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

Fiscal Year 2016-2017

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

## NCRS Public Equity Portfolio June 30, 2017

			June 50, 2017			Returns			
Fund	LLC/LLP	Inception	Market Value	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
Baillie Gifford EAFE Plus Alpha  MSCI EAFE		2007	\$1,830,210,258	31.6	4.7	11.4 <i>8.7</i>	4.9	- 6 2	- 12
				20.3	1.1		1.0	6.3	4.3
Baillie Gifford Emerging Markets Equities  MSCI Emerging Markets		2008	\$630,823,691	35.4 23.7	3.6 1.1	6.9 <i>4.0</i>	1.9	10.6	-
BlackRock EAFE LC Growth  MSCI EAFE Growth Index		2016	\$761,948,881	15.5 <i>16.1</i>	- 3.1	- 9.5	- 2.4	- 6.7	- 3.9
BlackRock Emerging Markets Opportunities Fund  MSCI Emerging Markets		2009	\$672,257,547	26.9 <i>23.7</i>	2.9 1.1	5.5 <i>4.0</i>	- 1.9	- 10.6	-
BlackRock Frontier Markets Fund  MSCI Frontier Markets		2009	\$206,268,404	14.4 19.7	(4.4) (3.0)	6.9 <i>9.0</i>	- (1.2)	- 8.5	- -
BlackRock Mid Cap Passive Russell Midcap Custom		2013	\$372,970,294	15.9 <i>15.9</i>	7.7 7.7	-	- -	-	- -
BlackRock MSCI ACWI ex US IMI  MSCI ACWI ex US IMI Index		2010	\$6,852,816,104	20.7 20.4	1.4 1.1	7.8 7.6	- 1.4	- 7.3	- 4.7
BlackRock R1000 Passive		2013	\$8,249,961,337	18.0	9.3	-	-	-	-
Russell 1000 Custom  Brown Advisory Small Cap Growth		2008	\$267,690,707	<i>18.0</i> 17.9	<i>9.3</i> 10.9	14.9	-	-	-
Russell 2000 Growth				24.4	7.6	14.0	7.8	9.5	6.5
Earnest Partners Small Cap Value Russell 2000 Value		2002	\$499,452,504	25.6 <i>24.9</i>	9.9 <i>7.0</i>	16.0 <i>13.4</i>	7.8 5.9	8.7	9.0
ECM Bespoke Fund 2 Equity Hedge Benchmark	Yes	2016	\$32,947,135	- 7.3	- 1.7	- 2.9	-	- -	- -
ECM Feeder Fund 2 Equity Hedge Benchmark	Yes	2016	\$169,644,832	35.5 <i>7.3</i>	- 1.7	- 2.9	-	<i>-</i> -	-
Franklin Templeton Int'l SC MSCI AC World ex USA Small Cap Index		2010	\$578,688,452	25.4 20.3	4.2 3.3	11.0 <i>10.0</i>	- 2.9	- 10.1	- 6.5
Mondrian Emerging Markets Equity  MSCI Emerging Markets		2009	\$399,644,192	15.7 23.7	(1.1) 1.1	2.6 <i>4.0</i>	- 1.9	- 10.6	-
Mondrian Focused International Equity  MSCI EAFE		2007	\$1,375,403,076	15.3 20.3	1.6 1.1	9.3 <i>8.7</i>	1.7 1.0	- 6.3	- 4.3
Mondrian Int'l SC  MSCI World Ex US Small Cap Index		2010	\$520,172,976	18.4 21.3	3.7 <i>4.0</i>	9.6 <i>11.4</i>	- 2.9	- 9.6	-
Numeric Small Cap Value Russell 2000 Value		2007	\$415,552,521	16.3 24.9	3.9 <i>7.0</i>	14.0 13.4	6.1 5.9	- 8.7	- 9.0
ONSHE BlackRock Equity Hedge Benchmark	Yes	2015	\$2,462,288,522	7.3 7.3	- 1.7	- 2.9	-	-	-
ONSHE Marshall Wace	Yes	2016	\$203,338,938	-	-	- 2.9	-	-	-
Equity Hedge Benchmark				7.3	1.7	2.9	-	-	-
ONSHE Menta Equity Hedge Benchmark	Yes	2016	\$191,415,203	(4.3) 7.3	1.7	2.9	-	-	-
Piedmont R200 Passive Russell Top 200 Custom		2015	\$3,508,572,886	18.6 <i>18.6</i>	- -	-	-	-	-
TimesSquare MidCap Growth  Russell Midcap Growth		2007	\$566,894,347	16.4 <i>17.0</i>	7.2 <i>7.8</i>	13.9 <i>14.2</i>	- 7.9	- 10.3	- 8.3
ValueAct Capital Russell MidCap Value	Yes	2015	\$385,869,604	22.3 15.9	- 7.5	- 15.1	- 7.2	- 10.4	- 10.1
Walter Scott International		2002	\$1,605,040,932	16.0	5.8	9.0	4.9	_	<u>-</u>
MSCI ACWI Ex US		2002	¥±,005,0 <del>1</del> 0,532	20.5	0.8	7.2	1.1	6.9	-

## NCRS Public Equity Portfolio June 30, 2017

					Returns			
Fund	LLC/LLP Inception	Market Value	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
Wellington Diversified International	1987	\$1,263,858,691	27.8	2.8	11.8	3.1	7.8	5.6
MSCI ACWI Ex US			20.5	0.8	7.2	1.1	6.9	-
Wellington Opportunistic Growth	1999	\$1,243,475,914	20.0	10.4	16.2	8.5	9.9	-
Russell 3000 Growth Custom			20.7	10.8	15.2	8.8	9.1	7.5
BlackRock Global Transition	N/A	\$41,123,082	-	-	-	-	-	-
Cash and Liquidating Accounts	N/A	\$23,402,762	-	-	-	-	-	-
Total		\$35,331,733,793	19.0	5.0	11.4	4.5	7.3	6.7
Public Equity Benchmark			18.1	4.6	10.6	3.8	6.6	5.9

- -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 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). Prior to July 2011, the Public Equity Benchmark was a blend of the Domestic Equity Benchmark and Non-U.S. Equity Benchmark at policy weights.
- 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, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
A.V. Management IV, LLC	2002		\$1,244,354	\$5,000,000	\$0 \$0	(2.44)	0.79	\$2,703,146	0.54	YES
Academy Venture Fund, LLC Accel-KKR Capital Partners IV, LP	1999 2013	2012	\$0 \$7,511,213	\$5,000,000 \$10,000,000	\$0 \$4,562,734	(22.26) 17.72	0.18 1.41	\$915,737 \$1,079,810	0.18 0.17	YES NO
Access Capital L.P. II D	2002		\$131,937	\$30,367,144	\$5,995,285	4.47	1.21	\$32,223,965	1.20	NO
AG Private Equity Partners IV (R), L.P.	2008		\$33,233,530	\$48,809,524	\$16,107,143	1.92	1.11	\$2,928,572	0.09	YES
AG Private Equity Partners IV, L.P. Ampersand 2006 Limited Partnership	2008 2006		\$38,290,505 \$18,428,186	\$48,810,000 \$30,000,000	\$6,101,250 \$0	7.88 14.68	1.45 2.27	\$24,160,950 \$49,746,052	0.56 1.66	YES YES
Angeleno Investors II, L.P.	2006		\$22,080,963	\$31,700,000	\$503,867	1.81	1.11	\$15,573,197	0.46	YES
Apollo Investment Fund VI, L.P.	2005	2013	\$0	\$150,000,000	\$0	4.85	1.23	\$158,306,822	1.23	NO
Apollo Investment Fund VII, L.P.  Apollo Investment Fund VIII, L.P.	2008 2013	2011	\$0 \$147,639,245	\$75,000,000 \$220,000,000	\$0 \$88,537,995	11.43 13.71	1.17 1.20	\$41,318,857 \$30,192,020	1.17 0.20	NO NO
Arch IX Overage	2016		\$23,648,981	\$60,000,000	\$36,300,000	(0.30)	1.00	\$30,192,020	-	YES
ARCH Venture Fund VII, L.P.	2007		\$78,484,689	\$50,000,000	\$0	37.42	3.90	\$116,580,615	2.33	YES
ARCH Venture Fund VIII, L.P.	2014		\$118,646,113	\$80,000,000	\$13,200,000	45.35	1.82	\$584,223	0.01	YES
ARCH Venture Fund IX Aurora Ventures IV, LLC	2016 2002		\$11,781,050 \$3,132,029	\$60,000,000 \$15,000,000	\$46,800,000 \$0	(27.53) (2.27)	0.89 0.81	\$0 \$9,017,111	0.60	YES YES
Aurora Ventures V, LLC	2005		\$11,223,341	\$15,000,000	\$400,517	4.64	1.35	\$8,506,575	0.58	YES
Avista Capital Partners I, L.P.	2006		\$15,066,652	\$50,000,000	\$725,629	5.65	1.39	\$58,310,150	1.11	YES
Avista Capital Partners II, L.P. Avista Capital Partners III, L.P.	2008 2011		\$44,632,531 \$149,867,958	\$100,000,000 \$150,000,000	\$16,516,839 \$13,828,797	16.60 5.61	2.21 1.19	\$140,270,382 \$14,266,123	1.68 0.10	YES YES
Blackstone Core Equity Partners - NC LP	2017		\$143,807,338	\$250,000,000	\$250,000,000	5.01	-	\$14,200,123	-	N/A
Blackstone Core Equity Partners LP	2017		\$84,075,272	\$250,000,000	\$165,918,724	(0.01)	1.00	\$2,324,765	0.03	YES
Blackstone TN Partners LP	2017		\$34,395,664	\$40,000,000	\$5,604,336	- (10.11)	1.00	\$1,604,336	0.04	N/A YES
Burrill Life Sciences Capital Fund III, L.P. Burrill Life Sciences Capital Fund, L.P.	2005 2002	2015	\$17,591,551 \$0	\$50,000,000 \$41,727,143	\$57,580 \$0	(10.11) 3.93	0.53 1.22	\$8,359,484 \$50,772,459	0.17 1.22	YES
Carolinas Capital, L.P.	1990	2008	\$0	\$225,000	\$0	7.09	1.54	\$347,062	1.54	NO
Carousel Capital Partners III, L.P.	2006		\$171,237	\$20,966,102	\$4,717,397	23.46	2.33	\$37,563,780	2.32	YES
Carousel Capital Partners IV, L.P. Carousel Capital Partners V LP	2012 2017		\$14,928,374 \$33,820	\$25,000,000 \$30,000,000	\$7,861,692 \$29,659,112	31.22 (95.70)	2.13 0.10	\$21,702,024 \$1	1.26 0.00	YES YES
Castle Harlan Partners IV, L.P.	2002		\$8,668,664	\$75,000,000	\$7,252,488	14.52	1.48	\$97,352,515	1.36	YES
Castle Harlan Partners V, L.P.	2008		\$64,470,850	\$100,000,000	\$26,949,176	15.78	1.38	\$50,836,078	0.63	YES
Catterton Growth Partners, L.P. Catterton Growth Partners II, L.P.	2008 2013		\$24,719,717 \$87,771,537	\$30,000,000 \$75,000,000	\$272,084 \$1,146,554	9.26 7.42	1.62 1.19	\$24,382,739 \$0	0.80	YES YES
Catterton Partners VII, L.P.	2013		\$115,356,105	\$100,000,000	\$5,253,896	9.44	1.13	\$8,825,734	0.09	YES
Chapter IV Investors Special Situations Fund, L.P.	2006		\$60,582,747	\$45,000,000	\$533,097	3.03	1.29	\$5,123,208	0.10	YES
Charterhouse Capital Partners IX, L.P.	2009		\$32,769,853	\$114,055,000	\$8,778,269	11.61	1.37	\$132,448,478	1.10	YES YES
Charterhouse Capital Partners X, L.P. Coller International Partners IV, L.P.	2015 2002		\$41,243,434 \$186,901	\$171,082,500 \$84,729,452	\$121,593,453 \$0	1.96 13.20	1.01 1.37	\$0 \$119,983,433	- 1.37	YES
Crestview Partners II, L.P.	2008		\$93,407,286	\$100,000,000	\$19,280,088	15.53	2.04	\$71,412,434	0.88	YES
Crestview Capital Partners III, L.P.	2013		\$45,719,052	\$150,000,000	\$104,769,906	0.67	1.01	\$191,149	0.00	YES
CVC Europe Equity Partners IV, L.P. CVC Capital Partners VI, L.P.	2005 2014		\$10,110,317 \$52,377,166	\$74,135,750 \$85,541,250	\$8,717,420 \$38,372,329	16.86 9.23	2.00 1.14	\$146,656,684 \$1,749,883	1.87 0.04	NO NO
CVE Kauffman Fund I	2007		\$56,531,520	\$50,000,000	\$5,750,000	10.80	1.96	\$30,574,083	0.69	YES
DLJ Merchant Banking Partners II, L.P.	1996	2016	\$0	\$6,896,027	\$0	5.98	1.30	\$9,903,153	1.30	NO
Elevation Partners, L.P. Francisco Partners Agility	2005 2017		\$771,748 \$0	\$91,651,866 \$50,000,000	\$1,066,179 \$48,999,999	12.16	1.59 -	\$146,725,669 \$1	1.58 0.00	YES YES
Francisco Partners II, L.P.	2006		\$11,932,044	\$60,000,000	\$4,140,000	10.40	1.55	\$82,356,932	1.35	YES
Francisco Partners IV, L.P.	2015		\$68,070,118	\$100,000,000	\$38,750,000	8.64	1.11	\$0	-	YES
Franklin Fairview I, L.P.	1997		\$917,581	\$2,500,000	\$0	0.11	1.02	\$1,615,789	0.65	NO N/A
GCM Grosvenor - NC Innovation Fund GCM Grosvenor - NC Innovation Fund 2013-1	2010 2013		\$120,655,173 \$14,692,900	\$230,000,000 \$15,000,000	\$53,574,854 \$1,886,158	19.56 10.48	1.71 1.25	\$208,306,202 \$1,957,101	1.08 0.15	N/A N/A
GCM Grosvenor - NC Innovation Fund II	2015		\$43,804,446	\$247,500,000	\$206,046,091	5.15	1.02	\$2,903,650	0.06	N/A
GCM Grosvenor - NC Investment Fund 2006	2006		\$81,298,239	\$250,000,000	\$4,208,000	3.91	1.25	\$227,120,923	0.92	N/A
GCM Grosvenor - NC Investment Fund 2008 Series 1 GCM Grosvenor - NC Investment Fund 2008 Series 2	2008 2009		\$89,164,160 \$40,716,290	\$250,000,000 \$50,000,000	\$98,350,757 \$5,060,941	5.29 (1.26)	1.27 0.96	\$105,281,776 \$3,519,185	0.69 0.08	N/A N/A
Halifax Capital Partners II, L.P.	2005		\$5,707,557	\$15,000,000	\$2,951,986	12.73	1.77	\$15,867,909	1.30	YES
Halifax Capital Partners III, L.P.	2012		\$13,009,571	\$30,000,000	\$10,568,209	28.57	1.51	\$21,708,015	0.94	YES
HarbourVest Partners III, L.P. Harvest Partners IV, L.P.	1989 2001	2008	\$0 \$4,182,705	\$6,500,000 \$47,904,069	\$0 \$1,371,715	13.91 35.80	2.16 2.26	\$14,012,101 \$100,874,516	2.16 2.17	NO YES
Harvest Partners V, L.P.	2001		\$32,705,888	\$75,000,000	\$6,477,503	18.43	1.85	\$94,732,839	1.38	YES
Harvest Partners VI, L.P.	2011		\$84,310,947	\$100,000,000	\$7,294,058	21.74	1.78	\$80,607,613	0.87	YES
Harvest Partners VII, L.P.	2016		\$26,205,114	\$100,000,000	\$69,538,761	(34.13)	0.89	\$9,299,015	0.23	YES
Hatteras Venture Partners III, L.P. Hg Capital 7	2007 2013		\$15,942,554 \$78,125,973	\$16,354,000 \$84,431,750	\$1,856,557 \$11,870,849	2.80 6.57	1.15 1.12	\$3,210,783 \$20,483,572	0.19 0.23	YES YES
Highland Capital Partners VI, L.P.	2001		\$607,047	\$5,000,000	\$0	12.00	1.60	\$7,411,081	1.48	NO
Highland Capital Partners VII, L.P.	2006		\$7,431,963	\$15,000,000	\$0	4.40	1.29	\$11,714,930	0.78	NO
Highland Consumer Fund I, L.P.  Horsley Bridge International IV, L.P.	2007 2006		\$11,367,167 \$58,395,667	\$25,000,000 \$65,000,000	\$0 \$3,039,400	(4.56) 7.98	0.75 1.60	\$7,358,806 \$40,690,375	0.29 0.66	YES NO
Horsley Bridge International V, L.P.	2008		\$98,667,198	\$75,000,000	\$6,771,750	16.95	1.69	\$16,678,546	0.24	NO
Horsley Bridge IX, L.P.	2008		\$120,908,697	\$85,000,000	\$3,277,600	19.15	2.16	\$55,311,241	0.68	NO
Intersouth Partners II, L.P.	1988	2004	\$0 \$0	\$2,000,000	\$0 \$0	(6.10)	0.73	\$1,465,150	0.73	NO NO
Intersouth Partners III, L.P. Intersouth Partners VI, L.P.	1994 2003	2014	\$0 \$4,209,480	\$1,000,000 \$7,000,000	\$0 \$0	26.92 3.27	2.14 1.25	\$2,139,655 \$4,498,450	2.14 0.64	NO NO
Kitty Hawk Capital III, L.P.	1994	2012	\$0	\$1,000,000	\$0	(5.03)	0.59	\$592,419	0.59	NO
KRG Capital Fund II, L.P.	2001	2016	\$0	\$20,160,635	\$592,542	21.64	1.51	\$29,647,641	1.51	YES
KRG Capital Fund III, L.P. KRG Capital Fund IV, L.P.	2005 2007		\$222,835 \$38,121,690	\$75,000,000 \$150,000,000	\$1,408,876 \$9,331,088	1.67 12.49	1.09 1.61	\$80,184,093 \$193,337,232	1.09 1.35	YES YES
L Catterton Growth Partners III, L.P.	2016		\$33,670,983	\$75,000,000	\$9,551,066	17.00	1.07	\$193,337,232	-	YES
Landmark Equity Partners XV, L.P.	2014		\$113,322,687	\$250,000,000	\$93,050,583	11.89	1.14	\$69,121,369	0.43	Observer
Levine Leichtman Capital Partners V	2013		\$124,689,608	\$150,000,000	\$35,610,634	8.93	1.20	\$15,326,342	0.13	YES
Lexington Middle Market Investors, L.P. Lexington Middle Market Investors II, L.P.	2004 2008		\$22,335,300 \$49,776,748	\$100,000,000 \$100,000,000	\$912,319 \$2,262,579	11.35 13.11	1.58 1.49	\$134,082,020 \$95,984,039	1.35 0.98	YES YES
Lexington Middle Market Investors III, L.P.	2012		\$60,154,219	\$150,000,000	\$71,266,345	16.21	1.25	\$38,831,777	0.49	YES
Lindsay Goldberg II, L.P.	2006		\$19,988,297	\$100,000,000	\$6,842,298	7.99	1.51	\$120,956,568	1.30	YES
Lindsay Goldberg III, LP LittleJohn Opportunities Fund II LP	2008		\$52,173,979 \$18,778,817	\$100,000,000	\$5,302,869 \$105,934,768	8.03 (2.14)	1.31 0.99	\$72,551,139 \$15,769	0.76 0.00	YES
Ettaesonin Opportunities Fund II LP	2017		\$18,778,817	\$125,000,000	\$105,934,768	(2.14)	0.99	\$15,769	0.00	YES

#### NCRS Private Equity Portfolio June 30, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
Longreach Capital Partners 1, L.P.	2006		\$41,645,640	\$75,000,000	\$2,381,639	(0.21)	0.99	\$42,618,641	0.50	YES
Markstone Capital Partners, L.P.	2005		\$0	\$50,000,000	\$0	(85.27)	0.30	\$16,130,502	0.30	YES
Marlin Equity IV	2013		\$34,739,216	\$49,000,000	\$16,228,856	4.00	1.07	\$467,103	0.01	NO
MatlinPatterson Global Opportunities Partners III	2007		\$61,581,883	\$100,000,000	\$3,436,976	4.05	1.25	\$59,084,270	0.61	NO
MHR Institutional Partners IV, L.P.	2015		\$30,142,223	\$150,000,000	\$117,018,019	(9.12)	0.88	\$3,639,359	0.10	YES
Milestone Partners IV, L.P.	2011		\$56,381,310	\$50,000,000	\$4,489,231	7.68	1.25	\$1,605,251	0.03	YES
Mount Kellett Capital Partners II, LP	2011		\$17,677,212	\$75,000,000	\$1,741,328	0.75	1.02	\$59,072,107	0.79	YES
NCEF Liquidating Trust	1990	2013	\$0	\$10,010,000	\$0	20.21	6.14	\$61,500,822	6.14	N/A
NEA 14, L.P.	2012		\$64,225,545	\$45,000,000	\$2,700,000	17.70	1.67	\$4,747,205	0.11	NO
NEA 15 Opportunity Fund, L.P.	2015		\$45,760,023	\$65,000,000	\$28,632,500	34.97	1.38	\$7,445,193	0.20	YES
NEA 15, L.P.	2015		\$52,540,573	\$67,500,000	\$22,950,000	20.73	1.26	\$0	-	NO
North Carolina Economic Opportunities Fund	2001	2015	\$0	\$6,561,414	\$0	16.27	1.69	\$11,078,893	1.69	N/A
Northbound NCRS Fund, L.P.	2015		\$67,125,340	\$200,000,000	\$133,212,723	0.71	1.01	\$0	-	N/A
Novak Biddle Venture Partners III, L.P.	2000		\$182,357	\$17,000,000	\$0	(13.68)	0.56	\$9,268,219	0.55	NO
Novak Biddle Venture Partners IV, L.P.	2004		\$1,021,493	\$10,000,000	\$307,451	(6.32)	0.65	\$5,240,089	0.54 1.07	NO NO
Novak Biddle Venture Partners V, L.P. Oaktree European Principal Fund III, L.P.	2007 2011		\$7,426,524 \$43,434,953	\$10,000,000 \$40,623,654	\$444,810 \$12,217,900	14.52 10.04	2.20 1.48	\$10,250,630 \$4,633,830	0.14	NO
Pappas Life Science Ventures II, L.P.	2000	2016	\$43,434,333	\$5,000,000	\$12,217,300	3.47	1.20	\$5,988,673	1.20	YES
Pappas Life Science Ventures III, L.P.	2005		\$921,314	\$20,000,000	\$100,000	4.68	1.37	\$26,408,629	1.33	YES
Pappas Life Science Ventures IV, L.P.	2003		\$12,325,036	\$24,456,530	\$1,956,521	34.84	2.54	\$44,901,349	2.00	YES
Perseus Market Opportunity Fund, L.P.	2003	2015	\$12,323,030	\$50,000,000	\$1,550,521	(15.81)	0.48	\$26,370,970	0.48	YES
Perseus Partners VII, L.P.	2006	2015	\$0	\$50,000,000	\$0	(38.45)	0.17	\$7,998,916	0.17	YES
Quaker BioVentures II, L.P.	2007		\$41,120,791	\$100,000,000	\$8,273,118	3.54	1.16	\$64,401,741	0.71	YES
Robeco Clean Tech II	2008		\$55,270,823	\$75,000,000	\$4,942,975	(1.48)	0.91	\$8,791,414	0.13	YES
Robeco Clean Tech II Co-Inv	2008		\$13,193,328	\$75,000,000	\$18,288,676	(12.74)	0.46	\$13,018,268	0.23	N/A
Sprout Capital VI, L.P.	1989	2009	\$0	\$6,500,000	\$0	18.54	2.16	\$14,030,005	2.16	NO
Sprout Growth II, L.P.	1993	2011	\$0	\$3,000,000	\$0	15.44	1.98	\$5,930,853	1.98	NO
Starvest Partners II	2007		\$21,675,752	\$30,000,000	\$270,146	(1.26)	0.93	\$6,278,375	0.21	YES
StepStone Pioneer Capital Europe	2006		\$75,486,906	\$171,082,500	\$33,181,161	6.57	1.41	\$170,859,232	0.98	YES
StepStone Pioneer Capital I	2004		\$48,272,815	\$140,275,000	\$3,483,281	5.69	1.36	\$147,147,551	1.03	YES
StepStone Pioneer Capital II	2006		\$87,922,488	\$125,000,000	\$7,228,989	8.38	1.68	\$125,609,007	0.99	YES
StepStone SYN	2006		\$15,045,573	\$35,000,000	\$4,648,521	(6.46)	0.63	\$4,711,660	0.15	N/A
Synergy Life Science Partners, L.P.	2006		\$12,201,240	\$38,000,000	\$1,330,000	1.09	1.08	\$22,743,612	0.62	YES
TCV VI, L.P.	2005		\$7,471,458	\$30,000,000	\$141,000	13.67	1.65	\$41,896,495	1.40	NO
TCV VIII, L.P.	2014		\$134,086,509	\$150,000,000	\$29,667,944	9.00	1.17	\$7,090,192	0.06	YES
TCV IX, L.P.	2016		\$12,723,922	\$150,000,000	\$135,600,000	(28.83)	0.88	\$0	-	YES
Tenaya Capital Fund V	2007		\$46,021,691	\$75,000,000	\$6,428,597	16.09	1.91	\$85,343,413	1.24	YES
Tenaya Capital Fund VI	2012		\$65,196,055	\$75,000,000	\$10,300,387	(0.91)	0.97	\$0	-	YES
Tenaya Capital Fund VII, L.P.	2015		\$26,437,689	\$90,000,000	\$58,169,808	0.78	1.00	\$5,792,077	0.18	YES
Terra Firma Capital Partners II, LP.	2002		\$21,815,679	\$114,055,000	\$212,418	13.46	1.80	\$213,425,585	1.63	YES
Terra Firma Capital Partners III, L.P. Thoma Bravo XII	2006 2016		\$81,620,945 \$44,017,413	\$171,082,500 \$150,000,000	\$680,465 \$89,251,018	(9.41) (37.94)	0.49 0.73	\$19,305,197 \$885,032	0.09 0.01	YES YES
TPG Biotechnology Partners II, L.P.	2016		\$4,971,004	\$18,000,000	\$8,413	0.42	1.02	\$13,582,138	0.75	NO NO
TPG Biotechnology Partners III, L.P.	2008		\$27,240,650	\$50,000,000	\$2,031,306	4.76	1.02	\$31,896,766	0.73	YES
TPG Partners IV, L.P.	2003	2013	\$27,240,030	\$100,000,000	\$2,031,300	13.94	1.71	\$161,089,251	1.71	NO
TPG Partners V, L.P.	2003	2013	\$0	\$150,000,000	\$0	(7.73)	0.72	\$90,365,522	0.72	NO
TPG Partners VI, L.P.	2008	2013	\$0	\$75,000,000	\$0	(6.38)	0.72	\$29,522,273	0.88	NO
Trident VII LP	2017		\$0	\$125,000,000	\$125,000,000	(0.50)	-	\$0	-	Observer
Tudor Ventures III, L.P.	2006		\$11,304,937	\$30,000,000	\$165,813	4.51	1.28	\$22,077,489	0.85	YES
Venture First II, L.P.	1988	2004	\$0	\$3,000,000	\$0	(15.61)	0.23	\$694,029	0.23	NO
Vista Equity Partners Fund IV, L.P.	2011		\$46,990,930	\$50,000,000	\$7,413,253	19.36	1.99	\$39,055,120	0.90	NO
Warburg Pincus Private Equity IX, L.P.	2005	2013	\$0	\$50,000,000	\$0	4.20	1.20	\$60,538,258	1.20	NO
Warburg Pincus Private Equity X - 10	2007	2013	\$0	\$22,800,000	\$0	(2.09)	0.95	\$21,860,427	0.95	YES
Warburg Pincus Private Equity X - 40	2007	2013	\$0	\$100,000,000	\$0	(2.77)	0.93	\$62,168,760	0.93	YES
Warburg Pincus Private Equity X - 50	2007	2013	\$0	\$125,000,000	\$0	(2.44)	0.94	\$84,177,133	0.94	YES
Warburg Pincus Private Equity XI, L.P.	2012		\$152,815,080	\$150,000,000	\$9,900,000	12.36	1.33	\$35,876,850	0.25	Observer
Warburg Pincus Private Equity XII, L.P.	2015		\$52,424,634	\$175,000,000	\$119,350,000	(7.89)	0.96	\$647,500	0.01	Yes
WLR AGO Co-Inv, L.P.	2008	2014	\$0	\$7,162,281	\$0	5.15	1.29	\$9,465,652	1.29	N/A
WLR AHM Co-Inv, L.P.	2007	2015	\$0	\$28,634,000	\$0	11.81	1.65	\$47,447,135	1.65	YES
WLR Recovery Fund IV, L.P.	2007		\$24,380,429	\$200,000,000	\$19,131,450	7.88	1.37	\$223,908,649	1.23	YES
Stock Distribution	2002		\$21,323,389	N/A	N/A	N/A	N/A	N/A	N/A	N/A
										·
Total			94,023,352,5Ub	\$11,135,790,091	\$3,068,169,173	7.66	1.32	\$5,967,363,334	0.73	

<sup>-</sup> 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.

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

<sup>-</sup> Distributions to Paid-In (DPI), also know as the Realization Multiple, is the ratio of cumulative distributions to cumulative paid-in.

<sup>-</sup> 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, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
AG Asia Realty Fund II, L.P.	2010	-	\$9,157,080	\$25,000,000	\$5,591,769	21.56	1.82	\$26,186,412	1.35	YES
AG Asia Realty Fund III LP	2016		\$42,877,894	\$100,000,000	\$61,907,500	12.20	1.12	\$7,750,000	0.17	YES
AG Core Plus Realty Fund I, L.P. AG Core Plus Realty Fund II, L.P.	2003 2006		\$352,534 \$3,795,216	\$75,000,000 \$100,000,000	\$3,750,000 \$5,500,000	17.54 8.36	1.52 1.34	\$107,941,956 \$123,006,749	1.51 1.30	YES YES
AG Net Lease Realty Fund II, L.P.	2010		\$98,468,093	\$100,000,000	\$2,922,080	8.34	1.45	\$41,272,140	0.43	YES
AG Net Lease Realty Fund III, L.P.	2013		\$72,649,156	\$100,000,000	\$29,000,000	5.63	1.08	\$3,796,617	0.05	YES
American Value Partners Fund I, L.P.	2006		\$9,753,619	\$50,000,000	\$12,530,944	0.79	1.04	\$29,302,718	0.78	YES
Benson Elliot Real Estate Partners II, L.P.	2006		\$8,501,785	\$57,027,500	\$9,256,617	(8.86)	0.53	\$21,974,138	0.38	YES
Benson Elliot Real Estate Partners III, L.P. Blackstone Real Estate Partners Europe IV, L.P.	2008 2013		\$39,029,443 \$224,026,688	\$57,027,500 \$250,000,000	\$10,365,484 \$57,489,462	11.33 17.46	1.30 1.39	\$30,214,842 \$29,606,098	0.57 0.14	YES YES
Blackstone Real Estate Partners Europe V, L.P.	2015		\$17,107,523	\$200,000,000	\$182,892,477	-	1.00	\$29,000,098	-	YES
Blackstone Real Estate Partners V, L.P.	2006		\$33,501,680	\$100,000,000	\$4,061,200	10.44	2.01	\$157,962,398	1.65	NO
Blackstone Real Estate Partners VI, L.P.	2007		\$37,076,554	\$200,000,000	\$9,815,800	13.02	2.03	\$379,542,938	1.83	YES
Blackstone Real Estate Partners VII, L.P.	2011		\$257,888,232	\$300,000,000	\$49,979,050	18.75	1.74	\$199,392,490	0.75	YES
Blackstone Real Estate Partners VIII, L.P.	2015		\$90,084,405	\$200,000,000 \$100,000,000	\$125,111,388	17.16	1.16	\$27,459,301	0.27	YES
Brookfield Real Estate Finance Fund III, L.P. CB Richard Ellis Strategic Partners US IV, L.P.	2011 2005		\$9,988,011 \$5,184,444	\$150,000,000	\$26,109,134 \$0	10.13 (25.87)	1.23 0.07	\$81,551,502 \$5,745,573	1.09 0.04	YES YES
CB Richard Ellis Strategic Partners US V, L.P.	2007		\$39,762,034	\$100,000,000	\$5,786,731	5.21	1.35	\$87,146,094	0.92	YES
Cherokee Investment Partners III, L.P.	2002		\$807,874	\$50,000,000	\$4,620,127	(26.04)	0.29	\$12,469,041	0.27	YES
Cherokee Investment Partners IV, L.P.	2005		\$12,867,842	\$50,357,693	\$7,030,584	(11.51)	0.51	\$9,120,082	0.21	YES
CrossHarbor Institutional Partners, L.P.	2006		\$10,623,641	\$50,000,000	\$0	3.32	1.24	\$44,036,261	1.00	YES YES
CrossHarbor Institutional Partners II, L.P. Crow Holdings Realty Partners IV, L.P.	2010 2006		\$64,947,325 \$5,393,188	\$106,000,000 \$80,000,000	\$6,235,294 \$6,450,761	12.25 1.77	1.37 1.11	\$71,456,471 \$80,387,012	0.72 1.04	YES
Crow Holdings Realty Partners IV-A, L.P.	2006		\$1,259,053	\$20,000,000	\$1,612,691	1.67	1.10	\$20,012,046	1.04	YES
Crow Holdings Realty Partners V, L.P.	2008		\$10,686,006	\$100,000,000	\$7,721,151	15.07	1.50	\$141,527,540	1.40	YES
Crow Holdings Realty Partners VI, L.P.	2012		\$67,400,939	\$85,000,000	\$7,687,682	9.91	1.24	\$33,909,570	0.41	YES
Crow Holdings Realty Partners VII, L.P.	2015		\$70,171,811	\$100,000,000	\$31,171,673	6.78	1.05	\$4,900,348	0.07	YES
Crow Holdings Retail Fund II, L.P.  DB Real Estate Global Opps I-A/I-B, L.P.	2016 2003		\$0 \$1,133,615	\$100,000,000 \$156,430,025	\$100,000,000 \$0	18.40	1.32	\$0 \$200,140,832	- 1.32	YES YES
DLJ Real Estate Capital Partners I, L.P.	1995	2010	\$0	\$25,000,000	\$0	10.67	1.47	\$38,278,693	1.47	YES
DLJ Real Estate Capital Partners II, L.P.	2000	2015	\$0	\$50,000,000	\$0	14.22	1.47	\$77,480,141	1.47	YES
DLJ Real Estate Capital Partners III, L.P.	2005		\$64,441,176	\$150,000,000	\$8,062,663	(0.65)	0.95	\$83,135,525	0.54	YES
DLJ Real Estate Capital Partners IV, L.P.	2007	2014	\$87,682,536	\$100,000,000	\$9,056,431	3.96	1.24	\$35,003,271	0.35	YES
DRA Growth & Income Fund III, LLC DRA Growth & Income Fund IV, LLC	2000 2002	2014 2015	\$0 \$0	\$25,000,000 \$50,000,000	\$0 \$0	22.98 12.13	2.78 1.63	\$70,008,163 \$86,985,562	2.78 1.63	YES YES
DRA Growth & Income Fund V, LLC	2005		\$2,740,124	\$100,000,000	\$0	5.07	1.44	\$150,485,355	1.41	YES
DRA Growth & Income Fund V Co-Investment, LLC	2005		\$45,950	\$25,000,000	\$0	10.26	1.98	\$51,950,812	1.98	YES
DRA Growth & Income Fund VI, LLC	2007		\$5,070,779	\$50,000,000	\$0	9.76	1.59	\$51,836,881	1.45	YES
DRA Growth & Income Fund VII, LLC	2011		\$135,002,307	\$150,000,000	\$4,440,000	18.30	1.71	\$134,446,441	0.85	YES
DRA Growth & Income Fund VIII, LLC Frogmore Real Estate Partners I, L.P.	2013 2005		\$134,759,339 \$7,780,060	\$150,000,000 \$31,304,695	\$18,752,493 \$34,215	12.58 (6.15)	1.16 0.59	\$35,253,969 \$18,993,860	0.24	YES NO
Frogmore Real Estate Partners II, L.P.	2008		\$7,737,647	\$32,473,750	\$2,494,430	13.46	1.40	\$46,517,094	1.26	YES
Frogmore Real Estate Partners III, L.P.	2014		\$24,828,899	\$60,844,507	\$32,423,742	(7.40)	0.89	\$3,554,639	0.11	YES
Harrison St. RE Partners III, L.P.	2010		\$16,373,388	\$60,000,000	\$9,805,164	21.13	1.81	\$75,639,472	1.49	YES
Harrison St. RE Partners IV, L.P.	2013		\$71,509,955	\$100,000,000	\$25,102,868	12.28	1.39	\$32,653,120	0.44	YES
Harrison St. RE Partners V Co-Investment, L.P. Harrison St. RE Partners V, L.P.	2014 2014		\$50,452,305 \$75,368,406	\$50,000,000 \$100,000,000	\$5,778,282 \$28,329,127	11.73 7.90	1.18 1.10	\$6,770,183 \$13,202,248	0.14 0.16	YES YES
Harrison St. RE Partners VI, L.P.	2016		\$5,318,169	\$100,000,000	\$93,500,000	(26.70)	0.82	\$0	-	YES
Harrison Street Real Estate Partners VI Co-Investment LP	2017		\$10,810,080	\$50,000,000	\$39,500,000	3.62	1.03	\$0	-	YES
Hawkeye (Scout) Fund 1-A, L.P.	2006		\$424,162	\$50,000,000	\$0	15.07	1.53	\$78,962,499	1.52	YES
Hawkeye (Scout) Fund II, L.P.	2012	 2016	\$20,591,587	\$100,000,000	\$70,003,211 \$0	(47.83) 4.20	0.71	\$1,880,309	0.06 1.17	YES YES
JER Real Estate Partners Fund III, L.P.  JER Real Estate Partners IV, L.P.	2003 2006	2016	\$0 \$0	\$100,000,000 \$43,400,508	\$0	(4.97)	1.17 0.46	\$86,723,580 \$14,008,724	0.46	YES
Keystone Industrial Fund I, L.P.	2005		\$447,996	\$100,000,000	\$0	4.01	1.27	\$135,221,675	1.26	YES
Keystone Industrial Fund II, L.P.	2008		\$619,705	\$150,000,000	\$0	26.95	2.24	\$308,409,754	2.24	YES
Keystone Industrial Fund III, L.P.	2013		\$205,290	\$110,000,000	\$0	39.99	1.59	\$74,330,774	1.59	YES
LaSalle Real Estate Debt Strategies II, L.P.  LEM Real Estate Mezzanine Fund II, L.P.	2014 2006		\$50,463,334 \$3,177,626	\$81,184,375 \$50,000,000	\$23,948,010 \$30,334,558	(0.09) 3.70	0.99 1.35	\$18,079,042 \$25,450,365	0.26 1.20	YES YES
Lone Star Real Estate Partners II	2010		\$48,384,502	\$300,000,000	\$34,170,505	26.94	1.56	\$368,310,335	1.38	YES
Meadow Real Estate Fund II, L.P.	2012		\$31,739,830	\$60,000,000	\$3,051,370	21.93	1.69	\$68,288,265	1.15	YES
Meadow Real Estate Fund III, L.P.	2014		\$117,734,632	\$100,000,000	\$3,083,050	13.88	1.22	\$26,248	0.00	YES
Meadow Real Estate Fund IV, L.P.	2016		\$0	\$75,000,000	\$75,000,000	7.76	1 10	\$0	-	YES
Mesa West Real Estate Income Fund III, L.P.  North Haven Real Estate Fund V International	2013 2005		\$58,780,796 \$6,701,348	\$100,000,000 \$110,000,000	\$42,906,506 \$491,566	7.76 5.36	1.18 1.16	\$31,494,566 \$126,953,788	0.41 1.10	YES YES
Morgan Stanley Real Estate Fund VI, L.P.	2007		\$49,184,938	\$440,000,000	\$0	(14.28)	0.31	\$92,103,564	0.21	YES
NorthCreek Fund, L.P.	2011		\$285,086,297	\$205,000,000	\$0	18.21	2.37	\$200,200,846	0.98	YES
NorthRock Fund II, L.P.	2012		\$250,546,782	\$400,000,000	\$36,019,855	22.53	1.61	\$336,880,188	0.92	YES
NorthRock Fund III, L.P. Paladin Latin American Partners III, L.P.	2015 2008		\$183,577,322 \$16,415,122	\$400,000,000 \$50,000,000	\$215,323,360	(1.21) (15.85)	0.99 0.49	\$0 \$7,877,626	0.16	YES YES
Patria Brazil Real Estate Fund II	2008		\$21,609,853	\$50,000,000	\$0 \$17,173,259	2.21	1.07	\$13,854,919	0.10	YES
Penwood CSIP I, L.P.	2005		\$6,044,121	\$50,000,000	\$0	(4.31)	0.72	\$30,173,135	0.60	YES
Penwood PSIP II, L.P.	2007		\$1,721,741	\$100,000,000	\$14,544,906	24.40	2.11	\$179,201,255	2.09	YES
RLJ Lodging Fund I, L.P.	2004	2008	\$0	\$50,000,000	\$0	52.87	1.99	\$99,305,766	1.99	YES
Rockpoint NYC CIP Investors, L.P.	2013		\$18,805	\$78,320,018	\$0	40.03	1.43	\$112,210,774	1.43	YES
Rockpoint Real Estate Fund I, L.P. Rockpoint Real Estate Fund II, L.P.	2004 2005		\$0 \$12,185,101	\$100,000,000 \$150,000,000	\$0 \$0	12.03 (2.49)	1.25 0.86	\$119,396,418 \$114,143,529	1.25 0.78	YES YES
Rockpoint Real Estate Fund III, L.P.	2007		\$10,372,294	\$100,000,000	\$12,124,556	14.10	1.39	\$122,921,348	1.28	YES
Rockpoint Real Estate Fund IV, L.P.	2011		\$54,134,170	\$100,000,000	\$22,678,429	18.35	1.35	\$57,890,587	0.70	YES
Rockpoint Real Estate Fund V Side Car, L.P.	2014		\$0	\$100,000,000	\$100,000,000	-	-	\$0	-	YES
Rockpoint Real Estate Fund V, L.P.	2014		\$32,726,718	\$100,000,000	\$70,498,638	12.61	1.06	\$2,544,963	0.08	YES
Rockwood Capital Real Estate Partners Fund VI, L.P Rockwood Capital Real Estate Partners Fund VII, L.P.	2005 2006		\$1,457,656 \$50,808,970	\$90,000,000 \$125,000,000	\$2,720,290 \$0	1.60 (3.35)	1.11 0.76	\$90,712,129 \$42,984,869	1.10 0.35	YES YES
Rockwood Capital Real Estate Partners Fund VIII, L.P.	2008		\$3,385,813	\$45,754,007	\$0	19.34	1.65	\$73,035,887	1.58	YES
Rockwood Capital Real Estate Partners Fund IX, L.P.	2012		\$43,683,469	\$50,000,000	\$8,793,590	13.70	1.34	\$11,521,233	0.28	YES
Rockwood Capital Real Estate Partners Fund IX CIV, L.P.	2015	2016	\$0	\$25,000,000	\$0	-	-	\$0	-	YES
Rockwood Capital Real Estate Partners Fund X Side Car, L.P.	2015		\$11,013,814	\$50,000,000	\$40,274,754	9.33	1.13	\$0	-	YES

#### NCRS Non-Core Real Estate Portfolio June 30, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
Rockwood Capital Real Estate Partners X, L.P.	2015		\$23,358,673	\$100,000,000	\$75,384,398	(7.87)	0.97	\$519,199	0.02	YES
Rockwood Development Partners	2016		\$29,684,761	\$250,000,000	\$218,159,199	(22.56)	0.93	\$1	0.00	YES
RREEF Global Opportunities Fund II, LLC	2005		\$1,520,239	\$200,000,000	\$3	(8.72)	0.55	\$109,654,256	0.54	YES
Sentinel Realty Partners V	1998	2009	\$0	\$50,000,000	\$0	7.52	1.73	\$86,400,652	1.73	N/A
SRI Seven REIT	2004		\$9,288,398	\$75,000,000	\$2,419,481	7.67	1.57	\$104,471,179	1.44	YES
SRI Eight REIT	2006		\$61,199,439	\$100,000,000	\$4,650,149	(2.48)	0.83	\$18,021,159	0.19	YES
SRI Nine REIT	2007		\$4,702,048	\$72,272,625	\$7,743,258	9.68	1.44	\$83,512,333	1.37	YES
SRI Ten REIT	2011		\$46,150,295	\$100,000,000	\$24,418,183	15.35	1.46	\$64,481,531	0.85	YES
Starwood Opportunity Fund VII, L.P.	2005		\$45,223,122	\$150,000,000	\$0	(3.04)	0.76	\$69,972,771	0.46	YES
Starwood SDL/SOF Co-Investment	2005		\$12,945,191	\$55,000,000	\$0	8.08	1.88	\$82,635,410	1.63	YES
Terra Firma Deutsche Annington, L.P. (Non-Core)	2005	2014	\$0	\$57,027,500	\$0	8.58	1.73	\$103,646,574	1.73	N/A
Value Enhancement Fund II	1996	2017	\$0	\$25,000,000	\$0	5.05	1.38	\$36,711,016	1.38	N/A
Value Enhancement Fund III, LLC	1998	2008	\$0	\$25,000,000	\$0	14.03	1.66	\$43,224,893	1.66	N/A
Value Enhancement Fund IV, L.P.	1999	2014	\$0	\$100,000,000	\$0	(0.19)	0.94	\$98,187,830	0.94	N/A
Warburg Pincus Real Estate I, L.P.	2006		\$26,658,919	\$100,000,000	\$0	7.03	1.55	\$121,502,733	1.27	YES
WCP Real Estate Fund III(A), L.P.	2011		\$91,456,447	\$100,000,000	\$10,540,000	10.23	1.46	\$36,918,982	0.41	YES
Westbrook Real Estate Fund I, L.P.	1995	2014	\$0	\$10,000,000	\$0	26.06	2.16	\$23,461,789	2.16	YES
Westbrook Real Estate Fund II, L.P.	1997	2013	\$0	\$50,000,000	\$0	12.92	1.48	\$79,872,223	1.48	YES
Westbrook Real Estate Fund III, L.P.	1998	2014	\$0	\$96,372,752	\$0	8.18	1.34	\$137,467,835	1.34	YES
Westbrook Real Estate Fund IV, L.P.	2000	2015	\$0	\$100,000,000	\$0	20.62	1.66	\$157,651,520	1.66	YES
Total			\$3,669,848,133	\$10,825,797,455	\$2,218,334,098	6.20	1.28	\$7,493,419,444	0.86	

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

<sup>-</sup> 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.

#### NCRS Opportunistic Fixed Income Portfolio June 30, 2017

Fund	1		Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board		
AG Capital Recovery Partners V, L.P.	2005		\$641,889	\$25,000,000	\$0	2.79	1.13	\$25,667,929	1.10	YES
AG Capital Recovery Partners VI, L.P.	2008		\$7,026,997	\$200,000,000	\$0	7.00	1.38	\$277,668,653	1.35	YES
AG Commercial Real Estate Debt Fund, L.P.	2008		\$0	\$73,214,286	\$0	3.62	1.18	\$88,309,229	1.18	YES
AG GECC Public-Private Investment Fund (PPIP)	2010	2014	\$0	\$180,000,000	\$0	20.13	1.54	\$278,165,031	1.54	YES
AG Global Debt Strategy Partners, L.P.	2008		\$514,096,634	\$279,915,359	\$0	10.88	1.86	\$5,399,364	0.02	N/A
AG Pisgah, L.P.	2016		\$439,924,222	\$400,000,000	\$17,803,978	13.44	1.15	\$0	-	YES
AG TALF Partners, L.P.	2009	2011	\$0	\$73,214,286	\$0	22.42	1.32	\$96,608,014	1.32	N/A
Anchorage Capital Partners	2011		\$509,076,609	\$350,000,000	\$0	6.14	1.44	\$0	-	N/A
Benefit Street Partners Capital Opportunity Fund, L.P.	2013		\$153,180,468	\$150,000,000	\$4,942,583	8.80	1.21	\$24,410,737	0.17	N/A
Benefit Street Partners Capital Opportunity Fund II LP	2016		\$49,968,821	\$150,000,000	\$100,209,325	1.09	1.01	\$384,277	0.01	N/A
Benefit Street Partners Debt Funds IV LP	2016		\$41,655,550	\$250,000,000	\$208,216,368	(0.08)	1.00	\$97,921	0.00	YES
Brigade LCS Fund	2011		\$363,815,184	\$330,000,000	\$0	4.05	1.27	\$54,000,000	0.16	N/A
Brightwood Capital Fund III, L.P.	2014		\$67,067,637	\$100,000,000	\$20,000,000	1.70	1.03	\$17,016,137	0.21	YES
Centerbridge Special Credit Partners III	2016		\$25,450,700	\$350,000,000	\$323,750,000	(4.19)	0.97	\$0	-	YES
Citadel Residential Mortgage Opportunities Fund, LLC	2011	2011	\$0	\$119,072,245	\$0	(2.37)	0.99	\$122,558,072	0.99	N/A
Claren Road Credit Fund, Ltd.	2011		\$11,772,194	\$260,000,000	\$0	(0.19)	1.00	\$246,818,528	0.95	N/A
Claren Road Credit Opportunities Partners, L.P.	2013		\$29,021,178	\$231,840,047	\$0	(13.09)	0.72	\$138,209,594	0.59	N/A
CVI Credit Value Fund	2010		\$62,900,000	\$150,000,000	\$7,500,000	13.34	1.67	\$188,915,174	1.25	YES
CVI Credit Value Fund II	2013		\$181,400,000	\$200,000,000	\$10,000,000	9.40	1.39	\$83,647,424	0.44	YES
CVI Credit Value Fund III	2015		\$76,800,000	\$100,000,000	\$35,000,000	14.75	1.18	\$0	-	YES
Fortress Credit Opportunities Fund III (A)	2012		\$48,312,191	\$75,000,000	\$11,638,770	11.29	1.38	\$39,732,898	0.62	YES
GSO Capital Opportunities Fund	2007		\$4,157,349	\$133,652,282	\$8,394,849	17.10	1.66	\$255,889,393	1.64	YES
GSO Capital Opportunities Fund II, L.P.	2011		\$62,604,077	\$100,000,000	\$33,642,328	12.79	1.28	\$32,319,870	0.44	YES
GSO Capital Solutions Fund II, L.P.	2013		\$47,273,055	\$84,667,160	\$40,449,262	16.29	1.21	\$11,121,758	0.23	YES
Highbridge Irish Specialty Loan Fund III plc	2013		\$88,989,498	\$150,000,000	\$21,543,952	7.14	1.19	\$94,956,217	0.62	YES
Highbridge Principle Strategies Kitty Hawk Credit Fund LP	2016		\$89,849,579	\$200,000,000	\$109,936,686	(0.63)	1.00	\$0	-	N/A
Highbridge Specialty Loan Fund 2016 LP	2016		\$17,158,603	\$200,000,000	\$183,555,541	11.90	1.07	\$3,390,442	0.17	YES
HPS Cardinal Fund LP Series A	2016		\$253,398,129	\$350,000,000	\$100,000,000	3.07	1.02	\$0	-	N/A
HPS Cardinal Fund LP Series B	2017		\$35,099,627	\$75,000,000	\$39,999,999	(1.38)	1.00	\$1	0.00	N/A
Magnetar Constellation Fund IV LLC	2013		\$95,619,279	\$100,000,000	\$0	6.59	1.21	\$24,912,573	0.25	YES
Marathon Currituck Fund, LP	2014		\$463,369,036	\$453,000,000	\$32,715,497	3.34	1.10	\$0	-	N/A
Marathon Currituck Series D	2016		\$27,807,882	\$100,000,000	\$75,000,000	(0.25)	1.00	\$0	-	N/A
MCP Private Capital Fund II	2014		\$48,517,054	\$68,433,000	\$20,429,732	5.15	1.05	\$7,493,964	0.14	YES
Monarch Debt Recovery Fund	2011		\$488,600,000	\$380,000,000	\$0	4.67	1.29	\$1,840,187	0.00	N/A
Oaktree Value Opportunities Fund, L.P.	2011		\$94,384,064	\$190,000,000	\$0	2.61	1.13	\$122,612,708	0.64	N/A
PAAMCO - Newport Burgundy	2010		\$785,579,471	\$950,000,000	\$0	3.83	1.20	\$350,000,000	0.37	N/A
Providence Debt Fund III, L.P.	2013		\$205,166,897	\$200,000,000	\$4,116,825	9.79	1.19	\$31,333,820	0.16	YES
Saba Capital Partners	2011	2015	\$0	\$150,000,000	\$0	(7.05)	0.79	\$119,737,014	0.79	N/A
Silverback Arbitrage Fund	2012		\$49,888,666	\$155,000,000	\$0	(1.00)	0.96	\$98,197,699	0.63	N/A
Varde Fund X	2011		\$70,218,021	\$100,000,000	\$0	12.70	1.80	\$109,191,640	1.09	N/A
WLR IV PPIP Co-Invest	2010		\$14,336,940	\$150,000,000	\$4,305,452	15.04	1.38	\$188,273,786	1.29	YES
Total			\$5.524.127.502	\$8.337.008.665	\$1,413,151,147	6.19	1.23	\$3.138.880.054	0.45	

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- Total Value to Paid-In (TVPI), also know as the Investment Multiple, is the ratio of cumulative distributions plus the valuation to cumulative paid-in.
- Distributions to Paid-In (DPI), also know 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, 2017

	Returns										
Fund	Inception	Market Value	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr			
Core IG Fixed Income	1997	\$25,265,886,202	(0.4)	3.2	2.9	6.0	5.9	6.5			
Core Fixed Income Benchmark			(0.8)	3.5	2.9	5.8	5.6	6.2			
IG Fixed Income Cash	2014	\$2,982,236,363	1.0	0.7	-	-	-	-			
IG Fixed Income Cash Benchmark			0.5	0.2	0.2	-	-	-			
Pension Cash	2013	\$3,682,775,214	1.0	0.8	-	-	-	-			
Pension Cash Benchmark			0.5	0.2	0.2	-	-	-			
Total		\$31,930,897,779	(0.4)	2.8	2.7	5.9	5.8	6.4			
Rates & Liquidity Benchmark			(0.6)	3.1	2.7	5.7	5.6	6.2			

- -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, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distribution	DPI	Advisory Board
ArcLight Energy Partners Fund V, L.P.	2011		\$56,764,135	\$100,000,000	\$14,907,265	2.39	1.07	\$33,911,946	0.40	YES
ArcLight Shore Co-Investments Holdings II, LLC	2013	2015	\$1	\$10,000,000	\$0	8.39	1.11	\$9,868,585	1.11	N/A
BlackRock TIPS Index	2015		\$55,443,514	\$500,000,000	\$0	1.00	1.01	\$450,000,000	0.90	N/A
Blackstone Energy Partners, LP	2012		\$105,503,521	\$100,000,000	\$9,706,662	13.59	1.41	\$32,540,926	0.34	YES
Blackstone Energy Partners II, L.P.	2014		\$36,609,974	\$100,000,000	\$67,485,803	26.54	1.08	\$72,774	0.00	YES
Blackstone Granite Fund - Class A - Resources Select	2011		\$286,129,460	\$500,000,000	\$0	(9.12)	0.56	\$0	-	N/A
Blackstone Granite Fund - Class B - Commodity Pod	2014		\$188,299,854	\$200,000,000	\$0	(2.64)	0.93	\$0	-	N/A
Blackstone Granite Fund - Class C - Opportunistic Commodity	2014		\$0	\$100,000,000	\$25,000,000	(62.14)	0.50	\$18,913,571	0.50	N/A
Blackstone Granite Fund - Class D - Bayview	2014		\$350,873,329	\$400,000,000	\$97,251,624	12.40	1.19	\$0	-	NO
Blackstone SP NCRASMA	2014		\$240,759,819	\$450,000,000	\$266,274,265	23.51	1.31	\$60,928,031	0.26	Observer
Blackstone SP NCRASMA (Overage)	2015		\$66,284,105	\$100,000,000	\$44,621,463	15.50	1.24	\$4,101,939	0.07	N/A
Brookfield Infrastructure Fund II-B, L.P.	2013		\$198,055,637	\$200,000,000	\$23,434,457	9.59	1.22	\$25,104,336	0.14	YES
Campbell Timber Fund III, LLC	2006		\$684,518,907	\$796,878,283	\$0	(1.89)	0.88	\$18,600,000	0.02	YES
Capital Dynamics US Solar Energy, LP	2012	2017	\$0	\$25,000,000	\$2,579,396	10.28	1.23	\$28,111,926	1.23	YES
Credit Suisse Enhanced	2011	2017	\$0	\$500,000,000	\$0	(13.73)	0.53	\$263,514,282	0.53	N/A
Denham Commodity Partners Fund VI LP	2012		\$54,469,421	\$75,000,000	\$12,769,997	9.48	1.17	\$27,124,149	0.39	NO
DCPF VI Oil and Gas Co-Inv Fund	2013		\$58,369,863	\$50,000,000	\$8,928,561	29.69	1.57	\$9,250,119	0.21	YES
DL Blue Diamond Fund	2016		\$317,795,414	\$300,000,000	\$0	5.56	1.06	\$0	-	N/A
EIF United States Power Fund IV, L.P.	2011		\$77,295,750	\$75,000,000	\$9,462,657	9.34	1.30	\$7,614,019	0.12	YES
EIG Energy Fund XVI, L.P.	2013		\$147,249,209	\$250,000,000	\$111,785,875	8.41	1.16	\$28,644,041	0.19	YES
EnCap Energy Capital Fund VIII Co-Investors, L.P.	2011		\$16,668,629	\$29,814,882	\$4	(9.98)	0.74	\$3,704,268	0.12	N/A
EnCap Energy Capital Fund VIII, LP	2011		\$22,378,044	\$50,000,000	\$4,189,740	(3.59)	0.90	\$19,837,166	0.43	NO
EnCap Energy Capital Fund X, L.P.	2015		\$56,364,363	\$123,000,000	\$66,667,008	17.52	1.13	\$16,738,906	0.26	Observer
Energy Capital Partners II (Summit Co-Invest), LP	2011		\$15,798,481	\$28,220,824	\$0	1.68	1.07	\$12,881,358	0.48	N/A
Energy Capital Partners II, LP	2010		\$24,707,866	\$50,000,000	\$15,049,807	14.18	1.71	\$37,438,961	1.03	YES
Energy Capital Partners III, LP	2014		\$54,588,345	\$100,000,000	\$48,259,579	12.85	1.21	\$4,444,940	0.09	YES
Gresham TAP Flex	2010		\$204,942,543	\$800,000,000	\$0	(9.43)	0.57	\$250,000,000	0.31	N/A
GSO Bakken Holdings I LP	2013		\$13,661,883	\$15,000,000	\$2,983,088	8.01	1.28	\$2,320,338	0.19	N/A
GSO Energy Partners - B LP	2013		\$89,850,948	\$250,000,000	\$156,204,234	(3.33)	0.96	\$7,329,217	0.07	N/A
GSO Foreland Resources Co-Invest LP	2013	2014	\$0	\$15,000,000	\$130,204,234	27.99	1.31	\$15,645,719	1.32	N/A
IFM Global Infrastructure Fund, L.P.	2013		\$349,912,417	\$300,000,000	\$0	9.54	1.21	\$13,388,789	0.04	YES
Intervale Capital II, LP	2012		\$29,697,074	\$51,428,572	\$9,944,496	(9.76)	0.73	\$789,234	0.02	YES
Intervale Capital III, LP	2014		\$45,764,077	\$60,000,000	\$14,724,407	0.71	1.01	\$0		YES
Jade Real Assets Fund, L.P.	2014		\$96,177,716	\$150,000,000	\$68,346,909	13.49	1.23	\$39,424,426	0.36	N/A
Landmark Real Asset SMA, L.P.	2014		\$77,669,981	\$250,000,000	\$180,150,550	24.98	1.14	\$11,082,690	0.14	N/A
Landmark Real Estate Partners VII, L.P.	2014		\$63,118,271	\$100,000,000	\$18,361,881	15.80	1.16	\$32,054,511	0.39	NO
Lindsay Goldberg III - Formation Energy L.P.	2013		\$2,849,649	\$10,000,000	\$4,562,076	(16.55)	0.52	\$0	-	N/A
MTP Energy Fund LP	2013		\$227,351,853	\$250,000,000	\$4,302,070	0.23	1.01	\$30,000,000	0.12	N/A
MTP Energy Opportunities Fund LP	2013		\$50,000,701	\$75,000,000	\$23,147,891	5.77	1.17	\$13,352,143	0.26	YES
MTP Energy Opportunities Fund II LLC	2015		\$131,390,873	\$250,000,000	\$121,549,060	3.24	1.04	\$16,575,864	0.12	YES
NC Garnet Fund	2016		\$309,377,416	\$300,000,000	\$121,545,000	3.09	1.03	\$10,575,004	-	N/A
North Star Investment Co-Invest	2013		\$186,289,318	\$200,000,000	\$41,322,168	8.55	1.25	\$20,979,375	0.13	N/A
North Star Investment Holdings LLC	2013		\$202,593,316	\$200,000,000	\$13,319,285	5.77	1.17	\$29,094,751	0.15	N/A
Perella Weinberg Partners ABV Opportunity Fund III LP	2012		\$117,457,412	\$150,000,000	\$3,619,405	5.90	1.22	\$67,600,334	0.15	YES
Quintana Energy I Co-Investment	2011		\$91,127	\$75,000,000	\$52,884,689	12.94	1.63	\$36,048,376	1.63	YES
Quintana Energy I, L.P.	2007		\$40,121,561	\$100,000,000	\$802,752	(0.14)	0.99	\$57,095,245	0.58	YES
Quintana Energy II Co-Invest	2008	2014	\$40,121,301	\$75,000,000	\$802,732	(0.14)	-	\$07,093,243	-	N/A
Quintana Energy Partners II, L.P.	2008		\$20,767,358	\$86,208,333	\$1,749,324	2.14	1.04	\$67,299,609	0.80	YES
Orion Mine Finance Fund I	2012		\$83,051,071	\$75,000,000	\$4,434,732	7.85	1.24	\$7,697,576	0.30	YES
Orion Mine Finance Fund I-A	2012		\$181,951,898	\$125,000,000	\$10,775,595	31.08	1.69	\$7,037,370	0.11	YES
RMK Emerging Growth Timberland Fund	1993	2013	\$161,951,696	\$15,000,000	\$10,775,595	9.38	2.92	\$44,071,503	2.92	N/A
Sheridan Production Partners I, L.P.	2007	2013	\$65,724,000	\$116,550,000	\$0	5.88	1.27	\$82,750,000	0.71	YES
Sheridan Production Partners I, L.P. Sheridan Production Partners II, L.P.	2010		\$109,502,000	\$165,000,000	\$0 \$0	(7.15)	0.73	\$11,550,000	0.71	YES
Timber Investment Resources (Nahele, LLC) Separate	2010		\$266,776,563	\$200,000,000	\$0 \$0	3.19	1.38	\$12,967,580	0.07	YES
Varde Fund XI, L.P.	2006		\$423,000,905	\$350,000,000	\$0 \$0	8.04	1.38	\$12,967,580 \$0	0.06	YES
Vermillion Celadon	2014	2013	\$423,000,903	\$300,000,000	\$0 \$0	(13.42)	0.76	\$0 \$228,351,957	0.76	N/A
verminori celadoli	2011	2013	\$0	,300,000,000	30	(13.44)	0.70	J220,331,33/	0.70	IV/ A
Total			\$6,504,019,570	\$10,322,100,894	\$1,557,256,705	(0.33)	0.99	\$2,211,594,055	0.25	

<sup>-</sup> 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.

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

<sup>-</sup> Distributions to Paid-In (DPI), also know 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, 2017

Fund	Vintage	Liquidated	Market Value	Commitment	Unfunded	IRR	TVPI	Distributions	DPI	Advisory Board
BlackRock Developed	2016		\$345,259,903	\$312,445,976	\$0	7.79	1.11	\$0	-	N/A
Blackstone NC Property Partners, L.P.	2014		\$195,353,382	\$200,000,000	\$18,122,790	7.69	1.16	\$17,829,849	0.10	YES
Blackstone Property Partners, L.P.	2014		\$372,348,835	\$300,000,000	\$0	10.82	1.23	\$11,907,176	0.04	YES
BREP Edens Investment Partners L.P.	2013		\$516,066,558	\$487,500,000	\$50,598,953	8.17	1.27	\$52,205,281	0.12	YES
BR Emerging REIT	2016		\$66,906,634	\$50,000,000	\$0	24.13	1.34	\$0	-	N/A
BR World REIT	2016		\$254,805,365	\$227,153,161	\$0	9.01	1.12	\$0	-	N/A
CIGNA Realty Investors Open-End Fund	1987	2015	\$0	\$243,938,601	\$0	2.57	1.16	\$282,716,893	1.16	N/A
CIM Urban REIT, LLC	2006		\$74,534,649	\$100,000,000	\$0	6.42	1.63	\$88,129,413	0.88	YES
JP Morgan Strategic Property Fund	1989		\$360,237,489	\$305,133,108	\$0	9.15	2.70	\$501,461,062	1.57	N/A
LBA NC Core Industrial, L.P.	2016		\$184,660,507	\$300,000,000	\$121,782,178	7.96	1.06	\$4,430,840	0.02	YES
M&G Real Estate Debt Fund III	2013		\$21,160,338	\$33,318,068	\$11,505,519	(4.00)	0.93	\$8,632,408	0.28	YES
Meadow Core Plus Real Estate Fund	2014		\$136,057,729	\$129,895,000	\$0	(4.96)	0.90	\$4,867,156	0.03	YES
Meadow Core Plus Real Estate Fund 2015-1 Series	2017		\$17,099,637	\$84,431,750	\$65,690,680	(26.48)	0.71	\$737,493	0.03	YES
MS Global RE Securities	2007		\$9,791	\$400,000,000	\$0	0.79	1.07	\$428,702,218	1.07	N/A
MW North Carolina Debt Fund, LLC	2016		\$66,621,796	\$200,000,000	\$133,803,330	0.82	1.01	\$895,596	0.01	YES
NorthRock Core Fund, L.P.	2008		\$696,399,199	\$600,000,000	\$41,801,432	9.91	1.64	\$224,501,876	0.40	YES
NorthRock Fund II, L.P Core	2016		\$317,961,990	\$336,880,188	\$0	24.92	1.17	\$75,377,436	0.22	YES
NorthRock Fund IV, L.P.	2015		\$288,990,521	\$400,000,000	\$106,766,133	1.41	1.01	\$18,999,022	0.06	YES
Prudential Property Investment Separate Account	2004	2017	\$0	\$204,934,563	\$0	9.76	1.74	\$363,169,193	1.74	N/A
RLJ Lodging Fund II, L.P.	2006	2014	\$0	\$50,000,000	\$0	3.61	1.25	\$62,322,697	1.25	YES
RLJ Real Estate Fund III, L.P.	2007	2014	\$0	\$50,000,000	\$0	9.62	1.41	\$57,227,492	1.41	YES
Rockpoint Growth and Income Side Car Fund I, L.P.	2014		\$207,041,334	\$200,000,000	\$27,651,146	11.00	1.19	\$0	-	YES
Rockpoint Growth and Income Real Estate Fund I, L.P.	2014		\$199,538,784	\$200,000,000	\$30,357,480	12.41	1.19	\$6,889,694	0.04	YES
Rockpoint Growth and Income Real Estate Fund II, L.P.	2016		\$0	\$100,000,000	\$100,000,000	-	-	\$0	-	YES
Rockpoint Growth and Income Side Car Fund II, L.P.	2016		\$39,490,236	\$100,000,000	\$60,469,558	(0.12)	1.00	\$0	-	YES
Rockwood Income and Credit Partners LP	2016		\$0	\$100,000,000	\$100,000,000	-	-	\$0	-	YES
RREEF Global Opportunities Fund II, LLC Senior Nts	2010	2013	\$0	\$12,366,672	\$0	23.62	1.55	\$18,643,810	1.55	YES
Security Capital Focus Select	2007	2016	\$0	\$30,000,000	\$0	3.92	1.39	\$41,832,707	1.39	N/A
Sentinel Real Estate Fund	1985	2010	\$0	\$65,000,000	\$0	7.08	3.26	\$222,130,004	3.26	N/A
STAG Investments II, LLC	2005		\$0	\$75,000,000	\$0	(10.21)	0.75	\$60,402,567	0.81	YES
Terra Firma Deutsche Annington, L.P. (Core)	2014	2015	\$0	\$80,946,200	\$0	4.36	1.06	\$103,009,894	1.06	N/A
UBS Trumbull Property Fund	1984		\$155,415,694	\$215,000,000	\$0	8.66	2.11	\$459,561,332	1.58	YES
UBS Trumbull Property Income Fund	1984		\$1	\$120,995,294	\$0	8.32	3.09	\$374,330,961	3.09	YES
Transition Accounts	2015		\$211,844	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total			\$4,516,172,216	\$6,314,938,581	\$868,549,199	7.20	1.42	\$3,490,914,070	0.62	

<sup>-</sup> 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.

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

- Distributions to Paid-In (DPI), also know 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, 2017

					Returns			
Fund	Inception	<b>Market Value</b>	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr	20 Yr
AG Cataloochee, L.P.	2016	\$153,534,110	14.1	-	-	-	-	-
Broyhill Fund	2002	\$773,885	3.7	(35.9)	(31.9)	(24.1)	-	-
GCM/NC Invest Fund 2011 Series	2011	\$78,212	(4.2)	(33.3)	(26.9)	-	-	-
Gladius Aconcagua	2011	\$1,443,498,415	14.4	4.9	10.6	-	-	-
Gladius Arx Fund	2017	\$148,382,985	-	-	-	-	-	-
Gladius Venator Fund	2017	\$7,500,000	-	-	-	-	-	-
SCS Instl Global Series I	2008	\$710,106	(10.9)	(5.3)	(0.1)	-	-	-
Total		\$1,754,477,713	13.2	4.2	9.3	5.2	-	-
Multi-Strategy Benchmark			12.4	2.9	8.5	4.4	-	-

<sup>-</sup>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.

<sup>-</sup> 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

		Total	NCR	S External Fees Pa	aid I	Y 2016-2017					
Asset Classification	Mar	nagement Fees		ncentive Fees	Total Fees		Fno	ding Market Value	Ratio of Fees to		
7 to See Glassification	iviai	iagement rees								ang market value	<b>Ending Market Value</b>
Public Equity	\$	84,193,763	\$	6,185,620	\$	90,379,383	\$	35,331,733,793	0.26%		
Private Equity	\$	65,935,717	\$	55,257,094	\$	121,192,811	\$	4,825,352,506	2.51%		
Non-Core Real Estate	\$	53,195,776	\$	50,421,413	\$	103,617,190	\$	3,669,848,133	2.82%		
Opportunistic Fixed Income	\$	53,547,631	\$	35,904,273	\$	89,451,905	\$	5,524,127,502	1.62%		
IG Fixed Income & Cash	\$	-	\$	-	\$	-	\$	28,248,122,565	0.00%		
Pension Cash	\$	-	\$	-	\$	-	\$	3,682,775,214	0.00%		
Inflation Sensitive	\$	54,237,935	\$	4,542,092	\$	58,780,027	\$	6,504,019,570	0.90%		
Core Real Estate	\$	30,840,958	\$	883,404	\$	31,724,362	\$	4,516,172,216	0.70%		
Multi-Strategy	\$	4,222,698	\$	-	\$	4,222,698	\$	1,754,477,713	0.24%		
Total Fund	\$	346,174,479	\$	153,193,897	\$	499,368,376	\$	94,056,629,211	0.53%		
Ratio of Fees to Ending Marke Value	t	0.37%		0.16%		0.53%					

Note: 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.

Pub	lic Equity Externa	al Fees Paid FY 2	2016-2	2017				
Asset Classification	Man	Management Fees		centive Fees	Total Fees		Ending Market Value	
Baillie Gifford EAFE Plus Alpha	\$	4,762,530	\$	-	\$ 4,762,530	\$	1,830,210,258	
Baillie Gifford Emerging Markets Equities	\$	3,293,620	\$	-	\$ 3,293,620	\$	630,823,691	
BlackRock EAFE LC Growth	\$	169,315	\$	-	\$ 169,315	\$	761,948,881	
BlackRock Emerging Markets Opportunities Fund	\$	4,185,147	\$	-	\$ 4,185,147	\$	672,257,547	
BlackRock Frontier Markets Fund	\$	1,636,399	\$	-	\$ 1,636,399	\$	206,268,404	
BlackRock Global Transition	\$	-	\$	-	\$ -	\$	41,123,082	
BlackRock Mid Cap Passive	\$	23,836	\$	-	\$ 23,836	\$	372,970,294	
BlackRock MSCI ACWI ex US IMI	\$	650,231	\$	-	\$ 650,231	\$	6,852,816,104	
BlackRock R1000 Passive	\$	517,214	\$	-	\$ 517,214	\$	8,249,961,337	
Brown Advisory Small Cap Growth	\$	1,376,996	\$	-	\$ 1,376,996	\$	267,690,707	
Cash and Liquidating Accounts	\$	24,958,681	\$	-	\$ 24,958,681	\$	23,402,762	
Earnest Partners Small Cap Value	\$	2,428,868	\$	-	\$ 2,428,868	\$	499,452,504	
ECM Bespoke Fund 2	\$	-	\$	-	\$ -	\$	32,947,135	
ECM Feeder Fund 2	\$	2,351,982	\$	6,185,620	\$ 8,537,602	\$	169,644,832	
Franklin Templeton Int'l SC	\$	3,135,968	\$	-	\$ 3,135,968	\$	578,688,452	
Mondrian Emerging Markets Equity	\$	2,541,647	\$	-	\$ 2,541,647	\$	399,644,192	
Mondrian Focused International Equity	\$	3,949,091	\$	-	\$ 3,949,091	\$	1,375,403,076	
Mondrian Int'l SC	\$	3,233,604	\$	-	\$ 3,233,604	\$	520,172,976	
Numeric Small Cap Value	\$	2,883,389	\$	-	\$ 2,883,389	\$	415,552,521	
ONSHE BlackRock	\$	3,219,284	\$	-	\$ 3,219,284	\$	2,462,288,522	
ONSHE Marshall Wace	\$	532,414	\$	-	\$ 532,414	\$	203,338,938	
ONSHE Menta	\$	1,138,677	\$	-	\$ 1,138,677	\$	191,415,203	
Piedmont R200 Passive	\$	333,940	\$	-	\$ 333,940	\$	3,508,572,886	
TimesSquare MidCap Growth	\$	2,947,501	\$	-	\$ 2,947,501	\$	566,894,347	
ValueAct Capital	\$	1,823,474	\$	-	\$ 1,823,474	\$	385,869,604	
Walter Scott International	\$	5,292,740	\$	-	\$ 5,292,740	\$	1,605,040,932	
Wellington Diversified International	\$	2,832,561	\$	-	\$ 2,832,561		1,263,858,691	
Wellington Opportunistic Growth	\$	3,974,654	\$	-	\$ 3,974,654		1,243,475,914	
Total	\$	84,193,763	\$	6,185,620	\$ 90,379,383	\$	35,331,733,793	

Privat	e Equity Externa	l Fees Paid FY	2016	5-2017				
Asset Classification	Mana	gement Fees		Incentive Fees		Total Fees	End	ling Market Value
A.V. Management IV, LLC	\$	-	\$	-	\$	-	\$	1,244,354
Academy Venture Fund, LLC	\$	-	\$	-	\$		\$	-
Accel-KKR Capital Partners IV, LP	\$	76,545	\$	-	\$	76,545	\$	7,511,213
Access Capital L.P. II D	\$ ¢	- 286,141	\$	-	\$	- 206 141	\$	131,937
AG Private Equity Partners IV (R), L.P. AG Private Equity Partners IV, L.P.	\$ ¢	415,205	\$ \$	-	ç	286,141 415,205	\$ \$	33,233,530
Ampersand 2006 Limited Partnership	ş ¢	137,830	\$ \$	- 6,215,049	۶ \$	6,352,879	\$ \$	38,290,505 18,428,186
Angeleno Investors II, L.P.	¢	518,632	ب \$	0,213,049	ب \$	518,632	\$	22,080,963
Apollo Investment Fund VI, L.P.	¢	318,032	\$		ç	518,032	\$	22,080,903
Apollo Investment Fund VIII, L.P.	ς ς	1,068,607	\$	138,760	\$	1,207,367	\$	147,639,245
Arch IX Overage	\$	1,000,007	ς ς	130,700	ς ς	1,207,307	\$	23,648,981
ARCH Venture Fund IX	Ś	1,353,000	\$	_	\$	1,353,000	\$	11,781,050
ARCH Venture Fund VII, L.P.	\$	403,357	\$	2,921,237	\$	3,324,594	\$	78,484,689
ARCH Venture Fund VIII, L.P.	\$	1,691,608	\$	-	Ś	1,691,608	\$	118,646,113
Aurora Ventures IV, LLC	\$	-,	\$	-	\$	-,	\$	3,132,029
Aurora Ventures V, LLC	\$	-	\$	-	\$	_	\$	11,223,341
Avista Capital Partners I, L.P.	\$	40,556	\$	(296,112)	\$	(255,556)	-	15,066,652
Avista Capital Partners II, L.P.	\$	-	\$	4,927,257	\$	4,927,257	\$	44,632,531
Avista Capital Partners III, L.P.	\$	-	\$	-	\$	-	\$	149,867,958
Blackstone Core Equity Partners LP	\$	-	\$	-	\$	-	\$	84,075,272
Blackstone TN Partners LP	\$	-	\$	-	\$	-	\$	34,395,664
Burrill Life Sciences Capital Fund III, L.P.	\$	355,998	\$	-	\$	355,998	\$	17,591,551
Burrill Life Sciences Capital Fund, L.P.	\$	-	\$	-	\$	-	\$	-
Carousel Capital Partners III, L.P.	\$	(38,998)	\$	278,745	\$	239,747	\$	171,237
Carousel Capital Partners IV, L.P.	\$	265,668	\$	938,777	\$	1,204,445	\$	14,928,374
Carousel Capital Partners V LP	\$	258,392	\$	-	\$	258,392	\$	33,820
Castle Harlan Partners IV, L.P.	\$	-	\$	-	\$	-	\$	8,668,664
Castle Harlan Partners V, L.P.	\$	193,158	\$	-	\$	193,158	\$	64,470,850
Catterton Growth Partners II, L.P.	\$	995,789	\$	-	\$	995,789	\$	87,771,537
Catterton Growth Partners, L.P.	\$	306,650	\$	-	\$	306,650	\$	24,719,717
Catterton Partners VII, L.P.	\$	1,448,166	\$	-	\$	1,448,166	\$	115,356,105
Chapter IV Investors Special Situations Fund, L.P.	\$	310,386	\$	-	\$	310,386	\$	60,582,747
Charterhouse Capital Partners IX, L.P.	\$	562,326		6,135,897	\$	6,698,223	\$	32,769,853
Charterhouse Capital Partners X, L.P.	\$	3,587,600	\$	-	\$	3,587,600	\$	41,243,434
Coller International Partners IV, L.P.	\$ 6	1 400 044	\$	665,951	\$	665,951		186,901
Crestview Capital Partners III, L.P.	\$ ¢	1,488,044	Ş د	-	ç	1,488,044	\$ ¢	45,719,052
Crestview Partners II, L.P. CVC Capital Partners VI, L.P.	ş ¢	517,726 1,091,670	\$ \$	-	¢	517,726 1,091,670	\$ \$	93,407,286 52,377,166
CVC Europe Equity Partners IV, L.P.	¢	1,091,070	\$	677,744	ب \$	677,744		10,110,317
CVE Kauffman Fund I	¢	366,462	¢	-	¢	366,462	\$	56,531,520
DLJ Merchant Banking Partners II, L.P.	ς ς	300,402	\$	_	ب خ	300,402	\$	50,551,520
Elevation Partners, L.P.	ς ς	_	ς ,	_	ς ς	_	\$	771,748
Francisco Partners Agility	Ś	234,375	\$	_	Ś	234,375	\$	-
Francisco Partners II, L.P.	\$	254,446	\$	533,878	\$	788,324	\$	11,932,044
Francisco Partners IV, L.P.	\$	1,551,845	\$	-	\$	1,551,845	\$	68,070,118
Franklin Fairview I, L.P.	\$	-	\$	-	; \$	-	\$	917,581
GCM Grosvenor - NC Innovation Fund	\$	729,448	\$	5,569,946	\$	6,299,394	, \$	120,655,173
GCM Grosvenor - NC Innovation Fund 2013-1	\$	37,500	\$	-	\$	37,500	\$	14,692,900
GCM Grosvenor - NC Innovation Fund II	\$	1,859,121	\$	-	\$	1,859,121	\$	43,804,446
GCM Grosvenor - NC Investment Fund 2006	\$	1,036,336	\$	73,852	\$	1,110,188	\$	81,298,239
GCM Grosvenor - NC Investment Fund 2008 Series 1	\$	856,332	\$	-	\$	856,332	\$	89,164,160
GCM Grosvenor - NC Investment Fund 2008 Series 2	\$	472,224	\$	-	\$	472,224	\$	40,716,290
Halifax Capital Partners II, L.P.	\$	44,997	\$	326,913	\$	371,910	\$	5,707,557
Halifax Capital Partners III, L.P.	\$	411,770	\$	2,344,799	\$	2,756,569	\$	13,009,571
Harvest Partners IV, L.P.	\$	-	\$	-	\$	-	\$	4,182,705
Harvest Partners V, L.P.	\$	-	\$	-	\$	-	\$	32,705,888
Harvest Partners VI, L.P.	\$	-	\$	4,707,483	\$	4,707,483	\$	84,310,947
Harvest Partners VII, L.P.	\$	1,088,471	\$	-	\$	1,088,471	\$	26,205,114
Hatteras Venture Partners III, L.P.	\$	98,743	\$	-	\$	98,743	\$	15,942,554
Hg Capital 7	\$	1,487,729	\$	-	\$	1,487,729	\$	78,125,973
Highland Capital Partners VI, L.P.	\$	-	\$	-	\$	-	\$	607,047
Highland Capital Partners VII, L.P.	\$	222,923	\$	-	\$	222,923	\$	7,431,963

Priva	ate Equity Externa	I Fees Paid FY 2	2016-2	2017				
Asset Classification	Mana	gement Fees	In	centive Fees		Total Fees	Endi	ng Market Value
Highland Consumer Fund I, L.P.	\$	420,657	\$	-	\$	420,657	\$	11,367,167
Horsley Bridge International IV, L.P.	\$	512,500	\$	-	\$	512,500	\$	58,395,667
Horsley Bridge International V, L.P.	\$	562,500	\$	-	\$	562,500	\$	98,667,198
Horsley Bridge IX, L.P.	\$	612,500	\$	-	\$	612,500	\$	120,908,697
Intersouth Partners III, L.P.	\$	-	\$	-	\$	-	\$	-
Intersouth Partners VI, L.P.	\$	-	\$	-	\$	-	\$	4,209,480
KRG Capital Fund II, L.P.	\$	-	\$	-	\$	-	\$	-
KRG Capital Fund III, L.P.	\$	-	\$	-	\$	-	\$	222,835
KRG Capital Fund IV, L.P.	\$	271,134	\$	10,919,934	\$	11,191,068	\$	38,121,690
L Catterton Growth Partners III, L.P.	\$	1,125,000	\$	-	\$	1,125,000	\$	33,670,983
Landmark Equity Partners XV, L.P.	\$	2,420,318	\$	-	\$	2,420,318	\$	113,322,687
Levine Leichtman Capital Partners V	\$	2,284,703	\$	-	\$	2,284,703	\$	124,689,608
Lexington Middle Market Investors II, L.P.	\$	222,772	\$	281,030	\$	503,802	\$	49,776,748
Lexington Middle Market Investors III, L.P.	\$	965,578	\$	357,143	\$	1,322,721	\$	60,154,219
Lexington Middle Market Investors, L.P.	\$	110,576	\$	1,037,973	\$	1,148,549	\$	22,335,300
Lindsay Goldberg II, L.P.	\$	183,274	\$	-	\$	183,274	\$	19,988,297
Lindsay Goldberg III, LP	\$	456,620	\$	-	\$	456,620	\$	52,173,979
LittleJohn Opportunities Fund II LP	\$	71,093	\$	-	\$	71,093	\$	18,778,817
Longreach Capital Partners 1, L.P.	\$	-	\$	-	\$	-	\$	41,645,640
Markstone Capital Partners, L.P.	\$	-	\$	-	\$	-	\$	-
Marlin Equity IV	\$	755,270	\$	-	\$	755,270	\$	34,739,216
MatlinPatterson Global Opportunities Partners III	\$	269,858	\$	-	\$	269,858	\$	61,581,883
MHR Institutional Partners IV, L.P.	\$	2,126,967	\$	-	\$	2,126,967	\$	30,142,223
Milestone Partners IV, L.P.	, \$	563,846	\$	_	\$	563,846	, \$	56,381,310
Mount Kellett Capital Partners II, LP	\$	546,227	\$	_	\$	546,227	\$	17,677,212
NCEF Liquidating Trust	Ś	-	\$	_	\$	-	\$	
NEA 14, L.P.	\$	341,816	\$	_	\$	341,816	\$	64,225,545
NEA 15 Opportunity Fund, L.P.	\$	541,010	\$	_	\$	541,610	\$	45,760,023
NEA 15, L.P.	¢	648,116	\$	_	\$	648,116	\$	52,540,573
North Carolina Economic Opportunities Fund	¢	048,110	¢	_	\$	040,110	\$	32,340,373
Northbound NCRS Fund, L.P.	¢	900,000	\$	_	\$	900,000	\$	67,125,340
Novak Biddle Venture Partners III, L.P.	¢	300,000	\$		\$	300,000	\$	182,357
Novak Biddle Venture Partners IV, L.P.	ç Ç	_	ر د		\$	_	\$	1,021,493
Novak Biddle Venture Partners V, L.P.	ې خ	- 82,229	۶ \$	-	۶ \$	- 82,229	۶ \$	
Oaktree European Principal Fund III, L.P.	ې د	627,468	۶ \$	-	۶ \$	627,468	۶ \$	7,426,524
•	ş ç	027,400	ې خ	-		027,400	ې د	43,434,953
Pappas Life Science Ventures II, L.P.	ې خ	-	ې خ	-	\$ ¢	-	ې د	021 214
Pappas Life Science Ventures III, L.P.	Ş	412,703	ې د	-	ç	412.702	\$ \$	921,314
Pappas Life Science Ventures IV, L.P.	ş	412,703	ې د	-	ç	412,703		12,325,036
Perseus Market Opportunity Fund, L.P.	\$ \$	-	\$	-	\$	-	\$	-
Perseus Partners VII, L.P.	\$	-	\$	-	\$	-	\$	-
Quaker BioVentures II, L.P.	\$	1,484,333	\$	-	\$	1,484,333	\$	41,120,791
Robeco Clean Tech II	\$	1,780,625	\$	-	\$	1,780,625	\$	55,270,823
Robeco Clean Tech II Co-Inv	\$	903,456	\$	-	\$	903,456	\$	13,193,328
Sprout Growth II, L.P.	\$	-	\$	-	\$	-	\$	-
Starvest Partners II	\$	232,929	\$	-	\$	232,929	\$	21,675,752
StepStone Pioneer Capital Europe	\$	343,730	\$	413,082	\$	756,812	\$	75,486,906
StepStone Pioneer Capital I	\$	182,546	\$	-	\$	182,546	\$	48,272,815
StepStone Pioneer Capital II	\$	375,785	\$	447,835	\$	823,620	\$	87,922,488
StepStone SYN	\$	143,637	\$	-	\$	143,637	\$	15,045,573
Stock Distribution	\$	90,953	\$	-	\$	90,953	\$	21,323,389
Synergy Life Science Partners, L.P.	\$	337,883	\$	-	\$	337,883	\$	12,201,240
TCV IX, L.P.	\$	423,868	\$	-	\$	423,868	\$	12,723,922
TCV VI, L.P.	\$	34,236	\$	-	\$	34,236	\$	7,471,458
TCV VIII, L.P.	\$	2,613,750	\$	-	\$	2,613,750	\$	134,086,509
Tenaya Capital Fund V	\$	852,728	\$	-	\$	852,728	\$	46,021,691
Tenaya Capital Fund VI	\$	1,125,000	\$	-	\$	1,125,000	\$	65,196,055
Tenaya Capital Fund VII, L.P.	\$	1,800,000	\$	-	\$	1,800,000	\$	26,437,689
Terra Firma Capital Partners II, LP.	\$	-	\$	4,661,917	\$	4,661,917	\$	21,815,679
Terra Firma Capital Partners III, L.P.	\$	1,161,039	\$	- -	\$	1,161,039	\$	81,620,945
Thoma Bravo XII	\$	1,451,192	\$	-	\$	1,451,192	\$	44,017,413
TPG Biotechnology Partners II, L.P.	\$	-	\$	-	\$	-	\$	4,971,004
TPG Biotechnology Partners III, L.P.	\$	267,116	\$	231,817	\$	498,933	, \$	27,240,650

	Private Equity Extern	al Fees Paid FY	2016-	2017				
Asset Classification	Management Fees		Incentive Fees			Total Fees	Ending Market Va	
TPG Partners IV, L.P.	\$	-	\$	-	\$	-	\$	-
TPG Partners V, L.P.	\$	-	\$	-	\$	-	\$	-
TPG Partners VI, L.P.	\$	-	\$	-	\$	-	\$	-
Tudor Ventures III, L.P.	\$	138,251	\$	-	\$	138,251	\$	11,304,937
Vista Equity Partners Fund IV, L.P.	\$	718,683	\$	-	\$	718,683	\$	46,990,930
Warburg Pincus Private Equity IX, L.P.	\$	-	\$	-	\$	-	\$	-
Warburg Pincus Private Equity X - 10	\$	-	\$	-	\$	-	\$	-
Warburg Pincus Private Equity XI, L.P.	\$	1,072,185	\$	345,000	\$	1,417,185	\$	152,815,080
Warburg Pincus Private Equity XII, L.P.	\$	2,478,910	\$	-	\$	2,478,910	\$	52,424,634
WLR AGO Co-Inv, L.P.	\$	-	\$	-	\$	-	\$	-
WLR AHM Co-Inv, L.P.	\$	-	\$	-	\$	-	\$	-
WLR Recovery Fund IV, L.P.	\$	342,376	\$	401,188	\$	743,564	\$	24,380,429
Total	\$	65,935,717	\$	55,257,094	\$	121,192,811	\$	4,825,352,506

Non-Core R	eal Estate Ext	ernal Fees Paid	FY 2	2016-2017				
Asset Classification	Mana	agement Fees	ı	Incentive Fees		Total Fees	Endi	ng Market Value
AG Asia Realty Fund II, L.P.	\$	168,268	\$	-	\$	168,268	\$	9,157,080
AG Asia Realty Fund III LP	\$	1,166,013	\$	-	\$	1,166,013	\$	42,877,894
AG Core Plus Realty Fund I, L.P.	\$	-	\$	-	\$	-	\$	352,534
AG Core Plus Realty Fund II, L.P.	\$	94,154	\$	3,174,408	\$	3,268,562		3,795,216
AG Net Lease Realty Fund II, L.P.	\$	2,061,816	\$	-	\$	2,061,816	\$	98,468,093
AG Net Lease Realty Fund III, L.P.	\$	626,008	\$	-	\$	626,008	\$	72,649,156
American Value Partners Fund I, L.P.	\$	277,203	\$	-	\$	277,203	\$	9,753,619
Benson Elliot Real Estate Partners II, L.P.	\$	-	\$	-	\$	-	\$	8,501,785
Benson Elliot Real Estate Partners III, L.P.	\$	1,781,027	\$	418,144	\$	2,199,171	\$	39,029,443
Blackstone Real Estate Partners Europe IV, L.P.	\$	2,846,342	\$	1,133,878	\$	3,980,220	\$	224,026,688
Blackstone Real Estate Partners Europe V, L.P.	\$ ¢	-	\$	4 690 102	\$ \$	4 690 103	\$	17,107,523
Blackstone Real Estate Partners V. L.P.	ş ç	- 759,624	ې د	4,689,192 6,318,532		4,689,192	\$ \$	33,501,680
Blackstone Real Estate Partners VI, L.P. Blackstone Real Estate Partners VII, L.P.	ş ¢	2,585,205	\$ \$		۶ \$	7,078,156	۶ \$	37,076,554 257,888,232
Blackstone Real Estate Partners VIII, L.P.	ş ¢	3,000,000	۶ \$		۶ \$	9,098,600 3,527,426	۶ \$	90,084,405
Brookfield Real Estate Finance Fund III, L.P.	¢	133,652	ب \$	527,420	ب \$	133,652		9,988,011
CB Richard Ellis Strategic Partners US IV, L.P.	¢	133,032	\$		ر خ	133,032	\$	5,184,444
CB Richard Ellis Strategic Partners US V, L.P.	¢	476,804	\$		¢	476,804	ب \$	39,762,034
Cherokee Investment Partners III, L.P.	¢	470,804	¢		ر خ	470,804	\$	807,874
Cherokee Investment Partners IV, L.P.	¢	218,007	\$	_	¢	218,007	\$	12,867,842
CrossHarbor Institutional Partners II, L.P.	¢	727,228	\$	1,772,456	\$	2,499,684	\$	64,947,325
CrossHarbor Institutional Partners, L.P.	\$	325,850	\$		\$	325,850	\$	10,623,641
Crow Holdings Realty Partners IV, L.P.	\$	245,886	\$	_	\$	245,886	\$	5,393,188
Crow Holdings Realty Partners IV-A, L.P.	ς ς	61,472	\$	_	ς .	61,472		1,259,053
Crow Holdings Realty Partners V, L.P.	ς ς	199,740	\$	_	\$	199,740	\$	10,686,006
Crow Holdings Realty Partners VI, L.P.	\$	973,178	\$	_	\$	973,178	\$	67,400,939
Crow Holdings Realty Partners VII, L.P.	\$	1,437,500	\$	_	\$	1,437,500	\$	70,171,811
DB Real Estate Global Opps I-A/I-B, L.P.	Ś	-	\$	30,948	\$	30,948	\$	1,133,615
DLJ Real Estate Capital Partners I, L.P.	Ś	_	\$	-	\$	-	Ś	-
DLJ Real Estate Capital Partners II, L.P.	Ś	_	Ś	_	Ś	_	Ś	_
DLJ Real Estate Capital Partners III, L.P.	\$	788,378	\$	-	\$	788,378	\$	64,441,176
DLJ Real Estate Capital Partners IV, L.P.	Ś	825,844	\$	_	\$	825,844	\$	87,682,536
DRA Growth & Income Fund III, LLC	Ś	-	\$	-	Ś	-	Ś	-
DRA Growth & Income Fund IV, LLC	, \$	_	\$	_	\$	-	\$	_
DRA Growth & Income Fund V Co-Investment, LLC	, \$	_	\$	36,409	\$	36,409	\$	45,950
DRA Growth & Income Fund V, LLC	\$	355,033	\$	, -	\$	355,033	\$	2,740,124
DRA Growth & Income Fund VI, LLC	\$	91,245	\$	-	\$	91,245	\$	5,070,779
DRA Growth & Income Fund VII, LLC	\$	2,352,152	\$	-	\$		\$	135,002,307
DRA Growth & Income Fund VIII, LLC	\$	3,632,026	\$	-	\$	3,632,026		134,759,339
Frogmore Real Estate Partners I, L.P.	\$	90,817	\$	-	\$	90,817	\$	7,780,060
Frogmore Real Estate Partners II, L.P.	\$	126,155	\$	-	\$	126,155		7,737,647
Frogmore Real Estate Partners III, L.P.	\$	1,518,415	\$	(235,350)	\$	1,283,065	\$	24,828,899
Harrison St. RE Partners III, L.P.	\$	282,656	\$		\$	4,462,041	\$	16,373,388
Harrison St. RE Partners IV, L.P.	\$	967,043	\$	-	\$	967,043	\$	71,509,955
Harrison St. RE Partners V Co-Investment, L.P.	\$	263,215	\$	-	\$	263,215	\$	50,452,305
Harrison St. RE Partners V, L.P.	\$	1,500,000	\$	-	\$	1,500,000	\$	75,368,406
Harrison St. RE Partners VI, L.P.	\$	632,948	\$	-	\$	632,948	\$	5,318,169
Harrison Street Real Estate Partners VI Co-Investment LP	\$	162,024	\$	-	\$	162,024	\$	10,810,080
Hawkeye (Scout) Fund 1-A, L.P.	\$	79,661	\$	3,129,629	\$	3,209,290	\$	424,162
Hawkeye (Scout) Fund II, L.P.	\$	1,259,203	\$	-	\$	1,259,203	\$	20,591,587
JER Real Estate Partners Fund III, L.P.	\$	-	\$	-	\$	-	\$	-
JER Real Estate Partners IV, L.P.	\$	-	\$	-	\$	-	\$	-
Keystone Industrial Fund I, L.P.	\$	-	\$	-	\$	-	\$	447,996
Keystone Industrial Fund II, L.P.	\$	-	\$	-	\$	-	\$	619,705
Keystone Industrial Fund III, L.P.	\$	-	\$	-	\$	-	\$	205,290
LaSalle Real Estate Debt Strategies II, L.P.	\$	589,064	\$	-	\$	589,064	\$	50,463,334
LEM Real Estate Mezzanine Fund II, L.P.	\$	96,729	\$	-	\$	96,729	\$	3,177,626
Lone Star Real Estate Partners II	\$	147,696	\$	1,368,599	\$	1,516,295	\$	48,384,502
Meadow Real Estate Fund II, L.P.	\$	322,380	\$	-	\$	322,380	\$	31,739,830
Meadow Real Estate Fund III, L.P.	\$	1,250,000	\$	-	\$	1,250,000	\$	117,734,632
Meadow Real Estate Fund IV, L.P.	\$	282,779	\$	-	\$	282,779	\$	-
Mesa West Real Estate Income Fund III, L.P.	\$	1,045,792	\$	-	\$	1,045,792	\$	58,780,796

Non-Core Rea	al Estate Ext	ernal Fees Paid	FY 201	6-2017				
Asset Classification	Man	agement Fees	Inc	entive Fees		Total Fees	End	ing Market Value
Morgan Stanley Real Estate Fund VI, L.P.	\$	143,831	\$	-	\$	143,831	\$	49,184,938
North Haven Real Estate Fund V International	\$	47,031	\$	-	\$	47,031	\$	6,701,34
NorthCreek Fund, L.P.	\$	512,500	\$	-	\$	512,500	\$	285,086,29
NorthRock Fund II, L.P.	\$	1,368,000	\$	-	\$	1,368,000	\$	250,546,782
NorthRock Fund III, L.P.	\$	1,800,000	\$	-	\$	1,800,000	\$	183,577,322
Paladin Latin American Partners III, L.P.	\$	581,458	\$	-	\$	581,458	\$	16,415,122
Patria Brazil Real Estate Fund II	\$	303,059	\$	-	\$	303,059	\$	21,609,853
Penwood CSIP I, L.P.	\$	-	\$	-	\$	-	\$	6,044,121
Penwood PSIP II, L.P.	\$	198,240	\$	12,662,174	\$	12,860,414	\$	1,721,741
Rockpoint NYC CIP Investors, L.P.	\$	-	\$	-	\$	-	\$	18,805
Rockpoint Real Estate Fund I, L.P.	\$	-	\$	-	\$	-	\$	-
Rockpoint Real Estate Fund II, L.P.	\$	79,238	\$	-	\$	79,238	\$	12,185,101
Rockpoint Real Estate Fund III, L.P.	\$	190,974	\$	966,096	\$	1,157,070	\$	10,372,294
Rockpoint Real Estate Fund IV, L.P.	\$	702,366	\$	631,139	\$	1,333,505	\$	54,134,170
Rockpoint Real Estate Fund V Side Car, L.P.	\$	-	\$	-	\$	-	\$	-
Rockpoint Real Estate Fund V, L.P.	\$	1,249,741	\$	-	\$	1,249,741	\$	32,726,718
Rockwood Capital Real Estate Partners Fund IX, L.P.	\$	697,267	\$	-	\$	697,267	\$	43,683,469
Rockwood Capital Real Estate Partners Fund VI, L.P	\$	378,210	\$	-	\$	378,210	\$	1,457,656
Rockwood Capital Real Estate Partners Fund VII, L.P.	\$	1,334,148	\$	-	\$	1,334,148	\$	50,808,970
Rockwood Capital Real Estate Partners Fund VIII, L.P.	\$	288,290	\$	1,218,553	\$	1,506,843	\$	3,385,813
Rockwood Capital Real Estate Partners Fund X Side Car, L.P.	\$	46,988	\$	-	\$	46,988	\$	11,013,814
Rockwood Capital Real Estate Partners X, L.P.	\$	178,143	\$	_	\$	178,143	\$	23,358,673
Rockwood Development Partners	\$	, 755,299	\$	_	\$	755,299	\$	29,684,761
RREEF Global Opportunities Fund II, LLC	\$	-	\$	_	Ś	-	\$	1,520,239
SRI Eight REIT	\$	896,274	Ś	_	Ś	896,274	\$	61,199,439
SRI Nine REIT	\$	249,294	\$	278,932	\$	528,226	\$	4,702,048
SRI Seven REIT	; \$	94,384	\$	101,613	\$	195,997		9,288,398
SRI Ten REIT	\$	873,113		1,505,855	\$	2,378,968	\$	46,150,295
Starwood Opportunity Fund VII, L.P.	\$	172,400	\$	-	\$	172,400	\$	45,223,122
Starwood SDL/SOF Co-Investment	Ś	10,412	\$	_	\$	10,412	\$	12,945,191
Value Enhancement Fund II	\$	,	\$	_	\$	,	\$	,,
Value Enhancement Fund IV, L.P.	Ś	_	\$	_	\$	_	\$	_
Warburg Pincus Real Estate I, L.P.	\$	102,667	\$	_	\$	102,667	\$	26,658,919
WCP Real Estate Fund III(A), L.P.	\$	1,116,216	\$	_	\$	1,116,216	\$	91,456,447
Westbrook Real Estate Fund I, L.P.	Ś	-,,	\$	_	\$	-,,	\$	-
Westbrook Real Estate Fund II, L.P.	Ś	-	Ś	_	Ś	_	Ś	_
Westbrook Real Estate Fund III, L.P.	ς ς	-	\$	_	\$	_	\$	_
Westbrook Real Estate Fund IV, L.P.	ς ς	-	Ś	_	Ś	_	\$	_
Total	<u>\$</u>	53,195,776	\$	50,421,413	\$	103,617,190	\$	3,669,848,133

Opportunistic Fiz	ked Income	External Fees P	aid	FY 2016-2017				
Asset Classification	Man	agement Fees		Incentive Fees		Total Fees	Ending Market Va	
AG Capital Recovery Partners V, L.P.	\$	-	\$	-	\$	-	\$	641,889
AG Capital Recovery Partners VI, L.P.	\$	365,660	\$	-	\$	365,660	\$	7,026,997
AG Commercial Real Estate Debt Fund, L.P.	\$	69,402	\$	22,644	\$	92,046	\$	-
AG GECC Public-Private Investment Fund (PPIP)	\$	-	\$	-	\$	-	\$	-
AG Global Debt Strategy Partners, L.P.	\$	1,606,767	\$	2,086,127	\$	3,692,894	\$	514,096,634
AG Pisgah, L.P.	\$	1,524,509	\$	-	\$	1,524,509	\$	439,924,222
Anchorage Capital Partners	\$	6,502,493	\$	2,310,611	\$	8,813,104	\$	509,076,609
Benefit Street Partners Capital Opportunity Fund II LP	\$	5,625	\$	-	\$	5,625	\$	49,968,821
Benefit Street Partners Capital Opportunity Fund, L.P.	\$	455,354	\$	-	\$	455,354	\$	153,180,468
Benefit Street Partners Debt Funds IV LP	\$	-	\$	-	\$	-	\$	41,655,550
Brigade LCS Fund	\$	3,068,217	\$	7,202,721	\$	10,270,938	\$	363,815,184
Brightwood Capital Fund III, L.P.	\$	-	\$	-	\$	-	\$	67,067,637
Centerbridge Special Credit Partners III	\$	1,766,078	\$	_	\$	1,766,078	\$	25,450,700
Claren Road Credit Fund, Ltd.	\$	443,496	\$	-	\$	443,496	\$	11,772,194
Claren Road Credit Opportunities Partners, L.P.	\$	1,149,153	\$	-	\$	1,149,153	\$	29,021,178
CVI Credit Value Fund	\$	2,621,865	\$	9,760,582	\$	12,382,447	\$	62,900,000
CVI Credit Value Fund II	\$	2,280,000			\$	3,522,398		181,400,000
CVI Credit Value Fund III	\$	495,000	\$	89,908	\$	584,908	;	76,800,000
Fortress Credit Opportunities Fund III (A)	\$	658,754	\$	-	\$	658,754	\$	48,312,191
GSO Capital Opportunities Fund	\$	192,046	\$	(1,020,867)		(828,821)		4,157,349
GSO Capital Opportunities Fund II, L.P.	\$	1,002,155	\$	-	\$	1,002,155	;	62,604,077
GSO Capital Solutions Fund II, L.P.	\$	788,659	\$	_	\$	788,659	\$	47,273,055
Highbridge Irish Specialty Loan Fund III plc	Ś	2,568,446	\$	869,750	\$	3,438,197		88,989,498
Highbridge Principle Strategies Kitty Hawk Credit Fund LP	Ś	11,972	\$	-	\$	11,972	\$	89,849,579
Highbridge Specialty Loan Fund 2016 LP	\$	94,019	\$	_	\$	94,019	\$	17,158,603
HPS Cardinal Fund LP Series A	Ś		\$	_	\$	-	Ś	253,398,129
HPS Cardinal Fund LP Series B	Ś	_	\$	_	\$	_	\$	35,099,627
Magnetar Constellation Fund IV LLC	\$	1,049,402	\$	_	\$	1,049,402	\$	95,619,279
Marathon Currituck Fund, LP	Ś	3,199,708	\$	2,790,442	\$	5,990,150	\$	463,369,036
Marathon Currituck Series D	Ś	7,488	\$	-	\$	7,488	\$	27,807,882
MCP Private Capital Fund II	Ś	1,045,193	\$	_	Ś	1,045,193	\$	48,517,054
Monarch Debt Recovery Fund	\$	6,695,486	\$	3,709,233	\$	10,404,719	-	488,600,000
Oaktree Value Opportunities Fund, L.P.	ς ς	1,829,477	\$	-	\$	1,829,477	\$	94,384,064
PAAMCO - Newport Burgundy	ς ς	7,944,738	\$	_	\$	7,944,738	\$	785,579,471
Providence Debt Fund III, L.P.	\$	536,988	\$	_	\$	536,988	\$	205,166,897
Saba Capital Partners	ς ς	-	\$	_	\$	-	\$	203,100,037
Silverback Arbitrage Fund	ς ς	2,159,517	\$	_	\$	2,159,517	\$	49,888,666
Varde Fund X	¢	1,217,624	\$	4,491,694	\$	5,709,318	\$	70,218,021
WLR IV PPIP Co-Invest	ب خ	1,217,024	۶ \$	2,349,030	۶ \$	2,541,372	۶ \$	14,336,940
Total	, \$	53,547,631	۶ <b>\$</b>	35,904,273	۶ \$	89,451,905	\$	5,524,127,502

Inflation Sen	sitive Exte	rnal Fees Paid F	Y 20	16-2017			
Asset Classification	Man	agement Fees	ı	Incentive Fees	Total Fees	Ending Market Value	
ArcLight Energy Partners Fund V, L.P.	\$	852,014	\$	-	\$ 852,014	\$	56,764,135
ArcLight Shore Co-Investments Holdings II, LLC	\$	-	\$	-	\$ -	\$	1
BlackRock TIPS Index	\$	95,227	\$	-	\$ 95,227	\$	55,443,514
Blackstone Energy Partners II, L.P.	\$	2,116,407	\$	-	\$ 2,116,407	\$	36,609,974
Blackstone Energy Partners, LP	\$	541,461	1	485,522	\$ 1,026,983		105,503,521
Blackstone Granite Fund - Class A - Resources Select	\$	2,127,702	\$	-	\$ 2,127,702		286,129,460
Blackstone Granite Fund - Class B - Commodity Pod	\$	1,403,705	\$	-	\$ 1,403,705	\$	188,299,854
Blackstone Granite Fund - Class C - Opportunistic Commodity	\$	128,816	\$	-	\$ 128,816		<del>-</del>
Blackstone Granite Fund - Class D - Bayview	\$	4,200,000	\$	-	\$ 4,200,000		350,873,329
Blackstone SP NCRASMA	\$	2,583,179	\$	-	\$ 2,583,179		240,759,819
Blackstone SP NCRASMA (Overage)	\$	-		-	\$ 151,511		66,284,105
Brookfield Infrastructure Fund II-B, L.P.	\$	2,531,942	\$	-	\$ 2,531,942	\$	198,055,637
Campbell Timber Fund III, LLC	\$	4,656,455	\$	-	\$ 4,656,455	\$	684,518,907
Capital Dynamics US Solar Energy, LP	\$	-	\$	-	\$ -	\$	-
Credit Suisse Enhanced	\$	-	\$	-	\$ -	\$	-
DCPF VI Oil and Gas Co-Inv Fund	\$	374,216	\$	-	\$ 374,216	\$	58,369,863
Denham Commodity Partners Fund VI LP	\$	1,098,162	\$	-	\$ 1,098,162	\$	54,469,421
DL Blue Diamond Fund	\$	998,727	\$	-	\$ 998,727		317,795,414
EIF United States Power Fund IV, L.P.	\$	1,046,681	\$	-	\$ 1,046,681	\$	77,295,750
EIG Energy Fund XVI, L.P.	\$	2,002,617	\$	-	\$ 2,002,617		147,249,209
EnCap Energy Capital Fund VIII Co-Investors, L.P.	\$	-	\$	-	\$ -	\$	16,668,629
EnCap Energy Capital Fund VIII, LP	\$	485,351	\$	-	\$ 485,351	\$	22,378,044
EnCap Energy Capital Fund X, L.P.	\$	1,845,000	\$	-	\$ 1,845,000	\$	56,364,363
Energy Capital Partners II (Summit Co-Invest), LP	\$	11,350	\$	-	\$ 11,350	\$	15,798,481
Energy Capital Partners II, LP	\$	247,304	\$	-	\$ 247,304	\$	24,707,866
Energy Capital Partners III, LP	\$	1,344,285	\$	-	\$ 1,344,285	\$	54,588,345
Gresham TAP Flex	\$	49,385	\$	-	\$ 49,385	\$	204,942,543
GSO Bakken Holdings I LP	\$	150,212	\$	-	\$ 150,212	\$	13,661,883
GSO Energy Partners - B LP	\$	268,707	\$	-	\$ 268,707	\$	89,850,948
GSO Foreland Resources Co-Invest LP	\$	-	\$	-	\$ -	\$	-
IFM Global Infrastructure Fund, L.P.	\$	2,635,881	\$	161,126	\$ 2,797,007	\$	349,912,417
Intervale Capital II, LP	\$	431,703	\$	-	\$ 431,703	\$	29,697,074
Intervale Capital III, LP	\$	830,342	\$	-	\$ 830,342		45,764,077
Jade Real Assets Fund, L.P.	\$	347,825	\$	-	\$ 347,825	\$	96,177,716
Landmark Real Asset SMA, L.P.	\$	780,000	\$	-	\$ 780,000	\$	77,669,981
Landmark Real Estate Partners VII, L.P.	\$	773,396	\$	-	\$ 773,396	\$	63,118,271
Lindsay Goldberg III - Formation Energy L.P.	\$	-	\$	-	\$ -	\$	2,849,649
MTP Energy Fund LP	\$	2,916,647	\$	-	\$ 2,916,647	\$	227,351,853
MTP Energy Opportunities Fund II LLC	\$	-	\$	-	\$ -	\$	131,390,873
MTP Energy Opportunities Fund LP	\$	-	\$	-	\$ -	\$	50,000,701
NC Garnet Fund	\$	-	\$	-	\$ -	\$	309,377,416
North Star Investment Co-Invest	\$	410,080	\$	-	\$ 410,080	\$	186,289,318
North Star Investment Holdings LLC	\$	2,440,735	\$	-	\$ 2,440,735	\$	202,593,316
Orion Mine Finance Fund I	\$	715,330	\$	-	\$ 715,330	\$	83,051,071
Orion Mine Finance Fund I-A	\$	-	\$	-	\$ -	\$	181,951,898
Perella Weinberg Partners ABV Opportunity Fund III LP	\$	1,603,917	\$	-	\$ 1,603,917	\$	117,457,412
Quintana Energy I Co-Investment	\$	-	\$	-	\$ -	\$	91,127
Quintana Energy I, L.P.	\$	444,551	\$	-	\$ 444,551	\$	40,121,561
Quintana Energy II Co-Invest	\$	-	\$	-	\$ -	\$	-
Quintana Energy Partners II, L.P.	\$	180,979	\$	-	\$ 180,979	\$	20,767,358
RMK Emerging Growth Timberland Fund	\$	-	\$	-	\$ -	\$	-
Sheridan Production Partners I, L.P.	\$	1,250,024	\$	-	\$ 1,250,024	\$	65,724,000
Sheridan Production Partners II, L.P.	\$	846,097	\$	-	\$ 846,097		109,502,000
Timber Investment Resources (Nahele, LLC) Separate	\$	2,162,157	\$	-	\$ 2,162,157	\$	266,776,563
Varde Fund XI, L.P.	\$	4,157,855	\$	3,895,444	\$ 8,053,299	\$	423,000,905
Vermillion Celadon	\$	-	\$	-	\$ -	\$	-
Total	\$	54,237,935	\$	4,542,092	\$ 58,780,027	\$	6,504,019,570

Core Re	al Estate Exter	nal Fees Paid F	2016-2	2017				
Asset Classification	Management Fees		Incentive Fees			Total Fees	End	ling Market Value
BlackRock Developed	\$	117,444	\$	-	\$	117,444	\$	345,259,903
Blackstone NC Property Partners, L.P.	\$	996,166	\$	-	\$	996,166	\$	195,353,382
Blackstone Property Partners, L.P.	\$	2,341,558	\$	-	\$	2,341,558	\$	372,348,835
BREP Edens Investment Partners L.P.	\$	3,209,537	\$	-	\$	3,209,537	\$	516,066,558
BR Emerging REIT	\$	232,039	\$	-	\$	232,039	\$	66,906,634
BR World REIT	\$	983,660	\$	-	\$	983,660	\$	254,805,365
CIGNA Realty Investors Open-End Fund	\$	-	\$	-	\$	-	\$	-
CIM Urban REIT, LLC	\$	-	\$	-	\$	-	\$	74,534,649
JP Morgan Strategic Property Fund	\$	4,697,923	\$	-	\$	4,697,923	\$	360,237,489
LBA NC Core Industrial, L.P.	\$	1,586,633	\$	-	\$	1,586,633	\$	184,660,507
M&G Real Estate Debt Fund III	\$	244,555	\$	-	\$	244,555	\$	21,160,338
Meadow Core Plus Real Estate Fund	\$	1,639,576	\$	-	\$	1,639,576	\$	136,057,729
Meadow Core Plus Real Estate Fund 2015-1 Series	\$	-	\$	-	\$	-	\$	17,099,637
MS Global RE Securities	\$	325,300	\$	-	\$	325,300	\$	9,791
MW North Carolina Debt Fund, LLC	\$	520,521	\$	-	\$	520,521	\$	66,621,796
NorthRock Core Fund, L.P.	\$	5,662,603	\$	-	\$	5,662,603	\$	696,399,199
NorthRock Fund II, L.P Core	\$	432,000	\$	-	\$	432,000	\$	317,961,990
NorthRock Fund IV, L.P.	\$	788,929	\$	-	\$	788,929	\$	288,990,521
Prudential Property Investment Separate Account	\$	1,098,281	\$	147,944	\$	1,246,225	\$	-
RLJ Lodging Fund II, L.P.	\$	-	\$	-	\$	-	\$	-
RLJ Real Estate Fund III, L.P.	\$	-	\$	-	\$	-	\$	-
Rockpoint Growth and Income Side Car Fund I, L.P.	\$	839,194	\$	-	\$	839,194	\$	207,041,334
Rockpoint Growth and Income Real Estate Fund I, L.P.	\$	2,067,440	\$	-	\$	2,067,440	\$	199,538,784
Rockpoint Growth and Income Real Estate Fund II, L.P.	\$	136,578	\$	-	\$	136,578	\$	-
Rockpoint Growth and Income Side Car Fund II, L.P.	\$	38,570	\$	-	\$	38,570	\$	39,490,236
Rockwood Income and Credit Partners LP	\$	-	\$	-	\$	-	\$	-
RREEF Global Opportunities Fund II, LLC Senior Nts	\$	-	\$	-	\$	-	\$	-
Security Capital Focus Select	\$	-	\$	-	\$	-	\$	-
Sentinel Real Estate Fund	\$	-	\$	-	\$	-	\$	-
STAG Investments II, LLC	\$	123,996	\$	-	\$	123,996	\$	-
Terra Firma Deutsche Annington, L.P. (Core)	\$	-	\$	-	\$	-	\$	-
UBS Trumbull Property Fund	\$	2,437,295	\$	735,460	\$	3,172,755	\$	155,415,694
UBS Trumbull Property Income Fund	\$	321,161	\$	-	\$	321,161	\$	1
Transition Accounts	\$	<u>-</u>	\$	<u> </u>	\$		\$	211,844
Total	\$	30,840,958	\$	883,404	\$	31,724,362	\$	4,516,172,216

	Multi-Strategy Externa	al Fees Paid FY	2016-20	17			
Asset Classification	Management Fees Incentive Fees		Total Fees	End	ing Market Value		
AG Cataloochee, L.P.	\$	567,104	\$	-	\$ 567,104	\$	153,534,110
Broyhill Fund	\$	5,065	\$	-	\$ 5,065	\$	773,885
Franklin Street Partners	\$	517,680	\$	-	\$ 517,680	\$	-
GCM/NC Invest Fund 2011 Series	\$	25,000	\$	-	\$ 25,000	\$	78,212
Gladius Aconcagua	\$	1,940,431	\$	-	\$ 1,940,431	\$	1,443,498,415
Gladius Arx Fund	\$	-	\$	-	\$ -	\$	148,382,985
Gladius Venator Fund	\$	397,418	\$	-	\$ 397,418	\$	7,500,000
Investcorp	\$	750,000	\$	-	\$ 750,000	\$	-
SCS Instl Global Series I	\$	20,000	\$	-	\$ 20,000	\$	710,106
Total	\$	4,222,698	\$	-	\$ 4,222,698	\$	1,754,477,713

# 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)	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, 2017. 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 continued 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 the 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.