Investment Performance Review Period Ending September 30, 2017

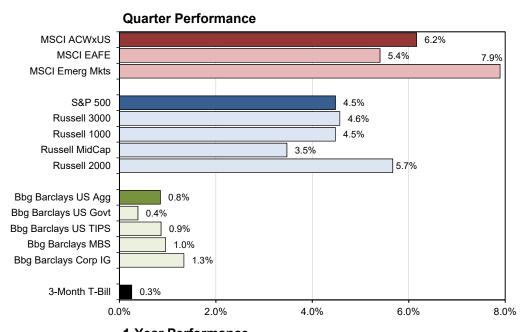
# Southfield Fire & Police Retirement System

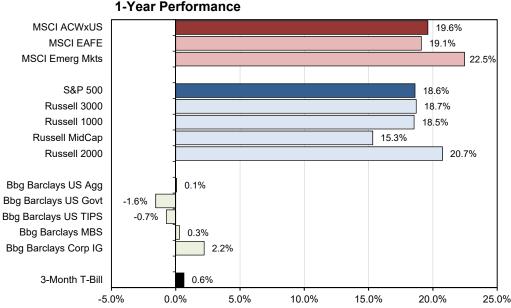


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- Returns were positive for major equity and fixed income indices for the 3rd quarter of 2017. Broad domestic and international equity market performance was largely fueled by continued improvement in corporate earnings and macroeconomic data worldwide. Domestic equities trailed international indices during the guarter. While U.S. economic fundamentals and corporate earnings growth were viewed positively, market participants faced headwinds from increasing tension between the U.S. and North Korea, several major weather events and ongoing political concerns surrounding the pace of implementation of Trump administration expansive fiscal policy reforms. Despite these concerns, investor optimism remained high and many major domestic equity indices hit record levels during the quarter. Small cap equities outperformed large cap stocks for the quarter with the Russell 2000 Index returning 5.7% versus a 4.5% return for the S&P 500 Index. Small cap companies have also been the best performers domestically over the last 12 months, returning over 20%. While small cap equities lead the charge, all U.S. core market capitalization indices returned over 15% over the last year.
- International equity market benchmarks continued to outpace U.S. markets through the 3<sup>rd</sup> quarter of 2017 as both developed and emerging market international equities saw benefits from continued strength in global macroeconomic data, a weakening U.S. Dollar (USD) and ongoing accommodative global central bank policies. The improving economic fundamentals worldwide have led many international central banks to begin telegraphing an eventual reduction in stimulus going forward, with both the European Central Bank and the Bank of England expected to announce plans to reduce stimulus before year end. Emerging markets, which benefitted from a weakening USD and rising commodity prices during the period, continued their trend of outperformance relative to developed markets. The MSCI Emerging Market Index returned 7.9% for the quarter and a solid 22.5% for the 1-year period. While weaker by comparison, the developed market MSCI EAFE Index also posted robust performance, returning 5.4% for the quarter and 19.1% for the year.
- The yield curve continued to flatten through the 3<sup>rd</sup> quarter of 2017 as interest rates rose slightly from the prior quarter, but with greater magnitude in short-term maturities. The Federal Reserve announced that its plan to systematically shrink the size of its balance sheet would begin in October. Broad fixed income indices posted positive results with the bellwether Bloomberg Barclays U.S. Aggregate Index returning 0.8% for the quarter. Benefitting from tightening credit spreads, corporate credit has been the best performer among the investment grade sectors with the Bloomberg Barclays U.S. Corporate Investment Grade Index returning 1.3% and 2.2% over the quarter and 1-year period respectively.







- Total Fund return of +3.06% exceeded the Policy Index return of +2.94%.
- Morgan Dempsey (Micro Cap Equity) outperformed their benchmark by 0.99% for the quarter. They will remain on watch until 12/31/2017.
- 1607 Capital Partners outperformed their benchmark by 0.29% for the quarter, and ranks favorably over all time periods.
- In their first quarter of watch status, Brandes Emerging Markets outperformed by 1.27%. They will remain on watch until 12/31/2017.
- Both Domestic Fixed Income managers, Tortoise Credit (+.85%) and Loomis Sayles (+.83%), continue to outperform their benchmarks.
- Avignon Holdings LLC carried at \$3.42 million book value. No investment activity this period.
- Several private market managers have not finalized 9/30/17 information as of this report so the most current information available is used. Managers include JCR II and III.
- Fintan is in the process of winding down their institutional fund.
- While Nantucket underperformed for the quarter, they still ranked in the 19<sup>th</sup> percentile of their peer group. Longer term results remain strong.
- KStone Partners outperformed for the quarter, thought by a very small margin. Long term results remain strong.
- Year-to-date and longer period results for the Total Fund's return, market risk, peer group standing and risk-adjusted returns continue to meet expectations, outperforming the Total Fund Policy for the quarter, YTD, 1 YR, 3 YR, 5 YR, and 10 YR time periods..
- 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 09/30/2017, the Total Fund is in compliance with the Investment Policy Statement and Public Act 314.



# **Commission Recapture Program**

Broker	2002 thru 2010	2011	2012	2013	2014	2015	2016	YTD 17
Bank of New York*	\$102,260	\$6,458	\$5200	\$2796	\$2501	\$1,325	\$1,613	\$628
Income to Fund	\$102,260	\$6,458	\$5,200	\$2,796	\$2,501	\$1,325	\$1,613	\$628

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

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# **Securities Lending Program (Northern Trust)**

	2002 thru 2010	2011	2012	2013	2014	2015	2016	YTD 17
Gross Income	\$522,900	\$97,838	\$98,488	\$110,349	\$131,990	\$123,118	\$147,987	\$100,879
Less: Program Fees	\$209,695	\$39,093	\$39,342	\$44,072	\$52,698	\$49,144	\$59,108	\$40,279
Income To Fund	\$313,205	\$58,745	\$59,146	\$66,277	\$79,292	\$73,974	\$88,879	\$60,600

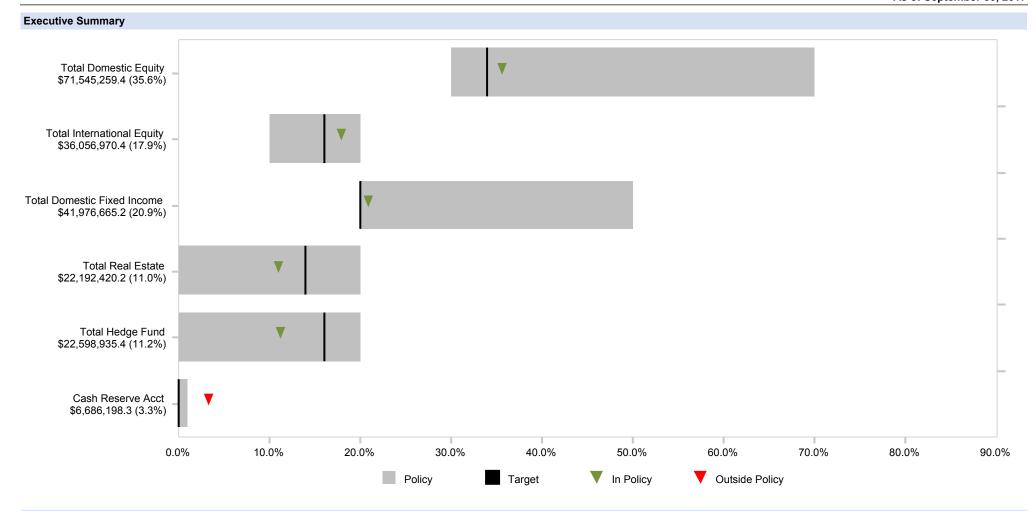


Comparative Performance Trailing Returns Southfield Fire & Police Retirement System

As of September 30, 2017

Comparative Perf	ormance								
	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Total Fund 3.00	9.47	791 11	.4514	6.7886	8.6277	8.1091	5.3292	7.6853	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	201,056,449	100.0	N/A	100.0	N/A	-	-	-
Total Domestic Equity	71,545,259	35.6	30.0	34.0	70.0	-11,228,325	-3,186,067	69,194,255
Total International Equity	36,056,970	17.9	10.0	16.0	20.0	-15,951,326	-3,887,939	4,154,319
Total Domestic Fixed Income	41,976,665	20.9	20.0	20.0	50.0	-1,765,375	-1,765,375	58,551,559
Total Real Estate	22,192,420	11.0	0.0	14.0	20.0	-22,192,420	5,955,483	18,018,870
Total Hedge Fund	22,598,935	11.2	0.0	16.0	20.0	-22,598,935	9,570,096	17,612,354
Cash Reserve Acct	6,686,198	3.3	0.0	0.0	1.0	-6,686,198	-6,686,198	-4,675,634



Asset Allocation Attributes														
	Domestic	Equity	Internation	al Equity	Domestic Inco		Real E	state	Hedge I	Fund	Cash Equ	ıivalent	Total F	und
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	71,343,879	35.48	34,319,879	17.07	41,651,701	20.72	22,192,420	11.04	22,598,935	11.24	8,949,635	4.45	201,056,449	100.00
Total Domestic Equity	71,343,879	99.72	-	-	-	-	-	-	-	-	201,381	0.28	71,545,259	35.58
NTGI S&P Midcap 400 - Lending	19,134,404	100.00	-	_	-	_	-	_	-	_	383	0.00	19,134,787	9.52
LSIA Dividend Aristocrats	12,160,896	99.70	-	-	-	-	-	_	-	-	36,718	0.30	12,197,614	6.07
Morgan Dempsey	11,656,248	99.51	-	-	-	-	-	-	-	-	57,062	0.49	11,713,310	5.83
LSIA S&P 500 Low Volatility	11,967,796	99.53	-	-	-	-	-	-	-	-	56,085	0.47	12,023,881	5.98
LSIA LC 30/70	16,424,535	99.69	-	-	-	-	-	-	-	-	51,133	0.31	16,475,668	8.19
Total International Equity	-	-	34,319,879	95.18	-	-	-	-	-	-	1,737,091	4.82	36,056,970	17.93
1607 Capital Partners	_	_	25,255,226	93.56	_	_	_	_	_	_	1,737,091	6.44	26,992,318	13.43
Brandes Emerging Mkts	-	-	9,064,653	100.00	-	-	-	-	-	-	-	-	9,064,653	4.51
Total Domestic Fixed Income	-	-	-	-	41,651,701	99.23	-	-	-	-	324,965	0.77	41,976,665	20.88
Avignon - Mortgage Loan	_	_	_	_	3,420,002	100.00	_	_	_	_	_	_	3,420,002	1.70
Tortoise Credit	_	_	_	_	19,116,743	98.33	_	_	_	_	324,965	1.67	19,441,708	9.67
Loomis Sayles Intermediate Duration	-	-	-	-	19,114,955	100.00	-	-	-	-	-	-	19,114,955	9.51
Total Real Estate	-	-	-	-	-	-	22,192,420	100.00	-	-	-	-	22,192,420	11.04
PRISA I	_	_	_	_	_	_	6,956,661	100.00	_	_	_	_	6,956,661	3.46
PRISA II	-	_	-	_	-	_	4,945,561	100.00	_	_	_	-	4,945,561	2.46
PRISA III	-	_	-	_	-	_	5,587,171	100.00	_	_	_	-	5,587,171	2.78
JCR Capital Fund 2	-	_	-	_	_	_	303,556	100.00	_	_	_	_	303,556	0.15
JCR Capital Fund 3 B	-	-	-	-	-	-	4,399,472	100.00	-	-	-	-	4,399,472	2.19
Total Hedge Fund	-	-	-	-	-	-	-	-	22,598,935	100.00	-	-	22,598,935	11.24
Nantucket Institutional	-	_	-	-	-	-	-	_	10,789,263	100.00	-	-	10,789,263	5.37
Fintan Partners	-	-	-	-	-	-	-	-	1,059,318	100.00	-	-	1,059,318	0.53
KStone Partners	-	-	-	-	-	-	-	-	10,750,355	100.00	-	-	10,750,355	5.35
Cash Reserve Acct	-	-	-	-	-	-	-	-	-	_	6,686,198	100.00	6,686,198	3.33



Financial Reconciliation Quarter to Da								
	Market Value 07/01/2017	Net Transfers	Contributions	Distributions	Management Fees	Income	Apprec./ Deprec.	Market Value 09/30/2017
Total Fund	197,553,704	-	1,817,765	-3,999,565	-230,292	1,171,950	4,820,034	201,056,449
Total Fulla	101,000,101		1,011,100	0,000,000	200,202	1,111,000	1,020,001	201,000,110
Total Domestic Equity	68,818,596	-	-	-	-40,543	243,127	2,524,080	71,545,259
NTGI S&P Midcap 400 - Lending	18,536,113	-	-	-	-1,854	1	600,526	19,134,787
LSIA Dividend Aristocrats	11,782,738	_	_	-	-8,506	74,462	348,921	12,197,614
Morgan Dempsey	10,975,571	-	-	-	-30,183	34,655	733,267	11,713,310
LSIA S&P 500 Low Volatility	11,669,792	-	-	-	-	58,749	295,339	12,023,881
LSIA LC 30/70	15,854,381	-	-	-	-	75,260	546,027	16,475,668
Total International Equity	33,759,727	-	-	-	-67,204	271,027	2,093,421	36,056,970
1607 Capital Partners	25,449,162	_	_	_	-47,467	271,027	1,319,597	26,992,318
Brandes Emerging Mkts	8,310,566	_	_		-19,737	271,027	773,824	9,064,653
brandes Emerging wikes	0,310,300	_	-	_	-19,737	_	113,024	9,004,033
Total Domestic Fixed Income	41,692,820	-	-	-	-37,899	617,188	-295,445	41,976,665
Avignon - Mortgage Loan	3,420,002	-	-	-	-	-	-	3,420,002
Tortoise Credit	19,293,065	-	-	-	-15,076	617,188	-453,469	19,441,708
Loomis Sayles Intermediate Duration	18,979,753	-	-	-	-22,822	-	158,025	19,114,955
Total Real Estate	22,743,338	-810,940	-	-	-66,687	-	326,709	22,192,420
PRISA I	6,886,370	-65,190	_	_	-17,216	_	152,697	6,956,661
PRISA II	4,906,915	-32,315	_	_	-14,721	_	85,682	4,945,561
PRISA III	5,748,669	-215,078	_	_	-34,750	_	88,330	5,587,171
JCR Capital Fund 2	303,556		_	-	-	_	-	303,556
JCR Capital Fund 3 B	4,897,828	-498,356	-	-	-	-	-	4,399,472
Total Hedge Fund	23,108,031	-842,971		-	-17,959	-	351,835	22,598,935
Nantucket Institutional	10,577,229	_			-17,959	_	229,994	10,789,263
Fintan Partners	1,903,610	- -842,971	<u>-</u>	-	-17,303	-	-1,321	1,059,318
KStone Partners	10,627,193	-042,311	<u>-</u>	-	-	-	123,162	10,750,355
NOTOTIC FAITHEIS	10,021,193	-	-	-	-	-	123, 102	10,700,300
Cash Reserve Acct	7,431,191	1,653,911	1,817,765	-3,999,565	-	40,608	-180,566	6,686,198



Financial Reconciliation Year to Date	Market Value	Net	Contributions	Distributions	Management	Income	Apprec./	Market Value
	01/01/2017	Transfers	Contributions	Distributions	Fees	income	Deprec.	09/30/2017
Total Fund	192,844,714	30	5,163,297	-13,719,873	-717,625	4,344,962	13,423,042	201,056,449
Total Domestic Equity	69,484,180	-4,792,924	-	-	-159,085	2,311,426	4,701,662	71,545,259
Loomia Cardon I C Valva	40.045.050	47 507 050			42.240	404.007	502.242	
Loomis Sayles LC Value	16,945,659	-17,567,252	-	-	-43,316 7,007	101,667	563,242	40 404 70
NTGI S&P Midcap 400 - Lending	18,928,010	-1,500,000	-	-	-7,607	1,500,003	214,381	19,134,78
LSIA Dividend Aristocrats	16,772,247	-6,193,674	-	-	-15,594	249,950	1,384,686	12,197,61
Morgan Dempsey	11,121,376	-250,000	-	-	-90,412	126,684	805,662	11,713,31
LSIA S&P 500 Low Volatility	5,716,889	5,263,674	-	-	-2,155	172,353	873,119	12,023,88
LSIA LC 30/70	-	15,454,328	-	-	-	160,768	860,572	16,475,66
Total International Equity	28,787,856	-	-	-	-180,105	806,738	6,642,481	36,056,970
4007 Capital Darta are	24 474 000				400 000	700 457	4 000 400	20,000,24
1607 Capital Partners	21,474,696	-	-	-	-128,328	723,457	4,922,493	26,992,31
Brandes Emerging Mkts	7,313,160	-	-	-	-51,777	83,281	1,719,988	9,064,65
Total Domestic Fixed Income	39,114,750	1,850,000	-	-	-103,545	934,497	180,963	41,976,66
Avignon - Mortgage Loan	3,420,000	_	-	_	-	_	2	3,420,00
Tortoise Credit	18,450,880	450,000	_	_	-59,121	934,497	-334,549	19,441,70
Loomis Sayles Intermediate Duration	17,243,870	1,400,000	_	_	-44,424	-	515,510	19,114,95
•					·			
Total Real Estate	23,334,396	-2,161,470	-	-	-204,714	182,565	1,041,644	22,192,42
PRISA I	6,826,263	-185,783	-	-	-51,413	76,087	291,507	6,956,66
PRISA II	4,833,339	-101,522	_	_	-43,760	46,333	211,170	4,945,56
PRISA III	5,549,331	-294,851	_	_	-72,042	52,801	351,932	5,587,17
JCR Capital Fund 2	785,766	-509,146	_	_	,	7,344	19,592	303,55
JCR Capital Fund 3 B	5,339,698	-1,070,168	-	-	-37,500	-	167,442	4,399,47
Total Hedge Fund	27,854,138	-6,212,583	_	-	-70,175	-	1,027,556	22,598,93
Total Houge Fulla	21,004,100	0,212,000			70,170		1,027,000	22,000,00
Nantucket Institutional	10,030,425	-	-	-	-70,175	-	829,013	10,789,26
Fintan Partners	7,585,905	-6,212,583	-	-	-	-	-314,004	1,059,31
KStone Partners	10,237,808	-	-	-	-	-	512,547	10,750,35
Cash Reserve Acct	4,269,395	11,317,006	5,163,297	-13,719,873		109,736	-171,265	6,686,19
	.,200,000	11,011,000	0,100,201	10,1 10,010		100,100	,200	5,550,10



Comparative Performance																
	Q <sup>-</sup>	TR	YTD	)	1 YR	3	YR	5 \	YR	7 `	/R	10	YR	Ince	ption	Inceptio Date
Total Fund	3.06	(79)	9.48 (	83)	11.45 (67	6.79	(50)	8.63	(48)	8.11	(70)	5.33	(70)	7.69	(94)	01/01/1989
Total Fund Policy	2.94	(85)	8.77 (	89)	10.16 (85	6.76	(51)	8.13	(66)	8.77	(41)	5.31	(72)	8.50	(54)	
All Public Plans-Total Fund Median	3.43	,	11.28		12.15	6.77	,	8.54	,	8.49	,	5.62	,	8.55	, ,	
Total Fund (Net of Fees)	2.94		9.08	•	10.91	6.05		N/A		N/A		N/A		5.92		01/01/2014
Total Domestic Equity																
LSIA Dividend Aristocrats	3.60	(81)	12.31 (	80)	12.06 (93	11.48	(28)	14.66	(38)	N/A		N/A		15.14	(41)	07/01/2012
S&P 500 Dividend Aristocrats Index TR	3.61	(81)	12.39 (	77)	12.15 (93	11.30	(30)	14.54	(40)	14.83	(33)	10.61	(2)	15.03	(44)	
IM U.S. Large Cap Core Equity (SA+CF) Median	4.65		14.08		18.60	10.54		14.17		14.43		7.85		14.82		
NTGI S&P Midcap 400 - Lending	3.24	(58)	9.45 (	64)	17.59 (41	11.36	(33)	14.19	(84)	13.80	(80)	N/A		16.43	(76)	07/01/2009
S&P MidCap 400 Index	3.22	(66)	9.40 (	73)	17.52 (49	11.18	(42)	14.43	(75)	13.92	(74)	9.00	(62)	16.47	(70)	
IM U.S. Mid Cap Core Equity (SA+CF) Median	3.52		10.27		17.51	10.37		15.08		14.10		9.06		16.60		
Morgan Dempsey	7.02	(46)	8.66 (	82)	24.30 (67	10.53	(84)	N/A		N/A		N/A		6.19	(84)	04/01/2014
40/60 R2000V/Russell Micro	6.03	(68)	8.95 (	79)	21.65 (79	12.19	(71)	13.68	(84)	13.49	(84)	6.90	(95)	7.68	(68)	
IM U.S. Micro Cap Equity (SA+CF) Median	6.67		13.15		27.01	13.82		16.06		16.07		9.34		9.92		
LSIA S&P 500 Low Volatility	3.03	(87)	12.04 (	81)	N/A	N/A		N/A		N/A		N/A		12.04	(81)	01/01/2017
S&P 500 Low Volatility Index TR	3.05	(87)	12.19 (	81)	13.09 (90	12.17	(19)	13.14	(74)	14.02	(62)	9.37	(8)	12.19	(81)	
IM U.S. Large Cap Core Equity (SA+CF) Median	4.65		14.08		18.60	10.54		14.17		14.43		7.85		14.08		
LSIA LC 30/70	3.92	(93)	N/A		N/A	N/A		N/A		N/A		N/A		5.72	(87)	05/01/2017
S&P 500 Equal Weighted	3.60	(97)	11.94 (	76)	16.23 (86	10.07	(72)	15.03	(24)	14.49	(69)	8.94	(13)	5.48	(91)	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	4.73		14.35		19.48	10.69		14.62		14.83		7.92		6.97		
Total International Equity																
1607 Capital Partners	6.54	(49)	26.04 (	37)	24.08 (28	7.10	(47)	9.24	(50)	8.21	(40)	4.22	(33)	7.01	(34)	07/01/2006
MSCI AC World ex USA	6.25	(53)	21.61 (	66)	20.15 (56	5.19	(74)	7.45	(73)	5.72	(75)	1.74	(85)	4.38	(83)	
IM International Equity (SA+CF) Median	6.41		24.02	:	20.93	6.90		9.20		7.60		3.11		6.03		
Brandes Emerging Mkts	9.31	(25)	24.71 (	69)	23.76 (44	3.83	(79)	N/A		N/A		N/A		2.53	(74)	07/01/2014
MSCI Emerging Markets Index	8.04	(43)	28.14 (	53)	22.91 (48	5.28	(59)	4.36	(76)	2.90	(75)	1.65	(79)	3.77	(59)	
IM Emerging Markets Equity (SA+CF) Median	7.67		28.47	:	22.66	5.85		5.73		4.29		2.70		4.46		



	Q	ΓR	YTI	D	1 YI	R	3 Y	/R	5 Y	/R	7 '	<b>YR</b>	10	YR	Ince	otion	Inception Date
Total Domestic Fixed Income																	
Tortoise Credit	0.85	(23)	3.28	` '	1.66	(13)	3.48	(4)	N/A		N/A		N/A		3.82	(4)	10/01/2013
Bloomberg Barclays Intermed Aggregate Index	0.72	(50)	2.34	(74)	0.25	(87)	2.25	(70)	1.75	(70)	2.46	(68)	3.83	(84)	2.37	(67)	
IM U.S. Intermediate Duration (SA+CF) Median	0.72		2.57		0.69		2.41		1.96		2.70		4.17		2.53		
Loomis Sayles Intermediate Duration	0.83	(26)	2.92	(21)	1.20	(23)	N/A		N/A		N/A		N/A		1.23	(19)	08/01/2016
Bloomberg Barclays Intermediate US Govt/Credit Idx	0.60	(82)	2.34	(74)	0.23	(87)	2.13	(79)	1.61	(84)	2.26	(85)	3.64	(89)	0.09	(87)	
IM U.S. Intermediate Duration (SA+CF) Median	0.72		2.57		0.69		2.41		1.96		2.70		4.17		0.61		
PRISA Real Estate Composite	1.86		6.05		8.68		12.98		13.16		14.27		4.87		8.19		07/01/1993
PRISA I	2.22	(19)	5.45	(55)	8.03	(55)	11.18	(37)	11.89	(37)	13.30	(37)	4.70	(63)	6.60	(N/A)	01/01/2006
NCREIF Fund Index-ODCE (VW)	1.86	(34)	5.43	` '	7.66	. ,	10.85	(52)	11.59	(53)	12.52	(54)	5.03	(42)	6.77	(N/A)	01/01/2000
IM U.S. Open End Private Real Estate (SA+CF) Median	1.62	(54)	5.60	(55)	8.17	(30)	10.93	(32)	11.62	(55)	12.72	(34)	4.97	(42)	N/A	(14/74)	
IN O.O. Open End i invate recai Estate (5/1/ Oi ) Median	1.02		0.00		0.17		10.00		11.02		12.12		4.07		14// (		
PRISA II	1.75	(38)	5.39	(64)	8.29	(46)	12.31	(28)	13.08	(28)	14.98	(19)	3.91	(89)	6.13	(N/A)	01/01/2006
NCREIF Fund Index-ODCE (VW)	1.86	(34)	5.43	(59)	7.66	(58)	10.85	(52)	11.59	(53)	12.52	(54)	5.03	(42)	6.77	(N/A)	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.62		5.60		8.17		10.93		11.62		12.72		4.97		N/A		
PRISA III	1.54	(55)	7.36	(1)	9.83	(10)	17.92	(1)	N/A		N/A		N/A		17.22	(1)	04/01/2013
NCREIF Fund Index-ODCE (VW)	1.86	(34)	5.43	` '	7.66	` '	10.85	(52)	11.59	(53)	12.52	(54)	5.03	(42)	11.72	` '	
IM U.S. Open End Private Real Estate (SA+CF) Median	1.62	,	5.60	, ,	8.17	,	10.93	, ,	11.62	,	12.72	, ,	4.97	, ,	11.50	,	
Total Hedge Fund																	
Nantucket Institutional	2.18	(19)	8.29	(3)	11.13	(1)	5.34	(2)	7.77	(1)	7.10	(1)	N/A		5.13	(1)	07/01/2008
HFRI FOF: Diversified Index	2.36	(17)	4.69		5.87		1.98	(32)	3.72	(16)	2.89	(53)	1.12	(22)	1.25	. ,	0170172000
IM Alternative Multi-Strategy (MF) Median	1.14	(,	3.00	(=: )	3.10	()	1.26	(02)	2.55	(.0)	2.97	(00)	0.68	()	1.08	(,	
Fintan Partners	-0.12	(88)	-11.66	(100)	-11.63	(100)	N/A		N/A		N/A		N/A		-5.14	(100)	10/01/2015
90 Day T-Bill +5%/Yr	1.50	(30)	4.32	` '	5.67	` '	5.30	(6)	5.20	(1)	5.17	(2)	5.47	(1)		(33)	10/01/2013
IM Alternative Credit Focus (MF) Median	1.03	(50)	3.88	(-12)	4.53	(04)	2.24	(0)	2.26	(1)	2.86	(~)	3.54	(1)	4.63	(00)	
· /	4.40	(4.4)	F 04	(00)		(40)	N1/A		N1/A		N1/A		N1/A		4.07	(55)	40/04/0045
KStone Partners	1.16	(44)	5.01	` '	7.44	` '	N/A	(47)	N/A	(0)	N/A	(47)	N/A	(40)	4.37	(55)	10/01/2015
90 Day T-Bill +3.5%/Yr	1.13	(45)	3.20	(62)	4.16	(5/)	3.79	(17)	3.70	(6)	3.67	(17)	3.96	(42)	3.92	(62)	
IM Alternative Credit Focus (MF) Median	1.03		3.88		4.53		2.24		2.26		2.86		3.54		4.63		



Comparative Performance																				
	20	16	20	15	20	14	20	13	20	12	20	11	20	10	20	09	20	80	20	07
Total Fund	9.76	(6)	-0.12	(55)	6.11	(67)	16.69	(54)	9.95	(93)	-1.11	(79)	11.15	(85)	24.69	(13)	-24.33	(62)	10.52	(12)
Total Fund Policy	8.66	` '		(39)	6.55	` '	14.83	. ,	12.97	(41)		` '	15.12	, ,	24.07	. ,	-28.44	` '	7.60	
All Public Plans-Total Fund Median	7.30	(11)	0.05	. ,	6.76	(00)	16.90	(10)	12.57	(11)	0.24	(20)	12.79	(12)	19.65	(10)	-23.20	(01)	7.80	` '
Total Fund (Net of Fees)	9.12		-1.05		5.33		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Total Domestic Equity																				
LSIA Dividend Aristocrats	12.20	(29)	1.11	(53)	15.78	(18)	32.33	(60)	N/A		N/A		N/A		N/A		N/A		N/A	
S&P 500 Dividend Aristocrats Index TR	11.83	` '	0.93	` '	15.76	` '	32.27	` '	16.94	(33)	8.33	(6)	19.35	(10)	26.56	(50)	-21.88	(5)	-2.07	(98)
IM U.S. Large Cap Core Equity (SA+CF) Median	10.51	(- )	1.32	. ,	13.42	( - /	32.96	(- )	15.70	()	2.03	(-)	14.80	( - )	26.53	()	-35.97	(-)	7.13	` '
NTGI S&P Midcap 400 - Lending	21.18	(10)	-2.10	(70)	9.52	(68)	33.87	(73)	16.18	(55)	-1.66	(54)	26.92	(20)	N/A		N/A		N/A	
S&P MidCap 400 Index	20.74	(23)	-2.18	(75)	9.77	(66)	33.50	(85)	17.88	(42)	-1.73	(60)	26.64	(26)	37.38	(44)	-36.23	(35)	7.98	(57)
IM U.S. Mid Cap Core Equity (SA+CF) Median	16.80		-0.98		10.17		37.10		17.27		-1.63		25.01		37.00		-37.89		8.04	
Morgan Dempsey	28.35	(24)	-5.60	(67)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
40/60 R2000V/Russell Micro	24.90	(49)	-6.06	(68)	3.90	(40)	41.11	(81)	19.10	(35)	-7.78	(72)	27.14	(86)	24.79	(85)	-35.58	(29)	-8.71	(91)
IM U.S. Micro Cap Equity (SA+CF) Median	24.72		-1.91		2.28		49.10		17.52		-4.36		32.61		41.71		-39.34		1.30	
LSIA S&P 500 Low Volatility	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
S&P 500 Low Volatility Index TR	10.37	(53)	4.34	(16)	17.11	(10)	23.59	(94)	10.30	(91)	14.78	(2)	13.36	(68)	19.22	(88)	-21.41	(5)	0.58	(92)
IM U.S. Large Cap Core Equity (SA+CF) Median	10.51		1.32		13.42		32.96		15.70		2.03		14.80		26.53		-35.97		7.13	
LSIA LC 30/70	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
S&P 500 Equal Weighted	14.80	(23)	-2.20	(89)	14.49	(42)	36.16	(13)	17.64	(29)	-0.11	(92)	21.90	(3)	46.31	(1)	-39.72	(94)	1.53	(84)
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median	12.45		1.01		14.19		33.43		16.52		2.86		14.74		25.67		-36.44		5.42	
Total International Equity																				
1607 Capital Partners	5.87	(39)	-5.34	(65)	-0.82	(37)	17.27	(58)	20.54	(45)	-12.13	(43)	22.79	(19)	49.26	(35)	-46.18	(58)	14.25	(53)
MSCI AC World ex USA	5.01	(43)	-5.25	(65)	-3.44	(59)	15.78	(61)	17.39	(69)	-13.33	(52)	11.60	(67)	42.14	(45)	-45.24	(53)	17.12	(44)
IM International Equity (SA+CF) Median	3.76		-1.64		-2.60		19.97		19.84		-13.11		15.13		39.75		-44.72		14.97	
Brandes Emerging Mkts	25.75	(2)	-19.12	(96)	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
MSCI Emerging Markets Index	11.60	(38)	-14.60	` '	-1.82	(69)	-2.27	(74)	18.64	(67)	-18.17	(51)	19.20	(69)	79.02	(57)	-53.18	(41)	39.78	(53)
IM Emerging Markets Equity (SA+CF) Median	10.07		-12.66		-0.18		0.89		20.53		-18.17		21.83		80.34		-54.04		40.30	

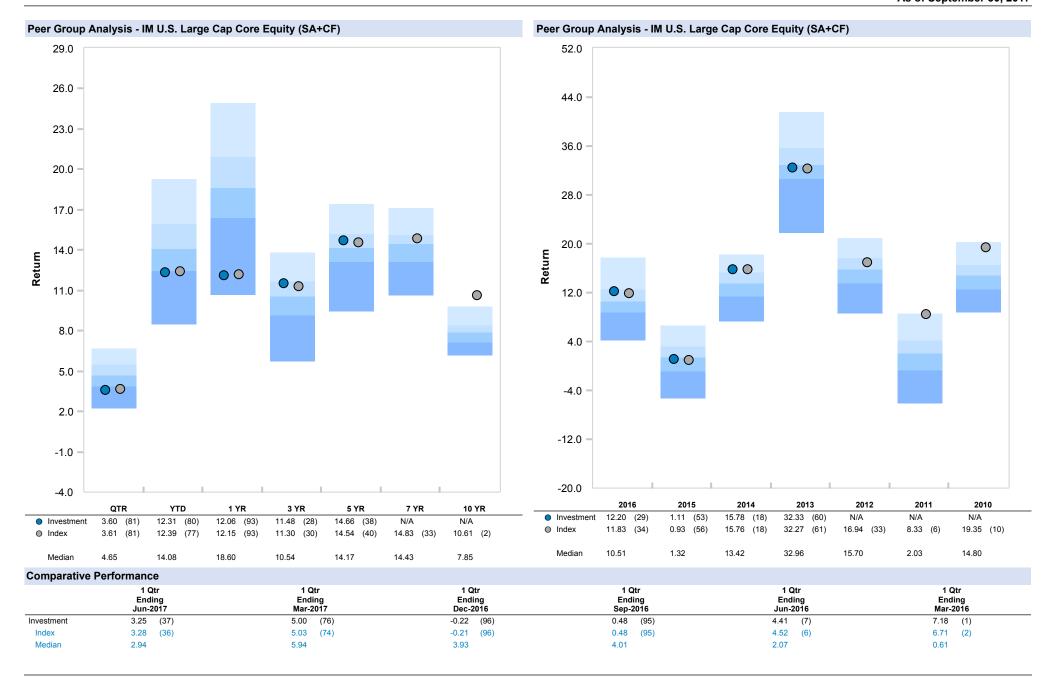


	20	16	201	15	20	14	20	13	20	12	20	11	20	10	200	09	200	80	20	07
Total Domestic Fixed Income																				
Tortoise Credit	4.42	(7)	1.70	(15)	5.30	(11)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Bloomberg Barclays Intermed Aggregate Index	1.97	(77)	1.21	(63)	4.12	(31)	-1.02	(80)	3.56	(87)	5.97	(45)	6.15	(65)	6.46	(66)	4.86	(49)	7.02	(57
IM U.S. Intermediate Duration (SA+CF) Median	2.40		1.30		3.57		-0.53		4.96		5.88		6.42		7.87		4.59		7.22	
Loomis Sayles Intermediate Duration	N/A		N/A		N/A		N/A													
Bloomberg Barclays Intermediate US Govt/Credit Idx	2.08	(73)	1.07	(76)	3.13	(76)	-0.86	(70)	3.89	(78)	5.80	(54)	5.89	(77)	5.24	(84)	5.08	(46)	7.39	(43
IM U.S. Intermediate Duration (SA+CF) Median	2.40		1.30		3.57		-0.53		4.96		5.88		6.42		7.87		4.59		7.22	
PRISA Real Estate Composite	11.15		17.77		14.20		14.93		10.78		18.86		19.05		-36.82		-12.52		17.58	
PRISA I	8.80	(80)	15.36	(42)	13.34	(57)	14.69	(45)	9.67	(89)	19.08	(19)	18.42	(28)	-34.24	(66)	-11.28	(51)	17.54	(35)
NCREIF Fund Index-ODCE (VW)	8.77	(81)	15.02	(50)	12.50	(79)	13.94	(59)	10.94	(77)	15.99	(43)	16.36	(45)	-29.76	(51)	-10.01	(48)	15.97	(52)
IM U.S. Open End Private Real Estate (SA+CF) Median	9.47		15.01		13.66		14.63		12.45		15.78		15.76		-29.76		-11.00		16.16	
PRISA II	10.70	(31)	17.54	(26)	14.22	(30)	15.17	(34)	14.38	(24)	20.72	(14)	24.86	(3)	-44.89	(89)	-16.10	(71)	17.83	(31)
NCREIF Fund Index-ODCE (VW)	8.77	(81)	15.02	(50)	12.50	(79)	13.94	(59)	10.94	(77)	15.99	(43)	16.36	(45)	-29.76	(51)	-10.01	(48)	15.97	(52)
IM U.S. Open End Private Real Estate (SA+CF) Median	9.47		15.01		13.66		14.63		12.45		15.78		15.76		-29.76		-11.00		16.16	
PRISA III	14.95	(10)	24.90	(1)	18.89	(7)	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
NCREIF Fund Index-ODCE (VW)	8.77	(81)	15.02	(50)	12.50	(79)	13.94	(59)	10.94	(77)	15.99	(43)	16.36	(45)	-29.76	(51)	-10.01	(48)	15.97	(52)
IM U.S. Open End Private Real Estate (SA+CF) Median	9.47		15.01		13.66		14.63		12.45		15.78		15.76		-29.76		-11.00		16.16	
Total Hedge Fund																				
Nantucket Institutional	2.37	(46)	2.43	(7)	9.93	(3)	13.73	(5)	10.15	(15)	0.26	(17)	8.40	(36)	19.44	(29)	N/A		N/A	
HFRI FOF: Diversified Index	0.45	(70)	-0.17	(26)	3.42	(37)	9.04	(22)	4.81	(43)	-5.01	(88)	5.48	(74)	11.46	(46)	-20.85	(49)	9.72	(29)
IM Alternative Multi-Strategy (MF) Median	2.07		-1.97		2.47		4.18		3.51		-2.17		7.10		10.98		-21.82		7.13	
Fintan Partners	1.73	(88)	N/A		N/A		N/A		N/A											
90 Day T-Bill +5%/Yr	5.27	(45)	5.03	(1)	5.04	(12)	5.05	(13)	5.08	(83)	5.09	(12)	5.14	(73)	5.17	(95)	7.20	(1)	10.16	(1)
IM Alternative Credit Focus (MF) Median	4.92		-1.61		1.01		0.63		8.39		1.33		7.53		21.04		-12.69		4.58	
KStone Partners	4.06	(62)	N/A		N/A		N/A		N/A											
90 Day T-Bill +3.5%/Yr	3.76	(66)	3.53	(3)	3.54	(16)	3.55	(22)	3.58	(88)	3.59	(23)	3.64	(84)	3.67	(96)	5.67	(1)	8.59	(1)
IM Alternative Credit Focus (MF) Median	4.92		-1.61		1.01		0.63		8.39		1.33		7.53		21.04		-12.69		4.58	



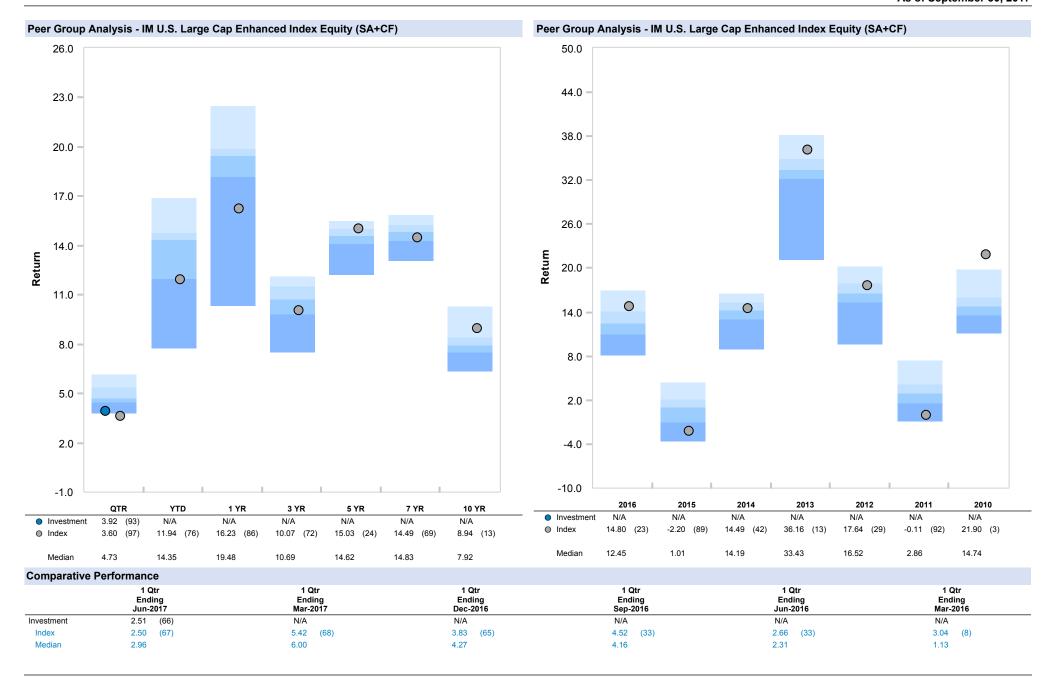




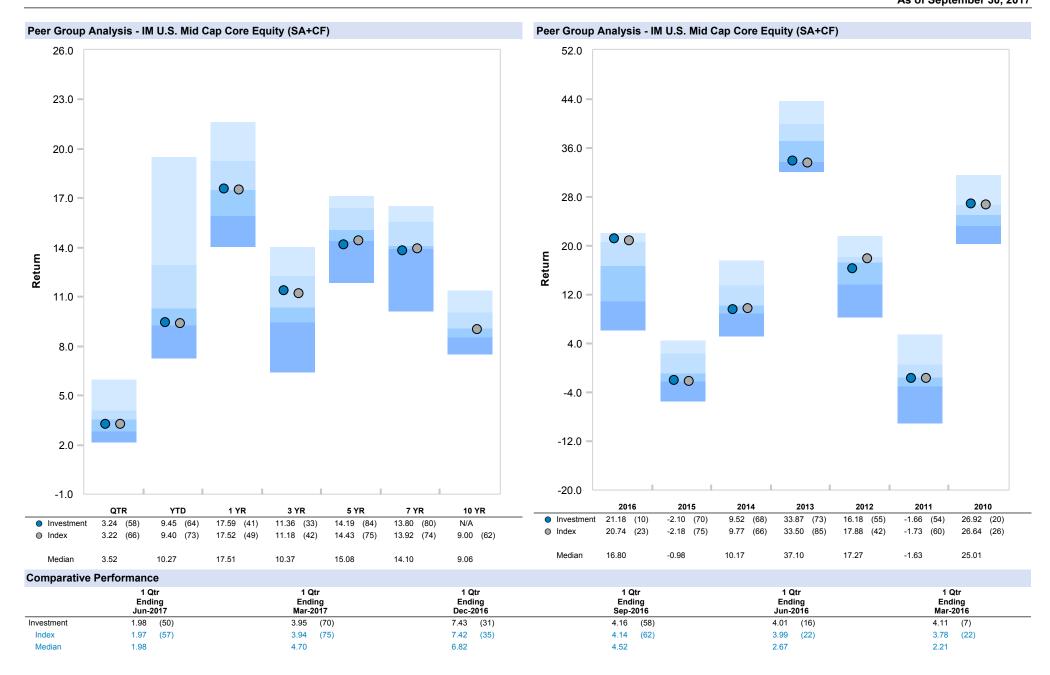




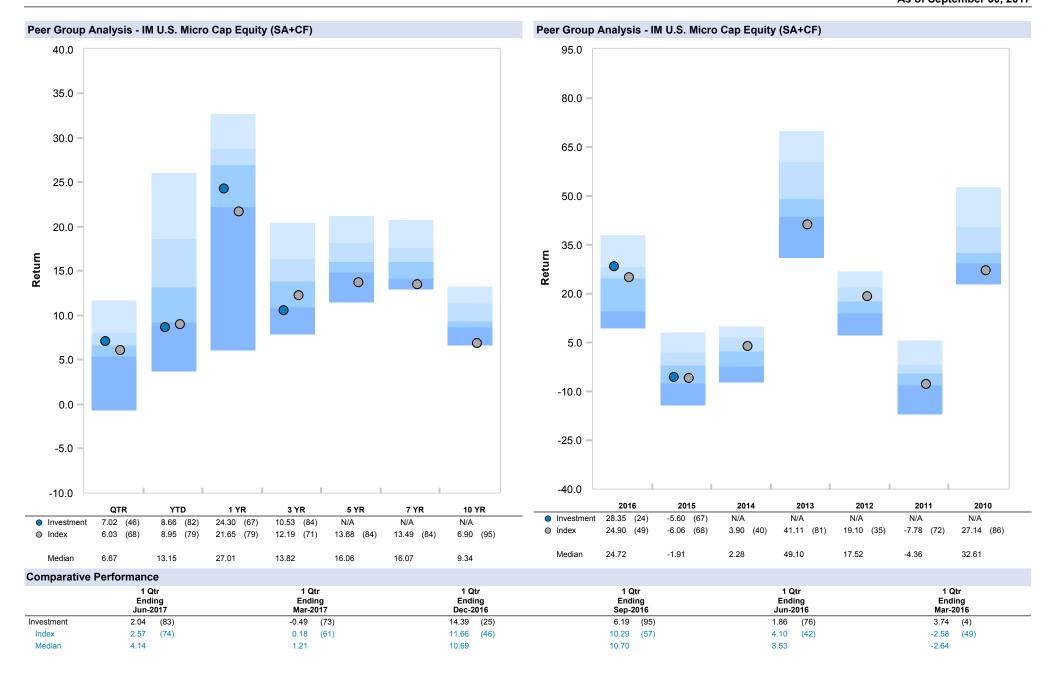
As of September 30, 2017



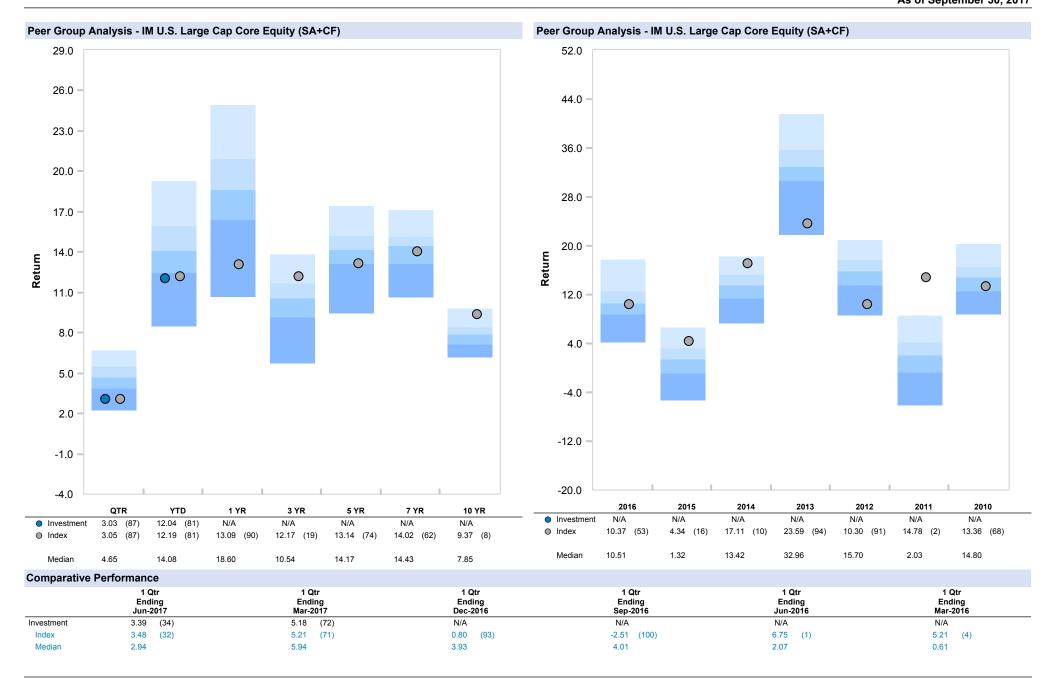




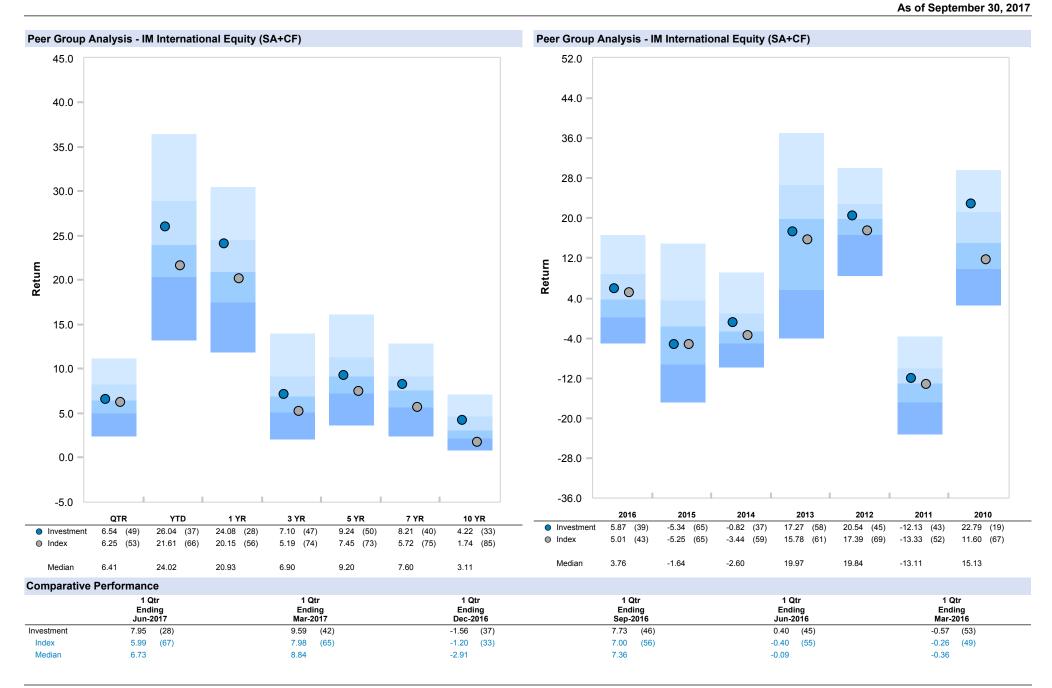




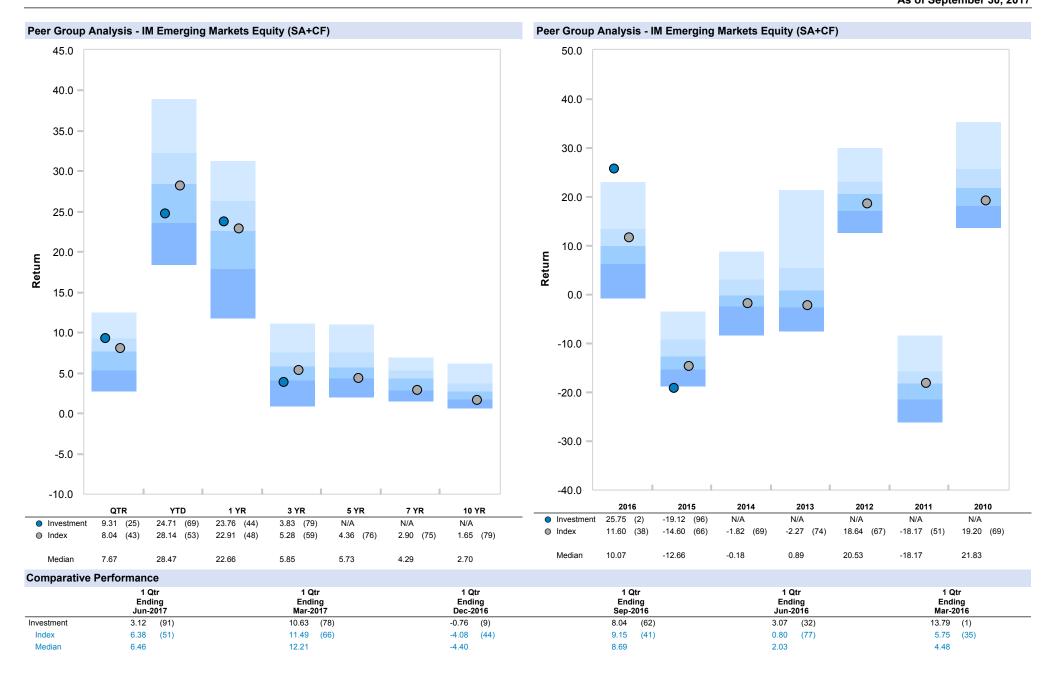




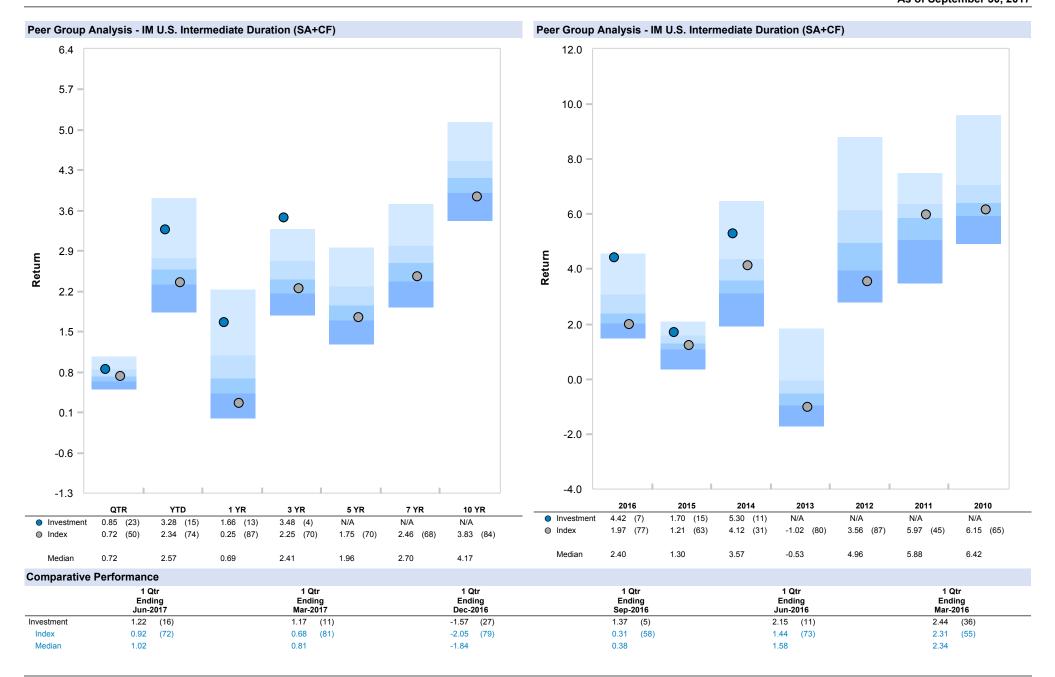




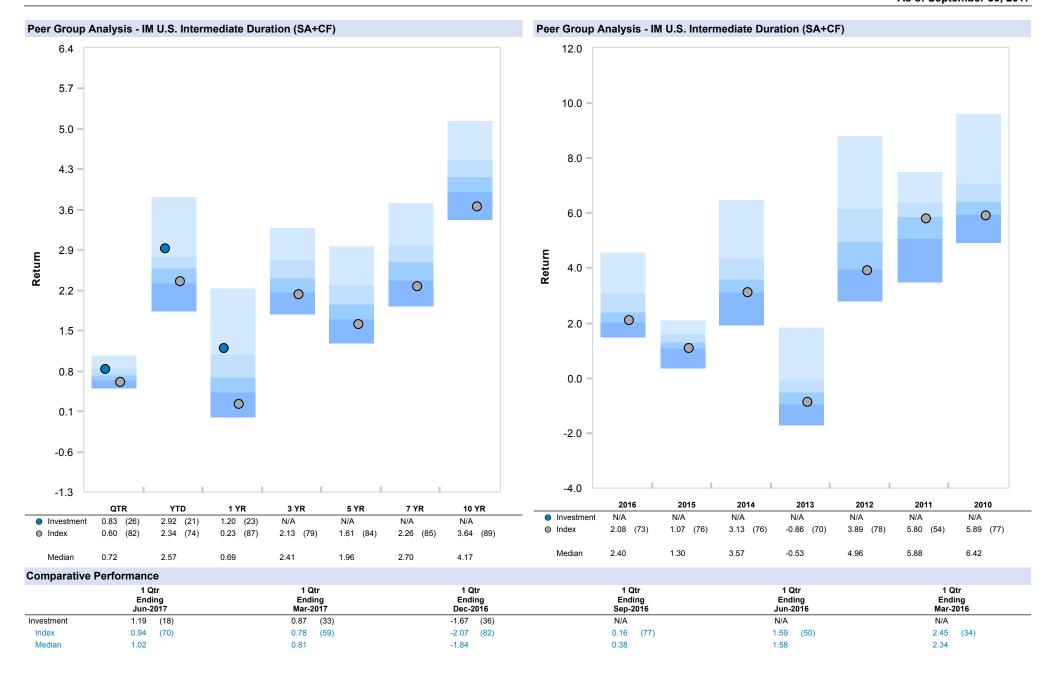












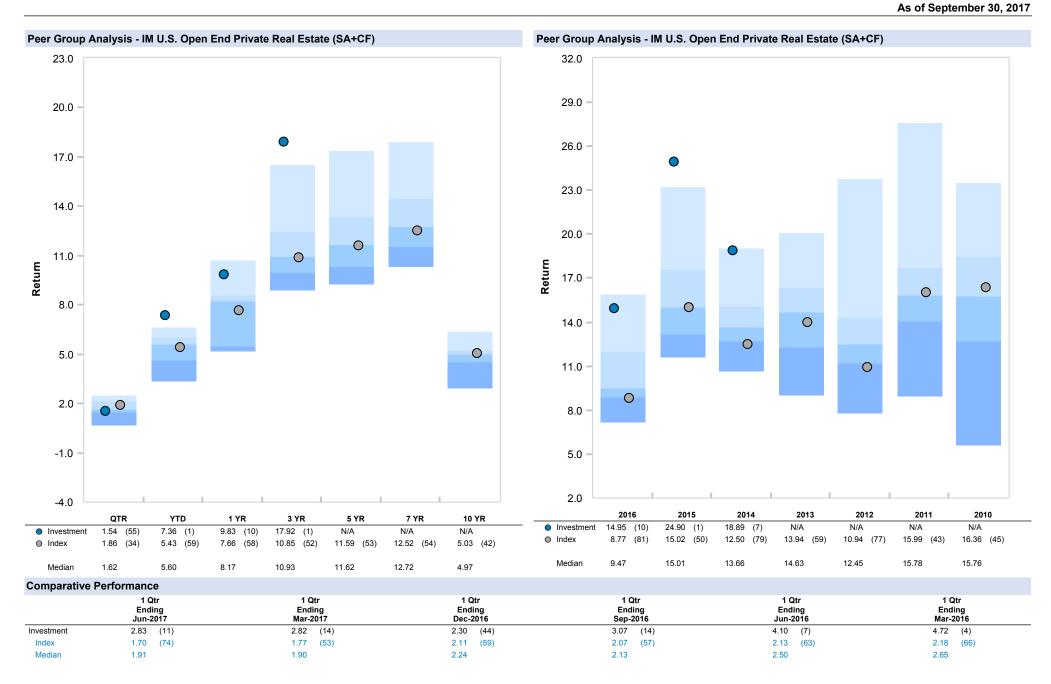




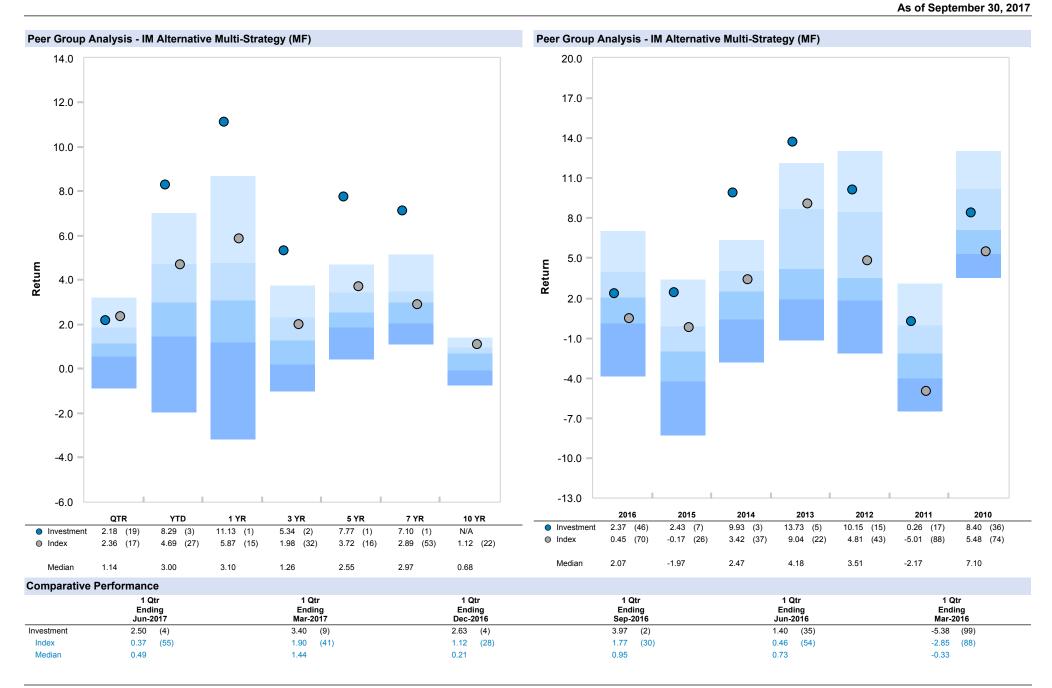




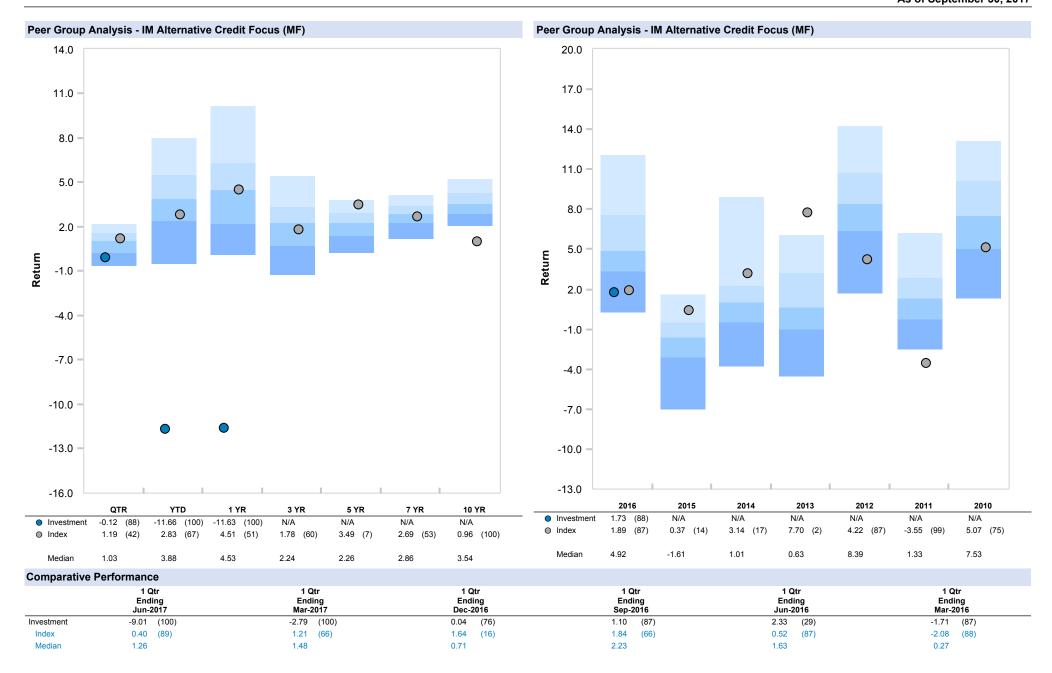




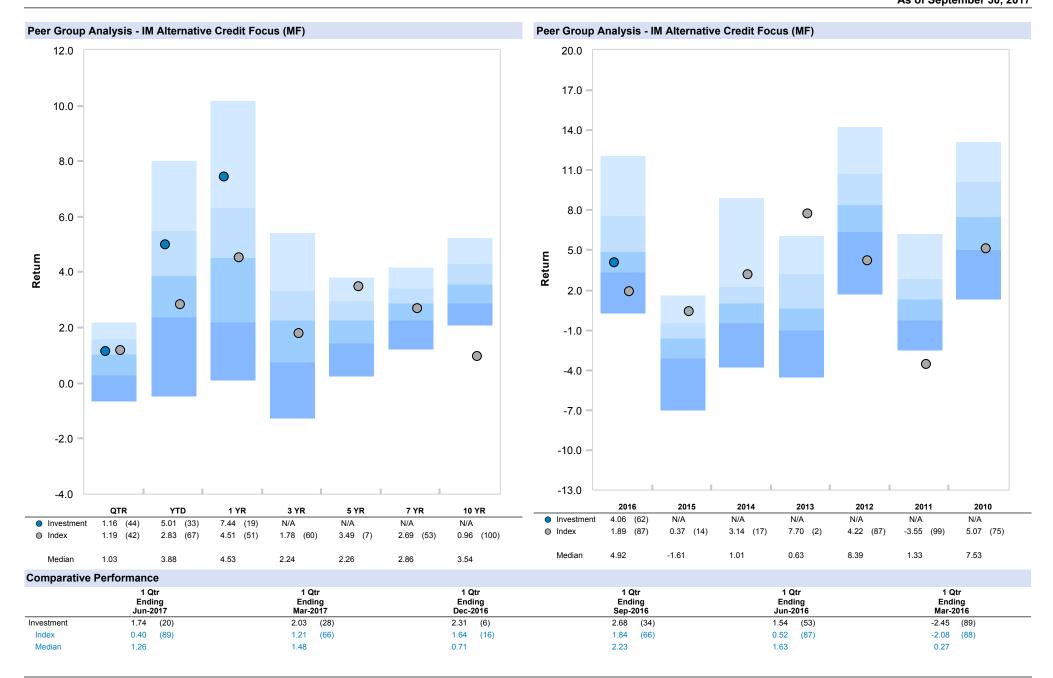














**Fund Information** 

**Cash Flow Summary** 

Type of Fund: Direct Vintage Year:

Strategy Type: Value-Add Real Estate Management Fee: 1.50% on Committed Capital plus 20% Incentive Fee after 9.00 % Preferred

Return

2012

 Size of Fund:
 74,000,000
 Preferred Return:
 9.00%

 Inception:
 06/01/2012
 General Partner:
 JCR Capital

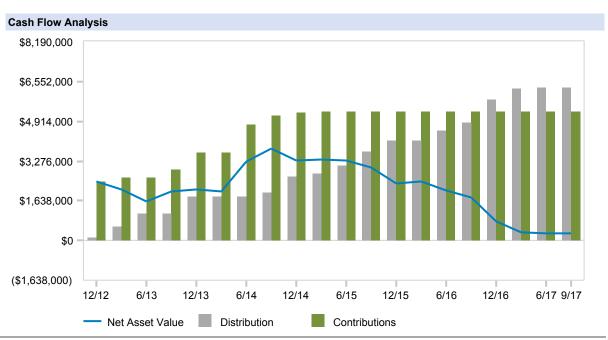
Final Close: 09/30/2014

Investment Strategy: The Fund II investment strategy was to provide capital to real estate sponsors seeking financing for distressed, opportunistic, and value-added commercial real estate. It focused on

middle-market transactions between \$2-15 million, providing sponsors with debt and structured equity. The fund offered customized capital solutions to commercial real estate middle market

sponsors whose assets do not typically attract institutional capital.

## **Capital Committed:** \$5,000,000 **Capital Contributed:** \$4,752,071 Management Fees: **Expenses:** Catch Up Interest: \$139,352 **Remaining Capital Commitment:** \$247,929 Distributions (Income + Return of Capital): \$6.299.516 Market Value: \$303,556 **Inception Date:** 11/09/2012 Inception IRR: 13.31 TVPI: 1.28 DPI: 1.22





As of September 30, 2017

# **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:** \$6,249,548 **Management Fees:** \$354,760 **Expenses:** Catch Up Interest: **Remaining Capital Commitment:** \$3,750,452 Distributions (Income + Return of Capital): \$6,703,426 Market Value: \$4,399,472 **Inception Date:** 06/02/2014 Inception IRR: 9.43 TVPI: 1.09 DPI: 0.64

01/14/2016





As of September 30, 2017

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
NTGI S&P Midcap 400 - Lending	0.04	19,134,787	7,654	0.04 % of Assets
LSIA Dividend Aristocrats 10% Discount on overall fee.	0.10	12,197,614	11,758	0.10 % of First \$10 M 0.08 % of Next \$40 M 0.08 % Thereafter
Morgan Dempsey	1.10	11,713,310	128,846	1.10 % of Assets
SIA S&P 500 Low Volatility	0.11	12,023,881	13,226	0.11 % of Assets
LSIA LC 30/70	0.09	16,475,668	15,181	0.10 % of First \$10 M 0.08 % of Next \$40 M 0.06 % of Next \$50 M 0.03 % of Next \$100 M 0.02 % Thereafter
1607 Capital Partners	0.75	26,992,318	202,442	0.75 % of Assets
Brandes Emerging Mkts	0.95	9,064,653	86,114	0.95 % of Assets
Avignon - Mortgage Loan		3,420,002	-	
ortoise Credit	0.32	19,441,708	62,213	0.32 % of Assets
oomis Sayles Intermediate Duration	0.25	19,114,955	47,787	0.25 % of Assets
PRISA I	0.75	6,956,661	52,175	0.75 % of Assets
PRISA II	0.85	4,945,561	42,037	0.85 % of Assets
RISA III	1.10	5,587,171	61,459	1.10 % of Assets
CR Capital Fund 2	1.50	303,556	4,553	1.50 % of Assets
CR Capital Fund 3 B	1.50	4,399,472	65,992	1.50 % of Assets
lantucket Institutional	1.00	10,789,263	107,893	1.00 % of Assets
intan Partners	0.75	1,059,318	7,945	0.75 % of Assets
(Stone Partners	0.75	10,750,355	80,628	0.75 % of Assets
otal Fund	0.50	201,056,449	997,904	



Total Portfolio Compliance Summary							
	September 30, 2017	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)	201,056,448.92	100.0%					
Total Equity (14)	107,602,229.83	53.5%	50.0%	40.0% - 70.0%	70.0%	YES	YES
i Otal Equity (14)	107,002,229.83	33.3%	50.0%	40.0% - 70.0%	70.0%	163	TES
Domestic Equity (14)	71,545,259.43	35.6%	34.0%	30.0% - 70.0%	70.0%	YES	YES
International Equity (14)	36,056,970.40	17.9%	16.0%	10.0% - 20.0%	70.0%	YES	YES
Total US Fixed Income (17 & 17.1.a.iii)	41,976,665.17	20.9%	20.0%	20.0% - 50.0%	100.0%	YES	YES
Total OS Fixed income (17 & 17.1.a.m)	41,970,000.17	20.9%	20.0%	20.0% - 30.0%	100.0%	123	TES
US Investment Grade Fixed Income (17)	41,976,665.17	20.9%	20.0%	20.0% - 50.0%	100.0%	YES	YES
US Non-Investment Grade Fixed Income (17.1.a.iii)	-	0.0%	0.0%	0.0% - 0.0%	100.0%	YES	YES
Total Non US Fixed Income (20k)		0.0%	0.0%	0.0% - 0.0%	20.0%	YES	YES
(-61)			2.370	0.070		. 20	
Total Real Estate (18 & 19)	22,192,420.17	11.0%	14.0%	0.0% - 20.0%	20.0%	YES	YES
Alternative Investments (20d)	22,598,935.43	11.2%	16.0%	0.0% - 20.0%	20.0%	YES	YES
Short Term/Cash Reserves	6,686,198.32	3.3%	0.0%	0.0% - 1.0%	N/A	NO	YES
onert Torris Gaerri (Cesti Tes	0,000,130.32		0.070	0.070 1.070	IV/A	110	120



# **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 50<sup>th</sup> percentile over twelve month rolling periods and in the 40<sup>th</sup> 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%	30 – 70%
Non-U.S. Equities	16%	10 – 20%
Global Fixed Income	20%	20 - 50%
Real Estate	14%	0 - 20%
Alternative Investments	16%	0 - 20%
Cash & Equivalents	0%	0 – 1%

# **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.



Α	١cti	ive	Re	ŧι	ırn

- 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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