

**LEGACY FUND
INVESTMENT PERFORMANCE REPORT AS OF OCTOBER 31, 2019**

	October-19					September-19					Current FYTD		Prior Year FY19		3 Years Ended 6/30/2019		5 Years Ended 6/30/2019	
	Allocation		Month			Allocation		Quarter			Returns		Returns					
	Market Value	Actual	Policy	Gross ⁽¹⁾	Net	Market Value	Actual	Policy	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
TOTAL LEGACY FUND	6,536,210,485	100.0%	100.0%	1.80%	1.79%	6,364,879,674	100.0%	100.0%	1.05%	1.01%	2.87%	2.82%	5.18%	4.98%	8.38%	8.15%	5.96%	5.72%
<i>POLICY TARGET BENCHMARK</i>				1.48%	1.48%				0.97%	0.97%	2.46%	2.46%	6.12%	6.12%	7.50%	7.50%	5.18%	5.18%
ATTRIBUTION ANALYSIS																		
Asset Allocation				-0.01%	-0.01%				-0.04%	-0.04%	-0.05%	-0.05%	-0.29%	-0.29%	-0.13%	-0.13%	-0.15%	-0.15%
Manager Selection				0.34%	0.33%				0.12%	0.08%	0.46%	0.41%	-0.65%	-0.85%	1.01%	0.78%	0.93%	0.70%
TOTAL RELATIVE RETURN				0.32%	0.31%				0.08%	0.04%	0.41%	0.36%	-0.94%	-1.14%	0.88%	0.65%	0.78%	0.55%
GLOBAL EQUITY	3,287,887,495	50.3%	50.0%	3.17%	3.17%	3,147,394,485	49.4%	50.0%	0.10%	0.04%	3.27%	3.21%	2.10%	1.89%				
<i>Benchmark</i>				2.65%	2.65%				-0.13%	-0.13%	2.52%	2.52%	4.39%	4.39%				
<i>Domestic - broad Benchmark</i>	1,967,705,498	30.1%	30.0%	2.38%	2.38%	1,882,195,068	29.6%	30.0%	0.79%	0.74%	3.19%	3.14%	4.67%	4.51%				
				2.26%	2.26%				0.40%	0.40%	2.66%	2.66%	6.36%	6.36%				
LARGE CAP DOMESTIC EQUITY																		
LA Capital Large Cap Growth	431,299,444	6.6%	6.6%	2.31%	2.31%	411,660,148	6.5%	6.6%	0.93%	0.88%	3.26%	3.20%	11.71%	11.48%	15.47%	15.24%	12.72%	12.49%
<i>Russell 1000 Growth</i>				2.82%	2.82%				1.49%	1.49%	4.35%	4.35%	11.56%	11.56%	18.07%	18.07%	13.39%	13.39%
LSV Large Cap Value	426,574,630	6.5%	6.6%	3.04%	3.04%	413,972,685	6.5%	6.6%	1.22%	1.15%	4.30%	4.23%	1.92%	1.64%	11.20%	10.89%	7.44%	7.14%
<i>Russell 1000 Value</i>				1.40%	1.40%				1.36%	1.36%	2.77%	2.77%	8.46%	8.46%	10.19%	10.19%	7.46%	7.46%
LA Capital 60% Large Cap/40% Large Cap Active Extension	289,624,530	4.4%	4.4%	1.79%	1.79%	274,583,739	4.3%	4.4%	1.34%	1.30%	3.15%	3.11%	10.56%	10.42%	12.77%	12.62%	10.47%	10.32%
<i>Russell 1000</i>				2.12%	2.12%				1.42%	1.42%	3.57%	3.57%	10.02%	10.02%	14.15%	14.15%	10.45%	10.45%
Clifton Group Enhanced S&P 500	292,578,643	4.5%	4.4%	2.19%	2.19%	286,309,462	4.5%	4.4%	2.02%	2.02%	4.26%	4.26%	10.60%	10.60%	13.97%	13.91%	10.87%	10.80%
<i>S&P 500</i>				2.17%	2.17%				1.70%	1.70%	3.90%	3.90%	10.42%	10.42%	14.19%	14.19%	10.71%	10.71%
TOTAL LARGE CAP DOMESTIC EQUITY	1,440,077,247	22.0%	22.0%	2.39%	2.39%	1,386,526,034	21.8%	22.0%	1.33%	1.29%	3.76%	3.71%	8.30%	8.12%	13.40%	13.19%	10.33%	10.12%
<i>Russell 1000</i>				2.12%	2.12%				1.42%	1.42%	3.57%	3.57%	10.02%	10.02%	14.15%	14.15%	10.45%	10.45%
SMALL CAP DOMESTIC EQUITY																		
PIMCO - Research Affiliates Equity US Small	253,863,850	3.9%	4.0%	1.97%	1.97%	248,965,440	3.9%	4.0%	0.40%	0.34%	2.37%	2.31%	-6.59%	-6.81%	9.89%	9.63%	6.10%	5.83%
Clifton Group Enhanced Russell 2000	273,764,401	4.2%	4.0%	2.78%	2.78%	246,703,594	3.9%	4.0%	-1.95%	-1.95%	0.78%	0.78%	-3.12%	-3.12%	12.52%	12.30%	7.86%	7.58%
TOTAL SMALL CAP DOMESTIC EQUITY	527,628,251	8.1%	8.0%	2.36%	2.36%	495,669,034	7.8%	8.0%	-0.79%	-0.82%	1.55%	1.52%	-4.83%	-4.94%	11.29%	11.04%	7.12%	6.84%
<i>Russell 2000</i>				2.63%	2.63%				-2.40%	-2.40%	0.17%	0.17%	-3.31%	-3.31%	12.30%	12.30%	7.06%	7.06%
INTERNATIONAL EQUITY																		
LSV International Large Cap Value	505,942,396	7.7%	8.0%	5.12%	5.12%	481,319,096	7.6%	8.0%	-0.60%	-0.70%	4.48%	4.38%	-4.30%	-4.66%	8.55%	8.14%	1.96%	1.57%
<i>MSCI EAFE</i>				3.59%	3.59%				-1.07%	-1.07%	2.48%	2.48%	1.08%	1.08%	9.11%	9.11%	2.25%	2.25%
William Blair International Leaders	543,040,758	8.3%	8.0%	3.55%	3.55%	524,432,857	8.2%	8.0%	-1.03%	-1.12%	2.48%	2.39%	5.65%	5.26%	13.63%	13.23%	N/A	N/A
<i>MSCI ACWI ex-US IMI (Net)</i>				3.56%	3.56%				-1.72%	-1.72%	1.79%	1.79%	0.26%	0.26%	9.17%	9.17%		
DFA International Small Cap Value (1)	137,266,254	2.1%	2.0%	4.38%	4.38%	131,503,731	2.1%	2.0%	-0.55%	-0.55%	3.80%	3.80%	-11.54%	-11.54%	6.29%	6.29%	1.05%	1.05%
Vanguard International Explorer Fund (1)	133,932,589	2.0%	2.0%	4.68%	4.68%	127,943,734	2.0%	2.0%	-2.72%	-2.72%	1.83%	1.83%	-11.72%	-11.72%	7.60%	7.60%	3.05%	3.05%
<i>S&P/Citigroup BMI EPAC < \$2BN</i>				5.15%	5.15%				-1.85%	-1.85%	3.20%	3.20%	-9.91%	-9.91%	6.36%	6.36%	3.29%	3.29%
TOTAL INTERNATIONAL EQUITY	1,320,181,997	20.2%	20.0%	4.35%	4.35%	1,265,199,418	19.9%	20.0%	-0.96%	-1.03%	3.35%	3.27%	-1.73%	-2.02%	10.37%	10.05%	3.33%	3.02%
<i>MSCI World Ex US (2)</i>				3.23%	3.23%				-0.93%	-0.93%	2.27%	2.27%	1.29%	1.29%	9.01%	9.01%	2.19%	2.19%

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	Market Value	Allocation		Month		Market Value	Allocation		Quarter		Returns		Returns		Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net
		Actual	Policy	Gross ⁽¹⁾	Net		Actual	Policy	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net				
GLOBAL FIXED INCOME	2,241,167,071	34.3%	35.0%	0.31%	0.31%	2,235,052,761	35.1%	35.0%	2.55%	2.52%	2.87%	2.84%	9.11%	8.99%				
Benchmark				0.30%	0.30%				2.27%	2.27%	2.58%	2.58%	7.87%	7.87%				
FIXED INCOME																		
Western Asset U.S. Core Fixed Income	669,038,458	10.2%	10.1%	0.27%	0.27%	667,273,515	10.5%	10.0%	2.85%	2.82%	3.13%	3.10%	9.21%	9.08%	3.99%	3.86%	4.23%	4.09%
Prudential Core Plus Fixed Income	681,339,119	10.4%	10.1%	0.26%	0.26%	679,591,130	10.7%	10.0%	2.81%	2.77%	3.07%	3.03%	9.54%	9.32%	4.50%	4.25%	4.62%	4.36%
PIMCO Distressed Senior Credit Opportunities II (1)	41,978,713	0.6%	0.6%	0.79%	0.79%	41,648,447	0.7%	0.7%	0.82%	0.82%	1.62%	1.62%	5.90%	5.90%	10.90%	10.90%	8.24%	8.24%
PIMCO BRAVO II (1)	12,403,812	0.2%	0.2%	-0.11%	-0.11%	12,416,916	0.2%	0.2%	0.00%	0.00%	-0.11%	-0.11%	3.10%	3.10%	5.96%	5.96%	7.04%	7.04%
Bloomberg Aggregate				0.30%	0.30%				2.27%	2.27%	2.58%	2.58%	7.87%	7.87%	2.31%	2.31%	2.9%	2.9%
Declaration Total Return Bond Fund (1)	168,642,106	2.6%	2.6%	0.15%	0.15%	168,391,262	2.6%	2.6%	1.98%	1.98%	2.13%	2.13%	6.47%	6.47%	4.93%	4.93%	4.18%	4.18%
3m LIBOR				0.16%	0.16%				0.55%	0.55%	0.72%	0.72%	2.61%	2.61%	1.78%	1.78%	1.21%	1.21%
State Street U.S. Govt Credit Bond Index	309,726,979	4.7%	4.9%	0.28%	0.28%	308,856,319	4.9%	4.9%	2.65%	2.64%	2.94%	2.93%	8.57%	8.55%	2.43%	2.40%	3.12%	3.09%
Bloomberg Gov/Credit				0.28%	0.28%				2.64%	2.64%	2.92%	2.92%	8.52%	8.52%	2.41%	2.41%	3.11%	3.11%
Wells Capital Medium Quality Credit	179,307,136	2.7%	3.9%	0.78%	0.78%	177,917,504	2.8%	3.9%	3.25%	3.20%	4.06%	4.01%	11.74%	11.57%	5.51%	5.34%	4.92%	4.75%
Bloomberg Credit Baa				0.72%	0.72%				3.26%	3.26%	4.01%	4.01%	11.39%	11.39%	4.67%	4.67%	4.18%	4.18%
Ares ND Credit Strategies	67,136,433	1.0%	1.0%	0.00%	0.00%	67,136,433	1.1%	1.1%	0.00%	0.00%	0.00%	0.00%	8.03%	8.03%	N/A	N/A	N/A	N/A
Cerberus ND Private Credit Fund	70,390,402	1.1%	1.1%	0.83%	0.83%	69,813,874	1.1%	1.1%	1.35%	1.35%	2.18%	2.18%	8.89%	8.89%	N/A	N/A	N/A	N/A
S&P LSTA Leveraged Loan B Index				-0.69%	-0.69%				0.98%	0.98%	0.28%	0.28%	4.22%	4.22%				
Bank of ND Match Loan CDs	41,203,912	0.6%	0.6%	0.27%	0.27%	42,007,361	0.7%	0.7%	0.88%	0.88%	1.15%	1.15%	3.55%	3.55%	N/A	N/A	N/A	N/A
TOTAL FIXED INCOME	2,241,167,071	34.3%	35.0%	0.31%	0.31%	2,235,052,761	35.1%	35.0%	2.55%	2.52%	2.87%	2.84%	9.11%	8.99%	4.62%	4.50%	4.50%	4.37%
Bloomberg Aggregate				0.30%	0.30%				2.27%	2.27%	2.58%	2.58%	7.87%	7.87%	2.31%	2.31%	2.95%	2.95%
GLOBAL REAL ASSETS	962,112,192	14.7%	15.0%	0.81%	0.74%	933,291,732	14.7%	15.0%	0.80%	0.80%	1.62%	1.54%	5.48%	5.14%				
Benchmark				0.33%	0.33%				1.36%	1.36%	1.69%	1.69%	5.02%	5.02%				
DIVERSIFIED REAL ASSETS																		
Western Asset Global Inflation Linked Plus, L.L.C.	405,821,270	6.2%	6.1%	0.36%	0.36%	404,378,526	6.4%	6.4%	1.88%	1.85%	2.25%	2.22%	3.78%	3.66%	2.43%	2.31%	1.41%	1.28%
Bloomberg US Gov't Inflation Linked Bond Index (4)				0.25%	0.25%				1.48%	1.48%	1.73%	1.73%	4.61%	4.61%	2.93%	2.93%	1.38%	1.38%
Grosvenor Customized Infrastructure Strategies II (1)	47,568,223	0.7%	0.7%	0.53%	0.53%	44,477,304	0.7%	0.7%	-0.38%	-0.38%	0.15%	0.15%	16.38%	16.38%	9.08%	9.08%	N/A	N/A
JP Morgan Infrastructure Investments Fund (IIF)	116,650,263	1.8%	1.8%	0.15%	-0.05%	116,707,991	1.8%	1.8%	0.40%	0.43%	0.55%	0.38%	7.56%	6.86%	8.36%	7.67%	N/A	N/A
ISQ Global Infrastructure Fund II (1)	26,320,119	0.4%	0.4%	0.00%	0.00%	26,320,119	0.4%	0.4%	-1.45%	-1.45%	-1.45%	-1.45%	3.39%	3.39%	N/A	N/A	N/A	N/A
Macquarie Infrastructure Partners IV	64,943,538	1.0%	1.0%	3.48%	3.48%	44,189,788	0.7%	0.7%	-1.05%	-1.05%	2.39%	2.39%	N/A	N/A	N/A	N/A	N/A	N/A
50% NCREIF ODCE/50% CPI-U (lagged one quarter) (3)				0.28%	0.28%				0.97%	0.97%	1.25%	1.25%	3.91%	3.91%	2.83%	2.83%		
TOTAL DIVERSIFIED REAL ASSETS	661,303,413	10.1%	10.0%	0.55%	0.52%	636,073,728	10.0%	10.0%	1.20%	1.18%	1.76%	1.71%	5.33%	5.11%	4.11%	3.87%	2.74%	2.51%
Benchmark				0.26%	0.26%				1.32%	1.32%	1.58%	1.58%	4.28%	4.28%	2.86%	2.86%	1.37%	1.37%
REAL ESTATE																		
J.P. Morgan U.S. Real Estate Income and Growth Domestic, LP	151,764,393	2.3%	2.5%	0.75%	0.53%	150,970,316	2.4%	2.5%	0.00%	0.04%	0.75%	0.56%	4.17%	3.40%	6.85%	6.04%	9.42%	8.47%
Invesco Core Real Estate-USA, LP	149,044,386	2.3%	2.5%	2.00%	1.91%	146,247,688	2.3%	2.5%	0.00%	0.00%	2.00%	1.91%	7.05%	6.69%	7.95%	7.58%	10.19%	9.81%
TOTAL REAL ESTATE	300,808,779	4.6%	5.0%	1.37%	1.21%	297,218,004	4.7%	5.0%	0.00%	0.02%	1.37%	1.23%	5.57%	4.99%	7.39%	6.79%	9.75%	9.08%
NCREIF Total Index				0.47%	0.47%				1.41%	1.41%	1.89%	1.89%	6.51%	6.51%	6.89%	6.89%	8.83%	8.83%

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	Market Value	Actual	Policy	Gross ⁽¹⁾	Net	Market Value	Actual	Policy	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net	Gross ⁽¹⁾	Net				
CASH EQUIVALENTS																		
Northern Trust-MFB NI Gov't Assets Portfolio (1)	22,298,077			0.15%	0.15%	26,432,126			0.50%	0.50%	0.65%	0.65%	2.09%	2.09%	1.16%	1.16%	0.72%	0.72%
Bank of ND	22,745,650			0.16%	0.16%	22,708,570			0.54%	0.54%	0.71%	0.71%	2.28%	2.28%	N/A	N/A	N/A	N/A
TOTAL CASH EQUIVALENTS	45,043,726	0.7%	0.0%	0.16%	0.16%	49,140,696	0.8%	0.0%	0.53%	0.53%	0.68%	0.68%	2.16%	2.16%	1.27%	1.27%	0.78%	0.78%
90 Day T-Bill				0.19%	0.19%				0.56%	0.56%	0.76%	0.76%	2.31%	2.31%	1.38%	1.38%	0.87%	0.87%

Initial funding September 7, 2011.

NOTE: Monthly returns and market values are preliminary and subject to change.

(1) All limited partnership-type (and mutual funds as of 7/1/14) investment returns will only be reported net of fees, which is standard practice by the investment consultant.

(2) This benchmark was changed to the MSCI World ex-US as of July 1, 2016 and the MSCI EAFE (unhedged) as of April 1, 2011.

(3) Prior to July 1, 2018, the benchmark was CPI-W.

(4) Prior to November 1, 2018, the benchmark was Bloomberg Global Inflation Linked Index.