

Investment Performance Review
Period Ending September 30, 2018

Southfield Fire & Police Retirement System



Index Returns (%)

Equities	Month	3 M	YTD	1 Year	3 Yr Ann	5 Yr Ann
S&P 500 Total Return	0.57	7.71	10.56	17.91	17.29	13.94
Russell Midcap Index	(0.64)	5.00	7.46	13.96	14.49	11.63
Russell 2000 Index	(2.41)	3.57	11.51	15.23	17.09	11.06
Russell 1000 Growth Indx	0.56	9.17	17.09	26.29	20.53	16.57
Russell 1000 Value Index	0.20	5.70	3.91	9.43	13.52	10.70
Russell 3000 Index	0.17	7.12	10.57	17.57	17.05	13.44
MSCI EAFE NR	0.87	1.35	(1.43)	2.74	9.23	4.41
MSCI EM NR	(0.53)	(1.10)	(7.68)	(0.81)	12.35	3.61

Russell Indices Style Returns

	V	B	G		V	B	G	
L	3.9	10.5	17.1	L	13.6	21.7	30.2	
	3.1	7.5	13.4		M	13.3	18.5	25.3
	7.2	11.5	15.7			S	7.8	14.6
YTD			2017					

Index Returns (%)

Fixed Income	Month	3 M	YTD	1 Year	Mod. Adj. Duration	Yield to Worst
U.S. Aggregate	(0.64)	0.02	(1.60)	(1.22)	6.03	3.46
U.S. Corporate Investment Grade	(0.36)	0.97	(2.33)	(1.19)	7.24	4.07
U.S. Corporate High Yield	0.56	2.40	2.57	3.05	3.76	6.24
Global Aggregate	(0.86)	(0.92)	(2.37)	(1.32)	6.99	2.15

Levels

Currencies

	09/30/18	12/31/17	12/31/16
Euro Spot	1.16	1.20	1.05
British Pound Spot	1.30	1.35	1.23
Japanese Yen Spot	113.70	112.69	116.96
Swiss Franc Spot	0.98	0.97	1.02

Levels (%)

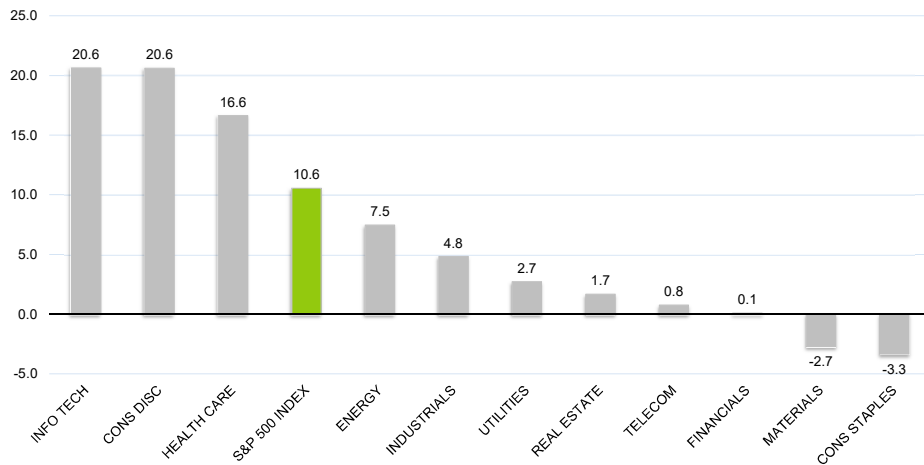
Key Rates	09/30/18	12/31/17	12/31/16	12/31/15	12/31/14
3 Month	2.20	1.38	0.50	0.16	0.04
US 2 Year	2.82	1.88	1.19	1.05	0.66
US 10 Year	3.06	2.41	2.44	2.27	2.17
US 30 Year	3.21	2.74	3.07	3.02	2.75
ICE LIBOR USD 3M	2.40	1.69	1.00	0.61	0.26
Euribor 3 Month ACT/360	(0.32)	(0.33)	(0.32)	(0.13)	0.08
Bankrate 30Y Mortgage Rates Na	4.57	3.85	4.06	3.90	3.99
Prime	5.25	4.50	3.75	3.50	3.25

Levels

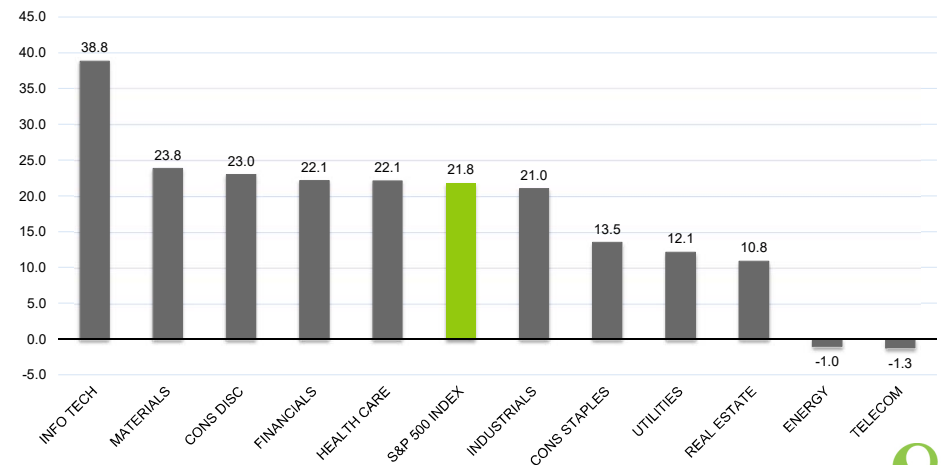
Commodities

	09/30/18	12/31/17	12/31/16
Oil	73.25	58.38	56.37
Gasoline	2.88	2.49	2.34
Natural Gas	3.01	2.87	2.97
Gold	1,196.20	1,332.90	1,187.30
Silver	14.71	17.47	16.50
Copper	280.50	335.05	252.10
Corn	356.25	384.00	394.75
BBG Commodity TR Idx	176.31	179.96	176.94

YTD Sector Returns



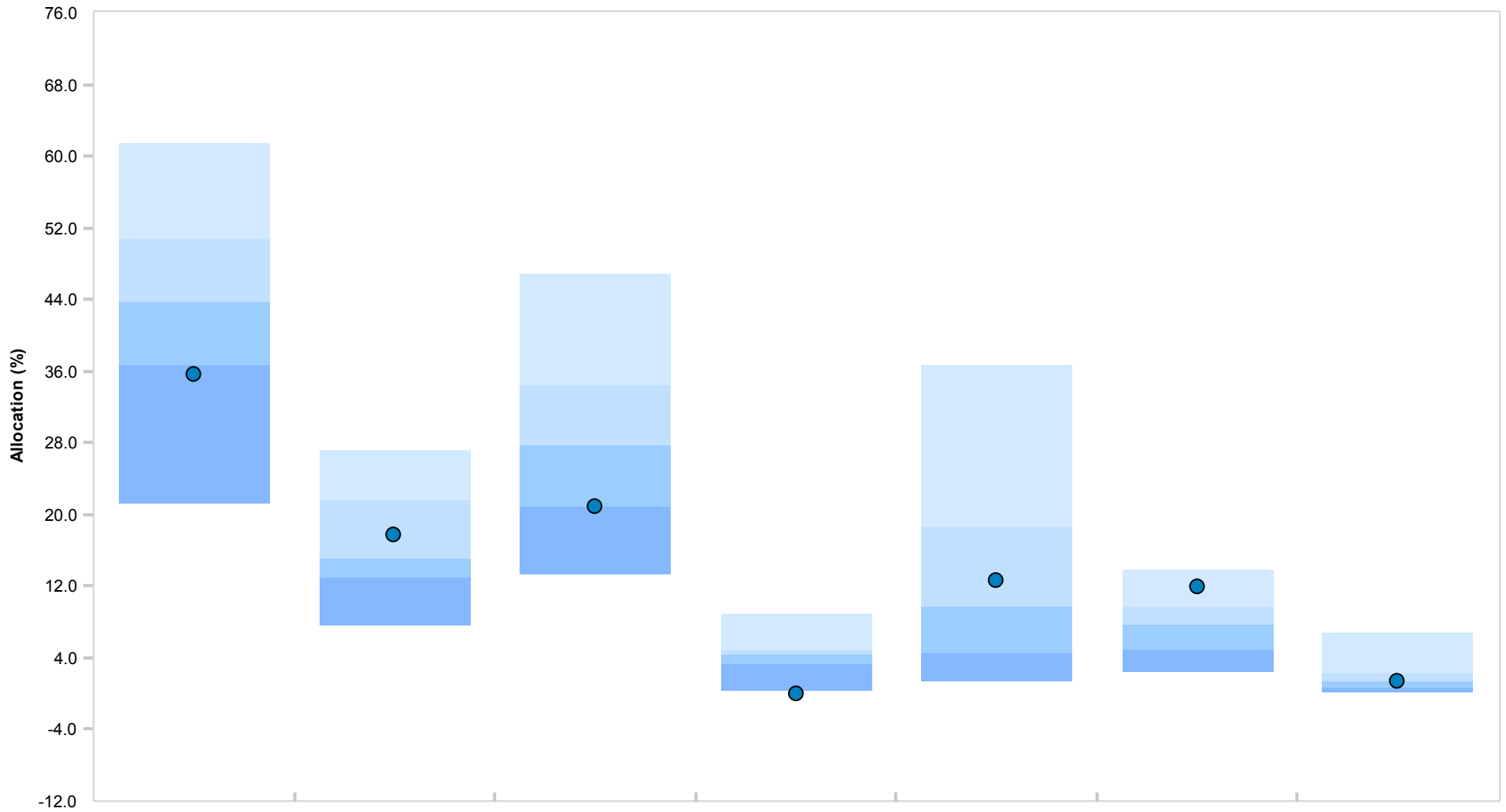
2017 Sector Returns



- Total Fund return of +1.98% trailed the Policy Index return of +2.35%
- The primary driver of the underperformance was relative underperformance from QMA Mid Cap and the exposure to LSIA Equal Weight and LSIA Low Volatility.
- Within the Large Cap allocation, the underweight to the largest names in the traditional S&P 500 caused the lag vs. peers and benchmark, as names like Apple, Amazon, Alphabet (Google) and Microsoft led performance.
- QMA Mid Cap underperformed, returning +2.76% vs. +3.86%. The primary driver of underperformance was an overweight to valuation related factors.
- Morgan Dempsey (Micro Cap Equity) outperformed their benchmark, returning +1.28% vs. +1.14% for the quarter.
- 1607 Capital Partners underperformed their benchmark by 1.03% for the quarter. They still rank favorably over all time periods.
- In their fifth quarter of watch status, Brandes Emerging Markets outperformed by 0.36%. Their watch status was extended through 6/30/2018.
- Both Domestic Fixed Income managers, Tortoise Credit and Loomis Sayles outperformed their benchmarks for the quarter.
- Nantucket outperformed for the quarter and long term. Longer term results remain strong vs. benchmark and peers.
- KStone Partners underperformed their benchmark for the quarter. Long term results remain strong.
- JCR Fund III made multiple distributions during the quarter and remains approximately 70% called. JCR Fund IV made additional calls during the quarter and is now just over 20% called.
- Landmark Fund VII had multiple distributions and a single capital call during the quarter.
- As of 9/30/2018, the Total Fund is in compliance with the Investment Policy Statement and Public Act 314.



Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund



	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
● Total Fund	35.67 (78)	17.69 (41)	20.81 (76)	0.00	12.58 (42)	11.82 (10)	1.43 (49)
5th Percentile	61.44	27.20	46.82	8.94	36.63	13.88	6.71
1st Quartile	50.62	21.57	34.31	4.92	18.63	9.84	2.31
Median	43.70	15.09	27.75	4.30	9.75	7.59	1.37
3rd Quartile	36.59	12.95	20.93	3.21	4.48	4.91	0.62
95th Percentile	21.26	7.68	13.31	0.27	1.31	2.35	0.05

Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.



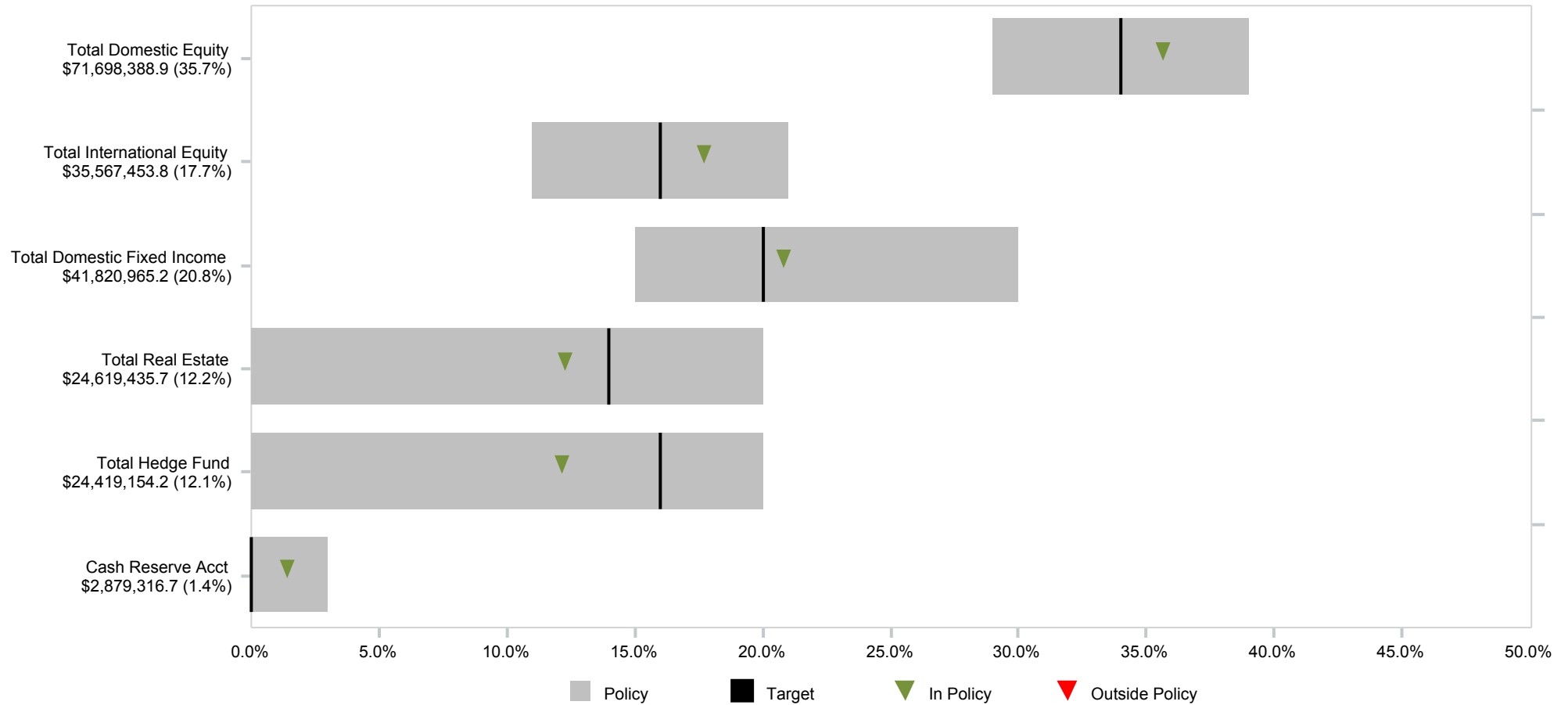
Comparative Performance Trailing Returns
Southfield Fire & Police Retirement System
As of September 30, 2018

Comparative Performance									
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fund	1.9766	2.7679	6.6517	9.5544	7.5136	9.2314	7.3642	7.6619	01/01/1989

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



Executive Summary



Asset Allocation Compliance

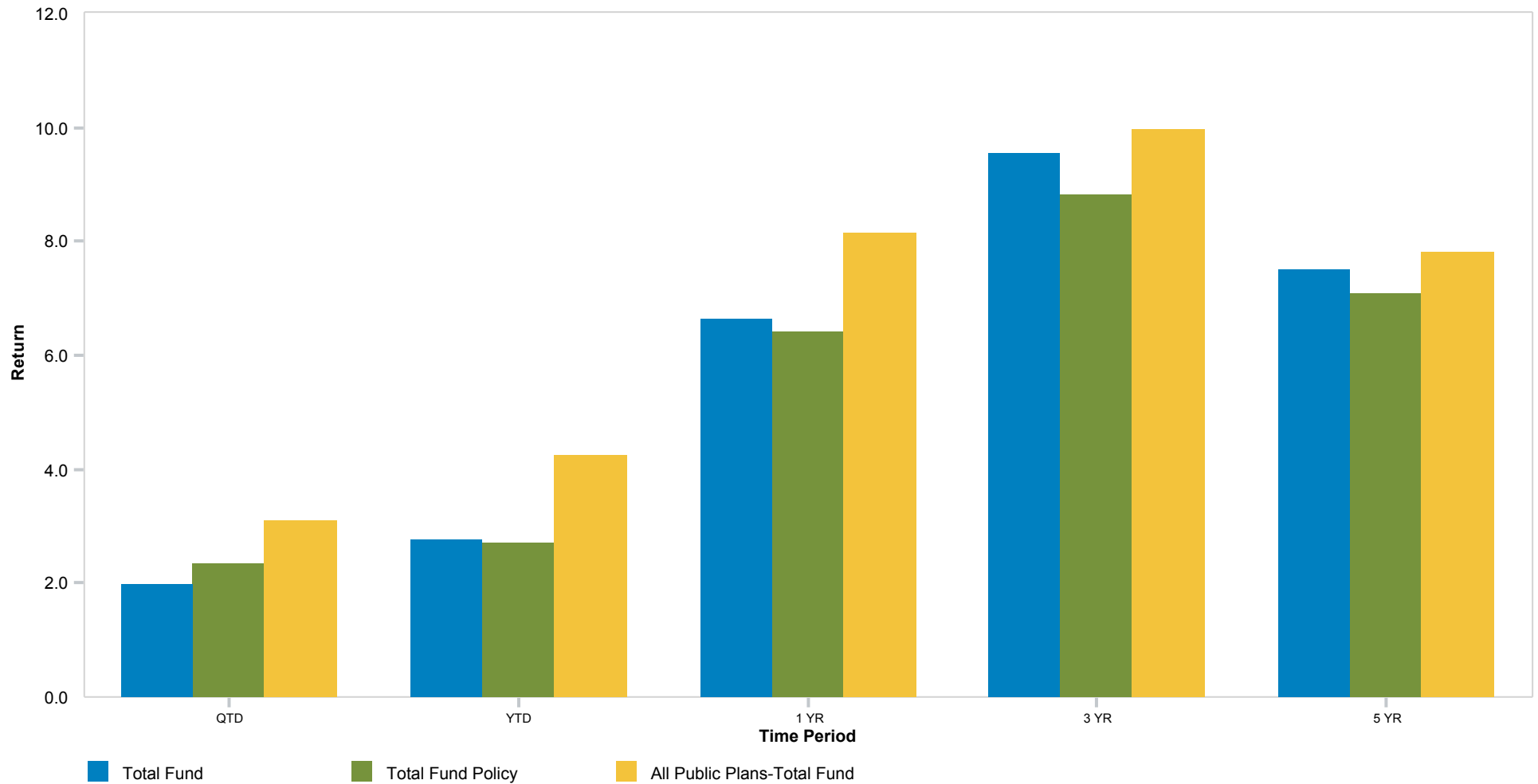
	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Min. Rebal. (\$000)	Target Rebal. (\$000)	Max. Rebal. (\$000)
Total Fund	201,004,714	100.0	N/A	100.0	N/A	-	-	-
Total Domestic Equity	71,698,389	35.7	29.0	34.0	39.0	-13,407,022	-3,356,786	6,693,450
Total International Equity	35,567,454	17.7	11.0	16.0	21.0	-13,456,935	-3,406,699	6,643,536
Total Domestic Fixed Income	41,820,965	20.8	15.0	20.0	30.0	-11,670,258	-1,620,022	18,480,449
Total Real Estate	24,619,436	12.2	0.0	14.0	20.0	-24,619,436	3,521,224	15,581,507
Total Hedge Fund	24,419,154	12.1	0.0	16.0	20.0	-24,419,154	7,741,600	15,781,789
Cash Reserve Acct	2,879,317	1.4	0.0	0.0	3.0	-2,879,317	-2,879,317	3,150,825



Gain/Loss Summary

	QTD	YTD	1 YR	3 YR	5 YR
Total Fund					
Beginning Market Value	200,979,681	205,832,327	201,580,480	185,513,137	188,240,110
Net Contributions	-3,594,821	-9,316,803	-12,216,321	-33,464,014	-50,605,647
Gain/Loss	3,619,854	4,489,191	11,640,556	48,955,591	63,370,251
Ending Market Value	201,004,714	201,004,714	201,004,714	201,004,714	201,004,714

Comparative Performance



Asset Allocation by Segment
Southfield Fire & Police Retirement System
As of September 30, 2018

Asset Allocation Attributes

	Domestic Equity		International Equity		Domestic Fixed Income		Real Estate		Hedge Fund		Cash Equivalent		Total Fund	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	71,151,440	35.40	34,197,260	17.01	41,508,370	20.65	24,619,436	12.25	24,391,667	12.13	5,136,542	2.56	201,004,714	100.00
Total Domestic Equity	71,151,440	99.24	-	-	-	-	-	-	-	-	546,949	0.76	71,698,389	35.67
LSIA LC 30/70	15,972,776	99.81	-	-	-	-	-	-	-	-	30,909	0.19	16,003,685	7.96
LSIA Dividend Aristocrats	11,656,540	99.67	-	-	-	-	-	-	-	-	39,159	0.33	11,695,699	5.82
LSIA S&P 500 Low Volatility	10,699,829	99.65	-	-	-	-	-	-	-	-	38,075	0.35	10,737,904	5.34
NTGI S&P Midcap 400 - Lending	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
QMA US MC Equity	21,385,938	99.58	-	-	-	-	-	-	-	-	90,189	0.42	21,476,127	10.68
Morgan Dempsey	11,436,357	97.04	-	-	-	-	-	-	-	-	348,617	2.96	11,784,974	5.86
Total International Equity	-	-	34,197,260	96.15	-	-	-	-	-	-	1,370,194	3.85	35,567,454	17.69
1607 Capital Partners	-	-	25,862,627	94.97	-	-	-	-	-	-	1,370,194	5.03	27,232,821	13.55
Brandes Emerging Mkts	-	-	8,334,633	100.00	-	-	-	-	-	-	-	-	8,334,633	4.15
Total Domestic Fixed Income	-	-	-	-	41,508,370	99.25	-	-	-	-	312,595	0.75	41,820,965	20.81
Avignon - Mortgage Loan	-	-	-	-	3,420,002	100.00	-	-	-	-	-	-	3,420,002	1.70
Tortoise Credit	-	-	-	-	19,073,948	98.39	-	-	-	-	312,595	1.61	19,386,543	9.64
Loomis Sayles Intermediate Duration	-	-	-	-	19,014,420	100.00	-	-	-	-	-	-	19,014,420	9.46
Total Real Estate	-	-	-	-	-	-	24,619,436	100.00	-	-	-	-	24,619,436	12.25
PRISA I	-	-	-	-	-	-	6,200,538	100.00	-	-	-	-	6,200,538	3.08
PRISA II	-	-	-	-	-	-	5,254,349	100.00	-	-	-	-	5,254,349	2.61
PRISA III	-	-	-	-	-	-	5,498,242	100.00	-	-	-	-	5,498,242	2.74
JCR Capital Fund 3 B	-	-	-	-	-	-	6,198,584	100.00	-	-	-	-	6,198,584	3.08
JCR Income Plus IV	-	-	-	-	-	-	602,557	100.00	-	-	-	-	602,557	0.30
Landmark Real Estate Partners VIII, L.P.	-	-	-	-	-	-	865,166	100.00	-	-	-	-	865,166	0.43
Total Hedge Fund	-	-	-	-	-	-	-	-	24,391,667	99.89	27,488	0.11	24,419,154	12.15
Nantucket Institutional	-	-	-	-	-	-	-	-	13,082,074	100.00	-	-	13,082,074	6.51
Fintan Partners	-	-	-	-	-	-	-	-	-	-	27,488	100.00	27,488	0.01
KStone Partners	-	-	-	-	-	-	-	-	11,309,593	100.00	-	-	11,309,593	5.63
Cash Reserve Acct	-	-	-	-	-	-	-	-	-	-	2,879,317	100.00	2,879,317	1.43



**Comparative Performance Trailing Returns
Southfield Fire & Police Retirement System**

As of September 30, 2018

Comparative Performance

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception	Inception Date	
Total Fund	1.98	(92)	2.77	(84)	6.65	(82)	9.55	(65)	7.51	(64)	9.23	(74)	7.36	(84)	7.66	(96)	01/01/1989
Total Fund Policy	2.35	(83)	2.71	(85)	6.42	(84)	8.82	(85)	7.10	(76)	9.34	(71)	7.70	(68)	8.43	(59)	
All Public Plans-Total Fund Median	3.10		4.24		8.14		9.98		7.82		9.80		8.04		8.53		
Population	538		534		533		498		482		474		441		41		
Total Fund (Net of Fees)	1.85		2.39		6.13		8.90		N/A		N/A		N/A		6.02		01/01/2014
Total Domestic Equity	4.46	(66)	6.79	(66)	13.16	(64)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14.94	(61)	01/01/2016
Russell 3000 Index	7.12	(34)	10.57	(42)	17.58	(40)	17.07	(40)	13.46	(35)	16.86	(48)	12.01	(59)	16.17	(45)	
IM U.S. Equity (SA+CF) Median	5.75		9.39		15.54		16.11		12.43		16.77		12.30		15.85		
Population	2,356		2,353		2,345		2,286		2,167		2,043		1,822		2,297		
Total International Equity	-0.39	(58)	-5.24	(67)	-0.58	(68)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.56	(39)	01/01/2016
MSCI AC World ex USA (Net)	0.71	(39)	-3.09	(51)	1.76	(47)	9.97	(64)	4.12	(79)	7.25	(78)	5.18	(89)	9.64	(59)	
IM International Equity (SA+CF) Median	0.14		-3.05		1.49		11.07		5.64		9.26		7.31		10.32		
Population	1,023		1,012		1,009		962		882		773		649		980		
Total Fixed Income	0.54	(44)	-0.17	(49)	-0.01	(52)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.81	(45)	01/01/2016
Blmbg. Barc. U.S. Aggregate Index	0.02	(83)	-1.60	(85)	-1.22	(89)	1.31	(80)	2.16	(67)	2.02	(74)	3.77	(66)	1.64	(75)	
IM U.S. Fixed Income (SA+CF) Median	0.46		-0.26		0.06		2.18		2.77		2.93		4.64		2.50		
Population	1,379		1,375		1,374		1,334		1,278		1,212		1,025		1,342		
Total Real Estate	1.73	(83)	6.89	(49)	11.15	(16)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.56	(31)	01/01/2016
NCREIF Fund Index-ODCE (VW)	2.09	(60)	6.48	(68)	8.68	(67)	8.80	(70)	10.72	(64)	11.17	(78)	5.58	(66)	8.34	(71)	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.19		6.81		9.63		9.72		11.25		11.80		6.05		9.33		
Population	21		21		21		21		21		21		20		21		
Total Hedge Fund	1.07	(54)	5.00	(7)	7.38	(9)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.40	(15)	01/01/2016
HFRI FOF: Diversified Index	0.63	(68)	1.41	(28)	3.49	(22)	3.01	(38)	3.16	(7)	3.55	(44)	2.61	(53)	3.13	(37)	
IM Alternative Multi-Strategy (MF) Median	1.16		-0.41		1.24		2.33		1.92		3.48		2.65		2.55		
Population	228		220		212		171		75		43		18		176		

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, 2018

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Domestic Equity	4.46	6.79	13.16	N/A	N/A	N/A	N/A	14.94	01/01/2016
LSIA LC 30/70	6.26 (84)	7.86 (69)	14.52 (77)	N/A	N/A	N/A	N/A	14.44 (81)	05/01/2017
S&P 500 Equal Weighted	5.42 (90)	7.28 (73)	13.95 (79)	15.43 (83)	12.49 (84)	16.73 (71)	13.14 (17)	13.86 (82)	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	7.35	9.87	17.72	17.10	14.14	17.34	12.41	17.67	
Population	59	59	59	57	57	55	54	59	
LSIA Dividend Aristocrats	7.90 (25)	6.53 (82)	15.33 (66)	15.80 (60)	13.24 (61)	N/A	N/A	15.17 (57)	07/01/2012
S&P 500 Dividend Aristocrats Index TR	7.91 (25)	6.46 (83)	15.30 (66)	15.70 (62)	13.11 (63)	16.76 (54)	13.60 (10)	15.07 (59)	
IM U.S. Large Cap Core Equity (SA+CF) Median	7.13	9.83	17.25	16.23	13.55	16.86	12.03	15.30	
Population	257	257	257	251	242	227	204	230	
LSIA S&P 500 Low Volatility	4.99 (89)	5.66 (89)	10.55 (91)	N/A	N/A	N/A	N/A	13.00 (89)	01/01/2017
S&P 500 Low Volatility Index TR	5.04 (89)	5.79 (88)	10.71 (91)	13.93 (85)	12.38 (78)	14.14 (86)	11.75 (58)	13.19 (89)	
IM U.S. Large Cap Core Equity (SA+CF) Median	7.13	9.83	17.25	16.23	13.55	16.86	12.03	18.28	
Population	257	257	257	251	242	227	204	255	
QMA US MC Equity	2.76 (95)	N/A	N/A	N/A	N/A	N/A	N/A	2.69 (89)	06/01/2018
S&P MidCap 400 Index	3.86 (68)	7.49 (46)	14.21 (45)	15.68 (42)	11.91 (56)	16.31 (65)	12.49 (75)	4.30 (62)	
IM U.S. Mid Cap Core Equity (SA+CF) Median	4.37	7.46	14.18	15.61	11.98	16.52	12.68	4.57	
Population	54	54	54	53	49	44	41	54	
Morgan Dempsey	1.28 (65)	8.84 (66)	13.22 (59)	18.85 (52)	N/A	N/A	N/A	7.71 (84)	04/01/2014
40/60 R2000V/Russell Micro	1.14 (65)	9.83 (64)	11.92 (68)	16.34 (78)	10.31 (79)	16.23 (81)	10.34 (96)	8.61 (80)	
IM U.S. Micro Cap Equity (SA+CF) Median	1.99	12.21	14.65	18.88	12.44	18.52	14.36	11.05	
Population	62	62	62	57	50	48	40	53	
Total International Equity	-0.39	-5.24	-0.58	N/A	N/A	N/A	N/A	11.56	01/01/2016
1607 Capital Partners	-0.33 (57)	-3.67 (55)	1.64 (49)	11.90 (42)	6.02 (44)	9.03 (54)	8.46 (32)	6.56 (36)	07/01/2006
MSCI AC World ex USA	0.80 (37)	-2.67 (46)	2.25 (43)	10.49 (57)	4.60 (69)	7.74 (73)	5.67 (80)	4.20 (83)	
IM International Equity (SA+CF) Median	0.14	-3.05	1.49	11.07	5.64	9.26	7.31	5.85	
Population	1,023	1,012	1,009	962	882	773	649	531	
Brandes Emerging Mkts	-0.59 (27)	-10.03 (67)	-7.18 (89)	14.55 (18)	N/A	N/A	N/A	0.16 (89)	07/01/2014
MSCI Emerging Markets Index	-0.95 (35)	-7.39 (28)	-0.44 (25)	12.77 (40)	3.99 (60)	5.41 (76)	5.76 (69)	2.76 (52)	
IM Emerging Markets Equity (SA+CF) Median	-2.21	-8.54	-2.53	12.04	4.33	6.31	6.73	2.81	
Population	285	279	279	268	236	185	137	249	

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, 2018

	QTR		YTD		1 YR		3 YR		5 YR		7 YR		10 YR		Inception		Inception Date	
Total Domestic Fixed Income	0.54		-0.17		-0.01		N/A		N/A		N/A		N/A		2.81		01/01/2016	
Tortoise Credit	0.63	(7)	-0.01	(24)	0.20	(18)	2.54	(7)	3.08	(6)	N/A		N/A		3.08	(6)	10/01/2013	
Bloomberg Barclays Intermed Aggregate Index	0.11	(96)	-0.86	(95)	-0.93	(96)	0.95	(92)	1.70	(76)	1.72	(85)	3.31	(90)	1.70	(76)		
IM U.S. Intermediate Duration (SA+CF) Median Population	0.37		-0.46		-0.38		1.37		1.91		2.09		3.76		1.91		152	
Population	159		159		159		157		152		146		131		152			
Loomis Sayles Intermediate Duration	0.56	(14)	-0.37	(40)	-0.22	(36)	N/A		N/A		N/A		N/A		0.56	(25)	08/01/2016	
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.21	(87)	-0.76	(92)	-0.96	(97)	0.91	(95)	1.52	(91)	1.63	(91)	3.22	(92)	-0.40	(96)		
IM U.S. Intermediate Duration (SA+CF) Median Population	0.37		-0.46		-0.38		1.37		1.91		2.09		3.76		0.12		158	
Population	159		159		159		157		152		146		131		158			
PRISA Real Estate Composite	2.48		7.29		10.35		10.56		12.72		12.63		5.38		8.28		07/01/1993	
PRISA I	2.40	(39)	6.79	(53)	8.82	(65)	8.81	(70)	11.09	(60)	11.34	(65)	5.00	(85)	6.77	(69)	01/01/2006	
NCREIF Fund Index-ODCE (VW)	2.09	(60)	6.48	(68)	8.68	(67)	8.80	(70)	10.72	(64)	11.17	(78)	5.58	(66)	6.92	(56)		
IM U.S. Open End Private Real Estate (SA+CF) Median Population	2.19		6.81		9.63		9.72		11.25		11.80		6.05		7.07		16	
Population	21		21		21		21		21		21		20		16			
PRISA II	2.30	(46)	7.87	(26)	10.61	(31)	10.46	(36)	12.66	(36)	13.00	(36)	4.56	(90)	6.47	(79)	01/01/2006	
NCREIF Fund Index-ODCE (VW)	2.09	(60)	6.48	(68)	8.68	(67)	8.80	(70)	10.72	(64)	11.17	(78)	5.58	(66)	6.92	(56)		
IM U.S. Open End Private Real Estate (SA+CF) Median Population	2.19		6.81		9.63		9.72		11.25		11.80		6.05		7.07		16	
Population	21		21		21		21		21		21		20		16			
PRISA III	2.73	(14)	7.34	(41)	11.95	(5)	13.13	(10)	16.20	(5)	N/A		N/A		16.25	(5)	04/01/2013	
NCREIF Fund Index-ODCE (VW)	2.09	(60)	6.48	(68)	8.68	(67)	8.80	(70)	10.72	(64)	11.17	(78)	5.58	(66)	11.16	(63)		
IM U.S. Open End Private Real Estate (SA+CF) Median Population	2.19		6.81		9.63		9.72		11.25		11.80		6.05		11.85		21	
Population	21		21		21		21		21		21		20		21			

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



**Comparative Performance Trailing Returns
Southfield Fire & Police Retirement System**

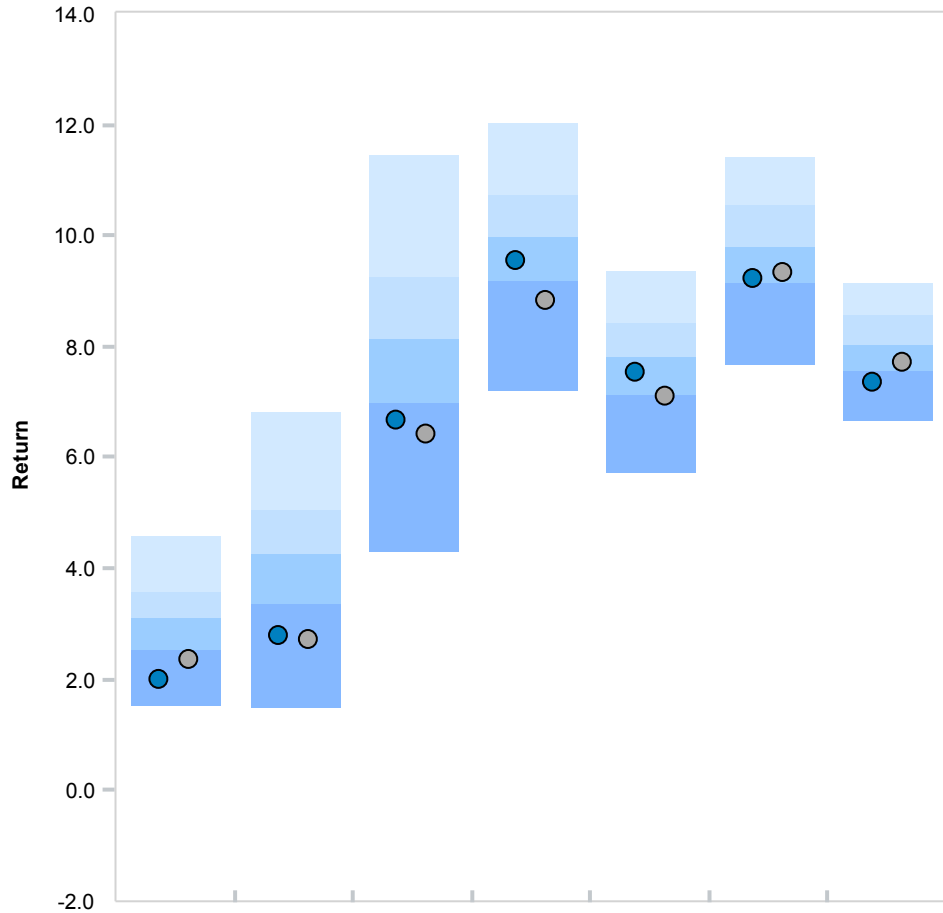
As of September 30, 2018

	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Hedge Fund	1.07	5.00	7.38	N/A	N/A	N/A	N/A	5.40	01/01/2016
Nantucket Institutional	1.39 (38)	6.99 (4)	10.04 (7)	7.07 (7)	7.49 (1)	8.34 (1)	7.08 (8)	5.64 (1)	07/01/2008
HFRI FOF: Diversified Index	0.63 (68)	1.41 (28)	3.49 (22)	3.01 (38)	3.16 (7)	3.55 (44)	2.61 (53)	1.47 (45)	
IM Alternative Multi-Strategy (MF) Median	1.16	-0.41	1.24	2.33	1.92	3.48	2.65	1.26	
Population	228	220	212	171	75	43	18	14	
Fintan Partners	0.00 (81)	0.00 (60)	6.33 (2)	-1.46 (100)	N/A	N/A	N/A	-1.46 (100)	10/01/2015
90 Day T-Bill +5%/Yr	1.73 (11)	5.08 (2)	6.67 (2)	5.84 (9)	5.52 (1)	5.39 (3)	5.34 (24)	5.84 (9)	
IM Alternative Credit Focus (MF) Median	0.68	0.43	1.12	3.46	2.28	2.94	4.42	3.46	
Population	268	261	255	215	128	93	44	215	
KStone Partners	0.72 (50)	2.90 (5)	4.52 (4)	4.64 (24)	N/A	N/A	N/A	4.64 (24)	10/01/2015
90 Day T-Bill +3.5%/Yr	1.36 (21)	3.95 (2)	5.15 (3)	4.33 (31)	4.01 (12)	3.89 (20)	3.83 (56)	4.33 (31)	
IM Alternative Credit Focus (MF) Median	0.68	0.43	1.12	3.46	2.28	2.94	4.42	3.46	
Population	268	261	255	215	128	93	44	215	

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

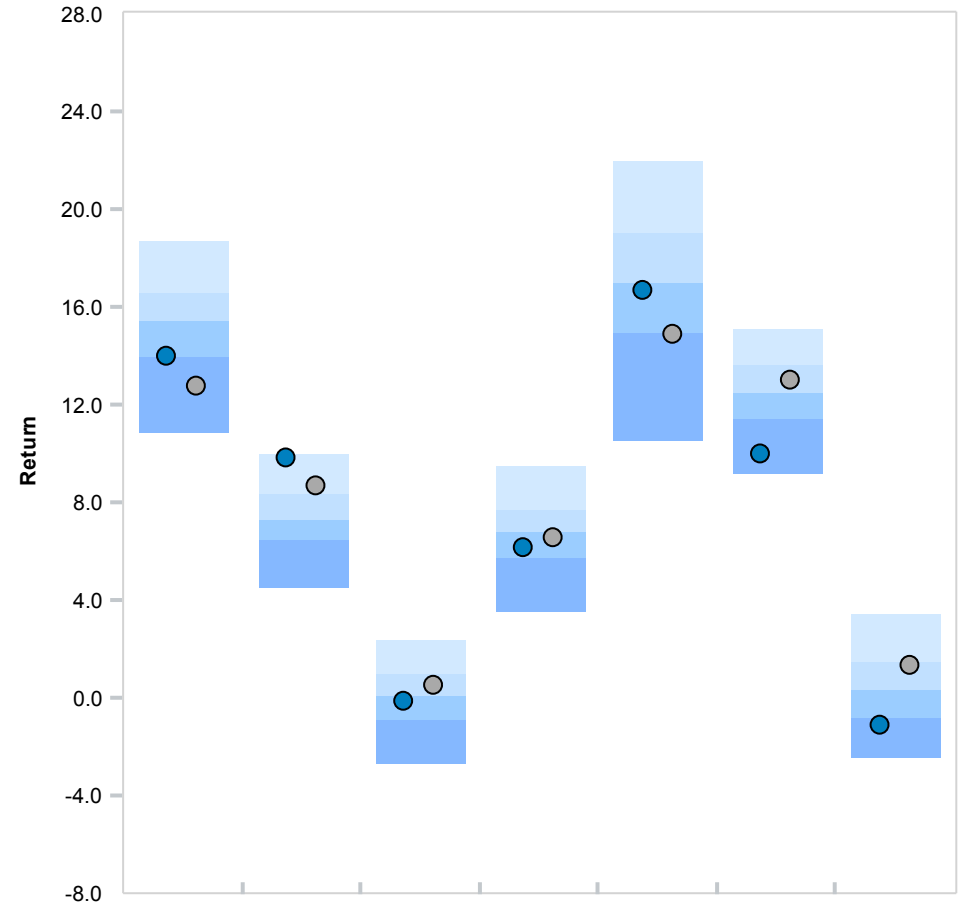


Peer Group Analysis - All Public Plans-Total Fund



	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR
● Investment	1.98 (92)	2.77 (84)	6.65 (82)	9.55 (65)	7.51 (64)	9.23 (74)	7.36 (84)
● Index	2.35 (83)	2.71 (85)	6.42 (84)	8.82 (85)	7.10 (76)	9.34 (71)	7.70 (68)
Median	3.10	4.24	8.14	9.98	7.82	9.80	8.04

Peer Group Analysis - All Public Plans-Total Fund



	2017	2016	2015	2014	2013	2012	2011
● Investment	13.96 (75)	9.78 (7)	-0.12 (56)	6.11 (67)	16.69 (56)	9.95 (91)	-1.11 (79)
● Index	12.72 (89)	8.66 (19)	0.45 (39)	6.55 (57)	14.83 (76)	12.97 (40)	1.28 (29)
Median	15.41	7.30	0.07	6.76	17.01	12.48	0.32

Comparative Performance

	1 Qtr Ending Jun-2018	1 Qtr Ending Mar-2018	1 Qtr Ending Dec-2017	1 Qtr Ending Sep-2017	1 Qtr Ending Jun-2017	1 Qtr Ending Mar-2017
Investment	1.15 (65)	-0.37 (58)	3.78 (47)	3.19 (71)	2.84 (61)	3.47 (90)
Index	0.87 (81)	-0.52 (69)	3.62 (59)	2.95 (86)	2.27 (88)	3.31 (93)
Median	1.42	-0.28	3.74	3.44	2.97	4.39



Fund Information

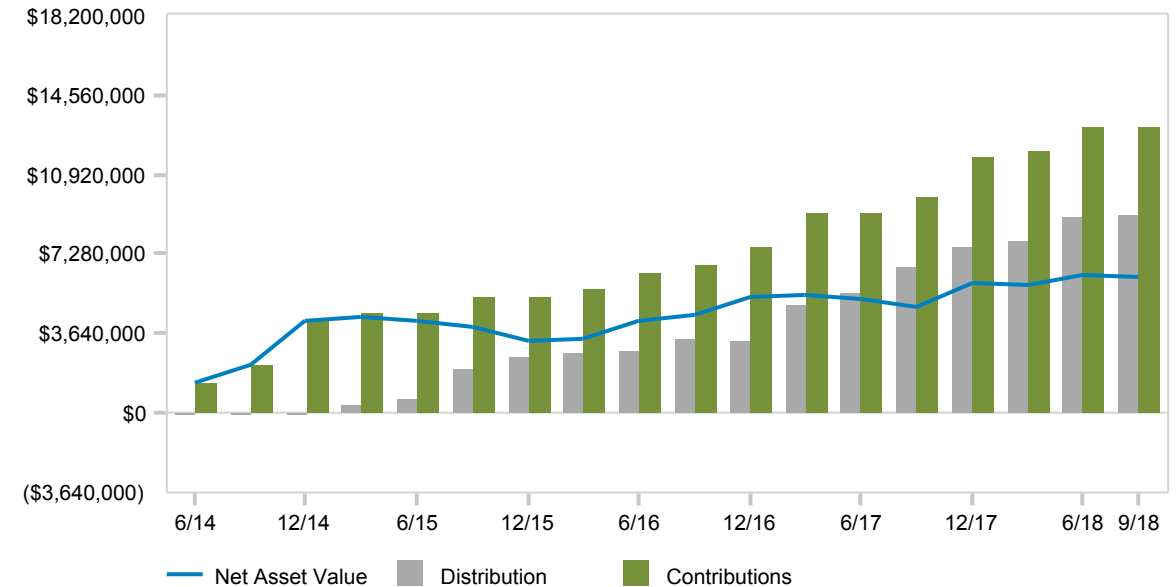
Type of Fund:	Direct	Vintage Year:	2014
Strategy Type:	Value-Add Real Estate	Management Fee:	1.50% on Committed Capital plus 20% after 9% Preferred Return
Size of Fund:	329,500,000	Preferred Return:	9.00%
Inception:	06/02/2014	General Partner:	JCR Capital
Final Close:	01/14/2016		

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.

Cash Flow Summary

Capital Committed:	\$10,000,000
Capital Contributed:	\$7,005,339
Management Fees:	\$526,338
Expenses:	\$232
Catch Up Interest:	-
Remaining Capital Commitment:	\$2,994,661
Distributions (Income + Return of Capital):	\$9,103,424
Market Value:	\$6,198,584
Inception Date:	06/02/2014
Inception IRR:	12.25
TVPI:	1.15
DPI:	0.67

Cash Flow Analysis



Fund Information

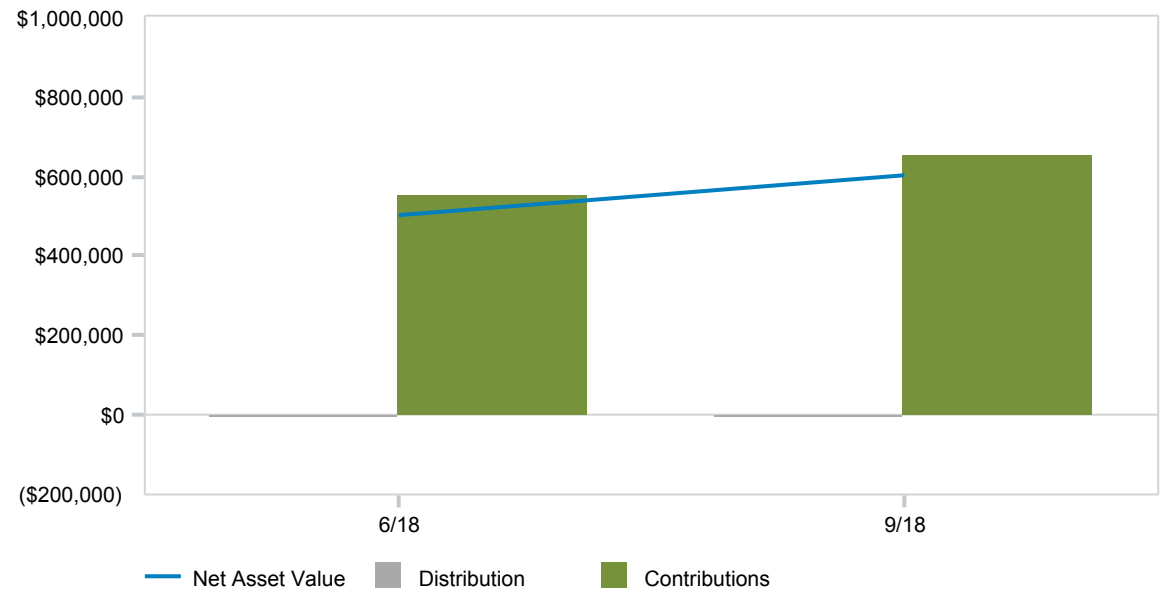
Type of Fund:	Partnership	Vintage Year:	2017
Strategy Type:	Value-Add Real Estate	Management Fee:	1.50%
Size of Fund:	216,495,000	Preferred Return:	8.00% Incentive Fee 20.00%
Inception:	10/20/2017	General Partner:	JCR Capital Investment Company, LLC
Final Close:	TBD		

Investment Strategy: The JCR Income Plus Fund IV, L.P. (the "Fund" or "Fund IV") will seek to provide high current returns as well as long-term capital appreciation to its investors by providing short-term, customized capital solutions to middle market commercial real estate operators for value-add, underperforming, undermanaged and opportunistic properties. Fund IV will seek to invest in a diversified portfolio which will primarily consist of high yield debt, participating debt, structured preferred equity and structured equity positions primarily in cash flowing commercial real estate properties in the United States. The Fund will seek to invest in a variety of property types including multifamily, industrial, office, retail and unique middle market special situations. The Fund will generally seek to make investments between \$5 million and \$15 million in large liquid markets in the U.S. with durations ranging from six to 36 months. Fund IV will have a total target capitalization of \$300 million, with over \$14 million being committed by JCR affiliates. To date, Fund IV has \$225 million in total commitments, and has made 8 investments representing \$36 million in investment commitments.

Cash Flow Summary

Capital Committed:	\$5,000,000
Capital Contributed:	\$655,000
Management Fees:	-
Expenses:	-
Catch Up Interest:	-
Remaining Capital Commitment:	\$4,345,000
Distributions (Income + Return of Capital):	\$459
Market Value:	\$602,557
Inception Date:	05/04/2018
Inception IRR:	-10.06
TVPI:	0.92
DPI:	0.00

Cash Flow Analysis



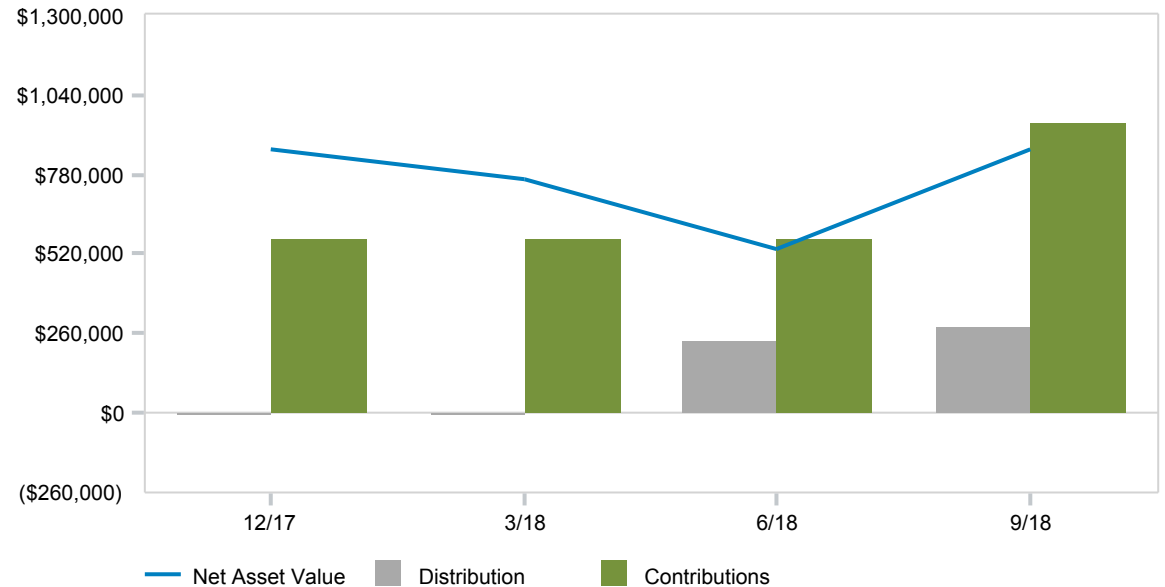
Fund Information

Type of Fund:	Partnership	Vintage Year:	2016
Strategy Type:	Secondaries	Management Fee:	1.00%
Size of Fund:	2,647,000,000,000	Preferred Return:	8.00%
Inception:	12/15/2016	General Partner:	Landmark Real Estate Fund-GP VIII, L.P.
Final Close:	Anticipated March 2018		
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.		

Cash Flow Summary

Capital Committed:	\$5,000,000
Capital Contributed:	\$934,909
Management Fees:	-
Expenses:	-
Catch Up Interest:	\$11,138
Remaining Capital Commitment:	\$4,065,091
Distributions (Income + Return of Capital):	\$283,894
Market Value:	\$865,166
Inception Date:	12/21/2017
Inception IRR:	43.90
TVPI:	1.23
DPI:	0.30

Cash Flow Analysis



Southfield Fire and Police Retirement System
Total Fund Asset Allocation Compliance Summary

September 30, 2018

Total Portfolio Compliance Summary							
	September 30, 2018 Market Value \$	Current Allocation %	IPS Target Allocation %	IPS Range Allocation %	Act 314 Limit %	Compliance within Ranges	Compliance w/314 Limits
Total Portfolio (excluding Unfunded Commitments)	201,004,714.39	100.0%					
Total Equity (14)	107,265,842.70	53.4%	50.0%	40.0% - 70.0%	70.0%	YES	YES
Domestic Equity (14)	71,698,388.93	35.7%	34.0%	29.0% - 39.0%	70.0%	YES	YES
International Equity (14)	35,567,453.77	17.7%	16.0%	11.0% - 21.0%	70.0%	YES	YES
Total US Fixed Income (17 & 17.1.a.iii)	41,820,965.15	20.8%	20.0%	20.0% - 50.0%	100.0%	YES	YES
US Investment Grade Fixed Income (17)	41,820,965.15	20.8%	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)	24,619,435.72	12.2%	14.0%	0.0% - 20.0%	20.0%	YES	YES
Alternative Investments (20d)	24,419,154.16	12.1%	16.0%	0.0% - 20.0%	20.0%	YES	YES
Short Term/Cash Reserves	2,879,316.66	1.4%	0.0%	0.0% - 3.0%	N/A	YES	YES



Commission Recapture Program

Broker	2002 thru 2010	2011	2012	2013	2014	2015	2016	2017	YTD 18
Bank of New York*	\$102,260	\$6,458	\$5,200	\$2,796	\$2,501	\$1,325	\$1,613	\$1,000	\$336
Income to Fund	\$102,260	\$6,458	\$5,200	\$2,796	\$2,501	\$1,325	\$1,613	\$1,000	\$336

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 2010	2011	2012	2013	2014	2015	2016	2017	YTD 18
Gross Income	\$522,900	\$97,838	\$98,488	\$110,349	\$131,990	\$123,118	\$147,987	\$134,192	\$102,618
Less: Program Fees	\$209,695	\$39,093	\$39,342	\$44,072	\$52,698	\$49,144	\$59,108	\$53,576	\$40,964
Income To Fund	\$313,205	\$58,745	\$59,146	\$66,277	\$79,292	\$73,974	\$88,879	\$80,616	\$61,655



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.



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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.

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