

KENTUCKY RETIREMENT SYSTEMS
Management and Performance Fees
For the Fiscal Year ended December 31, 2018
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	130,898,738			58,672,698		
INVESCO	7,503					
KRS INTERNAL EQUITY	258,239,963			114,190,217		
NTGI STRUCTURED	160,060,013	139,137		70,721,781	13,281	
RIVER ROAD	17,200,990	61,623		7,671,861	27,583	
RIVER ROAD FAV	114,903,214	126,603		51,878,069	53,029	
S&P 500 INDEX	917,601,247			417,328,093		
SYSTEMATIC	204,679,844	477,394		89,290,329	205,834	
TRANSITION ACCOUNT	50,673			6,761		
WESTFIELD CAPITAL	122,112,616	398,028		54,347,140	173,810	
Subtotal	\$ 1,925,754,801	\$ 1,202,786	\$ -	\$ 864,106,948	\$ 473,536	\$ -
Non-US Public Equity						
Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
AMERICAN CENTURY	295,222,189	695,566		129,091,225	302,510	
BLACKROCK ACWI-EX	901,521,194	295,014		398,239,064	129,051	
BLACKROCK ACWI-EX SC (Insurance ONLY)				31,187,526	21,278	
BOSTON CO	751,098			136,708		
FRANKLIN TEMPLETON	213,927,734	505,021		91,950,235	215,778	
LAZARD ASSET MGMT	412,027,658	532,377		181,252,542	229,581	
LSV ASSET MGMT	360,278,263	1,218,583		157,280,877	559,694	
NON-US TRANS ACCT	1,002,915			332,591		
NTGI INTL SM CAP (Pension ONLY)	69,474,623	64,621				
PYRAMIS	2,119,018			742,513		
Subtotal	\$ 2,256,324,693	\$ 3,311,182	\$ -	\$ 990,213,280	\$ 1,457,892	\$ -
Total	\$ 4,182,079,494	\$ 4,513,968	\$ -	\$ 1,854,320,228	\$ 1,931,428	\$ -

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	894,460,155	85,848		360,525,976	34,681	
IG CREDIT FI UNIT	3,848	52,496		6,328	23,192	
LORD ABBETT	544,120,997	54,185		210,210,197	20,933	
NISA	589,853,570	418,880		233,548,590	166,096	

PIMCO	205,127					
Subtotal	\$ 2,028,643,697	\$ 611,408	\$ -	\$ 804,291,091	\$ 244,901	\$ -
Specialty Fixed Income						
	Pension Fund			Insurance Fund		
Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
BSP Private Credit Fund	49,722,687	220,270	1,152	24,861,342	110,136	576
CERBERUS KRS LP	87,468,823	1,015,154	812,218	37,486,638	435,066	348,094
COLUMBIA	332,234,690	587,852		85,014,771	149,714	
H/2 CREDIT PARTNER	85,736,360			33,341,918		
LOOMIS	49,999			41,491		
MANULIFE ASSET MGMT	445,196,083	534,251		187,792,817	219,427	
MARATHON BLUEGRASS	335,625,684	1,366,650	1,909,636	132,496,874	537,932	734,075
MESA WEST CORE LEND	59,602,375	238,730		36,494,881	140,286	
MESA WEST IV	11,419,211	243,000		4,440,805	94,500	
SHENKMAN CAP	229,562,759	406,148		113,501,771	204,166	
WATERFALL	181,511,098	449,547		83,979,138	181,099	
WHITE OAK YIELD SPECTRUM FUND	72,756,739		244,013	36,378,371		122,007
Subtotal	\$ 1,890,886,507	\$ 5,061,602	\$ 2,967,019	\$ 775,830,818	\$ 2,072,325	\$ 1,204,752
Total	\$ 3,919,530,205	\$ 5,673,010	\$ 2,967,019	\$ 1,580,121,908	\$ 2,317,225	\$ 1,204,752

OPPORTUNISTIC						
	Pension Fund			Insurance Fund		
ARROWMARK	96,028,779			48,898,446		
Total	\$ 96,028,779	\$ -	\$ -	\$ 48,898,446	\$ -	\$ -

ABOLUTE RETURN						
	Pension Fund			Insurance Fund		
Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
ANCHORAGE CAPITAL	1,410,253	76,237	75,229	564,100	34,636	35,427
BLACKSTONE STRAT OPP	6,155,312			2,421,220		
COATUE QUALIFIED PARTNERS	678,142			226,047		
CREDIT SUISSE	24,075,252	218,363	246,910	9,999,609	92,676	104,578
DAVIDSON-KEMPNER LP	4,940,099	61,522	82,773	1,944,001	24,210	32,572
GOTHAM NEUTRAL STRATAGIES	13,309,360	67,132		5,528,017	27,883	
GOVERNORS LANE ONSHORE FUND	20,886,225	135,430		8,675,053	56,251	
KNIGHTHEAD	353,736	5,844	(605)	117,913	1,948	(201)
LIQUIDALTS H2O FORCE	16,852,129			7,079,908		
LUXOR CAPITAL	2,233,784			744,927		
MYRIAD OPPORTUNITIES	45,983,477	228,006		18,311,198	90,835	
PAAMCO	128,782			34,559		
PINE RIVER	452,793	2,140		150,931	713	
PRISMA CAPITAL	163,560,926	746,831	(38,963)	67,940,332	310,220	(16,185)

PRUDENTIAL FUND I			17,337			7,201
SENATOR LP PENSION	4,149,970	29,884	2,015	1,710,158	12,315	830
SRS PARTNERS US	8,018,761	49,109	(20,006)	3,160,329	19,355	(7,885)
SYSTEMATICA BLUE MATRIX		30,618	(29,408)		12,717	(12,215)
TIDE POINT PARTNERS						
TOURBILLON GLOBAL EQ	368,745	56,552		122,915	22,583	
TRICADIA SELECT	4,487,346	14,007		1,768,539	5,520	
Total	\$ 318,045,095	\$ 1,721,674	\$ 335,282	\$ 130,499,754	\$ 711,861	\$ 144,124

PRIVATE EQUITY						
Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
ARBOR INVST II	4,016,621		(58,961)	446,291		(6,551)
ARCANO FUND	26,286,571	90,070	24,564	2,920,731	10,008	2,729
ARES SSF IV	19,068,175	100,120		10,052,432	52,782	
BAY HILLS EM PTNR I	21,024,272		159,493	2,336,031		17,721
BAY HILLS EM PTNR II	70,648,038	27,414	516,291	7,849,782	3,046	57,366
BAY HILLS EM PTNR III	54,644,917	191,112	214,457	46,747,266	163,237	183,176
BAY HILLS II B	50,651,170	84,072	385,578	5,627,907	9,341	42,842
BDCM OPPT FD IV	34,173,818	312,178		23,454,881	214,261	
BLACKSTONE CAP V	5,300,108			1,394,554		
BLACKSTONE CAP VI	58,108,324	112,118	1,146,578	38,738,879	74,745	764,386
CM GROWTH I	9,604,300			1,067,142		
COLUMBIA CAP EQ IV	4,047,476			449,721		
CRESTVIEW PTNRS II	31,750,519	123,407	(1,795,017)	3,527,828	13,710	(199,446)
CRESTVIEW PTNRS III	25,669,141	76,602	1,456,098	13,821,847	41,248	784,051
CVC CAPITAL PARTNERS VI	25,346,812	116,953	508,734	13,393,192	61,797	268,814
DAG VENTURES II QP	5,654,736			628,295		
DAG VENTURES III QP	3,029,176		200,893	336,562		22,321
DAG VENTURES IV QP	73,591,484	200,176		8,176,832	22,242	
DAG VENTURES V QP	25,384,370	40,000	258,878	22,211,319	35,000	226,518
DB PRIVATE EQUITY	19,658,319	103,317	166,518	58,974,961	309,953	499,555
DCM VI LP	12,199,339			1,355,482		
ESSEX WOOD HLTH VIII	11,981,788	90,198		2,662,619	20,044	
GREEN EQTY INVST IV	3,074,354	(12,375)	(40,676)	341,595	(1,376)	
GREEN EQTY INVST V	58,843,120	12,701	5,393,198	6,538,124	1,411	599,245
GREEN EQTY INVST VI	33,461,835	114,321	(236,035)	29,279,107	100,031	(206,530)
GREEN EQUITY INV VII	11,491,995	3,958		11,491,995	3,958	
GTCR IX LP	106,758	16,457		11,848	1,829	(194,461)
H & F SPOCK I, LP	3,862,049			1,448,268		
HARVEST PARTNERS V	8,714,960		104,763	968,326		11,641
HARVEST PARTNERS VI	13,211,555		(373,246)	5,396,275		(152,454)
HARVEST PARTNERS VII	11,740,632	27,449	(112,654)	11,740,632	27,449	(112,654)

HELLMAN FRIEDMAN VI	1,438,394		4,709	539,411	2	1,766
HIG BIOVENTURES II	10,279,191	72,392	(31,792)	8,756,348	61,667	(27,082)
HIG CAP PTNRS V	11,111,865	131,000	701,428	5,852,816	69,000	369,455
HIG VENTURE PTNR II	6,381,091		738,064	709,010		82,007
HORSLEY BRDG INTL V	76,887,225	196,876		8,543,021	21,874	
INST VEN PTRN XII	8,147,761			905,184		
JW CHILDS EQUITY III	1,901			213		
KAYNE ANDERSON	46,499,400	335,595	520,881	46,499,400	335,595	520,881
KCP IV CO-INVEST	6,416,618		15,318	4,403,984		10,513
KEYHAVEN CAPITAL III	24,210,750			2,690,083		
KEYHAVEN CAPITAL IV	8,377,583		44,955	5,749,874		30,855
LEVINE LEICHTMAN CAP PTRNS V	42,612,028	289,974	(303,886)	22,232,363	151,291	190,404
LEVINE LEICHTMAN FUND VI	7,057,586	281,821		7,057,586	281,821	
MATLINPATTERSON II	1,385,861			153,981		
MATLINPATTERSON III	12,656,989	9,098		1,406,390	1,011	
MERIT MEZZ FD IV	2,609,930			289,992		
MHR INST PTNRS III				1,660,672	7,954	(444,694)
MILL ROAD CAPITAL	10,183,426			1,131,491		
NEW MTN PTNRS II LP	471,194		(78,086)	94,243		(15,617)
NEW MTN PTNRS III LP	22,621,604		394,446	5,027,016		87,654
NEW MTN PTRNS IV LP	31,945,982	8,330	783,109	16,752,163	4,368	410,656
OAK HILL CAP PT II	2,550,928	16,642	(23,338)	283,437	1,848	1,358
OAK HILL CAP PT III	17,991,186	56,403	169,001	6,663,402	20,890	94,985
OCM OPPTS FD VIIB				226,724	4,151	7,811
RIVERSIDE APPREC VI	28,655,743	198,686	(991,366)	15,104,799	104,729	(522,562)
STRATEGIC VALUE IV	9,329,007	133,945	197,825	4,675,285	67,127	99,140
SUN CAP PTRNS				386,044		
TCV VI				570,749		(18,670)
TRITON FUND IV	21,258,220	243,729	115,283	11,205,669	64,053	60,768
VANTAGEPOINT 2006	6,748,730			749,860		
VANTAGEPOINT IV	2,350,008			261,112		
VISTA EQ PTNR FD III	12,943,570		142,660	1,438,177		15,851
VISTA EQ PTNR FD IV	24,888,892		759,054	21,201,642		646,602
VISTA EQ PTNR FD VI	21,808,060		2,203,950	21,808,060		2,203,950
WARBURG PINCUS PE IX	3,270,482	10,485	(120,399)	654,097	2,097	(24,080)
WARBURG PINCUS PE X	17,368,588	35,357	(569,586)	3,361,674	6,844	(110,243)
WAYZATA OPPTS FD I						
WAYZATA OPPTS FD II	2,626,691			291,855		
WAYZATA OPPTS FD III	7,526,827			3,967,485		
Total	\$ 1,246,960,042	\$ 3,850,582	\$ 12,591,683	\$ 566,696,034	\$ 2,371,038	\$ 6,279,978

REAL ESTATE		
	Pension Fund	Insurance Fund

Asset Manager	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
BARING REAL ESTATE	34,843,996			14,933,141		
DIVCOWEST IV	4,189,500	25,691	202,822	1,853,051	11,363	115,253
FUNDAMENTAL PARTNERS III	39,345,275	466,941		16,862,262	200,117	
GREENFIELD ACQ VI	5,573,147	136,958	(209,142)	2,449,584	60,198	(91,925)
GREENFIELD ACQ VII	26,487,918	202,472	213,859	11,624,193	88,855	93,852
HARRISON STREET	82,207,431	454,142		36,504,792	201,596	
L-A VII	28,850,224	144,848		12,660,889	63,566	
LUBERT ADLER RE VIIB	15,630,396	55,231		6,698,741	23,670	
PATRON CAPITAL	15,774,126	368,880		6,134,576	143,453	
PROLOGIS TUSL	79,504,483		3,924,923	31,464,760		1,553,331
RUBENSTEIN PF II	16,613,045	114,138		7,348,077	50,484	
STOCKBRIDGE SM/MKTS	87,299,254	554,668		38,855,417	244,359	
WALTON ST RE FD VI	15,112,832	78,100		1,679,203	8,678	
WALTON ST RE FD VII	19,897,221	213,882		8,745,487	94,009	
Total	\$ 471,328,848	\$ 2,815,951	\$ 4,132,462	\$ 197,814,172	\$ 1,190,349	\$ 1,670,511

REAL RETURN						
Asset Manager	Pension Fund			Insurance Fund		
	AUM	Management Fees	Performance Fees	AUM	Management Fees	Performance Fees
AMERRA AGRI FUND II	24,036,653	128,648	288	9,694,013	51,884	116
AMERRA AGRI HOLDINGS	42,281,087	458,076		22,766,742	246,656	
BTG PACTUAL	18,401,804	189,390		8,267,477	85,088	
INTERNAL TIPS	225,970,052			114,177,921		
MAGNETAR MTP						
MAGNETAR MTP EOF II	19,409,724		800,456	6,469,908	44,987	266,819
NUVEEN REAL ASSET INCOME	197,128,034	691,876		80,698,140	224,529	
OBERLAND CAPITAL	1,182,362	452,814	(112,979)	531,207	203,439	(50,759)
PIMCO ALL ASSET	323,116,752			131,714,644		
TAURUS MINE FINANCE	20,053,024	281,875	381,123	8,848,231	124,375	168,167
TORTOISE CAPITAL	128,599,596	312,216		40,801,301	98,844	
TPF II	679,582	2,705		75,511	300	
Total	\$ 1,000,858,671	\$ 2,517,600	\$ 1,068,887	\$ 424,045,095	\$ 1,080,102	\$ 384,343

Portfolio Total	\$ 11,138,802,354	\$ 21,092,784	\$ 21,095,333	\$ 4,753,497,192	\$ 9,602,003	\$ 9,683,708
Fees in Basis Points (Annualized for Mgmt. Fees)		0.38%	0.19%		0.40%	0.20%

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.