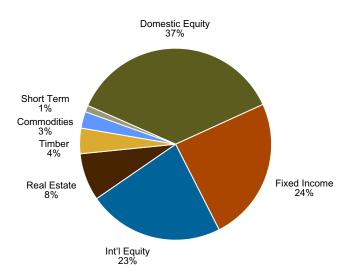
Callan

October 31, 2019
City of Tulsa
Tulsa Municipal Employees'
Retirement Plan
Investment Measurement Service
Quarterly Review

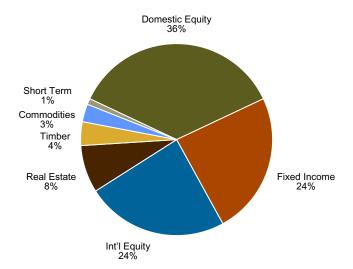
Actual vs Target Asset Allocation

The first chart below shows the Fund's asset allocation as of October 31, 2019. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



	\$000s	Percent	Percent	Percent	\$000s
Asset Class	Actual	Actual	Target	Difference	Difference
Domestic Equity	175,157	36.6%	36.0%	0.6%	2,981
Fixed Income	116,196	24.3%	24.0%	0.3%	1,412
Int'l Equity	109,438	22.9%	24.0%	(1.1%)	(5,346)
Real Estate	38,403	8.0%	8.0%	`0.0%	141
Timber	20,436	4.3%	4.0%	0.3%	1,305
Commodities	13,360	2.8%	3.0%	(0.2%)	(<mark>988)</mark> 494
Short Term	5,276	1.1%	1.0%	0.1%	`494´
Total	478.266	100.0%	100.0%		

^{*}Current Month Target Performance is calculated using monthly rebalancing.



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of October 31, 2019, with the distribution as of September 30, 2019. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	October 31, 2019				September 30, 2019	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$175,156,987	36.62%	\$0	\$3,622,180	\$171,534,807	36.46%
Large Cap Equity	\$141,017,532	29.49%	\$0	\$2,991,095	\$138,026,437	29.34%
Blackrock Equity Index Fd A	141,017,532	29.49%	0	2,991,095	138,026,437	29.34%
SMID Cap Equity	\$34,139,455	7.14%	\$0	\$631,084	\$33,508,370	7.12%
Smith Graham	17,279,725	3.61%	0	445,453	16,834,272	3.58%
ArrowMark	16,859,730	3.53%	0	185,632	16,674,099	3.54%
International Equity	\$109,438,091	22.88%	\$0	\$3,971,775	\$105,466,316	22.42%
Blackrock ACWI exUS	20,382,268	4.26%	0	687,874	19,694,395	4.19%
Templeton International Eq Ser	33,309,442	6.96%	0	1,267,934	32,041,508	6.81%
Vanguard Int'l Growth	35,986,352	7.52%	0	1,491,232	34,495,120	7.33%
Brandes	19,760,029	4.13%	0	524,736	19,235,293	4.09%
Fixed Income	\$116,195,610	24.30%	\$0	\$127,988	\$116,067,621	24.67%
Blackrock US Debt Index	27,996,895	5.85%	0	81,796	27,915,100	5.93%
Seix Investment Adv.	56,837,090	11.88%	0	72,621	56,764,469	12.07%
AB Global	31,361,624	6.56%	0	(26,429)	31,388,053	6.67%
J.P. Morgan Real Estate	\$38,402,553	8.03%	\$0	\$216,326	\$38,186,227	8.12%
JPM Spec. Situation PPTY	8,137,683	1.70%	0	18,187	8,119,496	1.73%
JPM Strategic PPTY	30,264,870	6.33%	0	198,139	30,066,731	6.39%
Timber	\$20,436,078	4.27%	\$0	\$4	\$20,436,074	4.34%
Molpus Woodlands Fund 3	12,455,693	2.60%	0	0	12,455,693	2.65%
Molpus Woodlands Fund 4	7,980,385	1.67%	0	4	7,980,381	1.70%
Commodities	\$13,360,056	2.79%	\$0	\$259,389	\$13,100,666	2.78%
PIMCO Commodities	13,360,056	2.79%	0	259,389	13,100,666	2.78%
Short Term	\$5,276,266	1.10%	\$(424,339)	\$10,639	\$5,689,966	1.21%
One Group Mny Mkt	5,276,266	1.10%	(424,339)	10,639	5,689,966	1.21%
Total Fund	\$478,265,639	100.0%	\$(424,339)	\$8,208,301	\$470,481,677	100.0%



Investment Manager Returns

The table below details the rates of return for the fund's investment managers over various time periods ended October 31, 2019. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended October 31, 2019

		Last	Last	Last	Last
	Last	3	12	36	60
	Month	Months	Months	Months	Months
Total Domestic Equity	2.11%	2.06%	11.46%	14.22%	10.49%
Russell 3000 Index	2.15%	1.83%	13.49%	14.47%	10.31%
80% S&P 500/20% Russell 2000	2.26%	1.87%	12.43%	14.18%	10.15%
Large Cap Equity	2.17%	2.43%	14.40%	15.00%	10.86%
Blackrock Equity Indx Fd A(2Q08)	2.17%	2.43%	14.40%	15.00%	10.86%
Standard & Poor's 500	2.17%	2.43%	14.33%	14.91%	10.78%
SMID Cap Equity	1.88%	0.50%	7.00%	13.29%	10.16%
Smith Graham(3Q98)	2.65%	1.36%	7.31%	7.78%	6.80%
ArrowMark(4Q14)	1.11%	(0.36%)	6.34%	18.55%	_
SMID Blended Benchmark**	1.91%	(0.43%)	8.84%	12.97%	8.53%
Russell 2500 Value Index	1.44%	0.92%	6.10%	8.47%	6.36%
Russell 2500 Index	1.91%	(0.43%)	8.84%	11.74%	8.04%
Russell 2500 Growth Index	2.57%	(2.22%)	11.77%	15.33%	9.83%
nternational Equity	3.80%	3.36%	7.22%	7.20%	4.70%
Blackrock ACWI ex-US(3Q10)	3.49%	2.89%	11.58%	8.40%	4.13%
Templeton Intl Eq Ser(3Q97)	4.03%	4.51%	2.64%	5.12%	2.11%
	4.35%	2.93%	14.87%	13.43%	8.25%
Vanguard Int'l Gr(4Q93)					
Brandes Int'l SC(4Q14)	2.73%	2.72%	(1.33%)	(0.31%)	3.05%
MSCI ACWI ex US IMI	3.56%	2.96%	10.93%	7.93%	4.01%
MSCI ACWI ex US	3.49%	2.87%	11.27%	8.08%	3.82%
MSCI ACWI ex US Small Cap	4.05%	3.51%	8.77%	6.98%	5.31%
ixed Income(1)	0.11%	2.04%	10.90%	3.54%	3.61%
Blackrock US Debt Idx(3Q01)	0.29%	2.35%	11.58%	3.38%	3.35%
Seix Investment(3Q01)	0.13%	2.27%	11.13%	3.54%	3.59%
BC Aggregate	0.30%	2.35%	11.51%	3.29%	3.24%
AB Global(4Q15)	(0.08%)	1.36%	9.88%	3.65%	-
Blmbg Global Aggregate	(0.17%)	1.62%	10.67%	3.93%	3.93%
had Fatata	0.570/	4.200/	A FE0/	7.00%	0.440/
Real Estate	0.57%	1.39%	4.55%	7.09%	9.41%
JPM Special Situation PPTY(1Q98)	0.22%	2.84%	6.93%	9.36%	12.19%
JPM Strategic PPTY(1Q98)	0.66%	1.00%	3.93%	6.51%	8.78%
ODCE + 2%	0.52%	1.56%	6.49%	8.25%	10.22%
imber	0.00%	0.42%	1.47%	1.98%	2.90%
Molpus Woodlands Fund 3(2Q11)	0.00%	0.13%	2.84%	2.03%	3.16%
Molpus Woodlands Fund 4(4Q15)	0.00%	0.88%	(0.69%)	1.94%	-
NCREIF Timberland Index	0.06%	0.18%	1.91%	3.01%	3.96%
Commodities	1.98%	(2.47%)	(5.94%)	4.45%	(5.87%)
PIMCO Commodities(3Q11)	1.98%	(2.47%)	(5.94%)	4.45%	(5.87%)
CS Commodity Idx	1.78%	(1.40%)	(5.05%)	4.10%	(6.77%)
Short Term	0.15%	0.48%	2.15%	1.39%	0.85%
One Group Mny Market(3Q00)	0.15%	0.48%	2.15%	1.39%	0.85%
One Group willy market(3000)	0.1370	0.40 /0	Z. 1J /0	1.03/0	0.00 /0
otal Fund	1.74%	2.02%	7.67%	8.16%	6.37%
Total Fund Benchmark*	1.79%	2.00%	10.90%	8.82%	6.32%



^{*} Current Month Target = 36.0% Russell 3000 Index, 24.0% Blmbg Aggregate, 24.0% MSCI ACWI ex US IMI, 8.0% NCREIF NFI-ODCE Val Wt Nt, 4.0% NCREIF Timberland Index, 3.0% CS Commodity ldx and 1.0% 3-month Treasury Bill. (1) Includes Worldcom litigation income.

**SMID Blended Benchmark is Russell 2000 until 7/31/2018 and Russell 2500 thereafter.