



IAC Performance Review

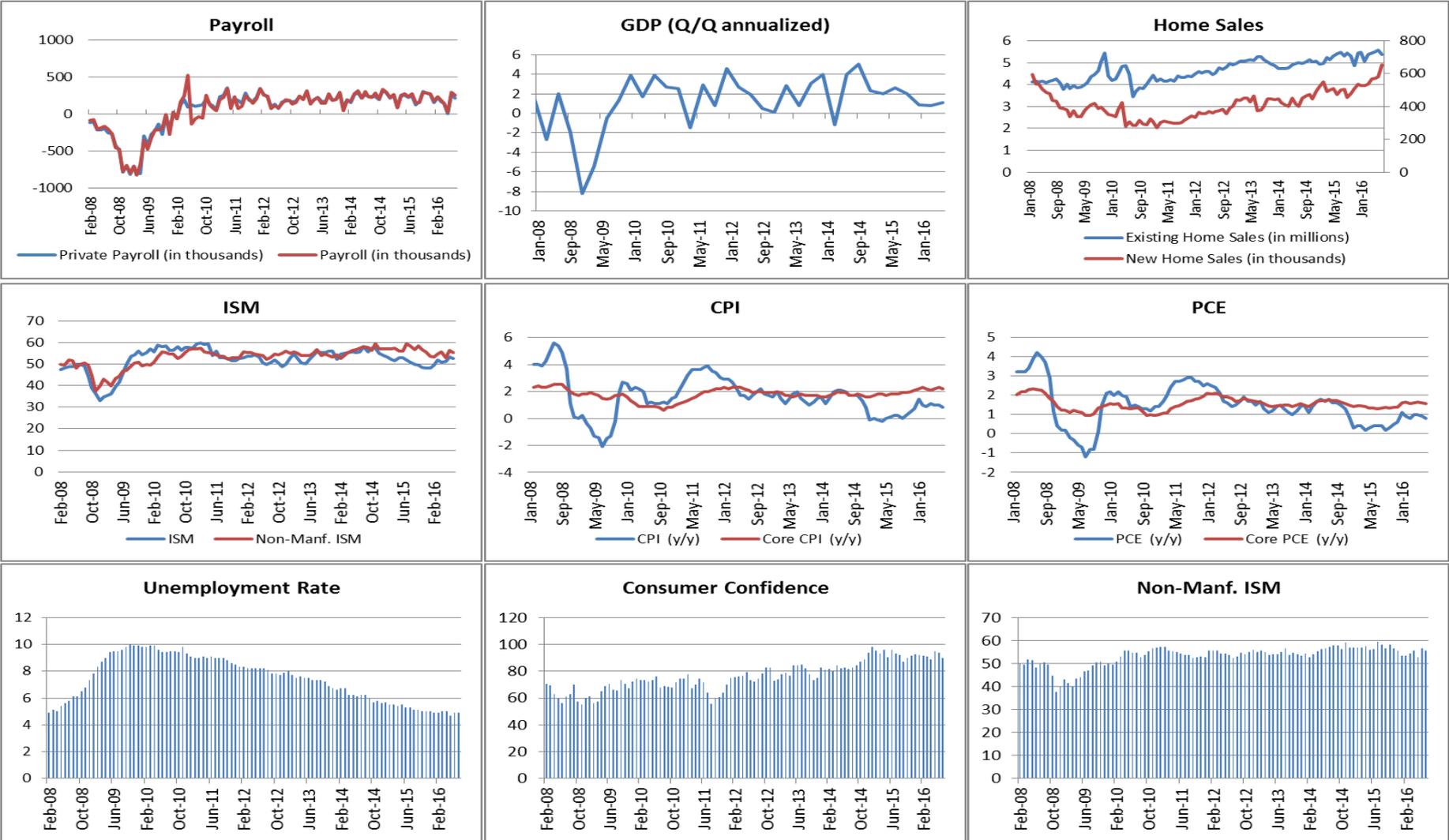
September 21, 2016



North Carolina Department of State Treasurer
Investment Management

Learn. Invest. Grow. Prosper.

U.S. Economic Environment



Source: Bloomberg; Data as of 07/31/16



Global Economic Environment

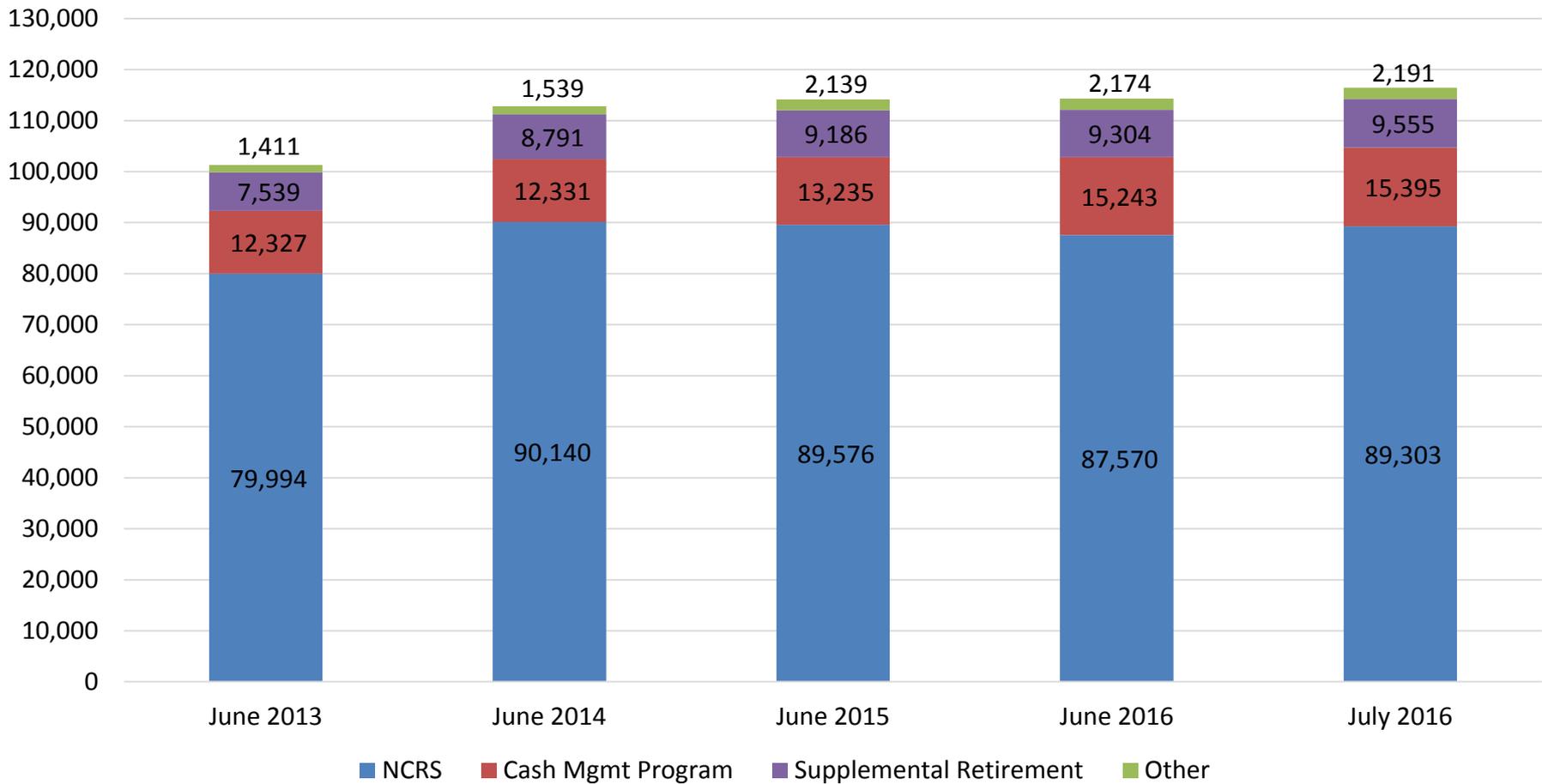
Countries	Real GDP YoY		Unemployment		CPI YoY		Countries	Real GDP YoY		Unemployment		CPI YoY	
	Date	Value	Date	Value	Date	Value		Date	Value	Date	Value	Date	Value
U.S.	06/16	1.2	07/16	4.9	07/16	0.8	Asia/Pacific/Latam						
Europe							China	06/16	6.7			07/16	1.8
Germany	06/16	1.8	07/16	6.1	07/16	0.4	India	06/16	7.1			07/16	6.5
France	06/16	1.4	07/16	10.3	07/16	0.2	Japan	06/16	0.6	07/16	3	07/16	-0.4
U.K	06/16	2.2	06/16	4.9	07/16	0.6	Indonesia	06/16	5.2			07/16	3.2
Italy	06/16	0.7	07/16	11.4	07/16	-0.1	Brazil	06/16	-3.8			07/16	8.7
Spain	06/16	3.2	07/16	19.6	07/16	-0.6	Australia	03/16	3.1	07/16	5.7	06/16	1.0

Source: Bloomberg; Data as of 07/31/16



Assets Under Management (\$mil)

\$116.4 Billion as of July 31, 2016



NCRS Asset Allocation

As of July 31, 2016

	Market Value (\$000)	%	Target	Range		Relative %	Relative \$ (\$000)
				Minimum	Maximum		
Growth	\$52,231,334	58.49%	58.00%	37.00%	71.00%	0.49%	\$435,545
Public Equity	38,839,952	43.49%	42.00%	37.00%	47.00%	1.49%	1,332,656
Non Core Real Estate	3,866,459	4.33%	3.00%	0.00%	8.00%	1.33%	1,187,367
Opportunistic Fixed Income	5,117,555	5.73%	7.00%	0.00%	7.50%	-1.27%	(1,133,661)
Private Equity	4,407,369	4.94%	6.00%	0.00%	8.75%	-1.06%	(950,817)
Inflation Sensitive & Diversifiers	9,515,614	10.66%	11.00%	4.00%	16.00%	-0.34%	(307,725)
Core Real Estate	4,329,126	4.85%	5.00%	2.00%	10.00%	-0.15%	(136,028)
Inflation Sensitive	5,186,488	5.81%	6.00%	2.00%	7.50%	-0.19%	(171,697)
Multi-Strategy	1,663,925	1.86%	2.00%	0.00%	4.00%	-0.14%	(122,136)
Rates & Liquidity	25,892,212	28.99%	29.00%	24.00%	42.00%	-0.01%	(5,683)
Cash	1,010,884	1.13%	1.00%	0.00%	10.00%	0.13%	117,853
Investment Grade Fixed Income	24,881,327	27.86%	28.00%	24.00%	32.00%	-0.14%	(123,537)
Grand Total	\$89,303,085	100.00%					



NCRS Unaudited Asset Allocation

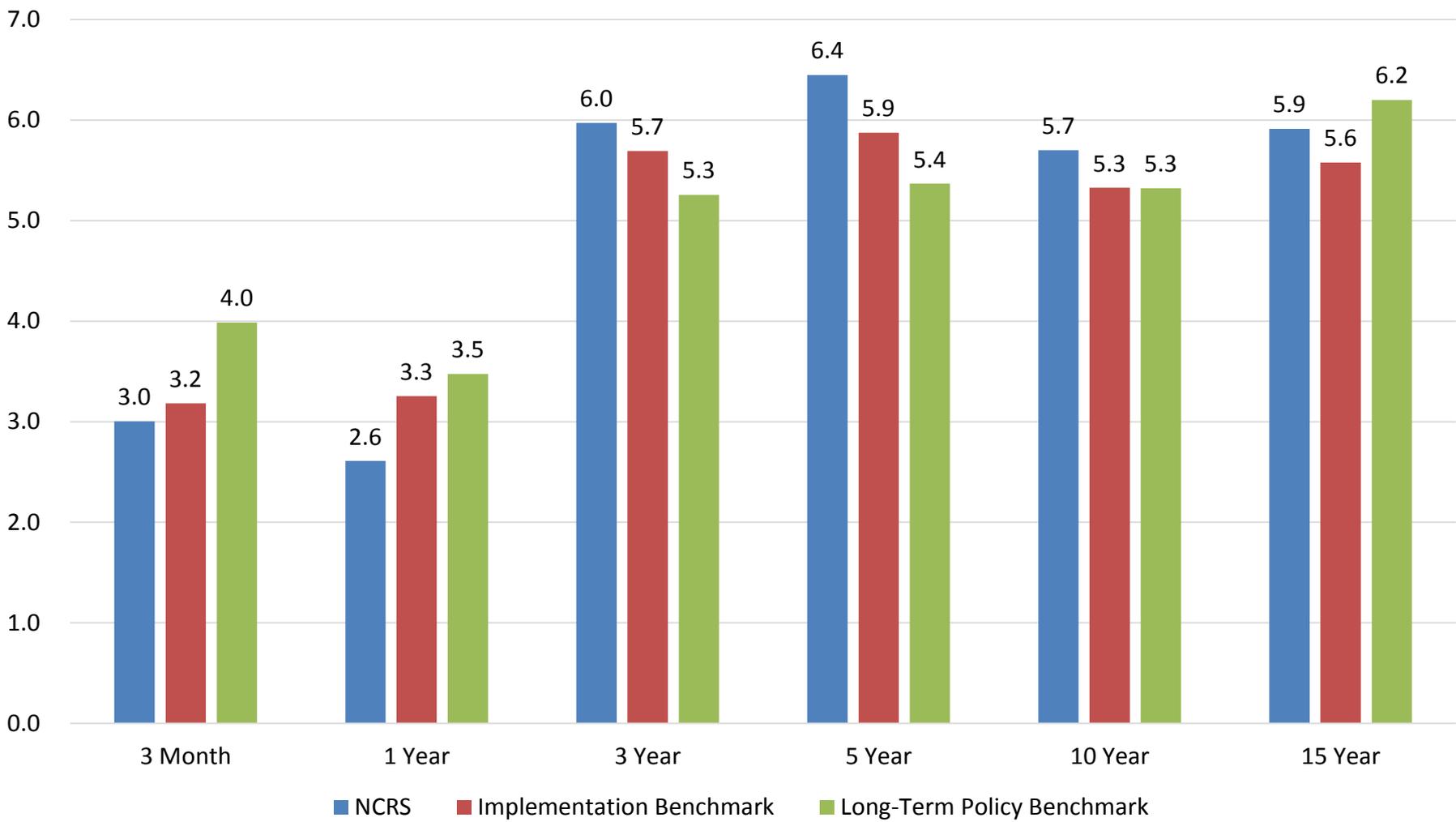
As of September 13, 2016

	Market Value (\$'000)	%	Target	Range		Relative %	Relative \$ (\$'000)
				Minimum	Maximum		
Growth	\$51,540,391	58.19%	58.00%	37.00%	71.00%	0.19%	\$170,998
Public Equity	38,095,604	43.01%	42.00%	37.00%	47.00%	1.01%	897,078
Non Core Real Estate	3,868,823	4.37%	3.00%	0.00%	8.00%	1.37%	1,211,785
Opportunistic Fixed Income	5,131,128	5.79%	7.00%	0.00%	7.50%	-1.21%	(1,068,627)
Private Equity	4,444,836	5.02%	6.00%	0.00%	8.75%	-0.98%	(869,239)
Inflation Sensitive & Diversifiers	9,819,058	11.09%	11.00%	4.00%	16.00%	0.09%	76,587
Core Real Estate	4,414,197	4.98%	5.00%	2.00%	10.00%	-0.02%	(14,199)
Inflation Sensitive	5,404,860	6.10%	6.00%	2.00%	7.50%	0.10%	90,785
Multi-Strategy	1,577,663	1.78%	2.00%	0.00%	4.00%	-0.22%	(193,696)
Rates & Liquidity	25,630,808	28.94%	29.00%	24.00%	42.00%	-0.06%	(53,889)
Cash	1,040,455	1.17%	1.00%	0.00%	10.00%	0.17%	154,776
Investment Grade Fixed Income	24,590,352	27.76%	28.00%	24.00%	32.00%	-0.24%	(208,665)
Grand Total	\$88,567,919	100.00%					



NCRS Total Net Portfolio Return vs. Benchmarks

As of July 31, 2016

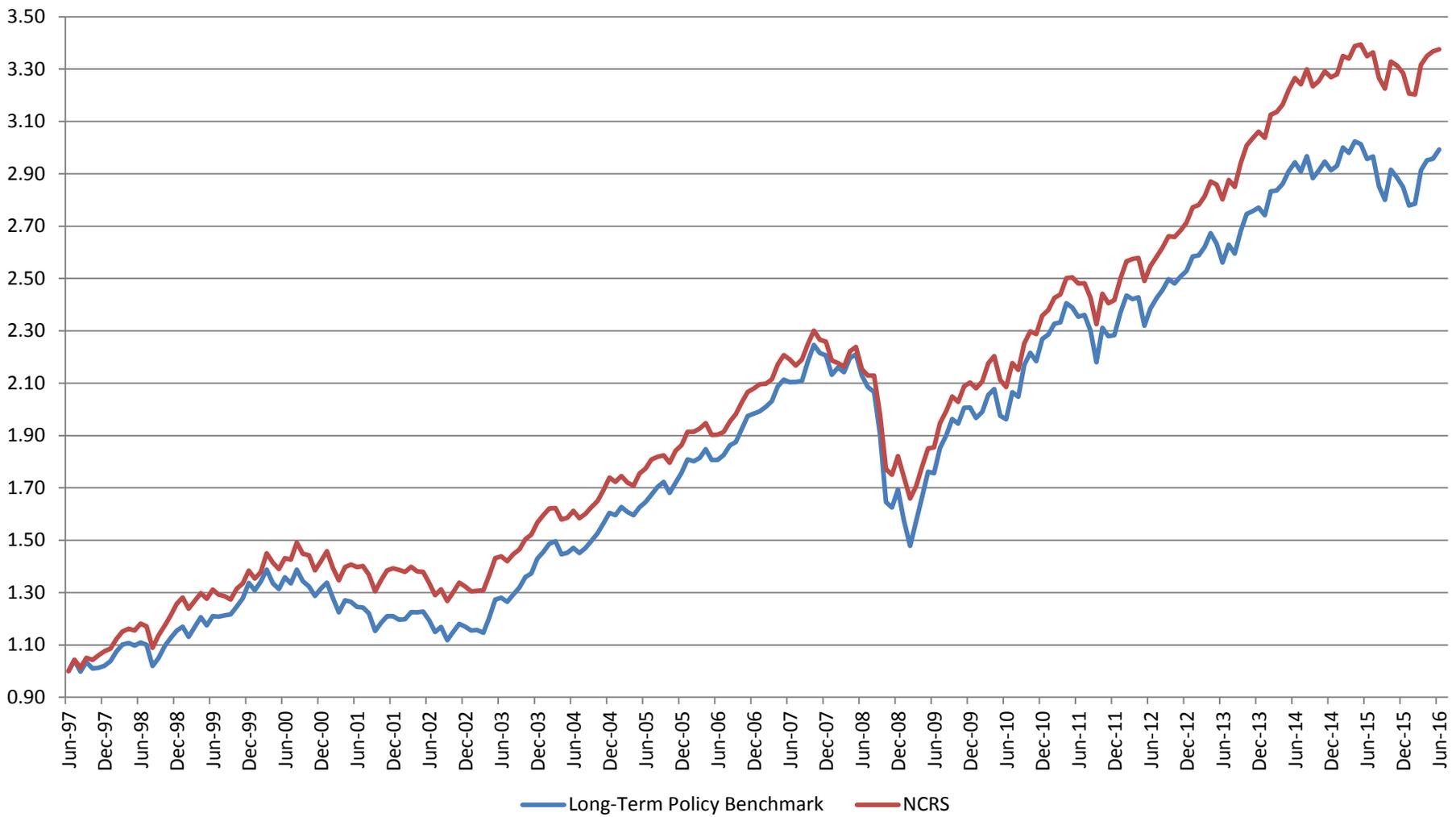


Note: Returns for periods greater than one year are annualized.



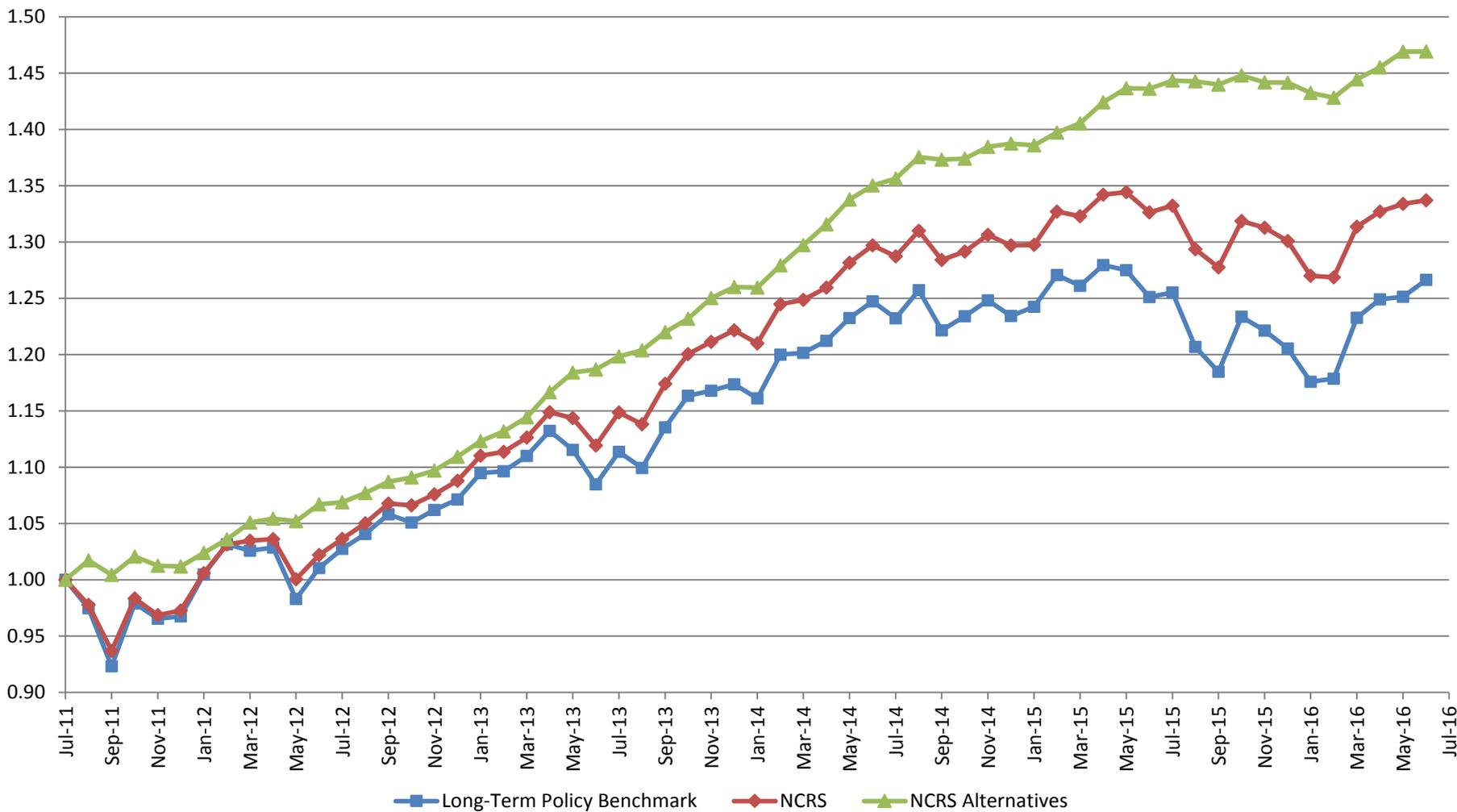
Growth of a Dollar

As of July 31, 2016



Growth of a Dollar

5 Years Ending July 31, 2016



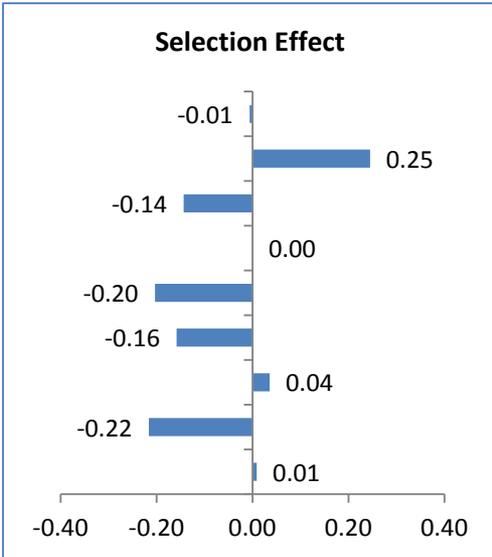
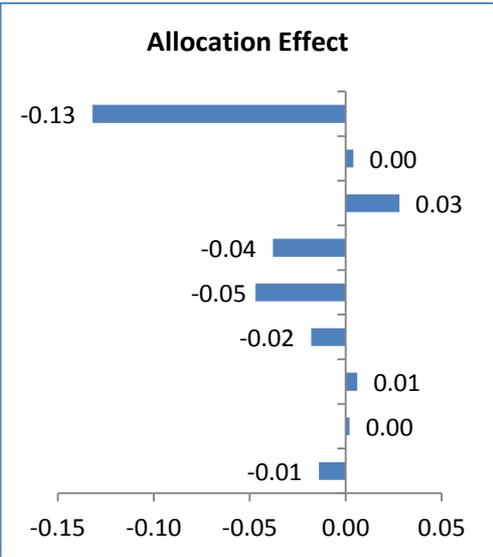
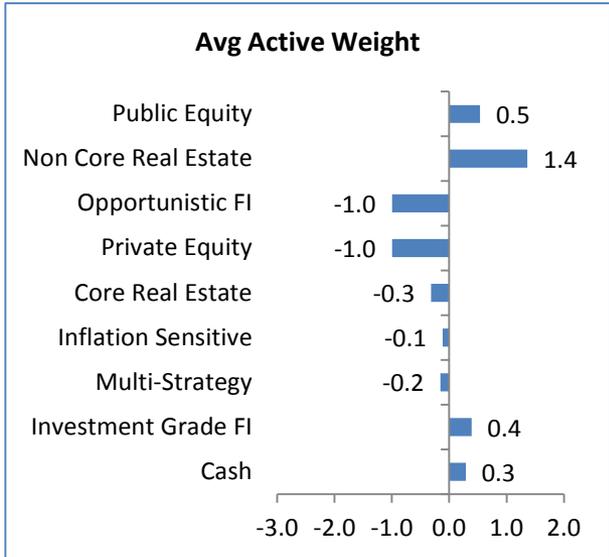
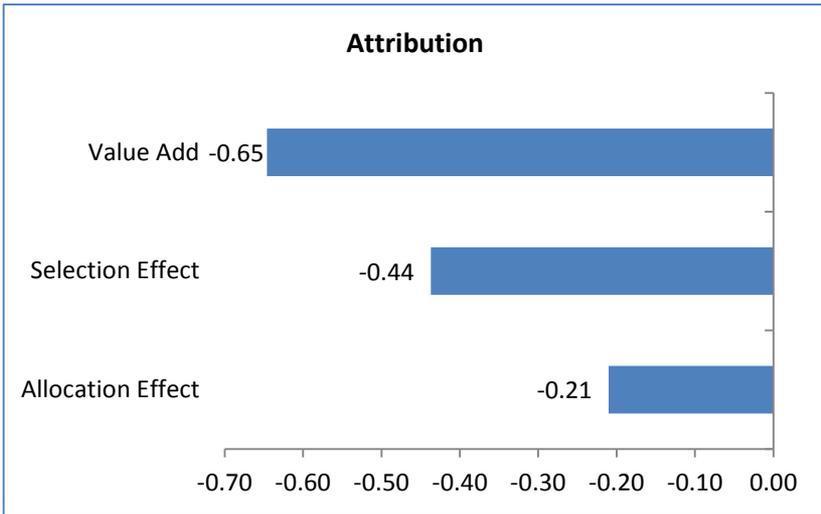
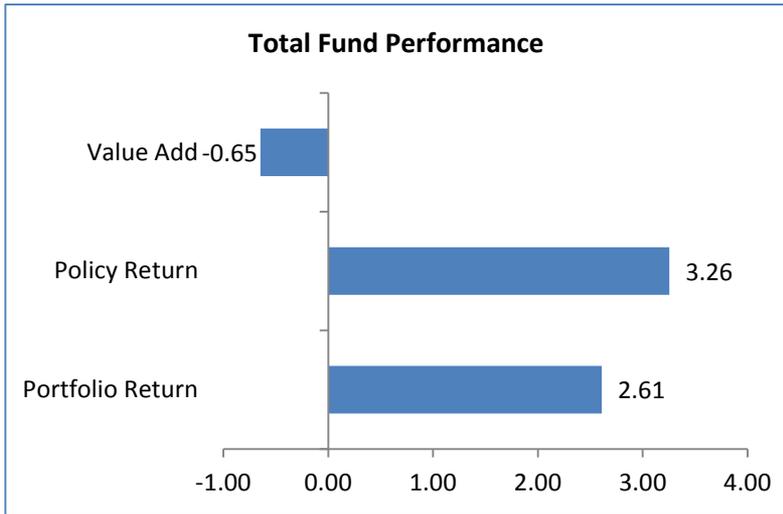
Note: NCRS Alternatives includes the following: Core Real Estate, Inflation Sensitive - Private Natural Resources, Inflation Sensitive – Real Assets and Other, Multi-Strategy Investments, Non Core Real Estate, Opportunistic Fixed Income, Private Equity, Equity Hedge Strategies and the Blackstone Granite Fund (Class B).



NCRS Net Return Attribution

Total Fund Performance vs. Implementation Benchmark

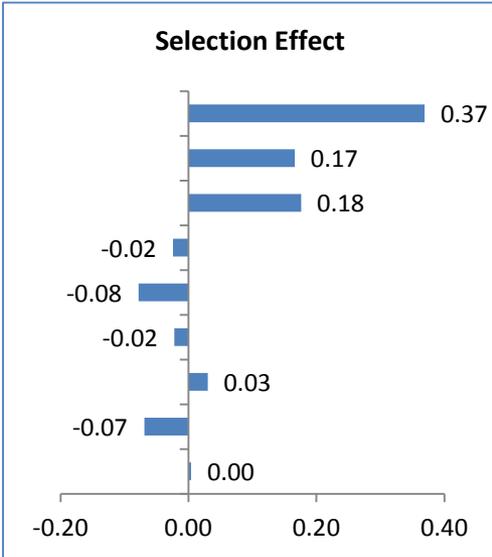
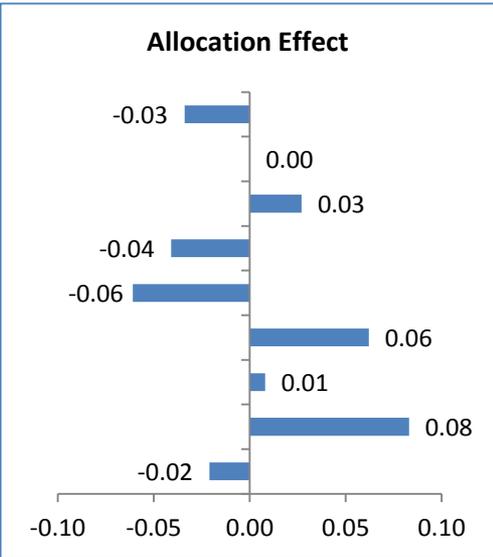
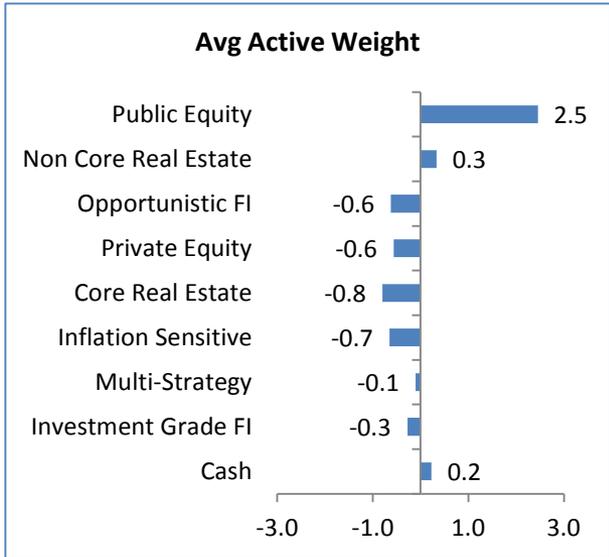
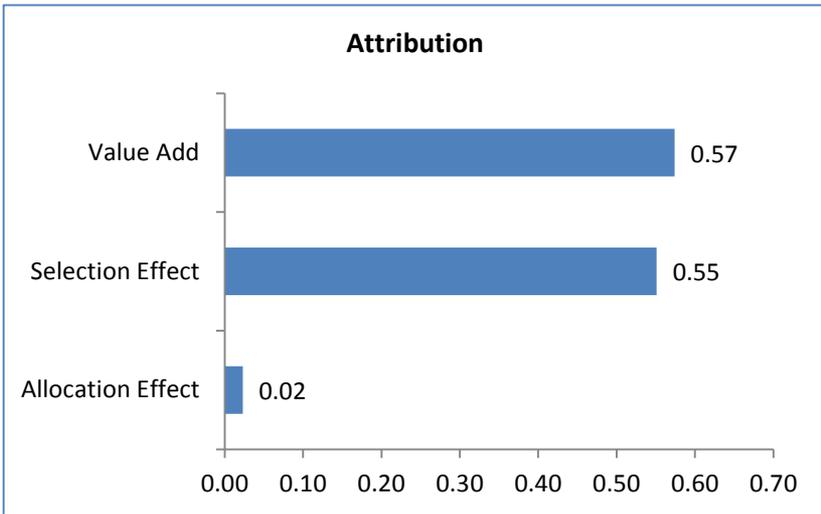
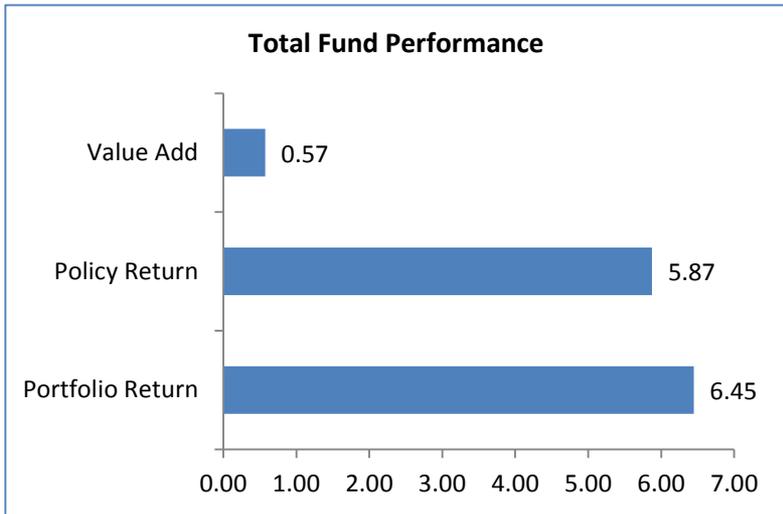
1 Year Ending July 31, 2016



NCRS Net Return Attribution

Total Fund Performance vs. Implementation Benchmark

5 Years Ending July 31, 2016

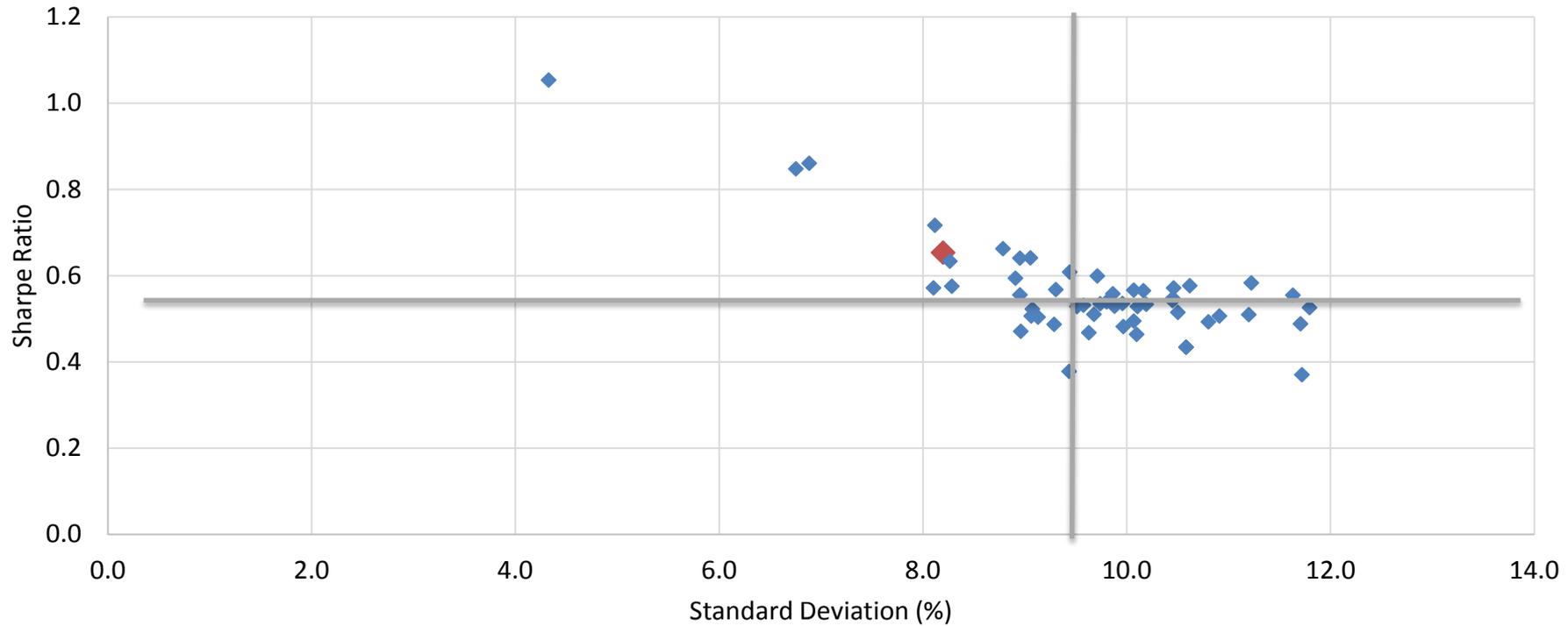


NCRS Gross of Fees Return and Risk
 BNY Mellon Universe: Public Funds > \$1B
 As of July 31, 2016

<u>Returns</u>	<u>3 Years</u>	<u>5 Years</u>	<u>10 Years</u>	<u>15 Year</u>
25th percentile	7.07	7.79	6.43	6.73
Median	6.52	7.02	6.00	6.41
75th percentile	5.93	6.46	5.50	6.01
NCRS	6.61	7.03	6.18	6.26
Percentile Rank (1 st percentile = highest performance)	49	50	38	61
<u>Risk</u>	<u>3 Years</u>	<u>5 Years</u>	<u>10 Years</u>	<u>15 Year</u>
25th percentile	7.09	7.94	10.46	9.92
Median	6.14	7.23	9.74	9.45
75th percentile	5.82	6.37	9.01	8.56
NCRS	5.37	6.20	8.20	7.78
Percentile Rank (99 th percentile = lowest risk)	80	81	89	94



NCRS Gross of Fees Sharpe Ratio
BNY Mellon Universe: Public Funds > \$1B
 As of July 31, 2016

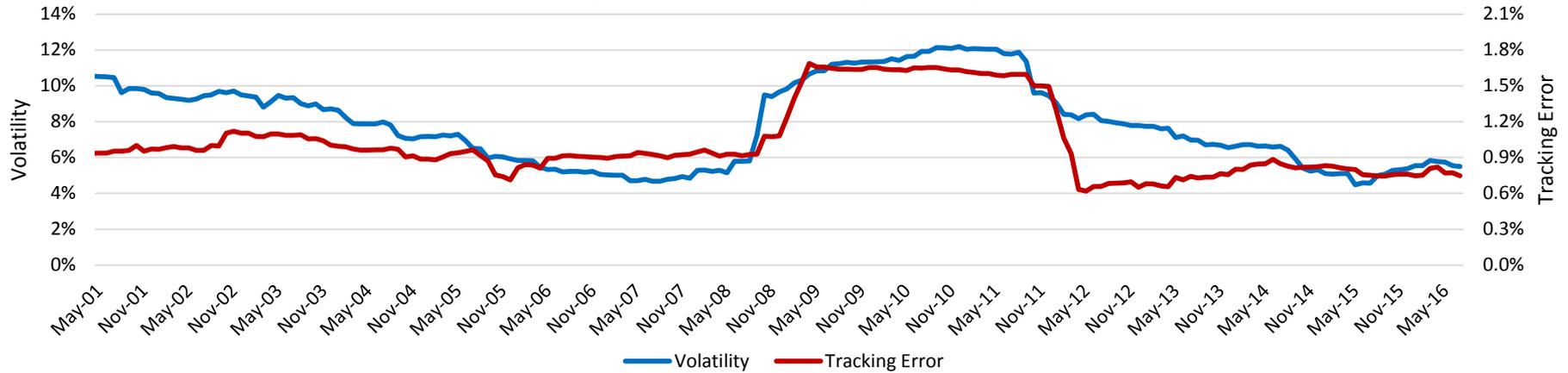


Sharpe Ratio	3 Years	5 Years	10 Years	15 Year
25th percentile	1.16	1.11	0.58	0.62
Median	0.98	0.95	0.54	0.56
75th percentile	0.90	0.88	0.51	0.52
NCRS	1.20	1.11	0.65	0.64
Percentile Rank	23	25	12	18

Note: Scatter plot shows Sharpe Ratio and Volatility for 10 years ending July 31, 2016

NCRS Rolling 3 Year Total Fund Volatility & Tracking Error*

Rolling 3-Year Total Fund Volatility & Tracking Error



NCRS Risk and Return Metrics*

Program	POSITION		36-MONTH					60-MONTH				
	\$ Bil	% Wgt	Return	St. Dev	Active Return	TE	IR	Return	St. Dev	Active Return	TE	IR
Growth	52.2	58.5	6.9	8.8	0.9	0.8	1.0	7.8	10.5	1.1	0.8	1.3
Public Equity	38.8	43.5	6.3	11.5	0.4	0.6	0.7	7.5	13.6	0.8	0.7	1.2
Private Equity	4.4	4.9	10.7	3.4	0.9	4.0	0.2	8.9	3.1	-0.5	4.4	-0.1
Non-Core Real Estate	3.9	4.3	15.6	3.2	6.1	4.3	1.4	13.6	3.7	4.0	3.6	1.1
Opportunistic Fixed Income	5.1	5.7	2.3	3.3	1.4	3.9	0.4	5.1	3.7	4.2	4.2	1.0
Rates & Liquidity	25.9	29.0	5.2	3.2	-0.5	0.6	-0.9	4.8	3.7	-0.2	0.7	-0.3
IG Fixed Income	24.9	27.9	5.4	3.3	-0.5	0.6	-0.9	4.9	3.8	-0.2	0.7	-0.3
Cash	1.0	1.1	0.6	0.1	0.5	0.1	6.3	--	--	--	--	--
Inflation Sensitive & Diversifiers	9.5	10.7	1.7	2.7	-2.4	2.2	-1.1	1.3	5.4	-1.6	2.3	-0.7
Inflation Sensitive	5.2	5.8	-3.1	4.6	-1.0	2.9	-0.3	-3.7	7.2	-0.3	2.6	-0.1
Core Real Estate	4.3	4.8	8.6	2.6	-3.4	2.1	-1.7	9.2	4.4	-2.3	2.8	-0.8
Multi-Strategy	1.7	1.9	5.5	8.2	1.0	1.0	1.1	9.4	10.1	2.1	2.6	0.8
Total NCRS	89.3	100.0	6.0	5.5	0.3	0.7	0.4	6.4	6.3	0.6	0.8	0.7

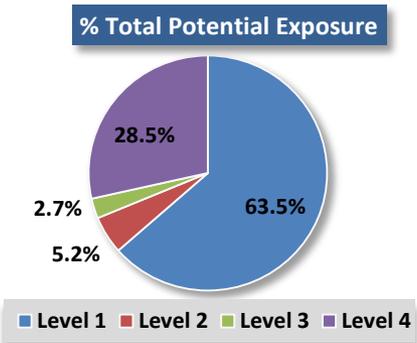
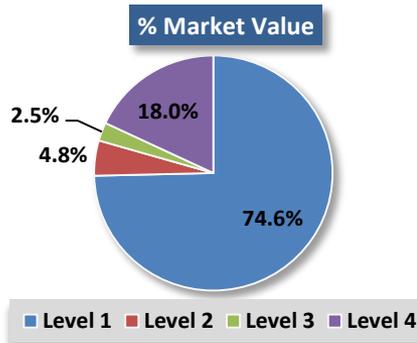
Note: Active Return= Net Managed less benchmark returns; TE=Tracking Error; IR = Information Ratio

*As of July 31, 2016



NCRS Liquidity Profile

As of July 31, 2016



Liquidity Levels
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)											
	Global 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	\$37,593	\$23	\$0	\$459	\$24,881	\$1,011	\$554	\$677	\$1,448	\$66,646	74.6%
Level 2	\$741	\$0	\$0	\$1,854	\$0	\$0	\$775	\$954	\$0	\$4,324	4.8%
Level 3	\$139	\$0	\$0	\$1,003	\$0	\$0	\$0	\$994	\$119	\$2,255	2.5%
Level 4	\$367	\$4,384	\$3,866	\$1,801	\$0	\$0	\$3,858	\$1,704	\$97	\$16,078	18.0%
Total \$	\$38,840	\$4,407	\$3,866	\$5,118	\$24,881	\$1,011	\$5,186	\$4,329	\$1,664	\$89,303	100.0%
Total %	43.5%	4.9%	4.3%	5.7%	27.9%	1.1%	5.8%	4.8%	1.9%		

Total Potential Exposure (Market Value + Unfunded Commitments)											
	Global 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	\$31,192	\$23	\$0	\$459	\$21,370	\$1,011	\$554	\$677	\$1,448	\$56,734	63.5%
Level 2	\$741	\$0	\$0	\$1,894	\$0	\$0	\$775	\$1,241	\$0	\$4,651	5.2%
Level 3	\$139	\$0	\$0	\$1,003	\$0	\$0	\$0	\$1,194	\$119	\$2,455	2.7%
Level 4	\$367	\$7,332	\$6,512	\$2,570	\$0	\$0	\$6,031	\$2,445	\$207	\$25,464	28.5%
Total \$	\$32,439	\$7,355	\$6,512	\$5,926	\$21,370	\$1,011	\$7,360	\$5,557	\$1,774	\$89,303	100.0%
Total %	36.3%	8.2%	7.3%	6.6%	23.9%	1.1%	8.2%	6.2%	2.0%		



NCRS Public Equity Net Performance

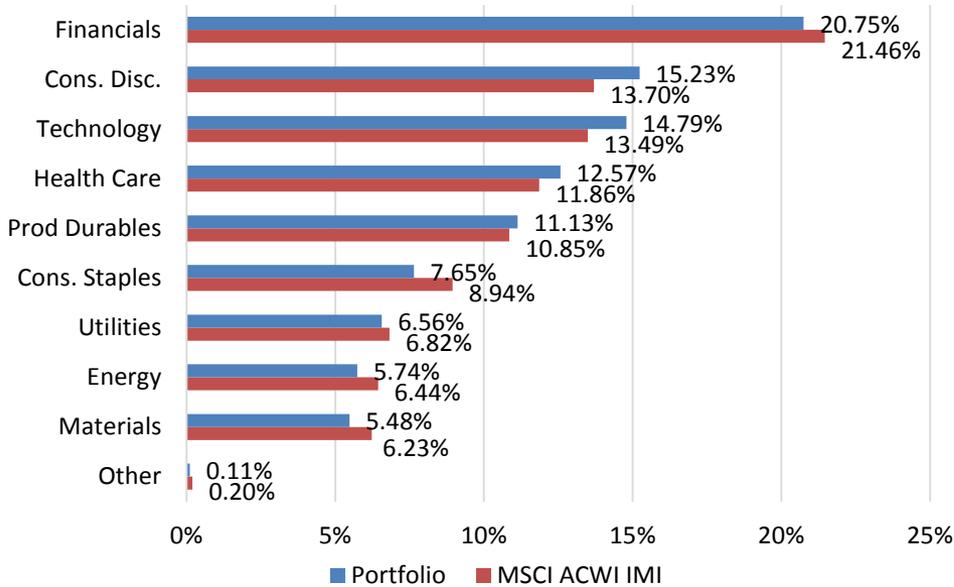
As of July 31, 2016

	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Public Equity*	\$38,840	3.74	(0.32)	6.30	7.51	5.04
Benchmark ²		3.75	(0.31)	5.92	6.67	4.53
Domestic Portfolio	\$17,309	5.55	2.94	10.24	12.70	7.77
Russell 3000		6.05	4.44	10.59	12.99	7.82
Non-US Portfolio	\$15,765	2.63	(3.16)	2.50	2.32	2.55
Custom Benchmark		1.62	(4.59)	1.84	1.62	1.52
Global Portfolio	\$2,526	1.42	(2.23)	8.25	10.98	-
MSCI ACWI		3.81	(0.44)	5.87	6.62	4.63
Equity Hedge	\$2,666	1.34	0.39	-	-	-
MSCI ACWI (beta adjusted)		1.57	0.22	1.28	-	-

*Public Equity segment returns also include transition and cash accounts, in the amount of roughly \$582 million, which do not fall under any specific sub-section.



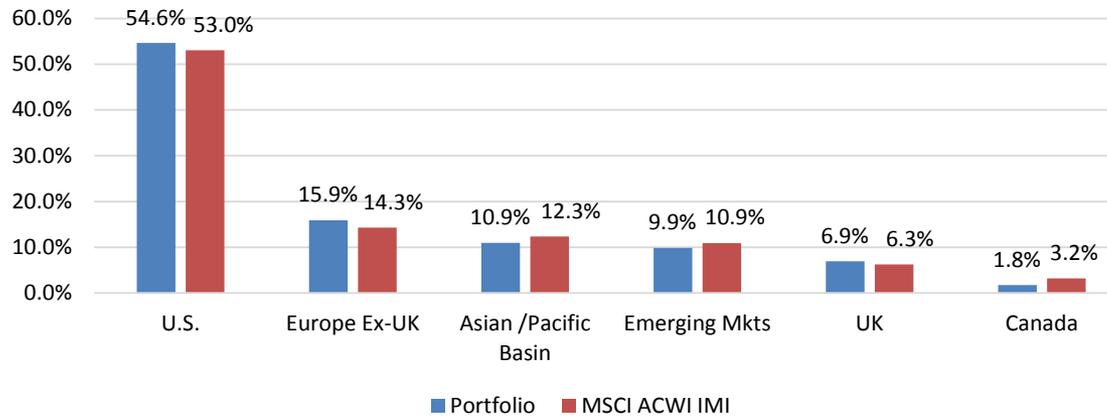
Total Equity Sector Allocation



Portfolio Characteristics

	Portfolio	MSCI ACWI IMI
Price/Earnings	21.8	21.9
Dividend Yield	2.32	2.49
Price/Book	3.03	2.90
Debt/Equity	0.94	0.97
Market Cap (\$B Weighted Median)	32.271	33.080
Return on Equity - 1 Year	14.8	14.4

Total Equity Regional Allocation



As of July 31, 2016



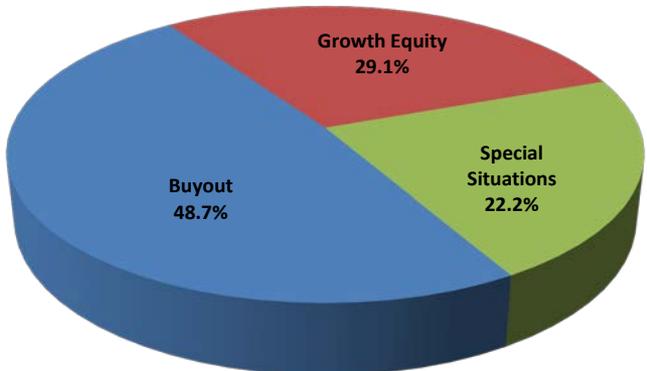
Private Equity

As of July 31, 2016

Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Private Equity*	\$4,407	0.68	4.32	10.65	8.86	7.38
Benchmark ³		0.71	4.33	9.74	9.38	9.36
Buyout	\$1,789	0.68	7.56	8.98	7.69	7.85
Growth	\$968	1.80	(1.65)	15.98	12.40	6.92
Special Situations	\$613	(0.37)	2.00	2.44	3.89	5.67
Fund of Funds	\$1,014	0.33	6.13	14.15	11.13	6.70

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>2016</u>	<u>Total</u>
NCRS	12.22	7.26	4.99	2.96	9.03	9.16	13.10	18.83	11.09	11.20	6.45	13.91	-2.98	N/A	7.40
# of Funds	28	3	11	21	15	17	3	1	6	6	9	4	9	5	138

Strategy Allocation (based on commitments)



*Private Equity segment returns also include a stock distribution account, in the amount of roughly \$23 million, which does not fall under any specific sub-section.



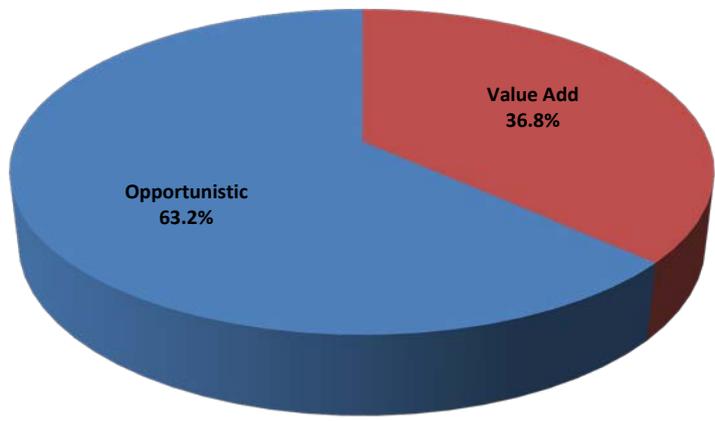
Non-Core Real Estate

As of July 31, 2016

Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Non-Core Real Estate	\$3,866	1.63	11.04	15.65	13.62	3.72
Benchmark ⁴		(0.61)	5.20	9.58	9.57	2.80
Opportunistic	\$2,444	1.10	9.77	15.10	12.29	2.74
Value Add	\$1,422	2.59	13.57	16.66	15.91	5.63

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>2016</u>	<u>Total</u>
NCRS	9.17	15.81	-1.33	2.30	1.28	17.26	1.39	18.14	17.54	18.27	13.12	1.67	-1.67	N/A	5.66
# of Funds	17	3	15	13	8	6	1	5	7	5	7	7	6	5	105

Strategy Allocation (based on valuation)



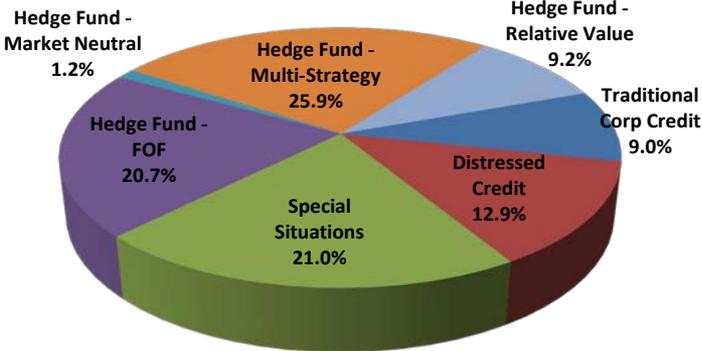
Opportunistic Fixed Income

As of July 31, 2016

Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Opportunistic Fixed Income	\$5,118	2.63	(3.05)	2.32	5.12	5.89
Benchmark ⁵		5.40	(0.67)	0.89	0.97	0.43
Traditional Corporate Credit	\$459	6.44	(0.94)	2.75	6.63	-
Distressed Credit	\$662	3.57	2.91	6.01	8.80	-
Special Situations	\$1,077	0.99	2.39	9.49	14.56	-
Hedged Fixed Income	\$2,919	2.44	(5.53)	0.29	2.70	-

IRR by Vintage Year													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
NCRS	2.59	N/A	17.29	8.32	22.42	7.39	2.80	1.01	0.83	-1.06	12.77	1.70	5.01
# of Funds	1	0	1	3	1	4	9	2	7	3	1	3	35

Strategy Allocation (based on valuation)



Rates & Liquidity

As of July 31, 2016

Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Rates & Liquidity	\$25,892	3.08	7.06	5.23	4.80	6.54
Benchmark ⁶		3.28	7.83	5.76	5.00	6.30
IG Fixed Income	\$24,881	3.19	7.35	5.37	4.88	6.58
Core Fixed Income	\$22,378	3.54	8.15	5.72	5.06	6.69
IG Fixed Income Cash	\$2,504	0.21	0.74	-	-	-
Cash	\$1,011	0.20	0.88	0.61	-	-

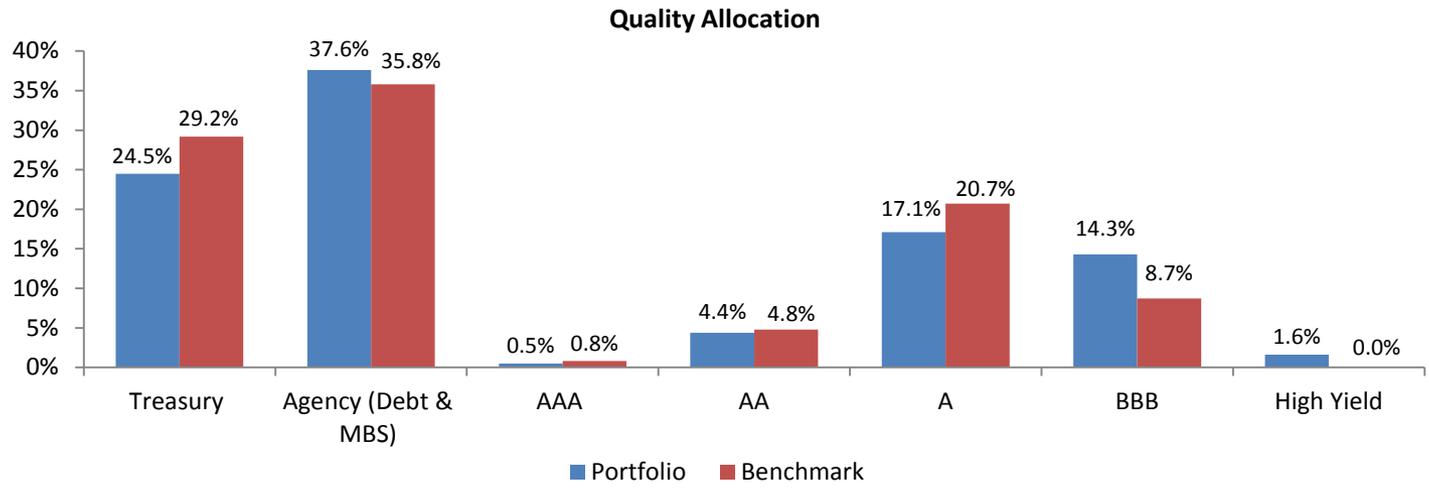
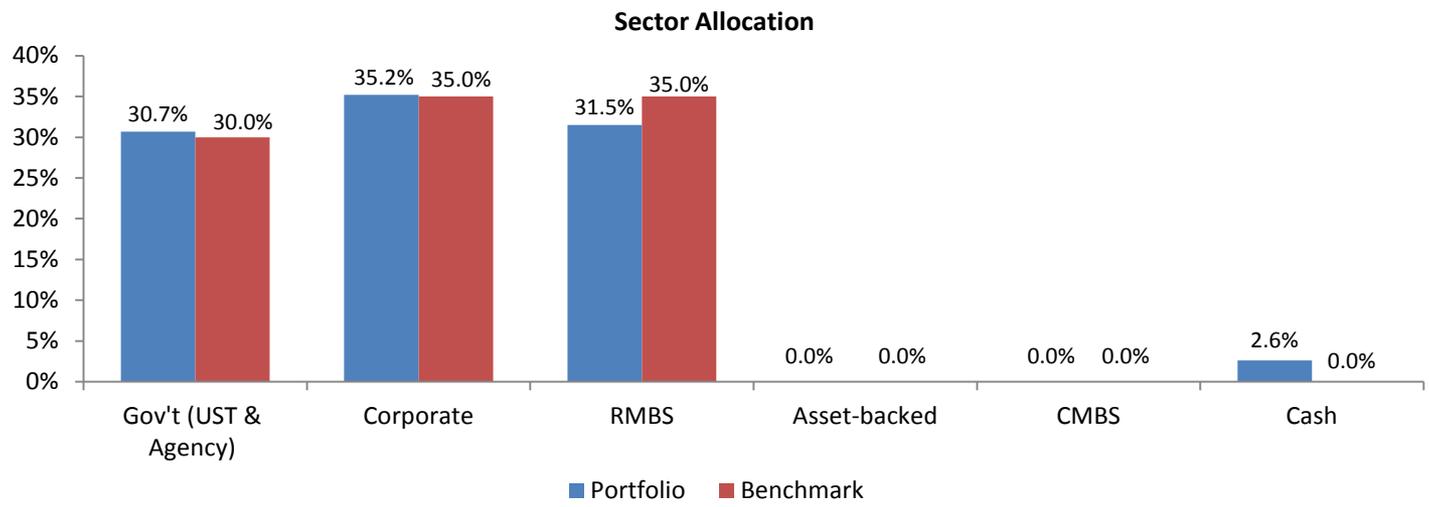
Core Fixed Income Portfolio Characteristics

	<u>Avg. Coupon</u>	<u>Yield to Maturity</u>	<u>Duration</u>
Government (Treasury & Agency)	4.97%	1.68%	11.2
Corporate	4.86%	3.29%	9.2
Mortgage	4.05%	2.04%	2.5
Total	4.62%	2.41%	7.5



Core Fixed Income

As of July 31, 2016



Inflation Sensitive

As of July 31, 2016

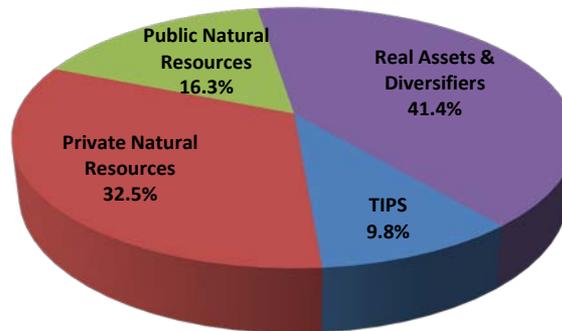
Net Performance

	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Inflation Sensitive	\$5,186	1.32	(2.94)	(3.11)	(3.69)	(1.20)
Benchmark ¹⁰		0.46	(0.32)	(2.10)	(3.43)	1.82
Private Natural Resources	\$1,708	1.04	(7.98)	(3.44)	(0.33)	0.41
Public Natural Resources	\$845	(2.70)	(10.42)	(11.81)	(11.07)	-
TIPS	\$205	0.74	1.37	-	-	-
Real Assets & Other Diversifiers	\$2,125	3.33	4.78	6.65	-	-

IRR by Vintage Year

	<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>2016</u>	<u>Total</u>
NCRS	-0.31	6.95	-2.22	N/A	-15.32	-8.75	3.12	0.60	3.75	1.54	0.98	-4.06
# of Funds	3	2	2	0	3	9	7	11	12	4	3	56

Strategy Allocation (based on valuation)



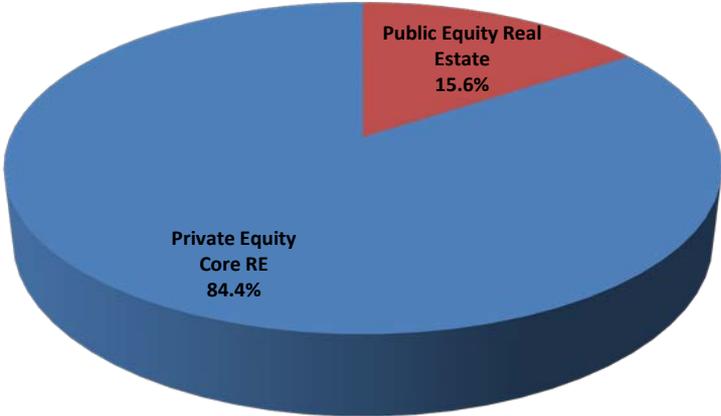
Core Real Estate

As of July 31, 2016

Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Core Real Estate	\$4,329	2.20	7.50	8.61	9.18	4.53
Benchmark ¹¹		3.26	12.03	12.04	11.51	5.30
Public Equity Real Estate	\$677	8.23	10.59	10.68	9.79	-
Private Equity Core Real Estate	\$3,652	1.23	7.08	8.26	9.58	5.38

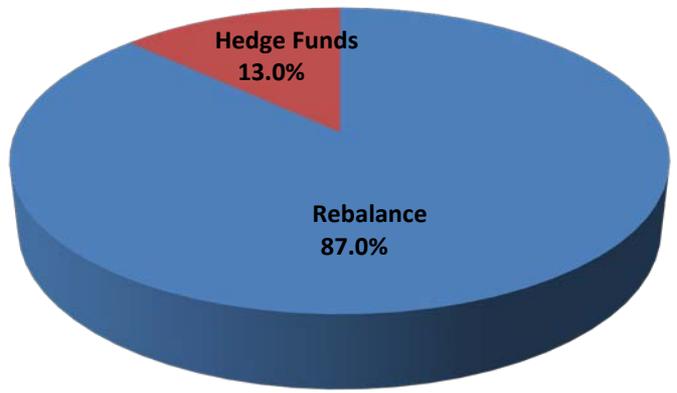
IRR by Vintage Year															
	<u>Pre-2004</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>Total</u>
NCRS	7.64	9.78	-5.90	5.67	1.39	9.15	N/A	23.62	N/A	N/A	6.93	4.38	N/A	16.97	7.09
# of Funds	5	1	1	2	3	1	0	1	0	0	2	6	1	7	30

Strategy Allocation (based on valuation)



Net Performance						
	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Multi-Strategy	\$1,664	2.84	0.04	5.54	9.39	5.27
Benchmark ¹²		2.53	(1.84)	4.49	7.33	5.88
Rebalance Strategy	\$1,448	3.09	0.76	6.54	-	-
Hedge Funds	\$216	1.44	(5.50)	0.02	0.14	0.72

Strategy Allocation (based on valuation)

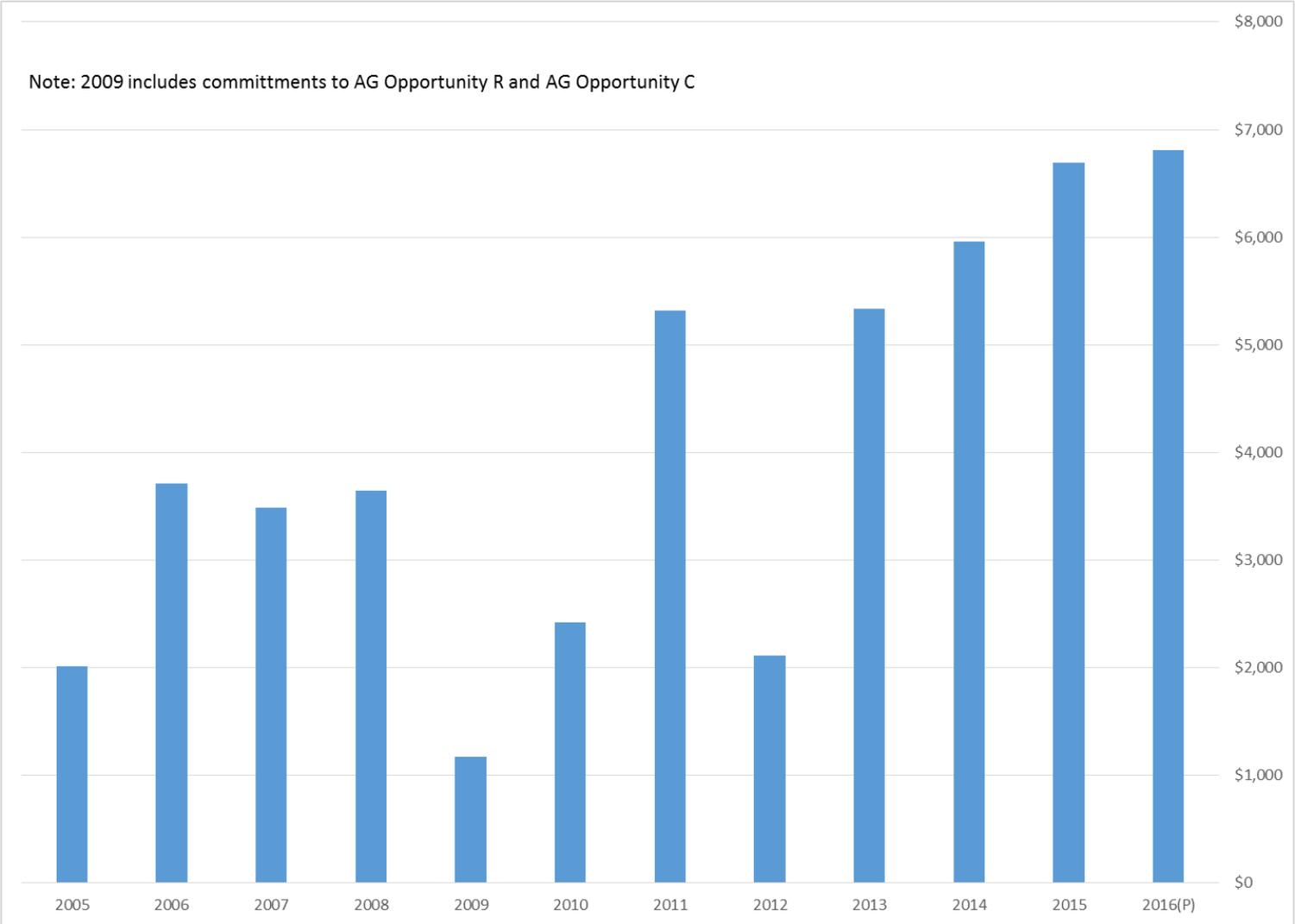


New and Incremental Investment Commitments Since July 2016 IAC Meeting

<u>Fund Name</u>	<u>Firm Name</u>	<u>Commitment</u>	<u>Closing Date</u>
<u>Public Equity</u>			
None	--	--	--
<u>Private Equity</u>			
Blackstone Core	Blackstone Core	\$250,000,000	08/01/16
<u>Non-Core Real Estate</u>			
Rockwood Development Partners	Rockwood Capital	\$200,000,000	07/29/16
Crow Retail Fund II	Crow Holdings	\$100,000,000	07/29/16
<u>Core Real Estate</u>			
None	--	--	--
<u>Opportunistic Fixed Income</u>			
None	--	--	--
<u>Inflation Sensitive</u>			
Blackstone Strategic Partners	Blackstone Strategic Partners VII	\$50,000,000	07/31/16
<u>Multi Strategy</u>			
None	--	--	--



NCRS Gross Commitments to Private Market Vehicles (\$100 Million)



Contributions and Distributions for Private Market Vehicles Last 12 Months to September 14, 2016 (\$100 Million)

Asset Class	Contributions	Distributions	Net New Funding
Inflation Sensitive	\$926	\$716	\$210
Multi-Strategy	\$90	\$244	(\$154)
Opportunistic Fixed Income	\$537	\$546	(\$9)
Private Equity Funds	\$589	\$668	(\$79)
Core Real Estate	\$475	\$289	\$186
Non-Core Real Estate	\$1,227	\$1,437	(\$210)
All	\$3,844	\$3,900	(\$56)



Projected Gross Commitments and Redemptions/Rebalance for Oct. 2016 - Jan. 2017 (\$100 Million)

	Commitments	Redemptions/Rebalance	Net
Public Equity	\$200	\$200	\$0
Inflation Sensitive	\$300	\$300	\$0
Multi-Strategy	\$300	\$300	\$0
Opportunistic Fixed Income	\$700	\$620	\$80
Private Equity	\$510	-	\$510
Real Estate (Combined)	\$350	\$491	(\$141)
Totals	\$2,360	\$1,911	\$449
Existing Relationships	\$2,035	\$1,911	\$124
New Relationships	\$325	-	\$325

Note: Closings are impacted by many factors and often occur earlier or later than projected. There are several closed-end funds that will have limited openings that NCRS is diligencing and may be added.



Appendix: NCRS Asset Class Net Performance

As of July 31, 2016

	Market Value (\$MM)	1 Year	3 Years	5 Years	10 Years	15 Years
Growth	\$52,231	0.59	6.95	7.79	5.00	5.29
Benchmark ¹		0.59	6.07	6.73	4.58	4.82
Public Equity	\$38,840	(0.32)	6.30	7.51	5.04	5.32
Benchmark ²		(0.31)	5.92	6.67	4.53	4.62
Private Equity	\$4,407	4.32	10.65	8.86	7.38	4.24
Benchmark ³		4.33	9.74	9.38	9.36	9.34
Non-Core Real Estate	\$3,866	11.04	15.65	13.62	3.72	5.09
Benchmark ⁴		5.20	9.58	9.57	2.80	6.69
Opportunistic Fixed Income	\$5,118	(3.05)	2.32	5.12	5.89	-
Benchmark ⁵		(0.67)	0.89	0.97	0.43	-
Rates & Liquidity	\$25,892	7.06	5.23	4.80	6.54	6.31
Benchmark ⁶		7.83	5.76	5.00	6.30	6.09
IG Fixed Income	\$24,881	7.35	5.37	4.88	6.58	6.34
Benchmark ⁷		8.11	5.89	5.07	6.34	6.11
Cash	\$1,011	0.88	0.61	-	-	-
Benchmark ⁸		0.17	0.08	0.07	-	-
Inflation Sensitive & Diversifiers	\$9,516	1.51	1.73	1.33	0.72	3.40
Benchmark ⁹		5.17	4.12	2.92	0.55	3.78
Inflation Sensitive	\$5,186	(2.94)	(3.11)	(3.69)	(1.20)	2.47
Benchmark ¹⁰		(0.32)	(2.10)	(3.43)	1.82	-
Core Real Estate	\$4,329	7.50	8.61	9.18	4.53	5.99
Benchmark ¹¹		12.03	12.04	11.51	5.30	7.03
Multi-Strategy	\$1,664	0.04	5.54	9.39	5.27	-
Benchmark ¹²		(1.84)	4.49	7.33	5.88	-



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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