

As of September 30, 2018

Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	15 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	1,036,859,403	100.0	-0.2	1.7	2.1	5.7	9.0	7.0	7.0	7.1	8.0	Nov-89
<i>Custom Benchmark - Policy Benchmark</i>			0.9	3.1	4.6	9.1	10.6	8.2	8.5	--	--	Nov-89
Domestic Equity Assets	259,944,567	25.1	-0.7	5.8	12.8	18.9	--	--	--	--	17.5	Jan-16
<i>Russell 3000</i>			0.2	7.1	10.6	17.6	17.1	13.5	12.0	9.9	16.2	Jan-16
International Developed Market Equity Assets	159,578,723	15.4	-0.7	-1.4	-4.7	-1.0	--	--	--	--	8.1	Jan-16
<i>MSCI EAFE</i>			0.9	1.4	-1.4	2.7	9.2	4.4	5.4	6.8	8.3	Jan-16
International Emerging Market Equity Assets	91,562,128	8.8	-1.6	-2.4	-8.4	-1.7	--	--	--	--	11.5	Jan-16
<i>MSCI Emerging Markets</i>			-0.5	-1.1	-7.7	-0.8	12.4	3.6	5.4	9.7	13.3	Jan-16
Global Equity Assets	98,627,345	9.5	0.8	2.4	--	--	--	--	--	--	-2.6	Feb-18
<i>MSCI ACWI</i>			0.4	4.3	3.8	9.8	13.4	8.7	8.2	8.1	-1.7	Feb-18
Domestic Fixed Income	85,637,712	8.3	-0.6	-0.1	-1.3	-0.8	--	--	--	--	2.2	Jan-16
<i>75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year</i>			-0.7	-0.1	-1.2	-0.8	1.4	1.9	--	--	1.7	Jan-16
Value Added Fixed Income	73,881,564	7.1	0.5	2.0	2.8	3.2	--	--	--	--	7.2	Jan-16
<i>50% BBgBarc US High Yield/ 50% Credit Suisse Leveraged Loans</i>			0.6	2.2	3.5	4.3	6.8	5.0	7.7	6.3	8.2	Jan-16
International Fixed Income	36,409,218	3.5	1.9	1.2	-1.2	0.2	--	--	--	--	6.0	Jan-16
<i>Custom Benchmark - Global Fixed Income</i>			1.5	2.3	-3.0	-1.8	4.7	3.3	--	--	5.1	Jan-16
Hedge Fund	44,650,150	4.3	-0.2	2.0	2.1	3.8	5.4	5.1	--	--	5.0	Feb-10
<i>HFRI Fund of Funds Composite Index</i>			-0.2	0.3	1.0	3.1	3.3	3.2	2.6	3.3	3.0	Feb-10
Real Estate	93,145,176	9.0	0.5	0.9	3.3	4.3	--	--	--	--	4.4	Jan-16
<i>NCREIF ODCE</i>			2.1	2.1	6.5	8.7	8.8	10.7	5.6	8.3	8.3	Jan-16
Private Equity	37,211,742	3.6	1.6	1.6	4.1	9.5	--	--	--	--	5.3	Jan-16
<i>Cambridge Associates Fund of Funds Composite 1-Quarter Lag</i>			4.0	4.0	12.7	16.5	9.8	12.5	8.3	11.4	10.7	Jan-16
Real Assets	24,736,219	2.4	0.4	0.4	-0.2	-0.9	--	--	--	--	-2.7	Jan-16
<i>CPI+3%</i>			0.3	1.2	3.9	5.3	5.0	4.5	4.4	5.1	5.1	Jan-16
Cash and Cash Equivalent	31,474,860	3.0										

As of September 30, 2018

Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	1,036,859,403	100.0	--	-0.2	1.7	2.1	5.7	9.0	7.0	7.0	8.0	Nov-89
<i>Custom Benchmark - Policy Benchmark</i>				0.9	3.1	4.6	9.1	10.6	8.2	8.5	--	Nov-89
Domestic Equity Assets	259,944,567	25.1	25.1	-0.7	5.8	12.8	18.9	--	--	--	17.5	Jan-16
<i>Russell 3000</i>				0.2	7.1	10.6	17.6	17.1	13.5	12.0	16.2	Jan-16
Rhumblin Russell 1000 Value	34,741,600	3.4	13.4	0.2	5.7	3.9	9.3	13.4	10.6	--	10.8	Apr-13
<i>Russell 1000 Value</i>				0.2	5.7	3.9	9.5	13.6	10.7	9.8	11.0	Apr-13
Rhumblin Russell 1000 Growth	46,741,005	4.5	18.0	0.6	9.2	17.1	26.1	20.4	16.5	--	16.6	Jul-09
<i>Russell 1000 Growth</i>				0.6	9.2	17.1	26.3	20.6	16.6	14.3	16.7	Jul-09
Fisher Midcap Value	47,258,975	4.6	18.2	0.4	6.1	7.1	13.7	16.8	11.5	11.6	8.3	Apr-07
<i>Russell MidCap Value</i>				-0.8	3.3	3.1	8.8	13.1	10.7	11.3	7.3	Apr-07
Boston Company Small Cap Growth	55,105,026	5.3	21.2	-0.8	8.4	26.4	32.6	22.2	15.2	--	16.6	Aug-09
<i>Russell 2000 Growth</i>				-2.3	5.5	15.8	21.1	18.0	12.1	12.7	15.6	Aug-09
LMCG Small Cap Value	76,082,992	7.3	29.3	-2.6	1.6	4.5	7.5	14.3	9.9	--	9.6	Mar-11
<i>Russell 2000 Value</i>				-2.5	1.6	7.1	9.3	16.1	9.9	9.5	10.2	Mar-11
International Developed Market Equity Assets	159,578,723	15.4	15.4	-0.7	-1.4	-4.7	-1.0	--	--	--	8.1	Jan-16
<i>MSCI EAFE</i>				0.9	1.4	-1.4	2.7	9.2	4.4	5.4	8.3	Jan-16
KBI Master Account	75,800,534	7.3	47.5	0.5	0.2	-4.4	-1.2	7.2	2.9	4.4	4.0	Jul-05
<i>MSCI EAFE</i>				0.9	1.4	-1.4	2.7	9.2	4.4	5.4	4.9	Jul-05
HGK TS International Equity	46,219,839	4.5	29.0	-2.2	-3.1	-4.2	-1.8	9.6	5.1	--	6.6	Feb-11
<i>MSCI EAFE</i>				0.9	1.4	-1.4	2.7	9.2	4.4	5.4	4.6	Feb-11
Copper Rock International Small Cap	37,558,349	3.6	23.5	-1.2	-2.3	-5.6	--	--	--	--	-3.9	Nov-17
<i>MSCI EAFE Small Cap</i>				-0.7	-0.9	-2.2	3.7	12.4	8.0	9.7	0.4	Nov-17

Total Retirement Association

	As of September 30, 2018											
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Emerging Market Equity Assets	91,562,128	8.8	8.8	-1.6	-2.4	-8.4	-1.7	--	--	--	11.5	Jan-16
<i>MSCI Emerging Markets</i>				-0.5	-1.1	-7.7	-0.8	12.4	3.6	5.4	13.3	Jan-16
LMCG Emerging Markets	91,562,128	8.8	100.0	-1.6	-2.4	-8.4	-1.7	10.2	2.1	--	2.1	Sep-13
<i>MSCI Emerging Markets</i>				-0.5	-1.1	-7.7	-0.8	12.4	3.6	5.4	3.6	Sep-13
Global Equity Assets	98,627,345	9.5	9.5	0.8	2.4	--	--	--	--	--	-2.6	Feb-18
<i>MSCI ACWI</i>				0.4	4.3	3.8	9.8	13.4	8.7	8.2	-1.7	Feb-18
First Eagle Global Value Fund	19,291,765	1.9	19.6	0.4	1.2	--	--	--	--	--	-3.5	Feb-18
<i>MSCI ACWI</i>				0.4	4.3	3.8	9.8	13.4	8.7	8.2	-1.7	Feb-18
Kopernik Global All Cap Fund	17,552,944	1.7	17.8	2.3	-6.4	--	--	--	--	--	-12.2	Feb-18
<i>MSCI ACWI</i>				0.4	4.3	3.8	9.8	13.4	8.7	8.2	-1.7	Feb-18
Lee Munder Global Multi-Cap Strategy	29,386,436	2.8	29.8	0.0	3.9	--	--	--	--	--	3.1	Mar-18
<i>MSCI ACWI</i>				0.4	4.3	3.8	9.8	13.4	8.7	8.2	2.6	Mar-18
Wellington Durable Enterprises, L.P.	32,396,201	3.1	32.8	0.9	7.0	--	--	--	--	--	8.0	Mar-18
<i>MSCI ACWI</i>				0.4	4.3	3.8	9.8	13.4	8.7	8.2	2.6	Mar-18
Domestic Fixed Income	85,637,712	8.3	8.3	-0.6	-0.1	-1.3	-0.8	--	--	--	2.2	Jan-16
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				-0.7	-0.1	-1.2	-0.8	1.4	1.9	--	1.7	Jan-16
IR&M Core Bonds	85,637,712	8.3	100.0	-0.6	-0.1	-1.3	-0.9	1.6	2.1	3.8	3.9	Nov-04
75% Bbg Barclays Aggregate/25% Bbg Barclays US TIPs 1-10 year				-0.7	-0.1	-1.2	-0.8	1.4	1.9	--	--	Nov-04
Value Added Fixed Income	73,881,564	7.1	7.1	0.5	2.0	2.8	3.2	--	--	--	7.2	Jan-16
50% BBgBarc US High Yield/ 50% Credit Suisse Leveraged Loans				0.6	2.2	3.5	4.3	6.8	5.0	7.7	8.2	Jan-16
Eaton Vance High Yield	38,271,443	3.7	51.8	0.4	2.1	1.9	2.0	6.9	5.3	8.6	7.0	Apr-06
<i>ICE BofAML US High Yield TR</i>				0.6	2.4	2.5	2.9	8.2	5.5	9.4	7.4	Apr-06
THL Bank Loan Select Fund	35,610,121	3.4	48.2	0.7	1.9	3.8	4.4	5.7	4.8	--	5.7	Sep-10
<i>Credit Suisse Leveraged Loans</i>				0.7	1.9	4.4	5.6	5.4	4.4	5.8	5.1	Sep-10

Total Retirement Association

As of September 30, 2018

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Fixed Income	36,409,218	3.5	3.5	1.9	1.2	-1.2	0.2	--	--	--	6.0	Jan-16
<i>Custom Benchmark - Global Fixed Income</i>				1.5	2.3	-3.0	-1.8	4.7	3.3	--	5.1	Jan-16
Franklin Templeton Emerging Market Bonds	36,409,218	3.5	100.0	1.9	1.2	-1.2	0.6	7.9	4.1	7.0	6.8	May-06
<i>JP Morgan EMBI Global Diversified</i>				1.5	2.3	-3.0	-1.9	6.0	5.4	7.5	6.9	May-06
Hedge Fund	44,650,150	4.3	4.3	-0.2	2.0	2.1	3.8	5.4	5.1	--	5.0	Feb-10
<i>HFRI Fund of Funds Composite Index</i>				-0.2	0.3	1.0	3.1	3.3	3.2	2.6	3.0	Feb-10
ABS Offshore SPC - Global Segregated Portfolio	21,691,899	2.1	48.6	-0.7	0.8	1.8	3.8	4.1	5.0	--	5.7	Aug-10
<i>HFRI Fund of Funds Composite Index</i>				-0.2	0.3	1.0	3.1	3.3	3.2	2.6	3.2	Aug-10
Entrust Special Opportunities Fund III, Ltd.	22,958,251	2.2	51.4	0.2	3.2	2.1	3.4	--	--	--	18.7	Oct-16
<i>HFRI Fund of Funds Composite Index</i>				-0.2	0.3	1.0	3.1	3.3	3.2	2.6	4.8	Oct-16
Real Estate	93,145,176	9.0	9.0	0.5	0.9	3.3	4.3	--	--	--	4.4	Jan-16
NCREIF ODCE				2.1	2.1	6.5	8.7	8.8	10.7	5.6	8.3	Jan-16
Core Real Estate	70,719,242	6.8	75.9	0.8	1.4	4.6	7.1	8.4	9.8	2.9	--	
NCREIF ODCE (lagged one qtr., net)				1.8	1.8	5.7	7.5	8.4	10.0	4.3	--	
PRISA I	39,687,182	3.8	56.1	1.6	1.6	5.5	7.6	8.8	10.5	3.8	6.8	Sep-04
NCREIF ODCE (lagged one qtr., net)				1.8	1.8	5.7	7.5	8.4	10.0	4.3	7.1	Sep-04
Invesco REIT	16,354,820	1.6	23.1	-2.4	0.3	1.2	4.7	7.6	8.9	7.6	11.1	Dec-02
<i>Wilshire REIT</i>				-2.8	0.7	2.2	4.0	7.1	9.2	7.4	10.4	Dec-02
TA Realty Core Property Fund, L.P.	14,677,241	1.4	20.8	2.4	2.4	--	--	--	--	--	8.5	Mar-18
NCREIF ODCE (lagged one qtr., net)				1.8	1.8	5.7	7.5	8.4	10.0	4.3	5.7	Mar-18
Non-Core Real Estate	22,425,934	2.2	24.1	-0.6	-0.6	-0.8	-5.4	--	--	--	-4.3	Jan-16
Mesirov Financial International Real Estate Fund I	3,980,727	0.4	17.8									
DSF Multi-Family Real Estate Fund III	8,762,545	0.8	39.1									
AEW Partners Real Estate VIII	5,003,723	0.5	22.3									
DSF Capital Partners IV	2,140,004	0.2	9.5									

Hedge Fund managers: The market value and performance data is based on an estimate.
Invesco REIT: Market value as of September 30, 2018.



Total Retirement Association

As of September 30, 2018

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Hunt Redevelopment & Renovation	168,092	0.0	0.7									
1921 Realty, Inc	931,632	0.1	4.2									
New Boston Institutional Fund, LP VII	320,647	0.0	1.4									
Berkshire Multifamily Value Fund II	-3,266	0.0	0.0									
Carlyle Realty Partners VIII	1,121,830	0.1	5.0									
Private Equity	37,211,742	3.6	3.6	1.6	1.6	4.1	9.5	--	--	--	5.3	Jan-16
<i>Cambridge Associates Fund of Funds Composite 1-Quarter Lag</i>				<i>4.0</i>	<i>4.0</i>	<i>12.7</i>	<i>16.5</i>	<i>9.8</i>	<i>12.5</i>	<i>8.3</i>	<i>10.7</i>	<i>Jan-16</i>
Private Equity General	28,857,608	2.8	77.5									
Euro Choice V Programme	5,598,526	0.5	19.4									
Lexington Capital Partners VII	3,153,562	0.3	10.9									
TRG Growth Partnership II	2,134,098	0.2	7.4									
Landmark Equity Partners XIV	1,420,217	0.1	4.9									
Summit Partners Growth Equity Fund IX	5,430,367	0.5	18.8									
Leeds Equity Partners V	1,878,344	0.2	6.5									
Audax Mezzaine Debt IV	2,402,772	0.2	8.3									
Siguler Guff Distressed Opportunities Fund III, LP	1,030,337	0.1	3.6									
Mesirow Financial Capital Partners IX, LP	265,163	0.0	0.9									
Leeds Equity Partners IV	54,564	0.0	0.2									
DN Partners II, LP	905,412	0.1	3.1									
Euro Choice II	170,561	0.0	0.6									
RIMCO Royalty Partners, LP	1	0.0	0.0									
Charles River Partnership XI	92,929	0.0	0.3									
LLR Equity Partners V, LP.	1,842,965	0.2	6.4									
Wellspring Capital Partners VI	404,237	0.0	1.4									

Total Retirement Association

As of September 30, 2018

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Trilantic Capital Partners, L.P.	2,073,552	0.2	7.2									
Venture Capital	8,354,134	0.8	22.5									
Ascent Ventures V	4,437,392	0.4	53.1									
Globespan Capital V	3,665,098	0.4	43.9									
Ascend Ventures II	72,247	0.0	0.9									
Ascent Ventures IV	179,397	0.0	2.1									
Real Assets	24,736,219	2.4	2.4	0.4	0.4	-0.2	-0.9	--	--	--	-2.7	Jan-16
<i>CPI+3%</i>				0.3	1.2	3.9	5.3	5.0	4.5	4.4	5.1	Jan-16
JP Morgan Global Maritime Investment	6,729,562	0.6	27.2									
Timbervest Partners III, LP	5,196,291	0.5	21.0									
BTG Pactual Global Timberland Resources	3,129,900	0.3	12.7									
Global Infrastructure Partners III	8,427,418	0.8	34.1									
Basalt Infrastructure Partners II	1,253,048	0.1	5.1									
Cash and Cash Equivalent	31,474,860	3.0	3.0									
Cash	31,474,860	3.0	100.0									

Ascend II: Market value as of June 30, 2018.



As of September 30, 2018

Allocation vs. Target

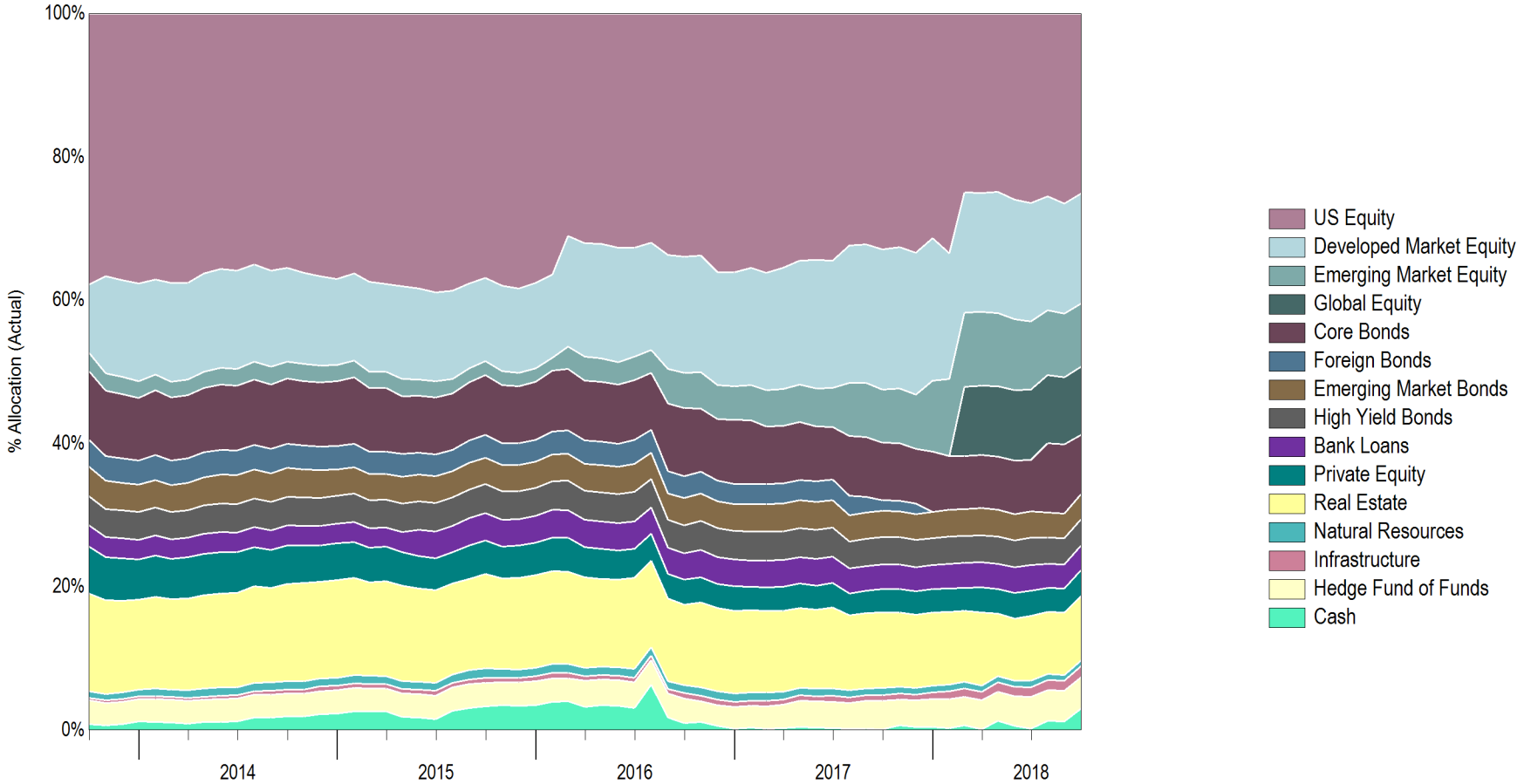
	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
US Equity	\$259,944,555	25%	26%	21% - 36%	Yes
Developed Market Equity	\$159,578,723	15%	6%	1% - 16%	Yes
Emerging Market Equity	\$91,562,128	9%	10%	5% - 20%	Yes
Global Equity	\$98,627,345	10%	10%	5% - 20%	Yes
Core Bonds	\$85,637,712	8%	9%	4% - 14%	Yes
Emerging Market Bonds	\$36,409,218	4%	2%	0% - 7%	Yes
High Yield Bonds	\$38,271,443	4%	2%	0% - 7%	Yes
Bank Loans	\$35,610,121	3%	2%	0% - 7%	Yes
Private Equity	\$37,211,742	4%	13%	8% - 18%	No
Real Estate	\$93,145,176	9%	10%	5% - 15%	Yes
Natural Resources	\$8,326,191	1%	2%	0% - 4%	Yes
Infrastructure	\$16,410,028	2%	4%	2% - 6%	No
Hedge Fund of Funds	\$44,650,150	4%	4%	2% - 6%	Yes
Cash	\$31,474,860	3%	0%	0% - 3%	No
Total	\$1,036,859,390	100%	100%		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	\$691,574,642	67%	69%	60% - 80%	Yes
Total Fixed Income	\$195,928,493	19%	15%	5% - 25%	Yes
Total Real Assets	\$117,881,395	11%	16%	13% - 19%	No
Cash	\$31,474,860	3%	0%	0% - 3%	No

Plymouth County Retirement Association adopted a new asset allocation as of May 2017.



Asset Allocation History
5 Years Ending September 30, 2018



As of September 30, 2018

Annual Investment Expense Analysis

As Of September 30, 2018

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Domestic Equity Assets		\$259,944,567		
Rhumbline Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$34,741,600	\$16,397	0.05%
Rhumbline Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$46,741,005	\$21,196	0.05%
Fisher Midcap Value	0.80% of First 25.0 Mil, 0.75% of Next 25.0 Mil, 0.67% Thereafter	\$47,258,975	\$366,942	0.78%
Boston Company Small Cap Growth	0.45% of Assets	\$55,105,026	\$247,973	0.45%
LMCG Small Cap Value	0.90% of Assets	\$76,082,992	\$684,747	0.90%
International Developed Market Equity Assets		\$159,578,723		
KBI Master Account	0.65% of Assets	\$75,800,534	\$492,703	0.65%
HGK TS International Equity	1.00% of Assets	\$46,219,839	\$462,198	1.00%
Copper Rock International Small Cap	0.85% of Assets	\$37,558,349	\$319,246	0.85%
International Emerging Market Equity Assets		\$91,562,128		
LMCG Emerging Markets	0.75% of Assets	\$91,562,128	\$686,716	0.75%
Global Equity Assets		\$98,627,345		
First Eagle Global Value Fund	0.75% of Assets	\$19,291,765	\$144,688	0.75%
Kopernik Global All Cap Fund	0.80% of First 50.0 Mil, 0.75% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.65% of Next 350.0 Mil	\$17,552,944	\$140,424	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	\$29,386,436	\$132,239	0.45%
Wellington Durable Enterprises, L.P.	0.60% of Assets	\$32,396,201	\$194,377	0.60%
Domestic Fixed Income		\$85,637,712		
IR&M Core Bonds	0.25% of First 50.0 Mil, 0.20% of Next 50.0 Mil, 0.15% Thereafter	\$85,637,712	\$196,275	0.23%
Value Added Fixed Income		\$73,881,564		
Eaton Vance High Yield	0.50% of Assets	\$38,271,443	\$191,357	0.50%
THL Bank Loan Select Fund	0.40% of Assets	\$35,610,121	\$142,440	0.40%
International Fixed Income		\$36,409,218		
Franklin Templeton Emerging Market Bonds	0.99% of Assets	\$36,409,218	\$360,451	0.99%