



IMD Performance Review

September 18, 2013

U.S. Economic Environment



North Carolina Department of State Treasurer Learn. Invest. Grow. Prosper.

Global Economic Environment

	Real GDP	YoY	Unempl	oyment	CPI Y	YoY		Real G	DP YoY	Unemp	loyment	CPI	YoY
Countries	Date	Value	Date	Value	Date	Value	Countries	Date	Value	Date	Value	Date	Value
U.S.	06/13	1.6	07/13	7.4	07/13	2	Asia/Pacific/L	atam					
Europe							China	06/13	7.5			07/13	2.7
Germany	06/13	0.5	07/13	6.8	07/13	1.9	India	06/13	4.4			07/13	10.85
France	06/13	0.3	07/13	11	07/13	1.1	Japan	06/13	0.9	07/13	3.8	07/13	0.7
U.K	06/13	1.6	06/13	7.8	07/13	2.8	Indonesia	06/13	5.81			07/13	8.61
Italy	06/13	-2	07/13	12	07/13	1.2	Brazil	06/13	3.28			07/13	6.27
Spain	06/13	-1.6	07/13	26.3	07/13	1.8	Australia	06/13	2.6	07/13	5.7	06/13	2.4

North Carolina Department of State Treasurer Learn. Invest. Grow. Prosper.

Investment Management Division Assets Under Management (\$mil) \$96.04 Billion as of July 31, 2013



	NCRS Asset Alle	ocation as o	of July 31, 2013	
	Market Value	Current		Transitional Target
Global Equity	\$38,808,170,199	47.37%	40.50%	44.28%
Total Fixed Income	\$26,371,877,400	32.19%	36.00%	35.27%
LTIF	\$25,988,844,649	31.72%		
Real Estate	\$6,460,512,994	7.89%	8.00%	7.89%
Alternatives	\$3,677,601,297	4.49%	6.50%	4.49%
Private Equity	\$3,405,639,571	4.16%		
Hedge Funds	\$271,961,726	0.33%		
Credit	\$3,499,033,567	4.27%	4.50%	4.27%
Inflation	\$2,421,634,496	2.96%	4.50%	2.96%
<u>Cash</u>	<u>686,539,980</u>	0.84%	0.00	0.84%
Total Fund	\$81,925,369,933	100.00%	100.00%	100.00%



Co	NCRS N ntribution to Tota	et Return Attrib l Fund Performa		k
	3 months	1 Year	3 Years	5 Years
Global Equity	0.49	0.82	0.21	0.21
Fixed Income	0.20	0.53	0.08	0.23
Real Estate	0.19	0.00	-0.22	-0.27
Private Equity	0.00	-0.18	-0.17	-0.23
Hedge Funds	0.01	0.00	0.01	-0.04
Credit Strategies	0.14	0.56	0.28	0.17
Inflation Portfolio	0.05	0.05	-0.07	-0.04
Cash	0.00	0.00	0.00	0.00
Total NCRS	1.07	1.77	0.13	0.03

			eturn and Risk Public Funds > \$	1B	
<u>Returns</u>	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	10 Years	15 Year
25th percentile	15.44	11.46	6.92	8.23	6.90
Median	13.64	10.99	6.13	7.74	6.42
75th percentile	11.94	9.96	5.46	7.28	5.93
NCRS	11.33	9.73	6.19	7.31	6.17
Percentile Rank	80	79	47	70	65
<u>Risk</u>	<u>1 Year</u>	<u>3 Years</u>	5 Years	10 Years	<u>15 Year</u>
25th percentile	5.07	9.09	12.69	10.34	10.74
Median	4.70	8.18	11.90	9.73	10.24
75th percentile	4.13	7.38	10.83	8.95	9.10
NCRS	4.26	6.89	10.11	8.17	8.72
Percentile Rank	69	82	83	92	85

NCRS Rolling 3 Year Total Fund Volatility & Tracking Error as of July 31, 2013



NCRS Risk and Return Metrics as of July 31, 2013

	POS	ITION			36-MONTH			Constant State		60-MONTH	And Asian				
Program					Active					Active					
	<u>\$ Bil</u>	<u>% Wgt</u>	Return	St. Dev	Return	TE	IR	Return	St. Dev	Return	TE	IR			
Global Equity	38.8	47.4	12.6	15.4	0.4	0.7	0.6	5.3	20.1	0.5	1.1	0.5			
Fixed Income	26.4	32.2	4.8	4.3	0.3	0.8	0.4	7.4	5.8	0.6	1.0	0.6			
Real Estate	6.5	7.9	11.9	3.1	-3.3	5.2	-0.6	-4.1	8.0	-4.3	7.4	-0.6			
Private Equity	3.4	4.2	8.9	3.3	-2.8	10.8	-0.3	3.1	6.0	-3.1	16.7	-0.2			
Hedged Strategies	0.3	0.3	2.1	3.6	-0.3	3.4	-0.1	-0.3	7.1	-3.6	7.1	-0.5			
Credit Strategies	3.5	4.3	11.4	4.0	8.4	4.2	2.0								
Inflation Portfolio	2.4	3.0	-9.7	16.1	-7.3	12.7	-0.6								
Cash	0.7	0.8													
Total NCRS	81.9	100.0	9.3	6.9	0.1	0.7	0.2	5.7	10.1	0.0	1.5	0.0			

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

NCRS Liquidity Profile as of June 30, 2013

Invested

30-Jun-13	GlobalEquity	Credit Portfolio	Inflation Portfolio	Hedge Fund Portfolio	Private Equity	Real Estate	Fixed Income	TOTAL	Allocation
Level 1	\$36,139,486,724	\$353,333,411	\$1,043,968,997	-	\$108,292,891	\$518,679,299	\$27,012,774,667	\$65,176,535,990	81.5%
Level 2	\$961,055,704	\$1,197,381,663	\$417,282,201	-	-	\$1,461,595,972	-	\$4,037,315,540	5.0%
Level 3	-	\$925,945,352	-	\$255,298,863	\$23,414,082	-	-	\$1,204,658,297	1.5%
Level 4	-	\$821,139,401	\$897,965,350	\$16,847,166	\$3,318,114,094	\$4,521,529,180	-	\$9,575,595,190	12.0%
TOTAL	\$37,100,542,428	\$3,297,799,827	\$2,359,216,548	\$272,146,029	\$3,449,821,067	\$6,501,804,451	\$27,012,774,667	\$79,994,105,017	12.070

Invested-Unfunded

30-Jun-13	GlobalEquity	Credit Portfolio	Inflation Portfolio	Hedge Fund Portfolio	Private Equity	Real Estate	Fixed Income	TOTAL	Allocation
Level 1	\$33,110,886,167	\$353,333,411	\$1,043,968,997	-	\$108,292,891	\$518,679,299	\$24,754,180,609	\$59,889,341,375	74.9%
Level 2	\$961,055,704	\$1,197,381,663	\$417,282,201	-	-	\$1,461,595,972	-	\$4,037,315,540	5.0%
Level 3	-	\$925,945,352	-	\$255,298,863	\$23,414,082	-	-	\$1,204,658,297	1.5%
Level 4	-	\$1,140,299,540	\$1,783,100,887	\$16,847,166	\$5,142,418,975	\$6,780,123,238	-	\$14,862,789,805	18.6%
TOTAL	\$34,071,941,871	\$3,616,959,966	\$3,244,352,085	\$272,146,029	\$5,274,125,948	\$8,760,398,509	\$24,754,180,609	\$79,994,105,017	10.070

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 Equit	y Net Perform	mance as	of July 31,	2013	
	3 Month	1 Year	3 Years	5 Years	10 Years
Global Equity	2.91	23.79	12.66	5.31	7.33
Custom Equity Benchmark ¹	1.84	21.80	12.23	4.78	6.83
Domestic Portfolio	7.19	28.01	18.00	8.71	8.38
Russell 3000	6.57	26.86	18.09	8.57	8.14
Non-US Portfolio	(1.35)	18.88	6.64	0.89	8.42
Custom Non-US Benchmark ²	(2.44)	17.44	6.44	0.25	7.53
Global Portfolio	6.39	32.62	15.66	7.87	_
MSCIACWI	1.45	20.50	11.19	3.81	7.86
Equity Rebalance	2.96	22.28	-		
Rebalance Custom Benchmark ³	2.34	22.40	_	_	
Equity Hedge	2.56	8.41	-	_	
Equity Hedge Custom Benchmark ⁴	0.70	5.45		_	



Portfolio Characteristics

	Portfolio	MSCI ACWI IMI
Price/Earnings	18.3	17.8
Dividend Yield	2.30	2.48
Price/Book	1.93	1.92
Debt/Equity	0.84	0.88
Market Cap (\$ Weighted Median)	29,540	31,266
Return on Equity - 1 Year	15.1	15.3

Total Equity Regional Allocation



Portfolio MSCI ACWI IMI

	3 Month	1 Year	3 Years	5 Years	10 Years
Total Fixed Income	(5.03)	(2.80)	4.79	7.36	6.34
ML Custom Benchmark ⁵	(5.59)	(4.12)	4.46	6.79	5.93
Core Fixed Income	(5.27)	(3.16)	4.76	7.37	6.37
Non-Core Fixed Income	0.70	9.07	8.24	9.14	_
ML Custom Benchmark ⁵	(5.59)	(4.12)	4.46	6.79	5.93

Internal Core Fixed Income Portfolio Characteristics as of July 31, 2013									
Avg. Coupon Yield to Maturity Duration									
Government (Treasury & Agency)	5.35%	2.33%	8.0						
Corporate	5.69%	4.18%	8.6						
Mortgage	4.20%	3.03%	4.8						
Total	5.18%	3.20%	7.5						



Internal Core Fixed Income Sector Allocation as of July31, 2013

Portfolio Benchmark

Internal Core Fixed Income Quality Allocation as of July 31, 2013



NCRS Real Estate	Net Performa	ince as of Ji	uly 31, 2013		
	3 Month	1 Year	3 Years	5 Years	10 Years
Total Real Estate	1.89	11.27	11.86	(4.13)	4.30
Custom Real Estate Benchmark ⁶	(0.53)	11.33	15.17	0.16	7.00
Core Private Real Estate (w/oTimber)	2.40	14.73	12.72	0.74	(3.34)
Value Add Private Real Estate	1.84	11.44	15.02	(3.80)	3.58
Opportunistic Private Real Estate	4.33	10.26	11.37	(9.23)	5.08
Timber	(0.93)	6.90	(5.48)	(4.35)	11.31
REITS	(6.20)	14.32	12.75	5.62	_

				Real	Estate IRF	R by Vintag	ge Year				
	<u>Pre-04</u>	2004	2005	2006	2007	2008	2010	2011	2012	2013	Total
NCRS	7.71	10.20	-3.15	-2.99	1.20	10.40	8.36	12.83	-14.02	0.00	3.72
Funds	20	4	15	19	13	6	5	8	8	2	100



Opportunistic

37.1%

Timber

10.1%

Cash

0.0%

Valued-

added

20.0%

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Core

32.7%





NCRS Alternatives Net Performance as of July 31, 2013								
3 Month	1 Year	3 Years	5 Years	10 Years				
2.91	6.72	8.29	2.70	5.62				
2.78	10.37	11.01	6.81	7.93				
3.00	6.77	8.93	3.12	7.13				
2.98	10.74	11.76	6.22	10.00				
1.73	6.15	2.11	(0.33)	2.70				
0.20	5.61	2.40	3.22	5.19				
	3 Month 2.91 2.78 3.00 2.98 1.73	3 Month 1 Year 2.91 6.72 2.78 10.37 3.00 6.77 2.98 10.74 1.73 6.15	3 Month 1 Year 3 Years 2.91 6.72 8.29 2.78 10.37 11.01 3.00 6.77 8.93 2.98 10.74 11.76 1.73 6.15 2.11	3 Month 1 Year 3 Years 5 Years 2.91 6.72 8.29 2.70 2.78 10.37 11.01 6.81				

				Р	rivate Eq	uity IRR	by Vinta	ge Year					
	<u>Pre-03</u>	<u>2003</u>	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
NCRS	12.56	13.23	6.79	5.32	2.20	5.22	7.00	8.96	11.94	-0.51	-21.58	-30.01	5.91
Funds	26	2	3	11	21	13	17	3	1	6	5	6	114









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NC	CRS Credit	t Strateg	ies & Infla	tion Port	folio Ne	t Perfori	mance as	of July 31	, 2013
				3 Mon	th 1	Year	3 Years	5 Years	10 Years
Total Cr	edit Strate	4.22	1	7.68	11.36	-	_		
Custom	Credit Ben	0.64	. 3	.88	3.00		_		
Total Inf	flation Por	rtfolio		(1.32) (5	.50)	(9.69)		-
Custom	Inflation Be	(2.93	, ,		(2.38)	_	_		
			Credit	Strategies IF	R by Vinta	ge Year			
NODO	2005	2006	2007	2008	2010	2011	2012	2013	Total
NCRS Funds	3.52	16.76	10.88	22.42	13.74	6.32	6.19	15.00	10.44
Funds	1	1	3	1	4	9	2	3	24
				n Portfolio II	RR by Vinta	ige Year			
NCDC	<u>2006</u>	<u>2007</u>	2008	<u>2009</u>	<u>2010</u>	<u>2011</u>	2012	<u>2013</u>	<u>Total</u>
NCRS	5.06 1	12.58	13.44	n/a	-6.89	-8.68	15.35	4.02	-4.38
Funds		2	2	0	3	9	7	7	31
	credit str	by Valu	ategy Allocati	lon			on Portfolio	0,	
HF - Ma			ic		Na	All	ocation by	Value	
Neutr		HF- Multi- Strategy	HF - Rel Value		Res	ources			
8.7%	6	20.1%	Contraction of the Contraction o	k Loans		Debt			
				9.5%				Commodities	
	Hedge Fund	1				Natur Resour		61.2%	
	- FOF 20.7%		ressed ebt	1		Privat			
		Statistics of the state of the state of the state		uctured		Equit 23.9%			
				Credit 1.8%			•		
	irect			1.070					
Mez	ding/ zanine								
17 3.	.2%						Assets7%		

New Investments – Since May IAC Meeting

<u>Fund Name</u> <u>Global Equity</u>	Firm Name	<u>Commitment</u>	Closing Date
	None		
Private Equity			
Warburg Pincus Private Equity XI CVC Capital Partners VI Avista Capital Partners III Catterton Growth Partners II	Warburg Pincus LLC CVC Capital Partners Avista Capital Partners	\$150,000,000 € 75,000,000 \$150,000,000	7/8/2013 7/10/2013 7/12/2013
catter ton browth Partners in	Catterton Growth Partners	\$75,000,000	8/5/2013
Real Estate			
Rockpoint NYC CIP Investors	Rockpoint Group	\$90,000,000	6/26/2013
Credit Strategies			
Highbridge Irish Specialty Loan Fund III GSO Capital Solutions Fund II	Highbridge Principal Strategies GSO Capital Partners	\$150,000,000 \$84,667,160	6/17/2013 8/20/2013
Inflation Portfolio			
GSO Bakken Holdings I DCPF VI Oil and Gas Co-Inv Fund GSO Energy Partners - SMA	GSO Capital Partners Denham Capital GSO Capital Partners	\$15,000,000 \$50,000,000 \$100,000,000	6/4/2013 7/26/2013 7/26/2013
Hedge Funds			
18	None		

Appendix: NCRS Asset Class Net Performance As of July 31, 2013										
	1 Year	3 Years	5 Years	10 Years	15 Years					
Global Equity	23.79%	12.66%	5.31%	7.33%	5.22%					
Benchmark	21.80%	12.23%	4.78%	6.83%	4.28%					
Fixed Income	-2.80%	4.79%	7.36%	6.34%	6.61%					
Benchmark	-4.12%	4.46%	6.79%	5.93%	6.28%					
Real Estate	11.27%	11.86%	-4.13%	4.30%	5.50%					
Benchmark	11.33%	15.17%	0.16%	7.00%	8.15%					
Private Equity	6.77%	8.93%	3.12%	7.13%	5.98%					
Benchmark	10.74%	11.76%	6.22%	10.00%	6.61%					
Hedge Funds	6.15%	2.11%	-0.33%	2.70%	-					
Benchmark	5.61%	2.40%	3.22%	5.19%						
Credit Strategies	17.68%	11.36%	-	_						
Benchmark	3.88%	3.00%	-	<u> </u>	_					
Inflation Portfolio	-5.50%	-9.69%	-	_	-					
Benchmark	-6.97%	-2.38%	_							

NOTES:

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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