

Kentucky Retirement Systems

Domestic and Global Commissions Report

Quarter Ending: December 31, 2018

Kentucky Retirement Systems
Domestic Equity - Common Stock Commissions
Quarter Ended December 31, 2018

Broker/Account	Shares Traded	Commission	Value of Trade	Per Share	% Cost of Trade
BAIRD, ROBERT W & CO INC, MILWAUKEE	24,080	963	1,370,135	0.0400	0.0703%
BARCLAYS	94,796	1,072	4,573,125	0.0113	0.0234%
BERNSTEIN SANFORD C & CO, NEW YORK	673,194	13,462	25,761,418	0.0200	0.0523%
BTIG LLC, NEW YORK	600,640	12,013	14,699,924	0.0200	0.0817%
CANTOR FITZGERALD & CO INC, NEW YORK	505,227	10,212	20,084,961	0.0202	0.0508%
CITIGROUP	225,244	4,849	7,213,758	0.0215	0.0672%
COWEN AND CO LLC, NEW YORK	4,105	164	743,359	0.0400	0.0221%
CREDIT SUISSE	443,836	12,121	11,980,083	0.0273	0.1012%
DEUTSCHE BANK	564,165	14,099	15,155,464	0.0250	0.0930%
DIRECT TRADING, UNITED STATES	45,191	931	3,495,342	0.0206	0.0266%
GOLDMAN SACHS	566,739	14,154	19,111,525	0.0250	0.0741%
INSTINET CORP	1,546,557	32,288	31,420,239	0.0209	0.1028%
INVESTMENT TECH GROUP INC, NEW YORK	1,282,827	19,553	63,526,006	0.0152	0.0308%
ISI GROUP	65,975	2,077	2,926,159	0.0315	0.0710%
ITG INC, NEW YORK	779,259	10,389	17,149,200	0.0133	0.0606%
J.P MORGAN SECURITIES INC, NEW YORK	306,675	5,401	13,377,307	0.0176	0.0404%
JEFFERIES & CO INC, NEW YORK	107,706	1,437	2,658,294	0.0133	0.0541%
JMP SECURITIES, SAN FRANCISCO	12,890	516	1,113,601	0.0400	0.0463%
JONESTRADING INST SVCS LLC, NEW YORK	117,732	3,532	6,532,705	0.0300	0.0541%
KEEFE BRUYETTE + WOODS INC, NEW YORK	24,430	977	976,434	0.0400	0.1001%
KEYBANC CAPITAL MARKETS INC, NEW YORK	15,180	607	900,177	0.0400	0.0675%
LIQUIDNET INC, NEW YORK	1,723,151	27,295	55,970,375	0.0158	0.0488%
MACQUARIE SECURITIES	10,580	423	1,695,930	0.0400	0.0250%
MERRILL LYNCH	118,207	2,818	4,563,585	0.0238	0.0618%
MKM PARTNERS LLC, GREENWICH	8,270	331	420,012	0.0400	0.0788%
MORGAN STANLEY	132,880	3,976	3,010,788	0.0299	0.1320%
NATIONAL FINL SVCS CORP, NEW YORK	83,445	2,503	609,625	0.0300	0.4106%
NEEDHAM AND CO LLC, NEW YORK	62,295	1,901	2,591,393	0.0305	0.0733%
O NEIL WILLIAM CO INC BCC CLRG, NEW YORK	4,120	165	476,460	0.0400	0.0346%
OPPENHEIMER & CO INC, NEW YORK	26,260	1,446	1,868,313	0.0550	0.0774%
PIPER JAFFRAY & CO., JERSEY CITY	7,010	280	693,761	0.0400	0.0404%
RAYMOND JAMES & ASSOC INC, ST PETERSBURG	180,400	5,739	5,305,973	0.0318	0.1082%
RBC CAPITAL MARKETS	52,087	816	3,033,130	0.0157	0.0269%
ROSENBLATT SECURITIES INC, NEW YORK	623,449	12,469	4,463,663	0.0200	0.2793%
SANDLER ONELL AND PARTNER LP, NEW YORK	12,915	387	447,514	0.0300	0.0866%
STEPHENS INC, LITTLE ROCK	3,180	127	367,210	0.0400	0.0346%
STIFEL NICOLAUS	54,051	1,905	2,008,773	0.0352	0.0948%
SUNTRUST CAPITAL MARKETS INC, NEW YORK	87,795	2,827	4,723,833	0.0322	0.0599%
UBS	892,984	10,584	67,031,849	0.0119	0.0158%
WEDBUSH MORGAN SECS INC, LOS ANGELES	3,790	152	482,570	0.0400	0.0314%
WEEDEN and CO	73,065	1,589	2,694,108	0.0217	0.0590%
WELLS FARGO SECURITIES, LLC, NEW YORK	235,478	4,970	9,157,453	0.0211	0.0543%
WOLFE TRAHAN SECURITIES, NEW YORK	4,090	164	247,603	0.0400	0.0661%
TOTAL DOMESTIC	12,405,950	243,682	436,633,137	0.0196	0.0558%

Broker/Account	Shares Traded	Commission	Value of Trade	Per Share	% Cost of Trade
NTGI STRUCTURED	489,543	4,895	13,103,205	0.0100	0.0374%
RIVER ROAD	121,294	2,513	5,406,433	0.0207	0.0465%
RIVER ROAD FAV	4,255,716	87,689	95,613,243	0.0206	0.0917%
S&P 500 INDEX	766,771	7,117	54,663,144	0.0093	0.0130%
SYSTEMATIC	4,097,051	72,891	125,120,744	0.0178	0.0583%
TORTOISE CAP	818,616	10,736	21,156,917	0.0131	0.0507%
WESTFIELD CAPITAL	1,856,959	57,841	121,569,451	0.0311	0.0476%
TOTAL DOMESTIC	12,405,950	243,682	436,633,137	0.0196	0.0558%

Kentucky Retirement Systems
Global Equity - Common Stock Commissions
Quarter Ended December 31, 2018

Broker/Account	Shares Traded	Commission	Value of Trade	Per Share	% Cost of Trade
BANCO BTG PACTUAL SA, RIO DE JANEIRO	94,000	153	306,184	0.0016	0.0500%
BANCO ITAU, SAO PAULO	99,900	7,287	3,997,291	0.0729	0.1823%
BARCLAYS	732,665	9,702	21,914,679	0.0132	0.0443%
BERENBERG GOSSLER & CIE, HAMBURG	6,960	335	558,227	0.0481	0.0600%
BERNSTEIN SANFORD C & CO, NEW YORK	288,252	1,872	3,514,227	0.0065	0.0533%
BMO CAPITAL MARKETS CORP, NEW YORK	1,900	10	174,486	0.0050	0.0054%
BNP PARIBUS	163,942	2,377	3,781,173	0.0145	0.0629%
BNY MELLON CLEARING	127,981	1,994	3,629,561	0.0156	0.0549%
CANTOR FITZGERALD & CO INC, NEW YORK	73,610	2,668	2,796,213	0.0362	0.0954%
CITIGROUP	7,425,167	31,461	32,318,078	0.0042	0.0973%
CREDIT LYONNAIS SECS (ASIA), HONG KONG	47,800	169	337,859	0.0035	0.0499%
CREDIT LYONNAIS SECS, SINGAPORE	75,600	2,974	5,946,650	0.0393	0.0500%
CREDIT SUISSE	2,664,478	25,451	31,578,849	0.0096	0.0806%
DAIWA SECURITIES	172,798	4,925	4,250,072	0.0285	0.1159%
DEUTSCHE BANK	834,896	14,103	19,806,407	0.0169	0.0712%
DEUTSCHE SEC ASIA LTD, HONG KONG	1,573,000	651	592,293	0.0004	0.1098%
DEUTSCHE SEC ASIA LTD, SEOUL	10,000	459	1,142,428	0.0459	0.0401%
EXANE, PARIS (EXANFRPP)	5,034	1,614	1,376,819	0.3206	0.1172%
GOLDMAN SACHS	1,307,993	10,940	17,919,681	0.0084	0.0610%
GOODBODY STOCKBROKERS, DUBLIN	5,266	408	538,207	0.0774	0.0757%
HSBC	513,118	2,860	4,569,935	0.0056	0.0626%
INSTINET CORP	21,700	231	768,210	0.0106	0.0300%
INVESTMENT TECH GROUP INC, NEW YORK	3,800	19	618,997	0.0050	0.0031%
INVESTMENT TECHNOLOGY GROUP LTD,DUBLIN	487,069	3,801	8,221,946	0.0078	0.0462%
ITG AUSTRALIA LTD, MELBOURNE	6,300	238	396,734	0.0378	0.0600%
ITG CANADA CORP, TORONTO	3,800	14	174,461	0.0038	0.0082%
J.P MORGAN SECURITIES INC, NEW YORK	17,040	85	1,755,986	0.0050	0.0049%
JEFFERIES & CO INC, NEW YORK	1,000	26	52,359	0.0262	0.0500%
JEFFERIES & CO LTD, LONDON	173,418	1,712	1,956,425	0.0099	0.0875%
JP MORGAN SECURITIES	763,317	10,933	25,194,377	0.0143	0.0434%
JPMORGAN SECURITIES INC, NEW YORK	295,760	3,868	6,045,383	0.0131	0.0640%
KEPLER EQUITIES, PARIS	1,422	71	113,205	0.0496	0.0623%
LIQUIDNET CANADA INC, TORONTO	3,800	43	194,330	0.0114	0.0224%
LIQUIDNET EUROPE LIMITED, LONDON	1,885	82	164,028	0.0435	0.0500%
LIQUIDNET INC, NEW YORK	23,191	319	1,606,066	0.0137	0.0198%
MACQUARIE SECURITIES	1,891,313	2,618	4,929,584	0.0014	0.0531%
MERRILL LYNCH	1,437,215	15,975	45,863,584	0.0111	0.0348%
MITSUBISHI SECURITIES	1,300	96	79,830	0.0738	0.1201%
MIZUHO SECURITIES USA INC. NEW YORK	319,700	11,968	12,056,322	0.0374	0.0993%
MORGAN STANLEY	1,536,586	25,318	20,552,872	0.0165	0.1232%
NESBITT BURNS, TORONTO (NTDT)	212,507	2,398	1,995,655	0.0113	0.1201%
RBC CAPITAL MARKETS	915,663	10,389	9,140,771	0.0113	0.1137%
REDBURN PARTNERS LLP, LONDON	178,264	3,628	5,441,270	0.0204	0.0667%
SANFORD C BERNSTEIN & CO INC, LONDON	77,531	717	2,889,910	0.0092	0.0248%
SCOTIA CAPITAL INC, NEW YORK	1,390,340	1,339	2,230,161	0.0010	0.0600%
SG SEC (LONDON) LTD, LONDON	173,545	4,810	5,350,039	0.0277	0.0899%
SMBC SECURITIES, INC NEW YORK	114,200	6,267	6,238,552	0.0549	0.1005%
SOCIETE GENERALE LONDON BRANCH, LONDON	596,562	5,938	11,862,307	0.0100	0.0501%
UBS	2,241,725	15,552	28,569,330	0.0069	0.0544%
XP INVESTIMENTOS CCTVM SA,RIO DE JANEIRO	700,000	2,190	2,187,020	0.0031	0.1001%
TOTAL GLOBAL	29,814,313	253,052	367,699,033	0.0085	0.0688%

Broker/Account	Shares Traded	Commission	Value of Trade	Per Share	% Cost of Trade
AMERICAN CENTURY	11,809,722	141,570	172,089,391	0.0120	0.0823%
COLUMBIA	(189)	1,179	230,477	(6.2357)	0.5113%
FRANKIN TEMPLETON	5,458,400	18,730	18,187,400	0.0034	0.1030%
LAZARD ASSET MGMT	7,349,821	80,457	156,348,968	0.0109	0.0515%
LSV ASSET MANAGEMENT	3,893,536	5,907	14,338,461	0.0015	0.0412%
LSV ASSET MGMT	1,303,280	2,169	5,092,710	0.0017	0.0426%
MANULIFE ASSET MGMT	(257)	3,041	1,411,626	(11.8318)	0.2154%
TOTAL GLOBAL	29,814,313	253,052	367,699,033	0.0085	0.0688%