

**Performance and Fee Report**  
**Reported under G.S. 147-69.12(b)**

Fiscal Year 2017 - 2018

This report is divided into four sections:

**Section 1. Value and Performance Supplement**

Lists the market value and investment return for each externally managed investment in the Retirement Systems portfolio.

**Section 2. Fee Supplement**

Lists the fees for each externally managed investment in the Retirement Systems portfolio.

**Section 3. Additional Information**

Lists several additional items requested by G.S. 147-69.12(b).

**Section 4. Use of new Investment Authority Report**

Details information on grants of investment authority from the state legislature as required by G.S. 147-69.8.

**Section 1**  
**Value and Performance Supplement**

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# NCRS Public Equity Portfolio

June 30, 2018

Fund	LLC/LLP	Inception	Market Value	Returns						
				1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr	
Baillie Gifford EAFE Plus Alpha <i>MSCI EAFE</i>		2007	\$ 3,089,834	24.4	13.0	12.9	7.4	-	-	
				6.8	4.9	6.4	2.8	7.3	4.3	
BlackRock EAFE LC Growth <i>MSCI EAFE Growth Index</i>		2016	\$ 839,105	10.1	-	-	-	-	-	
				9.9	6.8	7.8	3.8	7.9	4.1	
BlackRock Emerging Markets Opportunities Fund <i>MSCI Emerging Markets</i>		2009	\$ 741,160	10.2	7.5	6.2	-	-	-	
				8.2	5.6	5.0	2.3	10.7	-	
BlackRock Mid Cap Passive <i>Russell Midcap Custom</i>		2013	\$ 401,604	-	-	-	-	-	-	
				7.6	8.0	-	-	-	-	
BlackRock MSCI ACWI ex US IMI <i>MSCI ACWI ex US IMI Index</i>		2010	\$ 7,403,941	8.0	5.8	6.7	-	-	-	
				7.7	5.5	6.4	2.9	8.1	5.3	
BlackRock R1000 Passive <i>Russell 1000 Custom</i>		2013	\$ 3,676,594	14.5	11.6	-	-	-	-	
				14.5	11.6	-	-	-	-	
Brown Advisory Small Cap Growth <i>Russell 2000 Growth</i>		2008	\$ 317,362	18.6	12.7	13.9	11.8	-	-	
				21.9	10.6	13.6	11.2	10.9	6.9	
Earnest Partners Small Cap Value <i>Russell 2000 Value</i>		2002	\$ 581,370	16.4	13.1	13.8	10.5	11.4	-	
				13.1	11.2	11.2	9.9	9.9	8.7	
ECM Bespoke Fund 2 <i>Equity Hedge Benchmark</i>	Yes	2016	\$ 33,961	3.1	-	-	-	-	-	
				4.4	3.4	3.0	-	-	-	
ECM Feeder Fund 2 <i>Equity Hedge Benchmark</i>	Yes	2016	\$ 171,754	1.2	-	-	-	-	-	
				4.4	3.4	3.0	-	-	-	
Franklin Templeton Int'l SC <i>MSCI AC World ex USA Small Cap Index</i>		2010	\$ 638,973	10.4	7.7	8.8	-	-	-	
				10.6	7.9	9.0	5.8	10.5	7.8	
Internal Russell 200 Passive <i>Russell Top 200 Custom</i>		2017	\$ 7,621,425	-	-	-	-	-	-	
				15.4	12.5	-	-	-	-	
Internal Russell Mid Cap Passive <i>Russell Midcap Index</i>		2017	\$ 1,663,670	-	-	-	-	-	-	
				12.3	9.6	12.2	10.2	11.2	9.2	
Mondrian Focused All Country World ex US IMI <i>MSCI Emerging Markets</i>		2017	\$ 2,394,361	-	-	-	-	-	-	
				8.2	5.6	5.0	2.3	10.7	-	
Numeric Small Cap Value <i>Russell 2000 Value</i>		2007	\$ 465,778	12.1	7.9	10.1	10.5	-	-	
				13.1	11.2	11.2	9.9	9.9	8.7	
ONSHE BlackRock <i>Equity Hedge Benchmark</i>	Yes	2015	\$ 2,209,974	5.0	3.8	-	-	-	-	
				4.4	3.4	3.0	-	-	-	
ONSHE Marshall Wace <i>Equity Hedge Benchmark</i>	Yes	2016	\$ 222,899	9.6	-	-	-	-	-	
				4.4	3.4	3.0	-	-	-	
ONSHE Menta <i>Equity Hedge Benchmark</i>	Yes	2016	\$ 196,666	2.7	-	-	-	-	-	
				4.4	3.4	3.0	-	-	-	
Piedmont R200 Passive <i>Russell Top 200 Custom</i>		2015	\$ 586,897	15.3	12.4	-	-	-	-	
				15.4	12.5	-	-	-	-	
TimesSquare MidCap Growth <i>Russell Midcap Growth</i>		2007	\$ 665,983	17.5	10.4	12.4	10.8	-	-	
				18.5	10.7	13.4	10.5	11.1	8.0	
ValueAct Capital <i>Russell MidCap Value</i>	Yes	2015	\$ 839,922	15.1	-	-	-	-	-	
				7.6	8.8	11.3	10.1	11.0	9.3	
Walter Scott International <i>MSCI ACWI Ex US</i>		2002	\$ 1,818,585	13.3	10.8	8.8	6.2	9.9	-	
				7.3	5.1	6.0	2.5	7.7	-	
Wellington Diversified International <i>MSCI ACWI Ex US</i>		1987	\$ 1,356,869	7.4	7.9	8.9	4.9	8.7	5.9	
				7.3	5.1	6.0	2.5	7.7	-	
Wellington Opportunistic Growth <i>Russell 3000 Growth Custom</i>		1999	\$ 1,560,255	25.5	14.8	16.4	11.2	11.0	-	
				22.5	14.6	16.1	11.8	10.4	7.1	
BlackRock Global Transition Cash and Liquidating Accounts		N/A	\$ 2,411	-	-	-	-	-	-	
		N/A	\$ 10,495	-	-	-	-	-	-	
<b>Total Public Equity</b>			<b>\$ 39,511,849</b>	<b>12.5</b>	<b>8.8</b>	<b>10.2</b>	<b>6.9</b>	<b>8.1</b>	<b>6.1</b>	
<b>Public Equity Benchmark</b>				<b>10.6</b>	<b>7.9</b>	<b>9.3</b>	<b>6.2</b>	<b>7.4</b>	<b>5.1</b>	

# NCRS Public Equity Portfolio

June 30, 2018

Fund	LLC/LLP	Inception	Market Value	1 Yr	3 Yr	Returns			
						5 Yr	10 Yr	15 Yr	20 Yr

*Methodology and Notes:*

-Dollar Values in Thousands

-Returns are calculated using a Modified Dietz time weighted rate of return methodology. This method uses the beginning and ending valuation for the measurement period, and The Equity Hedge Benchmark is the MSCI ACWI IMI Net beta adjusted to the target beta of the Equity Hedge Portfolio.

-As of July 2011, 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 portfolio cash and any residual value from closed accounts are aggregated in the line item labeled "Cash and Liquidating Accounts."

**NCRS Private Equity Portfolio**  
June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
A.V. Management IV, LLC	2002	--	\$ 1,046	\$ 5,000	\$ -	(2.91)	0.75	\$ 2,703	0.54	YES
Academy Venture Fund, LLC	1999	2012	\$ 0	\$ 5,000	\$ -	(22.26)	0.18	\$ 916	0.18	YES
Accel-KKR Capital Partners IV, LP	2013	--	\$ 8,290	\$ 10,000	\$ 6,062	20.15	1.62	\$ 3,322	0.46	NO
Access Capital L.P. II D	2002	--	\$ 94	\$ 31,086	\$ 6,137	4.44	1.21	\$ 32,224	1.20	NO
AG Private Equity Partners IV (R), L.P.	2008	--	\$ 37,023	\$ 48,810	\$ 16,107	3.27	1.22	\$ 2,929	0.09	YES
AG Private Equity Partners IV, L.P.	2008	--	\$ 37,973	\$ 48,810	\$ 5,125	7.18	1.45	\$ 25,869	0.59	YES
Ampersand 2006 Limited Partnership	2006	--	\$ 23,470	\$ 30,000	\$ -	15.08	2.44	\$ 49,746	1.66	YES
Angeleno Investors II, L.P.	2006	--	\$ 15,591	\$ 30,000	\$ -	1.22	1.08	\$ 22,028	0.63	YES
Apollo Investment Fund VI, L.P.	2005	2013	\$ 0	\$ 128,418	\$ -	4.85	1.23	\$ 158,307	1.23	NO
Apollo Investment Fund VII, L.P.	2008	2011	\$ 0	\$ 34,550	\$ -	11.43	1.17	\$ 41,319	1.17	NO
Apollo Investment Fund VIII, L.P.	2013	--	\$ 193,444	\$ 220,000	\$ 50,356	14.28	1.28	\$ 58,395	0.30	NO
Arch IX Overage	2016	--	\$ 33,793	\$ 60,000	\$ 27,000	2.23	1.02	\$ -	-	YES
ARCH Venture Fund VII, L.P.	2007	--	\$ 58,725	\$ 50,000	\$ -	40.25	5.27	\$ 208,627	4.11	YES
ARCH Venture Fund VIII, L.P.	2014	--	\$ 152,525	\$ 80,000	\$ 5,200	34.44	2.04	\$ 584	0.01	YES
ARCH Venture Fund IX	2016	--	\$ 28,473	\$ 60,000	\$ 31,500	0.21	1.00	\$ 79	0.00	YES
Aurora Ventures IV, LLC	2002	--	\$ 2,538	\$ 15,000	\$ -	(2.76)	0.77	\$ 9,017	0.60	YES
Aurora Ventures V, LLC	2005	--	\$ 9,847	\$ 15,000	\$ -	4.26	1.34	\$ 10,192	0.68	YES
Avista Capital Partners I, L.P.	2006	--	\$ 0	\$ 50,000	\$ 726	4.41	1.29	\$ 68,105	1.29	YES
Avista Capital Partners II, L.P.	2008	--	\$ 28,466	\$ 100,000	\$ 13,748	15.95	2.15	\$ 157,252	1.82	YES
Avista Capital Partners III, L.P.	2011	--	\$ 120,220	\$ 150,000	\$ 9,155	4.83	1.20	\$ 51,849	0.36	YES
Blackstone Core Equity Partners - NC LP	2017	--	\$ 0	\$ 250,000	\$ 250,000	-	-	\$ -	-	N/A
Blackstone Core Equity Partners LP	2017	--	\$ 114,732	\$ 250,000	\$ 138,352	3.33	1.02	\$ 20,681	0.16	YES
Blackstone TN Partners LP	2017	--	\$ 35,990	\$ 40,000	\$ 3,974	(0.07)	1.00	\$ 1,604	0.04	N/A
Burrill Life Sciences Capital Fund III, L.P.	2005	--	\$ 10,631	\$ 50,000	\$ 58	(4.93)	0.71	\$ 24,743	0.50	YES
Burrill Life Sciences Capital Fund, L.P.	2002	2015	\$ 0	\$ 41,632	\$ -	3.93	1.22	\$ 50,772	1.22	YES
Carolinus Capital, L.P.	1990	2008	\$ 0	\$ 225	\$ -	7.09	1.54	\$ 347	1.54	NO
Carousel Capital Partners III, L.P.	2006	--	\$ 47	\$ 20,966	\$ 4,672	23.46	2.33	\$ 37,791	2.32	YES
Carousel Capital Partners IV, L.P.	2012	--	\$ 23,781	\$ 24,999	\$ 4,865	39.18	2.74	\$ 31,380	1.56	YES
Carousel Capital Partners V LP	2017	--	\$ 5,986	\$ 30,000	\$ 24,091	2.18	1.01	\$ 0	0.00	YES
Castle Harlan Partners IV, L.P.	2002	--	\$ 8,429	\$ 75,000	\$ 7,252	14.37	1.48	\$ 97,588	1.36	YES
Castle Harlan Partners V, L.P.	2008	--	\$ 51,007	\$ 100,000	\$ 26,949	13.42	1.37	\$ 59,908	0.74	YES
Catterton Growth Partners, L.P.	2008	--	\$ 21,923	\$ 30,000	\$ 272	9.18	1.68	\$ 28,884	0.95	YES
Catterton Growth Partners II, L.P.	2013	--	\$ 89,762	\$ 75,000	\$ 447	5.64	1.20	\$ -	-	YES
Catterton Partners VII, L.P.	2013	--	\$ 108,806	\$ 100,000	\$ 5,713	12.29	1.42	\$ 42,196	0.40	YES
Chapter IV Investors Special Situations Fund, L.P.	2006	2018	\$ 0	\$ 44,467	\$ -	1.82	1.17	\$ 59,322	1.17	YES
Charterhouse Capital Partners IX, L.P.	2009	--	\$ 30,471	\$ 116,755	\$ 8,857	11.03	1.37	\$ 135,097	1.12	YES
Charterhouse Capital Partners X, L.P.	2015	--	\$ 62,228	\$ 175,133	\$ 124,472	23.07	1.34	\$ -	-	YES
Colter International Partners IV, L.P.	2002	2018	\$ 0	\$ 83,729	\$ -	13.20	1.37	\$ 120,170	1.37	YES
Crestview Partners II, L.P.	2008	--	\$ 71,784	\$ 100,000	\$ 18,693	14.96	2.11	\$ 99,759	1.23	YES
Crestview Capital Partners III, L.P.	2013	--	\$ 60,851	\$ 150,000	\$ 87,794	5.84	1.12	\$ 11,028	0.17	YES
CVC Europe Equity Partners IV, L.P.	2005	--	\$ 130	\$ 75,891	\$ 8,924	16.63	1.97	\$ 153,884	1.97	NO
CVC Capital Partners VI, L.P.	2014	--	\$ 76,866	\$ 87,566	\$ 11,551	10.75	1.18	\$ 18,296	0.23	NO
CVE Kauffman Fund I	2007	--	\$ 56,016	\$ 50,000	\$ 5,750	10.94	2.11	\$ 37,802	0.85	YES
DLJ Merchant Banking Partners II, L.P.	1996	2016	\$ 0	\$ 6,896	\$ -	5.98	1.30	\$ 9,903	1.30	NO
Elevation Partners, L.P.	2005	--	\$ 201	\$ 91,652	\$ 1,066	12.15	1.59	\$ 147,260	1.59	YES
Francisco Partners Agility	2017	--	\$ 6,149	\$ 50,000	\$ 40,375	152.79	1.53	\$ 8,552	0.89	YES
Francisco Partners II, L.P.	2006	--	\$ 11,281	\$ 60,000	\$ 4,140	10.33	1.56	\$ 83,719	1.38	YES
Francisco Partners IV, L.P.	2015	--	\$ 118,832	\$ 100,000	\$ 2,550	17.95	1.32	\$ 11,289	0.11	YES
Franklin Fairview I, L.P.	1997	2017	\$ 0	\$ 2,478	\$ -	0.98	1.16	\$ 2,888	1.16	NO
GCM Grosvenor - NC Innovation Fund	2010	--	\$ 122,776	\$ 230,000	\$ 37,604	20.92	1.84	\$ 261,539	1.25	N/A
GCM Grosvenor - NC Innovation Fund 2013-1	2013	--	\$ 21,580	\$ 15,028	\$ 1,809	19.07	1.76	\$ 1,979	0.15	N/A
GCM Grosvenor - NC Innovation Fund II	2015	--	\$ 72,952	\$ 248,619	\$ 172,722	9.26	1.08	\$ 16,693	0.20	N/A
GCM Grosvenor - NC Investment Fund 2006	2006	--	\$ 49,086	\$ 252,482	\$ 4,275	3.98	1.27	\$ 265,831	1.07	N/A
GCM Grosvenor - NC Investment Fund 2008 Series 1	2008	--	\$ 61,583	\$ 179,996	\$ 26,488	5.92	1.33	\$ 145,904	0.93	N/A
GCM Grosvenor - NC Investment Fund 2008 Series 2	2009	--	\$ 40,911	\$ 50,000	\$ 2,011	(2.14)	0.92	\$ 4,177	0.08	N/A
Halifax Capital Partners II, L.P.	2005	--	\$ 4,148	\$ 15,000	\$ 2,895	11.18	1.65	\$ 15,993	1.31	YES
Halifax Capital Partners III, L.P.	2012	--	\$ 19,534	\$ 30,000	\$ 6,287	26.21	1.51	\$ 21,794	0.80	YES
HarbourVest Partners III, L.P.	1989	2008	\$ 0	\$ 6,500	\$ -	13.91	2.16	\$ 14,012	2.16	NO
Harvest Partners IV, L.P.	2001	--	\$ 3,007	\$ 47,904	\$ 1,372	35.78	2.25	\$ 101,999	2.19	YES
Harvest Partners V, L.P.	2006	--	\$ 17,277	\$ 75,000	\$ 6,770	18.51	1.91	\$ 114,659	1.66	YES
Harvest Partners VI, L.P.	2011	--	\$ 63,371	\$ 100,000	\$ 6,852	21.19	1.86	\$ 118,538	1.21	YES
Harvest Partners VII, L.P.	2016	--	\$ 55,447	\$ 100,000	\$ 45,932	3.19	1.02	\$ 9,299	0.15	YES
Hatteras Venture Partners III, L.P.	2007	--	\$ 15,308	\$ 16,354	\$ 1,888	1.83	1.11	\$ 3,211	0.19	YES
Hg Capital 7	2013	--	\$ 89,129	\$ 85,816	\$ 5,936	11.90	1.32	\$ 36,907	0.39	YES
Highland Capital Partners VI, L.P.	2001	--	\$ 598	\$ 5,000	\$ -	11.89	1.60	\$ 7,411	1.48	NO
Highland Capital Partners VII, L.P.	2006	--	\$ 6,778	\$ 15,000	\$ -	4.17	1.29	\$ 12,544	0.84	NO
Highland Consumer Fund I, L.P.	2007	--	\$ 9,888	\$ 25,000	\$ -	(2.60)	0.83	\$ 10,985	0.44	YES
Horsley Bridge International IV, L.P.	2006	--	\$ 49,618	\$ 65,000	\$ 3,039	8.46	1.72	\$ 56,996	0.92	NO
Horsley Bridge International V, L.P.	2008	--	\$ 120,286	\$ 75,000	\$ 3,539	18.95	2.04	\$ 25,739	0.36	NO
Horsley Bridge IX, L.P.	2008	--	\$ 115,689	\$ 85,000	\$ 2,987	18.45	2.33	\$ 74,999	0.91	NO
Intersouth Partners II, L.P.	1988	2004	\$ 0	\$ 2,000	\$ -	(6.10)	0.73	\$ 1,465	0.73	NO
Intersouth Partners III, L.P.	1994	2014	\$ 0	\$ 1,000	\$ -	26.92	2.14	\$ 2,140	2.14	NO
Intersouth Partners VI, L.P.	2003	--	\$ 3,249	\$ 7,000	\$ -	2.68	1.21	\$ 5,249	0.75	NO
Kitty Hawk Capital III, L.P.	1994	2012	\$ 0	\$ 1,000	\$ -	(5.03)	0.59	\$ 592	0.59	NO
KRG Capital Fund II, L.P.	2001	2016	\$ 0	\$ 19,568	\$ -	21.64	1.51	\$ 29,648	1.51	YES
KRG Capital Fund III, L.P.	2005	2017	\$ 0	\$ 73,591	\$ -	1.69	1.09	\$ 80,524	1.09	YES
KRG Capital Fund IV, L.P.	2007	--	\$ 9,080	\$ 140,559	\$ 3,889	13.12	1.68	\$ 234,737	1.62	YES
L Catterton Growth Partners III, L.P.	2016	--	\$ 51,096	\$ 75,000	\$ 30,097	20.48	1.24	\$ 7,317	0.15	YES
Landmark Equity Partners XV, L.P.	2014	--	\$ 133,536	\$ 250,000	\$ 65,093	13.39	1.20	\$ 114,146	0.55	Observer
Landmark Equity Partners XVI LP	2018	--	\$ 32,600	\$ 300,000	\$ 284,903	-	1.00	\$ -	-	YES
Landmark Equity Partners XVI Overflow LP	2018	--	\$ 0	\$ 200,000	\$ 200,000	-	-	\$ -	-	YES
Landmark Equity Partners XVI Opportunities LP	2018	--	\$ 15,098	\$ 300,000	\$ 267,400	-	1.00	\$ -	-	YES
Levine Leichtman Capital Partners V	2013	--	\$ 140,230	\$ 150,000	\$ 24,439	10.61	1.31	\$ 35,558	0.27	YES

**NCRS Private Equity Portfolio**  
June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
Lexington Middle Market Investors, L.P.	2004	--	\$ 16,801	\$ 100,000	\$ 912	11.60	1.63	\$ 144,352	1.46	YES
Lexington Middle Market Investors II, L.P.	2008	--	\$ 43,087	\$ 100,000	\$ 2,263	14.05	1.61	\$ 114,347	1.17	YES
Lexington Middle Market Investors III, L.P.	2012	--	\$ 91,883	\$ 150,000	\$ 46,520	22.29	1.43	\$ 56,916	0.55	YES
Lindsay Goldberg II, L.P.	2006	--	\$ 2,912	\$ 100,000	\$ 5,614	7.11	1.42	\$ 135,824	1.39	YES
Lindsay Goldberg III, LP	2008	--	\$ 25,805	\$ 100,000	\$ 4,741	8.71	1.39	\$ 106,723	1.12	YES
LittleJohn Opportunities Fund II LP	2017	--	\$ 37,963	\$ 125,000	\$ 88,730	5.80	1.05	\$ 94	0.00	YES
Longreach Capital Partners I, L.P.	2006	--	\$ 43,066	\$ 75,000	\$ 2,382	0.07	1.00	\$ 42,619	0.50	YES
Markstone Capital Partners, L.P.	2005	2017	\$ 0	\$ 48,570	\$ -	(85.27)	0.30	\$ 16,131	0.30	YES
Marlin Equity IV	2013	--	\$ 48,050	\$ 49,000	\$ 3,717	3.22	1.07	\$ 467	0.01	NO
MatlinPatterson Global Opportunities Partners III	2007	--	\$ 41,356	\$ 100,000	\$ 2,414	4.80	1.33	\$ 88,497	0.91	NO
MHR Institutional Partners IV, L.P.	2015	--	\$ 52,481	\$ 150,000	\$ 92,792	(5.45)	0.92	\$ 4,201	0.07	YES
Milestone Partners IV, L.P.	2011	--	\$ 51,793	\$ 50,000	\$ 750	12.62	1.49	\$ 28,252	0.53	YES
Mount Kellett Capital Partners II, LP	2011	--	\$ 14,042	\$ 75,000	\$ 1,741	2.56	1.08	\$ 67,238	0.89	YES
NCEF Liquidating Trust	1990	2013	\$ 0	\$ 10,010	\$ -	20.21	6.14	\$ 61,501	6.14	N/A
NEA 14, L.P.	2012	--	\$ 62,459	\$ 45,000	\$ 2,700	17.12	1.89	\$ 17,611	0.42	NO
NEA 15 Opportunity Fund, L.P.	2015	--	\$ 47,446	\$ 65,000	\$ 12,025	11.15	1.16	\$ 13,809	0.26	YES
NEA 15, L.P.	2015	--	\$ 72,818	\$ 67,500	\$ 15,188	22.60	1.51	\$ 5,984	0.11	NO
North Carolina Economic Opportunities Fund	2001	2015	\$ 0	\$ 6,561	\$ -	16.27	1.69	\$ 11,079	1.69	N/A
Northbound NCRS Fund, L.P.	2015	--	\$ 139,139	\$ 200,000	\$ 79,719	12.60	1.14	\$ 11,924	0.09	N/A
Novak Biddle Venture Partners III, L.P.	2000	2017	\$ 0	\$ 17,000	\$ -	(13.59)	0.56	\$ 9,450	0.56	NO
Novak Biddle Venture Partners IV, L.P.	2004	--	\$ 994	\$ 10,000	\$ 307	(6.21)	0.64	\$ 5,240	0.54	NO
Novak Biddle Venture Partners V, L.P.	2007	--	\$ 9,060	\$ 10,000	\$ 357	15.18	2.45	\$ 14,523	1.51	NO
Oaktree European Principal Fund III, L.P.	2011	--	\$ 35,985	\$ 41,585	\$ 12,507	10.46	1.63	\$ 17,720	0.54	NO
Pappas Life Science Ventures II, L.P.	2000	2016	\$ 0	\$ 4,925	\$ -	3.47	1.20	\$ 5,989	1.20	YES
Pappas Life Science Ventures III, L.P.	2005	--	\$ 939	\$ 20,000	\$ 100	4.67	1.37	\$ 26,409	1.33	YES
Pappas Life Science Ventures IV, L.P.	2009	--	\$ 7,217	\$ 24,457	\$ 1,223	33.53	2.45	\$ 49,810	2.14	YES
Perseus Market Opportunity Fund, L.P.	2002	2015	\$ 0	\$ 50,000	\$ -	(15.81)	0.48	\$ 26,371	0.48	YES
Perseus Partners VII, L.P.	2006	2015	\$ 0	\$ 48,431	\$ -	(38.45)	0.17	\$ 7,999	0.17	YES
Quaker BioVentures II, L.P.	2007	--	\$ 30,732	\$ 100,000	\$ 5,273	1.77	1.08	\$ 70,761	0.75	YES
Robeco Clean Tech II	2008	--	\$ 54,684	\$ 75,000	\$ 4,619	(0.82)	0.95	\$ 11,881	0.17	YES
Robeco Clean Tech II Co-Inv	2008	--	\$ 14,545	\$ 75,000	\$ 18,289	(10.88)	0.49	\$ 13,018	0.23	N/A
Sprout Capital VI, L.P.	1989	2009	\$ 0	\$ 6,500	\$ -	18.54	2.16	\$ 14,030	2.16	NO
Sprout Growth II, L.P.	1993	2011	\$ 0	\$ 3,000	\$ -	15.44	1.98	\$ 5,931	1.98	NO
Starvest Partners II	2007	--	\$ 19,854	\$ 30,000	\$ 141	(2.25)	0.87	\$ 6,278	0.21	YES
StepStone Pioneer Capital Europe	2006	--	\$ 51,388	\$ 175,133	\$ 33,740	6.83	1.45	\$ 206,862	1.17	YES
StepStone Pioneer Capital I	2004	2018	\$ 0	\$ 136,794	\$ -	5.06	1.32	\$ 188,993	1.32	YES
StepStone Pioneer Capital II	2006	--	\$ 82,758	\$ 125,000	\$ 7,594	9.04	1.83	\$ 149,255	1.18	YES
StepStone SYN	2006	--	\$ 16,397	\$ 35,000	\$ 4,402	(5.07)	0.67	\$ 4,754	0.15	N/A
Synergy Life Science Partners, L.P.	2006	--	\$ 17,693	\$ 38,000	\$ 1,330	1.35	1.10	\$ 22,744	0.62	YES
TCV VI, L.P.	2005	--	\$ 6,988	\$ 30,000	\$ 141	13.42	1.66	\$ 42,459	1.42	NO
TCV VIII, L.P.	2014	--	\$ 174,212	\$ 150,000	\$ 22,783	14.89	1.46	\$ 11,602	0.09	YES
TCV IX, L.P.	2016	--	\$ 50,454	\$ 150,000	\$ 100,140	1.67	1.01	\$ -	-	YES
Tenaya Capital Fund V	2007	--	\$ 51,415	\$ 75,000	\$ 4,777	17.78	2.21	\$ 103,876	1.48	YES
Tenaya Capital Fund VI	2012	--	\$ 70,141	\$ 75,000	\$ 6,614	0.62	1.03	\$ -	-	YES
Tenaya Capital Fund VII, L.P.	2015	--	\$ 38,570	\$ 90,000	\$ 42,026	5.06	1.07	\$ 13,115	0.27	YES
Terra Firma Capital Partners II, LP	2002	--	\$ 1,076	\$ 116,755	\$ 217	13.32	1.79	\$ 232,462	1.78	YES
Terra Firma Capital Partners III, L.P.	2006	--	\$ 34,948	\$ 175,133	\$ 697	(6.94)	0.57	\$ 53,621	0.26	YES
Thoma Bravo XII	2016	--	\$ 100,556	\$ 150,000	\$ 55,417	4.97	1.06	\$ 5,481	0.05	YES
TPG Biotechnology Partners II, L.P.	2006	--	\$ 3,993	\$ 18,000	\$ 8	(0.10)	0.99	\$ 14,001	0.77	NO
TPG Biotechnology Partners III, L.P.	2008	--	\$ 21,224	\$ 50,000	\$ 1,066	3.41	1.16	\$ 36,284	0.73	YES
TPG Partners IV, L.P.	2003	2013	\$ 0	\$ 92,798	\$ -	13.94	1.71	\$ 161,089	1.71	NO
TPG Partners V, L.P.	2006	2013	\$ 0	\$ 125,215	\$ -	(7.73)	0.72	\$ 90,366	0.72	NO
TPG Partners VI, L.P.	2008	2013	\$ 0	\$ 33,034	\$ -	(6.38)	0.88	\$ 29,522	0.88	NO
Trident VII LP	2017	--	\$ 38,580	\$ 125,000	\$ 84,260	(10.14)	0.95	\$ 28	0.00	Observer
Tudor Ventures III, L.P.	2006	--	\$ 5,199	\$ 30,000	\$ 137	3.50	1.22	\$ 26,487	1.02	YES
Venture First II, L.P.	1988	2004	\$ 0	\$ 3,000	\$ -	(15.61)	0.23	\$ 694	0.23	NO
Vista Equity Partners Fund IV, L.P.	2011	--	\$ 40,042	\$ 49,408	\$ 8,755	18.46	2.06	\$ 50,484	1.15	NO
Warburg Pincus Private Equity IX, L.P.	2005	2013	\$ 0	\$ 50,000	\$ -	4.20	1.20	\$ 60,538	1.20	NO
Warburg Pincus Private Equity X - 10	2007	2013	\$ 0	\$ 22,800	\$ -	(2.09)	0.95	\$ 21,860	0.95	YES
Warburg Pincus Private Equity X - 40	2007	2013	\$ 0	\$ 66,950	\$ -	(2.77)	0.93	\$ 62,169	0.93	YES
Warburg Pincus Private Equity X - 50	2007	2013	\$ 0	\$ 88,875	\$ -	(2.44)	0.94	\$ 84,177	0.94	YES
Warburg Pincus Private Equity XI, L.P.	2012	--	\$ 138,143	\$ 150,000	\$ -	13.95	1.48	\$ 86,286	0.57	Observer
Warburg Pincus Private Equity XII, L.P.	2015	--	\$ 101,630	\$ 175,000	\$ 81,813	10.01	1.12	\$ 2,923	0.03	Yes
WLR AGO Co-Inv, L.P.	2008	2014	\$ 0	\$ 7,162	\$ -	5.15	1.29	\$ 9,466	1.29	N/A
WLR AHM Co-Inv, L.P.	2007	2015	\$ 0	\$ 28,634	\$ -	11.81	1.65	\$ 47,447	1.65	YES
WLR Recovery Fund IV, L.P.	2007	--	\$ 17,999	\$ 200,000	\$ 19,131	7.79	1.37	\$ 230,819	1.27	YES
Stock Distribution	2002	--	\$ 4,899	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Private Equity</b>			<b>\$ 5,074,695</b>	<b>\$ 11,666,710</b>	<b>\$ 3,040,234</b>	<b>8.33</b>	<b>1.37</b>	<b>\$ 7,293,754</b>	<b>0.81</b>	

*Methodology and Notes:*

- Dollar values in Thousands

- Returns are calculated using the Internal Rate of Return (IRR) methodology. The IRR is the discount rate where the sum of the discounted cash flows and the discounted valuation is equal to zero.

Returns are reported net of fees.

- Total Value to Paid-In (TVPI), also known as the Investment Multiple, is the ratio of cumulative distributions plus the valuation to cumulative paid-in.

- Distributions to Paid-In (DPI), also known as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

- The advisory board column is an indication of NCRS participation on the Fund's advisory board, N/A indicates that the Fund has no advisory board.

**NCRS Non-Core Real Estate Portfolio**  
June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
AG Asia Realty Fund II, L.P.	2010	--	\$ 3,713	\$ 25,000	\$ 5,592	20.46	1.80	\$ 31,276	1.60	YES
AG Asia Realty Fund III LP	2016	--	\$ 78,456	\$ 100,000	\$ 30,393	13.90	1.15	\$ 12,458	0.16	YES
AG Core Plus Realty Fund I, L.P.	2003	2018	\$ 0	\$ 75,000	\$ 3,750	17.53	1.52	\$ 108,278	1.52	YES
AG Core Plus Realty Fund II, L.P.	2006	--	\$ 3,146	\$ 100,000	\$ 5,500	8.21	1.33	\$ 123,007	1.30	YES
AG Net Lease Realty Fund II, L.P.	2010	--	\$ 89,792	\$ 100,000	\$ 3,000	8.79	1.56	\$ 60,826	0.63	YES
AG Net Lease Realty Fund III, L.P.	2013	--	\$ 72,208	\$ 100,000	\$ 29,000	6.40	1.16	\$ 9,579	0.14	YES
American Value Partners Fund I, L.P.	2006	--	\$ 5,783	\$ 50,000	\$ 12,531	0.81	1.04	\$ 33,390	0.89	YES
Benson Elliot Real Estate Partners II, L.P.	2006	--	\$ 9,439	\$ 58,378	\$ 9,501	(7.60)	0.56	\$ 22,670	0.40	YES
Benson Elliot Real Estate Partners III, L.P.	2008	--	\$ 36,832	\$ 58,378	\$ 9,766	10.10	1.31	\$ 40,314	0.74	YES
Blackstone Real Estate Partners Europe IV, L.P.	2013	--	\$ 155,811	\$ 250,000	\$ 53,880	18.50	1.57	\$ 174,876	0.83	YES
Blackstone Real Estate Partners Europe V, L.P.	2016	--	\$ 95,430	\$ 200,000	\$ 121,460	33.41	1.17	\$ 344	0.00	YES
Blackstone Real Estate Partners V, L.P.	2006	--	\$ 17,426	\$ 91,413	\$ 4,061	10.41	2.04	\$ 177,226	1.86	NO
Blackstone Real Estate Partners VI, L.P.	2007	--	\$ 24,576	\$ 200,000	\$ 9,816	13.06	2.05	\$ 401,593	1.93	YES
Blackstone Real Estate Partners VII, L.P.	2011	--	\$ 240,264	\$ 300,000	\$ 45,380	18.46	1.85	\$ 266,267	0.97	YES
Blackstone Real Estate Partners VIII, L.P.	2015	--	\$ 118,179	\$ 200,000	\$ 106,481	17.71	1.23	\$ 46,037	0.34	YES
Brookfield Real Estate Finance Fund III, L.P.	2011	--	\$ 228	\$ 100,000	\$ 26,109	7.17	1.15	\$ 85,466	1.15	YES
CB Richard Ellis Strategic Partners US IV, L.P.	2005	2017	\$ 0	\$ 150,000	\$ -	(33.40)	0.04	\$ 6,409	0.04	YES
CB Richard Ellis Strategic Partners US V, L.P.	2007	--	\$ 25,830	\$ 100,000	\$ 5,461	5.52	1.39	\$ 105,479	1.12	YES
Cherokee Investment Partners III, L.P.	2002	--	\$ 333	\$ 50,000	\$ 1,848	(34.40)	0.27	\$ 12,800	0.27	YES
Cherokee Investment Partners IV, L.P.	2005	--	\$ 10,266	\$ 50,358	\$ 6,171	(12.80)	0.45	\$ 9,609	0.22	YES
CrossHarbor Institutional Partners, L.P.	2006	--	\$ 9,401	\$ 43,858	\$ -	4.32	1.34	\$ 49,770	1.13	YES
CrossHarbor Institutional Partners II, L.P.	2010	--	\$ 58,563	\$ 106,000	\$ 6,235	12.44	1.45	\$ 86,047	0.86	YES
Crow Holdings Realty Partners IV, L.P.	2006	--	\$ 1,929	\$ 80,000	\$ 6,451	1.64	1.10	\$ 83,226	1.08	YES
Crow Holdings Realty Partners IV-A, L.P.	2006	--	\$ 380	\$ 20,000	\$ 1,613	1.53	1.10	\$ 20,722	1.08	YES
Crow Holdings Realty Partners V, L.P.	2008	--	\$ 273	\$ 100,000	\$ 7,721	15.01	1.50	\$ 152,322	1.50	YES
Crow Holdings Realty Partners VI, L.P.	2012	--	\$ 40,535	\$ 85,000	\$ 7,688	11.71	1.36	\$ 71,489	0.87	YES
Crow Holdings Realty Partners VII, L.P.	2015	--	\$ 78,982	\$ 100,000	\$ 12,382	12.19	1.17	\$ 28,409	0.31	YES
Crow Holdings Retail Fund II, L.P.	2016	--	\$ 22,964	\$ 100,000	\$ 76,700	(2.67)	0.99	\$ -	-	YES
DB Real Estate Global Opps I-A/I-B, L.P.	2003	--	\$ 601	\$ 152,061	\$ -	18.39	1.32	\$ 200,752	1.32	YES
DLJ Real Estate Capital Partners I, L.P.	1995	2010	\$ 0	\$ 23,667	\$ -	10.67	1.47	\$ 38,279	1.47	YES
DLJ Real Estate Capital Partners II, L.P.	2000	2015	\$ 0	\$ 47,347	\$ -	14.22	1.47	\$ 77,480	1.47	YES
DLJ Real Estate Capital Partners III, L.P.	2005	--	\$ 49,265	\$ 150,000	\$ 8,063	(1.48)	0.89	\$ 89,763	0.58	YES
DLJ Real Estate Capital Partners IV, L.P.	2007	--	\$ 96,036	\$ 100,000	\$ 5,908	4.92	1.33	\$ 41,717	0.40	YES
DRA Growth & Income Fund III, LLC	2000	2014	\$ 0	\$ 25,000	\$ -	22.98	2.78	\$ 70,008	2.78	YES
DRA Growth & Income Fund IV, LLC	2002	2015	\$ 0	\$ 50,000	\$ -	12.13	1.63	\$ 86,986	1.63	YES
DRA Growth & Income Fund V, LLC	2005	--	\$ 84	\$ 100,000	\$ -	5.24	1.46	\$ 155,376	1.46	YES
DRA Growth & Income Fund V Co-Investment, LLC	2005	--	\$ 41	\$ 24,927	\$ -	10.26	1.98	\$ 51,951	1.98	YES
DRA Growth & Income Fund VI, LLC	2007	--	\$ 3,945	\$ 34,480	\$ -	9.71	1.60	\$ 53,225	1.49	YES
DRA Growth & Income Fund VII, LLC	2011	--	\$ 109,894	\$ 150,000	\$ 690	20.09	1.89	\$ 199,482	1.22	YES
DRA Growth & Income Fund VIII, LLC	2013	--	\$ 127,790	\$ 146,248	\$ 11,444	13.31	1.26	\$ 64,044	0.42	YES
Frogmore Real Estate Partners I, L.P.	2005	--	\$ 1,345	\$ 31,818	\$ 35	(4.96)	0.65	\$ 27,941	0.62	NO
Frogmore Real Estate Partners II, L.P.	2008	--	\$ 4,589	\$ 33,006	\$ 2,535	13.77	1.44	\$ 48,371	1.31	YES
Frogmore Real Estate Partners III, L.P.	2014	--	\$ 34,895	\$ 66,013	\$ 27,896	(3.14)	0.91	\$ 3,555	0.08	YES
Harrison St. RE Partners III, L.P.	2010	--	\$ 10,757	\$ 60,000	\$ 9,805	20.69	1.83	\$ 82,298	1.62	YES
Harrison St. RE Partners IV, L.P.	2013	--	\$ 60,346	\$ 100,000	\$ 25,103	13.50	1.55	\$ 55,886	0.75	YES
Harrison St. RE Partners V Co-Investment, L.P.	2014	--	\$ 57,775	\$ 50,000	\$ 2,653	11.86	1.29	\$ 8,843	0.17	YES
Harrison St. RE Partners V, L.P.	2014	--	\$ 81,884	\$ 100,000	\$ 18,937	11.77	1.24	\$ 29,880	0.33	YES
Harrison St. RE Partners VI, L.P.	2016	--	\$ 47,993	\$ 100,000	\$ 52,000	(0.02)	1.00	\$ -	-	YES
Harrison Street Real Estate Partners VI Co-Investment LP	2016	--	\$ 40,540	\$ 50,000	\$ 11,500	7.54	1.06	\$ -	-	YES
Harrison Street Real Estate Partners VI Co-Investment 3 LP	2018	--	\$ 17,500	\$ 50,000	\$ 32,500	-	1.00	\$ -	-	YES
Hawkeye (Scout) Fund 1-A, L.P.	2006	--	\$ 371	\$ 49,918	\$ -	15.04	1.53	\$ 78,962	1.52	YES
Hawkeye (Scout) Fund II, L.P.	2012	--	\$ 92,468	\$ 100,000	\$ 9,288	2.71	1.02	\$ 3,073	0.03	YES
JER Real Estate Partners Fund III, L.P.	2003	2016	\$ 0	\$ 68,036	\$ -	4.20	1.17	\$ 86,724	1.17	YES
JER Real Estate Partners IV, L.P.	2006	2015	\$ 0	\$ 30,219	\$ -	(4.97)	0.46	\$ 14,009	0.46	YES
Keystone Industrial Fund I, L.P.	2005	2017	\$ 0	\$ 95,041	\$ -	4.01	1.27	\$ 135,670	1.27	YES
Keystone Industrial Fund II, L.P.	2008	2017	\$ 0	\$ 137,935	\$ -	26.94	2.24	\$ 309,029	2.24	YES
Keystone Industrial Fund III, L.P.	2013	2017	\$ 0	\$ 46,871	\$ -	39.97	1.59	\$ 74,536	1.59	YES
LaSalle Real Estate Debt Strategies II, L.P.	2014	--	\$ 29,672	\$ 82,516	\$ 23,515	3.13	1.06	\$ 46,961	0.66	YES
LEM Real Estate Mezzanine Fund II, L.P.	2006	--	\$ 2,219	\$ 50,000	\$ 30,335	3.45	1.32	\$ 25,899	1.22	YES
Lone Star Real Estate Partners II	2010	--	\$ 18,029	\$ 300,000	\$ 34,171	26.06	1.55	\$ 395,595	1.48	YES
Meadow Real Estate Fund II, L.P.	2012	--	\$ 25,595	\$ 60,000	\$ 3,051	20.11	1.70	\$ 74,934	1.26	YES
Meadow Real Estate Fund III, L.P.	2014	--	\$ 121,125	\$ 100,000	\$ 7,966	11.11	1.29	\$ 7,992	0.08	YES
Meadow Real Estate Fund IV, L.P.	2016	--	\$ 33,335	\$ 75,000	\$ 41,425	(1.06)	0.99	\$ -	-	YES
Mesa West Real Estate Income Fund III, L.P.	2013	--	\$ 34,298	\$ 100,000	\$ 69,486	8.23	1.24	\$ 60,180	0.79	YES
North Haven Real Estate Fund V International	2005	--	\$ 5,470	\$ 110,000	\$ 492	5.19	1.15	\$ 127,668	1.10	YES
Morgan Stanley Real Estate Fund VI, L.P.	2007	--	\$ 12,911	\$ 440,000	\$ -	(13.50)	0.32	\$ 132,104	0.29	YES
NorthCreek Fund, L.P.	2011	--	\$ 9,851	\$ 205,000	\$ -	21.34	3.03	\$ 610,681	2.98	YES
NorthRock Fund II, L.P.	2012	2017	\$ 0	\$ 363,980	\$ -	22.23	1.53	\$ 630,012	1.53	YES
NorthRock Fund III, L.P.	2015	--	\$ 261,986	\$ 400,000	\$ 154,229	4.16	1.06	\$ -	-	YES
Paladin Latin American Partners III, L.P.	2008	--	\$ 12,074	\$ 50,000	\$ -	(17.70)	0.40	\$ 7,888	0.16	YES
Patria Brazil Real Estate Fund II	2010	--	\$ 17,343	\$ 50,000	\$ 16,423	0.43	1.01	\$ 17,110	0.50	YES
Penwood CSIP I, L.P.	2005	--	\$ 6,864	\$ 50,000	\$ -	(3.75)	0.75	\$ 30,573	0.61	YES
Penwood PSIP II, L.P.	2007	2017	\$ 0	\$ 85,455	\$ -	24.29	2.10	\$ 179,968	2.10	YES
RLJ Lodging Fund I, L.P.	2004	2008	\$ 0	\$ 50,000	\$ -	52.87	1.99	\$ 99,306	1.99	YES
Rockpoint NYC CIP Investors, L.P.	2013	2017	\$ 0	\$ 78,320	\$ -	40.02	1.43	\$ 112,211	1.43	YES
Rockpoint Real Estate Fund I, L.P.	2004	2017	\$ 0	\$ 90,524	\$ -	12.03	1.25	\$ 119,396	1.25	YES
Rockpoint Real Estate Fund II, L.P.	2005	--	\$ 5,578	\$ 135,787	\$ -	(2.43)	0.86	\$ 120,947	0.82	YES
Rockpoint Real Estate Fund III, L.P.	2007	--	\$ 7,992	\$ 100,000	\$ 12,125	13.92	1.39	\$ 125,591	1.31	YES
Rockpoint Real Estate Fund IV, L.P.	2011	--	\$ 42,233	\$ 84,916	\$ 7,389	16.74	1.38	\$ 73,411	0.88	YES
Rockpoint Real Estate Fund V Side Car, L.P.	2014	--	\$ 0	\$ 100,000	\$ 100,000	-	-	\$ -	-	YES
Rockpoint Real Estate Fund V, L.P.	2014	--	\$ 58,178	\$ 100,000	\$ 52,351	14.10	1.11	\$ 9,494	0.16	YES
Rockwood Capital Real Estate Partners Fund VI, L.P	2005	--	\$ 885	\$ 86,575	\$ 2,720	1.61	1.11	\$ 91,370	1.10	YES
Rockwood Capital Real Estate Partners Fund VII, L.P.	2006	--	\$ 29,285	\$ 125,000	\$ -	(3.34)	0.75	\$ 63,289	0.51	YES
Rockwood Capital Real Estate Partners Fund VIII, L.P.	2008	--	\$ 2,117	\$ 45,754	\$ -	19.03	1.64	\$ 73,758	1.60	YES

**NCRS Non-Core Real Estate Portfolio**  
June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
Rockwood Capital Real Estate Partners Fund IX, L.P.	2012	--	\$ 21,076	\$ 50,000	\$ 6,802	14.42	1.43	\$ 40,555	0.94	YES
Rockwood Capital Real Estate Partners Fund IX CIV, L.P.	2015	2016	\$ 0	\$ -	\$ -	-	-	\$ -	-	YES
Rockwood Capital Real Estate Partners Fund X Side Car, L.P.	2015	--	\$ 37,006	\$ 50,000	\$ 14,062	3.19	1.03	\$ -	-	YES
Rockwood Capital Real Estate Partners X, L.P.	2015	--	\$ 41,384	\$ 100,000	\$ 57,384	0.73	1.02	\$ 1,565	0.04	YES
Rockwood Development Partners	2016	--	\$ 98,089	\$ 250,000	\$ 147,114	(6.93)	0.95	\$ 0	0.00	YES
RREEF Global Opportunities Fund II, LLC	2005	--	\$ 1,503	\$ 200,000	\$ 0	(8.70)	0.55	\$ 109,654	0.54	YES
Sentinel Realty Partners V	1998	2009	\$ 0	\$ 50,000	\$ -	7.52	1.73	\$ 86,401	1.73	N/A
SRI Seven REIT	2004	--	\$ 135	\$ 75,000	\$ 2,419	7.62	1.56	\$ 113,300	1.56	YES
SRI Eight REIT	2006	--	\$ 63,031	\$ 100,000	\$ 4,650	(1.48)	0.88	\$ 21,385	0.22	YES
SRI Nine REIT	2007	--	\$ 5,395	\$ 65,909	\$ 4,436	9.65	1.44	\$ 83,712	1.36	YES
SRI Ten REIT	2011	--	\$ 34,995	\$ 100,000	\$ 23,197	15.83	1.57	\$ 85,332	1.11	YES
Starwood Opportunity Fund VII, L.P.	2005	--	\$ 10,601	\$ 150,000	\$ -	(2.99)	0.76	\$ 104,598	0.69	YES
Starwood SDL/SOF Co-Investment	2005	--	\$ 3,207	\$ 50,779	\$ -	8.04	1.90	\$ 93,047	1.83	YES
Value Enhancement Fund II	1996	2016	\$ 0	\$ 25,000	\$ -	5.05	1.38	\$ 36,711	1.38	N/A
Value Enhancement Fund III, LLC	1998	2008	\$ 0	\$ 25,000	\$ -	14.03	1.66	\$ 43,225	1.66	N/A
Value Enhancement Fund IV, L.P.	1999	2014	\$ 0	\$ 100,000	\$ -	(0.19)	0.94	\$ 98,188	0.94	N/A
Warburg Pincus Real Estate I, L.P.	2006	--	\$ 20,428	\$ 95,833	\$ -	7.38	1.60	\$ 133,241	1.39	YES
WCP Real Estate Fund III(A), L.P.	2011	--	\$ 87,283	\$ 100,000	\$ 7,040	9.51	1.49	\$ 51,419	0.55	YES
Westbrook Real Estate Fund I, L.P.	1995	2014	\$ 0	\$ 10,000	\$ -	26.06	2.16	\$ 23,462	2.16	YES
Westbrook Real Estate Fund II, L.P.	1997	2013	\$ 0	\$ 50,000	\$ -	12.92	1.48	\$ 79,872	1.48	YES
Westbrook Real Estate Fund III, L.P.	1998	2014	\$ 0	\$ 96,373	\$ -	8.18	1.34	\$ 137,468	1.34	YES
Westbrook Real Estate Fund IV, L.P.	2000	2015	\$ 0	\$ 89,645	\$ -	20.62	1.66	\$ 157,652	1.66	YES
<b>Total</b>			<b>\$ 3,200,032</b>	<b>\$ 10,518,336</b>	<b>\$ 1,649,633</b>	<b>6.66</b>	<b>1.31</b>	<b>\$ 9,044,848</b>	<b>0.97</b>	

*Methodology and Notes:*

- Dollar values in Thousands

- Returns are calculated using the Internal Rate of Return (IRR) methodology. The IRR is the discount rate where the sum of the discounted cash flows and the discounted valuation is equal to zero. Returns are reported net of fees.

- Total Value to Paid-In (TVPI), also known as the Investment Multiple, is the ratio of cumulative distributions plus the valuation to cumulative paid-in.

- Distributions to Paid-In (DPI), also known as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

- The advisory board column is an indication of NCRS participation on the Fund's advisory board, N/A indicates that the Fund has no advisory board.



## NCRS Opportunistic Fixed Income Portfolio

June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
AG Capital Recovery Partners V, L.P.	2005	--	\$ 48	\$ 23,375	\$ -	2.87	1.13	\$ 26,378	1.13	YES
AG Capital Recovery Partners VI, L.P.	2008	--	\$ 510	\$ 200,000	\$ -	6.99	1.38	\$ 284,065	1.38	YES
AG Commercial Real Estate Debt Fund, L.P.	2008	2017	\$ 0	\$ 73,214	\$ -	3.62	1.18	\$ 88,309	1.18	N/A
AG GECC Public-Private Investment Fund (PPIP)	2010	2014	\$ 0	\$ 180,000	\$ -	20.13	1.54	\$ 278,165	1.54	N/A
AG Global Debt Strategy Partners, L.P.	2008	--	\$ 553,193	\$ 279,915	\$ -	10.37	2.00	\$ 5,399	0.02	YES
AG Pisgah, L.P.	2016	--	\$ 516,318	\$ 400,000	\$ -	13.15	1.29	\$ -	-	YES
AG TALF Partners, L.P.	2009	2011	\$ 0	\$ 73,214	\$ -	22.42	1.32	\$ 96,608	1.32	N/A
Anchorage Capital Partners	2011	--	\$ 532,714	\$ 350,000	\$ -	6.11	1.52	\$ -	-	NO
Benefit Street Partners Capital Opportunity Fund, L.P.	2013	--	\$ 152,122	\$ 150,000	\$ 6,528	9.33	1.31	\$ 41,091	0.28	YES
Benefit Street Partners Capital Opportunity Fund II LP	2016	--	\$ 110,464	\$ 150,000	\$ 41,354	6.27	1.06	\$ 6,164	0.06	YES
Benefit Street Partners Debt Funds IV LP	2016	--	\$ 114,991	\$ 250,000	\$ 136,751	5.54	1.05	\$ 5,062	0.04	YES
Brigade LCS Fund	2011	--	\$ 386,614	\$ 330,000	\$ -	4.33	1.34	\$ 54,000	0.16	NO
Brightwood Capital Fund III, L.P.	2014	--	\$ 67,272	\$ 100,000	\$ 20,000	4.75	1.13	\$ 24,895	0.31	YES
Centerbridge Special Credit Partners III	2016	--	\$ 69,622	\$ 350,000	\$ 281,750	1.90	1.02	\$ 1	0.00	YES
Citadel Residential Mortgage Opportunities Fund, LLC	2011	2011	\$ 0	\$ 119,072	\$ -	(2.37)	0.99	\$ 122,558	0.99	N/A
Claren Road Credit Fund, Ltd.	2011	--	\$ 232	\$ 260,000	\$ -	(0.31)	0.99	\$ 257,679	0.99	YES
Claren Road Credit Opportunities Partners, L.P.	2013	--	\$ 352	\$ 231,840	\$ -	(13.20)	0.71	\$ 165,585	0.71	YES
CVI Credit Value Fund	2010	--	\$ 43,700	\$ 150,000	\$ 7,500	13.11	1.69	\$ 211,624	1.40	YES
CVI Credit Value Fund II	2013	--	\$ 94,300	\$ 200,000	\$ 10,000	9.47	1.46	\$ 183,000	0.96	YES
CVI Credit Value Fund III	2015	--	\$ 109,900	\$ 100,000	\$ 10,000	12.00	1.22	\$ -	-	YES
Fortress Credit Opportunities Fund III (A)	2012	--	\$ 32,901	\$ 75,000	\$ 10,625	11.17	1.43	\$ 59,889	0.92	YES
GSO Capital Opportunities Fund	2007	--	\$ 3,674	\$ 133,652	\$ 8,265	17.06	1.66	\$ 256,575	1.64	YES
GSO Capital Opportunities Fund II, L.P.	2011	--	\$ 49,962	\$ 99,313	\$ 28,699	12.81	1.33	\$ 56,972	0.71	YES
GSO Capital Solutions Fund II, L.P.	2013	--	\$ 28,463	\$ 84,667	\$ 40,449	12.91	1.23	\$ 32,704	0.66	YES
HC NCBR	2017	--	\$ 249,350	\$ 226,636	\$ -	10.02	1.10	\$ -	-	No
Highbridge Irish Specialty Loan Fund III plc	2013	--	\$ 64,858	\$ 150,000	\$ 13,126	6.94	1.21	\$ 131,585	0.81	YES
Highbridge Principle Strategies Kitty Hawk Credit Fund LP	2016	--	\$ 152,546	\$ 200,000	\$ 50,075	5.13	1.03	\$ 45,165	0.24	YES
Highbridge Specialty Loan Fund 2016 LP	2016	--	\$ 24,915	\$ 200,000	\$ 177,542	21.91	1.13	\$ 43,955	0.72	YES
HPS Cardinal Fund LP Series A	2016	--	\$ 269,092	\$ 425,000	\$ 130,000	4.14	1.05	\$ 48,155	0.16	YES
HPS Cardinal Fund LP Series B	2017	--	\$ 49,636	\$ 0	\$ -	24.74	1.21	\$ 8,544	0.18	YES
Magnetar Constellation Fund IV LLC	2013	--	\$ 62,580	\$ 100,000	\$ -	7.30	1.29	\$ 65,971	0.66	YES
Marathon Currituck Fund, LP	2014	--	\$ 496,759	\$ 453,000	\$ 27,952	4.14	1.16	\$ 1,700	0.00	NO
Marathon Currituck Series D	2016	--	\$ 40,735	\$ 100,000	\$ 50,000	(25.70)	0.81	\$ -	-	NO
MCP Private Capital Fund II	2014	--	\$ 51,075	\$ 70,053	\$ 18,690	5.79	1.10	\$ 10,347	0.19	YES
Monarch Debt Recovery Fund	2011	--	\$ 519,600	\$ 380,000	\$ -	4.92	1.37	\$ 1,840	0.00	NO
Oaktree Value Opportunities Fund, L.P.	2011	--	\$ 106,090	\$ 190,000	\$ -	3.40	1.19	\$ 122,613	0.64	NO
PAAMCO - Newport Burgundy	2010	--	\$ 457,394	\$ 950,000	\$ -	3.44	1.19	\$ 676,636	0.71	YES
Providence Debt Fund III, L.P.	2013	--	\$ 199,106	\$ 200,000	\$ 6,638	8.72	1.25	\$ 49,709	0.25	YES
Saba Capital Partners	2011	2015	\$ 0	\$ 150,000	\$ -	(7.05)	0.79	\$ 119,737	0.79	N/A
Silverback Arbitrage Fund	2012	--	\$ 54,395	\$ 155,000	\$ -	(0.30)	0.99	\$ 98,366	0.63	NO
Varde Fund X	2011	--	\$ 37,659	\$ 100,000	\$ -	12.29	1.83	\$ 145,143	1.45	YES
WLR IV PPIP Co-Invest	2010	--	\$ 9,418	\$ 150,000	\$ 4,305	14.80	1.38	\$ 193,218	1.32	YES
<b>Total Opportunistic Fixed Income</b>			<b>\$ 5,712,559</b>	<b>\$ 8,562,953</b>	<b>\$ 1,080,251</b>	<b>6.29</b>	<b>1.26</b>	<b>\$ 4,019,409</b>	<b>0.52</b>	

**Methodology and Notes:**

- Dollar values in Thousands

- Returns are calculated using the Internal Rate of Return (IRR) methodology. The IRR is the discount rate where the sum of the discounted cash flows and the discounted valuation is equal to zero. Returns are reported net of fees.

- Total Value to Paid-In (TVPI), also known as the Investment Multiple, is the ratio of cumulative distributions plus the valuation to cumulative paid-in.

- Distributions to Paid-In (DPI), also known as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

- The advisory board column is an indication of NCRS participation on the Fund's advisory board, N/A indicates that the Fund has no advisory board.

# NCRS Rates and Liquidity Portfolio

June 30, 2018

Fund	Inception	Market Value	Returns						
			1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr	
Core IG Fixed Income	1997	\$ 24,574,625	(0.6)	2.3	3.0	5.1	4.8	5.7	
<i>Core Fixed Income Benchmark</i>			(0.7)	2.4	3.2	4.9	4.6	5.5	
Non-Core IG Fixed Income	1997	\$ 2	-	-	-	-	-	-	
IG Fixed Income Cash	2014	\$ 3,022,277	1.3	1.0	-	-	-	-	
<i>IG Fixed Income Cash Benchmark</i>			1.3	0.7	0.4	-	-	-	
Pension Cash	2013	\$ 3,464,317	1.4	1.1	0.8	-	-	-	
<i>Pension Cash Benchmark</i>			1.3	0.7	0.4	-	-	-	
<b>Total</b>		<b>\$ 31,061,221</b>	<b>(0.2)</b>	<b>2.1</b>	<b>2.8</b>	<b>5.1</b>	<b>4.7</b>	<b>5.7</b>	
<b>Rates &amp; Liquidity Benchmark</b>			<b>(0.4)</b>	<b>2.2</b>	<b>3.0</b>	<b>4.8</b>	<b>4.5</b>	<b>5.4</b>	

*Methodology and Notes:*

- Dollar values in Thousands

- Returns are calculated using a Modified Dietz time weighted rate of return methodology. This method uses the beginning and ending valuation for the measurement period, and weights each cash flow by the amount of time it is invested. Returns are reported net of fees.

- The Core Fixed Income Benchmark consists of 30% Gov't 5+yr / 35% Corp. (Inv. Grade - BBB Max 25%) 5+yr / 35% Mtg. Master.

- The IG Fixed Income Cash Benchmark is the iMoneyNet First Tier Institutional Money Market Funds Net Index.

- The Rates & Liquidity Benchmark is a blend of the IG Fixed Income Benchmark and the Pension Cash Benchmark at policy weights. The IG Fixed Income Benchmark is a blend of the Core Fixed Income Benchmark and the IG Fixed Income Cash Benchmark using the following weights: 10% IG Fixed Income Cash Benchmark and 90% Core Fixed Income Benchmark.

## NCRS Inflation Sensitive Portfolio

June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distribution	DPI	Advisory Board
ArcLight Energy Partners Fund V, L.P.	2011	--	\$ 67,632	\$ 100,000	\$ 14,907	7.64	1.29	\$ 42,195	0.50	YES
ArcLight Shore Co-Investments Holdings II, LLC	2013	2015	\$ 0	\$ 8,487	\$ -	8.39	1.11	\$ 9,869	1.11	N/A
BlackRock TIPS Index	2015	--	\$ 56,275	\$ 500,000	\$ -	1.05	1.01	\$ 450,000	0.90	N/A
Blackstone Energy Partners, LP	2012	--	\$ 95,821	\$ 100,000	\$ 9,405	12.20	1.47	\$ 47,381	0.49	YES
Blackstone Energy Partners II, L.P.	2014	--	\$ 52,186	\$ 100,000	\$ 56,484	14.46	1.10	\$ 2,869	0.06	YES
Blackstone Granite Fund - Class A - Resources Select	2011	--	\$ 1,465	\$ 500,000	\$ -	(7.88)	0.59	\$ 291,467	0.58	N/A
Blackstone Granite Fund - Class B - Commodity Pod	2014	--	\$ 433	\$ 200,000	\$ -	(1.30)	0.96	\$ 190,778	0.95	N/A
Blackstone Granite Fund - Class C - Opportunistic Commodity	2014	2017	\$ 0	\$ 38,179	\$ -	(62.14)	0.50	\$ 18,914	0.50	N/A
Blackstone Granite Fund - Class D - Bayview	2014	--	\$ 420,665	\$ 400,000	\$ 97,252	13.72	1.38	\$ -	-	NO
Blackstone SP NCRASMA	2014	--	\$ 235,590	\$ 450,000	\$ 214,823	21.08	1.36	\$ 164,303	0.56	Observer
Blackstone SP NCRASMA (Overage)	2015	--	\$ 46,674	\$ 100,000	\$ 36,478	14.52	1.29	\$ 39,562	0.59	N/A
Brookfield Infrastructure Fund II-B, L.P.	2013	--	\$ 213,415	\$ 200,000	\$ 21,076	10.23	1.33	\$ 40,221	0.21	YES
Campbell Timber Fund III, LLC	2006	--	\$ 708,626	\$ 796,878	\$ -	(0.80)	0.94	\$ 40,850	0.05	YES
Capital Dynamics US Solar Energy, LP	2012	2016	\$ 0	\$ 22,421	\$ -	10.28	1.23	\$ 28,112	1.23	YES
Credit Suisse Enhanced	2011	2017	\$ 0	\$ 500,000	\$ -	(13.73)	0.53	\$ 263,514	0.53	N/A
Denham Commodity Partners Fund VI LP	2012	--	\$ 54,663	\$ 75,000	\$ 10,917	7.83	1.18	\$ 35,239	0.46	NO
DCPF VI Oil and Gas Co-Inv Fund	2013	--	\$ 39,729	\$ 50,000	\$ 9,535	18.94	1.51	\$ 25,450	0.59	YES
DL Blue Diamond Fund	2016	--	\$ 527,031	\$ 725,000	\$ 225,000	4.06	1.05	\$ -	-	N/A
EIF United States Power Fund IV, L.P.	2011	--	\$ 66,152	\$ 75,000	\$ 9,463	5.48	1.22	\$ 13,614	0.21	YES
EIG Energy Fund XVI, L.P.	2013	--	\$ 183,963	\$ 250,000	\$ 83,789	9.47	1.19	\$ 78,266	0.35	YES
EnCap Energy Capital Fund VIII Co-Investors, L.P.	2011	--	\$ 12,273	\$ 29,815	\$ 304	(12.85)	0.61	\$ 5,982	0.20	N/A
EnCap Energy Capital Fund VIII, LP	2011	--	\$ 15,717	\$ 50,000	\$ 4,692	(3.73)	0.89	\$ 26,161	0.55	NO
EnCap Energy Capital Fund X, L.P.	2015	--	\$ 87,294	\$ 123,000	\$ 36,966	10.75	1.13	\$ 18,736	0.20	Observer
Energy Capital Partners II (Summit Co-Invest), LP	2011	--	\$ 10,901	\$ 26,897	\$ -	(3.00)	0.88	\$ 12,881	0.48	N/A
Energy Capital Partners II, LP	2010	--	\$ 15,152	\$ 50,000	\$ 14,875	12.68	1.65	\$ 45,893	1.24	YES
Energy Capital Partners III, LP	2014	--	\$ 97,943	\$ 101,668	\$ 15,091	13.74	1.22	\$ 11,354	0.13	YES
Gresham TAP Flex	2010	--	\$ 228,280	\$ 800,000	\$ -	(7.92)	0.60	\$ 250,000	0.31	N/A
GSO Bakken Holdings I LP	2013	--	\$ 10,880	\$ 15,000	\$ 2,615	1.92	1.06	\$ 2,877	0.22	N/A
GSO Energy Partners - B LP	2013	--	\$ 139,099	\$ 250,000	\$ 119,141	3.26	1.05	\$ 22,359	0.15	N/A
GSO Foreland Resources Co-Invest LP	2012	2014	\$ 0	\$ 11,670	\$ -	28.03	1.31	\$ 15,646	1.32	N/A
IFM Global Infrastructure Fund, L.P.	2013	--	\$ 349,284	\$ 300,000	\$ -	11.15	1.37	\$ 62,663	0.21	YES
Intervale Capital II, LP	2012	--	\$ 42,220	\$ 51,429	\$ 7,289	(0.73)	0.97	\$ 789	0.02	YES
Intervale Capital III, LP	2014	--	\$ 49,078	\$ 60,000	\$ 12,319	1.66	1.04	\$ 1,298	0.03	YES
Jade Real Assets Fund, L.P.	2014	--	\$ 104,672	\$ 150,000	\$ 76,381	17.15	1.38	\$ 82,023	0.61	N/A
Landmark Real Asset SMA, L.P.	2014	--	\$ 114,983	\$ 250,000	\$ 135,947	16.58	1.16	\$ 34,115	0.27	N/A
Landmark Real Estate Partners VII, L.P.	2014	--	\$ 64,591	\$ 102,681	\$ 12,427	13.39	1.18	\$ 55,274	0.54	NO
Landmark Real Assets Fund II LP	2018	--	\$ 0	\$ 250,000	\$ 250,000	-	-	\$ -	-	YES
Landmark Real Estate Partners VIII Overflow LP	2018	--	\$ 17,012	\$ 75,000	\$ 53,788	(2.55)	0.98	\$ 4,200	0.19	YES
Landmark Real Estate Partners VIII LP	2018	--	\$ 6,954	\$ 125,000	\$ 110,982	(34.61)	0.79	\$ 7,064	0.40	YES
Landmark Real Assets Fund II Opportunistic LP	2018	--	\$ 0	\$ -	\$ -	-	-	\$ -	-	YES
Lindsay Goldberg III - Formation Energy L.P.	2013	--	\$ 212	\$ 10,000	\$ 4,554	(16.21)	0.46	\$ 2,400	0.44	N/A
MTP Energy Fund LP	2013	--	\$ 222,085	\$ 250,000	\$ -	0.18	1.01	\$ 30,000	0.12	N/A
MTP Energy Opportunities Fund LP	2013	--	\$ 32,147	\$ 75,000	\$ 23,148	3.40	1.12	\$ 26,140	0.50	YES
MTP Energy Opportunities Fund II LLC	2015	--	\$ 129,424	\$ 250,000	\$ 112,006	5.94	1.09	\$ 90,309	0.45	YES
NC Garnet Fund	2016	--	\$ 389,910	\$ 375,000	\$ -	2.78	1.04	\$ -	-	N/A
North Star Investment Co-Invest	2013	--	\$ 160,929	\$ 200,000	\$ 34,469	6.74	1.24	\$ 65,187	0.36	N/A
North Star Investment Holdings LLC	2012	--	\$ 174,743	\$ 200,000	\$ 9,053	4.73	1.17	\$ 73,879	0.35	N/A
Perella Weinberg Partners ABV Opportunity Fund III LP	2011	--	\$ 86,122	\$ 150,000	\$ 3,619	4.79	1.19	\$ 96,021	0.63	YES
Quintana Energy I Co-Investment	2007	--	\$ 38	\$ 75,000	\$ 52,885	12.92	1.63	\$ 36,048	1.63	YES
Quintana Energy I, L.P.	2006	--	\$ 28,123	\$ 100,000	\$ 803	(2.40)	0.87	\$ 57,095	0.58	YES
Quintana Energy II Co-Invest	2008	2014	\$ 0	\$ -	\$ -	-	-	\$ -	-	N/A
Quintana Energy Partners II, L.P.	2008	--	\$ 16,206	\$ 86,208	\$ 1,749	(0.57)	0.99	\$ 67,300	0.80	YES
Orion Mine Finance Fund I	2012	--	\$ 62,087	\$ 75,000	\$ 4,435	6.84	1.26	\$ 32,427	0.43	YES
Orion Mine Finance Fund I-A	2014	--	\$ 137,708	\$ 125,737	\$ 12,644	24.24	1.75	\$ 61,278	0.54	YES
RMK Emerging Growth Timberland Fund	1993	2013	\$ 0	\$ 15,000	\$ -	9.38	2.92	\$ 44,072	2.92	N/A
Sheridan Production Partners I, L.P.	2007	--	\$ 68,552	\$ 116,550	\$ -	5.75	1.30	\$ 82,750	0.71	YES
Sheridan Production Partners II, L.P.	2010	--	\$ 81,040	\$ 165,000	\$ -	(11.97)	0.54	\$ 11,550	0.07	YES
Timber Investment Resources (Nahele, LLC) Separate	2006	--	\$ 278,991	\$ 200,000	\$ -	3.41	1.46	\$ 12,968	0.06	YES
Varde Fund XI, L.P.	2014	--	\$ 351,090	\$ 350,000	\$ -	7.86	1.29	\$ 101,810	0.29	YES
Vermillion Celadon	2011	2013	\$ 0	\$ 300,000	\$ -	(13.42)	0.76	\$ 228,352	0.76	N/A
<b>Total Inflation</b>			<b>\$ 6,356,061</b>	<b>\$ 11,131,620</b>	<b>\$ 1,901,310</b>	<b>0.84</b>	<b>1.03</b>	<b>\$ 3,561,503</b>	<b>0.37</b>	

**Methodology and Notes:**

- Dollar values in Thousands

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- Distributions to Paid-In (DPI), also known as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

- The advisory board column is an indication of NCRS participation on the Fund's advisory board, N/A indicates that the Fund has no advisory board.

## NCRS Core Real Estate Portfolio

June 30, 2018

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
BlackRock Developed	2016	--	\$ 368,005	\$ 312,446	\$ -	7.27	1.18	\$ -	-	N/A
Blackstone NC Property Partners, L.P.	2014	--	\$ 180,693	\$ 200,000	\$ 18,123	5.46	1.16	\$ 33,457	0.18	YES
Blackstone Property Partners, L.P.	2014	--	\$ 404,212	\$ 302,674	\$ -	10.09	1.32	\$ 24,684	0.08	YES
BREP Edens Investment Partners L.P.	2013	--	\$ 540,408	\$ 487,500	\$ 41,999	7.85	1.33	\$ 71,014	0.15	YES
BR Emerging REIT	2016	--	\$ 74,020	\$ 50,000	\$ -	18.19	1.48	\$ -	-	N/A
BR World REIT	2016	--	\$ 274,928	\$ 227,153	\$ -	8.53	1.21	\$ -	-	N/A
CIGNA Realty Investors Open-End Fund	1987	2015	\$ 0	\$ 243,939	\$ -	2.57	1.16	\$ 282,717	1.16	N/A
CIM Urban REIT, LLC	2006	--	\$ 56,460	\$ 100,000	\$ -	6.17	1.63	\$ 106,895	1.07	YES
JP Morgan Strategic Property Fund	1989	--	\$ 385,336	\$ 305,133	\$ -	9.10	2.78	\$ 501,461	1.57	N/A
LBA NC Core Industrial, L.P.	2016	--	\$ 286,681	\$ 300,000	\$ 26,733	8.33	1.11	\$ 16,887	0.06	YES
LBA NC Core Industrial II LP	2018	--	\$ 22,475	\$ 250,000	\$ 227,525	-	1.00	\$ -	-	YES
M&G Real Estate Debt Fund III	2013	--	\$ 16,984	\$ 33,864	\$ 4,758	0.72	1.01	\$ 21,773	0.57	YES
Meadow Core Plus Real Estate Fund	2014	--	\$ 135,051	\$ 132,025	\$ 27,325	1.11	1.03	\$ 36,754	0.22	YES
Meadow Core Plus Real Estate Fund 2015-1 Series	2015	--	\$ 81,789	\$ 85,816	\$ 1,379	(9.76)	0.92	\$ 30,110	0.25	YES
MS Global RE Securities	2007	--	\$ 6	\$ 400,000	\$ -	0.79	1.07	\$ 428,702	1.07	N/A
MW North Carolina Debt Fund, LLC	2016	--	\$ 151,959	\$ 200,000	\$ 55,111	5.08	1.05	\$ 1,248	0.01	YES
NorthRock Core Fund, L.P.	2008	--	\$ 728,285	\$ 600,000	\$ 36,826	10.16	1.78	\$ 279,892	0.49	YES
NorthRock Fund II, L.P. - Core	2016	--	\$ 607,551	\$ 372,900	\$ 7,761	10.31	1.13	\$ 86,593	0.14	YES
NorthRock Fund IV, L.P.	2015	--	\$ 327,744	\$ 400,000	\$ 88,955	5.62	1.09	\$ 36,804	0.11	YES
Prudential Property Investment Separate Account	2004	2017	\$ 0	\$ 204,935	\$ -	9.76	1.74	\$ 363,169	1.74	N/A
RLJ Lodging Fund II, L.P.	2006	2014	\$ 0	\$ 50,000	\$ -	3.61	1.25	\$ 62,323	1.25	YES
RLJ Real Estate Fund III, L.P.	2007	2014	\$ 0	\$ 40,601	\$ -	9.62	1.41	\$ 57,227	1.41	YES
Rockpoint Growth and Income Side Car Fund I, L.P.	2014	--	\$ 223,900	\$ 200,000	\$ 27,651	9.96	1.28	\$ -	-	YES
Rockpoint Growth and Income Real Estate Fund I, L.P.	2014	--	\$ 201,913	\$ 200,000	\$ 24,463	10.34	1.24	\$ 24,241	0.13	YES
Rockpoint Growth and Income Real Estate Fund II, L.P.	2016	--	\$ 49,704	\$ 100,000	\$ 53,674	14.17	1.07	\$ 2,820	0.06	YES
Rockpoint Growth and Income Side Car Fund II, L.P.	2016	--	\$ 97,867	\$ 100,000	\$ 8,841	11.06	1.07	\$ 746	0.01	YES
Rockwood Income and Credit Partners LP	2016	--	\$ 89,244	\$ 100,000	\$ 13,039	6.61	1.06	\$ 3,332	0.04	YES
RREEF Global Opportunities Fund II, LLC Senior Nts	2010	2013	\$ 0	\$ 12,122	\$ -	23.62	1.55	\$ 18,644	1.55	YES
Security Capital Focus Select	2007	2016	\$ 0	\$ 30,000	\$ -	3.92	1.39	\$ 41,833	1.39	N/A
Sentinel Real Estate Fund	1985	2010	\$ 0	\$ 65,000	\$ -	7.08	3.26	\$ 222,130	3.26	N/A
STAG Investments II, LLC	2005	--	\$ 31	\$ 74,986	\$ -	(8.32)	0.78	\$ 58,212	0.78	YES
Terra Firma Deutsche Annington, L.P. (Core)	2014	--	\$ 10	\$ 82,862	\$ -	4.23	1.06	\$ 103,010	1.06	N/A
UBS Trumbull Property Fund	1984	2017	\$ 0	\$ 290,000	\$ -	8.66	2.11	\$ 614,977	2.11	YES
UBS Trumbull Property Income Fund	1984	2016	\$ 0	\$ 120,995	\$ -	8.32	3.09	\$ 374,331	3.09	YES
<b>Total Core Real Estate</b>			<b>\$ 5,305,255</b>	<b>\$ 6,674,952</b>	<b>\$ 664,165</b>	<b>7.23</b>	<b>1.42</b>	<b>\$ 3,905,984</b>	<b>0.60</b>	

*Methodology and Notes:*

- Dollar values in Thousands

- Returns are calculated using the Internal Rate of Return (IRR) methodology. The IRR is the discount rate where the sum of the discounted cash flows and the discounted valuation is equal to zero. Returns are reported net of fees.

- Total Value to Paid-In (TVPI), also known as the Investment Multiple, is the ratio of cumulative distributions plus the valuation to cumulative paid-in.

- Distributions to Paid-In (DPI), also known as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

- The advisory board column is an indication of NCRS participation on the Fund's advisory board, N/A indicates that the Fund has no advisory board.

# NCRS Multi-Strategy Portfolio

June 30, 2018

Fund	Inception	Market Value	Returns					
			1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
AG Cataloochee, L.P.	2016	\$ 200,418	3.4	-	-	-	-	-
Broyhill Fund	2002	\$ 198	(4.8)	(34.4)	(24.4)	(24.7)	(16.1)	-
GCM/NC Invest Fund 2011 Series	2011	\$ 19	(26.8)	(19.2)	(28.0)	-	-	-
Gladius Aconcagua	2011	\$ 1,563,711	8.3	7.1	8.7	-	-	-
Gladius Arx Fund	2017	\$ 141,311	(4.8)	-	-	-	-	-
Gladius Venator Fund	2017	\$ 26,775	(28.8)	-	-	-	-	-
SCS Instl Global Series I	2008	\$ 440	-	(6.3)	(0.7)	-	-	-
<b>Total</b>		<b>\$ 1,932,873</b>	<b>6.3</b>	<b>5.8</b>	<b>7.4</b>	<b>5.9</b>	<b>6.0</b>	<b>-</b>
<b>Multi-Strategy Benchmark</b>			<b>5.7</b>	<b>4.7</b>	<b>6.4</b>	<b>4.6</b>	<b>7.4</b>	<b>-</b>

*Methodology and Notes:*

- Dollar values in Thousands

- Returns are calculated using a Modified Dietz time weighted rate of return methodology. This method uses the beginning and ending valuation for the measurement period, and weights each cash flow by the amount of time it is invested. Returns are reported net of fees.

- 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.

**Section 2**  
**Fee Supplement**

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## Total NCRS External Management and Incentive Fees Paid FY 2018

Asset Classification	Management Fees	Incentive Fees	Total Fees	Ending Market Value	Ratio of Fees to Ending Market Value
Public Equity	\$ 64,541	\$ 10,998	\$ 75,539	\$ 39,511,849	0.19%
Private Equity	\$ 57,317	\$ 43,947	\$ 101,264	\$ 5,074,695	2.00%
Non-Core Real Estate	\$ 48,150	\$ 115,226	\$ 163,376	\$ 3,200,032	5.11%
Opportunistic Fixed Income	\$ 57,222	\$ 35,080	\$ 92,303	\$ 5,712,559	1.62%
IG Fixed Income & Cash	\$ -	\$ -	\$ -	\$ 27,596,904	0.00%
Pension Cash	\$ 665	\$ -	\$ 665	\$ 3,464,317	0.02%
Inflation Sensitive	\$ 58,687	\$ 2,571	\$ 61,258	\$ 6,356,061	0.96%
Core Real Estate	\$ 27,515	\$ 15,094	\$ 42,609	\$ 5,305,255	0.80%
Multi-Strategy	\$ 6,284	\$ -	\$ 6,284	\$ 1,932,873	0.33%
<b>Total Fund</b>	<b>\$ 320,382</b>	<b>\$ 222,917</b>	<b>\$ 543,299</b>	<b>\$ 98,154,545</b>	<b>0.55%</b>
<b>Ratio of Fees to Ending Market Value</b>	<b>0.33%</b>	<b>0.23%</b>	<b>0.55%</b>	<b>--</b>	<b>--</b>

*Notes:*

- Dollar values in Thousands

- Consistent with industry convention, cost figures do not include the fees and expenses of investment managers that are held within fund-of-fund vehicles. Such fees and expenses have been deducted from all reported investment returns.

## Public Equity External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
Baillie Gifford EAFE Plus Alpha	\$ 7,976	\$ 0	\$ 7,976	\$ 3,089,834
BlackRock EAFE LC Growth	\$ 196	\$ 0	\$ 196	\$ 839,105
BlackRock Emerging Markets Opportunities Fund	\$ 1,865	\$ 0	\$ 1,865	\$ 741,160
BlackRock Mid Cap Passive	\$ 13	\$ 0	\$ 13	\$ 401,604
BlackRock MSCI ACWI ex US IMI	\$ 1,783	\$ 0	\$ 1,783	\$ 7,403,941
BlackRock R1000 Passive	\$ 402	\$ 0	\$ 402	\$ 3,676,594
Brown Advisory Small Cap Growth	\$ 1,548	\$ 0	\$ 1,548	\$ 317,362
Earnest Partners Small Cap Value	\$ 2,596	\$ 0	\$ 2,596	\$ 581,370
ECM Bespoke Fund 2	\$ 0	\$ 0	\$ 0	\$ 33,961
ECM Feeder Fund 2	\$ 3,519	\$ 8,567	\$ 12,087	\$ 171,754
Franklin Templeton Int'l SC	\$ 2,532	\$ 0	\$ 2,532	\$ 638,973
Internal Russell 200 Passive	\$ 0	\$ 0	\$ 0	\$ 7,621,425
Internal Russell Mid Cap Passive	\$ 0	\$ 0	\$ 0	\$ 1,663,670
Mondrian Focused All Country World ex US IMI	\$ 9,894	\$ 0	\$ 9,894	\$ 2,394,361
Numeric Small Cap Value	\$ 1,992	\$ 0	\$ 1,992	\$ 465,778
ONSHE BlackRock	\$ 2,000	\$ 0	\$ 2,000	\$ 2,209,974
ONSHE Marshall Wace	\$ 3,533	\$ 2,431	\$ 5,964	\$ 222,899
ONSHE Menta	\$ 3,112	\$ 0	\$ 3,112	\$ 196,666
Piedmont R200 Passive	\$ 324	\$ 0	\$ 324	\$ 586,897
TimesSquare MidCap Growth	\$ 2,921	\$ 0	\$ 2,921	\$ 665,983
ValueAct Capital	\$ 4,406	\$ 0	\$ 4,406	\$ 839,922
Walter Scott International	\$ 5,309	\$ 0	\$ 5,309	\$ 1,818,585
Wellington Diversified International	\$ 3,326	\$ 0	\$ 3,326	\$ 1,356,869
Wellington Opportunistic Growth	\$ 4,992	\$ 0	\$ 4,992	\$ 1,560,255
BlackRock Global Transition	\$ 0	\$ 0	\$ 0	\$ 2,411
Cash and Liquidating Accounts	\$ 299	\$ 0	\$ 299	\$ 10,495
<b>Total</b>	<b>\$ 64,541</b>	<b>\$ 10,998</b>	<b>\$ 75,539</b>	<b>\$ 39,511,849</b>

*Notes:*

- Dollar values in Thousands.



## Private Equity External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
A.V. Management IV, LLC	\$ 0	\$ 0	\$ 0	\$ 1,046
Accel-KKR Capital Partners IV, LP	\$ 194	\$ 0	\$ 194	\$ 8,290
Access Capital L.P. II D	\$ 0	\$ 0	\$ 0	\$ 94
AG Private Equity Partners IV (R), L.P.	\$ 266	\$ 0	\$ 266	\$ 37,023
AG Private Equity Partners IV, L.P.	\$ 393	\$ 0	\$ 393	\$ 37,973
Ampersand 2006 Limited Partnership	\$ 80	\$ 0	\$ 80	\$ 23,470
Angeleno Investors II, L.P.	\$ 493	\$ 0	\$ 493	\$ 15,591
Apollo Investment Fund VIII, L.P.	\$ 1,255	\$ 2,681	\$ 3,936	\$ 193,444
Arch IX Overage	\$ 0	\$ 0	\$ 0	\$ 33,793
ARCH Venture Fund IX	\$ 1,727	\$ 0	\$ 1,727	\$ 28,473
ARCH Venture Fund VII, L.P.	\$ 248	\$ 0	\$ 248	\$ 58,725
ARCH Venture Fund VIII, L.P.	\$ 919	\$ 0	\$ 919	\$ 152,525
Aurora Ventures IV, LLC	\$ 0	\$ 0	\$ 0	\$ 2,538
Aurora Ventures V, LLC	\$ 0	\$ 0	\$ 0	\$ 9,847
Avista Capital Partners I, L.P.	\$ 69	\$ 0	\$ 69	\$ 0
Avista Capital Partners II, L.P.	\$ 0	\$ 2,365	\$ 2,365	\$ 28,466
Avista Capital Partners III, L.P.	\$ 0	\$ 0	\$ 0	\$ 120,220
Blackstone Core Equity Partners LP	\$ 949	\$ 0	\$ 949	\$ 114,732
Blackstone TN Partners LP	\$ 0	\$ 0	\$ 0	\$ 35,990
Burrill Life Sciences Capital Fund III, L.P.	\$ 358	\$ 0	\$ 358	\$ 10,631
Carousel Capital Partners III, L.P.	\$ 0	\$ 399	\$ 399	\$ 47
Carousel Capital Partners IV, L.P.	\$ 221	\$ 5,138	\$ 5,358	\$ 23,781
Carousel Capital Partners V LP	\$ 480	\$ 0	\$ 480	\$ 5,986
Castle Harlan Partners IV, L.P.	\$ 0	\$ 0	\$ 0	\$ 8,429
Castle Harlan Partners V, L.P.	\$ 498	\$ 0	\$ 498	\$ 51,007
Catterton Growth Partners II, L.P.	\$ 1,065	\$ 0	\$ 1,065	\$ 89,762
Catterton Growth Partners, L.P.	\$ 139	\$ 0	\$ 139	\$ 21,923
Catterton Partners VII, L.P.	\$ 2,035	\$ 303	\$ 2,338	\$ 108,806
Chapter IV Investors Special Situations Fund, L.P.	\$ 207	\$ 0	\$ 207	\$ 0
Charterhouse Capital Partners IX, L.P.	\$ 479	\$ 0	\$ 479	\$ 30,471
Charterhouse Capital Partners X, L.P.	\$ 0	\$ 0	\$ 0	\$ 62,228
Coller International Partners IV, L.P.	\$ 0	\$ 62	\$ 62	\$ 0
Crestview Capital Partners III, L.P.	\$ 2,302	\$ 0	\$ 2,302	\$ 60,851
Crestview Partners II, L.P.	\$ 544	\$ 3,085	\$ 3,628	\$ 71,784
CVC Capital Partners VI, L.P.	\$ 1,174	\$ 0	\$ 1,174	\$ 76,866
CVC Europe Equity Partners IV, L.P.	\$ 0	\$ 2,922	\$ 2,922	\$ 130
CVE Kauffman Fund I	\$ 293	\$ 263	\$ 556	\$ 56,016
Elevation Partners, L.P.	\$ 0	\$ 0	\$ 0	\$ 201
Francisco Partners Agility	\$ 474	\$ 0	\$ 474	\$ 6,149
Francisco Partners II, L.P.	\$ 112	\$ 2,007	\$ 2,119	\$ 11,281
Francisco Partners IV, L.P.	\$ 742	\$ 0	\$ 742	\$ 118,832
GCM Grosvenor - NC Innovation Fund	\$ 589	\$ 6,951	\$ 7,540	\$ 122,776
GCM Grosvenor - NC Innovation Fund 2013-1	\$ 38	\$ 0	\$ 38	\$ 21,580
GCM Grosvenor - NC Innovation Fund II	\$ 1,869	\$ 0	\$ 1,869	\$ 72,952
GCM Grosvenor - NC Investment Fund 2006	\$ 814	\$ 147	\$ 961	\$ 49,086
GCM Grosvenor - NC Investment Fund 2008 Series 1	\$ 587	\$ 612	\$ 1,199	\$ 61,583
GCM Grosvenor - NC Investment Fund 2008 Series 2	\$ 1,011	\$ 0	\$ 1,011	\$ 40,911
Halifax Capital Partners II, L.P.	\$ 46	\$ 29	\$ 75	\$ 4,148
Halifax Capital Partners III, L.P.	\$ 312	\$ 21	\$ 333	\$ 19,534
Harvest Partners IV, L.P.	\$ 0	\$ 0	\$ 0	\$ 3,007
Harvest Partners V, L.P.	\$ 0	\$ 1,317	\$ 1,317	\$ 17,277
Harvest Partners VI, L.P.	\$ 0	\$ 376	\$ 376	\$ 63,371
Harvest Partners VII, L.P.	\$ 137	\$ 0	\$ 137	\$ 55,447
Hatteras Venture Partners III, L.P.	\$ 69	\$ 0	\$ 69	\$ 15,308
Hg Capital 7	\$ 864	\$ 0	\$ 864	\$ 89,129
Highland Capital Partners VI, L.P.	\$ 0	\$ 0	\$ 0	\$ 598
Highland Capital Partners VII, L.P.	\$ 74	\$ 0	\$ 74	\$ 6,778
Highland Consumer Fund I, L.P.	\$ 158	\$ 0	\$ 158	\$ 9,888
Horsley Bridge International IV, L.P.	\$ 513	\$ 0	\$ 513	\$ 49,618
Horsley Bridge International V, L.P.	\$ 563	\$ 0	\$ 563	\$ 120,286
Horsley Bridge IX, L.P.	\$ 613	\$ 0	\$ 613	\$ 115,689

## Private Equity External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
Intersouth Partners VI, L.P.	\$ 0	\$ 0	\$ 0	\$ 3,249
KRG Capital Fund IV, L.P.	\$ 0	\$ 0	\$ 0	\$ 9,080
L Catterton Growth Partners III, L.P.	\$ 1,464	\$ 1,326	\$ 2,790	\$ 51,096
Landmark Equity Partners XV, L.P.	\$ 1,448	\$ 0	\$ 1,448	\$ 133,536
Landmark Equity Partners XVI Opportunities LP	\$ 0	\$ 0	\$ 0	\$ 32,600
Landmark Equity Partners XVI Overflow LP	\$ 0	\$ 0	\$ 0	\$ 0
Landmark Equity Partners XVI Opportunities LP	\$ 0	\$ 0	\$ 0	\$ 15,098
Levine Leichtman Capital Partners V	\$ 1,800	\$ 0	\$ 1,800	\$ 140,230
Lexington Middle Market Investors II, L.P.	\$ 443	\$ 1,475	\$ 1,918	\$ 43,087
Lexington Middle Market Investors III, L.P.	\$ 1,386	\$ 257	\$ 1,643	\$ 91,883
Lexington Middle Market Investors, L.P.	\$ 0	\$ 253	\$ 253	\$ 16,801
Lindsay Goldberg II, L.P.	\$ 4	\$ 0	\$ 4	\$ 2,912
Lindsay Goldberg III, LP	\$ 393	\$ 0	\$ 393	\$ 25,805
LittleJohn Opportunities Fund II LP	\$ 196	\$ 0	\$ 196	\$ 37,963
Longreach Capital Partners 1, L.P.	\$ 0	\$ 0	\$ 0	\$ 43,066
Marlin Equity IV	\$ 427	\$ 0	\$ 427	\$ 48,050
MatlinPatterson Global Opportunities Partners III	\$ 336	\$ 0	\$ 336	\$ 41,356
MHR Institutional Partners IV, L.P.	\$ 2,071	\$ 0	\$ 2,071	\$ 52,481
Milestone Partners IV, L.P.	\$ (235)	\$ 0	\$ (235)	\$ 51,793
Mount Kellett Capital Partners II, LP	\$ 350	\$ 0	\$ 350	\$ 14,042
NEA 14, L.P.	\$ 391	\$ 0	\$ 391	\$ 62,459
NEA 15 Opportunity Fund, L.P.	\$ 211	\$ 0	\$ 211	\$ 47,446
NEA 15, L.P.	\$ 605	\$ 0	\$ 605	\$ 72,818
Northbound NCRS Fund, L.P.	\$ 900	\$ 0	\$ 900	\$ 139,139
Novak Biddle Venture Partners IV, L.P.	\$ 0	\$ 0	\$ 0	\$ 994
Novak Biddle Venture Partners V, L.P.	\$ 65	\$ 0	\$ 65	\$ 9,060
Oaktree European Principal Fund III, L.P.	\$ 484	\$ 0	\$ 484	\$ 35,985
Pappas Life Science Ventures III, L.P.	\$ 0	\$ 0	\$ 0	\$ 939
Pappas Life Science Ventures IV, L.P.	\$ 199	\$ 0	\$ 199	\$ 7,217
Quaker BioVentures II, L.P.	\$ 1,070	\$ 0	\$ 1,070	\$ 30,732
Robeco Clean Tech II	\$ 648	\$ 0	\$ 648	\$ 54,684
Robeco Clean Tech II Co-Inv	\$ 431	\$ 0	\$ 431	\$ 14,545
Starvest Partners II	\$ 214	\$ 0	\$ 214	\$ 19,854
StepStone Pioneer Capital Europe	\$ 305	\$ 0	\$ 305	\$ 51,388
StepStone Pioneer Capital I	\$ 103	\$ 0	\$ 103	\$ 0
StepStone Pioneer Capital II	\$ 355	\$ 0	\$ 355	\$ 82,758
StepStone SYN	\$ 249	\$ 0	\$ 249	\$ 16,397
Stock Distribution	\$ 94	\$ 0	\$ 94	\$ 4,899
Synergy Life Science Partners, L.P.	\$ 279	\$ 0	\$ 279	\$ 17,693
TCV IX, L.P.	\$ 1,248	\$ 0	\$ 1,248	\$ 50,454
TCV VI, L.P.	\$ 6	\$ 23	\$ 29	\$ 6,988
TCV VIII, L.P.	\$ 3,006	\$ 0	\$ 3,006	\$ 174,212
Tenaya Capital Fund V	\$ 629	\$ 248	\$ 878	\$ 51,415
Tenaya Capital Fund VI	\$ 973	\$ 0	\$ 973	\$ 70,141
Tenaya Capital Fund VII, L.P.	\$ 1,800	\$ 0	\$ 1,800	\$ 38,570
Terra Firma Capital Partners II, L.P.	\$ 0	\$ 7,620	\$ 7,620	\$ 1,076
Terra Firma Capital Partners III, L.P.	\$ 0	\$ 0	\$ 0	\$ 34,948
Thoma Bravo XII	\$ 1,507	\$ 0	\$ 1,507	\$ 100,556
TPG Biotechnology Partners II, L.P.	\$ 0	\$ 0	\$ 0	\$ 3,993
TPG Biotechnology Partners III, L.P.	\$ 94	\$ 0	\$ 94	\$ 21,224
Trident VII LP	\$ 2,282	\$ 0	\$ 2,282	\$ 38,580
Tudor Ventures III, L.P.	\$ 0	\$ 0	\$ 0	\$ 5,199
Vista Equity Partners Fund IV, L.P.	\$ 558	\$ 0	\$ 558	\$ 40,042
Warburg Pincus Private Equity XI, L.P.	\$ 841	\$ 3,546	\$ 4,387	\$ 138,143
Warburg Pincus Private Equity XII, L.P.	\$ 1,750	\$ 0	\$ 1,750	\$ 101,630
WLR Recovery Fund IV, L.P.	\$ (31)	\$ 522	\$ 491	\$ 17,999
<b>Total</b>	<b>\$ 57,317</b>	<b>\$ 43,947</b>	<b>\$ 101,264</b>	<b>\$ 5,074,695</b>

Notes:

- Dollar values in Thousands.

## Non-Core Real Estate External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
AG Asia Realty Fund II, L.P.	\$ 144	\$ 0	\$ 144	\$ 3,713
AG Asia Realty Fund III LP	\$ 1,125	\$ 0	\$ 1,125	\$ 78,456
AG Core Plus Realty Fund II, L.P.	\$ 44	\$ 0	\$ 44	\$ 3,146
AG Net Lease Realty Fund II, L.P.	\$ 1,985	\$ 0	\$ 1,985	\$ 89,792
AG Net Lease Realty Fund III, L.P.	\$ 1,530	\$ 0	\$ 1,530	\$ 72,208
American Value Partners Fund I, L.P.	\$ 179	\$ 0	\$ 179	\$ 5,783
Benson Elliot Real Estate Partners II, L.P.	\$ 0	\$ 0	\$ 0	\$ 9,439
Benson Elliot Real Estate Partners III, L.P.	\$ 645	\$ 633	\$ 1,278	\$ 36,832
Blackstone Real Estate Partners Europe IV, L.P.	\$ 1,995	\$ 13,561	\$ 15,556	\$ 155,811
Blackstone Real Estate Partners V, L.P.	\$ 3,000	\$ 0	\$ 3,000	\$ 95,430
Blackstone Real Estate Partners VI, L.P.	\$ 0	\$ 2,707	\$ 2,707	\$ 17,426
Blackstone Real Estate Partners VII, L.P.	\$ 315	\$ 11,255	\$ 11,570	\$ 24,576
Blackstone Real Estate Partners VIII, L.P.	\$ 2,226	\$ 8,304	\$ 10,530	\$ 240,264
Blackstone Real Estate Partners VIII, L.P.	\$ 3,000	\$ 1,231	\$ 4,231	\$ 118,179
Brookfield Real Estate Finance Fund III, L.P.	\$ 94	\$ 0	\$ 94	\$ 228
CB Richard Ellis Strategic Partners US V, L.P.	\$ 326	\$ 0	\$ 326	\$ 25,830
Cherokee Investment Partners III, L.P.	\$ 0	\$ 0	\$ 0	\$ 333
Cherokee Investment Partners IV, L.P.	\$ 247	\$ 0	\$ 247	\$ 10,266
CrossHarbor Institutional Partners II, L.P.	\$ 746	\$ 0	\$ 746	\$ 58,563
CrossHarbor Institutional Partners, L.P.	\$ 109	\$ 0	\$ 109	\$ 9,401
Crow Holdings Realty Partners IV, L.P.	\$ 118	\$ 0	\$ 118	\$ 1,929
Crow Holdings Realty Partners IV-A, L.P.	\$ 29	\$ 0	\$ 29	\$ 380
Crow Holdings Realty Partners V, L.P.	\$ 198	\$ 1,329	\$ 1,527	\$ 273
Crow Holdings Realty Partners VI, L.P.	\$ 382	\$ 0	\$ 382	\$ 40,535
Crow Holdings Realty Partners VII, L.P.	\$ 838	\$ 0	\$ 838	\$ 78,982
Crow Holdings Retail Fund II, L.P.	\$ 901	\$ 0	\$ 901	\$ 22,964
DB Real Estate Global Opps I-A/I-B, L.P.	\$ 0	\$ 0	\$ 0	\$ 601
DLJ Real Estate Capital Partners III, L.P.	\$ 604	\$ 0	\$ 604	\$ 49,265
DLJ Real Estate Capital Partners IV, L.P.	\$ 800	\$ 0	\$ 800	\$ 96,036
DRA Growth & Income Fund V Co-Investment, LLC	\$ 0	\$ 5	\$ 5	\$ 41
DRA Growth & Income Fund V, LLC	\$ 0	\$ 0	\$ 0	\$ 84
DRA Growth & Income Fund VI, LLC	\$ 140	\$ 1,518	\$ 1,658	\$ 3,945
DRA Growth & Income Fund VII, LLC	\$ 1,886	\$ 0	\$ 1,886	\$ 109,894
DRA Growth & Income Fund VIII, LLC	\$ 2,717	\$ 0	\$ 2,717	\$ 127,790
Frogmore Real Estate Partners I, L.P.	\$ 10	\$ 0	\$ 10	\$ 1,345
Frogmore Real Estate Partners II, L.P.	\$ 47	\$ 1,216	\$ 1,263	\$ 4,589
Frogmore Real Estate Partners III, L.P.	\$ 662	\$ 1,114	\$ 1,776	\$ 34,895
Harrison St. RE Partners III, L.P.	\$ 203	\$ 0	\$ 203	\$ 10,757
Harrison St. RE Partners IV, L.P.	\$ 812	\$ 0	\$ 812	\$ 60,346
Harrison St. RE Partners V Co-Investment, L.P.	\$ 308	\$ 0	\$ 308	\$ 57,775
Harrison St. RE Partners V, L.P.	\$ 1,341	\$ 311	\$ 1,652	\$ 81,884
Harrison St. RE Partners VI, L.P.	\$ 1,463	\$ 0	\$ 1,463	\$ 47,993
Harrison Street Real Estate Partners VI Co-Investment LP	\$ (59)	\$ 0	\$ (59)	\$ 40,540
Harrison Street Real Estate Partners VI Co-Investment 3 LP	\$ 0	\$ 0	\$ 0	\$ 17,500
Hawkeye (Scout) Fund 1-A, L.P.	\$ 14	\$ 39	\$ 53	\$ 371
Hawkeye (Scout) Fund II, L.P.	\$ 999	\$ 0	\$ 999	\$ 92,468
LaSalle Real Estate Debt Strategies II, L.P.	\$ 657	\$ 0	\$ 657	\$ 29,672
LEM Real Estate Mezzanine Fund II, L.P.	\$ 71	\$ 0	\$ 71	\$ 2,219
Lone Star Real Estate Partners II	\$ 100	\$ 2,139	\$ 2,239	\$ 18,029
Meadow Real Estate Fund II, L.P.	\$ 213	\$ 0	\$ 213	\$ 25,595
Meadow Real Estate Fund III, L.P.	\$ 1,240	\$ 0	\$ 1,240	\$ 121,125
Meadow Real Estate Fund IV, L.P.	\$ 938	\$ 0	\$ 938	\$ 33,335
Mesa West Real Estate Income Fund III, L.P.	\$ 699	\$ 0	\$ 699	\$ 34,298
Morgan Stanley Real Estate Fund VI, L.P.	\$ 73	\$ 0	\$ 73	\$ 12,911
North Haven Real Estate Fund V International	\$ 28	\$ 0	\$ 28	\$ 5,470
NorthCreek Fund, L.P.	\$ 513	\$ 66,136	\$ 66,648	\$ 9,851
NorthRock Fund III, L.P.	\$ 900	\$ 900	\$ 1,800	\$ 261,986
Paladin Latin American Partners III, L.P.	\$ 214	\$ 230	\$ 444	\$ 12,074
Patria Brazil Real Estate Fund II	\$ 285	\$ 0	\$ 285	\$ 17,343
Penwood CSIP I, L.P.	\$ 0	\$ 0	\$ 0	\$ 6,864
Penwood PSIP II, L.P.	\$ 22	\$ 214	\$ 236	\$ 0

## Non-Core Real Estate External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
Rockpoint Real Estate Fund II, L.P.	\$ 46	\$ 0	\$ 46	\$ 5,578
Rockpoint Real Estate Fund III, L.P.	\$ 184	\$ 0	\$ 184	\$ 7,992
Rockpoint Real Estate Fund IV, L.P.	\$ 610	\$ 499	\$ 1,109	\$ 42,233
Rockpoint Real Estate Fund V, L.P.	\$ 1,297	\$ 0	\$ 1,297	\$ 58,178
Rockwood Capital Real Estate Partners Fund IX, L.P.	\$ 701	\$ 0	\$ 701	\$ 21,076
Rockwood Capital Real Estate Partners Fund VI, L.P.	\$ 0	\$ 0	\$ 0	\$ 885
Rockwood Capital Real Estate Partners Fund VII, L.P.	\$ 1,062	\$ 0	\$ 1,062	\$ 29,285
Rockwood Capital Real Estate Partners Fund VIII, L.P.	\$ 81	\$ 695	\$ 775	\$ 2,117
Rockwood Capital Real Estate Partners Fund X Side Car, L.P.	\$ 54	\$ 0	\$ 54	\$ 37,006
Rockwood Capital Real Estate Partners X, L.P.	\$ 986	\$ 0	\$ 986	\$ 41,384
Rockwood Development Partners	\$ 2,125	\$ 0	\$ 2,125	\$ 98,089
RREEF Global Opportunities Fund II, LLC	\$ 0	\$ 0	\$ 0	\$ 1,503
SRI Eight REIT	\$ 974	\$ 0	\$ 974	\$ 63,031
SRI Nine REIT	\$ 155	\$ 15	\$ 170	\$ 5,395
SRI Seven REIT	\$ 68	\$ 346	\$ 414	\$ 135
SRI Ten REIT	\$ 597	\$ 830	\$ 1,427	\$ 34,995
Starwood Opportunity Fund VII, L.P.	\$ 109	\$ 0	\$ 109	\$ 10,601
Starwood SDL/SOF Co-Investment	\$ 4	\$ 0	\$ 4	\$ 3,207
Warburg Pincus Real Estate I, L.P.	\$ 0	\$ 0	\$ 0	\$ 20,428
WCP Real Estate Fund III(A), L.P.	\$ 1,023	\$ 0	\$ 1,023	\$ 87,283
<b>Total</b>	<b>\$ 48,150</b>	<b>\$ 115,226</b>	<b>\$ 163,376</b>	<b>\$ 3,200,032</b>

*Notes:*

- Dollar values in Thousands.

## Opportunistic Fixed Income External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
AG Capital Recovery Partners V, L.P.	\$ 0	\$ 0	\$ 0	\$ 48
AG Capital Recovery Partners VI, L.P.	\$ 153	\$ 1,138	\$ 1,291	\$ 510
AG Global Debt Strategy Partners, L.P.	\$ 1,787	\$ 2,103	\$ 3,890	\$ 553,193
AG Pisgah, L.P.	\$ 2,262	\$ 432	\$ 2,695	\$ 516,318
Anchorage Capital Partners	\$ 11,761	\$ 8,687	\$ 20,447	\$ 532,714
Benefit Street Partners Capital Opportunity Fund II LP	\$ 251	\$ 0	\$ 251	\$ 110,464
Benefit Street Partners Capital Opportunity Fund, L.P.	\$ 750	\$ 0	\$ 750	\$ 152,122
Benefit Street Partners Debt Funds IV LP	\$ 0	\$ 0	\$ 0	\$ 114,991
Brigade LCS Fund	\$ 4,279	\$ 5,144	\$ 9,423	\$ 386,614
Brightwood Capital Fund III, L.P.	\$ 0	\$ 0	\$ 0	\$ 67,272
Centerbridge Special Credit Partners III	\$ 1,574	\$ (1)	\$ 1,573	\$ 69,622
Claren Road Credit Fund, Ltd.	\$ 0	\$ 0	\$ 0	\$ 232
Claren Road Credit Opportunities Partners, L.P.	\$ 0	\$ 0	\$ 0	\$ 352
CVI Credit Value Fund	\$ 1,055	\$ 10,822	\$ 11,878	\$ 43,700
CVI Credit Value Fund II	\$ 2,147	\$ 1,043	\$ 3,190	\$ 94,300
CVI Credit Value Fund III	\$ 750	\$ 0	\$ 750	\$ 109,900
Fortress Credit Opportunities Fund III (A)	\$ 448	\$ 0	\$ 448	\$ 32,901
GSO Capital Opportunities Fund	\$ 38	\$ 261	\$ 298	\$ 3,674
GSO Capital Opportunities Fund II, L.P.	\$ 844	\$ 0	\$ 844	\$ 49,962
GSO Capital Solutions Fund II, L.P.	\$ 714	\$ 0	\$ 714	\$ 28,463
HC NCBR	\$ 415	\$ 0	\$ 415	\$ 249,350
Highbridge Irish Specialty Loan Fund III plc	\$ 1,486	\$ 573	\$ 2,060	\$ 64,858
Highbridge Principle Strategies Kitty Hawk Credit Fund LP	\$ 403	\$ 0	\$ 403	\$ 152,546
Highbridge Specialty Loan Fund 2016 LP	\$ 906	\$ 603	\$ 1,509	\$ 24,915
HPS Cardinal Fund LP Series A	\$ 1,098	\$ 0	\$ 1,098	\$ 269,092
HPS Cardinal Fund LP Series B	\$ 167	\$ 0	\$ 167	\$ 49,636
Magnetar Constellation Fund IV LLC	\$ 1,030	\$ 0	\$ 1,030	\$ 62,580
Marathon Currituck Fund, LP	\$ 3,591	\$ 0	\$ 3,591	\$ 496,759
Marathon Currituck Series D	\$ 113	\$ 0	\$ 113	\$ 40,735
MCP Private Capital Fund II	\$ 734	\$ 0	\$ 734	\$ 51,075
Monarch Debt Recovery Fund	\$ 6,740	\$ 3,825	\$ 10,565	\$ 519,600
Oaktree Value Opportunities Fund, L.P.	\$ 1,786	\$ 0	\$ 1,786	\$ 106,090
PAAMCO - Newport Burgundy	\$ 7,175	\$ 0	\$ 7,175	\$ 457,394
Providence Debt Fund III, L.P.	\$ 1,074	\$ 0	\$ 1,074	\$ 199,106
Silverback Arbitrage Fund	\$ 885	\$ 0	\$ 885	\$ 54,395
Varde Fund X	\$ 770	\$ 450	\$ 1,220	\$ 37,659
WLR IV PPIP Co-Invest	\$ 36	\$ 0	\$ 36	\$ 9,418
<b>Total Opportunistic Fixed Income</b>	<b>\$ 57,222</b>	<b>\$ 35,080</b>	<b>\$ 92,303</b>	<b>\$ 5,712,559</b>

**Notes:**

- Dollar values in Thousands.

## Inflation Sensitive External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
ArcLight Energy Partners Fund V, L.P.	\$ 857	\$ 0	\$ 857	\$ 67,632
BlackRock TIPS Index	\$ 17	\$ 0	\$ 17	\$ 56,275
Blackstone Energy Partners II, L.P.	\$ 1,949	\$ 0	\$ 1,949	\$ 52,186
Blackstone Energy Partners, LP	\$ 401	\$ 1,251	\$ 1,652	\$ 95,821
Blackstone Granite Fund - Class A - Resources Select	\$ 1,815	\$ 0	\$ 1,815	\$ 1,465
Blackstone Granite Fund - Class B - Commodity Pod	\$ 719	\$ 0	\$ 719	\$ 433
Blackstone Granite Fund - Class D - Bayview	\$ 2,100	\$ 0	\$ 2,100	\$ 420,665
Blackstone SP NCRASMA	\$ 1,910	\$ 87	\$ 1,997	\$ 235,590
Blackstone SP NCRASMA (Overage)	\$ 150	\$ 0	\$ 150	\$ 46,674
Brookfield Infrastructure Fund II-B, L.P.	\$ 2,339	\$ 0	\$ 2,339	\$ 213,415
Campbell Timber Fund III, LLC	\$ 2,402	\$ 0	\$ 2,402	\$ 708,626
DCPF VI Oil and Gas Co-Inv Fund	\$ 289	\$ 51	\$ 340	\$ 39,729
Denham Commodity Partners Fund VI LP	\$ 601	\$ 76	\$ 677	\$ 54,663
DL Blue Diamond Fund	\$ 1,708	\$ 0	\$ 1,708	\$ 527,031
EIF United States Power Fund IV, L.P.	\$ 993	\$ 0	\$ 993	\$ 66,152
EIG Energy Fund XVI, L.P.	\$ 2,600	\$ 0	\$ 2,600	\$ 183,963
EnCap Energy Capital Fund VIII Co-Investors, L.P.	\$ 0	\$ 0	\$ 0	\$ 12,273
EnCap Energy Capital Fund VIII, LP	\$ 261	\$ 0	\$ 261	\$ 15,717
EnCap Energy Capital Fund X, L.P.	\$ 1,485	\$ 0	\$ 1,485	\$ 87,294
Energy Capital Partners II (Summit Co-Invest), LP	\$ 23	\$ 0	\$ 23	\$ 10,901
Energy Capital Partners II, LP	\$ 242	\$ 0	\$ 242	\$ 15,152
Energy Capital Partners III, LP	\$ 1,075	\$ 0	\$ 1,075	\$ 97,943
Gresham TAP Flex	\$ 2,467	\$ 0	\$ 2,467	\$ 228,280
GSO Bakken Holdings I LP	\$ 121	\$ 0	\$ 121	\$ 10,880
GSO Energy Partners - B LP	\$ 778	\$ 0	\$ 778	\$ 139,099
IFM Global Infrastructure Fund, L.P.	\$ 2,222	\$ 161	\$ 2,383	\$ 349,284
Intervale Capital II, LP	\$ 557	\$ 0	\$ 557	\$ 42,220
Intervale Capital III, LP	\$ 860	\$ 0	\$ 860	\$ 49,078
Jade Real Assets Fund, L.P.	\$ 445	\$ 946	\$ 1,391	\$ 104,672
Landmark Real Asset SMA, L.P.	\$ 2,077	\$ 0	\$ 2,077	\$ 114,983
Landmark Real Estate Partners VII, L.P.	\$ 964	\$ 0	\$ 964	\$ 64,591
Landmark Real Assets Fund II LP	\$ 0	\$ 0	\$ 0	\$ 0
Landmark Real Estate Partners VIII Overflow LP	\$ 0	\$ 0	\$ 0	\$ 17,012
Landmark Real Estate Partners VIII LP	\$ 2,823	\$ 0	\$ 2,823	\$ 6,954
Landmark Real Assets Fund II Opportunistic LP	\$ 0	\$ 0	\$ 0	\$ 0
Lindsay Goldberg III - Formation Energy L.P.	\$ 0	\$ 0	\$ 0	\$ 212
MTP Energy Fund LP	\$ 3,064	\$ 0	\$ 3,064	\$ 222,085
MTP Energy Opportunities Fund II LLC	\$ 0	\$ 0	\$ 0	\$ 129,424
MTP Energy Opportunities Fund LP	\$ 0	\$ 0	\$ 0	\$ 32,147
NC Garnet Fund	\$ 1,544	\$ 0	\$ 1,544	\$ 389,910
North Star Investment Co-Invest	\$ 623	\$ 0	\$ 623	\$ 160,929
North Star Investment Holdings LLC	\$ 4,028	\$ 0	\$ 4,028	\$ 174,743
Orion Mine Finance Fund I	\$ 709	\$ 0	\$ 709	\$ 62,087
Orion Mine Finance Fund I-A	\$ 0	\$ 0	\$ 0	\$ 137,708
Perella Weinberg Partners ABV Opportunity Fund III LP	\$ 2,446	\$ 0	\$ 2,446	\$ 86,122
Quintana Energy I Co-Investment	\$ 0	\$ 0	\$ 0	\$ 38
Quintana Energy I, L.P.	\$ 397	\$ 0	\$ 397	\$ 28,123
Quintana Energy Partners II, L.P.	\$ 289	\$ 0	\$ 289	\$ 16,206
Sheridan Production Partners I, L.P.	\$ 1,250	\$ 0	\$ 1,250	\$ 68,552
Sheridan Production Partners II, L.P.	\$ 1,379	\$ 0	\$ 1,379	\$ 81,040
Timber Investment Resources (Nahele, LLC) Separate	\$ 2,213	\$ 0	\$ 2,213	\$ 278,991
Varde Fund XI, L.P.	\$ 3,497	\$ 0	\$ 3,497	\$ 351,090
<b>Total</b>	<b>\$ 58,687</b>	<b>\$ 2,571</b>	<b>\$ 61,258</b>	<b>\$ 6,356,061</b>

**Notes:**

- Dollar values in Thousands.

## Core Real Estate External Management and Incentive Fees Paid CY FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
BlackRock Developed	\$ 123	\$ 0	\$ 123	\$ 368,005
Blackstone NC Property Partners, L.P.	\$ 963	\$ 0	\$ 963	\$ 180,693
Blackstone Property Partners, L.P.	\$ 3,198	\$ 0	\$ 3,198	\$ 404,212
BREP Edens Investment Partners L.P.	\$ 3,294	\$ 0	\$ 3,294	\$ 540,408
BR Emerging REIT	\$ 253	\$ 0	\$ 253	\$ 74,020
BR World REIT	\$ 844	\$ 0	\$ 844	\$ 274,928
CIM Urban REIT, LLC	\$ 0	\$ 0	\$ 0	\$ 56,460
JP Morgan Strategic Property Fund	\$ 1,821	\$ 0	\$ 1,821	\$ 385,336
LBA NC Core Industrial, L.P.	\$ 1,850	\$ 80	\$ 1,929	\$ 286,681
LBA NC Core Industrial II LP	\$ 0	\$ 0	\$ 0	\$ 22,475
M&G Real Estate Debt Fund III	\$ 199	\$ 0	\$ 199	\$ 16,984
Meadow Core Plus Real Estate Fund	\$ 1,298	\$ 0	\$ 1,298	\$ 135,051
Meadow Core Plus Real Estate Fund 2015-1 Series	\$ 639	\$ 0	\$ 639	\$ 81,789
MS Global RE Securities	\$ 0	\$ 0	\$ 0	\$ 6
MW North Carolina Debt Fund, LLC	\$ 1,305	\$ 0	\$ 1,305	\$ 151,959
NorthRock Core Fund, L.P.	\$ 5,401	\$ 0	\$ 5,401	\$ 728,285
NorthRock Fund II, L.P. - Core	\$ 1,847	\$ 14,142	\$ 15,989	\$ 607,551
NorthRock Fund IV, L.P.	\$ 821	\$ 872	\$ 1,694	\$ 327,744
Rockpoint Growth and Income Side Car Fund I, L.P.	\$ 862	\$ 0	\$ 862	\$ 223,900
Rockpoint Growth and Income Real Estate Fund I, L.P.	\$ 1,788	\$ 0	\$ 1,788	\$ 201,913
Rockpoint Growth and Income Real Estate Fund II, L.P.	\$ 401	\$ 0	\$ 401	\$ 49,704
Rockpoint Growth and Income Side Car Fund II, L.P.	\$ 318	\$ 0	\$ 318	\$ 97,867
Rockwood Income and Credit Partners LP	\$ (28)	\$ 0	\$ (28)	\$ 89,244
STAG Investments II, LLC	\$ 0	\$ 0	\$ 0	\$ 31
Terra Firma Deutsche Annington, L.P. (Core)	\$ 0	\$ 0	\$ 0	\$ 10
UBS Trumbull Property Fund	\$ 319	\$ 0	\$ 319	\$ 0
<b>Total Core Real Estate</b>	<b>\$ 27,515</b>	<b>\$ 15,094</b>	<b>\$ 42,609</b>	<b>\$ 5,305,255</b>

*Notes:*

*- Dollar values in Thousands.*

## Multi-Strategy External Management and Incentive Fees Paid FY 2018

Fund	Management Fees	Incentive Fees	Total Fees	Ending Market Value
AG Cataloochee, L.P.	\$ 1,108	\$ 0	\$ 1,108	\$ 200,418
Broyhill Fund	\$ 2	\$ 0	\$ 2	\$ 198
GCM/NC Invest Fund 2011 Series	\$ 13	\$ 0	\$ 13	\$ 19
Gladius Aconcagua	\$ 2,500	\$ 0	\$ 2,500	\$ 1,563,711
Gladius Arx Fund	\$ 2,085	\$ 0	\$ 2,085	\$ 141,311
Gladius Venator Fund	\$ 576	\$ 0	\$ 576	\$ 26,775
SCS Instl Global Series I	\$ 0	\$ 0	\$ 0	\$ 440
<b>Total</b>	<b>\$ 6,284</b>	<b>\$ -</b>	<b>\$ 6,284</b>	<b>\$ 1,932,873</b>

*Notes:*

- Dollar values in Thousands.



### Section 3 Additional Information

Portfolio	Name	Commitment Amount	Statutory Classification	Inception Year	Investment Manager	Management & Incentive Fees
Public Equity Portfolio	See Section 1 of this report	Fixed commitment amounts only for the following funds: ECM Feeder Fund 2 LP: \$125 million; ValueAct Capital: \$750 million. For all other funds, none.	N.C.G.S. §§ 147-69.2(b)(8) for long-only public equity investments; N.C.G.S. §§ 147-69.2(b)(8)(b.) for public equity limited liability investment vehicles ONSHE BlackRock, ECM Bespoke Fund 2, ECM Feeder Fund 2, ONSHE Marshall Wace, ONSHE MEN, and ValueAct Capital	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Private Equity Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(9)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Non-Core Real Estate Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(7)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Opportunistic Fixed Income Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(6c)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Rates and Liquidity Portfolio	See Section 1 of this report	None	N.C.G.S. §§ 147-69.1(c) and 147-69.2(b)(1)-(6b)	1941	Managed internally by staff of the State Treasurer	No management fees or incentive fees
Inflation Sensitive Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(9a)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Core Real Estate Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(7)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report
Multi-Strategy Portfolio	See Section 1 of this report	See Section 1 of this report	N.C.G.S. §§ 147-69.2(b)(9)(ii)	See Section 1 of this report	Externally managed by firms listed in Section 1 of this report	See section 2 of this report

We are not aware of any placement agent fees relating to any Retirement Systems investment that were directly or indirectly borne by the State Treasurer or Retirement Systems.

## **Section 4**

### **Use of New Investment Authority Report required by G.S. 147-69.8**

This report is pursuant to G.S. 147-69.8 on the use of new investment authority by the State Treasurer. The report covers new investment authority granted by the General Assembly since 2009 and includes performance and other investment information through June 30, 2018. We have interpreted "new investment authority" or "broadens the investment authority" in the statute to cover two types of situations: (1) changes in the percentage limits stated by G.S. 147-69.2(b) for particular classes of investments; and (2) changes that allowed the State Treasurer to invest in an investment asset type that was not previously allowed.

#### **Opportunistic Fixed Income Portfolio**

The Opportunistic Fixed Income (or Credit Strategies) asset class (G.S. 147-69.2(b)(6c)) was created by the General Assembly in June 2009. It included some investments that were previously authorized under other provisions of G.S. 147-69.2. See "NCRS Opportunistic Fixed Income Portfolio" in Section 1 "Value and Performance Supplement" for the investment returns, earnings, changes to value, and gains and losses in disposition of such investments.

The value of Opportunistic Fixed Income assets originally was limited to 5% of the total assets of the Retirement Systems, but the limit was raised to 7.5% in August 2013. The allocation to Opportunistic Fixed Income assets remained below the original 5% limit in fiscal year 2013 despite the increase in the limit to 7.5%; however, the allocation rose above 5% in April 2014. Information on the individual funds with a vintage year later than 2014 can be found in Section 1 of this report.

#### **Inflation Sensitive Portfolio**

The Inflation Sensitive asset class (G.S. 147-69.2(b)(9a)) was created by the General Assembly in June 2009. It included some investments that were previously authorized under other provisions of G.S. 147-69.2. See "NCRS Inflation Protection Portfolio" in Section 1 "Value and Performance Supplement" for the investment returns, earnings, changes to value, and gains and losses in disposition of such investments.

The value of Inflation Sensitive assets originally was limited to 5% of the total assets of the Retirements Systems, but the limit was raised to 7.5% in August 2013. The allocation to Inflation Sensitive assets remained below the original 5% limit in fiscal year 2014 despite the increase in the limit to 7.5%; however, the allocation rose above 5% in May 2015. Information on the individual funds with a vintage year later than 2015 can be found in Section 1 of this report.

## **Section 4**

### **Use of New Investment Authority Report required by G.S. 147-69.8**

#### **Alternatives Portfolio**

The State Treasurer makes investments in the Alternatives Portfolio, which includes the Private Equity and Multi-Strategy Portfolios, through G.S. 147-69.2(b)(9). G.S. 147-69.2(b)(9)(ii), added by Session Law 2011-211 in June 2011, allows investments in limited liability entities if their primary purpose is “to engage in any other strategies not expressly authorized by any other subdivision of this subsection.” The State Treasurer today administratively classifies the Multi-Strategy Portfolio under G.S. 147-69.2(b)(9)(ii). See “Multi-Strategy Portfolio” in Section 1 “Value and Performance Supplement” for the investment returns, earnings, changes to value, and gains and losses in disposition of such investments.

The limit on the value of Alternatives assets as a percentage of the total assets of the Retirements Systems was raised from 5% to 7.5% in June 2011 (Session Law 2011-211) and to 8.75% in August 2013 (Session Law 2013-398). The allocation to the Alternatives Portfolio rose above 5% in September 2011, and has been above or below 5% at various times since 2011. However, the allocation has not exceeded 7.5%. Information on the individual funds with a vintage year later than 2012 can be found in Section 1 of this report for both the Private Equity Portfolio and the Multi-Strategy portfolios.

#### **Public Equity Portfolio**

The State Treasurer makes investments in the Public Equity (or Global Equity) Portfolio through G.S. 147-69.2(b)(8).

Beginning in June 2011, investments were permitted in “limited partnerships, limited liability companies, and other limited liability investment vehicles that are not publicly traded and invest primarily in [public equities]” (G.S. 147-69.2(b)(8)(b.)). These investments include the Hedged Equity subcomponent of the Public Equity Portfolio identified in the State Treasurer’s Investment Policy Statement. See “NCRS Public Equity Portfolio” in Section 1 “Value and Performance Supplement” for the investment returns, earnings, changes to value, and gains and losses in disposition of such investments with the LLC/LLP label.