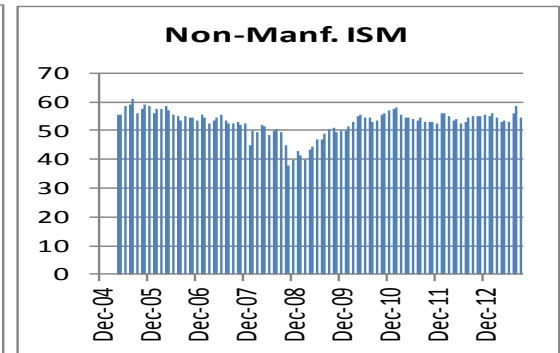
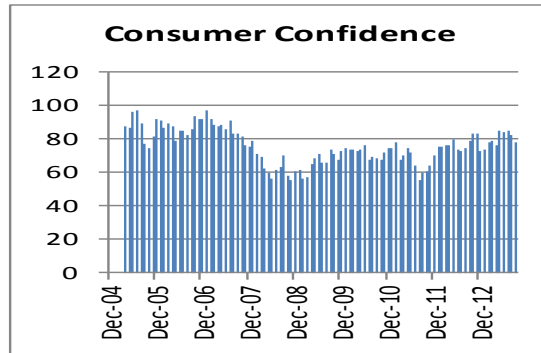
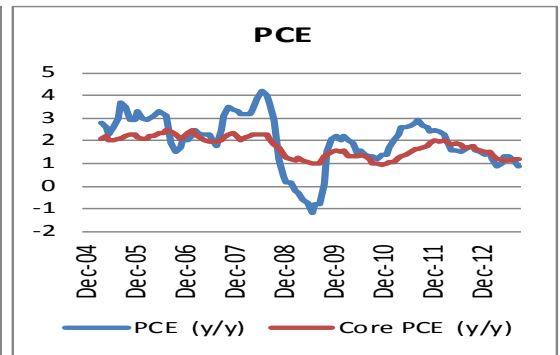
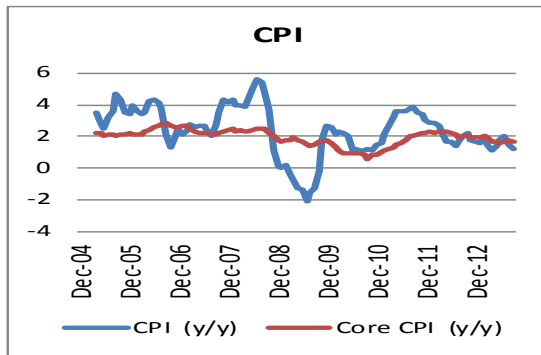
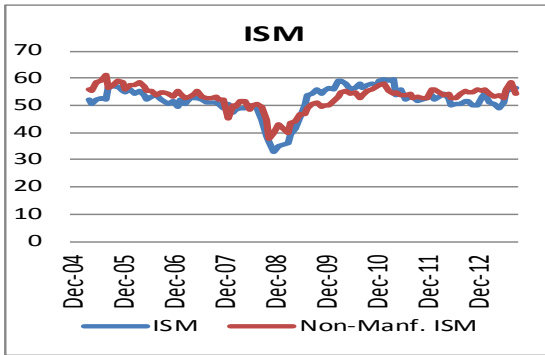
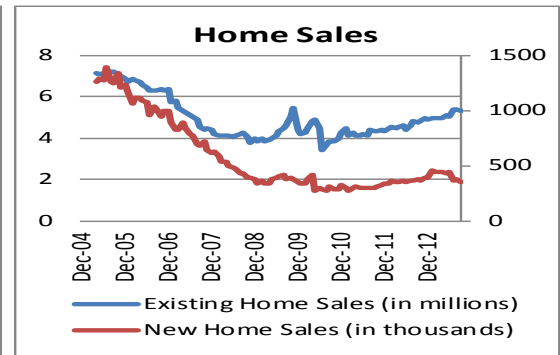
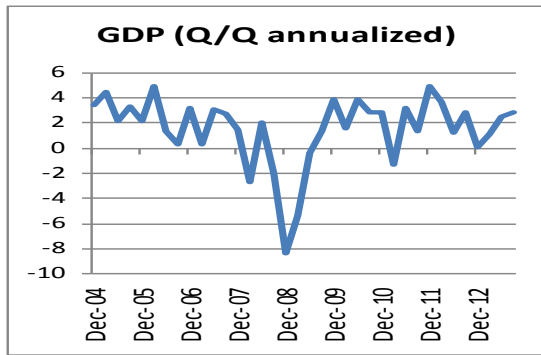
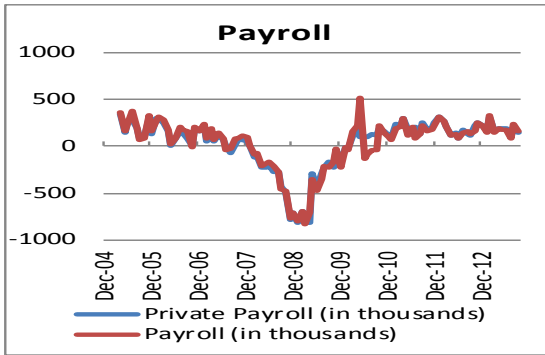




# IMD Performance Review

December 16, 2013

# U.S. Economic Environment

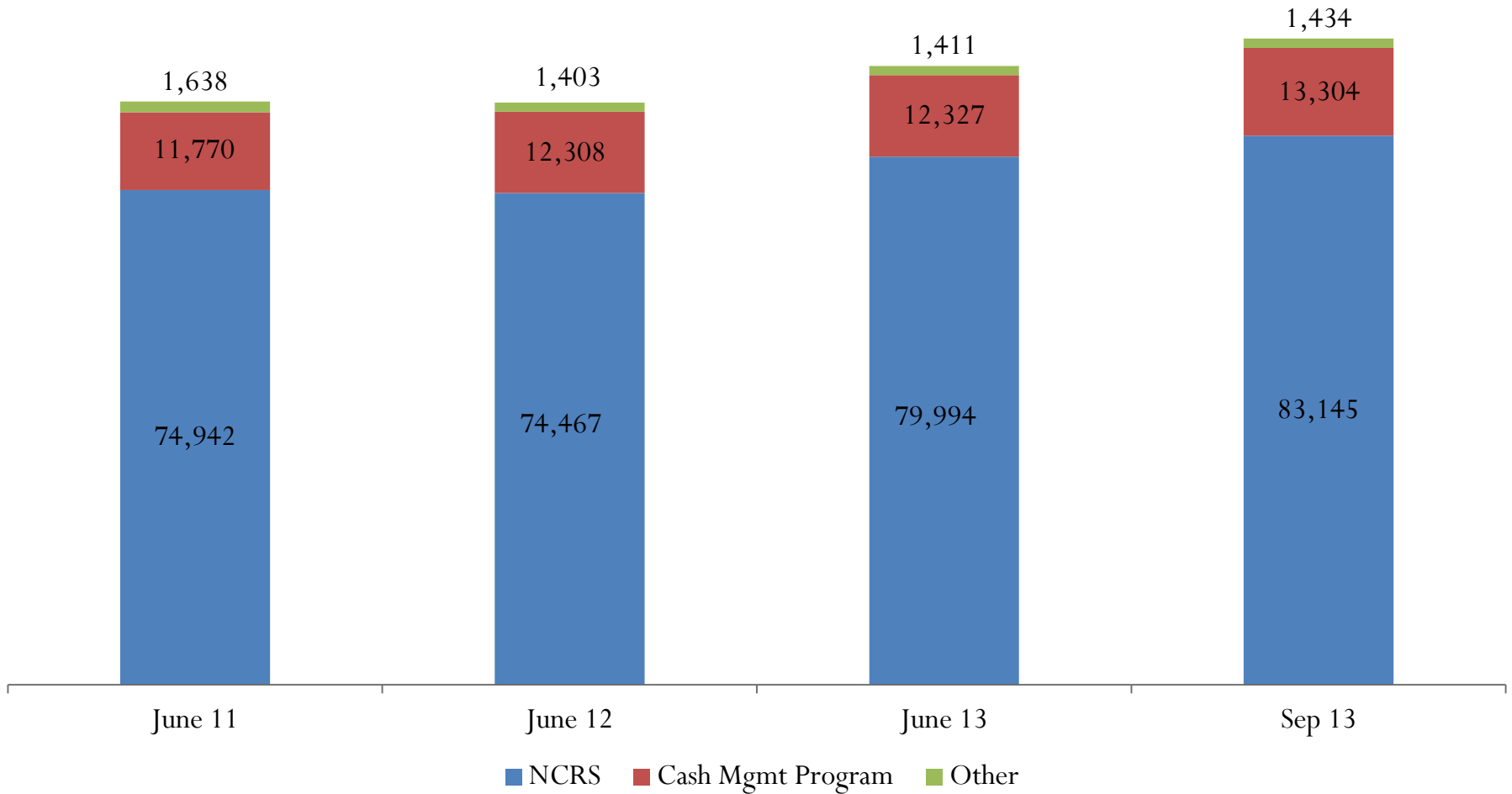


# Global Economic Environment

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
<b>U.S.</b>	09/13	1.6	09/13	7.2	09/13	1.2	<b>Asia/Pacific/Latam</b>						
<b>Europe</b>							China	09/13	7.8			09/13	3.1
Germany	09/13	0.6	09/13	6.9	09/13	1.4	India	09/13	4.8			09/13	10.7
France	09/13	0.2	09/13	11.1	09/13	0.9	Japan	09/13	2.7	09/13	4	09/13	1.1
U.K.	09/13	1.6	09/13	7.6	09/13	2.7	Indonesia	09/13	5.62			09/13	8.4
Italy	09/13	-1.9	09/13	12.5	09/13	0.9	Brazil	09/13	2.16			09/13	5.86
Spain	09/13	-1.1	09/13	26.6	09/13	0.3	Australia	09/13	2.3	09/13	5.7	09/13	2.2



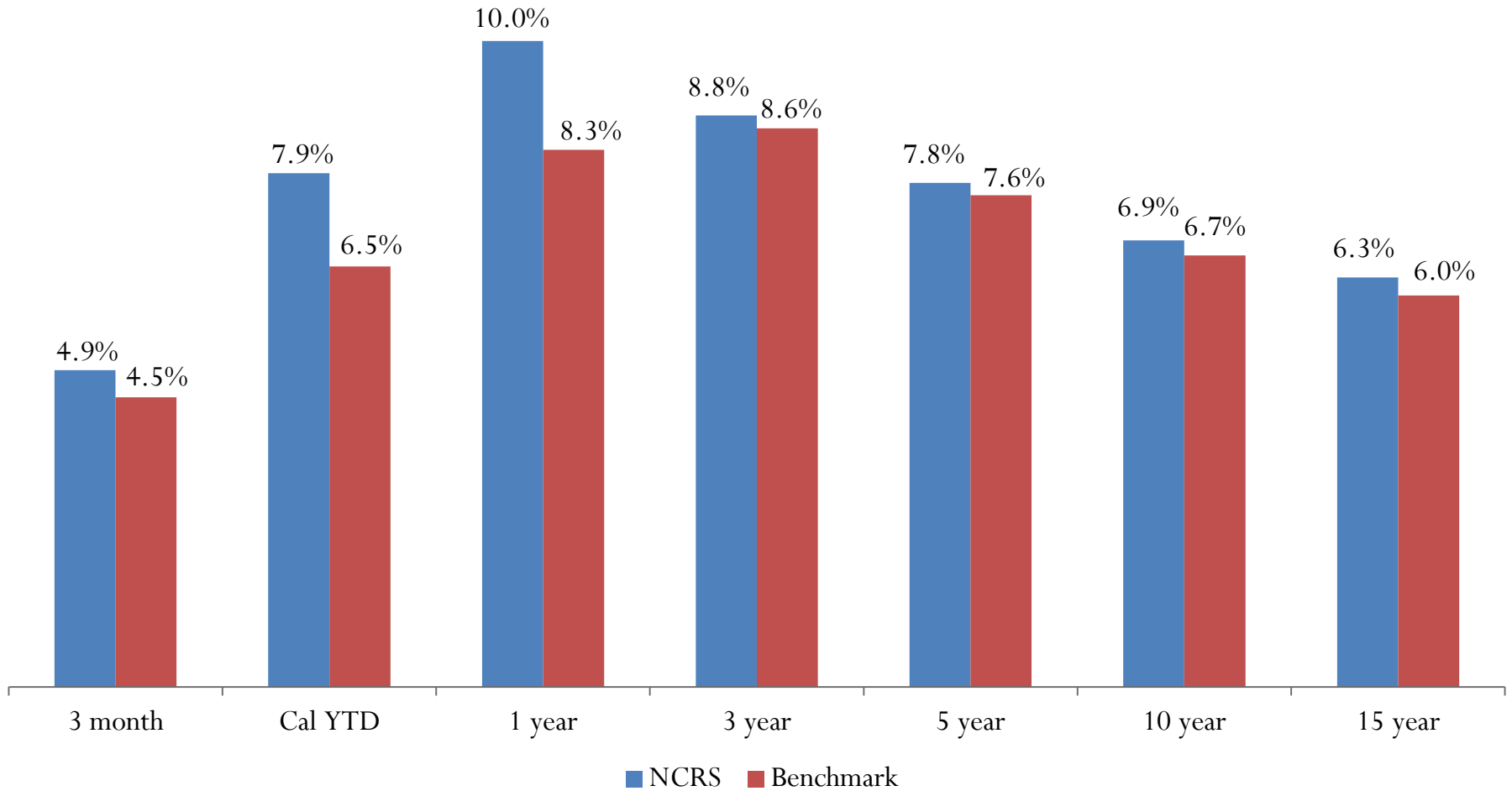
**Assets Under Management (\$mil)**  
**\$97.88 Billion as of September 30, 2013**



## NCRS Asset Allocation as of September 30, 2013

	Market Value	Current	Strategic Target	Transitional Target
Global Equity	\$39,591,549,833	47.62%	40.50%	43.87%
Total Fixed Income	\$26,463,535,885	31.83%	36.00%	35.59%
LTIF	\$26,101,964,266	31.39%		
Real Estate	\$6,495,317,304	7.81%	8.00%	7.81%
Alternatives	\$3,745,092,480	4.50%	6.50%	4.50%
Private Equity	\$3,470,725,429	4.17%		
Hedge Funds	\$274,367,051	0.33%		
Credit	\$3,819,226,166	4.59%	4.50%	4.59%
Inflation	\$2,528,991,249	3.04%	4.50%	3.04%
Cash	\$501,585,739	0.60%	0.00%	0.60%
<b>Total Fund</b>	<b>\$83,145,298,656</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## NCRS Total Net Portfolio Return vs. Benchmark As of September 30, 2013



**NCRS Net Return Attribution**  
**Contribution to Total Fund Performance vs. Benchmark**

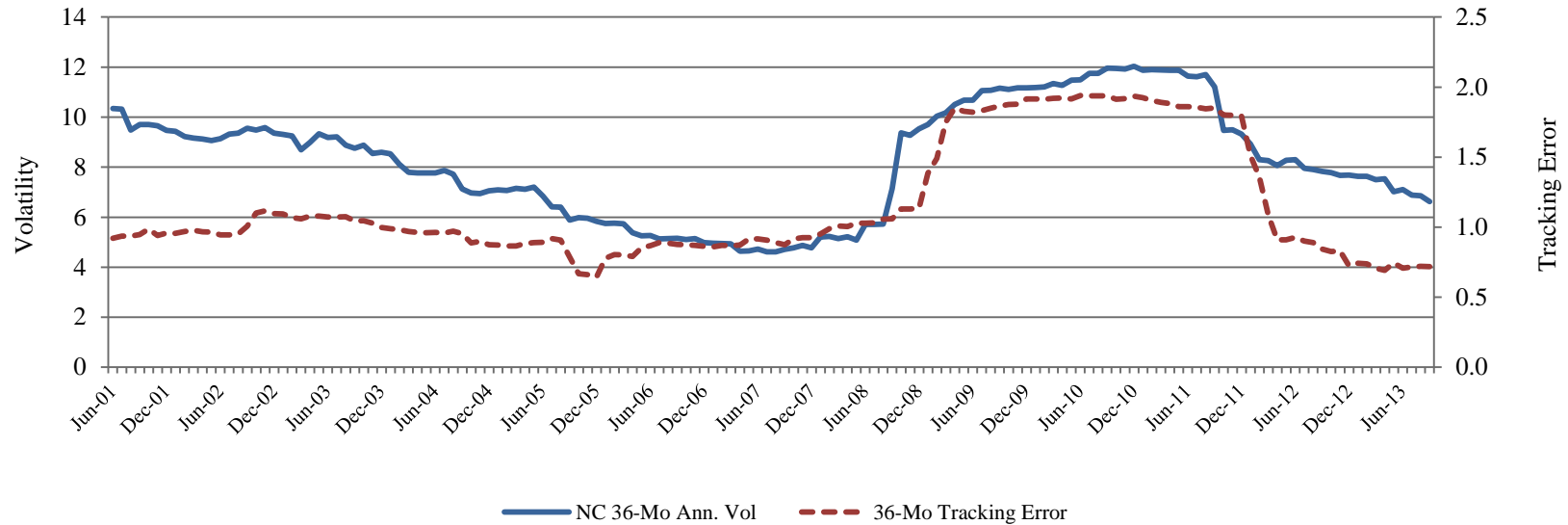
	<b>3 months</b>	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>
Global Equity	0.39	0.96	0.30	0.36
Fixed Income	0.09	0.36	0.13	0.25
Real Estate	-0.12	-0.02	-0.21	-0.28
Private Equity	-0.01	-0.23	-0.32	-0.27
Hedge Funds	0.00	0.01	0.01	-0.03
Credit Strategies	0.03	0.51	0.29	0.18
Inflation Portfolio	0.04	0.09	0.02	-0.04
Cash	0.00	0.00	0.00	0.00
<b>Total NCRS</b>	<b>0.43</b>	<b>1.68</b>	<b>0.21</b>	<b>0.19</b>

**NCRS Gross of Fees Return and Risk**  
**BNY Mellon Universe - Public Funds > \$1B**

<b>Returns</b>	<b><u>1 Year</u></b>	<b><u>3 Years</u></b>	<b><u>5 Years</u></b>	<b><u>10 Years</u></b>	<b><u>15 Year</u></b>
25th percentile	13.92	10.67	8.98	8.15	7.56
<b>Median</b>	<b>12.20</b>	<b>10.29</b>	<b>8.23</b>	<b>7.68</b>	<b>6.98</b>
75th percentile	10.09	9.21	7.46	7.13	6.34
<b>NCRS</b>	10.47	9.29	8.24	7.21	6.54
Percentile Rank	72	73	50	69	69
<b>Risk</b>	<b><u>1 Year</u></b>	<b><u>3 Years</u></b>	<b><u>5 Years</u></b>	<b><u>10 Years</u></b>	<b><u>15 Year</u></b>
25th percentile	6.19	8.60	12.19	10.44	10.38
<b>Median</b>	<b>5.68</b>	<b>7.84</b>	<b>11.38</b>	<b>9.79</b>	<b>9.91</b>
75th percentile	5.01	7.02	10.25	8.86	8.82
<b>NCRS</b>	5.07	6.62	9.60	8.21	8.48
Percentile Rank	75	81	81	90	84



## NCRS Rolling 3 Year Total Fund Volatility & Tracking Error as of September 30, 2013



## NCRS Risk and Return Metrics as of September 30, 2013

Program	POSITION		36-MONTH					60-MONTH				
	\$ Bil	% Wgt	Return	St. Dev	Active Return	TE	IR	Return	St. Dev	Active Return	TE	IR
<b>Global Equity</b>	39.6	47.6	12.2	14.5	0.6	0.7	0.8	8.9	19.5	0.8	1.1	0.8
<b>Fixed Income</b>	26.5	31.8	4.1	4.2	0.4	0.8	0.5	7.8	5.6	0.6	1.0	0.6
<b>Real Estate</b>	6.5	7.8	11.8	3.0	-2.9	5.0	-0.6	-3.3	8.0	-4.3	7.4	-0.6
<b>Private Equity</b>	3.5	4.2	9.3	3.2	-8.6	8.9	-1.0	4.0	5.9	-4.0	16.3	-0.2
<b>Hedged Strategies</b>	0.3	0.3	2.3	3.6	-0.1	3.5	0.0	0.9	6.9	-2.2	6.9	-0.3
<b>Credit Strategies</b>	3.8	4.6	10.9	4.0	8.2	4.2	2.0	--	--	--	--	--
<b>Inflation Portfolio</b>	2.5	3.0	-2.0	11.1	0.7	4.0	0.2	--	--	--	--	--
<b>Cash</b>	0.5	0.6	--	--	--	--	--	--	--	--	--	--
<b>Total NCRS</b>	<b>83.1</b>	<b>100.0</b>	<b>8.8</b>	<b>6.6</b>	<b>0.2</b>	<b>0.7</b>	<b>0.3</b>	<b>7.8</b>	<b>9.6</b>	<b>0.2</b>	<b>1.5</b>	<b>0.1</b>

# NCRS Liquidity Profile as of September 30, 2013

## Invested Assets

	Global Equity	Credit Portfolio	Inflation Portfolio	Hedge Fund Portfolio	Private Equity	Real Estate	Fixed Income	Cash	TOTAL	Allocation
Level 1	\$38,583,870,770	\$332,321,852	\$1,064,822,732	-	\$1,347,025	\$510,577,415	\$26,463,535,885	\$501,585,739	<b>\$67,458,061,418</b>	81.1%
Level 2	\$1,007,679,063	\$1,503,155,058	\$430,739,997	-	-	\$1,482,880,633	-	-	<b>\$4,424,454,751</b>	5.3%
Level 3	-	\$1,029,254,975	-	\$258,063,891	\$24,594,474	-	-	-	<b>\$1,311,913,340</b>	1.6%
Level 4	-	\$954,494,280	\$1,033,428,520	\$16,303,160	\$3,444,783,930	\$4,501,859,256	-	-	<b>\$9,950,869,147</b>	12.0%
<b>TOTAL</b>	<b>\$39,591,549,833</b>	<b>\$3,819,226,166</b>	<b>\$2,528,991,249</b>	<b>\$274,367,051</b>	<b>\$3,470,725,429</b>	<b>\$6,495,317,304</b>	<b>\$26,463,535,885</b>	<b>\$501,585,739</b>	<b>\$83,145,298,656</b>	

## Invested Assets plus Unfunded Commitments

	Global Equity	Credit Portfolio	Inflation Portfolio	Hedge Fund Portfolio	Private Equity	Real Estate	Fixed Income	Cash	TOTAL	Allocation
Level 1	\$34,574,755,712	\$332,321,852	\$1,064,822,732	-	\$1,347,025	\$510,577,415	\$24,360,430,502	\$501,585,739	<b>\$61,345,840,977</b>	73.8%
Level 2	\$1,007,679,063	\$1,503,155,058	\$430,739,997	-	-	\$1,482,880,633	-	-	<b>\$4,424,454,751</b>	5.3%
Level 3	-	\$1,029,254,975	-	\$258,063,891	\$24,594,474	-	-	-	<b>\$1,311,913,340</b>	1.6%
Level 4	-	\$1,523,915,078	\$2,335,324,369	\$16,303,160	\$5,582,582,341	\$6,604,964,639	-	-	<b>\$16,063,089,588</b>	19.3%
<b>TOTAL</b>	<b>\$35,582,434,775</b>	<b>\$4,388,646,964</b>	<b>\$3,830,887,098</b>	<b>\$274,367,051</b>	<b>\$5,608,523,840</b>	<b>\$8,598,422,687</b>	<b>\$24,360,430,502</b>	<b>\$501,585,739</b>	<b>\$83,145,298,656</b>	

The Liquidity Level defines the level of liquidity for each investment.

Level 1: Highly liquid (T+3 or less)

Level 2: Separate or Commingled Funds with Monthly, Quarterly or Semi-Annual redemption period

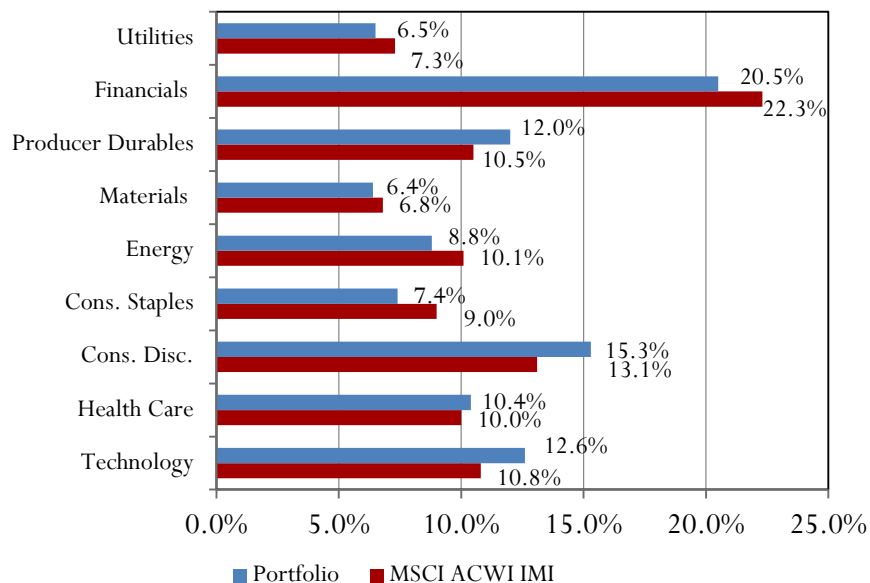
Level 3: Annual to 24 month redemption period

Level 4: Illiquid (> 24 month redemption period)

## NCRS Global Equity Net Performance as of September 30, 2013

	3 Month	1 Year	3 Years	5 Years	10 Years
<b>Global Equity</b>	<b>9.19</b>	<b>21.31</b>	<b>12.17</b>	<b>8.90</b>	<b>7.51</b>
Custom Equity Benchmark <sup>1</sup>	8.33	19.04	11.59	8.05	6.99
<b>Domestic Portfolio</b>	<b>7.31</b>	<b>23.25</b>	<b>16.91</b>	<b>11.19</b>	<b>8.39</b>
Russell 3000	6.35	21.60	16.76	10.58	8.11
<b>Non-US Portfolio</b>	<b>11.15</b>	<b>18.54</b>	<b>6.33</b>	<b>6.39</b>	<b>8.51</b>
Custom Non-US Benchmark <sup>2</sup>	10.37	16.91	6.11	5.61	7.54
<b>Global Portfolio</b>	<b>9.94</b>	<b>29.86</b>	<b>15.60</b>	<b>10.04</b>	<b>-</b>
MSCI ACWI	7.90	17.73	10.21	7.71	7.86
<b>Equity Rebalance</b>	<b>8.04</b>	<b>19.93</b>	<b>-</b>	<b>-</b>	<b>-</b>
Rebalance Custom Benchmark <sup>3</sup>	8.27	20.63	-	-	-
<b>Equity Hedge</b>	<b>0.81</b>	<b>6.71</b>	<b>-</b>	<b>-</b>	<b>-</b>
Equity Hedge Custom Benchmark <sup>4</sup>	2.04	4.82	-	-	-

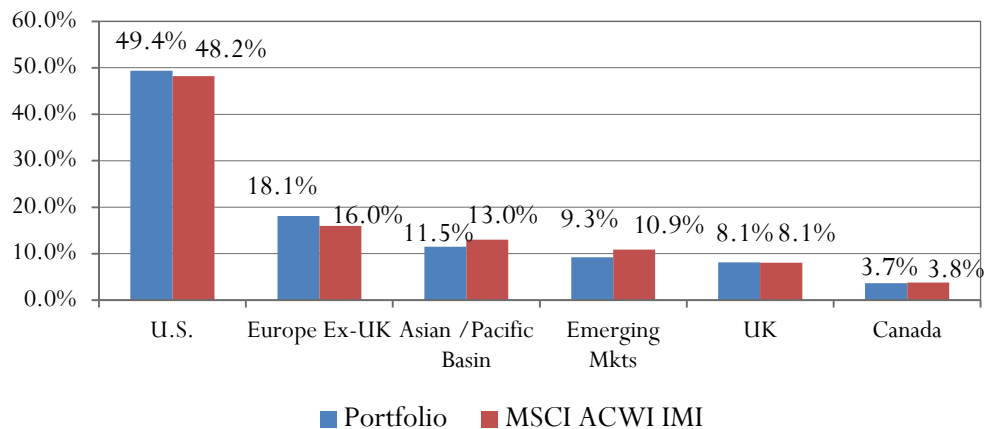
### Total Equity Sector Allocation



### Portfolio Characteristics

	Portfolio	MSCI ACWI IMI
Price/Earnings	19.0	18.2
Dividend Yield	2.36	2.51
Price/Book	1.97	1.94
Debt/Equity	0.84	0.88
Market Cap (\$ Weighted Median)	30,473	32,242
Return on Equity - 1 Year	15.1	15.2

### Total Equity Regional Allocation



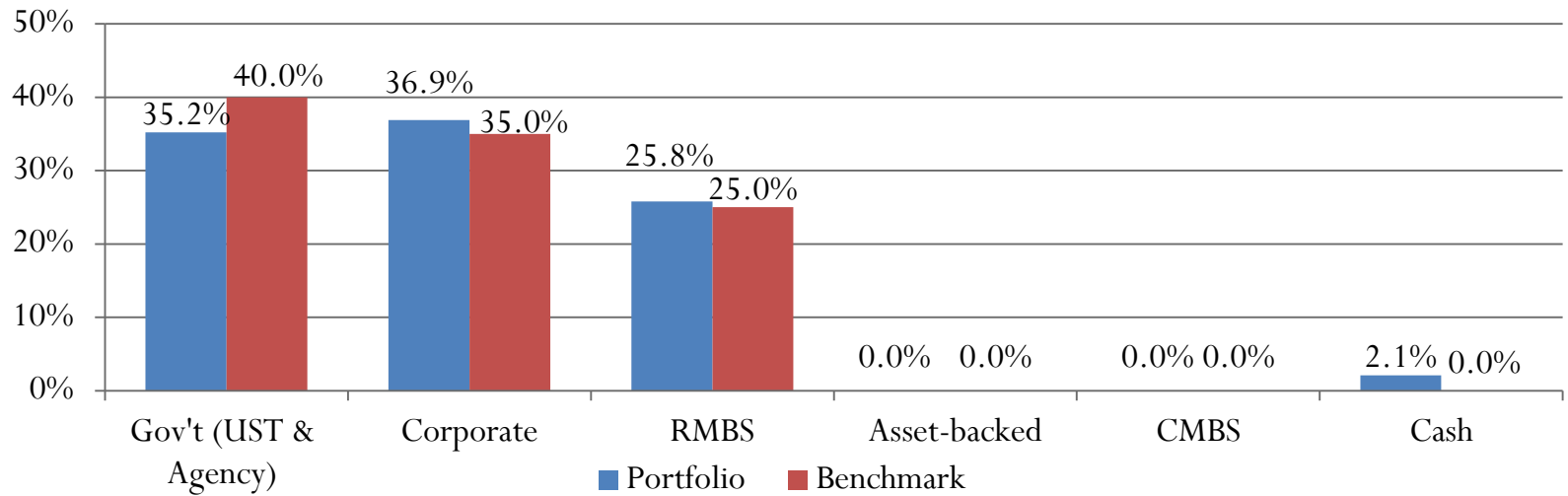
## NCRS Fixed Income Net Performance as of September 30, 2013

	3 Month	1 Year	3 Years	5 Years	10 Years
<b>Total Fixed Income</b>	<b>0.56</b>	<b>(2.85)</b>	<b>4.06</b>	<b>7.82</b>	<b>5.86</b>
ML Custom Benchmark <sup>5</sup>	0.30	(3.79)	3.66	7.20	5.46
<b>Core Fixed Income</b>	<b>0.56</b>	<b>(3.11)</b>	<b>4.05</b>	<b>7.86</b>	<b>5.90</b>
<b>Non-Core Fixed Income</b>	<b>0.96</b>	<b>4.84</b>	<b>7.37</b>	<b>9.25</b>	<b>-</b>
ML Custom Benchmark <sup>5</sup>	0.30	(3.79)	3.66	7.20	5.46

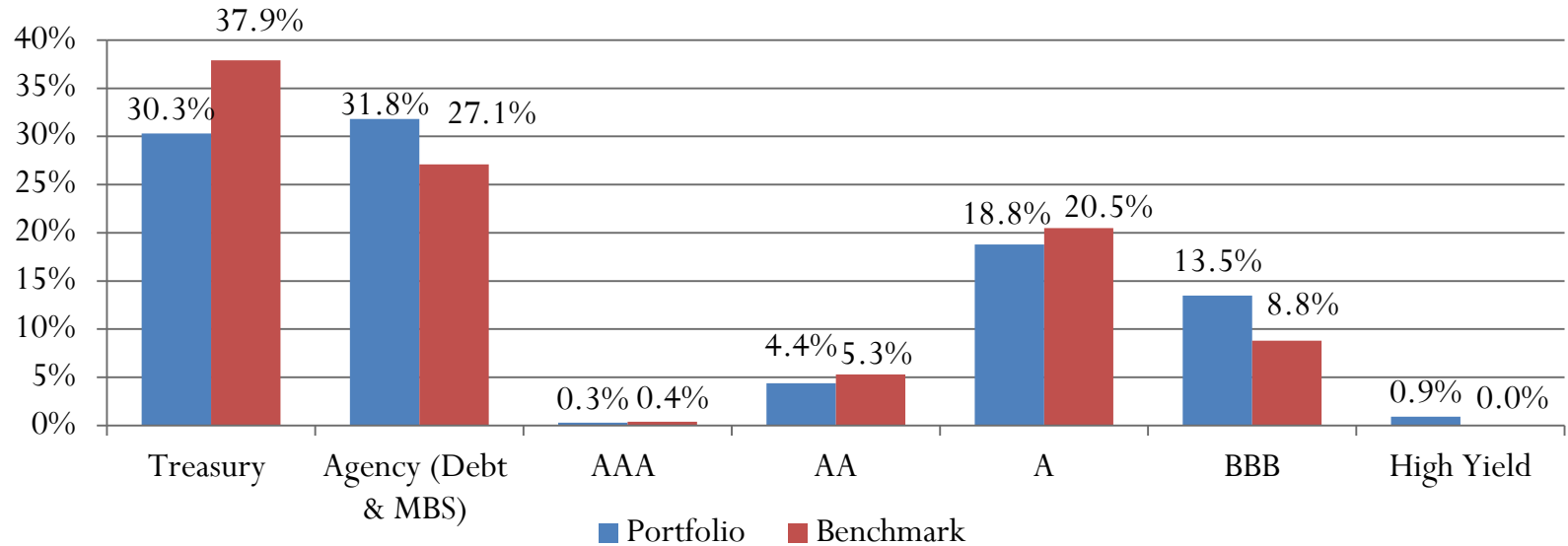
## Internal Core Fixed Income Portfolio Characteristics as of September 30, 2013

	<u>Avg. Coupon</u>	<u>Yield to Maturity</u>	<u>Duration</u>
Government (Treasury & Agency)	5.37%	2.32%	7.9
Corporate	5.65%	4.14%	8.6
Mortgage	4.16%	2.97%	5.2
<b>Total</b>	<b>5.16%</b>	<b>3.18%</b>	<b>7.3</b>

## Internal Core Fixed Income Sector Allocation as of September 30, 2013



## Internal Core Fixed Income Quality Allocation As of September 30, 2013



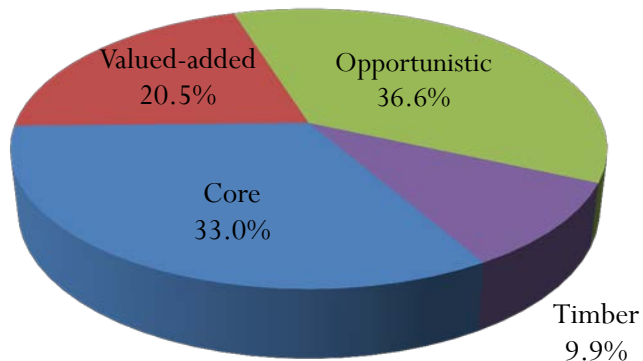
## NCRS Real Estate Net Performance as of September 30, 2013

	3 Month	1 Year	3 Years	5 Years	10 Years
<b>Total Real Estate</b>	2.29	11.82	11.77	(3.32)	4.44
Custom Real Estate Benchmark <sup>6</sup>	3.74	12.13	14.67	1.01	7.09
<b>Core Private Real Estate (w/o Timber)</b>	3.47	16.13	13.07	1.35	6.55
<b>Value Add Private Real Estate</b>	1.98	9.92	15.24	(3.57)	3.69
<b>Opportunistic Private Real Estate</b>	2.67	12.47	11.72	(8.05)	5.27
<b>Timber</b>	(1.56)	5.52	1.25	(4.65)	4.08
<b>REITS</b>	2.70	12.51	10.02	8.30	-

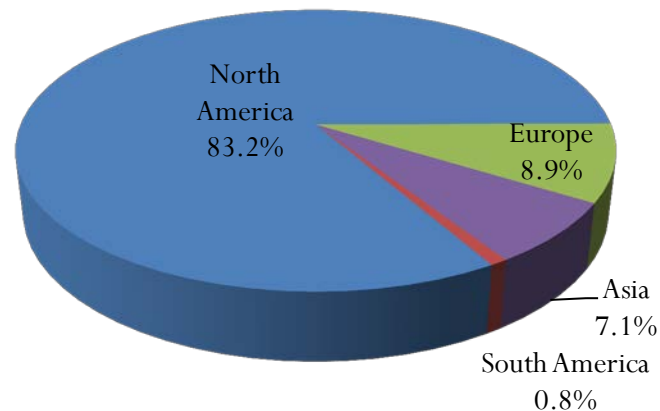
### Real Estate IRR by Vintage Year

	<u>Pre-04</u>	<u>2004</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>Total</u>
NCRS	7.85	9.24	-2.87	-2.88	1.46	10.30	9.49	13.82	-16.37	-12.56	3.88
Funds	21	3	15	19	13	6	5	8	8	2	100

Strategy Allocation by Value



Geographic Allocation by Value



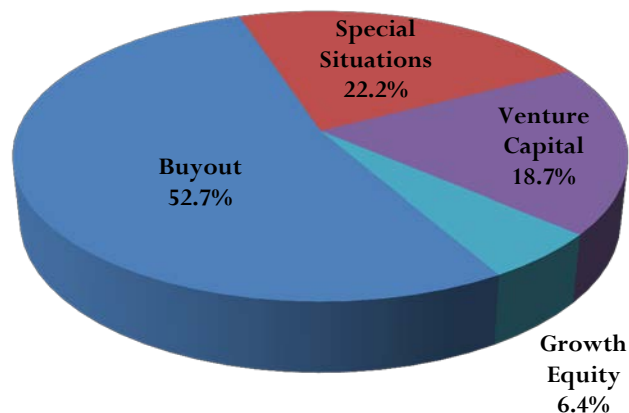
## NCRS Alternatives Net Performance as of September 30, 2013

	3 Month	1 Year	3 Years	5 Years	10 Years
<b>Alternatives</b>	<b>2.39</b>	<b>7.71</b>	<b>8.65</b>	<b>3.71</b>	<b>5.78</b>
Custom Alternatives Benchmark <sup>7</sup>	2.66	12.30	15.30	8.09	7.89
<b>Private Equity</b>	<b>2.48</b>	<b>7.78</b>	<b>9.30</b>	<b>4.02</b>	<b>7.22</b>
Custom Private Equity Benchmark <sup>8</sup>	2.77	12.88	17.85	8.00	9.44
<b>Hedge Funds</b>	<b>1.31</b>	<b>6.87</b>	<b>2.32</b>	<b>0.90</b>	<b>2.83</b>
Custom Hedge Fund Benchmark <sup>9</sup>	1.27	5.00	2.40	3.14	5.18

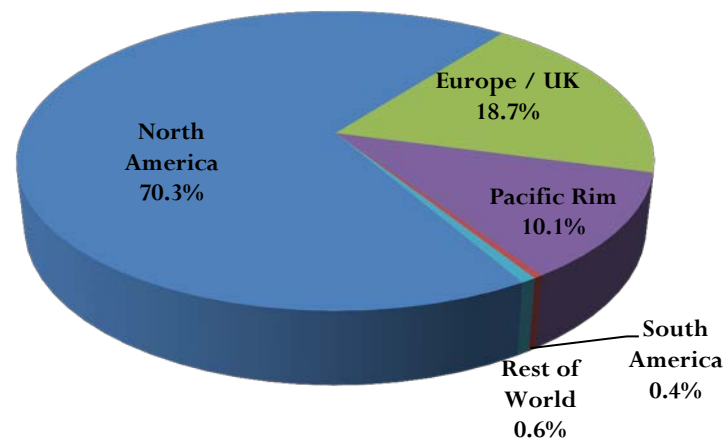
### Private Equity IRR by Vintage Year

	<u>Pre-03</u>	<u>2003</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>Total</u>
NCRS	12.63	13.22	6.75	5.57	2.51	5.30	7.30	10.22	10.94	-0.42	-16.32	-38.78	6.07
Funds	26	2	3	11	21	13	17	3	1	6	5	7	115

**Private Equity Strategy  
Allocation by Commitments**



**Private Equity Geographic  
Allocation by Value**





# NCRS Credit Strategies & Inflation Portfolio Net Performance as of September 30, 2013

	3 Month	1 Year	3 Years	5 Years	10 Years
<b>Total Credit Strategies</b>	<b>2.31</b>	<b>15.97</b>	<b>10.90</b>	-	-
Custom Credit Benchmark <sup>10</sup>	1.66	3.52	2.75	-	-
<b>Total Inflation Portfolio</b>	<b>2.76</b>	<b>(5.99)</b>	<b>(1.97)</b>	-	-
Custom Inflation Benchmark	1.34	(8.71)	(2.62)	-	-

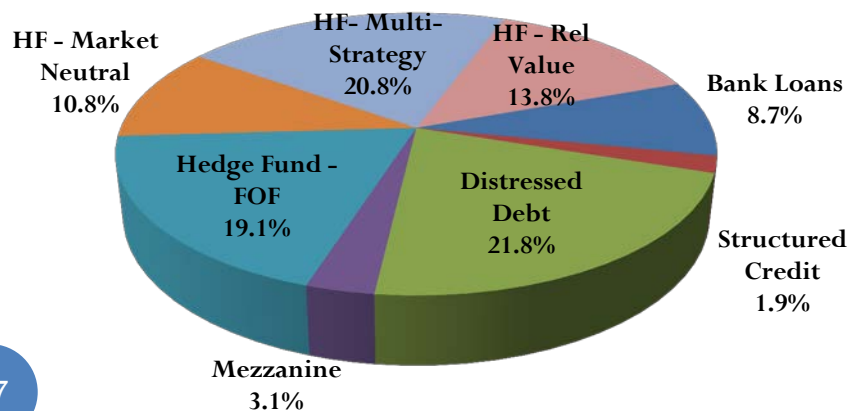
### Credit Strategies IRR by Vintage Year

	<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>Total</u>
NCRS	3.49	17.36	10.86	22.42	13.40	6.28	7.26	16.95	10.33
Funds	1	1	3	1	4	9	2	4	25

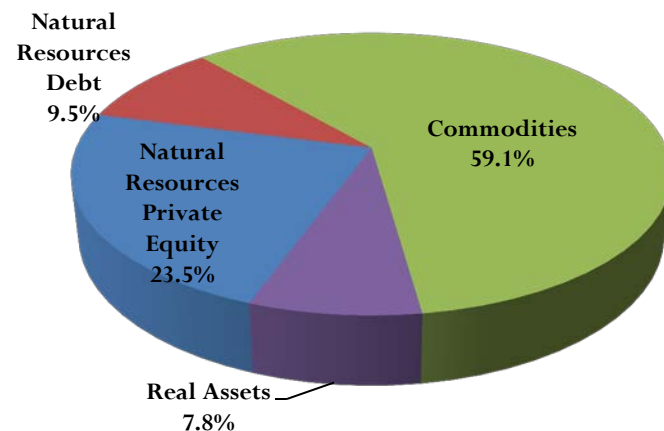
### Inflation Portfolio IRR by Vintage Year

	<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>Total</u>
NCRS	5.10	11.91	15.77	n/a	-5.57	-7.76	10.42	5.05	-3.57
Funds	1	2	2	0	3	9	7	9	33

### Credit Strategies Strategy Allocation by Value



### Inflation Portfolio Strategy Allocation by Value



## New Investments – Since September IAC Meeting

<u>Fund Name</u>	<u>Firm Name</u>	<u>Commitment</u>	<u>Closing Date</u>
<b><u>Global Equity</u></b>			
	None		
<b><u>Private Equity</u></b>			
Credit Suisse Innovation Fund - 2013-1	Credit Suisse Group	\$15,000,000	9/30/2013
<b><u>Real Estate</u></b>			
DRA Growth & Income Fund VIII, LLC	DRA Advisors	\$150,000,000	10/11/2013
M&G Real Estate Debt Fund III	M&G Investment Management	£25,650,000	11/6/2013
Blackstone Real Estate Partners Europe IV	The Blackstone Group	\$150,000,000	11/15/2013
<b><u>Credit Strategies</u></b>			
	None		
<b><u>Inflation Portfolio</u></b>			
EIG Energy Fund XVI	EIG Asset Management	\$250,000,000	9/20/2013
Brookfield Infrastructure Fund II-B	Brookfield Asset Management	\$200,000,000	9/30/2013
ArcLight Shore Co-Investments Holdings II	ArcLight PEF GP	\$10,000,000	10/17/2013
<b><u>Hedge Funds</u></b>			
	None		

**Appendix: NCRS Asset Class Net Performance**  
As of September 30, 2013

	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>	<b>15 Years</b>
<b>Global Equity</b>	<b>21.31%</b>	<b>12.17%</b>	<b>8.90%</b>	<b>7.51%</b>	<b>6.30%</b>
Benchmark	19.04%	11.59%	8.05%	6.99%	5.24%
<b>Fixed Income</b>	<b>-2.85%</b>	<b>4.06%</b>	<b>7.82%</b>	<b>5.86%</b>	<b>6.28%</b>
Benchmark	-3.79%	3.66%	7.20%	5.46%	5.93%
<b>Real Estate</b>	<b>11.82%</b>	<b>11.77%</b>	<b>-3.32%</b>	<b>4.44%</b>	<b>5.44%</b>
Benchmark	12.13%	14.67%	1.01%	7.09%	8.03%
<b>Private Equity</b>	<b>7.78%</b>	<b>9.30%</b>	<b>4.02%</b>	<b>7.22%</b>	<b>5.82%</b>
Benchmark	12.88%	17.85%	8.00%	9.44%	6.69%
<b>Hedge Funds</b>	<b>6.87%</b>	<b>2.32%</b>	<b>0.90%</b>	<b>2.83%</b>	-
Benchmark	5.00%	2.40%	3.14%	5.18%	-
<b>Credit Strategies</b>	<b>15.97%</b>	<b>10.90%</b>	-	-	-
Benchmark	3.52%	2.75%	-	-	-
<b>Inflation Portfolio</b>	<b>-5.99%</b>	<b>-1.97%</b>	-	-	-
Benchmark	-8.71%	-2.62%	-	-	-

## NOTES:

1. As of 5/1/12, the Global Equity Benchmark is the dynamically weighted return of the Domestic Benchmark, the Non-US Benchmark, the Global Benchmark, the Rebalance Benchmark, and the Equity Hedge Benchmark
2. As of 10/1/10, the Custom Non-US Benchmark is the MSCI ACWI ex US IMI Index
3. The Equity Rebalance (Gladius) Custom Benchmark is a combination of the return of the underlying benchmarks within share class A, and share class B's performance minus the accrued premium of share class B.
4. The Equity Hedge Custom Benchmark is the return of the MSCI World Index beta adjusted to the target beta of the Equity Hedge portfolio.
5. The ML Custom Benchmark consists of 40% Gov't 5+yr / 35% Corp. (Inv. Grade - BBB Max 25%) 5+yr / 25% Mtg. Master
6. As of 7/1/07, the Custom Real Estate Benchmark consists of 90% NCREIF ODCE Index / 10% FTSE EPRA/NAREIT Global Securities Index
7. As of 7/1/11, the Custom Alternatives Benchmark is the dynamically weighted return of the Custom Private Equity Benchmark and the Custom Hedge Fund Benchmark
8. As of 7/1/11, The Custom Private Equity Benchmark is the custom Cambridge Associates benchmark
9. As of 7/1/11, The Custom Hedge Fund Benchmark is the HFRI FOF Conservative Index
10. As of 7/1/11, The Custom Credit Benchmark consists of 50% HFRX Distressed / 20% HFRX Relative Value / 15% CS Leveraged Loan / 15% BOA High Yield
11. As of 7/1/11, The Custom Inflation Benchmark is the dynamically weighted return of the Private Energy benchmark (Cambridge Energy) and the Commodities benchmark (DJ-UBS Commodities Index)
12. As of 7/1/11, the Total Pension Custom Benchmark consists of the dynamically weighted return of the Fixed Income Benchmark, Custom Equity Benchmark, Custom Real Estate Benchmark, Custom Alternatives Benchmark, Custom Credit Benchmark, & Custom Inflation Benchmark