Investment Performance Review Period Ending March 31, 2018

Southfield Fire & Police Retirement System

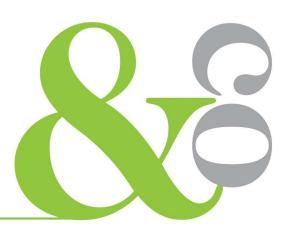


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			Index Re	turns (%)			_
<u>Equities</u>	Month	<u>3 M</u>	YTD	1 Year	<u>3 Yr</u> <u>Ann</u>	<u>5 Yr</u> <u>Ann</u>	
S&P 500 Total Return	(2.54)	(0.76)	(0.76)	13.99	10.77	13.30	
Russell Midcap Index	0.06	(0.46)	(0.46)	12.18	7.99	12.08	_ '
Russell 2000 Index	1.29	(80.0)	(0.08)	11.79	8.37	11.45	_
Russell 1000 Growth Indx	(2.74)	1.41	1.41	21.25	12.88	15.52	_ '
Russell 1000 Value Index	(1.76)	(2.83)	(2.83)	6.93	7.86	10.77	
Russell 3000 Index	(2.01)	(0.64)	(0.64)	13.80	10.21	13.02	_ ,
MSCI EAFE NR	(1.80)	(1.53)	(1.53)	14.80	5.55	6.49	
MSCI EM NR	(1.86)	1.42	1.42	24.93	8.80	4.98	

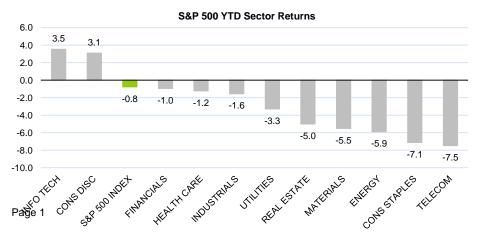
_	Russell In	dices Style	Returns				
	V	В	G		V	В	G
- L	-2.8	-0.7	1.4	L	13.6	21.7	30.2
М	-2.5	-0.5	2.2	М	13.3	18.5	25.3
S	-2.6	-0.1	2.3	s	7.8	14.6	22.1
- '		YTD		'		2017	

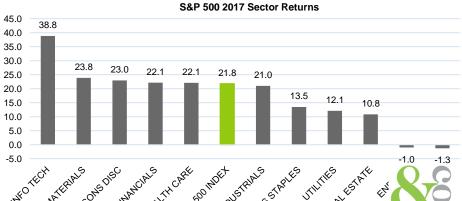
		Index Re	turns (%)		_	
Fixed Income	<u>Month</u>	<u>3 M</u>	YTD	1 Year	Mod. Adj. Duration	Yield to Worst
U.S. Aggregate	0.64	(1.46)	(1.46)	1.20	6.08	3.12
U.S. Corporate Investment Grade	0.25	(2.32)	(2.32)	2.70	7.50	3.76
U.S. Corporate High Yield	(0.60)	(0.86)	(0.86)	3.78	4.06	6.19
Global Aggregate	1.06	1.36	1.36	6.97	7.10	1.83

s (%)		_				Levels	
<u>TD</u>	1 Year	Mod. Adj. Duration	Yield to Worst	<u>Currencies</u>	03/31/18	12/31/17	12/31/16
.46)	1.20	6.08	3.12	Euro Spot	1.23	1.20	1.05
.32)	2.70	7.50	3.76	British Pound Spot	1.40	1.35	1.23
.86)	3.78	4.06	6.19	Japanese Yen Spot	106.28	112.69	116.96
.36	6.97	7.10	1.83	Swiss Franc Spot	0.95	0.97	1.02

			Levels (%)		
Key Rates	03/31/18	12/31/17	12/31/16	12/31/15	12/31/14
3 Month	1.70	1.38	0.50	0.16	0.04
US 2 Year	2.27	1.88	1.19	1.05	0.66
US 10 Year	2.74	2.41	2.44	2.27	2.17
US 30 Year	2.97	2.74	3.07	3.02	2.75
ICE LIBOR USD 3M	2.31	1.69	1.00	0.61	0.26
Euribor 3 Month ACT/360	(0.33)	(0.33)	(0.32)	(0.13)	0.08
Bankrate 30Y Mortgage Rates Na	4.27	3.85	4.06	3.90	3.99
Prime	4.75	4.50	3.75	3.50	3.25

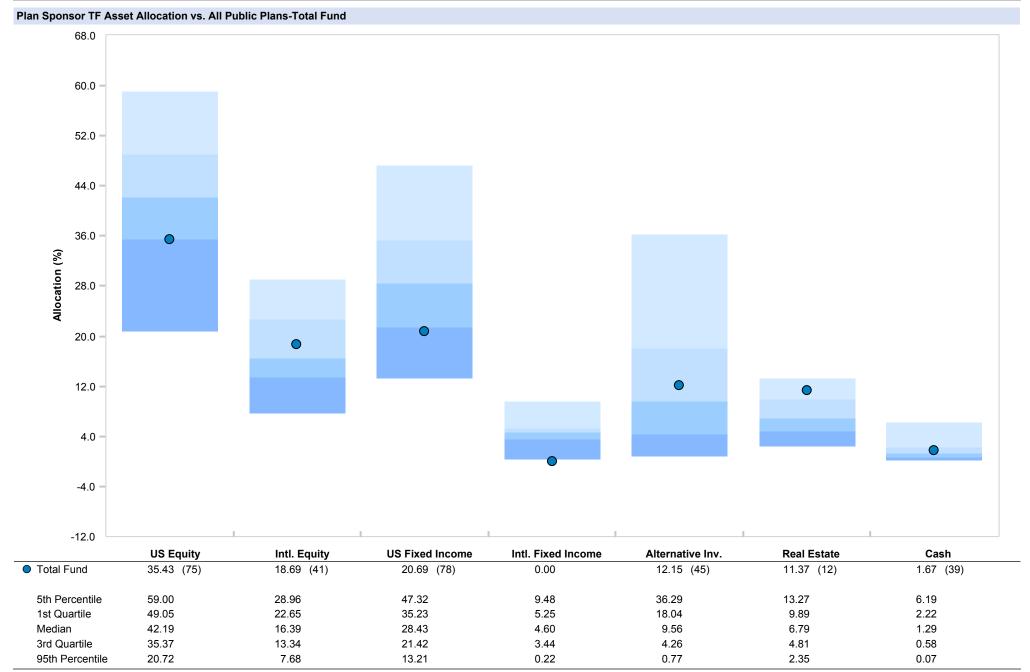
		Levels	
<u>Commodities</u>	03/31/18	12/31/17	12/31/16
Oil	64.94	60.27	56.64
Gasoline	2.65	2.49	2.34
Natural Gas	2.73	2.74	2.91
Gold	1,327.30	1,318.70	1,176.10
Silver	16.27	17.22	16.35
Copper	302.55	331.50	252.40
Corn	387.75	359.00	394.50
BBG Commodity TR Idx	179.24	179.96	176.94





- Total Fund return of -0.34% outperformed the Policy Index return of -0.50%. The primary drivers of the outperformance for the quarter were excess performance from 1607, Tortoise Credit, PRISA II and Nantucket.
- Morgan Dempsey (Micro Cap Equity) underperformed their benchmark by 2.48% for the quarter, returning -3.13% vs. -0.65% for their benchmark.
- 1607 Capital Partners outperformed their benchmark by 0.99% for the quarter, and ranks favorably over all time periods.
- In their third quarter of watch status, Brandes Emerging Markets underperformed by -1.35%. Their watch status was set to expire on 12/31/2017. We recommend extending watch until 6/30/2018.
- Both Domestic Fixed Income managers, Tortoise Credit and Loomis Sayles continue to outperform their benchmarks.
- Avignon Holdings LLC carried at \$3.42 million book value. No investment activity this period.
- Fintan is in the process of winding down their institutional fund. There was zero distribution activity during 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, thought they still turned in a positive return in a negative fixed income environment. Long term results remain strong.
- Fund III continued to call capital, and is now 76% called. JCR Fund IV issued its first capital call in late April.
- Landmark Fund VII made their first call in December 2017. There was not call activity during the quarter.
- At quarter end, cash was above the target level, offset by below target allocations to real estate and alternatives.
 Allocation levels are being addressed.
- As of 3/31/2018, the Total Fund is in compliance with the Investment Policy Statement and Public Act 314.





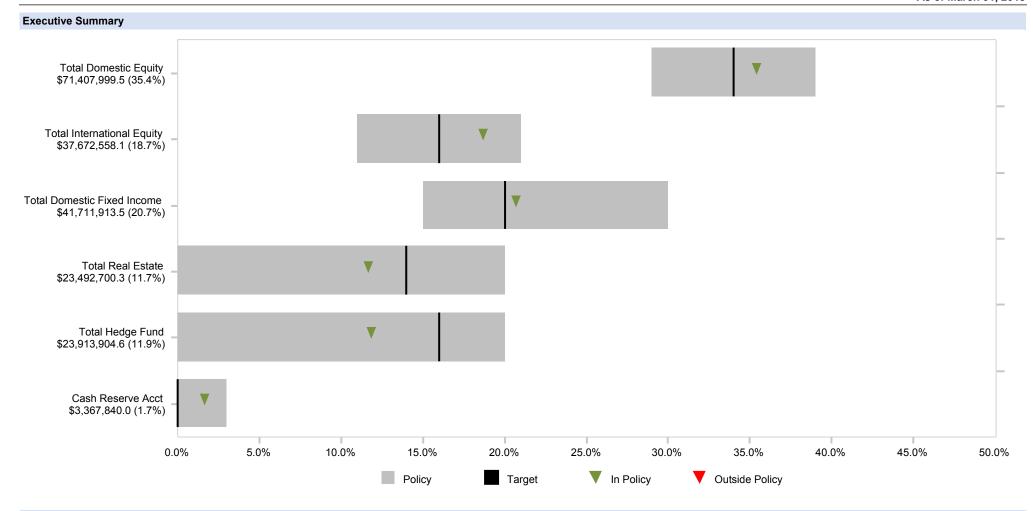
Parentheses contain percentile rankings. Calculation based on quarterly periodicity.



Comparative Performance Trailing Returns Southfield Fire & Police Retirement System As of March 31, 2018

Comparative	e Performance								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fund	-0.3369	-0.3369	9.5903	6.8461	7.8725	6.8736	6.2368	7.6791	01/01/1989



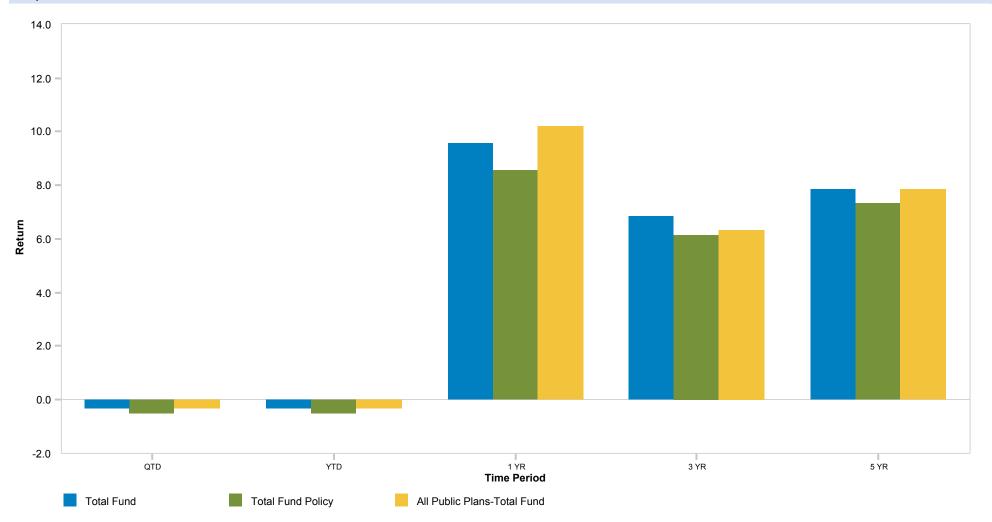


Asset Allocation Compliance								
	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Target Allocation (%)	Maximum Allocation (%)	Min. Rebal. (\$000)	Target Rebal. (\$000)	Max. Rebal. (\$000)
Total Fund	201,566,916	100.0	N/A	100.0	N/A	-	-	-
Total Domestic Equity	71,407,999	35.4	29.0	34.0	39.0	-12,953,594	-2,875,248	7,203,098
Total International Equity	37,672,558	18.7	11.0	16.0	21.0	-15,500,197	-5,421,852	4,656,494
Total Domestic Fixed Income	41,711,913	20.7	15.0	20.0	30.0	-11,476,876	-1,398,530	18,758,161
Total Real Estate	23,492,700	11.7	0.0	14.0	20.0	-23,492,700	4,726,668	16,820,683
Total Hedge Fund	23,913,905	11.9	0.0	16.0	20.0	-23,913,905	8,336,802	16,399,479
Cash Reserve Acct	3,367,840	1.7	0.0	0.0	3.0	-3,367,840	-3,367,840	2,679,167



ain/Loss Summary					
	QTD	YTD	1 YR	3 YR	5 YR
otal Fund					
Beginning Market Value	205,543,832	205,543,832	196,584,005	198,641,927	184,276,625
Net Contributions	-2,964,181	-2,964,181	-11,896,993	-31,373,993	-48,561,299
ROI (Income + Gain/Loss)	-668,538	-668,538	18,343,465	38,504,042	72,960,249
Ending Market Value	201,566,916	201,566,916	201,566,916	201,566,916	201,566,916

Comparative Performance





Asset Allocation Attributes														
	Domestic	Equity	Internation	al Equity	Domestic Inco		Real E	state	Hedge	Fund	Cash Equ	uivalent	Total F	und
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	71,061,529	35.25	36,668,145	18.19	41,086,320	20.38	23,492,700	11.66	23,913,903	11.86	5,344,319	2.65	201,566,916	100.00
Total Domestic Equity	71,061,529	99.51	-	-	-	-	-	-	-	-	346,471	0.49	71,407,999	35.43
LSIA LC 30/70	16,440,290	99.62	-	_	-	_	_	_	-	_	62,620	0.38	16,502,910	8.19
LSIA Dividend Aristocrats	12,240,614	99.46	-	-	-	-	-	-	-	-	67,007	0.54	12,307,621	6.11
LSIA S&P 500 Low Volatility	11,822,627	99.58	-	_	-	_	_	_	_	_	49,488	0.42	11,872,115	5.89
NTGI S&P Midcap 400 - Lending	20,177,536	99.99	-	-	-	-	-	-	-	-	2,420	0.01	20,179,955	10.01
Morgan Dempsey	10,380,462	98.44	-	-	-	-	-	-	-	-	164,937	1.56	10,545,398	5.23
Total International Equity	-	-	36,668,145	97.33	-	-	-	-	-	-	1,004,414	2.67	37,672,558	18.69
1607 Capital Partners	_	_	27,347,676	96.46	_	_	_	_	_		1,004,414	3.54	28,352,089	14.07
Brandes Emerging Mkts	-	-	9,320,469	100.00	-	-	-	-	-	-	-	-	9,320,469	4.62
Total Domestic Fixed Income	-	-	-	-	41,086,320	98.50	-	-	-	-	625,593	1.50	41,711,913	20.69
Avignon - Mortgage Loan	-	-	-	-	3,420,002	100.00	-	-	-	-	-	-	3,420,002	1.70
Tortoise Credit	-	-	-	-	18,712,898	96.77	-	-	-	-	625,593	3.23	19,338,491	9.59
Loomis Sayles Intermediate Duration	-	-	-	-	18,953,420	100.00	-	-	-	-	-	-	18,953,420	9.40
Total Real Estate	-	-	-	-	-	-	23,492,700	100.00	-	-	-	-	23,492,700	11.66
PRISA I	_	_	_	_	_	_	6,080,601	100.00	_	_	_	_	6,080,601	3.02
PRISA II	_	_	_	_	_	_	5,140,630	100.00	_	_	_	_	5,140,630	2.55
PRISA III	_	_	_	_	_	_	5,787,484	100.00	_	_	_	_	5,787,484	2.87
JCR Capital Fund 3 B	_	_	_	_	_	_	5,912,112	100.00	_	_	_	_	5,912,112	2.93
Landmark Real Estate Partners VIII, L.P.	-	-	-	-	-	-	571,873	100.00	-	-	-	-	571,873	0.28
Total Hedge Fund	-	-	-	-	-	-	-	-	23,913,903	100.00	2	0.00	23,913,905	11.86
Nantucket Institutional									12,465,328	100.00	_		12,465,328	6.18
Fintan Partners	-	-	-	-	-	-	-	-	421,231	100.00	2	0.00	421,233	0.18
	-	-	-	-	-	-	-	-	,		2	0.00	,	
KStone Partners	-	-	-	-	-	-	-	-	11,027,344	100.00	-	-	11,027,344	5.47
Cash Reserve Acct	-	-	-	-	-	-	-	-	-	-	3,367,840	100.00	3,367,840	1.67



Comparative Performance																	
	Q ⁻	ΓR	Y	ΓD	1 \	/R	3 \	ΥR	5 \	ΥR	7 `	Y R	10	YR	Ince	ption	Inception Date
Total Fund	-0.34	(50)	-0.34	(50)	9.59	(66)	6.85	(31)	7.87	(49)	6.87	(83)	6.24	(76)	7.68	(91)	01/01/1989
Total Fund Policy	-0.50	(63)	-0.50	(63)	8.55	(81)	6.16	(60)	7.33	(69)	7.31	(62)	6.40	(68)	8.46	(56)	
All Public Plans-Total Fund Median	-0.34		-0.34		10.20		6.33		7.84		7.49		6.62		8.55		
Population	468		468		459		432		422		410		377		34		
Total Fund (Net of Fees)	-0.45		-0.45		9.04		6.17		N/A		N/A		N/A		6.01		01/01/2014
Total Domestic Equity	-1.43		-1.43		11.40		N/A		N/A		N/A		N/A		14.40		01/01/2016
LSIA LC 30/70	-1.20	(55)	-1.20	(55)	N/A		N/A		N/A		N/A		N/A		10.90	(85)	05/01/2017
S&P 500 Equal Weighted	-1.01	(42)	-1.01	(42)	11.65	(85)	9.08	(85)	12.86	(75)	12.33	(80)	11.03	(9)	10.90	(85)	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	-1.18	` /	-1.18		14.37	` /	10.73	` '	13.45	` /	13.07	` '	9.96	` '	13.40	` '	
Population	49		49		49		47		46		45		44		49		
LSIA Dividend Aristocrats	-2.26	(90)	-2.26	(90)	13.17	(65)	10.20	(50)	12.93	(60)	N/A		N/A		14.86	(45)	07/01/2012
S&P 500 Dividend Aristocrats Index TR	-2.24	(89)	-2.24	(89)	13.30	(63)	10.07	(52)	12.82	(62)	14.02	(16)	12.42	(3)	14.77	(46)	
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.42	, ,	-0.42	. ,	14.23		10.20	, ,	13.33	, ,	12.76	, ,	9.74	. ,	14.61	, ,	
Population	227		227		226		223		213		197		175		203		
LSIA S&P 500 Low Volatility	-0.88	(68)	-0.88	(68)	10.48	(86)	N/A		N/A		N/A		N/A		12.76	(86)	01/01/2017
S&P 500 Low Volatility Index TR	-0.86	(68)	-0.86	(68)	10.63	(86)	9.99	(54)	11.38	(85)	13.12	(36)	10.93	(12)	12.91	(85)	
IM U.S. Large Cap Core Equity (SA+CF) Median	-0.42		-0.42		14.23		10.20		13.33		12.76		9.74		16.57		
Population	227		227		226		223		213		197		175		226		
NTGI S&P Midcap 400 - Lending	-0.75	(48)	-0.75	(48)	11.05	(50)	9.14	(36)	12.09	(58)	11.16	(78)	N/A		16.12	(78)	07/01/2009
S&P MidCap 400 Index	-0.77	(57)	-0.77	(57)	10.97	(58)	8.96	(49)	11.97	(69)	11.29	(73)	10.90	(67)	16.16	(73)	
IM U.S. Mid Cap Core Equity (SA+CF) Median	-0.76		-0.76		11.04		8.84		12.35		11.67		10.99		16.41		
Population	47		47		47		46		44		40		36		40		
Morgan Dempsey	-3.13	(88)	-3.13	(88)	10.04	(79)	9.43	(57)	N/A		N/A		N/A		5.60	(83)	04/01/2014
40/60 R2000V/Russell Micro	-0.65	(54)	-0.65	(54)	10.11	(78)	8.02	(71)	11.08	(85)	10.03	(88)	9.01	(94)	7.02	(75)	
IM U.S. Micro Cap Equity (SA+CF) Median	-0.34		-0.34		12.82		10.14		13.28		11.68		12.12		8.70		
Population	48		48		48		44		42		35		30		43		
Total International Equity	-0.04		-0.04		20.24		N/A		N/A		N/A		N/A		17.05		01/01/2016
1607 Capital Partners	-0.09	(51)	-0.09	(51)	21.24	(42)	9.17	(44)	8.15	(48)	6.75	(49)	5.86	(34)	7.18	(35)	07/01/2006
MSCI AC World ex USA	-1.08	(70)	-1.08	(70)	17.05	(65)	6.68	(73)	6.37	(75)	4.73	(79)		(85)	4.53	(82)	2770172000
IM International Equity (SA+CF) Median	-0.09	(, 0)	-0.09	(, 0)	19.68	(00)	8.44	(10)	7.99	(10)	6.67	(, 0)	4.84	(00)	6.38	(02)	
Population	841		841		839		804		739		638		538		460		



	Q.	ΓR	Y	ΓD	1 \	r	3 \	ΥR	5 \	r	7 Y	/R	10	YR	Ince	ption	Inception Date
Brandes Emerging Mkts	0.12	(84)	0.12	(84)	16.45	(89)	11.33	(30)	N/A		N/A		N/A		3.08	(89)	07/01/2014
MSCI Emerging Markets Index	1.47	(58)	1.47	(58)	25.37	(46)	9.21	(59)	5.37	(63)	2.83	(77)	3.36	(79)	5.68	(58)	
IM Emerging Markets Equity (SA+CF) Median	1.85		1.85		24.89		9.73		6.00		4.46		4.32		6.19		
Population	233		233		233		222		191		143		105		212		
Total Domestic Fixed Income	-0.67		-0.67		1.37		N/A		N/A		N/A		N/A		3.22		01/01/2016
Tortoise Credit	-0.58	(17)	-0.58	(17)	1.71	(11)	2.39	(4)	N/A		N/A		N/A		3.30	(3)	10/01/2013
Bloomberg Barclays Intermed Aggregate Index	-1.05	(83)	-1.05	(83)	0.51	(89)	1.02	(85)	1.45	(72)	2.34	(74)	3.18	(80)	1.85	(71)	
IM U.S. Intermediate Duration (SA+CF) Median	-0.90		-0.90		0.84		1.34		1.63		2.63		3.59		2.05		
Population	141		141		140		138		133		128		115		135		
Loomis Sayles Intermediate Duration	-0.87	(43)	-0.87	(43)	1.30	(24)	N/A		N/A		N/A		N/A		0.42	(21)	08/01/2016
Bloomberg Barclays Intermediate US Govt/Credit Idx	-0.98	(70)	-0.98	(70)	0.35	(95)	0.94	(90)	1.25	(90)	2.25	(85)	2.92	(92)	-0.65	(93)	
IM U.S. Intermediate Duration (SA+CF) Median	-0.90		-0.90		0.84		1.34		1.63		2.63		3.59		-0.11		
Population	141		141		140		138		133		128		115		140		
PRISA Real Estate Composite	2.56		2.56		9.83		12.05		13.31		13.37		5.03		8.25		07/01/1993
PRISA I	2.42	(10)	2.42	(10)	8.44	(50)	10.20	(40)	11.70	(50)	12.08	(50)	4.67	(91)	6.70	(N/A)	01/01/2006
NCREIF Fund Index-ODCE (VW)	2.19	(44)	2.19	(44)	8.06	(70)	9.99	(61)	11.42	(54)	11.79	(55)	5.11	(63)	6.85	(N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.14		2.14		8.42		10.18		11.70		12.08		5.22		N/A		
Population	11		11		11		11		11		11		11		N/A		
PRISA II	3.13	(1)	3.13	(1)	10.09	(11)	11.87	(21)	13.32	(21)	13.96	(31)	4.26	(100)	6.35	(N/A)	01/01/2006
NCREIF Fund Index-ODCE (VW)	2.19	(44)	2.19	(44)	8.06	(70)	9.99	(61)	11.42	(54)	11.79	(55)	5.11	(63)	6.85	(N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.14		2.14		8.42		10.18		11.70		12.08		5.22		N/A		
Population	11		11		11		11		11		11		11		N/A		
PRISA III	2.22	(41)	2.22	(41)	11.32	(1)	15.28	(1)	16.86	(1)	N/A		N/A		16.86	(1)	04/01/2013
NCREIF Fund Index-ODCE (VW)	2.19	(44)	2.19	(44)	8.06	(70)	9.99	(61)	11.42	(54)	11.79	(55)	5.11	(63)	11.42	(54)	
IM U.S. Open End Private Real Estate (SA+CF) Median	2.14		2.14		8.42		10.18		11.70		12.08		5.22		11.70		
Population	11		11		11		11		11		11		11		11		



	Q	ΓR	Y	ΓD	1 \	/R	3 \	ΥR	5 `	ΥR	7 '	r R	10	YR	Ince	ption	Inception Date
Total Hedge Fund	0.90		0.90		6.34		N/A		N/A		N/A		N/A		4.70		01/01/2016
Nantucket Institutional	1.44	(2)	1.44	(2)	9.71	(2)	4.19	(6)	7.44	(1)	6.99	(1)	N/A		5.36	(1)	07/01/2008
HFRI FOF: Diversified Index	0.57	(5)	0.57	(5)	5.47	(15)	1.64	(25)	3.31	(7)	2.60	(31)	1.63	(38)	1.46	(47)	
IM Alternative Multi-Strategy (MF) Median	-0.88		-0.88		1.87		0.39		1.66		2.07		1.40		1.31		
Population	233		233		203		153		71		38		14		14		
Fintan Partners	0.28	(43)	0.28	(43)	-3.10	(99)	N/A		N/A		N/A		N/A		-1.64	(100)	10/01/2015
90 Day T-Bill +5%/Yr	1.59	(8)	1.59	(8)	6.17	(10)	5.52	(5)	5.33	(1)	5.26	(1)	5.34	(1)	5.61	(16)	
IM Alternative Credit Focus (MF) Median	0.11		0.11		2.66		2.40		1.97		2.73		3.87		4.01		
Population	275		275		265		194		107		72		36		227		
KStone Partners	0.33	(40)	0.33	(40)	5.57	(15)	N/A		N/A		N/A		N/A		4.54	(38)	10/01/2015
90 Day T-Bill +3.5%/Yr	1.22	(11)	1.22	(11)	4.65	(23)	4.01	(14)	3.82	(4)	3.75	(6)	3.83	(52)	4.10	(49)	
IM Alternative Credit Focus (MF) Median	0.11		0.11		2.66		2.40		1.97		2.73		3.87		4.01		
Population	275		275		265		194		107		72		36		227		







Fund Information

Cash Flow Summary

Final Close:

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

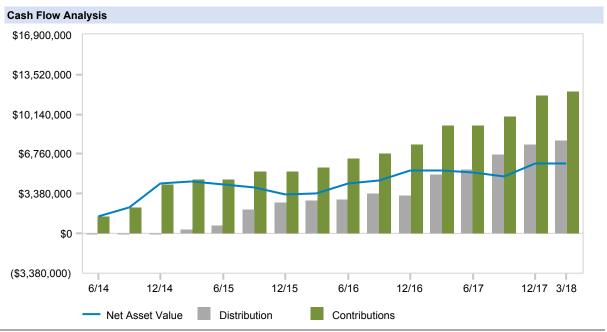
Investment Strategy: In line with the prior JCR funds, Fund III B is credit-focused with a mandate of protecting principal while providing investors with attractive risk adjusted returns, including current yield

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.

Capital Committed: \$10,000,000 **Capital Contributed:** \$7,558,662 \$504,658 Management Fees: Expenses: Catch Up Interest: **Remaining Capital Commitment:** \$2,441,338 Distributions (Income + Return of Capital): \$7,863,739 Market Value: \$5.912.112 **Inception Date:** 06/02/2014 Inception IRR: 11.39 TVPI: 1.12 DPI: 0.63

01/14/2016





Fund Information

Cash Flow Summary

Type of Fund:PartnershipVintage Year:2016Strategy Type:SecondariesManagement Fee:1.00%Size of Fund:2,647,000,000,000Preferred 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 RÉIT vehicles.

Capital Committed:	-
Capital Contributed:	\$560,735
Management Fees:	-
Expenses:	-
Catch Up Interest:	\$11,138
Remaining Capital Commitment:	-\$560,735
Distributions (Income + Return of Capital):	-
Market Value:	\$571,873
Inception Date:	12/21/2017
Inception IRR:	0.00
TVPI:	1.02
DPI:	0.00





March 31, 2018

Total Portfolio Compliance Summary							
	March 31, 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)	201,626,536.43	100.0%					
Total Equity (14)	109,080,557.58	54.1%	50.0%	40.0% - 70.0%	70.0%	YES	YES
Domestic Equity (14)	71,407,999.46	35.4%	34.0%	29.0% - 39.0%	70.0%	YES	YES
International Equity (14)	37,672,558.12	18.7%	16.0%	11.0% - 21.0%	70.0%	YES	YES
Total US Fixed Income (17 & 17.1.a.iii)	41,711,913.48	20.7%	20.0%	20.0% - 50.0%	100.0%	YES	YES
US Investment Grade Fixed Income (17)	41,711,913.48	20.7%	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
		0.00/	0.00/	0.00/ 0.00/	20.00/	VEO	VEC
Total Non US Fixed Income (20k)		0.0%	0.0%	0.0% - 0.0%	20.0%	YES	YES
Total Real Estate (18 & 19)	23,492,700.25	11.7%	14.0%	0.0% - 20.0%	20.0%	YES	YES
Alternative Investments (20d)	23,973,525.14	11.9%	16.0%	0.0% - 20.0%	20.0%	YES	YES
Short Term/Cash Reserves	3,367,839.98	1.7%	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	\$5200	\$2796	\$2501	\$1,325	\$1,613	\$1,000	\$181
Income to Fund	\$102,260	\$6,458	\$5,200	\$2,796	\$2,501	\$1,325	\$1,613	\$1,000	\$181

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	\$28,714
Less: Program Fees	\$209,695	\$39,093	\$39,342	\$44,072	\$52,698	\$49,144	\$59,108	\$53,576	\$11,463
Income To Fund	\$313,205	\$58,745	\$59,146	\$66,277	\$79,292	\$73,974	\$88,879	\$80,616	\$17,251



Total Fund Objectives:

- To earn an annual average return of 7.75% 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 I	Return
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- 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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