

**KENTUCKY RETIREMENT SYSTEMS**  
**Management and Performance Fees**  
**For the Period ended March 31, 2019**  
**Unaudited**

**PUBLIC EQUITY**

**US Public Equity**

Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
INTERNAL MID CAP	266,025,510			117,858,963		
INVESCO	7,550					
KRS INTERNAL EQUITY	404,825,030			178,341,701		
NTGI STRUCTURED	181,272,181	282,024		79,814,236	101,284	
RIVER ROAD	18,889,242	90,414		8,422,896	40,420	
RIVER ROAD FAV	132,555,095	213,383		59,847,549	93,731	
S&P 500 INDEX	1,035,587,460			470,955,941		
SYSTEMATIC	-	472,621		-	172,067	
TRANSITION ACCOUNT	142,729			64,154		
WESTFIELD CAPITAL	144,783,824	598,192		64,437,992	264,785	
<b>Subtotal</b>	<b>\$ 2,184,088,621</b>	<b>\$ 1,656,634</b>	<b>\$ -</b>	<b>\$ 979,743,432</b>	<b>\$ 672,288</b>	<b>\$ -</b>

**Non-US Public Equity**

Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
AMERICAN CENTURY	336,110,231	1,038,226		146,946,161	452,346	
BLACKROCK ACWI-EX	990,560,566	408,621		439,106,716	180,448	
BLACKROCK ACWI-EX SC (Insurance ONLY)				34,384,805	31,726	
BOSTON CO	722,107			130,401		
FRANKLIN TEMPLETON	247,264,115	752,347		106,328,821	323,253	
LAZARD ASSET MGMT	454,335,285	706,196		199,877,256	316,390	
LSV ASSET MGMT	390,400,874	1,829,182		169,712,684	796,542	
NON-US TRANS ACCT	1,206,958			397,987		
NTGI INTL SM CAP (Pension ONLY)	76,736,589	36,057				
PYRAMIS	2,101,416			741,930		
<b>Subtotal</b>	<b>\$ 2,499,438,142</b>	<b>\$ 4,770,629</b>	<b>\$ -</b>	<b>\$ 1,097,626,761</b>	<b>\$ 2,100,706</b>	<b>\$ -</b>
<b>Total</b>	<b>\$ 4,683,526,763</b>	<b>\$ 6,427,263</b>	<b>\$ -</b>	<b>\$ 2,077,370,193</b>	<b>\$ 2,772,993</b>	<b>\$ -</b>

**FIXED INCOME**

**Core Fixed Income**

Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
BNY IG CCREDIT FI UNIT	512,731,949	85,848		166,557,982	34,681	
IG CREDIT FI UNIT	6	80,646		9	35,642	
LOOMIS CORE FIXED INCOME	562,663,925			204,605,445		
LORD ABBETT	555,411,797	440,075		214,553,098	193,052	

NISA	602,234,470	629,768		238,532,854	250,079	
PIMCO	201,485			-		
<b>Subtotal</b>	<b>\$ 2,233,243,632</b>	<b>\$ 1,236,336</b>	<b>\$ -</b>	<b>\$ 824,249,389</b>	<b>\$ 513,454</b>	<b>\$ -</b>
<b>Specialty Fixed Income</b>						
	<b>Pension Fund</b>			<b>Insurance Fund</b>		
Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
BSP Private Credit Fund	47,785,318	360,184		23,892,656	180,093	
CERBERUS KRS LP	89,348,275	1,523,153	235,650	38,292,117	652,781	490,237
COLUMBIA	352,889,552	904,470	908,236	90,311,149	231,095	
H/2 CREDIT PARTNER	85,490,244			33,246,206		
LOOMIS	47,205			40,708		
MANULIFE ASSET MGMT	459,625,192	847,921		193,710,956	367,940	
MARATHON BLUEGRASS	343,626,600	2,060,770	2,890,530	135,633,251	810,875	1,114,980
MESA WEST CORE LEND	58,568,581	238,730		36,494,881	140,286	
MESA WEST IV	11,215,503	364,500	35,722	4,361,586	141,750	13,892
SHENKMAN CAP	237,235,121	703,031		117,367,423	350,536	
WATERFALL	190,566,376	1,723,249		91,300,635	550,672	
WHITE OAK YIELD SPECTRUM FUND	92,264,835		337,292	46,132,416		168,646
<b>Subtotal</b>	<b>\$ 1,968,662,801</b>	<b>\$ 8,726,008</b>	<b>\$ 4,407,430</b>	<b>\$ 810,783,983</b>	<b>\$ 3,426,028</b>	<b>\$ 1,787,755</b>
<b>Total</b>	<b>\$ 4,201,906,433</b>	<b>\$ 9,962,344</b>	<b>\$ 4,407,430</b>	<b>\$ 1,635,033,372</b>	<b>\$ 3,939,482</b>	<b>\$ 1,787,755</b>

<b>OPPORTUNISTIC</b>						
	<b>Pension Fund</b>			<b>Insurance Fund</b>		
Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
ARROWMARK	99,658,007		399,759	50,746,471	203,559	
<b>Total</b>	<b>\$ 99,658,007</b>	<b>\$ -</b>	<b>\$ 399,759</b>	<b>\$ 50,746,471</b>	<b>\$ 203,559</b>	<b>\$ -</b>

<b>ABOLUTE RETURN</b>						
	<b>Pension Fund</b>			<b>Insurance Fund</b>		
Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
ANCHORAGE CAPITAL	-	76,237	75,229	-	34,636	35,427
BLACKSTONE STRAT OPP	6,043,304			2,377,075		
COATUE QUALIFIED PARTNERS	678,142			226,047		
CREDIT SUISSE	16,293,288	258,707	306,663	6,767,385	109,433	129,396
DAVIDSON-KEMPNER LP	-	61,522	82,773	-	24,210	32,572
GOTHAM NEUTRAL STRATEGIES	13,340,405	89,566		5,540,911	37,201	
GOVERNORS LANE ONSHORE FUND	21,207,081	213,189		8,808,319	77,336	
KNIGHTHEAD	353,736	5,844	(605)	117,913	1,948	(201)
LIQUIDALTS H2O FORCE	16,867,704			7,086,451		
LUXOR CAPITAL	2,232,811			744,602		
MYRIAD OPPORTUNITIES	45,771,410	340,814		18,226,874	135,519	
PAAMCO	164,785			44,220		
PINE RIVER	357,199	2,623		119,066	878	

PRISMA CAPITAL	96,840,006	909,977	20,527	40,225,891	377,989	8,527
PRUDENTIAL FUND I	495,400		17,337	205,764		7,201
SENATOR LP PENSION		29,884	2,015	-	12,315	830
SRS PARTNERS US	7,962,810	73,393	(33,994)	3,138,277	28,925	(13,398)
SYSTEMATICA BLUE MATRIX		30,618	(29,408)		12,717	(12,215)
TIDE POINT PARTNERS						
TOURBILLON GLOBAL EQ		56,552			22,583	
TRICADIA SELECT	3,501,074	20,144		1,379,832	7,939	
<b>Total</b>	<b>\$ 232,109,155</b>	<b>\$ 2,169,071</b>	<b>\$ 440,536</b>	<b>\$ 95,008,629</b>	<b>\$ 883,628</b>	<b>\$ 188,141</b>

PRIVATE EQUITY						
Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
ARBOR INVST II	4,023,084		(58,961)	447,009		(6,551)
ARCANO FUND	25,244,843	134,176	37,341	2,804,983	14,908	2,729
ARES SSF IV	19,491,924	160,454		10,956,321	52,782	
BAY HILLS EM PTNR I	19,694,102		237,624	2,188,234		26,402
BAY HILLS EM PTNR II	65,534,525	40,200	638,398	7,281,615	4,467	70,933
BAY HILLS EM PTNR III	60,545,427	295,188	542,291	51,787,133	252,133	463,193
BAY HILLS II B	51,708,957	99,720	931,491	5,745,439	11,080	103,499
BDCM OPPT FD IV	32,248,106	465,558		22,133,186	319,532	
BLACKSTONE CAP V	2,389,523		(201,049)	628,559		(52,880)
BLACKSTONE CAP VI	49,864,852	171,702	(420,293)	33,243,232	114,467	(299,251)
CM GROWTH I	9,604,300			1,067,142		
COLUMBIA CAP EQ IV	3,849,944		(6,621)	427,774		
CRESTVIEW PTNRS II	25,318,713	208,655	(1,795,017)	2,813,184	23,181	(199,446)
CRESTVIEW PTNRS III	27,308,933	(9,156)	1,456,098	14,704,816	(4,933)	784,051
CVC CAPITAL PARTNERS VI	26,078,695	184,327	508,734	13,779,921	97,397	614,912
DAG VENTURES II QP	4,362,915			484,759		
DAG VENTURES III QP	2,990,720		200,893	332,289		22,321
DAG VENTURES IV QP	63,197,775	200,176		7,021,975	22,242	
DAG VENTURES V QP	29,780,746	40,000	258,878	26,058,147	35,000	226,518
DB PRIVATE EQUITY	18,582,243	147,422	115,372	55,746,732	442,269	346,118
DCM VI LP	11,777,007			1,308,556		
ESSEX WOOD HLTH VIII	11,981,788	90,198		2,662,619	20,044	
GREEN EQTY INVST IV	257,208	(12,843)	(40,676)	28,579	(1,428)	
GREEN EQTY INVST V	48,792,250	20,171	5,393,198	5,421,361	2,241	599,245
GREEN EQTY INVST VI	33,800,512	169,247	(236,035)	29,575,460	148,091	(206,530)
GREEN EQUITY INV VII	13,567,631	23,521		13,567,631	23,521	
GTCR IX LP	138,378	21,133		15,363	2,348	(194,461)
H & F SPOCK I, LP	4,023,634			1,508,862		
HARVEST PARTNERS V	6,001,955		104,763	666,880		11,641
HARVEST PARTNERS VI	13,313,791		(373,246)	5,438,033		(152,454)

HARVEST PARTNERS VII	11,737,033	27,449	(112,654)	11,737,033	27,449	(112,654)
HELLMAN FRIEDMAN VI	1,323,201		(24,437)	496,214	2	(9,164)
HIG BIOVENTURES II	10,982,034	110,694	(24,092)	9,355,067	94,295	(20,523)
HIG CAP PTRNS V	11,426,045	196,500	688,915	6,018,299	103,500	362,864
HIG VENTURE PTNR II	6,073,284		657,891	674,809		73,099
HORSLEY BRDG INTL V	75,670,787	196,876		8,407,862	21,874	
INST VEN PTRN XII	6,486,009			720,532		
JW CHILDS EQUITY III	836			95		
KAYNE ANDERSON	41,717,141	335,595	(613,569)	41,717,141	335,595	520,881
KCP IV CO-INVEST	6,302,672		15,318	4,325,779		10,513
KEYHAVEN CAPITAL III	22,713,413			2,523,712		
KEYHAVEN CAPITAL IV	8,228,814		44,955	5,647,768		30,855
LEVINE LEICHTMAN CAP PTRNS V	38,122,819	289,974	(303,886)	19,890,166	151,291	190,404
LEVINE LEICHTMAN FUND VI	9,417,438	281,821		9,229,539	450,541	
MATLINPATTERSON II	1,342,126			149,122		
MATLINPATTERSON III	11,134,522	22,745		1,237,226	2,527	
MERIT MEZZ FD IV	2,535,389			281,710		
MHR INST PTRNS III				1,628,834	11,809	(172,551)
MILL ROAD CAPITAL	9,396,541			1,044,060		
NEW MTN PTRNS II LP	392,456		(97,797)	78,495		(19,559)
NEW MTN PTRNS III LP	22,295,802		309,522	4,954,617		68,783
NEW MTN PTRNS IV LP	31,822,296	16,660	734,216	16,687,305	8,736	384,959
OAK HILL CAP PT II	2,359,129	25,232	(23,338)	262,615	2,803	(2,064)
OAK HILL CAP PT III	12,138,712	84,742	71,573	4,495,819	31,386	58,901
OCM OPPTS FD VIIB				182,835	5,852	4,684
RIVERSIDE APPREC VI	28,155,642	198,686	(991,366)	14,841,188	104,729	(522,562)
STRATEGIC VALUE IV	8,651,608	205,340		4,335,799	102,908	
SUN CAP PTRNS				291,164		
TCV VI				535,402		(18,670)
TRITON FUND IV	18,384,919	315,854	(152,599)	9,691,090	102,072	(80,438)
VANTAGEPOINT 2006	7,348,512	33,193		816,503	3,688	
VANTAGEPOINT IV	1,807,210			149,649		
VISTA EQ PTNR FD III	7,223,031	21,607	(249,949)	802,560	2,400	(27,771)
VISTA EQ PTNR FD IV	20,294,795	148,485	311,890	17,288,153	126,488	265,684
VISTA EQ PTNR FD VI	25,761,503	149,342	2,381,866	25,761,503	149,342	2,381,866
WARBURG PINCUS PE IX	3,205,418	13,285	(120,399)	641,084	2,657	(24,080)
WARBURG PINCUS PE X	14,210,659	47,412	(569,586)	2,750,469	9,177	(110,243)
WAYZATA OPPTS FD I						
WAYZATA OPPTS FD II	2,390,226			265,581		
WAYZATA OPPTS FD III	7,180,858			3,785,121		
<b>Total</b>	<b>\$ 1,173,707,359</b>	<b>\$ 5,171,342</b>	<b>\$ 9,225,657</b>	<b>\$ 553,547,714</b>	<b>\$ 3,430,463</b>	<b>\$ 5,393,203</b>

REAL ESTATE

Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
BARING REAL ESTATE	34,020,701			14,580,300		
DIVCOWEST IV	4,177,025	37,451	202,822	1,847,534	16,565	115,253
FUNDAMENTAL PARTNERS III	39,022,370	681,980	943,269	16,723,875	292,277	404,258
GREENFIELD ACQ VI	4,240,290	205,138	(209,142)	1,863,749	90,166	(91,925)
GREENFIELD ACQ VII	23,680,459	302,103	213,859	10,392,145	132,578	93,852
HARRISON STREET	81,301,752	454,142		36,504,792	201,596	
L-A VII	29,388,413	211,684		12,897,072	92,897	
LUBERT ADLER RE VIIB	20,057,733	90,871		8,596,171	38,945	
PATRON CAPITAL	16,897,351	368,880		6,571,397	143,453	
PROLOGIS TUSL	81,405,336		6,252,573	32,217,043		2,474,524
RUBENSTEIN PF II	17,021,658	167,322		7,528,809	74,008	
STOCKBRIDGE SM/MKTS	87,983,501	741,995		39,588,852	328,648	
WALTON ST RE FD VI	14,582,443	115,952		1,620,271	12,884	
WALTON ST RE FD VII	19,600,366	311,441		8,615,008	136,889	
<b>Total</b>	<b>\$ 473,379,397</b>	<b>\$ 3,688,958</b>	<b>\$ 7,403,381</b>	<b>\$ 199,547,019</b>	<b>\$ 1,560,906</b>	<b>\$ 2,995,962</b>

REAL RETURN						
Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
AMERRA AGRI FUND II	22,705,087	178,638	288	9,156,991	72,045	116
AMERRA AGRI HOLDINGS	43,383,977	687,114		23,360,603	369,984	
BTG PACTUAL	24,020,183	286,619		10,791,677	128,771	
INTERNAL TIPS	230,366,198			116,440,030		
MAGNETAR MTP						
MAGNETAR MTP EOF II	26,444,926		11,639	8,814,975	44,987	3,880
NUVEEN REAL ASSET INCOME	215,407,723	1,070,530		88,150,557	438,150	
OBERLAND CAPITAL	152,583	539,420	(125,865)	68,553	242,349	(56,548)
PIMCO ALL ASSET	338,756,193			138,089,874		
TAURUS MINE FINANCE	24,616,148	422,813	381,123	10,861,672	186,562	275,561
TORTOISE CAPITAL	152,189,891	428,692		48,285,911	135,749	
TPF II	679,582	2,705		75,511	300	
<b>Total</b>	<b>\$ 1,078,722,492</b>	<b>\$ 3,616,531</b>	<b>\$ 267,184</b>	<b>\$ 454,096,354</b>	<b>\$ 1,618,896</b>	<b>\$ 223,009</b>

Portfolio Total \$ 11,943,009,607 \$ 31,035,509 \$ 22,143,947 \$ 5,065,349,753 \$ 14,409,928 \$ 10,588,070  
Fees in Basis Points (Annualized for Mgmt. Fees) 0.35% 0.19% 0.38% 0.21%

## NOTE:

**Management Fee** - Management Fees is a fee to compensate investment managers for their time and expertise used to invest KRS funds. The fees typically range from 1%-4% per annum with 2% being the standard.

**Performance/Incentive fee** - a fee charged by the manager for generating returns that exceed the expected rate of return. The standard fee is typically 20% of the amount exceeding the expected rate of return.

**Carried Interest** - a fee charged share of the profits of an investment fund in excess of the amount that the manager contributes to the partnership. The standard fee is typically around 20%

Fees reported for Private Equity and Real Estate may appear high depending on the investment stage. Management Fees are often charged on committed capital; therefore, during the early phase of raising capital, fees may appear to be high because all the capital has not been called for investment.

PIMCO All Asset - KRS holds shares of the mutual fund PAAIX, which has an annual expense ratio of 0.865%