

IAC Performance Review

November 18, 2015

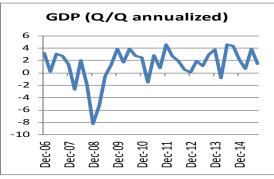


North Carolina Department of State Treasurer Investment Management

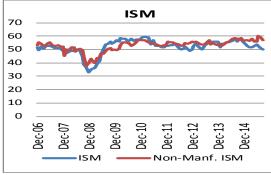
Learn. Invest. Grow. Prosper.

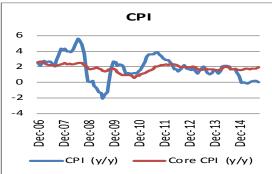
U.S. Economic Environment

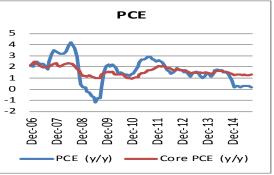


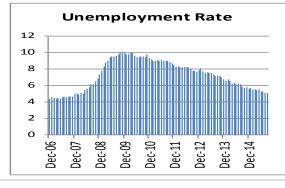




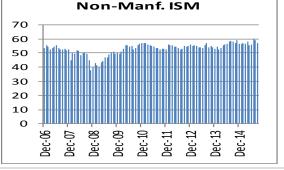












Source: Bloomberg



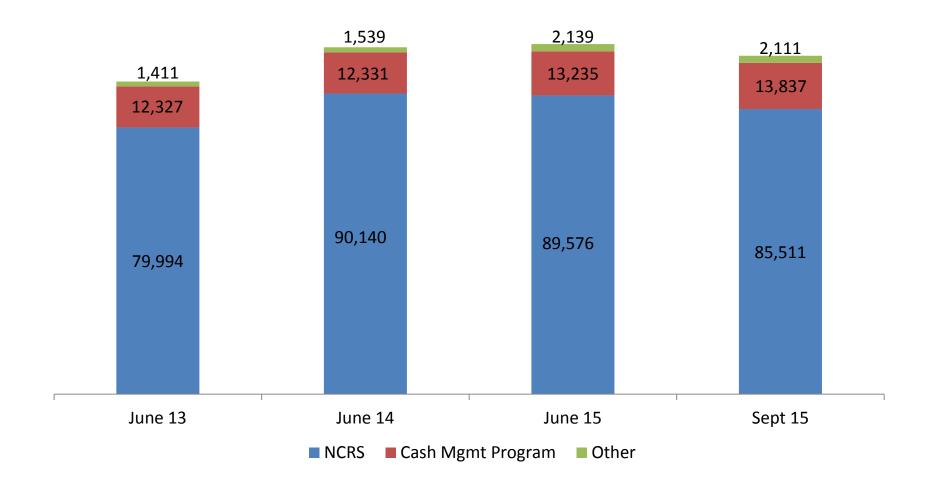
Global Economic Environment

	Real GDP	<u>YoY</u>	<u>Unempl</u>	oyment	<u>CPI \</u>	<u>YoY</u>		Real G	DP YoY	<u>Unemp</u>	loyment	<u>CPI</u>	YoY
Countries	Date	Value	Date	Value	Date	Value	Countries	Date	Value	Date	Value	Date	Value
U.S.	09/15	2	09/15	5.1	09/15	0	Asia/Pacific/L	atam					
Europe							China	09/15	6.9			09/15	1.6
Germany	06/15	1.6	09/15	6.4	09/15	0	India	06/15	7			09/15	5.14
France	06/15	1.1	09/15	10.7	09/15	0	Japan	06/15	0.8	09/15	3.4	09/15	0
U.K	09/15	2.3	08/15	5.4	09/15	-0.1	Indonesia	06/15	4.67			09/15	6.83
Italy	06/15	0.673	09/15	11.8	09/15	0.2	Brazil	06/15	-2.6			09/15	9.49
Spain	09/15	3.4	09/15	21.6	09/15	-0.9	Australia	06/15	2	09/15	6.2	09/15	1.5

Source: Bloomberg



Assets Under Management (\$mil) \$101.5 Billion as of September 30, 2015





NCRS Asset Allocation As of September 30, 2015

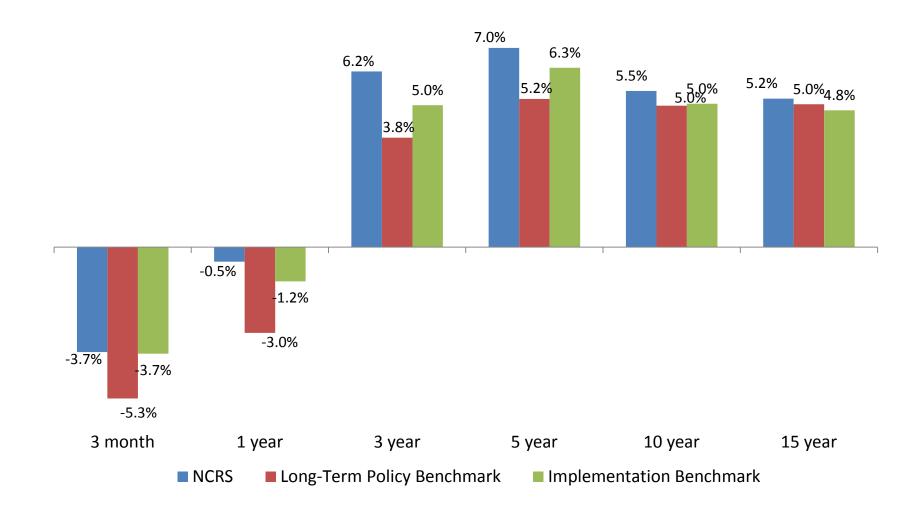
	Market Value	9/	Policy	Policy	Range	Relative	Relative \$
	(\$000)	(\$000)		Minimum	Maximum	%	(\$000)
Growth	\$48,483,524	56.70%	58.0%	37.0%	71.0%	-1.30%	(\$1,112,627)
Public Equity	35,222,012	41.19%	42.0%	37.0%	47.0%	-0.81%	(692,443)
Non Core Real Estate	3,623,653	4.24%	3.0%	0.0%	8.0%	1.24%	1,058,335
Opportunistic Fixed Income	5,293,878	6.19%	7.0%	0.0%	7.5%	-0.81%	(691,864)
Private Equity	4,343,982	5.08%	6.0%	0.0%	8.75%	-0.92%	(786,655)
Inflation Sensitive & Diversifiers	9,222,193	10.78%	11.0%	4.0%	16.0%	-0.22%	(183,974)
Core Real Estate	3,867,307	4.52%	5.0%	2.0%	10.0%	-0.48%	(408,223)
Inflation Sensitive	5,354,886	6.26%	6.0%	2.0%	7.5%	0.26%	224,249
Multi-Strategy	1,584,516	1.85%	2.0%	0.0%	4.0%	-0.15%	(125,696)
Rates & Liquidity	26,220,372	30.66%	29.0%	24.0%	42.0%	1.66%	1,422,297
Cash	873,833	1.02%	1.0%	0.0%	10.0%	0.02%	18,727
Investment Grade Fixed Income	25,346,540	29.64%	28.0%	24.0%	32.0%	1.64%	1,403,570
Grand Total	85,510,605	100.00%					

NCRS Asset Allocation As of November 3, 2015

	Market Value	%	Policy	Policy	Range	Relative	Relative \$
	(\$000)	/0	Target	Minimum	Maximum	%	(\$000)
Growth	\$51,382,110	58.02%	58.0%	37.0%	71.0%	0.02%	\$13,669
Public Equity	38,124,588	43.05%	42.0%	37.0%	47.0%	1.05%	926,751
Non Core Real Estate	3,653,263	4.12%	3.0%	0.0%	8.0%	1.12%	996,275
Opportunistic Fixed Income	5,308,040	5.99%	7.0%	0.0%	7.5%	-1.01%	(891,599)
Private Equity	4,296,219	4.85%	6.0%	0.0%	8.75%	-1.15%	(1,017,758)
Inflation Sensitive & Diversifiers	9,240,634	10.43%	11.0%	4.0%	16.0%	-0.57%	(501,657)
Core Real Estate	3,955,668	4.47%	5.0%	2.0%	10.0%	-0.53%	(472,646)
Inflation Sensitive	5,284,966	5.97%	6.0%	2.0%	7.5%	-0.03%	(29,011)
Multi-Strategy	1,671,880	1.89%	2.0%	0.0%	4.0%	-0.11%	(99,445)
Rates & Liquidity	26,271,653	29.66%	29.0%	24.0%	42.0%	0.66%	587,433
Cash	1,100,550	1.24%	1.0%	0.0%	10.0%	0.24%	214,887
Investment Grade Fixed Income	25,171,103	28.42%	28.0%	24.0%	32.0%	0.42%	372,545
Grand Total	88,566,278	100.00%					

NCRS Total Net Portfolio Return vs. Benchmarks

As of September 30, 2015





Growth of a Dollar as of September 30, 2015

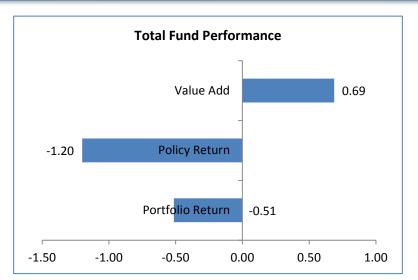


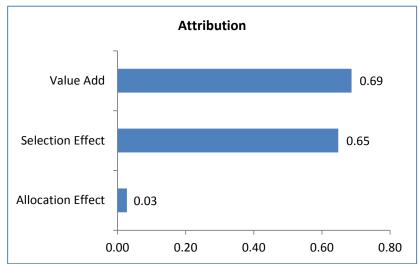


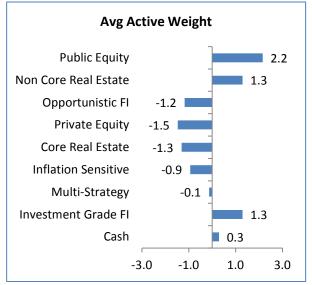
NCRS Net Return Attribution

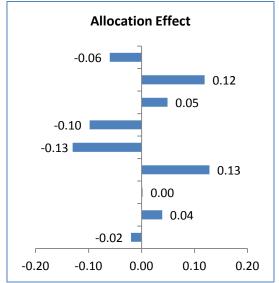
Total Fund Performance vs. Implementation Benchmark

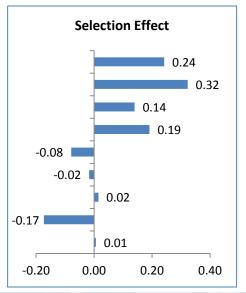
1 Year Ending September 30, 2015







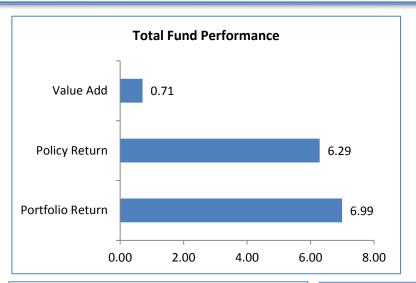


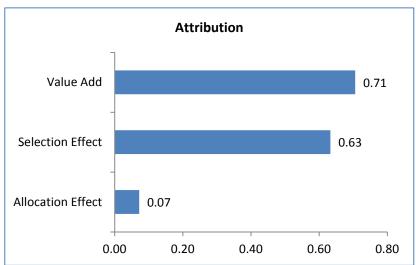


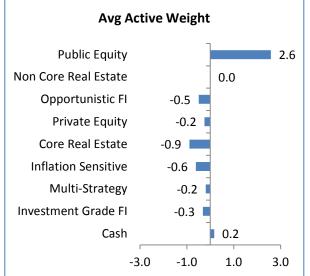
NCRS Net Return Attribution

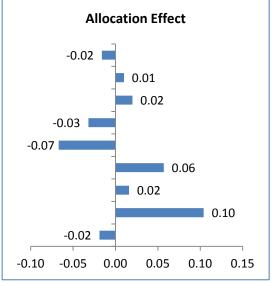
Total Fund Performance vs. Implementation Benchmark

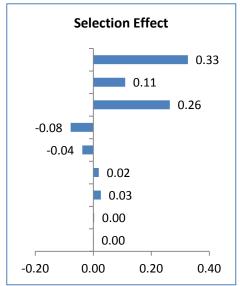
5 Years Ending September 30, 2015











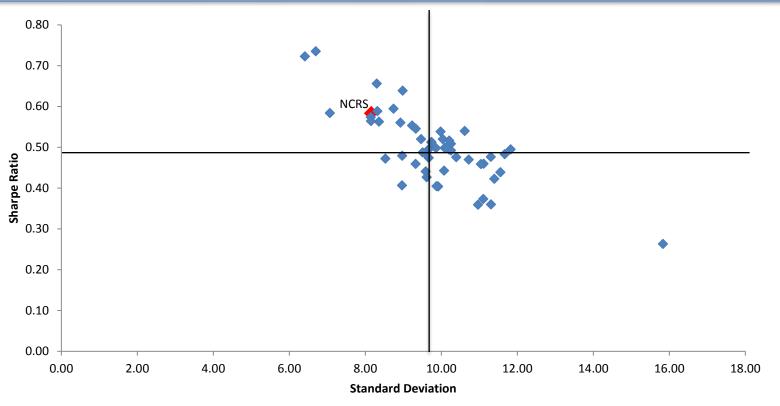


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<u>Returns</u>	3 Years	<u>5 Years</u>	<u> 10 Years</u>	<u> 15 Year</u>
25th percentile	8.08	8.39	6.14	5.85
Median	6.80	7.81	5.91	5.50
75th percentile	6.04	7.09	5.34	5.09
NCRS	6.74	7.52	5.90	5.51
Percentile Rank (1st percentile = highest performance)	52	57	52	50
<u>Risk</u>	3 Years	<u> 5 Years</u>	10 Years	<u> 15 Year</u>
25th percentile	6.54	7.93	10.44	10.06
Median	5.87	7.19	9.74	9.61
75th percentile	5.22	6.63	8.98	8.74
NCRS	4.95	6.00	8.15	8.00
Percentile Rank (99th percentile = lowest risk)	84	86	91	92

NCRS Gross of Fees Sharpe Ratio BNY Mellon Universe: Public Funds > \$1B

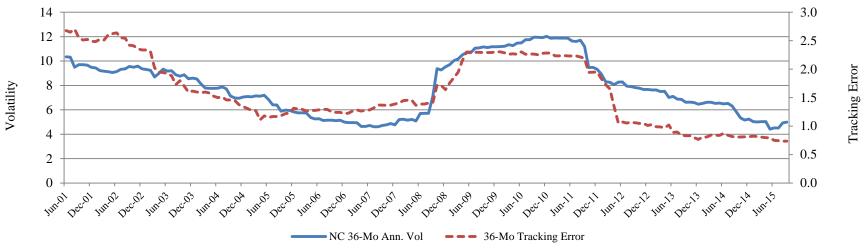
As of September 30, 2015



Sharpe Ratio	3 Years	<u>5 Years</u>	10 Years	<u>15 Year</u>
25th percentile	1.33	1.16	0.55	0.49
Median	1.14	1.05	0.49	0.43
75th percentile	0.99	0.95	0.45	0.39
NCRS	1.33	1.23	0.58	0.50
Percentile Rank	25	18	15	23



NCRS Rolling 3 Year Total Fund Volatility & Tracking Error*



NCRS Risk and Return Metrics*

	POSI	ITION			36-MONTH					60-MONTH		
			<u>Active</u>					<u>Active</u>				
Program	<u>\$ Bil</u>	% Wgt	<u>Return</u>	St. Dev	Return	<u>TE</u>	<u>IR</u>	<u>Return</u>	St. Dev	Return	<u>TE</u>	<u>IR</u>
Growth	48.5	56.7	9.2	7.7	1.6	0.8	2.0	8.9	10.1	1.2	1.0	1.2
Public Equity	35.2	41.2	8.4	9.9	1.1	0.7	1.6	8.1	12.9	0.8	0.7	1.1
Private Equity	4.3	5.1	12.3	2.9	-0.9	4.3	-0.2	11.4	3.2	-1.8	4.8	-0.4
Non-Core Real Estate	3.6	4.2	15.7	3.2	4.0	4.2	1.0	14.9	4.2	2.7	3.4	0.8
Opportunistic Fixed Income	5.3	6.2	7.4	3.3	6.6	2.4	2.7	7.8	3.8	6.5	3.6	1.8
Rates & Liquidity	26.2	30.7	1.9	3.9	0.0	0.6	0.1	4.2	3.9	0.1	0.7	0.1
IG Fixed Income	25.3	29.6	2.0	4.0	0.0	0.6	0.0	4.2	3.9	0.0	0.8	0.0
Cash	0.9	1.0										
Inflation Sensitive & Diversifiers	9.2	10.8	1.8	3.1	-0.3	2.1	-0.1	2.9	5.6	-1.0	2.1	-0.5
Inflation Sensitive	5.4	6.3	-3.7	4.8	0.8	2.3	0.4	-2.3	7.5	0.7	2.4	0.3
Core Real Estate	3.9	4.5	10.3	4.3	-0.7	3.1	-0.2	10.8	4.9	-1.5	2.9	-0.5
Multi-Strategy	1.6	1.9	7.7	7.1	0.6	0.9	0.7	8.8	9.3	2.1	3.0	0.7
Total NCRS	85.5	100.0	6.2	5.0	1.2	0.7	1.6	7.0	6.0	0.9	0.4	1.9

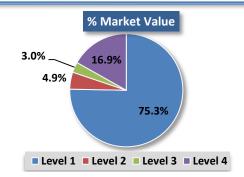
Note: Active Return= Net Managed less benchmark returns; TE=Tracking Error; IR = Information Ratio

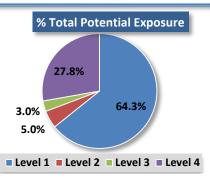
^{*}As of September 30, 2015



NCRS Liquidity Profile

As of September 30, 2015





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Level 1: Highly Liquid (T+3)

Level 2: T+3 to 12 Months

Level 3: 12 to 24 Months

Level 4: Greater than 24 Months

	Current Exposure (Market Value)										
	Public Equity	Private Equity	Non Core Real Estate	Opportunistic Fixed Income	Investment Grade Fixed Income	Pension Cash	Inflation Sensitive	Core Real Estate	Multi- Strategy	Total \$	Total %
Level 1	\$34,543	\$42	\$0	\$454	\$25,347	\$874	\$1,237	\$583	\$1,319	\$64,399	75.3%
Level 2	\$679	\$0	\$0	\$2,214	\$0	\$0	\$493	\$778	\$0	\$4,163	4.9%
Level 3	\$0	\$0	\$0	\$1,165	\$0	\$0	\$0	\$1,113	\$262	\$2,539	3.0%
Level 4	\$0	\$4,302	\$3,624	\$1,461	\$0	\$0	\$3,624	\$1,394	\$4	\$14,409	16.9%
Total \$	\$35,222	\$4,344	\$3,624	\$5,294	\$25,347	\$874	\$5,355	\$3,867	\$1,585	\$85,511	100.0%
Total %	41.19%	5.08%	4.24%	6.19%	29.64%	1.02%	6.26%	4.52%	1.85%		

	Total Potential Exposure (Market Value + Unfunded Commitments)										
	Public Equity	Private Equity	Non Core Real Estate	Opportunistic Fixed Income	Investment Grade Fixed Income	Pension Cash	Inflation Sensitive	Core Real Estate	Multi- Strategy	Total	Total %
Level 1	\$28,216	\$42	\$0	\$454	\$22,224	\$874	\$1,237	\$583	\$1,319	\$54,949	64.3%
Level 2	\$679	\$0	\$0	\$2,257	\$0	\$0	\$493	\$835	\$0	\$4,264	5.0%
Level 3	\$0	\$0	\$0	\$1,165	\$0	\$0	\$0	\$1,113	\$262	\$2,539	3.0%
Level 4	\$0	\$7,101	\$6,597	\$1,972	\$0	\$0	\$6,210	\$1,874	\$4	<i>\$23,758</i>	27.8%
Total \$	\$28,895	\$7,143	\$6,597	\$5,848	\$22,224	\$874	\$7,940	\$4,405	\$1,585	\$85,511	100.0%
Total %	33.79%	8.35%	7.72%	6.84%	25.99%	1.02%	9.29%	5.15%	1.85%		_



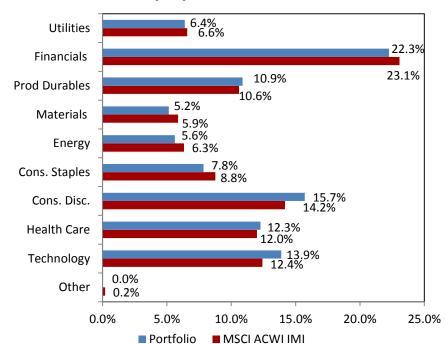
NCRS Public Equity Net Performance

As of September 30, 2015

	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Public Equity	\$35,222	(9.18)	(5.36)	8.40	8.12	4.68
Benchmark ²		(9.32)	(5.89)	7.29	7.36	4.18
Domestic Portfolio	\$15,942	(7.21)	(0.56)	12.96	13.35	6.96
Russell 3000		(7.25)	(0.49)	12.53	13.28	6.92
Non-US Portfolio	\$14,920	(12.11)	(11.45)	3.29	2.25	3.16
Custom Benchmark		(11.88)	(11.42)	2.75	2.08	2.26
Global Portfolio	\$2,368	(7.33)	0.72	14.07	12.04	-
MSCI ACWI		(9.45)	(6.66)	6.95	6.82	4.58
Equity Hedge	\$1,919	(3.67)	-	-	-	-
MSCI ACWI (beta adjusted)		(3.39)	(2.76)	1.63	-	-
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Transition	\$73	-	-	-	_	-



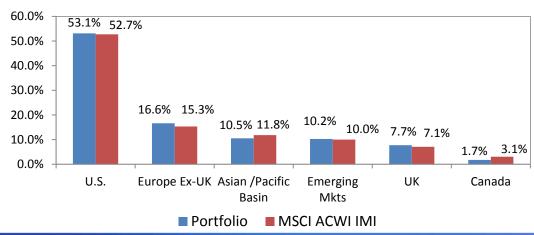
Total Equity Sector Allocation



Portfolio Characteristics

	Portfolio	MSCI ACWI IMI
Price/Earnings	18.7	18.3
Dividend Yield	2.40	2.61
Price/Book	1.99	1.96
Debt/Equity	0.94	0.96
Market Cap (\$ Weighted Median)	28,650	31,280
Return on Equity - 1 Year	15.5	15.3

Total Equity Regional Allocation





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Private Equity As of September 30, 2015

	Net Performance										
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years					
Private Equity	\$4,344	3.81	11.73	12.27	11.38	8.46					
Benchmark ³		4.02	7.04	13.15	13.22	11.20					
Buyout	\$1,723	1.92	7.43	8.83	8.55	9.29					
Growth	\$900	3.37	23.28	19.03	17.71	6.38					
Special Situations	\$557	3.62	(0.62)	5.93	7.28	8.08					
Fund of Funds	\$1,122	7.45	17.25	16.43	14.03	6.41					
Stock Distribution Account	\$42	2.54	1.00	(7.44)	(11.07)	(1.43)					

	IRR by Vintage Year													
	<u>Pre-2004</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total</u>
NCRS	12.68	7.91	5.17	3.51	10.39	10.74	15.55	19.40	8.13	14.81	5.53	10.24	-6.63	7.93
# of Funds	28	3	11	21	13	17	3	1	6	6	9	4	8	130

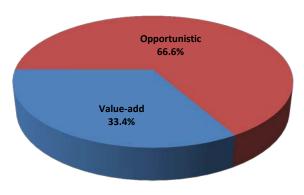
Strategy Allocation (based on commitments)



Non-Core Real Estate As of September 30, 2015

Net Performance											
Market Value (\$MM) 3 Month 1 Year 3 Years 5 Years 10 Years											
Non-Core Real Estate	\$3,624	3.04	17.66	15.68	14.91	4.62					
Benchmark ⁴		3.06	8.84	11.66	12.24	4.66					
Opportunistic	\$2,415	2.88	16.24	15.73	13.96	4.06					
Value Add	\$1,209	3.38	20.14	15.50	16.49	6.01					

	IRR by Vintage Year												
	Pre-2005	<u>2005</u>	<u>2006</u>	2007	2008	<u>2009</u>	2010	<u>2011</u>	2012	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total</u>
NCRS	9.92	-1.44	2.38	1.04	17.81	-2.44	18.39	17.83	14.84	15.84	-5.03	0.00	5.23
# of Funds	19	15	13	8	6	1	6	7	5	6	7	6	99

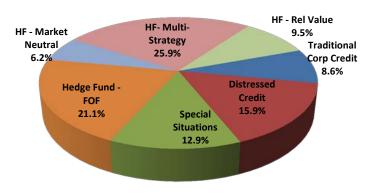


Opportunistic Fixed Income

As of September 30, 2015

Net Performance											
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years					
Opportunistic Fixed Income	\$5,294	(2.70)	(2.64)	7.40	7.82	-					
Benchmark ⁵		(4.23)	(4.79)	0.80	1.35	-					
Traditional Corporate Credit	\$454	(2.15)	(4.20)	7.17	8.96	-					
Distressed Credit	\$840	(2.04)	(1.31)	10.37	10.07	-					
Special Situations	\$682	2.48	11.39	20.71	19.63	-					
Hedged Fixed Income	\$3,318	(3.87)	(5.03)	4.98	-	-					

	IRR by Vintage Year												
	<u>2005</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u> 2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total</u>		
NCRS	3.02	17.41	9.06	22.42	9.93	4.18	0.70	2.79	0.28	4.22	6.82		
# of Funds	1	1	3	1	4	9	2	7	3	1	32		

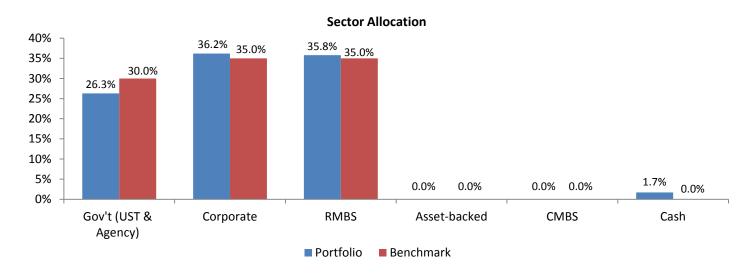


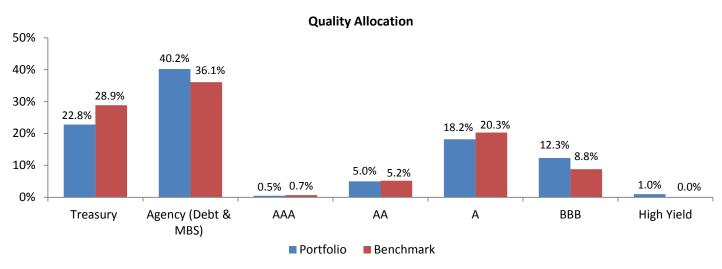


	Net Performance												
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years							
Rates & Liquidity	\$26,220	1.28	2.95	1.90	4.18	5.88							
Benchmark ⁶		1.64	3.45	1.86	4.11	5.54							
IG Fixed Income	\$25,347	1.32	3.01	1.95	4.21	5.90							
Core Fixed Income	\$22,659	1.47	3.31	1.96	4.27	5.94							
IG Fixed Income Cash	\$2,687	0.16	0.53	-	-	-							
Cash	\$874	0.16	0.53	-	-	-							

Core Fixed Income Portfolio Characteristics										
Avg. Coupon Yield to Maturity Duration										
Government (Treasury & Agency)	5.42%	2.17%	9.8							
Corporate	5.02%	3.99%	8.7							
Mortgage	4.09%	2.50%	3.7							
Total	4.79%	2.96%	7.2							

Core Fixed Income As of September 30, 2015

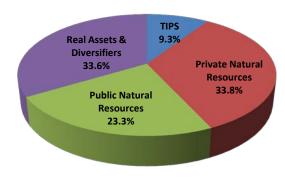






Net Performance												
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years						
Inflation Sensitive	\$5,355	(3.47)	(10.04)	(3.71)	(2.27)	0.96						
Benchmark ¹⁰		(4.12)	(9.63)	(4.52)	(2.94)	3.46						
Private Natural Resources	\$1,811	0.87	(8.33)	3.07	3.23	3.50						
Public Natural Resources	\$1,248	(13.42)	(23.70)	(13.77)	-	-						
TIPS	\$498	-	-	-	-	-						
Real Assets & Other Diversifiers	\$1,799	0.54	7.01	7.24	-	-						

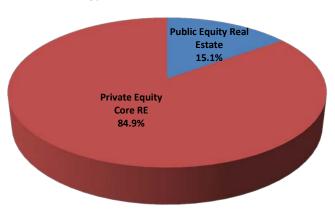
	IRR by Vintage Year											
	Pre-2006	2006	2007	2008	2009	2010	<u>2011</u>	2012	2013	2014	<u>2.15</u>	<u>Total</u>
NCRS	9.38	-0.11	10.51	1.76	N/A	-10.82	-8.41	8.19	0.33	2.87	-1.93	-3.48
# of Funds	1	3	2	2	0	3	9	7	11	12	3	53



Core Real Estate As of September 30, 2015

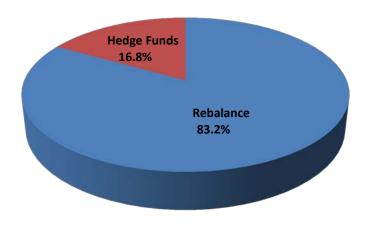
Net Performance											
Market Value (\$MM) 3 Month 1 Year 3 Years 5 Years 10 Years											
Core Real Estate	\$3,867	2.49	9.09	10.33	10.80	5.27					
Benchmark ¹¹		2.24	11.45	11.03	12.31	5.75					
Public Equity Real Estate	\$583	0.23	5.86	9.27	9.08	-					
Private Equity Core Real Estate	\$3,284	2.88	9.47	10.83	11.95	6.35					

	IRR by Vintage Year												
	<u>Pre-2005</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total</u>	
NCRS	7.62	-1.68	5.76	1.55	10.59	23.62	n/a	n/a	6.15	6.45	N/A	7.05	
# of Funds	6	1	2	3	1	1	0	0	2	6	0	22	



Multi-Strategy As of September 30, 2015

Net Performance												
Market Value (\$MM) 3 Month 1 Year 3 Years 5 Years 10 Years												
Multi-Strategy	\$1,585	(6.00)	(2.78)	7.65	8.81	5.29						
Benchmark ¹²		(6.69)	(4.20)	7.06	6.76	6.55						
Rebalance Strategy	\$1,319	(6.47)	(2.65)	8.60	-	-						
Hedge Funds	\$266	(3.57)	(3.30)	3.03	1.85	1.87						



New and Incremental Investment Commitments Since May IAC Meeting

<u>Fund Name</u>	<u>Firm Name</u>	Commitment	Closing Date
Public Equity			
Old North State Hedged Equity Fund 1, LLC	BlackRock	\$500,000,000*	8/14/2015
Private Equity			
Northbound NCRS Fund, L.P.	Neuberger Berman	\$200,000,000	6/10/2015
MHR Institutional Partners IV, L.P.	MHR Institutional Advisors	\$150,000,000	7/31/2015
CCP X No. 2 LP (Charterhouse Capital Partners X)	Charterhouse Capital Partners	\$150,000,000	9/29/2015
Non-Core Real Estate			
Rockwood Capital Real Estate Partners Fund IX CIV, L.P.	Rockwood Capital Partners	\$25,000,000	6/30/2015
Rockwood Capital Real Estate Partners Fund X Side Car, L.P.	Rockwood Capital Partners	\$50,000,000	6/30/2015
Rockwood Capital Real Estate Partners X, L.P.	Rockwood Capital Partners	\$100,000,000	6/30/2015
Rockpoint Real Estate Fund V Side Car Funds	Rockpoint Group	\$50,000,000*	8/06/2015
NorthRock Fund IV, L.P.	Rockwood Capital Partners	\$400,000,000	9/29/2015
Core Real Estate			
Meadow London Core-Plus Fund LP 2015-1 Series	Rockpoint Group	GBP 65,000,000	8/31/2015
Opportunistic Fixed Income			
Marathon Currituck Fund, LP Series A	Marathon Asset Management	\$10,000,000*	5/27/2015
Marathon Currituck Fund, LP Series C (to be invested in Marathon CLO Equity Fund, L.P.)	Marathon Asset Management	\$40,000,000*	7/31/2015
Inflation Sensitive			
MTP Energy Opportunities Fund II LLC	Magnetar Financial LLC	\$250,000,000	5/26/2015
BlackRock U.S. TIPS Index Separate Accoount	BlackRock	\$500,000,000	7/30/2015
Multi Strategy			
	None		

^{*}Additional commitment



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Appendix: NCRS Asset Class Net Performance As of September 30, 2015

	Market Value (\$MM)	1 Year	3 Years	5 Years	10 Years	15 Years
Growth	\$48,483.52	(2.14)	9.22	8.90	4.88	-
Benchmark ¹		(3.67)	7.58	7.93	4.51	3.09
Public Equity	\$35,222.01	(5.36)	8.40	8.12	4.68	3.64
Benchmark ²		(5.89)	7.29	7.36	4.18	2.71
Private Equity	\$4,343.98	11.73	12.27	11.38	8.46	0.99
Benchmark ³		7.04	13.15	13.22	11.20	8.50
Non-Core Real Estate	\$3,623.65	17.66	15.68	14.91	4.62	-
Benchmark ⁴		8.84	11.66	12.24	4.66	7.12
Opportunistic Fixed Income	\$5,293.88	(2.64)	7.40	7.82	-	-
Benchmark ⁵		(4.79)	0.80	1.35	-	-
Rates & Liquidity	\$26,220.37	2.95	1.90	4.18	5.88	6.65
Benchmark ⁶		3.45	1.86	4.11	5.54	6.38
IG Fixed Income	\$25,346.54	3.01	1.95	4.21	5.90	6.66
Benchmark ⁷		3.58	1.97	4.18	5.58	6.41
Cash	\$873.83	0.53	-	-	-	-
Benchmark ⁸		0.04	0.03	-	-	-
Inflation Sensitive & Diversifiers	\$9,222.19	(2.38)	1.82	2.87	1.96	-
Benchmark ⁹		(0.47)	2.10	3.91	1.53	4.02
Inflation Sensitive	\$5,354.89	(10.04)	(3.71)	(2.27)	0.96	-
Benchmark ¹⁰		(9.63)	(4.52)	(2.94)	3.46	-
Core Real Estate	\$3,867.31	9.09	10.33	10.80	5.27	-
Benchmark ¹¹		11.45	11.03	12.31	5.75	6.88
Multi-Strategy	\$1,584.52	(2.78)	7.65	8.81	5.29	-
Benchmark ¹²		(4.20)	7.06	6.76	6.55	-



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NOTES:

All data presented are based on currently available information at time of publication and may be revised subsequently

- 1. The Growth Benchmark is a blend of the Public Equity Benchmark, Private Equity Benchmark, Non-Core Real Estate Benchmark, & Opportunistic FI Benchmark at policy weights.
- 2. The Public Equity Benchmark is the dynamically weighted combination of the MSCI ACWI IMI Net (Long-Only) and a beta adjusted MSCI ACWI IMI Net (Hedged Equity).
- 3. The Private Equity Benchmark is comprised of the following Burgiss Group Private iQ indices: 50% Buyout, 20% Venture Capital, and 30% Special Situations and Distressed Securities.
- 4. The Non-Core Real Estate Benchmark is comprised of the following Burgiss Group Private iQ indices: 80% U.S. Non-Core Real Estate (Opportunistic and Value-Added) and 20% Non-U.S. Non-Core Real Estate (Opportunistic and Value-Added).
- 5. The Opportunistic Fixed Income Benchmark is a comprised of 50% HFRX Distressed Securities Index, 20% HFRX Relative Value Index, 15% Credit Suisse Leveraged Loan Index, and 15% BOAML High Yield Index*.
- 6. The Rates & Liquidity Benchmark is a blend of the IG Fixed Income Benchmark and the Cash Benchmark at policy weights.
- 7. The IG Fixed Income Benchmark is comprised 10% iMoneyNet First Tier Institutional Money Market Funds Net Index and 90% custom BOAML Core Investment Grade Index*. The custom BOAML core index comprised of the following weightings: 30% BOAML 5+ Years Governments, 35% BOAML 5+ Years Investment Grade Corporates, and 35% BOAML Mortgage Master.
- 8. The Cash Benchmark is the iMoneyNet First Tier Institutional Money Market Funds Net Index.
- 9. The Inflation Sensitive & Diversifiers Benchmark is a blend of the Inflation Sensitive Benchmark and the Core Real Estate Benchmark at policy weights.
- 10. The Inflation Sensitive Benchmark is the dynamically weighted combination of the Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index (TIPS)*, the Bloomberg Commodities Index (Commodities), and a combination of the benchmarks of investments classified within Private Natural Resources or Other Real Assets and Diversifiers.
- 11. The Core Real Estate Benchmark is comprised of 80% NCREIF ODCE Net and 20% FTSE EPRA NAREIT Global Index.
- 12. The Multi-Strategy Benchmark is comprised of a dynamically weighted combination of the HFRX ED: Multi-Strategy Index, net of fees, and the market value weighted benchmarks for any other total fund strategies within the Portfolio.
- *Source: BofA Merrill Lynch, used with permission. See disclaimer on page.



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