrs)	5.93
Average Eff Maturity (yrs)	8.20
Average Weighted Price	\$104.54

# Bond Market Index Separate Account-R6

Manager(s)	Start Date	Degree	Alma Mater
Gregory A. Lee	12/31/2010	B.S.	University of California, Davis
Stephanie Shu	10/02/2015	M.S.	Texas A&M University
Paul L. Benson	10/02/2015	B.A.	University of Michigan
Nancy G. Rogers	10/02/2015	M.B.A.	Drexel University

#### **Investment Strategy**

The investment seeks to provide current income. The fund normally invests at least 80% of its net assets, plus any borrowings for investment purposes, in debt securities held by the Barclays U. S. Aggregate Bond Index at the time of purchase. The index is composed of investment grade, fixed rate debt issues, including government, corporate, asset-backed, and mortgage-backed securities, with maturities of one year or more. It employs a passive investment approach designed to attempt to track the performance of the index.

### About Mellon Capital Mgmt

Mellon Capital Management Corporation (Mellon Capital) has been managing assets since August of 1983. Mellon Capital is a wholly-owned indirect subsidiary of The Bank of New York Mellon Corporation, a publicly traded company.

## **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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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.

Investment manager/sub-advisor means either the Investment Advisor or Sub-Advisor to the investment option or the underlying asset(s).

Fixed-income and asset allocation investment options that invest in mortgage securities are subject to increased risk due to real estate exposure.

About Principal Financial Group



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## **Important Notes**

Fixed-income investment options are subject to interest rate risk, and their value will decline as interest rates rise. Neither the principal of bond investment options nor their yields are guaranteed by the U.S. government.

Bloomberg Barclays Aggregate Bond Index represents securities that are domestic, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

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**

#### Statistics:

**30-Day SEC Yield - Subsidized (Net)** - This yield citation reflects the income that the investment option produced taking into consideration all expense waivers, caps, and breakpoints in place during the 30 day period. Without these waivers, the investment option's yield would be lower.

**30-Day SEC Yield - Non-Subsidized (Gross)** - This yield citation reflects the income that the investment option would produce if the investment option did not have a portion of its total investment expense waived or capped.

**Average Effective Duration** - A measure of a fixed income investment option's interest-rate sensitivity and represents an approximate percent change in bond's price for a one percent change in interest rates-the longer a fund's duration, the more sensitive the portfolio is to shifts in interest rates. The duration of a fixed income investment option is determined by a formula that includes projected cash flows, such as coupons and principal payout at maturities for bonds. **Average Effective Maturity** - Average effective maturity is a weighted average of all the effective maturities of the bonds in a portfolio.

**Average Weighted Price** - The statistic is calculated by weighting the price of each bond by its relative size in the portfolio. This number reveals if the investment option favors bonds selling at prices above or below face value (discount or premium securities, respectively). A higher number indicates a bias toward premiums. This statistic is expressed as a percentage of par (face) value.

**Effective Duration** - A measure of a fixed income investment option's interest-rate sensitivity and represents an approximate percent change in bond's price for a one percent change in interest rates-the longer a fund's duration, the more sensitive the portfolio is to shifts in interest rates. The duration of a fixed income investment option is determined by a formula that includes projected cash flows, such as coupons and principal payout at maturities for bonds.

<sup>\*</sup>Unless otherwise stated, all data from Bloomberg

<sup>1</sup>U.S. Treasury Constant Maturity 30-year, 10-year and 2-year yields

<sup>2</sup>Components of Bloomberg Barclays U.S. Aggregate Bond Index, via Barclays Live. Duration-adjusted excess return is a measure the relative performance to that of U.S. Treasurys with a similar duration profile.

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



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