

Kentucky Retirement Systems

# Domestic and Global Commissions Report

Quarter Ending: March 31, 2017

**Kentucky Retirement Systems**  
**Domestic Equity - Common Stock Commissions**  
**Quarter Ended March 31, 2017**

| Broker/Account                           | Shares Traded     | Commission     | Value of Trade       | Per Share     | % Cost of Trade |
|--|-------------------|----------------|----------------------|---------------|-----------------|
| BAIRD, ROBERT W & CO INC, MILWAUKEE      | 123,290           | 4,001          | 5,831,234            | 0.0325        | 0.0686%         |
| BARCLAYS CAPITAL INC./LE, NEW JERSEY     | 146,598           | 5,662          | 5,331,398            | 0.0386        | 0.1062%         |
| BARCLAYS CAPITAL LE, JERSEY CITY         | 159,518           | 5,048          | 6,032,121            | 0.0316        | 0.0837%         |
| BERNSTEIN SANFORD C & CO, NEW YORK       | 65,877            | 2,404          | 5,522,900            | 0.0365        | 0.0435%         |
| BMO CAPITAL MARKETS CORP, NEW YORK       | 16,420            | 657            | 667,480              | 0.0400        | 0.0984%         |
| BTIG LLC, SAN FRANCISCO                  | 249,540           | 7,486          | 879,174              | 0.0300        | 0.8515%         |
| CANTOR FITZGERALD & CO INC, NEW YORK     | 48,215            | 1,326          | 1,021,152            | 0.0275        | 0.1298%         |
| CITIGROUP GBL MKTS INC, NEW YORK         | 1,243,643         | 16,790         | 38,210,574           | 0.0135        | 0.0439%         |
| CLSA AMERICAS, NEW YORK                  | 59,380            | 2,375          | 802,791              | 0.0400        | 0.2959%         |
| COWEN AND COMPANY LLC, NEW YORK          | 98,650            | 3,473          | 2,355,486            | 0.0352        | 0.1474%         |
| CRAIG HALLUM, MINNEAPOLIS                | 14,440            | 578            | 532,218              | 0.0400        | 0.1085%         |
| CREDIT SUISSE, NEW YORK (CSUS)           | 879,865           | 31,555         | 20,403,631           | 0.0359        | 0.1547%         |
| DEUTSCHE BK SECS INC, NY (NWSCUS33)      | 218,525           | 6,861          | 5,100,947            | 0.0314        | 0.1345%         |
| FBR CAPITAL MARKETS & CO, ARLINGTON      | 1,540             | 62             | 176,934              | 0.0400        | 0.0348%         |
| GOLDMAN SACHS & CO, NY                   | 2,175,921         | 35,966         | 78,942,940           | 0.0165        | 0.0456%         |
| GUGGENHEIM CAPITAL MKT LLC, JERSEY CITY  | 18,220            | 729            | 432,925              | 0.0400        | 0.1683%         |
| INSTINET CORP, NEW YORK                  | 1,570,368         | 33,704         | 67,544,350           | 0.0215        | 0.0499%         |
| INSTINET CORP, NY                        | 2,998,542         | 38,371         | 124,650,253          | 0.0128        | 0.0308%         |
| INVESTMENT TECHNOLOGY GROUP, NEW YORK    | 2,097,991         | 28,030         | 74,138,748           | 0.0134        | 0.0378%         |
| ISI GROUP INC, NY                        | 190,480           | 6,514          | 7,988,401            | 0.0342        | 0.0815%         |
| ITG INC, NEW YORK                        | 1,825,527         | 24,217         | 66,655,675           | 0.0133        | 0.0363%         |
| ITG INC, NY                              | 5,443             | 54             | 17,904               | 0.0100        | 0.3040%         |
| J P MORGAN SECURITIES INC, BROOKLYN      | 94,821            | 3,223          | 4,969,830            | 0.0340        | 0.0648%         |
| J.P. MORGAN CLEARING CORP, NEW YORK      | 251,058           | 6,716          | 9,763,848            | 0.0268        | 0.0688%         |
| JEFFERIES & CO INC, NEW YORK             | 282,611           | 5,834          | 19,880,982           | 0.0206        | 0.0293%         |
| JMP SECURITIES, SAN FRANCISCO            | 24,100            | 964            | 571,748              | 0.0400        | 0.1686%         |
| JONESTRADING INSTL SVCS LLC, WESTLAKE    | 21,770            | 653            | 1,461,541            | 0.0300        | 0.0447%         |
| KEEFE BRUYETTE AND WOODS, JERSEY CITY    | 5,280             | 211            | 273,351              | 0.0400        | 0.0773%         |
| KEYBANC CAPITAL MARKETS INC, JERSEY CITY | 47,310            | 1,892          | 641,590              | 0.0400        | 0.2950%         |
| KING (CL) & ASSOCIATES, ALBANY           | 12,330            | 185            | 446,748              | 0.0150        | 0.0414%         |
| KNIGHT CLEARING SERVICES LLC, JERSEY CIT | 60,738            | 1,822          | 5,048,506            | 0.0300        | 0.0361%         |
| KNIGHT EQUITY MARKETS L.P., JERSEY CITY  | 14,417            | 433            | 1,825,238            | 0.0300        | 0.0237%         |
| LEERINK SWANN & CO, JERSEY CITY          | 18,220            | 729            | 431,715              | 0.0400        | 0.1688%         |
| LIQUIDNET INC, NEW YORK                  | 2,088,632         | 28,944         | 72,458,577           | 0.0139        | 0.0399%         |
| MERRILL LYNCH PIERCE FENNER SMITH INC NY | 794,105           | 11,010         | 24,939,618           | 0.0139        | 0.0441%         |
| MERRILL LYNCH PROFESSIONAL CLRG, PURCHAS | 49,398            | 1,976          | 2,742,753            | 0.0400        | 0.0720%         |
| MORGAN STANLEY & CO INC, NY              | 123,604           | 3,739          | 3,760,827            | 0.0303        | 0.0994%         |
| NATIONAL FINL SVCS CORP, NEW YORK        | 101,576           | 2,465          | 5,337,926            | 0.0243        | 0.0462%         |
| NEEDHAM AND COMPANY LLC, JERSEY CITY     | 25,015            | 750            | 1,397,662            | 0.0300        | 0.0537%         |
| OPPENHEIMER & CO INC, NEW YORK           | 70,390            | 2,816          | 4,030,255            | 0.0400        | 0.0699%         |
| PERSHING LLC, JERSEY CITY                | 71,080            | 2,660          | 5,083,945            | 0.0374        | 0.0523%         |
| PIPER JAFFRAY & CO, MINNEAPOLIS          | 34,670            | 1,387          | 440,927              | 0.0400        | 0.3145%         |
| RAYMOND JAMES & ASSOC INC, ST PETERSBURG | 133,297           | 4,284          | 3,528,022            | 0.0321        | 0.1214%         |
| RBC CAPITAL MARKETS LLC, NEW YORK        | 567,461           | 6,808          | 40,974,466           | 0.0120        | 0.0166%         |
| SANDLER O'NEILL & PARTNERS LP, NEW YORK  | 22,040            | 661            | 859,912              | 0.0300        | 0.0769%         |
| STATE STREET BROKERAGE SVCS, BOSTON      | 126,648           | 1,987          | 6,142,125            | 0.0157        | 0.0324%         |
| STATE STREET GLOBAL MARKETS LLC, BOSTON  | 161,610           | 2,248          | 7,844,359            | 0.0139        | 0.0287%         |
| STEPHENS INC, LITTLE ROCK                | 17,490            | 700            | 653,184              | 0.0400        | 0.1071%         |
| STIFEL NICOLAUS                          | 124,084           | 3,569          | 4,464,526            | 0.0288        | 0.0799%         |
| SUNTRUST CAPITAL MARKETS INC, ATLANTA    | 24,020            | 721            | 199,659              | 0.0300        | 0.3609%         |
| UBS SECURITIES LLC, STAMFORD             | 4,859,021         | 53,142         | 310,376,926          | 0.0109        | 0.0171%         |
| WEEDEN & CO, NEW YORK                    | 463,099           | 13,893         | 19,702,545           | 0.0300        | 0.0705%         |
| WELLS FARGO SECURITIES LLC, CHARLOTTE    | 257,528           | 7,485          | 11,215,427           | 0.0291        | 0.0667%         |
| WILLIAM BLAIR & CO, CHICAGO              | 74,670            | 2,987          | 2,698,379            | 0.0400        | 0.1107%         |
| <b>TOTAL DOMESTIC</b>                    | <b>25,230,086</b> | <b>432,754</b> | <b>1,087,406,354</b> | <b>0.0172</b> | <b>0.0398%</b>  |

| Broker/Account  | Shares Traded | Commission | Value of Trade | Per Share | % Cost of Trade |
|-----------------|---------------|------------|----------------|-----------|-----------------|
| NTGI STRUCTURED | 1,609,434     | 14,449     | 46,527,900     | 0.0090    | 0.0311%         |
| RIVER ROAD      | 2,109,155     | 27,370     | 108,888,586    | 0.0130    | 0.0251%         |
| RIVER ROAD FAV  | 2,586,603     | 61,671     | 97,553,851     | 0.0238    | 0.0632%         |
| S&P 500 INDEX   | 4,642,582     | 46,426     | 304,670,700    | 0.0100    | 0.0152%         |

|                       |                   |                |                      |               |                |
|-----------------------|-------------------|----------------|----------------------|---------------|----------------|
| SYSTEMATIC            | 10,280,600        | 161,432        | 338,572,834          | 0.0157        | 0.0477%        |
| TCV VI                | 350               | 4              | 29,008               | 0.0100        | 0.0121%        |
| TORTOISE CAP          | 303,154           | 4,160          | 10,724,117           | 0.0137        | 0.0388%        |
| WESTFIELD CAPITAL     | 3,698,208         | 117,242        | 180,439,357          | 0.0317        | 0.0650%        |
| <b>TOTAL DOMESTIC</b> | <b>25,230,086</b> | <b>432,754</b> | <b>1,087,406,354</b> | <b>0.0172</b> | <b>0.0398%</b> |

| <b>Kentucky Retirement Systems</b>              |  |  |  |  |  |
|---|--|--|--|--|--|
| <b>Global Equity - Common Stock Commissions</b> |  |  |  |  |  |
| <b>Quarter Ended March 31, 2017</b>             |  |  |  |  |  |

| Broker/Account                           | Shares Traded | Commission | Value of Trade | Per Share | % Cost of Trade |
|--|---------------|------------|----------------|-----------|-----------------|
| BANCO BTG PACTUAL SA, RIO DE JANEIRO     | 247,600       | 1,113      | 1,114,930      | 0.0045    | 0.0999%         |
| BARCLAYS CAPITAL LE, JERSEY CITY         | 361,630       | 3,386      | 16,037,935     | 0.0094    | 0.0211%         |
| BARCLAYS CAPITAL, LONDON (BARCGB33)      | 646,591       | 7,976      | 9,868,474      | 0.0123    | 0.0808%         |
| BERENBERG GOSSLER & CIE, HAMBURG         | 29,190        | 2,953      | 2,457,702      | 0.1012    | 0.1201%         |
| BERNSTEIN SANFORD C & CO, NEW YORK       | 1,005,994     | 8,180      | 38,804,604     | 0.0081    | 0.0211%         |
| BNP PARIBAS SEC SRVS SA, SINGAPORE       | 9,491         | 174        | 279,393        | 0.0184    | 0.0624%         |
| BNP PARIBAS SECS SERVS, SYDNEY           | 283,031       | 2,275      | 2,845,525      | 0.0080    | 0.0800%         |
| BRADESCO S.A. CTVM, SAO PAULO            | 280,000       | 1,236      | 1,236,238      | 0.0044    | 0.1000%         |
| BROCKHOUSE AND COOPER, MONTREAL          | 103,300       | 401        | 1,334,939      | 0.0039    | 0.0300%         |
| CARNEGIE ASA, OSLO                       | 13,635        | 88         | 62,794         | 0.0064    | 0.1398%         |
| CITATION GROUP/BCC CLRG, NEW YORK        | 12,700        | 374        | 1,278,959      | 0.0294    | 0.0292%         |
| CITIC CAPITAL SEC, HONG KONG             | 504,000       | 201        | 334,924        | 0.0004    | 0.0601%         |
| CITIGROUP GBL MKTS INC, NEW YORK         | 380,360       | 3,651      | 9,425,660      | 0.0096    | 0.0387%         |
| CITIGROUP GBL MKTS/SALOMON, NEW YORK     | 156,635,768   | 34,473     | 27,605,761     | 0.0002    | 0.1249%         |
| CITIGROUP GLOBAL MARKETS LTD, LONDON     | 322,423       | 7,224      | 13,488,359     | 0.0224    | 0.0536%         |
| CLSA AUSTRALIA PTY LTD, SYDNEY           | 18,705        | 547        | 272,985        | 0.0292    | 0.2004%         |
| CLSA SINGAPORE PTE LTD (CHV), SINGAPORE  | 398,673       | 4,085      | 8,455,594      | 0.0102    | 0.0483%         |
| CREDIT LYONNAIS SECS, NEW YORK           | 5,240         | 2,662      | 1,324,227      | 0.5080    | 0.2010%         |
| CREDIT LYONNAIS SECS, SINGAPORE          | 26,600        | 565        | 1,129,891      | 0.0212    | 0.0500%         |
| CREDIT SUISSE (EUROPE), LONDON           | 2,801,702     | 47,122     | 40,150,685     | 0.0168    | 0.1174%         |
| CREDIT SUISSE (HK) LIMITED, HONG KONG    | 5,000,000     | 784        | 711,538        | 0.0002    | 0.1102%         |
| CREDIT SUISSE, NEW YORK (CSUS)           | 17,502,146    | 48,515     | 55,933,520     | 0.0028    | 0.0867%         |
| CREDIT SUISSE, SAO PAULO                 | 290,000       | 1,294      | 1,296,098      | 0.0045    | 0.0999%         |
| DAIWA SECS AMER INC, NEW YORK            | 212,700       | 11,369     | 11,469,520     | 0.0534    | 0.0991%         |
| DEUTSCHE BK SECS INC, NY (NWSCUS33)      | 699,840       | 28,008     | 20,210,397     | 0.0400    | 0.1386%         |
| DEUTSCHE MORGAN GRENFELL SEC, SYDNEY     | 11,000        | 1,183      | 1,074,168      | 0.1075    | 0.1101%         |
| EXANE, PARIS (EXANFRPP)                  | 12,504        | 2,412      | 1,982,805      | 0.1929    | 0.1216%         |
| FORSYTH BARR, DUNEDIN                    | 61,183        | 604        | 302,778        | 0.0099    | 0.1996%         |
| GOLDMAN SACHS & CO, NY                   | 4,008,628     | 46,332     | 86,967,322     | 0.0116    | 0.0533%         |
| GOLDMAN SACHS CAP MKTS, NEW YORK         | 25,000        | 453        | 1,509,625      | 0.0181    | 0.0300%         |
| GOLDMAN SACHS INTL, LONDON (GSILGB2X)    | 18,932        | 1,514      | 1,082,649      | 0.0799    | 0.1398%         |
| GOODBODY STOCKBROKERS, DUBLIN            | 33,258        | 1,415      | 1,182,973      | 0.0425    | 0.1196%         |
| HSBC BANK PLC (MIDLAND BK)(JAC), LONDON  | 379,687       | 919        | 3,069,772      | 0.0024    | 0.0299%         |
| HSBC SECS INC, NEW YORK                  | 10,733        | 37         | 123,755        | 0.0035    | 0.0300%         |
| ING BANK N V, LONDON                     | 3,041         | 146        | 104,576        | 0.0481    | 0.1398%         |
| INSTINET EUROPE LIMITED, LONDON          | 71,500        | 442        | 1,474,135      | 0.0062    | 0.0300%         |
| INVESTMENT TECHNOLOGY GROUP LTD,DUBLIN   | 277,186       | 3,038      | 3,379,810      | 0.0110    | 0.0899%         |
| ITG AUSTRALIA LTD, MELBOURNE             | 88,756        | 1,956      | 1,829,812      | 0.0220    | 0.1069%         |
| ITG CANADA CORP, TORONTO                 | 11,700        | 176        | 536,585        | 0.0151    | 0.0329%         |
| IXIS SECURITIES, PARIS                   | 10,764        | 946        | 678,358        | 0.0878    | 0.1394%         |
| J P MORGAN SEC, SYDNEY                   | 167,252       | 997        | 1,673,813      | 0.0060    | 0.0596%         |
| J P MORGAN SECS LTD, LONDON              | 521,627       | 19,333     | 20,231,316     | 0.0371    | 0.0956%         |
| J.P. MORGAN CLEARING CORP, NEW YORK      | 544,694       | 4,358      | 4,679,613      | 0.0080    | 0.0931%         |
| JEFFERIES & CO LTD, LONDON               | 1,513,347     | 4,592      | 7,020,182      | 0.0030    | 0.0654%         |
| JP MORGAN BROKING (HK) LTD, HONG KONG    | 58,000        | 630        | 359,133        | 0.0109    | 0.1755%         |
| JPMORGAN SECURITIES INC, NEW YORK        | 3,174,052     | 32,151     | 22,939,448     | 0.0101    | 0.1402%         |
| KNIGHT CLEARING SERVICES LLC, JERSEY CIT | 68,000        | 1,640      | 1,160,483      | 0.0241    | 0.1413%         |
| LIQUIDNET CANADA INC, TORONTO            | 8,200         | 124        | 339,128        | 0.0151    | 0.0365%         |
| LIQUIDNET INC, NEW YORK                  | 89,450        | 1,744      | 6,721,883      | 0.0195    | 0.0259%         |
| MACQUARIE BANK LIMITED, SYDNEY           | 205,502       | 3,241      | 1,857,127      | 0.0158    | 0.1745%         |
| MACQUARIE BANK LTD, HONG KONG            | 372,626       | 5,143      | 3,661,548      | 0.0138    | 0.1405%         |
| MACQUARIE CAPITAL LTD, LONDON            | 666,774       | 3,782      | 3,171,191      | 0.0057    | 0.1193%         |
| MACQUARIE SECURITIES LTD, AUCKLAND       | 13,709        | 34         | 67,552         | 0.0025    | 0.0500%         |
| MERRILL LYNCH GILTS LTD, LONDON          | 120,000       | 1,778      | 1,483,383      | 0.0148    | 0.1199%         |
| MERRILL LYNCH INTL LONDON EQUITIES       | 5,484,335     | 48,523     | 48,267,916     | 0.0088    | 0.1005%         |
| MERRILL LYNCH PIERCE FENNER SMITH INC NY | 114,454       | 2,794      | 9,472,196      | 0.0244    | 0.0295%         |

|  |                    |                |                    |               |                |
|--|--------------------|----------------|--------------------|---------------|----------------|
| MERRILL LYNCH PIERCE FENNER, WILMINGTON  | 299,999,641        | 2,888          | 4,243,530          | 0.0000        | 0.0681%        |
| MERRILL LYNCH, SYDNEY                    | 12,944             | 152            | 201,366            | 0.0117        | 0.0754%        |
| MIZUHO SECURITIES USA INC. NEW YORK      | 283,600            | 9,608          | 8,959,303          | 0.0339        | 0.1072%        |
| MORGAN STANLEY & CO INC, NY              | 4,551,662          | 38,767         | 37,076,425         | 0.0085        | 0.1046%        |
| NATIONAL FINL SVCS CORP, NEW YORK        | 12,000             | 450            | 904,491            | 0.0375        | 0.0498%        |
| NOMURA SECS INTL INC, NEW YORK           | 16,000             | 1,494          | 1,246,516          | 0.0934        | 0.1199%        |
| PERSHING SECURITIES LTD, LONDON          | 35,778             | 809            | 808,298            | 0.0226        | 0.1001%        |
| RBC DOMINION SECS INC, TORONTO (DOMA)    | 272,840            | 6,202          | 12,457,908         | 0.0227        | 0.0498%        |
| ROYAL BANK OF CANADA EUROPE LTD, LONDON  | 77,977             | 3,931          | 3,831,667          | 0.0504        | 0.1026%        |
| SANFORD C BERNSTEIN & CO INC, LONDON     | 292,969            | 359            | 897,233            | 0.0012        | 0.0400%        |
| SCOTIA CAPITAL INC, NEW YORK             | 320,000            | 1,380          | 1,381,843          | 0.0043        | 0.0999%        |
| SCOTIA CAPITAL MKTS, TORONTO             | 117,100            | 355            | 1,536,302          | 0.0030        | 0.0231%        |
| SG SEC (LONDON) LTD, LONDON              | 440,577            | 7,210          | 13,168,177         | 0.0164        | 0.0548%        |
| SMBC SECURITIES, INC NEW YORK            | 71,200             | 5,778          | 5,775,371          | 0.0812        | 0.1001%        |
| SOCIETE GENERALE LONDON BRANCH, LONDON   | 1,930,308          | 11,887         | 20,964,244         | 0.0062        | 0.0567%        |
| TORONTO DOMINION SEC, TORONTO            | 100,600            | 536            | 1,910,289          | 0.0053        | 0.0280%        |
| UBS SECURITIES LLC, STAMFORD             | 477,897            | 4,240          | 5,149,732          | 0.0089        | 0.0823%        |
| UBS WARBURG ASIA LTD, HONG KONG          | 6,945,767          | 10,367         | 17,188,919         | 0.0015        | 0.0603%        |
| UBS WARBURG AUSTRALIA EQUITIES, SYDNEY   | 52,598             | 1,171          | 953,613            | 0.0223        | 0.1228%        |
| UBS WARBURG, LONDON                      | 1,198,838          | 11,034         | 16,849,911         | 0.0092        | 0.0655%        |
| XP INVESTIMENTOS CCTVM SA,RIO DE JANEIRO | 390,000            | 1,697          | 1,699,287          | 0.0044        | 0.0999%        |
| <b>TOTAL GLOBAL</b>                      | <b>523,537,509</b> | <b>531,407</b> | <b>662,740,114</b> | <b>0.0010</b> | <b>0.0802%</b> |

| Broker/Account       | Shares Traded      | Commission     | Value of Trade     | Per Share     | % Cost of Trade |
|----------------------|--------------------|----------------|--------------------|---------------|-----------------|
| AMERICAN CENTURY     | 26,592,577         | 305,759        | 373,241,554        | 0.0115        | 0.0819%         |
| FRANKIN TEMPLETON    | 12,415,472         | 79,673         | 100,068,887        | 0.0064        | 0.0796%         |
| LAZARD ASSET MGMT    | 7,209,745          | 110,312        | 122,100,761        | 0.0153        | 0.0903%         |
| LSV ASSET MANAGEMENT | 309,756,931        | 19,979         | 44,337,066         | 0.0001        | 0.0451%         |
| LSV ASSET MGMT       | 167,561,820        | 9,555          | 21,705,972         | 0.0001        | 0.0440%         |
| MANULIFE ASSET MGMT  | 964                | 6,128          | 1,285,874          | 6.3567        | 0.4765%         |
| <b>TOTAL GLOBAL</b>  | <b>523,537,509</b> | <b>531,407</b> | <b>662,740,114</b> | <b>0.0010</b> | <b>0.0802%</b>  |