Investment Performance Review Period Ending September 30, 2019

Southfield Fire & Police Retirement System



AndCo Consulting | (844) 44-ANDCO | AndCoConsulting.com

Fixed Income

U.S. Aggregate

Global Aggregate

Key Rates

US 2 Year

US 10 Year

US 30 Year

Prime

ICE LIBOR USD 3M

Euribor 3 Month ACT/360

Bankrate 30Y Mortgage Rates Na

3 Month

U.S. Corporate Investment Grade

U.S. Corporate High Yield

			Index Re	eturns (%)			
<u>Equities</u>	Month	<u>3 M</u>	YTD	<u>1 Year</u>	<u>3 Yr</u> Ann	<u>5 Yr</u> Ann	_
S&P 500 Total Return	1.87	1.70	20.55	4.25	13.39	10.84	
Russell Midcap Index	1.97	0.48	21.93	3.19	10.69	9.10	_
Russell 2000 Index	2.08	(2.40)	14.18	(8.89)	8.23	8.19	- 1
Russell 1000 Growth Indx	0.01	1.49	23.30	3.71	16.89	13.39	- 1
Russell 1000 Value Index	3.57	1.36	17.81	4.00	9.43	7.79	_
Russell 3000 Index	1.76	1.16	20.09	2.92	12.83	10.44	
MSCI EAFE NR	2.87	(1.07)	12.80	(1.34)	6.48	3.27	_
MSCI EM NR	1.91	(4.25)	5.90	(2.02)	5.97	2.33	_

<u>3 M</u>

2.27

3.05

1.33

0.71

12/31/18

2.35

2.49

2.68

3.01

2.81

(0.31)

4.51

5.50

Month

(0.53)

(0.65)

0.36

(1.02)

09/30/19

1.81

1.62

1.66

2.11

2.09

(0.42)

3.72

5.00

Index Returns (%)

YTD

8.52

13.20

11.41

6.32

Levels (%)

12/31/17

1.38

1.88

2.41

2.74

1.69

(0.33)

3.85

4.50

Mod. Adj.

Duration

5.78

7.83

3.07

7.18

12/31/15

0.16

1.05

2.27

3.02

0.61

(0.13)

3.90

3.50

1 Year

10.30

13.00

6.36

7.60

12/31/16

0.50

1.19

2.44

3.07

1.00

(0.32)

4.06

3.75

Yield to

Worst

2.26

2.91

5.65

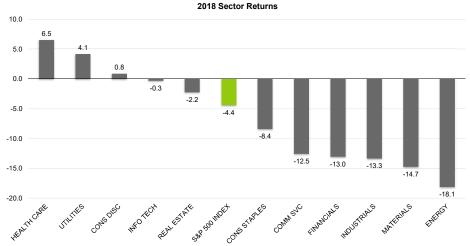
1.30

	Russell Ir	ndices Style	Returns	
	v	В	G	
L	17.8	20.5	23.3	
М	19.5	21.9	25.2	
S	12.8	14.2	15.3	
		YTD		

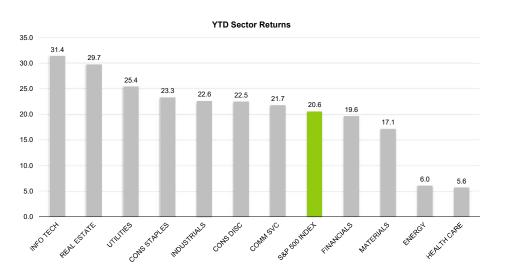
	v	В	G
L	-8.3	-4.8	-1.5
М	-12.3	-9.1	-4.8
S	-12.9	-11.0	-9.3
		2018	

-	eveis	
<u>/30/19 12</u>	<u>2/31/18</u> 1	2/31/17
.09	1.15	1.20
.23	1.28	1.35
8.08 1	09.69	112.69
.00	0.98	0.97
	.09 .23 8.08 1	'30/19 12/31/18 1 .09 1.15 .23 1.28 8.08 109.69

		Levels	
Commodities	09/30/19	<u>12/31/18</u>	<u>12/31/17</u>
Oil	54.07	48.22	55.10
Gasoline	2.66	2.26	2.49
Natural Gas	2.33	2.80	2.78
Gold	1,472.90	1,312.50	1,187.30
Silver	17.00	15.92	16.50
Copper	257.85	264.60	337.75
Corn	388.00	397.50	404.25
BBG Commodity TR Idx	164.72	159.72	179.96



Commodities	09/30/19	12/31/18	12/3
Oil	54.07	48.22	55.
Gasoline	2.66	2.26	2.4
Natural Gas	2.33	2.80	2.7
Gold	1,472.90	1,312.50	1,187
Silver	17.00	15.92	16.
Copper	257.85	264.60	337.
Corn	388.00	397.50	404.
BBG Commodity TR Idx	164.72	159.72	179.





Source: Bloomberg & Investment Metrics. For informational purposes only and should not be regarded as investment advice. Information is based on sources and data believed to be reliable, but AndCo Consulting cannot guarantee the accuracy, adequacy or completeness of the information. The material provided herein is valid only as of the date of distribution and not as of any future date.

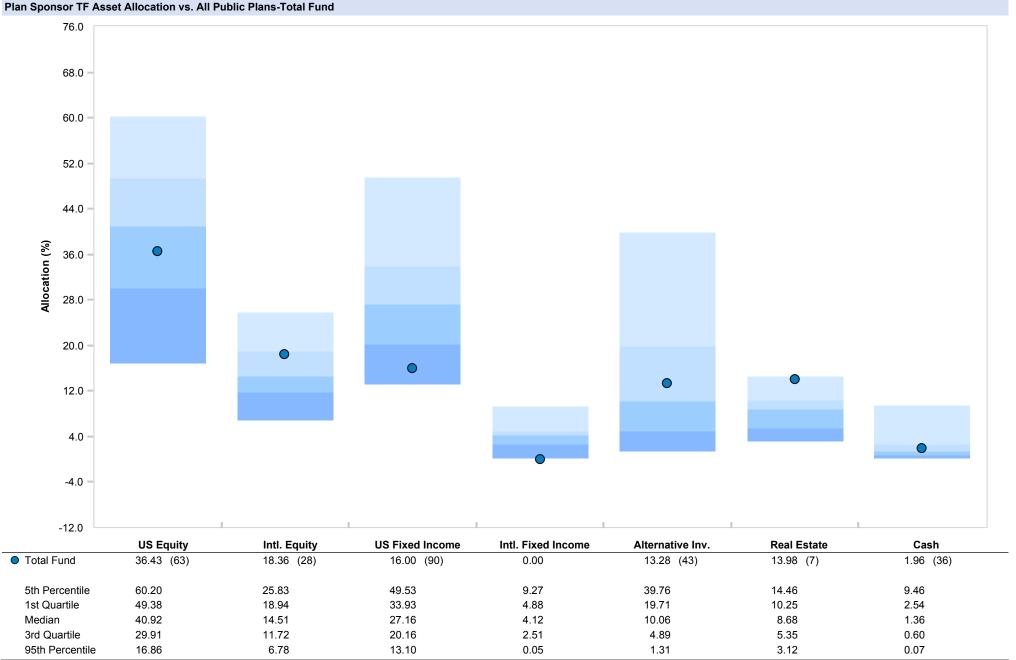
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Market Summary:

Broad asset class returns were mixed during the 3rd quarter with more conservative segments faring better during this period. The Federal Reserve and slowing global economic growth played major roles in the market's performance. Equities advanced in July in anticipation of rate cuts from the Fed. However, the U.S. central bank indicated additional stimulus was not anticipated, causing investors to fear a recession in coming quarters; the stock market sold off and the yield curve inverted further. As evidence of the slowing global economy mounted, the Fed suggested more accommodative policies would be forthcoming. Stocks rallied and interest rates rose to finish the quarter. Large cap posted positive results, but small caps and international markets ended in negative territory. Fixed income provided the strongest returns. Over the past 12 months core fixed income is up over 10%, handily beating all major equity indices, some of which are down over this period.

- 1. Total Fund return of +0.42% lagged the Policy Index return of +0.60%. The primary drivers of underperformance were Nantucket and KStone Partners.
- 2. Within the Large Cap allocation, the Low Volatility and Dividend Aristocrat allocations outpaced the broad S&P 500 by 4.07% and 2.03%, respectively. The Equal Weight portfolio lagged by -0.88%.
- 3. QMA Mid Cap outperformed their benchmark, returning 1.51% vs. +3.05%.
- 4. Morgan Dempsey (Small / Micro Cap Equity) underperformed their benchmark, returning -3.93% vs. -3.50% for the quarter. This marks the second quarter of their watch status, which began for underperformance on 3/31/2019.
- 5. 1607 Capital Partners slightly lagged their benchmark for the quarter, -1.87% vs. -1.70% for their benchmark.
- 6. Both Domestic Fixed Income managers, Tortoise Credit and Loomis Sayles outperformed their benchmarks for the quarter as investment grade corporate bonds rallied higher.
- 7. Bloomfield Capital Fund V is now 75% called. Investment activity continues as the portfolio fully deploys into loans.
- 8. Nantucket underperformed for the quarter due to 3 underlying concentrated equity managers. Long term results remain strong vs. benchmark and peers.
- 9. KStone Partners underperformed their benchmark for the quarter again as bonds continued to rally.
- 10. PRISA I, II and III were all ahead of their benchmarks for the quarter.
- 11. JCR Fund III made multiple distributions during the quarter and remains approximately 65% called. JCR Fund IV made another call during the quarter and is now just over 40% called.
- 12. Landmark Fund VII had continued activity during the quarter and is now 33% called. IRR since inception is 22.2%.
- 13. As of 9/30/2019, the Total Fund is in compliance with Public Act 314.





Parentheses contain percentile rankings.

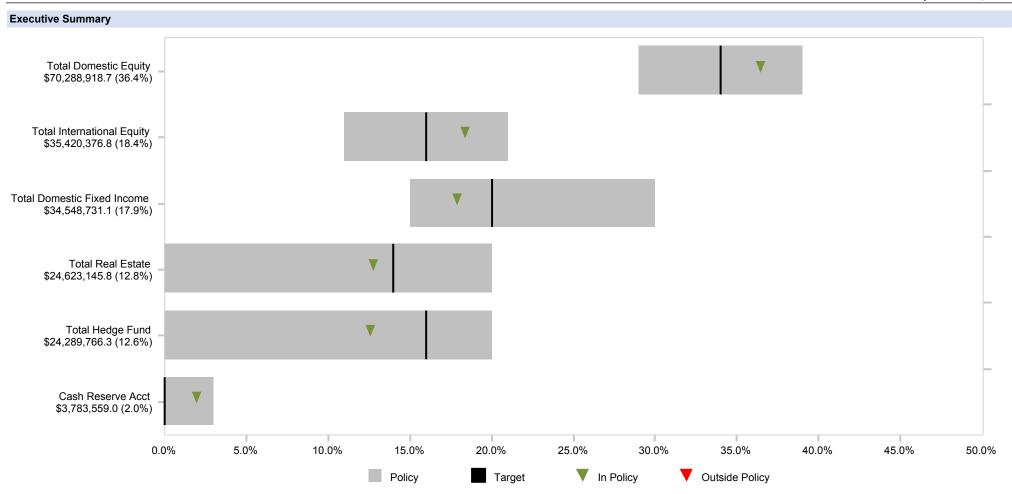
Calculation based on quarterly periodicity.



Comparative Performance Trailing Returns Southfield Fire & Police Retirement System As of September 30, 2019

								A	
Comparative Pe	erformance								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fund 0	.4231	10.1791	3.2671	7.1557	6.0980	7.5992	7.5144	7.5132	01/01/1989





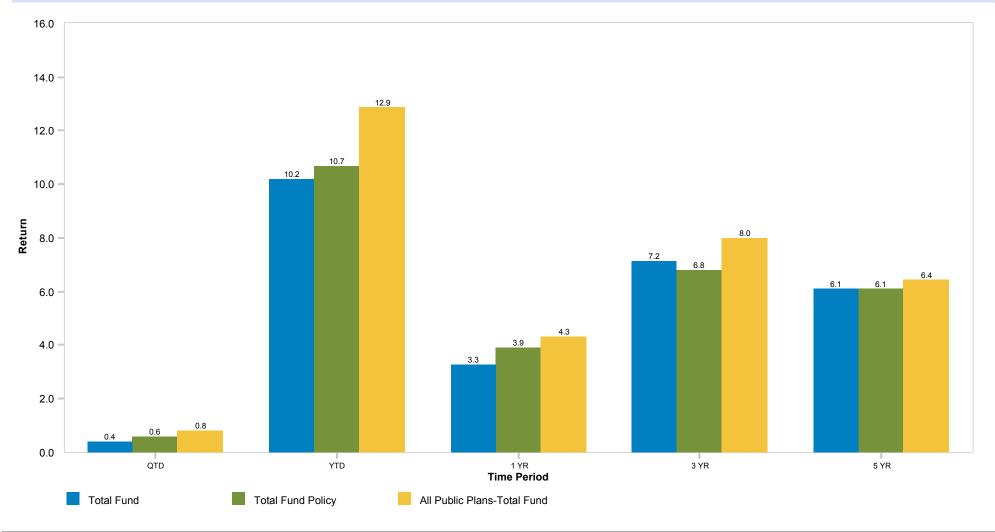
Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Min. Rebal. (\$000)	Target Rebal. (\$000)	Max. Rebal. (\$000)
Total Fund	192,954,498	100.0	N/A	100.0	N/A	-	-	-
Total Domestic Equity	70,288,919	36.4	29.0	34.0	39.0	-14,332,114	-4,684,389	4,963,335
Total International Equity	35,420,377	18.4	11.0	16.0	21.0	-14,195,382	-4,547,657	5,100,068
Total Domestic Fixed Income	34,548,731	17.9	15.0	20.0	30.0	-5,605,556	4,042,168	23,337,618
Total Real Estate	24,623,146	12.8	0.0	14.0	20.0	-24,623,146	2,390,484	13,967,754
Total Hedge Fund	24,289,766	12.6	0.0	16.0	20.0	-24,289,766	6,582,953	14,301,133
Cash Reserve Acct	3,783,559	2.0	0.0	0.0	3.0	-3,783,559	-3,783,559	2,005,076



Performance At-A-Glance Total Fund As of September 30, 2019

Gain/Loss Summary					
	QTD	YTD	1 YR	3 YR	5 YR
Total Fund					
Beginning Market Value	195,177,254	184,485,371	200,959,914	192,095,517	197,922,027
Net Contributions	-2,747,612	-9,148,247	-12,324,643	-35,445,262	-55,092,680
Gain/Loss	524,856	17,617,374	4,319,227	36,304,243	50,125,151
Ending Market Value	192,954,498	192,954,498	192,954,498	192,954,498	192,954,498
Comparative Performance					





Asset Allocation Attributes														
	Domestic	Equity	Internation	al Equity	Domestic Incor		Real E	state	Hedge	Fund	Cash Equ	iivalent	Total F	und
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	61,745,924	32.00	34,591,269	17.93	30,304,705	15.71	28,294,632	14.66	24,289,766	12.59	13,728,201	7.11	192,954,498	100.00
Total Domestic Equity	61,745,924	87.85	-	-	-	-	-	-	-	-	8,542,994	12.15	70,288,919	36.43
LSIA LC 30/70	15,868,470	99.60	-	-	-	-	-	-	-	-	63,340	0.40	15,931,810	8.26
LSIA Dividend Aristocrats	12,043,751	99.24	-	-	-	-	-	-	-	-	91,881	0.76	12,135,632	6.29
LSIA S&P 500 Low Volatility	11,783,188	99.22	-	-	-	-	-	-	-	-	92,194	0.78	11,875,382	6.15
QMA US MC Equity	14,268,401	99.43	-	-	-	-	-	-	-	-	82,296	0.57	14,350,697	7.44
Morgan Dempsey	7,782,114	94.38	-	-	-	-	-	-	-	-	463,284	5.62	8,245,399	4.27
Reinhart Sm/Mid Cap PMV	-	-	-	-	-	-	-	-	-	-	7,750,000	100.00	7,750,000	4.02
Total International Equity	-	-	34,591,269	97.66	-	-	-	-	-	-	829,108	2.34	35,420,377	18.36
1607 Capital Partners	-	-	34,591,269	97.66	-	-	-	-	-	-	829,108	2.34	35,420,377	18.36
Total Domestic Fixed Income	-	-	-	-	30,304,705	87.72	3,671,486	10.63	-	-	572,540	1.66	34,548,731	17.91
Tortoise Credit	_	_	_	_	15,045,152	96.33	_	_	_	_	572,540	3.67	15,617,692	8.09
Loomis Sayles Intermediate Duration	_	_	-	_	15,259,553	100.00	_	_	_	_	572,540	5.07	15,259,553	7.91
Bloomfield Capital Income Fund V	-	-	-	-	-	-	3,671,486	100.00	-	-	-	-	3,671,486	1.90
Total Real Estate	-	-	-	-	-	-	24,623,146	100.00	-	-	-	-	24,623,146	12.76
PRISAI	_	_	_	-	_	-	6,343,807	100.00	-	-	_	-	6,343,807	3.29
PRISA II	-	_	_	-	-	_	5,362,987	100.00	_	_	-	_	5,362,987	2.78
PRISA III	-	-	_	-	-	-	5,776,939	100.00	-	-	-	-	5,776,939	2.99
JCR Capital Fund 3 B	-	-	-	-	-	-	4,051,006	100.00	-	-	-	-	4,051,006	2.10
JCR Income Plus IV	-	-	-	-	-	-	1,762,528	100.00	-	-	-	-	1,762,528	0.91
Landmark Real Estate Partners VIII, L.P.	-	-	-	-	-	-	1,325,878	100.00	-	-	-	-	1,325,878	0.69
Total Hedge Fund	-	-	-	-	-	-	-	-	24,289,766	100.00	-	-	24,289,766	12.59
Nantucket Institutional	-	-	-	-	-	-	-	_	12,999,606	100.00	_	-	12,999,606	6.74
KStone Partners	-	-	-	-	-	-	-	-	11,290,160	100.00	-	-	11,290,160	5.85
Cash Reserve Acct	-	-	-	-	-	-	-	-	-	-	3,783,559	100.00	3,783,559	1.96



Comparative Performance																	
	Q	TR	ΤΥ	D	1 Y	′R	3 `	(R	5 ٦	(R	7	ŕR	10	YR	Ince	otion	Inception Date
Total Fund	0.42	(78)	10.18	(92)	3.27	(72)	7.16	(75)	6.10	(59)	7.60	(49)	7.51	(69)	7.51	(84)	01/01/1989
Total Fund Policy	0.60	(66)	10.67	(89)	3.91	(53)	6.80	(82)	6.12	(58)	7.27	(64)	8.19	(35)	8.28	(47)	
All Public Plans-Total Fund Median	0.80		13.36		3.99		7.84		6.27		7.56		7.86		8.12		
Population	591		589		583		558		538		510		458		19		
Total Fund (Net of Fees)	0.34		9.86		2.83		6.66		5.47		N/A		N/A		5.46		01/01/2014
Total Domestic Equity	1.24	(36)	16.77	(65)	1.43	(43)	10.33	(59)	N/A		N/A		N/A		11.17	(53)	01/01/2016
Russell 3000 Index	1.16	(38)	20.09	(40)	2.92	(34)	12.83	(38)	10.44	(39)	13.00	(40)	13.08	(46)	12.47	(36)	
IM U.S. Equity (SA+CF) Median	0.52		18.67		0.16		11.33		9.49		12.49		12.89		11.36		
Population	2,137		2,133		2,129		2,074		1,997		1,879		1,702		2,058		
Total International Equity	-1.87	(52)	13.77	(34)	3.70	(17)	8.16	(26)	N/A		N/A		N/A		9.41	(26)	01/01/2016
MSCI AC World ex USA (Net)	-1.80	(50)	11.56	(52)	-1.23	(49)	6.33	(53)	2.90	(72)	5.01	(75)	4.46	(86)	6.63	(56)	
IM International Equity (SA+CF) Median	-1.83		11.83		-1.40		6.53		4.07		6.58		6.33		7.02		
Population	978		976		970		934		852		760		614		913		
Total Fixed Income	1.31	(62)	7.23	(55)	8.34	(42)	3.15	(59)	N/A		N/A		N/A		4.26	(53)	01/01/2016
Blmbg. Barc. U.S. Aggregate Index	2.27	(30)	8.52	(46)	10.30	(28)	2.92	(64)	3.38	(59)	2.72	(65)	3.75	(64)	3.88	(60)	
IM U.S. Fixed Income (SA+CF) Median	1.49		7.86		7.88		3.43		3.69		3.31		4.42		4.36		
Population	1,282		1,280		1,279		1,237		1,203		1,133		1,002		1,226		
Total Real Estate	1.21	(89)	4.28	(83)	6.01	(88)	8.46	(47)	N/A		N/A		N/A		9.05	(32)	01/01/2016
NCREIF Fund Index-ODCE (VW)	1.31	(87)	3.77	(90)	5.60	(90)	7.31	(82)	9.35	(78)	10.30	(76)	10.86	(69)	7.60	(82)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		5.34		7.05		8.43		9.97		11.13		11.67		8.60		
Population	21		21		21		20		20		20		19		20		
Total Hedge Fund	-0.45	(83)	5.73	(50)	-0.22	(71)	4.71	(13)	N/A		N/A		N/A		3.95	(20)	01/01/2016
HFRI FOF: Diversified Index	-0.67	(86)	5.35	(58)	0.51	(62)	3.26	(28)	1.98	(24)	3.22	(9)	2.76	(55)	2.42	(50)	
IM Alternative Multi-Strategy (MF) Median	0.53		5.72		1.22		2.15		1.15		2.07		2.83		2.38		
Population	177		174		171		128		79		43		18		126		

Returns for periods greater than one year are annualized. Returns are expressed as percentages.

Comparative Performance Trailing Returns Southfield Fire & Police Retirement System

As of September 30, 2019

	QT	R	Υ	D	1 Y	(R	3 \	′R	5	ŕR	7 YR		10	YR	Incep	otion	Inception Date
Total Domestic Equity	1.24		16.77		1.43		10.33		N/A		N/A		N/A		11.17		01/01/2016
LSIA LC 30/70	0.82	(74)	19.35	(57)	3.78	(44)	N/A		N/A		N/A		N/A		9.91	(69)	05/01/2017
S&P 500 Equal Weighted	0.77	(76)	20.10	(48)	3.40	(47)	11.05	(80)	9.46	(69)	13.14	(54)	13.41	(34)	9.41	(75)	
IM U.S. Large Cap Core Equity (SA+CF) Median	1.54		19.93		3.02		12.74		10.36		13.22		13.12		10.99		
Population	226		226		226		221		214		200		182		223		
LSIA Dividend Aristocrats	3.73	(8)	20.11	(48)	9.69	(9)	12.34	(60)	11.88	(18)	14.03	(19)	N/A		14.40	(23)	07/01/2012
S&P 500 Dividend Aristocrats Index TR	3.75	(7)	20.29	(45)	9.91	(8)	12.43	(58)	11.81	(18)	13.98	(21)	14.67	(11)	14.35	(24)	
IM U.S. Large Cap Core Equity (SA+CF) Median	1.54		19.93		3.02		12.74		10.36		13.22		13.12		13.69		
Population	226		226		226		221		214		200		182		198		
LSIA S&P 500 Low Volatility	5.77	(1)	26.25	(4)	19.71	(1)	N/A		N/A		N/A		N/A		15.40	(9)	01/01/2017
S&P 500 Low Volatility Index TR	5.80	(1)	26.46	(4)	19.86	(1)	14.49	(17)	13.37	(5)	13.72	(32)	14.50	(12)	15.57	(8)	
IM U.S. Large Cap Core Equity (SA+CF) Median	1.54		19.93		3.02		12.74		10.36		13.22		13.12		12.53		
Population	226		226		226		221		214		200		182		223		
QMA US MC Equity	0.28	(41)	16.59	(77)	-4.70	(83)	N/A		N/A		N/A		N/A		-1.61	(87)	06/01/2018
S&P MidCap 400 Index	-0.09	(57)	17.87	(64)	-2.49	(67)	9.38	(60)	8.88	(54)	11.81	(69)	12.56	(78)	1.27	(69)	
IM U.S. Mid Cap Core Equity (SA+CF) Median	-0.08		18.20		-1.92		9.46		8.90		12.22		13.07		1.85		
Population	44		44		44		44		41		36		36		44		
Morgan Dempsey	-3.93	(61)	1.19	(96)	-14.22	(68)	6.48	(72)	5.57	(82)	N/A		N/A		3.35	(86)	04/01/2014
40/60 R2000V/Russell Micro	-3.50	(56)	9.89	(56)	-12.92	(64)	5.84	(76)	6.60	(77)	9.19	(81)	9.94	(95)	4.33	(77)	
IM U.S. Micro Cap Equity (SA+CF) Median	-3.00		10.92		-11.37		8.85		8.89		11.60		12.55		6.25		
Population	55		55		55		52		45		40		35		44		
Reinhart Sm/Mid Cap PMV	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		10/01/2019
Russell 2500 Value Index	0.13	(41)	15.41	(83)	-4.35	(66)	6.87	(86)	6.98	(80)	10.13	(88)	11.00	(89)	N/A		
IM U.S. SMID Cap Equity (SA+CF) Median	-0.34		18.72		-2.59		9.98		8.82		11.95		12.77		N/A		
Population	190		187		185		175		165		151		132		N/A		
Total International Equity	-1.87		13.77		3.70		8.16		N/A		N/A		N/A		9.41		01/01/2016
					5.70								N/A				
1607 Capital Partners	-1.87	(52)	13.77	(34)	1.71	(27)	8.65	(21)	4.89	(38)	7.02	(43)	7.41	(31)	6.19	(32)	07/01/2006
MSCI AC World ex USA	-1.70	(47)	12.06	(49)	-0.72	(44)	6.85	(44)	3.39	(63)	5.50	(69)	4.93	(79)	3.82	(80)	
IM International Equity (SA+CF) Median	-1.83		11.83		-1.40		6.53		4.07		6.58		6.33		5.23		
Population	978		976		970		934		852		760		614		472		



Returns for periods greater than one year are annualized. Returns are expressed as percentages.

Comparative Performance Trailing Returns Southfield Fire & Police Retirement System

As of September 30, 2019

	Q	ſR	ΥT	D	1 Y	′R	3 \	′R	5 ٦	(R	7	ŕ R	10	YR	Incep	otion	Inception Date
Total Domestic Fixed Income	1.31		7.23		8.34		3.15		N/A		N/A		N/A		4.26		01/01/2016
Tortoise Credit	1.55	(22)	7.38	(10)	8.56	(13)	3.38	(7)	3.79	(5)	N/A		N/A		3.96	(6)	10/01/2013
Bloomberg Barclays Intermed Aggregate Index	1.38	(58)	6.18	(70)	8.08	(44)	2.39	(88)	2.74	(74)	2.24	(75)	3.16	(75)	2.74	(73)	
IM U.S. Intermediate Duration (SA+CF) Median	1.42		6.51		7.99		2.68		2.93		2.45		3.40		2.92		
Population	150		150		150		147		144		138		126		141		
Loomis Sayles Intermediate Duration	1.56	(20)	7.57	(7)	8.80	(6)	3.21	(13)	N/A		N/A		N/A		3.11	(13)	08/01/2016
Bloomberg Barclays Intermediate US Govt/Credit Idx	1.37	(62)	6.41	(60)	8.17	(38)	2.40	(86)	2.68	(82)	2.15	(85)	3.05	(85)	2.23	(88)	
IM U.S. Intermediate Duration (SA+CF) Median	1.42		6.51		7.99		2.68		2.93		2.45		3.40		2.54		
Population	150		150		150		147		144		138		126		147		
PRISA Real Estate Composite	1.68		5.32		7.10		8.70		11.25		11.87		12.52		8.23		07/01/1993
PRISA I	1.54	(75)	4.94	(70)	6.86	(59)	7.90	(68)	9.83	(65)	10.71	(58)	11.65	(55)	6.78	(67)	01/01/2006
NCREIF Fund Index-ODCE (VW)	1.31	(87)	3.77	(90)	5.60	(90)	7.31	(82)	9.35	(78)	10.30	(76)	10.86	(69)	6.82	(66)	0 1/0 1/2000
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80	()	5.34	()	7.05	()	8.43	()	9.97	(11.13	(,	11.67	()	7.13	()	
Population	21		21		21		20		20		20		19		15		
PRISA II	1.71	(60)	5.25	(56)	6.78	(72)	8.55	(43)	10.85	(32)	11.81	(37)	13.11	(28)	6.49	(78)	01/01/2006
NCREIF Fund Index-ODCE (VW)	1.31	(87)	3.77	(90)	5.60	(90)	7.31	(82)	9.35	(78)	10.30	(76)	10.86	(69)	6.82	(66)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		5.34		7.05		8.43		9.97		11.13		11.67		7.13		
Population	21		21		21		20		20		20		19		15		
PRISA III	1.80	(51)	5.81	(36)	7.67	(36)	9.80	(22)	14.60	(6)	N/A		N/A		14.88	(11)	04/01/2013
NCREIF Fund Index-ODCE (VW)	1.31	(87)	3.77	(90)	5.60	(90)	7.31	(82)	9.35	(78)	10.30	(76)	10.86	(69)	10.29	(71)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.80		5.34		7.05		8.43		9.97		11.13		11.67		11.14		
Population	21		21		21		20		20		20		19		20		

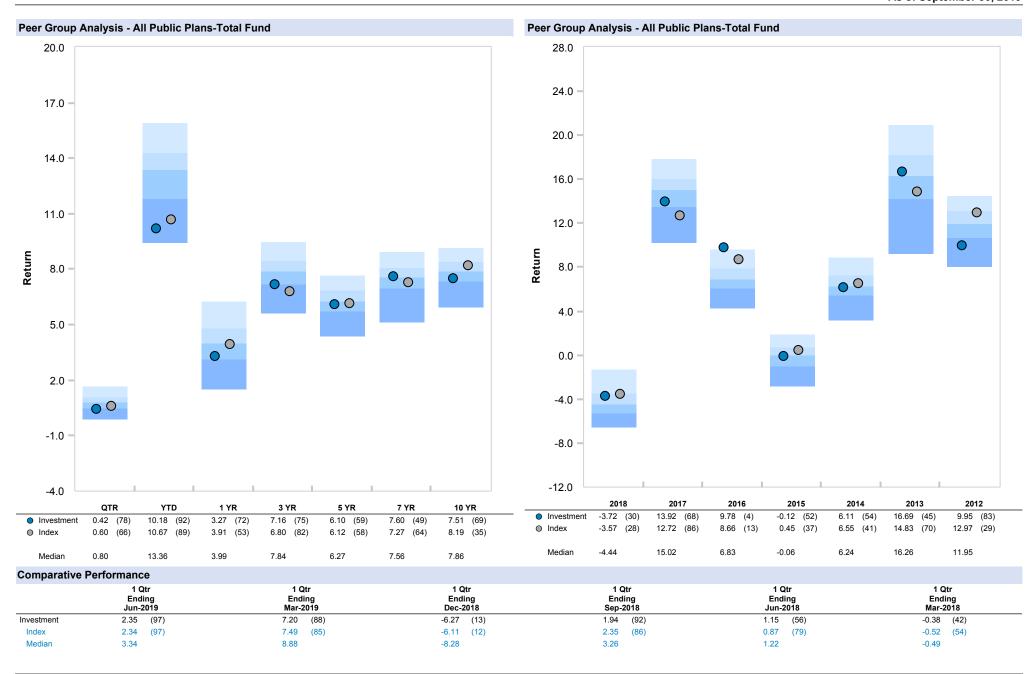
Returns for periods greater than one year are annualized. Returns are expressed as percentages.

Comparative Performance Trailing Returns Southfield Fire & Police Retirement System As of September 30, 2019

	QT	ſR	ΥT	D	1 Y	′R	3 \	′R	5 ۲	(R	7 \	(R	10	YR	Incep	otion	Inception Date
Total Hedge Fund	-0.45		5.73		-0.22		4.71		N/A		N/A		N/A		3.95		01/01/2016
Nantucket Institutional	-1.09	(87)	8.20	(24)	-0.26	(71)	7.18	(1)	5.31	(1)	7.05	(1)	6.82	(1)	5.15	(1)	07/01/2008
HFRI FOF: Diversified Index	-0.67	(86)	5.35	(58)	0.51	(62)	3.26	(28)	1.98	(24)	3.22	(9)	2.76	(55)	1.38	(46)	
IM Alternative Multi-Strategy (MF) Median	0.53		5.72		1.22		2.15		1.15		2.07		2.83		1.23		
Population	177		174		171		128		79		43		18		12		
KStone Partners	0.29	(83)	3.01	(85)	-0.17	(91)	4.11	(33)	N/A		N/A		N/A		3.42	(60)	10/01/2015
90 Day T-Bill +3.5%/Yr	1.43	(22)	4.47	(68)	5.97	(26)	5.09	(17)	4.50	(5)	4.23	(2)	4.04	(30)	4.74	(22)	
IM Alternative Credit Focus (MF) Median	0.94		5.61		4.20		3.20		2.45		2.47		2.78		3.76		
Population	234		229		229		209		151		91		50		187		



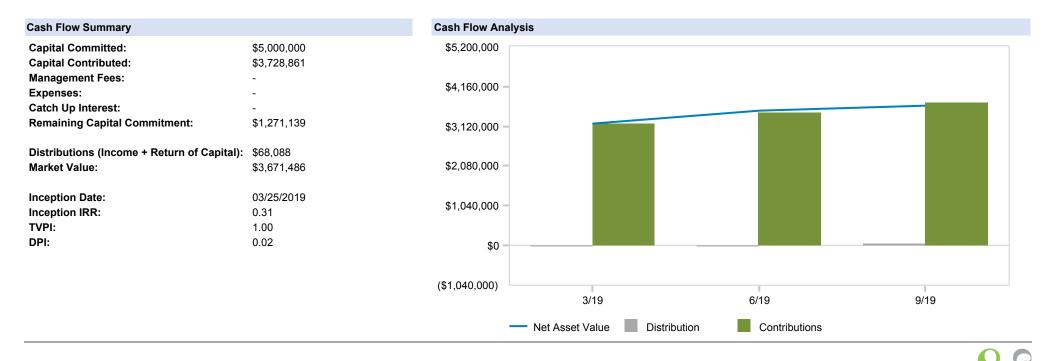
Strategy Review Total Fund | Total Fund Policy As of September 30, 2019





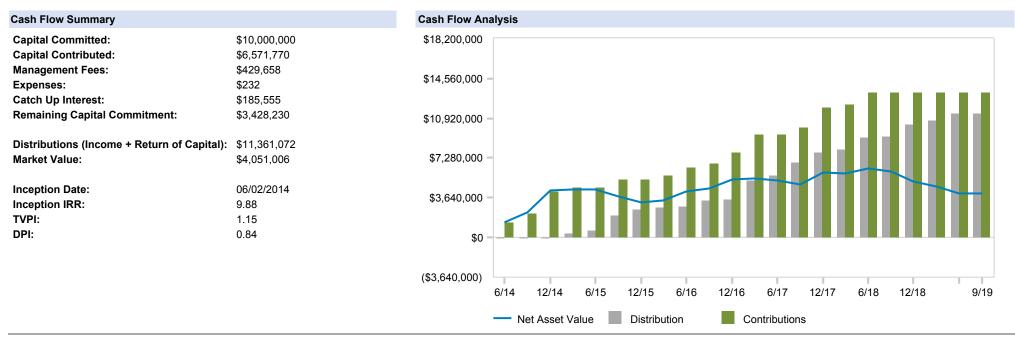
Fund Information			
Type of Fund:	Direct	Vintage Year:	2018
Strategy Type:	Other	Management Fee:	1.5%
Size of Fund:	300,000,000	Preferred Return:	8.5% (Series A only)
Inception:	11/16/2018	General Partner:	Bloomfield Capital Partners V, LLC
Final Close:	11/16/2019		
Investment Strategy:	debt and debt-related investments) with short to intermediate-term durations and returns that have a low correlation to traditional public markets (although there ca estate debt and other general debt and debt-related transactions (including REO invest in traditional leveraged common equity positions in real estate; however, th equity positions in connection with certain loans in order to obtain supplemental of foreclosure process with such loan for the benefit of the Fund. The primary focus related investments) will be to capitalize on gap, transitional, bridge, special situa	often contractual cash f n be no assurances tha properties, and preferre the Fund may acquire RE collateral to enhance the of private credit and sp tion and opportunistic fil	

same or similar nature as the Series typically invests.



Fund Information								
Type of Fund:	Direct	Vintage Year:	2014					
Strategy Type:	Value-Add Real Estate	Management Fee:	1.50% on Committed Capital plus 20% after 9% Preferred Return					
Size of Fund:	329,500,000	Preferred Return:	9.00%					
Inception:	06/02/2014	General Partner:	JCR Capital					
Final Close:	01/14/2016							
Investment Strategy: In line with the prior JCR funds, Fund III B is credit-focused with a mandate of protecting principal while providing investors with attractive risk adjusted returns, including current yield								

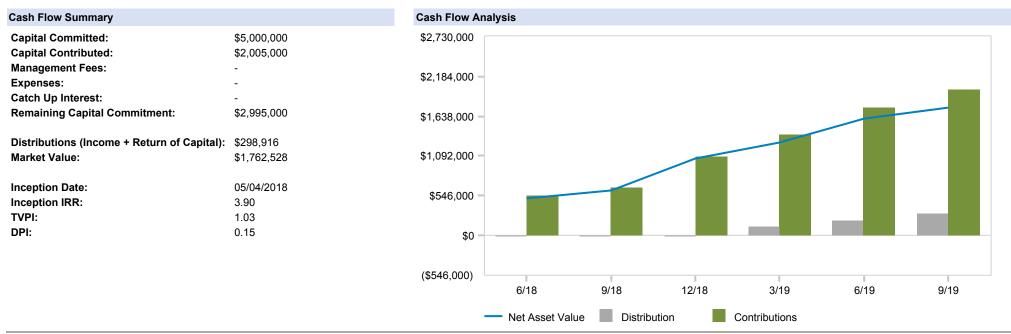
and profit participation components. Fund III B's investment strategy is to provide capital to middle market sponsors for value-add, opportunistic and special situations. The fund targets a variety of asset classes and typically provides high leverage senior debt, mezzanine debt, preferred equity, joint venture equity and programmatic joint venture facilities.





Fund Information			
Type of Fund:	Partnership	Vintage Year:	2017
Strategy Type:	Value-Add Real Estate	Management Fee:	1.50%
Size of Fund:	216,495,000	Preferred Return:	8.00% Incentive Fee 20.00%
Inception:	10/20/2017	General Partner:	JCR Capital Investment Company, LLC
Final Close:	TBD		
Investment Strategy:	The JCR Income Plus Fund IV, L.P. (the "Fund" or "Fund IV") will seek to provide customized capital solutions to middle market commercial real estate operators for diversified portfolio which will primarily consist of high yield debt, participating debt estate properties in the United States. The Fund will seek to invest in a variety of The Fund will generally seek to make investments between \$5 million and \$15 million total target capitalization of \$300 million, with over \$14 million being committed by	or value-add, underperfo ot, structured preferred of f property types includin illion in large liquid mark	orming, undermanaged and opportunistic properties. Fund IV will seek to invest in a equity and structured equity positions primarily in cash flowing commercial real g multifamily, industrial, office, retail and unique middle market special situations. kets in the U.S. with durations ranging from six to 36 months. Fund IV will have a

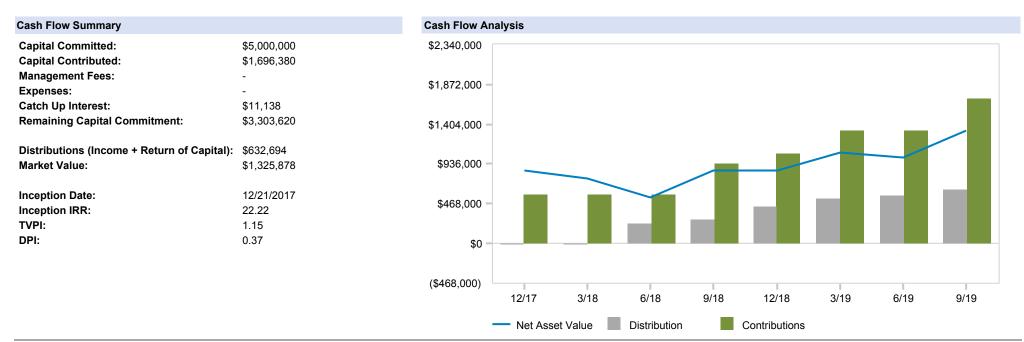
representing \$36 million in investment commitments.





Fund Information			
Type of Fund:	Partnership	Vintage Year:	2016
Strategy Type:	Secondaries	Management Fee:	1.00%
Size of Fund:	3,333,000,000	Preferred Return:	8.00%
Inception:	12/15/2016	General Partner:	Landmark Real Estate Fund-GP VIII, L.P.
Final Close:	March 2018		
Investment Otherstein	uu Landmark Daal Catata Dartmara VIII LI	De Deleviere limited restresekin (the "Destresekin" er the "Ever"	

Investment Strategy: Landmark Real Estate Partners VIII, L.P., a Delaware limited partnership (the "Partnership" or the "Fund"), is being established to provide investors access to a diversified private equity portfolio of real estate related investments, primarily through secondary market transactions. The Fund expects to make secondary investments principally in various types of real estate and real estate related entities, such as commingled real estate funds, limited partnerships, joint ventures, real estate operating companies and non-traded REIT vehicles.





Total Portfolio Compliance Summary							
	September 30, 2019	Current	IPS Target	IPS Range	Act 314	Compliance	Compliance
	Market Value \$	Allocation %	Allocation %	Allocation %	Limit %	within Ranges	w/314 Limits
Total Portfolio (excluding Unfunded Commitments)	192,954,498.00	100.0%					
Total Equity (14)	105,709,296.00	54.8%	50.0%	40.0% - 70.0%	70.0%	YES	YES
	100,100,200.00	04.070	00.070	40.070 10.070	10.070	120	120
Domestic Equity (14)	70,288,919.00	36.4%	34.0%	29.0% - 39.0%	70.0%	YES	YES
International Equity (14)	35,420,377.00	18.4%	16.0%	11.0% - 21.0%	70.0%	YES	YES
Total US Fixed Income (17 & 17.1.a.iii)	34,548,731.00	17.9%	20.0%	20.0% - 50.0%	100.0%	NO	YES
	04,040,701.00	11.070	20.070	20.070 00.070	100.070		120
US Investment Grade Fixed Income (17)	34,548,731.00	17.9%	20.0%	15.0% - 30.0%	100.0%	YES	YES
US Non-Investment Grade Fixed Income (17.1.a.iii)	-	0.0%	0.0%	0.0% - 5.0%	100.0%	YES	YES
Total Non US Fixed Income (20k)	-	0.0%	0.0%	0.0% - 0.0%	20.0%	YES	YES
					,		
Total Real Estate (18 & 19)	24,623,146.00	12.8%	14.0%	0.0% - 20.0%	20.0%	YES	YES
	04 000 700 00	40.0%	40.00/	0.0% 00.0%	00.0%	VEO	VEO
Alternative Investments (20d)	24,289,766.00	12.6%	<mark>16.0%</mark>	0.0% - 20.0%	20.0%	YES	YES
Short Term/Cash Reserves	3,783,559.00	2.0%	0.0%	0.0% - 3.0%	N/A	YES	YES



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Commission Recapture Program

Broker	2002 thru 2011	2012	2013	2014	2015	2016	2017	2018	YTD 19
Bank of New York*	\$108,718	\$5200	\$2796	\$2501	\$1,325	\$1,613	\$1,000	\$392	\$812
Income to Fund	\$108,718	\$5,200	\$2,796	\$2,501	\$1,325	\$1,613	\$1,000	\$392	\$812

NOTE: * (formerly L, J&R) Participants may include: Loomis Sayles, Fiduciary, WHV, and 1607 Capital

*Participants may include: Loomis Sayles, Fiduciary, WHV, and 1607 Capital

Securities Lending Program (Northern Trust)

	2002 thru 2011	2012	2013	2014	2015	2016	2017	2018	YTD 19
Gross Income	\$620,738	\$98,488	\$110,349	\$131,990	\$123,118	\$147,987	\$134,192	\$134,018	\$78,655
Less: Program Fees	\$248,788	\$39,342	\$44,072	\$52,698	\$49,144	\$59,108	\$53,576	\$53,491	\$31,370
Income To Fund	\$371,950	\$59,146	\$66,277	\$79,292	\$73,974	\$88,879	\$80,616	\$80,527	\$47,286

Notes:

As of report run date statements for JCR accounts and Landmark were not released.



Total Fund Objectives:

- To earn an annual average return of 7.50% over rolling 5 year periods.
- To earn an average annual, real return of 3.75% after inflation over rolling five year periods.
- To meet the assumed actuarial rate of return with a high degree of probability.
- To rank in the 50th percentile over twelve month rolling periods and in the 40th percentile over rolling five year periods, among public employee retirement funds.

Manager Objectives:

• To exceed their performance return standard with equal or less risk over all three year periods.

Asset Allocation Policy:

Asset Class	Target	Ranges
U.S. Equities	34%	29 – 39%
Non-U.S. Equities	16%	11 – 21%
Global Fixed Income	20%	15 - 30%
Real Estate	14%	0-20%
Alternative Investments	16%	0-20%
Cash & Equivalents	0%	0 – 3%

Equity Portfolio Guidelines:

- No more than 5% of the portfolio may be invested in the stock of any one company.
- No more than 10% of the portfolio may be invested in ADRs.

Fixed Income Portfolio Guidelines:

- No more than 5% of the portfolio may be invested with one issuer, except for the U.S. Treasury and Agency securities.
- No more than 15% of the portfolio in below investment grade.
- No more than 30% of total assets in non-U.S. dollar denominated securities. At least 75% of any non-U.S. currency exposure must be hedged. May invest beyond the 30% limit in Yankee and Euro issues.

Other Portfolio Guidelines:

- Managers are expected to be fully invested at all times, however they may raise cash if this is deemed appropriate under the circumstances.
- Leveraging the portfolio is prohibited.
- Derivative contracts only as permitted.
- Additional investment policies and guidelines are contained in the formal Statement of Investment Policies, Procedures and Objectives.
- All investment managers should follow State of Michigan laws governing the investment of public retirement plan assets.



Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.



AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

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