

# Membership list

## Russell 3000® Index

| Company                  | Ticker |
|--------------------------|--------|
| 1-800 FLOWERS COM        | FLWS   |
| 1ST CONSTITUTION BANCORP | FCCY   |
| 1ST SOURCE CORP          | SRCE   |
| 22ND CENTURY GROUP INC   | XXII   |
| 2U INC                   | TWOU   |
| 3D SYSTEMS CORP          | DDD    |
| 3M CO                    | MMM    |
| 8X8 INC NEW              | EGHT   |
| A10 NETWORKS INC         | ATEN   |
| AAON INC                 | AAON   |
| AAR CORP                 | AIR    |
| AARONS INC               | AAN    |
| ABBOTT LABORATORIES      | ABT    |
| ABBVIE INC               | ABBV   |
| ABEONA THERAPEUTICS INC  | ABEO   |
| ABERCROMBIE & FITCH      | ANF    |
| ABIOMED INC              | ABMD   |
| ABM INDUSTRIES INC       | ABM    |
| ABRAXAS PETE CORP        | AXAS   |
| ACACIA COMMUNICATIONS    | ACIA   |
| ACACIA RESEARCH CORP     | ACTG   |
| ACADIA HEALTHCARE CO     | ACHC   |
| ACADIA PHARMACEUTICALS   | ACAD   |
| ACADIA REALTY TRUST      | AKR    |
| ACCELERATE DIAGNOSTICS   | AXDX   |
| ACCELERON PHARMA INC     | XLRN   |
| ACCENTURE PLC IRELAND    | ACN    |
| ACCO BRANDS CORP         | ACCO   |
| ACCURAY INC              | ARRAY  |
| ACELRX PHARMACEUTICALS   | ACRX   |
| ACER THERAPEUTICS INC    | ACER   |
| ACHILLION PHARM          | ACHN   |
| ACI WORLDWIDE INC        | ACIW   |
| ACLARIS THERAPEUTICS     | ACRS   |
| ACNB CORP                | ACNB   |
| ACORDA THERAPEUTICS INC  | ACOR   |
| ACTIVISION BLIZZARD INC  | ATVI   |
| ACTUANT CORP             | ATU    |
| ACUITY BRANDS INC        | AYI    |
| ACUSHNET HOLDINGS CORP   | GOLF   |
| ADAMAS PHARMACEUTICALS   | ADMS   |
| ADDUS HOMECARE CORP      | ADUS   |
| ADESTO TECHNOLOGIES CORP | IOTS   |
| ADIENT PLC               | ADNT   |
| ADMA BIOLOGICS INC       | ADMA   |
| ADOBE INC                | ADBE   |
| ADT INC                  | ADT    |
| ADTALEM GLOBAL EDUCATION | ATGE   |

| Company                  | Ticker |
|--------------------------|--------|
| ADTRAN INC               | ADTN   |
| ADURO BIOTECH INC        | ADRO   |
| ADVANCE AUTO PARTS INC   | AAP    |
| ADVANCED DISPOSAL SVCS   | ADSW   |
| ADVANCED DRAINAGE SYSTEM | WMS    |
| ADVANCED EMISSIONS SLTNS | ADES   |
| ADVANCED ENERGY INDS INC | AEIS   |
| ADVANCED MICRO DEVICES   | AMD    |
| ADVANSIX                 | ASIX   |
| ADVERUM BIOTECH INC      | ADVM   |
| AECOM                    | ACM    |
| AEGION CORP              | AEGN   |
| AEGLEA BIOTHERAPEUTICS   | AGLE   |
| AERIE PHARMACEUTICALS    | AERI   |
| AEROHIVE NETWORKS INC    | HIVE   |
| AEROJET ROCKETDYNE HLDGS | AJRD   |
| AEROVIRONMENT INC        | AVAV   |
| AES CORP                 | AES    |
| AFFILIATED MANAGERS GRP  | AMG    |
| AFFIMED NV               | AFMD   |
| AFLAC INC                | AFL    |
| AG MORTGAGE INVT TR INC  | MITT   |
| AGCO CORP                | AGCO   |
| AGENSUS INC              | AGEN   |
| AGEX THERAPEUTICS INC    | AGE    |
| AGILENT TECHNOLOGIES INC | A      |
| AGILYSYS INC             | AGYS   |
| AGIOS PHARMACEUTICALS    | AGIO   |
| AGNC INVESTMENT          | AGNC   |
| AGREE REALTY CORP        | ADC    |
| AIMMUNE THERAPEUTICS INC | AIMT   |
| AIR LEASE CORP           | AL     |
| AIR PRODS & CHEMS INC    | APD    |
| AIR TRANSPORT SERVICES   | ATSG   |
| AIRCASTLE LTD            | AYR    |
| AIRGAIN INC              | AIRG   |
| AK STEEL HOLDING CORP    | AKS    |
| AKAMAI TECHNOLOGIES      | AKAM   |
| AKCEA THERAPEUTICS       | AKCA   |
| AKEBIA THERAPEUTICS INC  | AKBA   |
| AKORN INC                | AKRX   |
| AKOUSTIS TECHNOLOGIES    | AKTS   |
| ALAMO GROUP INC          | ALG    |
| ALARM.COM HOLDINGS INC   | ALRM   |
| ALASKA AIR GROUP INC     | ALK    |
| ALBANY INTERNATIONAL     | AIN    |
| ALBEMARLE CORP           | ALB    |
| ALBIREO PHARMA INC       | ALBO   |

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| ALCOA CORPORATION        | AA     |
| ALDER BIOPHARMACEUTICALS | ALDR   |
| ALDEYRA THERAPEUTICS INC | ALDX   |
| ALECTOR                  | ALEC   |
| ALEXANDER & BALDWIN INC  | ALEX   |
| ALEXANDERS INC           | ALX    |
| ALEXANDRIA REAL ESTATE   | ARE    |
| ALEXION PHARMACEUTICALS  | ALXN   |
| ALICO INC                | ALCO   |
| ALIGN TECHNOLOGY INC     | ALGN   |
| ALKERMES PLC             | ALKS   |
| ALLAKOS INC              | ALLK   |
| ALLEGHANY CORP           | Y      |
| ALLEGHENY TECHNOLOGIES   | ATI    |
| ALLEGIANCE BANCSHARES    | ABTX   |
| ALLEGiant TRAVEL CO      | ALGT   |
| ALLEGION PLC             | ALLE   |
| ALLERGAN PLC             | AGN    |
| ALLETE INC               | ALE    |
| ALLIANCE DATA SYSTEMS    | ADS    |
| ALLIANT ENERGY CORP      | LNT    |
| ALLIED MOTION TECH       | AMOT   |
| ALLISON TRANSMISSION     | ALSN   |
| ALLOGENE THERAPEUTICS    | ALLO   |
| ALLSCRIPTS HEALTHCARE    | MDRX   |
| ALLSTATE CORP            | ALL    |
| ALLY FINL INC            | ALLY   |
| ALNYLAM PHARMACEUTICALS  | ALNY   |
| ALPHA & OMEGA SEMICON    | AOSL   |
| ALPHABET INC CL A        | GOOGL  |
| ALPHABET INC CL C        | GOOG   |
| ALPHATEC HOLDINGS        | ATEC   |
| ALTAIR ENGINEERING INC   | ALTR   |
| ALTERYX INC              | AYX    |
| ALTICE USA               | ATUS   |
| ALTISOURCE PORTFOLIO     | ASPS   |
| ALTRA INDUSTRIAL MOTION  | AIMC   |
| ALTRIA GROUP INC         | MO     |
| ALTUS MIDSTREAM CO       | ALTM   |
| AMAG PHARMACEUTICALS INC | AMAG   |
| AMALGAMATED BANK         | AMAL   |
| AMAZON COM INC           | AMZN   |
| AMBAC FINL GROUP INC     | AMBC   |
| AMBARELLA INC            | AMBA   |
| AMBER RD INC             | AMBR   |
| AMC ENTERTAINMENT        | AMC    |
| AMC NETWORKS INC         | AMCX   |
| AMDOCS LTD               | DOX    |

| Company                  | Ticker |
|--------------------------|--------|
| AMER PUBLIC EDUCATION    | APEI   |
| AMERANT BANCORP INC (A)  | AMTB   |
| AMERCO                   | UHAL   |
| AMEREN CORP              | AEE    |
| AMERESCO INC             | AMRC   |
| AMERICAN AIRLINES GROUP  | AAL    |
| AMERICAN ASSETS TRST INC | AAT    |
| AMERICAN AXLE & MFG      | AXL    |
| AMERICAN CAMPUS COMMUN   | ACC    |
| AMERICAN EAGLE OUTFITTER | AEO    |
| AMERICAN ELECTRIC POWER  | AEP    |
| AMERICAN EQUITY INVST    | AEL    |
| AMERICAN EXPRESS CO      | AXP    |
| AMERICAN FINANCE TRUST   | AFIN   |
| AMERICAN FINANCIAL GROUP | AFG    |
| AMERICAN HOMES 4 RENT    | AMH    |
| AMERICAN INTL GROUP      | AIG    |
| AMERICAN NATIONAL INS CO | ANAT   |
| AMERICAN NATL BANKSHARES | AMNB   |
| AMERICAN OUTDOOR BRANDS  | AOBC   |
| AMERICAN RENAL ASSOC HLD | ARA    |
| AMERICAN RLTY INVS INC   | ARL    |
| AMERICAN SOFTWARE INC    | AMSWA  |
| AMERICAN STATES WATER CO | AWR    |
| AMERICAN SUPERCONDUCTOR  | AMSC   |
| AMERICAN TOWER CORP      | AMT    |
| AMERICAN VANGUARD CORP   | AVD    |
| AMERICAN WOODMARK CORP   | AMWD   |
| AMERICAN WTR WKS CO INC  | AWK    |
| AMERICAS CAR-MART INC    | CRMT   |
| AMERICOLD REALTY TRUST   | COLD   |
| AMERIPRISE FINANCIAL INC | AMP    |
| AMERIS BANCORP           | ABCB   |
| AMERISAFE INC            | AMSF   |
| AMERISOURCEBERGEN CORP   | ABC    |
| AMES NATL CORP           | ATLO   |
| AMETEK INC               | AME    |
| AMGEN INC                | AMGN   |
| AMICUS THERAPEUTICS INC  | FOLD   |
| AMKOR TECHNOLOGY INC     | AMKR   |
| AMN HEALTHCARE SERVICES  | AMN    |
| AMNEAL PHARMACEUTICALS   | AMRX   |
| AMPHASTAR PHARMA INC     | AMPH   |
| AMPHENOL CORP            | APH    |
| AMYRIS INC               | AMRS   |
| ANADARKO PETROLEUM CORP  | APC    |
| ANALOG DEVICES INC       | ADI    |
| ANAPLAN                  | PLAN   |

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| AMEDISYS INC             | AMED   |
| ANAVEX LIFE SCIENCES     | AVXL   |
| ANDERSONS INC            | ANDE   |
| ANGIODYNAMICS INC        | ANGO   |
| ANI PHARMACEUTICALS INC  | ANIP   |
| ANIKA THERAPEUTICS INC   | ANIK   |
| ANIXTER INTERNATIONAL    | AXE    |
| ANNALY CAPITAL MGMT INC  | NLY    |
| ANSYS INC                | ANSS   |
| ANTARES PHARMA INC       | ATRS   |
| ANTERO MIDSTREAM CORP    | AM     |
| ANTERO RESOURCES CO      | AR     |
| ANTHEM INC               | ANTM   |
| ANWORTH MORTGAGE ASSET   | ANH    |
| AON PLC                  | AON    |
| APACHE CORP              | APA    |
| APARTMENT INVNT & MGMT   | AIV    |
| APELLIS PHARMACEUTICALS  | APLS   |
| APERGY CORPORATION       | APY    |
| APOGEE ENTERPRISES INC   | APOG   |
| APOLLO COMMERCIAL RE     | ARI    |
| APOLLO MEDICAL HOLDINGS  | AMEH   |
| APPFOLIO INC             | APPF   |
| APPIAN                   | APPN   |
| APPLE HOSPITALITY REIT   | APLE   |
| APPLE INC                | AAPL   |
| APPLIED INDUSTRIAL TECH  | AIT    |
| APPLIED MATLS INC        | AMAT   |
| APPLIED OPTOELECTRONICS  | AAOI   |
| APTARGROUP INC           | ATR    |
| APTIV PLC                | APTV   |
| APYX MEDICAL INC         | APYX   |
| AQUA AMERICA INC         | WTR    |
| AQUANTICA CORP           | AQ     |
| AQUAVENTURE HOLDINGS LTD | WAAS   |
| ARAMARK                  | ARMK   |
| ARATANA THERAPEUTICS INC | PETX   |
| ARCBEST CORPORATION      | ARCB   |
| ARCH CAP GROUP LTD       | ACGL   |
| ARCH COAL INC            | ARCH   |
| ARCHER DANIELS MIDLAND   | ADM    |
| ARCHROCK INC             | AROC   |
| ARCONIC INC              | ARNC   |
| ARCOSA                   | ACA    |
| ARCUS BIOSCIENCES        | RCUS   |
| ARDAGH GROUP SA          | ARD    |
| ARDELYX INC              | ARDX   |
| ARDMORE SHIPPING CORP    | ASC    |

| Company                  | Ticker |
|--------------------------|--------|
| ANAPTYS BIO INC          | ANAB   |
| ARES MANAGEMENT CORP     | ARES   |
| ARGAN INC                | AGX    |
| ARGO GROUP INTL          | ARGO   |
| ARISTA NETWORKS INC      | ANET   |
| ARLINGTON ASSET INVNT    | AI     |
| ARLO TECHNOLOGIES INC    | ARLO   |
| ARMADA HOFFLER PPTYS INC | AHH    |
| ARMOUR RESIDENTIAL REIT  | ARR    |
| ARMSTRONG FLOORING INC   | AFI    |
| ARMSTRONG WORLD INDS INC | AWI    |
| ARQULE INC               | ARQL   |
| ARRAY BIOPHARMA INC      | ARRY   |
| ARROW ELECTRONICS INC    | ARW    |
| ARROW FINANCIAL CORP     | AROW   |
| ARROWHEAD PHARMACEUTICAL | ARWR   |
| ARTESIAN RESOURCES CORP  | ARTNA  |
| ARTISAN PARTNERS ASSET   | APAM   |
| ARVINAS HOLDING          | ARVN   |
| ASBURY AUTOMOTIVE GROUP  | ABG    |
| ASCENA RETAIL GROUP INC  | ASNA   |
| ASGN INCORPORATED        | ASGN   |
| ASHFORD HOSPITALITY      | AHT    |
| ASHLAND GLOBAL HOLDINGS  | ASH    |
| ASPEN TECHNOLOGY INC     | AZPN   |
| ASSEMBLY BIOSCIENCES INC | ASMB   |
| ASSERTIO THERAPEUTICS    | ASRT   |
| ASSOCIATED BANC CORP     | ASB    |
| ASSOCIATED CAPITAL GROUP | AC     |
| ASSURANT INC             | AIZ    |
| ASSURED GUARANTY LTD     | AGO    |
| ASTEC INDUSTRIES INC     | ASTE   |
| ASTRONICS CORP           | ATRO   |
| ASTRONOVA INC            | ALOT   |
| AT HOME GROUP INC        | HOME   |
| AT&T INC                 | T      |
| ATARA BIOTHERAPEUTICS    | ATRA   |
| ATHENE HOLDING LTD       | ATH    |
| ATHENEX                  | ATNX   |
| ATHERSYS INC             | ATHX   |
| ATKORE INTL GROUP INC    | ATKR   |
| ATLANTIC CAPITAL INC     | ACBI   |
| ATLANTIC PWR CORP        | AT     |
| ATLANTIC UNION BANKSHARE | AUB    |
| ATLAS AIR WORLDWIDE HLDG | AAWW   |
| ATLASSIAN CORP PLC       | TEAM   |
| ATMOS ENERGY CORP        | ATO    |
| ATN INTERNATIONAL INC    | ATNI   |

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| ARENA PHARMACEUTICALS    | ARNA   |
| ARES COML REAL ESTATE    | ACRE   |
| AUDENTES THERAPEUTICS    | BOLD   |
| AUTODESK INC             | ADSK   |
| AUTOMATIC DATA PROCESS   | ADP    |
| AUTONATION INC           | AN     |
| AUTOZONE INC             | AZO    |
| AVALARA INC              | AVLR   |
| AVALON GLOBOCARE CORP    | AVCO   |
| AVALONBAY CMNTYS INC     | AVB    |
| AVANGRID INC             | AGR    |
| AVANOS MEDICAL INC       | AVNS   |
| AVAYA HOLDINGS CORP      | AVYA   |
| AVEDRO                   | AVDR   |
| AVERY DENNISON CORP      | AVY    |
| AVID BIOSERVICES INC     | CDMO   |
| AVID TECHNOLOGY INC      | AVID   |
| AVIS BUDGET GROUP INC    | CAR    |
| AVISTA CORP              | AVA    |
| AVNET INC                | AVT    |
| AVROBIO INC              | AVRO   |
| AVX CORP                 | AVX    |
| AXA EQUITABLE HOLDINGS   | EQH    |
| AXALTA COATING SYSTEMS   | AXTA   |
| AXCELIS TECHNOLOGIES INC | ACLS   |
| AXCELLA HEALTH           | AXLA   |
| AXIS CAPITAL HOLDINGS    | AXS    |
| AXOGEN INC               | AXGN   |
| AXON ENTERPRISE INC      | AAXN   |
| AXONICS MODULATION TECH  | AXNX   |
| AXOS FINANCIAL INC       | AX     |
| AXSOME THERAPEUTICS INC  | AXSM   |
| AXT INC                  | AXTI   |
| AZZ INC                  | AZZ    |
| B & G FOODS INC          | BGS    |
| B. RILEY FINANCIAL INC   | RILY   |
| BADGER METER INC         | BMI    |
| BAKER HUGHES GE          | BHGE   |
| BALCHEM CORP             | BCPC   |
| BALL CORP                | BLL    |
| BANC OF CALIFORNIA INC   | BANC   |
| BANCFIRST CORP           | BANF   |
| BANCO LATINOAMERICANO    | BLX    |
| BANCORP INC              | TBBK   |
| BANCORPSOUTH BANK        | BXS    |
| BANDWIDTH CLASS A        | BAND   |
| BANK COMM HLDGS          | BOCH   |
| BANK FIRST NATIONAL      | BFC    |

| Company                  | Ticker |
|--------------------------|--------|
| ATRICURE INC             | ATRC   |
| ATRIION CORP             | ATRI   |
| BANK OF NEW YORK MELLON  | BK     |
| BANK OF NT BUTTERFIELD   | NTB    |
| BANK OF PRINCETON        | BPRN   |
| BANK OZK                 | OZK    |
| BANK7 CORP               | BSVN   |
| BANKFINANCIAL CORP       | BFIN   |
| BANKUNITED INC           | BKU    |
| BANKWELL FINL GROUP INC  | BWFG   |
| BANNER CORP              | BANR   |
| BAR HBR BANKSHARES       | BHB    |
| BARNES & NOBLE EDUCATION | BNED   |
| BARNES & NOBLE INC       | BKS    |
| BARNES GROUP INC         | B      |
| BARRETT BUSINESS SERVICE | BBSI   |
| BASSETT FURNITURE INDS   | BSET   |
| BAXTER INTERNATIONAL INC | BAX    |
| BAYCOM CORPORATION       | BCML   |
| BB&T CORP                | BBT    |
| BBX CAPITAL CORP         | BBX    |
| BCB BANCORP INC          | BCBP   |
| BEACON ROOFING SUPPLY    | BECN   |
| BEAZER HOMES USA INC     | BZH    |
| BECTON DICKINSON & CO    | BDX    |
| BED BATH & BEYOND INC    | BBBY   |
| BEL FUSE INC             | BELFB  |
| BELDEN INC               | BDC    |
| BENCHMARK ELECTRONICS    | BHE    |
| BENEFITFOCUS INC         | BNFT   |
| BERKLEY W R CORP         | WRB    |
| BERKSHIRE HATHAWAY INC   | BRK.B  |
| BERKSHIRE HILLS BANCORP  | BHLB   |
| BERRY GLOBAL GROUP       | BERY   |
| BERRY PETROLEUM          | BRY    |
| BEST BUY INC             | BBY    |
| BEYOND MEAT              | BYND   |
| BEYONDSRING              | BYSI   |
| BG STAFFING INC          | BGSF   |
| BGC PARTNERS INC         | BGCP   |
| BIG LOTS INC             | BIG    |
| BIGLARI HOLDINGS B       | BH     |
| BIOCRIST PHARMACEUTICALS | BCRX   |
| BIODELIVERY SCIENCES     | BDSI   |
| BIOGEN INC               | BIIB   |
| BIOHAVEN PHARMACEUTICAL  | BHVN   |
| BIOLIFE SOLUTIONS INC    | BLFS   |
| BIOMARIN PHARMACEUTICAL  | BMRN   |

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| BANK OF AMERICA CORP     | BAC    |
| BANK OF HAWAII CORP      | BOH    |
| BANK OF MARIN BANCORP    | BMRC   |
| BIOSIG TECHNOLOGIES INC  | BSGM   |
| BIOSPECIFICS TECHNO CORP | BSTC   |
| BIOTELEMETRY INC         | BEAT   |
| BIOTIME INC              | BTX    |
| BIOXCEL THERAPEUTICS     | BTAI   |
| BJS RESTAURANTS INC      | BJRI   |
| BJ'S WHOLESALE CLUB HDLG | BJ     |
| BLACK HILLS CORP         | BKH    |
| BLACK KNIGHT             | BKI    |
| BLACKBAUD INC            | BLKB   |
| BLACKLINE INC            | BL     |
| BLACKROCK INC            | BLK    |
| BLACKSTONE MORTGAGE TRST | BXMT   |
| BLOCK H & R INC          | HRB    |
| BLOOM ENERGY             | BE     |
| BLOOMIN' BRANDS INC      | BLMN   |
| BLUCORA INC              | BCOR   |
| BLUE BIRD CORP           | BLBD   |
| BLUEBIRD BIO INC         | BLUE   |
| BLUEGREEN VACATIONS CORP | BXG    |
| BLUELIX HOLDINGS INC     | BXC    |
| BLUEPRINT MEDICINES CORP | BPMC   |
| BLUEROCK RESIDENT REIT   | BRG    |
| BMC STOCK HOLDINGS INC   | BMCH   |
| BOEING CO                | BA     |
| BOINGO WIRELESS INC      | WIFI   |
| BOISE CASCADE COMPANY    | BCC    |
| BOK FINANCIAL CORP       | BOKF   |
| BONANZA CREEK ENER INC   | BCEI   |
| BOOKING HOLDINGS INC     | BKNG   |
| BOOT BARN HOLDINGS       | BOOT   |
| BOOZ ALLEN HAMILTON HLDG | BAH    |
| BORG WARNER INC          | BWA    |
| BOSTON BEER INC          | SAM    |
| BOSTON OMAHA             | BOMN   |
| BOSTON PRIVATE FINANCIAL | BPFH   |
| BOSTON PROPERTIES INC    | BXP    |
| BOSTON SCIENTIFIC CO     | BSX    |
| BOTTOMLINE TECHNOLOGIES  | EPAY   |
| BOX INC                  | BOX    |
| BOYD GAMING CORP         | BYD    |
| BRADY CORP               | BRC    |
| BRAEMAR HOTELS & RESORTS | BHR    |
| BRANDYWINE REALTY TRUST  | BDN    |
| BRIDGE BANCORP INC       | BDGE   |

| Company                  | Ticker |
|--------------------------|--------|
| BIO-RAD LABORATORIES INC | BIO    |
| BIOSCRIP INC             | BIOS   |
| BIO-TECHNE CORP          | TECH   |
| BRIGHT HORIZON FAMILY    | BFAM   |
| BRIGHTCOVE INC           | BCOV   |
| BRIGHTHOUSE FINANCIAL    | BHF    |
| BRIGHTSPHERE INVESTMENT  | BSIG   |
| BRIGHTVIEW HOLDINGS INC  | BV     |
| BRINKER INTERNATIONAL    | EAT    |
| BRINKS CO                | BCO    |
| BRISTOL MYERS SQUIBB     | BMJ    |
| BRIXMOR PROPERTY GROUP   | BRX    |
| BROADCOM INC             | AVGO   |
| BROADRIDGE FINANCIAL INC | BR     |
| BROOKDALE SENIOR LIVING  | BKD    |
| BROOKFIELD PROPERTY REIT | BPR    |
| BROOKLINE BANCORP INC    | BRKL   |
| BROOKS AUTOMATION INC    | BRKS   |
| BROWN & BROWN INC        | BRO    |
| BROWN FORMAN CORP CL A   | BF.A   |
| BROWN FORMAN CORP CL B   | BF.B   |
| BRT APARTMENTS CORP      | BRT    |
| BRUKER CORP              | BRKR   |
| BRUNSWICK CORP           | BC     |
| BRYN MAWR BANK CORP      | BMTC   |
| BUCKLE INC               | BKE    |
| BUILDERS FIRSTSOURCE INC | BLDR   |
| BUNGE LIMITED            | BG     |
| BURLINGTON STORES INC    | BURL   |
| BUSINESS FIRST BANCSHARE | BFST   |
| BWX TECHNOLOGIES INC     | BWXT   |
| BYLINE BANCORP           | BY     |
| C & F FINANCIAL CORP     | CFI    |
| C H ROBINSON WORLDWIDE   | CHRW   |
| C&J ENERGY SERVICES INC  | CJ     |
| CABLE ONE INC            | CABO   |
| CABOT CORP               | CBT    |
| CABOT MICROELECTRONICS   | CCMP   |
| CABOT OIL & GAS CORP     | COG    |
| CACI INTERNATIONAL INC   | CACI   |
| CACTUS INC               | WHD    |
| CADENCE BANCORP          | CADE   |
| CADENCE DESIGN SYSTEMS   | CDNS   |
| CADIZ INC                | CDZI   |
| CAESARS ENTMT CORP       | CZR    |
| CAESARSTONE LTD          | CSTE   |
| CAI INTERNATIONAL INC    | CAI    |
| CAL MAINE FOODS INC      | CALM   |

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| BRIDGEWATER BANCSHARES   | BWB    |
| BRIDGFORD FOODS CORP     | BRID   |
| BRIGGS & STRATTON CO     | BGG    |
| BRIGHAM MINERALS         | MNRL   |
| CALIFORNIA WTR SVC GRP   | CWT    |
| CALITHERA BIOSCIENCES    | CALA   |
| CALIX INC                | CALX   |
| CALLAWAY GOLF CO         | ELY    |
| CALLON PETROLEUM CO      | CPE    |
| CALYXT                   | CLXT   |
| CAMBREX CORP             | CBM    |
| CAMBRIDGE BANCORP        | CATC   |
| CAMDEN NATIONAL CORP     | CAC    |
| CAMDEN PROPERTY TRUST    | CPT    |
| CAMPBELL SOUP CO         | CPB    |
| CAMPING WORLD HOLDINGS   | CWH    |
| CANNAE HOLDINGS INC      | CNNE   |
| CANTEL MEDICAL CORP      | CMD    |
| CAPITAL BANCORP INC      | CBNK   |
| CAPITAL CITY BANK GROUP  | CCBG   |
| CAPITAL ONE FINANCIAL    | COF    |
| CAPITOL FEDERAL FINL INC | CFFN   |
| CAPRI HOLDINGS LIMITED   | CPRI   |
| CAPSTAR FINANCIAL HLDG   | CSTR   |
| CAPSTEAD MORTGAGE CORP   | CMO    |
| CARA THERAPEUTICS INC    | CARA   |
| CARBON BLACK             | CBLK   |
| CARBONITE INC            | CARB   |
| CARDINAL HEALTH INC      | CAH    |
| CARDIOVASCULAR SYS INC   | CSII   |
| CARDLYTICS INC           | CDLX   |
| CARDTRONICS PLC          | CATM   |
| CARE.COM INC             | CRCM   |
| CAREDX INC               | CDNA   |
| CAREER EDUCATION CORP    | CECO   |
| CARETRUST REIT INC       | CTRE   |
| CARGURUS INC             | CARG   |
| CARLISLE COS INC         | CSL    |
| CARMAX INC               | KMX    |
| CARNIVAL CORP            | CCL    |
| CAROLINA FINL CORP       | CARO   |
| CARPENTER TECHNOLOGY     | CRS    |
| CARRIAGE SERVICES INC    | CSV    |
| CARRIZO OIL & GAS INC    | CRZO   |
| CARROLS RESTAURANT GRP   | TAST   |
| CARS.COM                 | CARS   |
| CARTER BANK & TRUST      | CARE   |
| CARTER INC               | CRI    |

| Company                  | Ticker |
|--------------------------|--------|
| CALAMP CORP              | CAMP   |
| CALAVO GROWERS INC       | CVGW   |
| CALERES INC              | CAL    |
| CALIFORNIA RESOURCES     | CRC    |
| CASS INFORMATION SYSTEMS | CASS   |
| CASTLIGHT HEALTH INC     | CSLT   |
| CATALENT INC             | CTLT   |
| CATALYST PHARMACEUTICALS | CPRX   |
| CATASYS INC              | CATS   |
| CATCHMARK TIMBER TRUST   | CTT    |
| CATERPILLAR INC          | CAT    |
| CATHAY GENERAL BANCORP   | CATY   |
| CATO CORP                | CATO   |
| CAVCO INDUSTRIES INC     | CVCO   |
| CBDMD INC                | YCBD   |
| CBIZ INC                 | CBZ    |
| CBL & ASSOC PPTYS INC    | CBL    |
| CBOE GLOBAL MARKETS INC  | CBOE   |
| CBRE GROUP INC           | CBRE   |
| CBS CORPORATION          | CBS    |
| CBTX INC                 | CBTX   |
| CDK GLOBAL INC           | CDK    |
| CDW CORPORATION          | CDW    |
| CECO ENVIRONMENTAL CORP  | CECE   |
| CEDAR REALTY TRUST INC   | CDR    |
| CELANESE CORP            | CE     |
| CELCUITY                 | CELC   |
| CELGENE CORP             | CELG   |
| CELLULAR BIOMEDICINE GRP | CBMG   |
| CEL-SCI CORP             | CVM    |
| CELSIUS HOLDINGS INC     | CELH   |
| CENTENE CORP             | CNC    |
| CENTENNIAL RESOURCE DEV  | CDEV   |
| CENTERPOINT ENERGY INC   | CNP    |
| CENTERSTATE BANK CORP    | CSFL   |
| CENTRAL EUROPEAN MEDIA   | CETV   |
| CENTRAL GARDEN & PET CO  | CENT   |
| CENTRAL GARDEN & PET CO  | CENTA  |
| CENTRAL PACIFIC FINL     | CPF    |
| CENTRAL VALLEY CMNTY     | CVCY   |
| CENTRIC BRANDS INC       | CTRC   |
| CENTURY ALUMINUM CO      | CENX   |
| CENTURY BANCORP INC      | CNBKA  |
| CENTURY CASINOS INC      | CNTY   |
| CENTURY COMMUNITIES INC  | CCS    |
| CENTURYLINK INC          | CTL    |
| CERECOR INC              | CERC   |
| CERIDIAN HCM HOLDING     | CDAY   |

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| Company                  | Ticker |
|--------------------------|--------|
| CARVANA CO               | CVNA   |
| CASA SYSTEMS INC         | CASA   |
| CASELLA WASTE SYSTEMS    | CWST   |
| CASEYS GENERAL STORES    | CASY   |
| CASI PHARMACEUTICALS INC | CASI   |
| CHAPARRAL ENERGY INC     | CHAP   |
| CHARAH SOLUTIONS INC     | CHRA   |
| CHARLES RIVER LABS INTL  | CRL    |
| CHART INDUSTRIES INC     | GTLS   |
| CHARTER COMM INC         | CHTR   |
| CHASE CORP               | CCF    |
| CHATHAM LODGING TR       | CLDT   |
| CHECKPOINT THERAPEUTICS  | CKPT   |
| CHEESECAKE FACTORY INC   | CAKE   |
| CHEFS' WHAREHOUSE INC    | CHEF   |
| CHEGG INC                | CHGG   |
| CHEMED CORPORATION       | CHE    |
| CHEMICAL FINANCIAL CORP  | CHFC   |
| CHEMOCENTRYX INC         | CCXI   |
| CHEMUNG FINL CORP        | CHMG   |
| CHENIERE ENERGY INC      | LNG    |
| CHERRY HILL MORTGAGE INV | CHMI   |
| CHESAPEAKE ENERGY CORP   | CHK    |
| CHESAPEAKE LODGING TRUST | CHSP   |
| CHESAPEAKE UTILITIES     | CPK    |
| CHEVRON CORP             | CVX    |
| CHIASMA INC              | CHMA   |
| CHICOS FAS INC           | CHS    |
| CHILDRENS PLACE INC      | PLCE   |
| CHIMERA INVESTMENT CORP  | CIM    |
| CHIMERIX INC             | CMRX   |
| CHIPOTLE MEXICAN GRILL   | CMG    |
| CHOICE HOTELS INTL INC   | CHH    |
| CHROMADEX CORP           | CDXC   |
| CHUBB LIMITED            | CB     |
| CHURCH & DWIGHT INC      | CHD    |
| CHURCHILL DOWNS INC      | CHDN   |
| CHUY'S HOLDINGS INC      | CHUY   |
| CIENA CORP               | CIEN   |
| CIGNA CORP               | CI     |
| CIM COMMERCIAL TRUST     | CMCT   |
| CIMAREX ENERGY CO        | XEC    |
| CIMPRESS NV              | CMPR   |
| CINCINNATI BELL INC      | CBB    |
| CINCINNATI FINANCIAL     | CINF   |
| CINEMARK HOLDINGS INC    | CNK    |
| CINTAS CORP              | CTAS   |
| CIRCOR INTERNATIONAL INC | CIR    |

| Company                  | Ticker |
|--------------------------|--------|
| CERNER CORP              | CERN   |
| CERUS CORP               | CERS   |
| CEVA INC                 | CEVA   |
| CF INDUSTRIES HOLDINGS   | CF     |
| CHANNELADVISOR CORP      | ECOM   |
| CITIZENS & NORTHERN CORP | CZNC   |
| CITIZENS FINANCIAL INC   | CFG    |
| CITIZENS INC             | CIA    |
| CITRIX SYSTEMS INC       | CTXS   |
| CITY HOLDING CO          | CHCO   |
| CITY OFFICE REIT INC     | CIO    |
| CIVISTA BANCSHARES INC   | CIVB   |
| CLARUS CORPORATION       | CLAR   |
| CLEAN ENERGY FUELS CORP  | CLNE   |
| CLEAN HARBORS INC        | CLH    |
| CLEAR CHANNEL OUTDOOR    | CCO    |
| CLEARFIELD INC           | CLFD   |
| CLEARWATER PAPER CORP    | CLW    |
| CLEARWAY ENERGY          | CWEN.A |
| CLEARWAY ENERGY (C)      | CWEN   |
| CLEVELAND-CLIFFS INC     | CLF    |
| CLIPPER REALTY INC       | CLPR   |
| CLOROX CO                | CLX    |
| CLOUDERA INC             | CLDR   |
| CLOVIS ONCOLOGY INC      | CLVS   |
| CME GROUP INC            | CME    |
| CMS ENERGY CORP          | CMS    |
| CNA FINANCIAL CORP       | CNA    |
| CNB FINL CORP PA         | CCNE   |
| CNO FINANCIAL GROUP      | CNO    |
| CNX RESOURCES CORP       | CNX    |
| COASTAL FINANCIAL CORP   | CCB    |
| COCA COLA CO             | KO     |
| COCA-COLA CONSOLIDATED   | COKE   |
| CODA OCTOPUS GROUP INC   | CODA   |
| CODEXIS INC              | CDXS   |
| CODORUS VY BANCORP INC   | CVLY   |
| COEUR MINING INC         | CDE    |
| COGENT COMM HOLDINGS     | CCOI   |
| COGNEX CORP              | CGNX   |
| COGNIZANT TECH SOLUTIONS | CTSH   |
| COHEN & STEERS INC       | CNS    |
| COHERENT INC             | COHR   |
| COHERUS BIOSCIENCES      | CHRS   |
| COHU INC                 | COHU   |
| COLFAX CORP              | CFX    |
| COLGATE PALMOLIVE CO     | CL     |
| COLLECTORS UNIVERSE INC  | CLCT   |

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| Company                  | Ticker |
|--------------------------|--------|
| CIRRUS LOGIC INC         | CRUS   |
| CISCO SYSTEMS INC        | CSCO   |
| CISION                   | CISN   |
| CIT GROUP INC            | CIT    |
| CITI TRENDS INC          | CTRN   |
| CITIGROUP INC            | C      |
| COLUMBIA PPTY TR INC     | CXP    |
| COLUMBIA SPORTSWEAR CO   | COLM   |
| COLUMBUS MCKINNON CORP   | CMCO   |
| COMCAST CORP CL A        | CMCSA  |
| COMERICA INC             | CMA    |
| COMFORT SYSTEMS USA INC  | FIX    |
| COMMERCE BANCSHARES INC  | CBSH   |
| COMMERCIAL METALS CO     | CMC    |
| COMMERCIAL VEH GROUP INC | CVGI   |
| COMMSCOPE HOLDING CO     | COMM   |
| COMMUNITY BANK SYSTEMS   | CBU    |
| COMMUNITY BANKERS TRUST  | ESXB   |
| COMMUNITY FINL CORP MD   | TCFC   |
| COMMUNITY HEALTH SYSTEMS | CYH    |
| COMMUNITY HEALTHCARE TR  | CHCT   |
| COMMUNITY TRUST BANCORP  | CTBI   |
| COMMVAULT SYSTEMS INC    | CVLT   |
| COMPASS MINERALS INTL    | CMP    |
| COMPUTER PROGRAMS & SYS  | CPSI   |
| COMPX INTERNATIONAL INC  | CIX    |
| COMSCORE INC             | SCOR   |
| COMSTOCK RESOURCES INC   | CRK    |
| COMTECH TELECOMM         | CMTL   |
| CONAGRA BRANDS INC       | CAG    |
| CONCERT PHARMACEUTICALS  | CNCE   |
| CONCHO RESOURCES INC     | CXO    |
| CONCRETE PUMPING         | BBCP   |
| CONDUENT INC             | CNDT   |
| CONFORMIS INC            | CFMS   |
| CONMED CORP              | CNMD   |
| CONNECTICUT WATER SVC    | CTWS   |
| CONNECTONE BANCORP INC   | CNOB   |
| CONNS INC                | CONN   |
| CONOCOPHILLIPS           | COP    |
| CONSOL ENERGY INC        | CEIX   |
| CONSOLIDATED COMM        | CNSL   |
| CONSOLIDATED EDISON INC  | ED     |
| CONSOLIDATED TOMOKA LAND | CTO    |
| CONSOLIDATED WATER CO    | CWCO   |
| CONSTELLATION BRANDS     | STZ    |
| CONSTELLATION PHARMA     | CNST   |
| CONSTRUCTION PARTNERS    | ROAD   |

| Company                  | Ticker |
|--------------------------|--------|
| COLLEGIUM PHARMACEUTICAL | COLL   |
| COLONY BANKCORP INC      | CBAN   |
| COLONY CAPITAL INC       | CLNY   |
| COLONY CR RE INC (A)     | CLNC   |
| COLUMBIA BKG SYSTEM INC  | COLB   |
| COLUMBIA FINANCIAL INC   | CLBK   |
| COPA HOLDINGS SA         | CPA    |
| COPART INC               | CPRT   |
| CORBUS PHARMACEUTICALS   | CRBP   |
| CORCEPT THERAPEUTICS INC | CORT   |
| CORE MARK HOLDING CO INC | CORE   |
| CORECIVIC INC            | CXW    |
| CORELOGIC INC            | CLGX   |
| COREENERGY INFRASTRUCT   | CORR   |
| COREPOINT LODGINGS INC   | CPLG   |
| CORESITE REALTY CORP     | COR    |
| CORINDUS VASC ROBOTICS   | CVRS   |
| CORMEDIX INC             | CRMD   |
| CORNERSTONE BUILDING     | CNR    |
| CORNERSTONE ONDEMAND INC | CSOD   |
| CORNING INC              | GLW    |
| CORPORATE OFFICE PPTYS   | OFC    |
| CORTEVA                  | CTVA   |
| CORTEXIME                | CRTX   |
| CORVEL CORP              | CRVL   |
| COSTAMARE INC            | CMRE   |
| COSTAR GROUP INC         | CSGP   |
| COSTCO WHOLESALE CORP    | COST   |
| COTY INC                 | COTY   |
| COUPA SOFTWARE INC       | COUP   |
| COUSINS PROPERTIES INC   | CUZ    |
| COVANTA HOLDING CORP     | CVA    |
| COVENANT TRANS GRP INC   | CVTI   |
| COVETRUS INC             | CVET   |
| COVIA HOLDINGS CORP      | CVIA   |
| COWEN INC                | COWN   |
| CRA INTERNATIONAL INC    | CRAI   |
| CRACKER BARREL STORE     | CBRL   |
| CRAFT BREW ALLIANCE      | BREW   |
| CRANE CO                 | CR     |
| CRAWFORD & CO CL A       | CRD.A  |
| CRAY INC                 | CRAY   |
| CREDIT ACCEP CORP MICH   | CACC   |
| CREE INC                 | CREE   |
| CRINETICS PHARMACEUTICAL | CRNX   |
| CROCS INC                | CROX   |
| CROSS COUNTRY HEALTHCARE | CCRN   |
| CROWN CASTLE INTL CORP   | CCI    |



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| Company                  | Ticker |
|--------------------------|--------|
| CONTINENTAL BLDG PRODS   | CBPX   |
| CONTINENTAL RESOURCES    | CLR    |
| CONTROL4 CORPORATION     | CTRL   |
| CONTURA ENERGY           | CTRA   |
| COOPER COMPANIES INC     | COO    |
| COOPER STD HLDGS INC     | CPS    |
| COOPER TIRE & RUBBER CO  | CTB    |
| CUBESMART                | CUBE   |
| CUBIC CORP               | CUB    |
| CUE BIOPHARMA INC        | CUE    |
| CULLEN FROST BANKERS     | CFR    |
| CULP INC                 | CULP   |
| CUMMINS INC              | CMI    |
| CUMULUS MEDIA INC        | CMLS   |
| CURO GROUP HOLDINGS CORP | CURO   |
| CURTISS WRIGHT CORP      | CW     |
| CUSHMAN & WAKEFIELD PLC  | CWK    |
| CUSTOMERS BANCORP INC    | CUBI   |
| CUTERA INC               | CUTR   |
| CVB FINANCIAL CORP       | CVBF   |
| CVR ENERGY INC           | CVI    |
| CVS HEALTH CORPORATION   | CVS    |
| CYCLERION THERAPEUTICS   | CYCN   |
| CYMABAY THERAPEUTICS INC | CBAY   |
| CYPRESS SEMICONDUCTOR    | CY     |
| CYRUSONE INC             | CONE   |
| CYTOKINETICS INC         | CYTK   |
| CYTOMX THERAPEUTICS INC  | CTMX   |
| CYTOSORBENTS CORP        | CTSO   |
| D R HORTON INC           | DHI    |
| DAILY JOURNAL CORP       | DJCO   |
| DAKTRONICS INC           | DAKT   |
| DANA INCORPORATED        | DAN    |
| DANAHER CORP             | DHR    |
| DARDEN RESTAURANTS INC   | DRI    |
| DARLING INGREDIENTS INC  | DAR    |
| DASAN ZHONG SOLUTIONS    | DZSI   |
| DASEKE INC               | DSKE   |
| DAVE & BUSTERS ENTMT INC | PLAY   |
| DAVITA INC               | DVA    |
| DEAN FOODS COMPANY       | DF     |
| DECIPHERA PHARMACEUTICAL | DCPH   |
| DECKERS OUTDOOR CORP     | DECK   |
| DEERE & CO               | DE     |
| DEL FRISCOS RESTAURANT   | DFRG   |
| DEL TACO RESTAURANTS INC | TACO   |
| DELEK US HLDGS INC       | DK     |
| DELL TECHNOLOGIES        | DELL   |

| Company                  | Ticker |
|--------------------------|--------|
| CROWN HOLDINGS INC       | CCK    |
| CRYOLIFE INC             | CRY    |
| CRYOPORT INC             | CYRX   |
| CSG SYSTEMS INTL INC     | CSGS   |
| CSW INDUSTRIALS INC      | CSWI   |
| CSX CORP                 | CSX    |
| CTS CORP                 | CTS    |
| DESIGNER BRANDS INC      | DBI    |
| DEVON ENERGY CORP        | DVN    |
| DEXCOM INC               | DXCM   |
| DHI GROUP INC            | DHX    |
| DHT HOLDINGS INC         | DHT    |
| DIAMOND HILL INVESTMENT  | DHIL   |
| DIAMOND OFFSHR DRILLING  | DO     |
| DIAMOND S SHIPPING       | DSSI   |
| DIAMONDBACK ENERGY INC   | FANG   |
| DIAMONDROCK HOSPITALITY  | DRH    |
| DICERNA PHARMACEUTICALS  | DRNA   |
| DICKS SPORTING GOODS INC | DKS    |
| DIEBOLD NIXDORF          | DBD    |
| DIGI INTL INC            | DGII   |
| DIGIMARC CORPORATION     | DMRC   |
| DIGITAL REALTY TRUST INC | DLR    |
| DIGITAL TURBINE INC      | APPS   |
| DILLARDS INC             | DDS    |
| DIME CMNTY BANCSHARES    | DCOM   |
| DINE BRANDS GLOBAL INC   | DIN    |
| DIODES INC               | DIOD   |
| DIPLOMAT PHARMACY INC    | DPLO   |
| DISCOVER FINANCIAL SRVC  | DFS    |
| DISCOVERY INC SERIES A   | DISCA  |
| DISCOVERY INC SERIES C   | DISCK  |
| DISH NETWORK CORP        | DISH   |
| DISNEY WALT CO           | DIS    |
| DMC GLOBAL INC           | BOOM   |
| DNB FINL CORP            | DNBF   |
| DOCUSIGN                 | DOCU   |
| DOLBY LABORATORIES INC   | DLB    |
| DOLLAR GENERAL CORP      | DG     |
| DOLLAR TREE INC          | DLTR   |
| DOMINION ENERGY INC      | D      |
| DOMINOS PIZZA INC        | DPZ    |
| DOMO INC                 | DOMO   |
| DOMTAR CORPORATION       | UFS    |
| DONALDSON INC            | DCI    |
| DONEGAL GROUP INC        | DGICA  |
| DONNELLEY FINANCIAL      | DFIN   |
| DONNELLEY R R & SONS CO  | RRD    |

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| Company                  | Ticker |
|--------------------------|--------|
| DELTA AIR LINES INC      | DAL    |
| DELTA APPAREL INC        | DLA    |
| DELUXE CORP              | DLX    |
| DENALI THERAPEUTICS INC  | DNLI   |
| DENBURY RESOURCES INC    | DNR    |
| DENNYS CORP              | DENN   |
| DENTSPLY SIRONA INC      | XRAY   |
| DERMIRA INC              | DERM   |
| DRIVE SHACK              | DS     |
| DROPBOX                  | DBX    |
| DSP GROUP INC            | DSPG   |
| DTE ENERGY CO            | DTE    |
| DUCOMMUN INC             | DCO    |
| DUKE ENERGY CORP         | DUK    |
| DUKE REALTY CORP         | DRE    |
| DULUTH HOLDINGS INC      | DLTH   |
| DUNKIN BRANDS GROUP INC  | DNKN   |
| DUPONT DE NEMOURS INC    | DD     |
| DXC TECHNOLOGY COMPANY   | DXC    |
| DXP ENTERPRISES INC      | DXPE   |
| DYCOM INDUSTRIES INC     | DY     |
| DYNAVAX TECHNOLOGIES     | DVAX   |
| DYNEX CAPITAL INC        | DX     |
| E TRADE FINANCIAL CORP   | ETFC   |
| EAGLE BANCORP INC        | EGBN   |
| EAGLE BULK SHIPPING INC  | EGLE   |
| EAGLE MATERIALS INC      | EXP    |
| EAGLE PHARMACEUTICALS    | EGRX   |
| EARTHSTONE ENERGY INC    | ESTE   |
| EAST WEST BANCORP INC    | EWBC   |
| EASTERLY GOVERNMENT PPTY | DEA    |
| EASTERN CO               | EML    |
| EASTGROUP PROPERTIES INC | EGP    |
| EASTMAN CHEMICAL CO      | EMN    |
| EATON CORP PLC           | ETN    |
| EATON VANCE CORP         | EV     |
| EBAY INC                 | EBAY   |
| EBIX INC                 | EBIX   |
| ECHO GLOBAL LOGISTICS    | ECHO   |
| ECHOSTAR CORP            | SATS   |
| ECOLAB INC               | ECL    |
| EDGEWELL PERSONAL CARE   | EPC    |
| EDISON INTERNATIONAL     | EIX    |
| EDITAS MEDICINE INC      | EDIT   |
| EDWARDS LIFESCIENCES     | EW     |
| EGAIN CORPORATION        | EGAN   |
| EHEALTH INC              | EHTH   |
| EIDOS THERAPEUTICS       | EIDX   |

| Company                  | Ticker |
|--------------------------|--------|
| DORIAN LPG LTD           | LPG    |
| DORMAN PRODUCTS INC      | DORM   |
| DOUGLAS DYNAMICS INC     | PLOW   |
| DOUGLAS EMMETT INC       | DEI    |
| DOVA PHARMACEUTICALS     | DOVA   |
| DOVER CORP               | DOV    |
| DOW INC                  | DOW    |
| DRIL-QUIP INC            | DRQ    |
| ELEMENT SOLUTIONS INC.   | ESI    |
| ELEVATE CREDIT INC       | ELVT   |
| ELF BEAUTY INC           | ELF    |
| ELLINGTON FINANCIAL      | EFC    |
| ELOXX PHARMACEUTICALS    | ELOX   |
| EMC INS GROUP INC        | EMCI   |
| EMCOR GROUP INC          | EME    |
| EMERALD EXPOSITIONS      | EEX    |
| EMERGENT BIOSOLUTIONS    | EBS    |
| EMERSON ELECTRIC CO      | EMR    |
| EMPIRE RESORTS INC       | NYNY   |
| EMPIRE STATE REALTY      | ESRT   |
| EMPLOYERS HOLDINGS INC   | EIG    |
| ENANTA PHARMACEUTICALS   | ENTA   |
| ENCOMPASS HEALTH CORP    | EHC    |
| ENCORE CAPITAL GROUP INC | ECPG   |
| ENCORE WIRE CORP         | WIRE   |
| ENDO INTERNATIONAL PLC   | ENDP   |
| ENDURANCE INTERNATIONAL  | EIGI   |
| ENERGIZER HOLDINGS INC   | ENR    |
| ENERGIOUS CORP           | WATT   |
| ENERGY FUELS INC         | UUUU   |
| ENERGY RECOVERY INC      | ERII   |
| ENERSYS INC              | ENS    |
| ENNIS INC                | EBF    |
| ENOCHIAN BIOSCIENCES     | ENOB   |
| ENOVA INTERNATIONAL INC  | ENVA   |
| ENPHASE ENERGY INC       | ENPH   |
| ENPRO INDUSTRIES INC     | NPO    |
| ENSIGN GROUP INC         | ENSG   |
| ENSTAR GROUP LIMITED     | ESGR   |
| ENTEGR FINANCIAL CORP    | ENFC   |
| ENTEGRIS INC             | ENTG   |
| ENTERCOM COMMUNICATIONS  | ETM    |
| ENTERGY CORP             | ETR    |
| ENTERPRISE BANCORP INC   | EBTC   |
| ENTERPRISE FINL SERVICES | EFSC   |
| ENTRAVISION COMM         | EVC    |
| ENVESTNET INC            | ENV    |
| ENZO BIOCHEM INC         | ENZ    |

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| Company                  | Ticker |
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| EIGER BIOPHARMACEUTICALS | EIGR   |
| EL PASO ELECTRIC CO      | EE     |
| EL POLLO LOCO HLDGS INC  | LOCO   |
| ELANCO ANIMAL HEALTH     | ELAN   |
| ELASTIC N.V.             | ESTC   |
| ELDORADO RESORTS INC     | ERI    |
| ELECTROCORE INC          | ECOR   |
| ELECTRONIC ARTS INC      | EA     |
| ELECTRONICS FOR IMAGING  | EFII   |
| EQUITY BANCSHARE INC     | EQBK   |
| EQUITY COMMONWEALTH      | EQC    |
| EQUITY LIFESTYLE PROP    | ELS    |
| EQUITY RESIDENTIAL       | EQR    |
| ERA GROUP INC            | ERA    |
| ERIE INDEMNITY CO        | ERIE   |
| EROS INTL PLC            | EROS   |
| ESCALADE INC             | ESCA   |
| ESCO TECHNOLOGIES INC    | ESE    |
| ESPERION THERAPEUTICS    | ESPR   |
| ESQUIRE FINANCIAL HLDGS  | ESQ    |
| ESSA BANCORP INC         | ESSA   |
| ESSENT GROUP LTD         | ESNT   |
| ESSENTIAL PROPERTIES     | EPRT   |
| ESSEX PROPERTY TRUST INC | ESS    |
| ESTEE LAUDER COMPANIES   | EL     |
| ETHAN ALLEN INTERIORS    | ETH    |
| ETSY INC                 | ETSY   |
| EURONET WORLDWIDE INC    | EEFT   |
| EVANS BANCORP INC        | EVBN   |
| EVELO BIOSCIENCES        | EVLO   |
| EVENTBRITE               | EB     |
| EVERBRIDGE INC           | EBVG   |
| EVERCORE INC             | EVR    |
| EVEREST RE GROUP LTD     | RE     |
| EVERGY INC               | EVRG   |
| EVERI HOLDINGS INC       | EVRI   |
| EVERQUOTE                | EVER   |
| EVERSOURCE ENERGY        | ES     |
| EVERTEC INC              | EVTC   |
| EVI INDUSTRIES           | EVI    |
| EVO PAYMENTS INC         | EVOP   |
| EVOFEM BIOSCIENCES INC   | EVFM   |
| EVOLENT HEALTH INC       | EVH    |
| EVOLUS INC               | EOLS   |
| EVOLUTION PETROLEUM CORP | EPM    |
| EVOQUA WATER TECH        | AQUA   |
| EXACT SCIENCES CORP      | EXAS   |
| EXANTAS CAPITAL CORP     | XAN    |

| Company                  | Ticker |
|--------------------------|--------|
| EOG RESOURCES INC        | EOG    |
| EPAM SYSTEMS INC         | EPAM   |
| EPIZYME INC              | EPZM   |
| EPLUS INC                | PLUS   |
| EPR PROPERTIES           | EPR    |
| EQT CORPORATION          | EQT    |
| EQUIFAX INC              | EFX    |
| EQUINIX INC              | EQIX   |
| EQUITRANS MIDSTREAM CORP | ETRN   |
| EXTERRAN CORPORATION     | EXTN   |
| EXTRA SPACE STORAGE INC  | EXR    |
| EXTRACTION OIL & GAS INC | XOG    |
| EXTREME NETWORKS INC     | EXTR   |
| EXXON MOBIL CORP         | XOM    |
| EYEPOINT PHARMACEUTICALS | EYPT   |
| EZCORP INC               | EZPW   |
| F5 NETWORKS INC          | FFIV   |
| FABRINET                 | FN     |
| FACEBOOK INC             | FB     |
| FACTSET RESEARCH SYSTEMS | FDS    |
| FAIR ISAAC CORP          | FICO   |
| FALCON MINERALS CORP (A) | FLMN   |
| FARMER BROS CO           | FARM   |
| FARMERS & MERCHANTS BNCP | FMAO   |
| FARMERS NATL BANC CORP   | FMNB   |
| FARMLAND PARTNERS INC    | FPI    |
| FARO TECHNOLOGIES INC    | FARO   |
| FASTENAL CO              | FAST   |
| FATE THERAPEUTICS INC    | FATE   |
| FB FINANCIAL CORP        | FBK    |
| FBL FINANCIAL GROUP INC  | FFG    |
| FEDERAL AGRIC MTG CO     | AGM    |
| FEDERAL REALTY INVT      | FRT    |
| FEDERAL SIGNAL CORP      | FSS    |
| FEDERATED INVESTORS INC  | FII    |
| FEDEX CORP               | FDX    |
| FEDNAT HOLDING COMPANY   | FNHC   |
| FERRO CORP               | FOE    |
| FGL HOLDINGS             | FG     |
| FIBROGEN INC             | FGEN   |
| FIDELITY D&D BANCORP INC | FDBC   |
| FIDELITY NATL INFO SVCS  | FIS    |
| FIDELITY SOUTHERN CORP   | LION   |
| FIESTA RESTAURANT GROUP  | FRGI   |
| FIFTH THIRD BANCORP      | FITB   |
| FINANCIAL INSTNS INC     | FISI   |
| FINISAR CORP             | FNSR   |
| FIREEYE INC              | FEYE   |

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| Company                  | Ticker |
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| EXELA TECHNOLOGIES       | XELA   |
| EXELIXIS INC             | EXEL   |
| EXELON CORP              | EXC    |
| EXLSERVICE HOLDINGS INC  | EXLS   |
| EXP WORLD HOLDINGS       | EXPI   |
| EXPEDIA GROUP INC        | EXPE   |
| EXPEDITORS INTL OF WASH  | EXPD   |
| EXPONENT INC             | EXPO   |
| EXPRESS INC              | EXPR   |
| EXTENDED STAY AMERICA    | STAY   |
| FIRST CITIZENS BANCSHRS  | FCNCA  |
| FIRST CMNTY BANCSHAR     | FCBC   |
| FIRST COMMONWLTH FINL    | FCF    |
| FIRST DATA CORPORATION   | FDC    |
| FIRST DEFIANCE FINANCIAL | FDEF   |
| FIRST FINANCIAL BANCORP  | FFBC   |
| FIRST FINANCIAL CORP     | THFF   |
| FIRST FINL BANKSHARES    | FFIN   |
| FIRST FINL NORTHWEST     | FFNW   |
| FIRST FNDTN INC          | FFWM   |
| FIRST GUARANTY BANCSHARE | FGBI   |
| FIRST HAWAIIAN INC       | FHB    |
| FIRST HORIZON NATL CORP  | FHN    |
| FIRST INDUSTRIAL RLTY TR | FR     |
| FIRST INTERNET BANCORP   | INBK   |
| FIRST INTST BANCSYSTEM   | FIBK   |
| FIRST LONG ISLAND CORP   | FLIC   |
| FIRST MERCHANTS CORP     | FRME   |
| FIRST MID BANCSHARES INC | FMBH   |
| FIRST MIDWEST BANCORP    | FMBI   |
| FIRST NORTHWEST BANCORP  | FNWB   |
| FIRST REP BK SAN FRAN    | FRC    |
| FIRST SOLAR INC          | FSLR   |
| FIRSTCASH INC            | FCFS   |
| FIRSTENERGY CORP         | FE     |
| FISERV INC               | FISV   |
| FITBIT INC               | FIT    |
| FIVE BELOW               | FIVE   |
| FIVE PRIME THERAPEUTICS  | FPRX   |
| FIVE9 INC                | FIVN   |
| FLAGSTAR BANCORP INC     | FBC    |
| FLEETCOR TECHNOLOGIES    | FLT    |
| FLEXION THERAPEUTICS INC | FLXN   |
| FLEXSTEEL INDUSTRIES INC | FLXS   |
| FLIR SYSTEMS INC         | FLIR   |
| FLOOR & DECOR HOLDINGS   | FND    |
| FLOTEK INDUSTRIES INC    | FTK    |
| FLOWERS FOODS INC        | FLO    |

| Company                  | Ticker |
|--------------------------|--------|
| FIRST AMERICAN FINL CORP | FAF    |
| FIRST BANCORP INC        | FNLC   |
| FIRST BANCORP NC         | FBNC   |
| FIRST BANCORP PR         | FBP    |
| FIRST BANCSHARES INC MS  | FBMS   |
| FIRST BANK WILLIAMSTOWN  | FRBA   |
| FIRST BUSEY CORP         | BUSE   |
| FIRST BUSINESS FINL SVCS | FBIZ   |
| FIRST CAPITAL INC        | FCAP   |
| FIRST CHOICE BANCORP     | FCBP   |
| FORD MOTOR CO            | F      |
| FORESCOUT TECHNOLOGIES   | FSCT   |
| FORESTAR GROUP INC       | FOR    |
| FORMFACTOR INC           | FORM   |
| FORRESTER RESEARCH INC   | FORR   |
| FORTERRA INC             | FRTA   |
| FORTINET INC             | FTNT   |
| FORTIVE CORPORATION      | FTV    |
| FORTUNE BRDS HOME & SEC  | FBHS   |
| FORTY SEVEN INC          | FTSV   |
| FORUM ENERGY TECH        | FET    |
| FORWARD AIR CORP         | FWRD   |
| FOSSIL GROUP INC         | FOSL   |
| FOSTER L B CO            | FSTR   |
| FOUNDATION BLDG MATERIAL | FBM    |
| FOUR CORNERS PPTY TRUST  | FCPT   |
| FOX CORPORATION CLASS A  | FOXA   |
| FOX CORPORATION CLASS B  | FOX    |
| FOX FACTORY HOLDING CORP | FOXF   |
| FRANKLIN COVEY CO        | FC     |
| FRANKLIN ELECTRIC CO     | FELE   |
| FRANKLIN FINANCIAL NTWK  | FSB    |
| FRANKLIN FINANCIAL SERV  | FRAF   |
| FRANKLIN RESOURCES INC   | BEN    |
| FRANKLIN STREET PPTYS CO | FSP    |
| FRANK'S INTERNATIONAL    | FI     |
| FREEMPORT-MCMORAN INC    | FCX    |
| FRESH DEL MONTE PRODUCE  | FDP    |
| FRESHPET INC             | FRPT   |
| FRONT YARD RESIDENTIAL   | RESI   |
| FRONTDOOR INC            | FTDR   |
| FRONTIER COMMUNICATIONS  | FTR    |
| FRP HOLDINGS INC         | FRPH   |
| FS BANCORP INC           | FSBW   |
| FTI CONSULTING INC       | FCN    |
| FTS INTERNATIONAL INC    | FTSI   |
| FULTON FINANCIAL CORP    | FULT   |
| FUNKO CLASS A            | FNKO   |

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| Company                  | Ticker |
|--------------------------|--------|
| FLOWERVE CORP            | FLS    |
| FLUENT INC               | FLNT   |
| FLUIDIGM CORP            | FLDM   |
| FLUOR CORP               | FLR    |
| FLUSHING FINANCIAL CORP  | FFIC   |
| FMC CORP                 | FMC    |
| FNB CORP                 | FNB    |
| FNCB BANCORP INC         | FNCB   |
| FNF GROUP                | FNF    |
| FOCUS FINANCIAL PARTNERS | FOCS   |
| FOOT LOCKER INC          | FL     |
| GANNETT CO INC           | GCI    |
| GAP INC                  | GPS    |
| GARDNER DENVER HOLDINGS  | GDI    |
| GARMIN LTD               | GRMN   |
| GARTNER INC              | IT     |
| GASLOG LTD               | GLOG   |
| GATES INDUSTRIAL CORP    | GTES   |
| GATX CORP                | GATX   |
| GCI LIBERTY INC          | GLIBA  |
| GCP APPLIED TECHNOLOGIES | GCP    |
| GENCO SHIPPING & TRADING | GNK    |
| GENCOR INDUSTRIES INC    | GENC   |
| GENERAC HOLDINGS INC     | GNRC   |
| GENERAL DYNAMICS CORP    | GD     |
| GENERAL ELECTRIC CO      | GE     |
| GENERAL FINANCE CORP     | GFN    |
| GENERAL MILLS INC        | GIS    |
| GENERAL MTRS CO          | GM     |
| GENESCO INC              | GCO    |
| GENESEE & WYOMING INC    | GWR    |
| GENESIS HEALTHCARE INC   | GEN    |
| GENIE ENERGY LTD         | GNE    |
| GENMARK DIAGNOSTICS INC  | GNMK   |
| GENOMIC HEALTH INC       | GHDX   |
| GENPACT LTD              | G      |
| GENTEX CORP              | GNTX   |
| GENTHERM INC             | THRM   |
| GENUINE PARTS CO         | GPC    |
| GENWORTH FINANCIAL INC   | GNW    |
| GEO GROUP INC            | GEO    |
| GEOSPACE TECHNOLOGIES    | GEOS   |
| GERMAN AMERICAN BANCORP  | GABC   |
| GERON CORP               | GERN   |
| GETTY REALTY CORP        | GTY    |
| GIBRALTAR INDUSTRIES INC | ROCK   |
| GILEAD SCIENCES INC      | GILD   |
| GLACIER BANCORP INC      | GBCI   |

| Company                  | Ticker |
|--------------------------|--------|
| FUTUREFUEL CORPORATION   | FF     |
| FVCBANKCORP INC          | FVCB   |
| G1 THERAPEUTICS          | GTHX   |
| GAIA INC                 | GAIA   |
| GAIN CAPITAL HLDNGS INC  | GCAP   |
| GALECTIN THERAPEUTICS    | GALT   |
| GALLAGHER ARTHUR J & CO  | AJG    |
| GAMCO INVESTORS INC      | GBL    |
| GAMESTOP CORP            | GME    |
| GAMING AND LEISURE PPTYS | GLPI   |
| G-III APPAREL GROUP LTD  | GIII   |
| GLU MOBILE INC           | GLUU   |
| GLYCOMIMETICS INC        | GLYC   |
| GMS INC                  | GMS    |
| GNC HLDGS INC            | GNC    |
| GODADDY INC              | GDDY   |
| GOGO INC                 | GOGO   |
| GOLAR LNG LTD BERMUDA    | GLNG   |
| GOLD RESOURCE CORP       | GORO   |
| GOLDEN ENTERTAINMENT INC | GDEN   |
| GOLDMAN SACHS GROUP INC  | GS     |
| GOODRICH PETROLEUM CORP  | GDP    |
| GOODYEAR TIRE & RUBBER   | GT     |
| GOOSEHEAD INSURANCE      | GSHD   |
| GOPRO INC                | GPRO   |
| GORMAN RUPP CO           | GRC    |
| GOSSAMER BIO             | GOSS   |
| GP STRATEGIES CORP       | GPX    |
| GRACE W R & CO           | GRA    |
| GRACO INC                | GGG    |
| GRAFTECH INTERNATIONAL   | EAF    |
| GRAHAM CORP              | GHM    |
| GRAHAM HOLDINGS COMPANY  | GHC    |
| GRAINGER WW INC          | GWW    |
| GRAND CANYON EDUCATION   | LOPE   |
| GRANITE CONSTR INC       | GVA    |
| GRANITE POINT MORTGAGE   | GPMT   |
| GRAPHIC PACKAGING HLDG   | GPK    |
| GRAY TELEVISION INC      | GTN    |
| GREAT AJAX CORP          | AJX    |
| GREAT LAKES DREDGE & DOC | GLDD   |
| GREAT SOUTHERN BANCORP   | GSBC   |
| GREAT WESTERN BANCORP    | GWB    |
| GREEN BRICK PARTNERS INC | GRBK   |
| GREEN DOT CORP           | GDOT   |
| GREEN PLAINS INC         | GPRE   |
| GREENBRIER COMPANIES INC | GBX    |
| GREENE COUNTY BANCORP    | GCBC   |

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| Company                  | Ticker |
|--------------------------|--------|
| GLADSTONE COMMERCIAL     | GOOD   |
| GLADSTONE LAND INC       | LAND   |
| GLATFELTER               | GLT    |
| GLAUKOS CORPORATION      | GKOS   |
| GLOBAL BLOOD THERA       | GBT    |
| GLOBAL BRASS & COPPR HLD | BRSS   |
| GLOBAL INDEMNITY LTD     | GBLI   |
| GLOBAL MEDICAL REIT INC  | GMRE   |
| GLOBAL NET LEASE INC     | GNL    |
| GLOBAL PAYMENTS INC      | GPN    |
| GLOBAL WATER RESOURCES   | GWRS   |
| GLOBUS MEDICAL INC       | GMED   |
| GTT COMMUNICATIONS INC   | GTT    |
| GTY TECHNOLOGY HOLDINGS  | GTYH   |
| GUARANTY BANCSHARES INC  | GNTY   |
| GUARDANT HEALTH          | GH     |
| GUESS INC                | GES    |
| GUIDEWIRE SOFTWARE INC   | GWRE   |
| GULFPORT ENERGY CORP     | GPOR   |
| GWG HLDGS INC            | GWGH   |
| H&E EQUIPMENT SERVICES   | HEES   |
| HABIT RESTAURANTS        | HABT   |
| HACKETT GROUP INC        | HCKT   |
| HAEMONETICS CORP         | HAE    |
| HAIN CELESTIAL GROUP     | HAIN   |
| HALLADOR ENERGY CO       | HNRG   |
| HALLIBURTON CO           | HAL    |
| HALLMARK FINL SVCS INC   | HALL   |
| HALOZYME THERAPEUTICS    | HALO   |
| HAMILTON BEACH BRANDS    | HBB    |
| HAMILTON LANE INC        | HLNE   |
| HANCOCK WHITNEY CORP     | HWC    |
| HANESBRAND INC           | HBI    |
| HANGER INC               | HNGR   |
| HANMI FINANCIAL CORP     | HAFC   |
| HANNON ARMSTRONG SUSTAIN | HASI   |
| HANOVER INSURANCE GROUP  | THG    |
| HARBORONE BANCORP INC    | HONE   |
| HARLEY DAVIDSON INC      | HOG    |
| HARMONIC INC             | HLIT   |
| HARPOON THERAPEUTICS     | HARP   |
| HARSCO CORP              | HSC    |
| HARTFORD FINL SVCS GRP   | HIG    |
| HASBRO INC               | HAS    |
| HAVERTY FURNITURE INC    | HVT    |
| HAWAIIAN ELECTRIC INDS   | HE     |
| HAWAIIAN HOLDINGS INC    | HA     |
| HAWKINS INC              | HWKN   |

| Company                  | Ticker |
|--------------------------|--------|
| GREENHILL & CO INC       | GHL    |
| GREENLANE HOLDINGS       | GNLN   |
| GREENLIGHT CAPITAL RE LT | GLRE   |
| GREIF INC                | GEF    |
| GREIF INC                | GEF.B  |
| GRIFFIN INDUSTRIAL RLTY  | GRIF   |
| GRIFFON CORP             | GFF    |
| GRITSTONE ONCOLOGY       | GRTS   |
| GROUP 1 AUTOMOTIVE INC   | GPI    |
| GROUPON INC              | GRPN   |
| GRUBHUB INC              | GRUB   |
| GSI TECHNOLOGY           | GSIT   |
| HEARTLAND EXPRESS INC    | HTLD   |
| HEARTLAND FINANCIAL USA  | HTLF   |
| HECLA MINING CO          | HL     |
| HEICO CORP CL A          | HEI.A  |
| HEICO CORP COMMON        | HEI    |
| HEIDRICK & STRUGGLES     | HSII   |
| HELEN OF TROY LTD        | HELE   |
| HELIOS TECHNOLOGIES INC  | HLIO   |
| HELIX ENERGY SOLUTIONS   | HLX    |
| HELMERICH & PAYNE INC    | HP     |
| HEMISPHERE MEDIA GROUP   | HMTV   |
| HENRY JACK & ASSOCIATES  | JKHY   |
| HERBALIFE NUTRITION LTD  | HLF    |
| HERC HOLDING INC         | HRI    |
| HERITAGE COMMERCE CORP   | HTBK   |
| HERITAGE CRYL CLEAN INC  | HCCI   |
| HERITAGE FINANCIAL CORP  | HFWA   |
| HERITAGE INS HLDGS INC   | HRTG   |
| HERMAN MILLER INC        | MLHR   |
| HERON THERAPEUTICS INC   | HRTX   |
| HERSHA HOSPITALITY TRUST | HT     |
| HERSHEY COMPANY          | HSY    |
| HERTZ GLOBAL HOLDINGS    | HTZ    |
| HESKA CORP               | HSKA   |
| HESS CORP                | HES    |
| HEWLETT PACKARD ENT      | HPE    |
| HEXCEL CORP              | HXL    |
| HF FOODS GROUP INC       | HFFG   |
| HFF INC                  | HF     |
| HIBBETT SPORTS INC       | HIBB   |
| HIGH POINT RESOURCES     | HPR    |
| HIGHWOODS PROPERTIES INC | HIW    |
| HILLENBRAND INC          | HI     |
| HILL-ROM HOLDINGS INC    | HRC    |
| HILLTOP HOLDINGS INC     | HTH    |
| HILTON GRAND VACATIONS   | HGV    |

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| HAWTHORN BANCSHARES INC  | HWBK   |
| HAYNES INTERNATIONAL INC | HAYN   |
| HB FULLER COMPANY        | FUL    |
| HCA HEALTHCARE INC       | HCA    |
| HCI GROUP INC            | HCI    |
| HCP INC                  | HCP    |
| HD SUPPLY HOLDINGS INC   | HDS    |
| HEALTH INS INNOVATIONS   | HIHQ   |
| HEALTHCARE REALTY TRUST  | HR     |
| HEALTHCARE SVCS GRP INC  | HCSG   |
| HEALTHCARE TR AMER INC   | HTA    |
| HEALTH EQUITY INC        | HQY    |
| HEALTHSTREAM INC         | HSTM   |
| HOOKER FURNITURE CORP    | HOFT   |
| HOOKIPA PHARMA           | HOOK   |
| HOPE BANCORP INC         | HOPE   |
| HORACE MANN EDUCATORS    | HMN    |
| HORIZON BANCORP INC      | HBNC   |
| HORIZON THERAPEUTICS PLC | HZNP   |
| HORMEL FOODS CORP        | HRL    |
| HOSPITALITY PPTYS TRUST  | HPT    |
| HOST HOTELS & RESORTS    | HST    |
| HOSTESS BRANDS INC       | TWNK   |
| HOUGHTON MIFFLIN HARCOUR | HMHC   |
| HOULIHAN LOKEY INC       | HLI    |
| HOWARD BANCORP INC       | HBMD   |
| HOWARD HUGHES CORP       | HHC    |
| HP INC                   | HPQ    |
| HUB GROUP INC            | HUBG   |
| HUBBELL INC              | HUBB   |
| HUBSPOT INC              | HUBS   |
| HUDSON LTD               | HUD    |
| HUDSON PAC PPTYS INC     | HPP    |
| HUMANA INC               | HUM    |
| HUNTINGTON BANCSHARES    | HBAN   |
| HUNTINGTON INGALLS IND   | HII    |
| HUNTSMAN CORP            | HUN    |
| HURCO COMPANIES INC      | HURC   |
| HURON CONSULTING GROUP   | HURN   |
| HYATT HOTELS CORP        | H      |
| HYSTER-YALE MATERIALS    | HY     |
| I3 VERTICALS INC         | IIIV   |
| IAA                      | IAA    |
| IAC INTERACTIVECORP      | IAC    |
| IBERIABANK CORP          | IBKC   |
| ICF INTERNATIONAL INC    | ICFI   |
| ICHR HOLDINGS INC        | ICHR   |
| ICU MEDICAL INC          | ICUI   |

| Company                  | Ticker |
|--------------------------|--------|
| HILTON WORLDWIDE HOLDING | HLT    |
| HINGHAM INSTN SVGS MASS  | HIFS   |
| HMS HOLDINGS CORP        | HMSY   |
| HNI CORPORATION          | HNI    |
| HOLLYFRONTIER CORP       | HFC    |
| HOLOGIC INC              | HOLX   |
| HOME BANCORP INC         | HBCP   |
| HOME BANCSHARES INC      | HOMB   |
| HOME DEPOT INC           | HD     |
| HOMESTREET INC           | HMST   |
| HOMETRUST BANCSHARES INC | HTBI   |
| HOMOLOGY MEDICINES       | FIXX   |
| HONEYWELL INTERNATIONAL  | HON    |
| IMPINJ INC               | PI     |
| INCYTE CORP              | INCY   |
| IND CONTRACT DRILLING    | ICD    |
| INDEPENDENCE HOLDING CO  | IHC    |
| INDEPENDENCE RLTY TRUST  | IRT    |
| INDEPENDENT BANK CORP    | IBCP   |
| INDEPENDENT BANK MA      | INDB   |
| INDEPENDENT BK GROUP INC | IBTX   |
| INDUSTRIAL LOGISTICS     | ILPT   |
| INFINERA CORP            | INFN   |
| INFORMATION SERVICES GRP | III    |
| INGERSOLL-RAND PLC       | IR     |
| INGEVITY CORPORATION     | NGVT   |
| INGLES MARKETS INC       | IMKTA  |
| INGREDION INC            | INGR   |
| INNERWORKINGS INC        | INWK   |
| INNOPHOS HOLDINGS INC    | IPHS   |
| INNOVATIVE INDUSTRIAL    | IIPR   |
| INNOVIVA INC             | INVA   |
| INOGEN INC               | INGN   |
| INOVALON HOLDINGS INC    | INOV   |
| INOVIO PHARMACEUTICALS   | INO    |
| INPHI CORP               | IPHI   |
| INSEGO CORP              | INSG   |
| INSIGHT ENTERPRISES INC  | NSIT   |
| INSMED INC               | INSM   |
| INSPIRETY INC            | NSP    |
| INSPIRE MEDICAL SYSTEMS  | INSP   |
| INSPIRED ENTERTAINMENT   | INSE   |
| INSTALLED BLDNG PRODUCTS | IBP    |
| INSTEEL INDUSTRIES INC   | IIIN   |
| INSTRUCTURE INC          | INST   |
| INSULET CORP             | PODD   |
| INTEGER HOLDINGS CORP    | ITGR   |

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| Company                  | Ticker |
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| IDACORP INC              | IDA    |
| IDEANOMICS INC           | IDEX   |
| IDEX CORP                | IEX    |
| IDEXX LABS INC           | IDXX   |
| IDT CORP                 | IDT    |
| IES HOLDINGS INC         | IESC   |
| IHS MARKIT LTD           | INFO   |
| II VI INC                | IIVI   |
| ILLINOIS TOOL WORKS INC  | ITW    |
| ILLUMINA INC             | ILMN   |
| IMAX CORP                | IMAX   |
| IMMERSION CORP           | IMMR   |
| IMMUNOGEN INC            | IMGN   |
| IMMUNOMEDICS INC         | IMMU   |
| INTERNATIONAL PAPER CO   | IP     |
| INTERNATIONAL SEAWAYS    | INSW   |
| INTERNATIONAL SPEEDWAY   | ISCA   |
| INTERPUBLIC GROUP OF COS | IPG    |
| INTERSECT ENT INC        | XENT   |
| INTL BUSINESS MACHINES   | IBM    |
| INTL FCSTONE INC         | INTL   |
| INTL FLAVORS & FRAGRANCE | IFF    |
| INTRA CELLULAR THERAPIES | ITCI   |
| INTREPID POTASH INC      | IPI    |
| INTREXON CORP            | XON    |
| INTRICON CORP            | IIN    |
| INTUIT                   | INTU   |
| INTUITIVE SURGICAL INC   | ISRG   |
| INVACARE CORP            | IVC    |
| INVESCO LTD              | IVZ    |
| INVESCO MORTGAGE CAP     | IVR    |
| INVESTAR HOLDING CORP    | ISTR   |
| INVESTORS BANCORP INC    | ISBC   |
| INVESTORS REAL ESTATE TR | IRET   |
| INVESTORS TITLE CO       | ITIC   |
| INVITAE CORPORATION      | NVTA   |
| INVITATION HOMES INC     | INVH   |
| IONIS PHARMACEUTICALS    | IONS   |
| IOVANCE BIOTHERAPEUTICS  | IOVA   |
| IPG PHOTONICS CORP       | IPGP   |
| IQVIA HOLDINGS INC       | IQV    |
| IRADIMED CORPORATION     | IRMD   |
| IRHYTHM TECHNOLOGIES INC | IRTC   |
| IRIDIUM COMMUNICATIONS   | IRDM   |
| IROBOT CORP              | IRBT   |
| IRON MOUNTAIN INC        | IRM    |
| IRONWOOD PHARMACEUTICALS | IRWD   |
| ISRAMCO INC              | ISRL   |

| Company                  | Ticker |
|--------------------------|--------|
| INTEGRA LIFESCIENCES     | IART   |
| INTEL CORP               | INTC   |
| INTELLA THERAPEUTICS INC | NTLA   |
| INTELLIGENT SYSTEMS CORP | INS    |
| INTELSAT SA              | I      |
| INTER PARFUMS INC        | IPAR   |
| INTERACTIVE BROKERS GRP  | IBKR   |
| INTERCEPT PHARMA INC     | ICPT   |
| INTERCONTINENTAL EXCH    | ICE    |
| INTERDIGITAL INC         | IDCC   |
| INTERFACE INC            | TILE   |
| INTERNATIONAL BANCSHARES | IBOC   |
| INTERNATIONAL GAME TECH  | IGT    |
| INTERNATIONAL MONEY EXP  | IMXI   |
| JBG SMITH PROPERTIES     | JBGS   |
| JEFFERIES FINANCIAL GRP  | JEF    |
| JELD-WEN HOLDING INC     | JELD   |
| JERNIGAN CAP INC         | JCAP   |
| JETBLUE AIRWAYS CORP     | JBLU   |
| JJILL INC                | JILL   |
| JOHN BEAN TECH CORP      | JBT    |
| JOHNSON & JOHNSON        | JNJ    |
| JOHNSON CONTROLS INTNL   | JCI    |
| JOHNSON OUTDOORS INC     | JOUT   |
| JONES LANG LASALLE INC   | JLL    |
| JOUNCE THERAPEUTICS INC  | JNCE   |
| JPMORGAN CHASE & CO      | JPM    |
| JUNIPER NETWORKS INC     | JNPR   |
| K12 INC                  | LRN    |
| KADANT INC               | KAI    |
| KADMON HOLDINGS INC      | KDMN   |
| KAISER ALUMINUM CORP     | KALU   |
| KALA PHARMACEUTICALS     | KALA   |
| KALEIDO BIOSCIENCES      | KLDO   |
| KALVISTA PHARMACEUTICALS | KALV   |
| KAMAN CORP               | KAMN   |
| KANSAS CITY SOUTHERN     | KSU    |
| KAR AUCTION SERVICES INC | KAR    |
| KARYOPHARM THERAPEUTICS  | KPTI   |
| KB HOME                  | KBH    |
| KBR INC                  | KBR    |
| KEANE GROUP INC          | FRAC   |
| KEARNY FINANCIAL CORP    | KRNY   |
| KELLOGG CO               | K      |
| KELLY SERVICES INC       | KELYA  |
| KEMET CORP               | KEM    |
| KEMPER CORPORATION       | KMPR   |
| KENNAMETAL INC           | KMT    |



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| Company                  | Ticker |
|--------------------------|--------|
| ISTAR INC                | STAR   |
| ITERIS INC               | ITI    |
| ITRON INC                | ITRI   |
| ITT INC                  | ITT    |
| J & J SNACK FOODS CO     | JJSF   |
| J ALEXANDERS HOLDINGS    | JAX    |
| J2 GLOBAL INC            | JCOM   |
| JABIL INC                | JBL    |
| JACK IN THE BOX INC      | JACK   |
| JACOBS ENGINEERING GRP   | JEC    |
| JAGGED PEAK ENERGY INC   | JAG    |
| JAMES RIVER GROUP HLDG   | JRVR   |
| JANUS HENDERSON GROUP    | JHG    |
| JAZZ PHARMACEUTICALS PLC | JAZZ   |
| JB HUNT TRANS SVCS INC   | JBHT   |
| KIRBY CORP               | KEX    |
| KITE REALTY GROUP TRUST  | KRG    |
| KKR REAL ESTATE FINANCE  | KREF   |
| KLA-TENCOR CORP          | KLAC   |
| KLX ENERGY SERVICES      | KLXE   |
| KNIGHT-SWIFT TRANSPORT   | KNX    |
| KNOLL INC                | KNL    |
| KNOWLES CORPORATION      | KN     |
| KODIAK SCIENCES          | KOD    |
| KOHL'S CORP              | KSS    |
| KONTOOR BRANDS           | KTB    |
| KOPPERS HOLDINGS INC     | KOP    |
| KORN FERRY               | KFY    |
| KOSMOS ENERGY LTD        | KOS    |
| KRATON CORPORATION       | KRA    |
| KRATOS DEFENSE & SEC SOL | KTOS   |
| KROGER CO                | KR     |
| KRONOS WORLDWIDE INC     | KRO    |
| KRYSTAL BIOTECH          | KRYS   |
| KURA ONCOLOGY INC        | KURA   |
| KVH INDUSTRIES INC       | KVHI   |
| L BRANDS INC             | LB     |
| L3 TECHNOLOGIES          | LLL    |
| L3HARRIS TECHNOLOGIES    | LHX    |
| LA JOLLA PHARMACEUTICAL  | LJPC   |
| LA Z BOY INC             | LZB    |
| LABORATORY CORP OF AMER  | LH     |
| LADDER CAPITAL CORP      | LADR   |
| LADENBURG THALMAN FIN    | LTS    |
| LAKELAND BANCORP INC     | LBAI   |
| LAKELAND FINANCIAL CORP  | LKFN   |
| LAM RESEARCH CORP        | LRCX   |
| LAMAR ADVERTISING CO     | LAMR   |

| Company                  | Ticker |
|--------------------------|--------|
| KENNEDY-WILSON HLDGS INC | KW     |
| KEURIG DR PEPPER INC     | KDP    |
| KEYCORP                  | KEY    |
| KEYSIGHT TECHNOLOGIES    | KEYS   |
| KEZAR LIFE SCIENCES      | KZR    |
| KFORCE INC               | KFRC   |
| KILROY REALTY CORP       | KRC    |
| KIMBALL ELECTRONICS INC  | KE     |
| KIMBALL INTERNATIONAL    | KBAL   |
| KIMBERLY CLARK CORP      | KMB    |
| KIMCO REALTY CORP        | KIM    |
| KINDER MORGAN INC        | KMI    |
| KINDRED BIOSCIENCES INC  | KIN    |
| KINIKSA PHARMACEUTICALS  | KNSA   |
| KINSALE CAPITAL GROUP    | KNSL   |
| LEAR CORP                | LEA    |
| LEE ENTERPRISES INC      | LEE    |
| LEGACY HOUSING CORP      | LEGH   |
| LEGACYTEXAS FIN GROUP    | LTXB   |
| LEGG MASON INC           | LM     |
| LEGETT & PLATT INC       | LEG    |
| LEIDOS HOLDINGS INC      | LDOS   |
| LEMAITRE VASCULAR INC    | LMAT   |
| LENDINGCLUB CORPORATION  | LC     |
| LENDINGTREE INC          | TREE   |
| LENNAR CORP CL A         | LEN    |
| LENNAR CORP CL B         | LEN.B  |
| LENNOX INTERNATIONAL INC | LII    |
| LEVEL ONE BANCORP INC    | LEVL   |
| LEXICON PHARMACEUTICALS  | LXRK   |
| LEXINGTON REALTY TRUST   | LXP    |
| LGI HOMES INC            | LGIH   |
| LHC GROUP INC            | LHCG   |
| LIBERTY BRAVES SERIES A  | BATRA  |
| LIBERTY BRAVES SERIES C  | BATRK  |
| LIBERTY BROADBAND CL A   | LBRDA  |
| LIBERTY BROADBAND CL C   | LBRDK  |
| LIBERTY EXPEDIA HOLDINGS | LEXEA  |
| LIBERTY FORMULA 1 SER A  | FWONA  |
| LIBERTY FORMULA 1 SER C  | FWONK  |
| LIBERTY LATIN AMERICA A  | LILA   |
| LIBERTY LATIN AMERICA C  | LILAK  |
| LIBERTY OILFIELD SERVICE | LBRT   |
| LIBERTY PROPERTY TRUST   | LPT    |
| LIBERTY SIRIUSXM SER A   | LSXMA  |
| LIBERTY SIRIUSXM SER C   | LSXMK  |
| LIBERTY TRIPADVISOR HLDG | LTRPA  |
| LIFE STORAGE INC         | LSI    |

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| Company                  | Ticker |
|--------------------------|--------|
| LAMB WESTON HOLDINGS     | LW     |
| LANCASTER COLONY CORP    | LANC   |
| LANDEC CORP              | LNDC   |
| LANDS END INC            | LE     |
| LANDSTAR SYSTEMS INC     | LSTR   |
| LANNETT CO INC           | LCI    |
| LANTHEUS HOLDINGS INC    | LNTH   |
| LAREDO PETROLEUM INC     | LPI    |
| LAS VEGAS SANDS CORP     | LVS    |
| LATTICE SEMICONDUCTOR    | LSCC   |
| LAUREATE EDUCATION INC   | LAUR   |
| LAWSON PRODUCTS INC      | LAWS   |
| LAZARD LTD               | LAZ    |
| LCI INDUSTRIES           | LCII   |
| LCNB CORP                | LCNB   |
| LEAF GROUP LTD           | LEAF   |
| LITTELFUSE INC           | LFUS   |
| LIVANOVA PLC             | LIVN   |
| LIVE NATION ENT INC      | LYV    |
| LIVE OAK BANCSHARES INC  | LOB    |
| LIVENT                   | LTHM   |
| LIVEPERSON INC           | LPSN   |
| LIVERAMP HOLDINGS INC    | RAMP   |
| LIVEXLIVE MEDIA          | LIVX   |
| LKQ CORP                 | LKQ    |
| LOCKHEED MARTIN CORP     | LMT    |
| LOEWS CORP               | L      |
| LOGICBIO THERAPEUTICS    | LOGC   |
| LOGMEIN INC              | LOGM   |
| LORAL SPACE & COMM       | LORL   |
| LOUISIANA PACIFIC CORP   | LPX    |
| LOVESAC CO               | LOVE   |
| LOWES COS INC            | LOW    |
| LPL FINANCIAL HOLDINGS   | LPLA   |
| LSB INDUSTRIES INC       | LXU    |
| LSC COMMUNICATIONS       | LKSD   |
| LTC PROPERTIES INC       | LTC    |
| LULULEMON ATHLETICA INC  | LULU   |
| LUMBER LIQUIDATORS HLDGS | LL     |
| LUMENTUM HOLDINGS INC    | LITE   |
| LUMINEX CORP             | LMNX   |
| LUTHER BURBANK CORP      | LBC    |
| LUXFER HOLDINGS          | LXFR   |
| LYDALL INC               | LDL    |
| LYFT                     | LYFT   |
| LYONDELLBASELL INDS      | LYB    |
| M & T BANK CORP          | MTB    |
| M/I HOMES INC            | MHO    |

| Company                  | Ticker |
|--------------------------|--------|
| LIFETIME BRANDS INC      | LCUT   |
| LIFEVANTAGE CORP         | LFVN   |
| LIGAND PHARMACEUTICALS   | LGND   |
| LILLY ELI & CO           | LLY    |
| LIMELIGHT NETWORKS INC   | LLNW   |
| LIMONEIRA CO             | LMNR   |
| LINCOLN ELECTRIC HLDGS   | LECO   |
| LINCOLN NATIONAL CORP    | LNC    |
| LINDBLAD EXPEDITIONS INC | LIND   |
| LINDE PLC                | LIN    |
| LINDSAY CORP             | LNN    |
| LIONS GATE ENT CLASS A   | LGF.A  |
| LIONS GATE ENT CLASS B   | LGF.B  |
| LIQUIDA TECHNOLOGIES INC | LQDA   |
| LIQUIDITY SERVICES INC   | LQDT   |
| LITHIA MOTORS INC        | LAD    |
| MALLINCKRODT PLC         | MNK    |
| MALVERN BANCORP INC      | MLVF   |
| MAMMOTH ENERGY SERVICES  | TUSK   |
| MANHATTAN ASSOCS INC     | MANH   |
| MANITOWOC CO INC         | MTW    |
| MANNKIND CORP            | MNKD   |
| MANPOWERGROUP            | MAN    |
| MANTECH INTERNATIONAL    | MANT   |
| MARATHON OIL CORP        | MRO    |
| MARATHON PETROLEUM CORP  | MPC    |
| MARCHEX INC              | MCHX   |
| MARCUS & MILLICHAP       | MMI    |
| MARCUS CORP              | MCS    |
| MARINE PRODUCTS CORP     | MPX    |
| MARINEMAX INC            | HZO    |
| MARINUS PHARMACEUTICALS  | MRNS   |
| MARKEL CORP              | MKL    |
| MARKER THERAPEUTICS INC  | MRKR   |
| MARKETAXESS HOLDINGS INC | MKTX   |
| MARLIN BUSINESS SVCS     | MRLN   |
| MARRIOTT INTL INC        | MAR    |
| MARRIOTT VAC WORLD CORP  | VAC    |
| MARRONE BIO INNOVATIONS  | MBII   |
| MARSH & MCLENNAN COS     | MMC    |
| MARTEN TRANS LTD         | MRTN   |
| MARTIN MARIETTA MTLs     | MLM    |
| MARVELL TECHNOLOGY GROUP | MRVL   |
| MASCO CORP               | MAS    |
| MASIMO CORPORATION       | MASI   |
| MASONITE INTL CORP       | DOOR   |
| MASTEC INC               | MTZ    |
| MASTERCARD INC           | MA     |

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| Company                  | Ticker |
|--------------------------|--------|
| MACATAWA BANK CORP       | MCBC   |
| MACERICH CO              | MAC    |
| MACK CALI REALTY CORP    | CLI    |
| MACKINAC FINL CORP       | MFNC   |
| MACOM TECH SOLUTIONS     | MTSI   |
| MACQUARIE INFRASTRUCTURE | MIC    |
| MACROGENICS INC          | MGNX   |
| MACYS INC                | M      |
| MADDEN STEVEN LTD        | SHOO   |
| MADISON SQUARE GARDEN CO | MSG    |
| MADRIGAL PHARMACEUTICALS | MDGL   |
| MAGELLAN HEALTH INC      | MGLN   |
| MAGENTA THERAPEUTICS INC | MGTA   |
| MAGNOLIA OIL & GAS (A)   | MGY    |
| MAINSTREET BANCSHARES    | MNSB   |
| MAJESCO                  | MJCO   |
| MALIBU BOATS INC         | MBUU   |
| MCDERMOTT INTL INC       | MDR    |
| MCDONALDS CORP           | MCD    |
| MCGRATH RENTCORP         | MGRC   |
| MCKESSON CORP            | MCK    |
| MDC CORP                 | MDCA   |
| MDC HOLDINGS INC         | MDC    |
| MDU RESOURCES GROUP INC  | MDU    |
| MEDALLION FINANCIAL      | MFIN   |
| MEDICAL PROPERTIES TRUST | MPW    |
| MEDICINES CO             | MDCO   |
| MEDICINOVA INC           | MNOV   |
| MEDIDATA SOLUTIONS INC   | MDSO   |
| MEDIFAST INC             | MED    |
| MEDNAX INC               | MD     |
| MEDPACE HOLDINGS INC     | MEDP   |
| MEDTRONIC PLC            | MDT    |
| MEI PHARMA INC           | MEIP   |
| MEIRAGTX HOLDINGS PLC    | MGTX   |
| MENLO THERAPEUTICS INC   | MNLO   |
| MERCANTILE BANK CORP     | MBWM   |
| MERCHANTS BANCORP        | MBIN   |
| MERCK & CO INC           | MRK    |
| MERCURY GENERAL CORP     | MCY    |
| MERCURY SYSTEMS INC      | MRCY   |
| MEREDITH CORP            | MDP    |
| MERIDIAN BANCORP INC     | EBSB   |
| MERIDIAN BIOSCIENCE INC  | VIVO   |
| MERIT MED SYSTEMS INC    | MMSI   |
| MERITAGE HOMES CORP      | MTH    |
| MERITOR INC              | MTOR   |
| MERSANA THERAPEUTICS     | MRSN   |

| Company                  | Ticker |
|--------------------------|--------|
| MASTERCRAFT BOAT HOLDING | MCFT   |
| MATADOR RES CO           | MTDR   |
| MATCH GROUP INC          | MTCH   |
| MATERION CORPORATION     | MTRN   |
| MATRIX SERVICE CO        | MTRX   |
| MATSON INC               | MATX   |
| MATTEL INC               | MAT    |
| MATTHEWS INTERNATIONAL   | MATW   |
| MAUI LAND & PINEAPPLE CO | MLP    |
| MAXAR TECHNOLOGIES INC   | MAXR   |
| MAXIM INTEGRATED PRODS   | MXIM   |
| MAXIMUS INC              | MMS    |
| MAXLINEAR INC            | MXL    |
| MAYVILLE ENGINEERING     | MEC    |
| MBIA INC                 | MBI    |
| MBT FINL CORP            | MBTF   |
| MCCORMICK & CO INC       | MKC    |
| MID-AMER APT CMNTYS      | MAA    |
| MIDDLEBY CORP            | MIDD   |
| MIDDLESEX WATER CO       | MSEX   |
| MIDLAND STATES BANCORP   | MSBI   |
| MIDSOUTH BANCORP INC     | MSL    |
| MIDSTATES PETROLEUM CO   | MPO    |
| MIDWESTONE FINL GROUP    | MOFG   |
| MILACRON HOLDINGS CORP   | MCRN   |
| MILLENDO THERAPEUTICS    | MLND   |
| MILLER INDUSTRIES INC    | MLR    |
| MINERALS TECHNOLOGIES    | MTX    |
| MINERVA NEUROSCIENCES    | NERV   |
| MIRATI THERAPEUTICS INC  | MRTX   |
| MISONIX INC              | MSON   |
| MISTRAS GROUP INC        | MG     |
| MITEK SYS INC            | MITK   |
| MKS INSTRUMENTS INC      | MKSI   |
| MMA CAPITAL HOLDINGS INC | MMAC   |
| MOBILE MINI INC          | MINI   |
| MOBILEIRON INC           | MOBL   |
| MODEL N INC              | MODN   |
| MODERNA                  | MRNA   |
| MODINE MANUFACTURING CO  | MOD    |
| MOELIS & CO              | MC     |
| MOHAWK INDUSTRIES INC    | MHK    |
| MOLECULAR TEMPLATES      | MTEM   |
| MOLINA HEALTHCARE INC    | MOH    |
| MOLSON COORS BREWING CO  | TAP    |
| MOMENTA PHARMACEUTICALS  | MNTA   |
| MONARCH CASINO & RESORT  | MCRI   |
| MONDELEZ INTERNATIONAL   | MDLZ   |

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| Company                  | Ticker |
|--------------------------|--------|
| MESA AIR GROUP INC       | MESA   |
| MESA LABS INC            | MLAB   |
| META FINANCIAL GROUP INC | CASH   |
| METHODE ELECTRS INC      | MEI    |
| METLIFE INC              | MET    |
| METROPOLITAN BANK HOLDIN | MCB    |
| METTLER TOLEDO INTL INC  | MTD    |
| MFA FINANCIAL INC        | MFA    |
| MGE ENERGY INC           | MGEE   |
| MGIC INVESTMENT CORP     | MTG    |
| MGM RESORTS INTL         | MGM    |
| MGP INGREDIENTS INC      | MGPI   |
| MICHAELS COS INC/THE     | MIK    |
| MICROCHIP TECHNOLOGY     | MCHP   |
| MICRON TECHNOLOGY INC    | MU     |
| MICROSOFT CORP           | MSFT   |
| MICROSTRATEGY INC        | MSTR   |
| MID PENN BANCORP INC     | MPB    |
| MSC INDL DIRECT INC      | MSM    |
| MSCI INC                 | MSCI   |
| MSG NETWORKS INC         | MSGN   |
| MTS SYSTEMS CORP         | MTSC   |
| MUELLER INDUSTRIES INC   | MLI    |
| MUELLER WTR PRODS INC    | MWA    |
| MULTI COLOR CORP         | LABL   |
| MURPHY OIL CORP          | MUR    |
| MURPHY USA INC           | MUSA   |
| MUSTANG BIO              | MBIO   |
| MUTUALFIRST FINL INC     | MFSF   |
| MVB FINANCIAL CORP       | MVBF   |
| MYERS INDUSTRIES INC     | MYE    |
| MYLAN NV                 | MYL    |
| MYOKARDIA INC            | MYOK   |
| MYR GROUP INC            | MYRG   |
| MYRIAD GENETICS INC      | MYGN   |
| NABORS INDUSTRIES LTD    | NBR    |
| NACCO INDUSTRIES INC     | NC     |
| NANOMETRICS INC          | NANO   |
| NANOSTRING TECH INC      | NSTG   |
| NAPCO SEC TECHNOLOGIES   | NSSC   |
| NASDAQ INC               | NDAQ   |
| NATERA INC               | NTRA   |
| NATHANS FAMOUS INC       | NATH   |
| NATIONAL BANK HOLDINGS   | NBHC   |
| NATIONAL BANKSHARES INC  | NKSH   |
| NATIONAL BEVERAGE CORP   | FIZZ   |
| NATIONAL CINEMEDIA INC   | NCMI   |
| NATIONAL ENERGY SERVICES | NESR   |

| Company                  | Ticker |
|--------------------------|--------|
| MONGODB                  | MDB    |
| MONMOUTH REAL ESTATE     | MNR    |
| MONOLITHIC POWER SYSTEMS | MPWR   |
| MONOTYPE IMAGING HLDG    | TYPE   |
| MONRO INC                | MNRO   |
| MONSTER BEVERAGE CORP    | MNST   |
| MONTAGE RESOURCES CORP   | MR     |
| MOODYS CORP              | MCO    |
| MOOG INC                 | MOG.A  |
| MORGAN STANLEY           | MS     |
| MORNINGSTAR INC          | MORN   |
| MOSAIC COMPANY           | MOS    |
| MOTORCAR PTS AMERICA INC | MPAA   |
| MOTOROLA SOLUTIONS INC   | MSI    |
| MOVADO GROUP INC         | MOV    |
| MR. COOPER GROUP INC     | COOP   |
| MRC GLOBAL INC           | MRC    |
| MSA SAFETY INC           | MSA    |
| NBT BANCORP INC          | NBTB   |
| NCR CORP                 | NCR    |
| NCS MULTISTAGE HOLD      | NCSM   |
| NEENAH INC               | NP     |
| NEKTAR THERAPEUTICS      | NKTR   |
| NELNET INC               | NNI    |
| NEOGEN CORP              | NEOG   |
| NEOGENOMICS INC          | NEO    |
| NEON THERAPEUTICS        | NTGN   |
| NEOPHOTONICS CORP        | NPTN   |
| NETAPP INC               | NTAP   |
| NETFLIX INC              | NFLX   |
| NETGEAR INC              | NTGR   |
| NETSCOUT SYSTEMS INC     | NTCT   |
| NEUROCRINE BIOSCIENCES   | NBIX   |
| NEURONETICS INC          | STIM   |
| NEVRO CORP               | NVRO   |
| NEW AGE BEVERAGES CORP   | NBEV   |
| NEW JERSEY RESOURCES     | NJR    |
| NEW MEDIA INVT GROUP INC | NEWM   |
| NEW RELIC INC            | NEWR   |
| NEW RESIDENTIAL INVT     | NRZ    |
| NEW SR INVT GROUP INC    | SNR    |
| NEW YORK CMNTY BANCORP   | NYCB   |
| NEW YORK MTG TR INC      | NYMT   |
| NEW YORK TIMES CO        | NYT    |
| NEWELL BRANDS INC        | NWL    |
| NEWMARK GROUP INC        | NMRK   |
| NEWMARKET CORPORATION    | NEU    |
| NEWMONT GOLDCORP CORP    | NEM    |

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| Company                  | Ticker |
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| NATIONAL FUEL GAS CO     | NFG    |
| NATIONAL GEN HLDGS CORP  | NGHC   |
| NATIONAL HEALTH INVS INC | NHI    |
| NATIONAL HEALTHCARE CORP | NHC    |
| NATIONAL INSTRS CORP     | NATI   |
| NATIONAL OILWELL VARCO   | NOV    |
| NATIONAL PRESTO INDS INC | NPK    |
| NATIONAL RESEARCH CORP   | NRC    |
| NATIONAL RETAIL PPTY     | NNN    |
| NATIONAL STORAGE AFFIL   | NSA    |
| NATIONAL VISION HOLDINGS | EYE    |
| NATIONAL WESTERN LIFE    | NWLI   |
| NATURAL GAS SERVICES GRP | NGS    |
| NATURAL GROCERS VITA CTG | NGVC   |
| NATURES SUNSHINE PRODS   | NATR   |
| NATUS MEDICAL INC        | BABY   |
| NAVIENT CORPORATION      | NAVI   |
| NAVIGANT CONSULTING INC  | NCI    |
| NAVISTAR INTL CORP       | NAV    |
| NLIGHT                   | LASR   |
| NMI HLDGS INC            | NMIH   |
| NN INC                   | NNBR   |
| NOBLE CORPORATION PLC    | NE     |
| NOBLE ENERGY INC         | NBL    |
| NOODLES & COMPANY        | NDLS   |
| NORDIC AMERICAN TANKER   | NAT    |
| NORDSON CORP             | NDSN   |
| NORDSTROM INC            | JWN    |
| NORFOLK SOUTHERN CORP    | NSC    |
| NORTHEAST BANK           | NBN    |
| NORTHERN OIL & GAS INC   | NOG    |
| NORTHERN TRUST CORP      | NTRS   |
| NORTHFIELD BANCORP INC   | NFBK   |
| NORTHRIM BANCORP INC     | NRIM   |
| NORTHROP GRUMMAN CORP    | NOC    |
| NORTHSTAR REALTY EUROPE  | NRE    |
| NORTHWEST BANCSHARES INC | NWBI   |
| NORTHWEST NATURAL HLDG   | NWN    |
| NORTHWEST PIPE CO        | NWPX   |
| NORTHWESTERN CORP        | NWE    |
| NORWEGIAN CRUISE LINE    | NCLH   |
| NORWOOD FINANCIAL CORP   | NWFL   |
| NOVAGOLD RESOURCES INC   | NG     |
| NOVANTA INC              | NOVT   |
| NOVAVAX INC              | NVAX   |
| NOVOCURE LTD             | NVCR   |
| NOW INC                  | DNOW   |
| NRC GROUP HOLDINGS CORP  | NRCG   |

| Company                  | Ticker |
|--------------------------|--------|
| NEWPARK RESOURCES INC    | NR     |
| NEWS CORP CL A           | NWSA   |
| NEWS CORP CL B           | NWS    |
| NEXPOINT RESIDENTIAL TR  | NXRT   |
| NEXSTAR MEDIA GROUP INC  | NXST   |
| NEXTCURE                 | NXTC   |
| NEXTDECADE               | NEXT   |
| NEXTERA ENERGY INC       | NEE    |
| NEXTGEN HEALTHCARE INC   | NXGN   |
| NGM BIOPHARMACEUTICALS   | NGM    |
| NI HOLDINGS INC          | NODK   |
| NIC INC                  | EGOV   |
| NICOLET BANKSHARES INC   | NCBS   |
| NIELSEN HOLDINGS PLC     | NLSN   |
| NII HOLDINGS INC         | NIHD   |
| NIKE INC                 | NKE    |
| NINE ENERGY SERVICE INC  | NINE   |
| NISOURCE INC             | NI     |
| NL INDUSTRIES INC        | NL     |
| ODONATE THERAPEUTICS INC | ODT    |
| OFFICE DEPOT INC         | ODP    |
| OFFICE PPTY INCOME TRUST | OPI    |
| OFB BANCORP              | OFB    |
| OGE ENERGY CORP          | OGE    |
| OHIO VY BANC CORP        | OVBC   |
| OIL DRI CORP OF AMERICA  | ODC    |
| OIL STATES INTERNATIONAL | OIS    |
| OKTA INC                 | OKTA   |
| OLD DOMINION FREIGHT     | ODFL   |
| OLD LINE BANCSHARES INC  | OLBK   |
| OLD NATIONAL BANCORP     | ONB    |
| OLD REPUBLIC INTL CORP   | ORI    |
| OLD SECOND BANCORP INC   | OSBC   |
| OLIN CORP                | OLN    |
| OLLIES BARGAIN OUTLET    | OLLI   |
| OLYMPIC STEEL INC        | ZEUS   |
| OMEGA FLEX INC           | OFLX   |
| OMEGA HEALTHCARE INVS    | OHI    |
| OMEROS CORP              | OMER   |
| OMNICELL INC             | OMCL   |
| OMNICOM GROUP INC        | OMC    |
| OMNOVA SOLUTIONS INC     | OMN    |
| ON DECK CAPITAL INC      | ONDK   |
| ON SEMICONDUCTOR CORP    | ON     |
| ONCOCYTE CORPORATION     | OCX    |
| ONE GAS INC              | OGS    |
| ONE LIBERTY PROPERTIES   | OLP    |
| ONEMAIN HOLDINGS INC     | OMF    |

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| Company                  | Ticker |
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| NRG ENERGY INC           | NRG    |
| NU SKIN ENTERPRISES      | NUS    |
| NUANCE COMMUNICATIONS    | NUAN   |
| NUCOR CORP               | NUE    |
| NUTANIX INC              | NTNX   |
| NUVASIVE INC             | NUVA   |
| NV5 GLOBAL INC           | NVEE   |
| NVE CORP                 | NVEC   |
| NVENT ELECTRIC PLC       | NVT    |
| NVIDIA CORP              | NVDA   |
| NVR INC                  | NVR    |
| O REILLY AUTOMOTIVE INC  | ORLY   |
| OAK VALLEY BANCORP       | OVLY   |
| OASIS PETE INC           | OAS    |
| OCCIDENTAL PETE CORP     | OXY    |
| OCEANEERING INTL INC     | OII    |
| OCEANFIRST FINANCIAL     | OCFC   |
| OCH-ZIFF CAPITAL MGMT    | OZM    |
| OCULAR THERAPEUTIX INC   | OCUL   |
| OCWEN FINANCIAL CORP     | OCN    |
| ORTHOPIX MEDICAL INC     | OFIX   |
| ORTHOPEDIATRICS CORP     | KIDS   |
| OSHKOSH CORP             | OSK    |
| OSI SYSTEMS INC          | OSIS   |
| OSMOTICA PHARMACEUTICALS | OSMT   |
| OTTER TAIL CORP          | OTTR   |
| OUTFRONT MEDIA INC       | OUT    |
| OVERSEAS SHIPHOLDING INC | OSG    |
| OVERSTOCK COM INC        | OSTK   |
| OWENS & MINOR INC        | OMI    |
| OWENS CORNING            | OC     |
| OWENS ILLINOIS INC       | OI     |
| OXFORD INDUSTRIES INC    | OXM    |
| P A M TRANSN SVCS INC    | PTSI   |
| P C CONNECTION           | CNXN   |
| PACCAR INC               | PCAR   |
| PACIFIC BIOSCIENCES CA   | PACB   |
| PACIFIC CITY FINANCIAL   | PCB    |
| PACIFIC DRILLING LTD     | PACD   |
| PACIFIC MERCANTILE BANCO | PMBC   |
| PACIFIC PREMIER BANCORP  | PPBI   |
| PACIRA BIOSCIENCES       | PCRX   |
| PACKAGING CORP OF AMER   | PKG    |
| PACWEST BANCORP          | PACW   |
| PAGERDUTY                | PD     |
| PALATIN TECHNOLOGIES INC | PTN    |
| PALO ALTO NETWORKS INC   | PANW   |
| PALOMAR HOLDINGS         | PLMR   |

| Company                  | Ticker |
|--------------------------|--------|
| ONEOK INC                | OKE    |
| ONESPAN INC              | OSPN   |
| ONESPAWORLD HOLDINGS     | OSW    |
| OOMA INC                 | OOMA   |
| OP BANCORP               | OPBK   |
| OPKO HEALTH INC          | OPK    |
| OPPENHEIMER HOLDINGS INC | OPY    |
| OPTIMIZERX CORP          | OPRX   |
| OPTINOSE INC             | OPTN   |
| OPUS BK IRVINE CALIF     | OPB    |
| ORACLE CORP              | ORCL   |
| ORASURE TECHNOLOGIES INC | OSUR   |
| ORBCOMM INC              | ORBC   |
| ORCHID ISLAND CAPITAL    | ORC    |
| ORGANOGENESIS            | ORGO   |
| ORIGIN BANCORP           | OBNK   |
| ORION ENGINEERED CARBONS | OEC    |
| ORITANI FINANCIAL CORP   | ORIT   |
| ORMAT TECHNOLOGIES INC   | ORA    |
| ORRSTOWN FINL SVCS INC   | ORRF   |
| PAYCHEX INC              | PAYX   |
| PAYCOM SOFTWARE INC      | PAYC   |
| PAYLOCITY HLDG CORP      | PCTY   |
| PAYPAL HOLDINGS INC      | PYPL   |
| PAYSIGN INC              | PAYS   |
| PBF ENERGY INC           | PBF    |
| PCM INC                  | PCMI   |
| PCSB FINANCIAL CORP      | PCSB   |
| PDC ENERGY INC           | PDCE   |
| PDF SOLUTIONS INC        | PDFS   |
| PDL BIOPHARMA INC        | PDLI   |
| PDL COMMUNITY BANCORP    | PDLB   |
| PDVWIRELESS INC          | ATEX   |
| PEABODY ENERGY CORP      | BTU    |
| PEAPACK-GLADSTONE FINL   | PGC    |
| PEBBLEBROOK HOTEL TRUST  | PEB    |
| PEGASYSTEMS INC          | PEGA   |
| PENN NATIONAL GAMING INC | PENN   |
| PENN VIRGINIA CORP       | PVAC   |
| PENNEY J C INC           | JCP    |
| PENNS WOODS BANCORP INC  | PWOD   |
| PENNSYLVANIA REAL ESTATE | PEI    |
| PENNYMAC FINL SVCS INC   | PFSI   |
| PENNYMAC MORTGAGE INV    | PMT    |
| PENSKE AUTOMOTIVE GROUP  | PAG    |
| PENTAIR PLC              | PNR    |
| PENUMBRA INC             | PEN    |
| PEOPLES BANCORP INC      | PEBO   |

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| Company                  | Ticker |
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| PANHANDLE OIL AND GAS    | PHX    |
| PAPA JOHNS INTERNATIONAL | PZZA   |
| PAR PACIFIC HOLDINGS INC | PARR   |
| PAR TECHNOLOGY CORP      | PAR    |
| PARAMOUNT GROUP INC      | PGRE   |
| PARATEK PHARMACEUTICALS  | PRTK   |
| PARETEUM                 | TEUM   |
| PARK ELECTROCHEMICAL     | PKE    |
| PARK HOTELS & RESORTS    | PK     |
| PARK NATIONAL CORP       | PRK    |
| PARK OHIO HOLDINGS CORP  | PKOH   |
| PARKE BANCORP INC        | PKBK   |
| PARKER DRILLING ORD      | PKD    |
| PARKER HANNIFIN CORP     | PH     |
| PARSLEY ENERGY INC       | PE     |
| PARSONS                  | PSN    |
| PARTY CITY HOLDCO INC    | PRTY   |
| PATRICK INDS INC         | PATK   |
| PATTERN ENERGY GROUP INC | PEGI   |
| PATTERSON COS INC        | PDCO   |
| PATTERSON UTI ENERGY     | PTEN   |
| PHUNWARE INC             | PHUN   |
| PHYSICIANS REALTY TRUST  | DOC    |
| PICO HOLDINGS INC        | PICO   |
| PIEDMONT OFFICE RLTY TR  | PDM    |
| PIERIS PHARMACEUTICALS   | PIRS   |
| PILGRIMS PRIDE CORP      | PPC    |
| PINNACLE FINANCIAL       | PNFP   |
| PINNACLE WEST CAPITAL CO | PNW    |
| PIONEER NAT RESOURCES CO | PXD    |
| PIPER JAFFRAY COMPANIES  | PJC    |
| PITNEY BOWES INC         | PBI    |
| PJT PARTNERS INC         | PJT    |
| PLANET FITNESS INC       | PLNT   |
| PLANTRONICS INC          | PLT    |
| PLAYAGS INC              | AGS    |
| PLEXUS CORP              | PLXS   |
| PLUG POWER INC           | PLUG   |
| PLURALSIGHT INC          | PS     |
| PNC FINANCIAL SVCS GROUP | PNC    |
| PNM RESOURCES INC        | PNM    |
| POLARIS INDUSTRIES INC   | PII    |
| POLARITYTE INC           | PTE    |
| POLYONE CORP             | POL    |
| POOL CORP                | POOL   |
| POPULAR INC              | BPOP   |
| PORTLAND GEN ELEC CO     | POR    |
| PORTOLA PHARMACEUTICALS  | PTLA   |

| Company                  | Ticker |
|--------------------------|--------|
| PEOPLES BANCORP N C INC  | PEBK   |
| PEOPLES FINL SVCS CORP   | PFIS   |
| PEOPLES UNITED FINANCIAL | PBCT   |
| PEOPLES UTAH BANCORP     | PUB    |
| PEPSICO INC              | PEP    |
| PERFICIENT INC           | PRFT   |
| PERFORMANCE FOOD GROUP   | PFGC   |
| PERKINELMER INC          | PKI    |
| PERRIGO CO PLC           | PRGO   |
| PERSPECTA                | PRSP   |
| PETIQ                    | PETQ   |
| PETMED EXPRESS INC       | PETS   |
| PFENEX INC               | PFNX   |
| PFIZER INC               | PFE    |
| PG&E CORP                | PCG    |
| PGT INNOVATIONS INC      | PGTI   |
| PHASEBIO PHARMACEUTICALS | PHAS   |
| PHIBRO ANIMAL HEALTH     | PAHC   |
| PHILIP MORRIS INTL       | PM     |
| PHILLIPS 66              | PSX    |
| PHOTRONICS INC           | PLAB   |
| PRIMERICA INC            | PRI    |
| PRIMO WTR CORP           | PRMW   |
| PRIMORIS SVCS CORP       | PRIM   |
| PRINCIPAL FINANCIAL GRP  | PFG    |
| PRINCIPIA BIOPHARMA      | PRNB   |
| PRIORITY TECHNOLOGY      | PRTH   |
| PROASSURANCE CORP        | PRA    |
| PROCTER & GAMBLE CO      | PG     |
| PROGENICS PHARMACEUTICAL | PGNX   |
| PROGRESS SOFTWARE CORP   | PRGS   |
| PROGRESSIVE CORP         | PGR    |
| PROLOGIS INC             | PLD    |
| PROOFPOINT INC           | PFPT   |
| PROPETRO HOLDING CO      | PUMP   |
| PROS HOLDINGS INC        | PRO    |
| PROSPERITY BANCSHARES    | PB     |
| PROTAGONIST THERAPEUTICS | PTGX   |
| PROTECTIVE INSURANCE (B) | PTVCB  |
| PROTHENA CORP PLC        | PRTA   |
| PROTO LABS INC           | PRLB   |
| PROVIDENCE SERVICE CORP  | PRSC   |
| PROVIDENT BANCORP INC    | PVBC   |
| PROVIDENT FINANCIAL SVCS | PFS    |
| PROVIDENT FINL HLDGS INC | PROV   |
| PRUDENTIAL BANCORP INC   | PBIP   |
| PRUDENTIAL FINANCIAL INC | PRU    |
| PS BUSINESS PARKS INC    | PSB    |

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| Company                  | Ticker |
|--------------------------|--------|
| POST HOLDINGS INC        | POST   |
| POTBELLY CORPORATION     | PBBP   |
| POTLATCHDELTIC CORP      | PCH    |
| POWELL INDUSTRIES INC    | POWL   |
| POWER INTEGRATIONS INC   | POWI   |
| PPG INDUSTRIES INC       | PPG    |
| PPL CORP                 | PPL    |
| PQ GROUP HOLDINGS INC    | PQG    |
| PRA GROUP INC            | PRAA   |
| PRA HEALTH SCIENCES INC  | PRAH   |
| PRECISION BIOSCIENCES    | DTIL   |
| PREFERRED APT CMNTYS INC | APTS   |
| PREFERRED BANK           | PFBC   |
| PREFORMED LINE PRODUCTS  | PLPC   |
| PREMIER FINL BANCORP INC | PFBI   |
| PREMIER INC              | PINC   |
| PRESIDIO INC             | PSDO   |
| PRESTIGE CONSUMER HEALTH | PBH    |
| PRGX GLOBAL INC          | PRGX   |
| PRICE T ROWE GROUP INC   | TROW   |
| PRICESMART INC           | PSMT   |
| PRIMEENERGY RESOURCES    | PNRG   |
| QUALCOMM INC             | QCOM   |
| QUALYS INC               | QLYS   |
| QUANEX BUILDING PRODUCTS | NX     |
| QUANTA SERVICES INC      | PWR    |
| QUANTERIX CORPORATION    | QTRX   |
| QUEST DIAGNOSTICS INC    | DGX    |
| QUIDEL CORP              | QDEL   |
| QUINSTREET INC           | QNST   |
| QUOTIENT TECHNOLOGY INC  | QUOT   |
| QURATE RETAIL INC        | QRTEA  |
| R1 RCM INC               | RCM    |
| RA PHARMACEUTICALS INC   | RARX   |
| RADIAN GROUP INC         | RDN    |
| RADIANT LOGISTICS INC    | RLGT   |
| RADIUS HEALTH INC        | RDUS   |
| RADNET INC               | RDNT   |
| RAFAEL HOLDINGS          | RFL    |
| RALPH LAUREN CORP        | RL     |
| RAMACO RESOURCES INC     | METC   |
| RAMBUS INC               | RMBS   |
| RANGE RESOURCES CORP     | RRC    |
| RAPID7 INC               | RPD    |
| RAVEN INDUSTRIES INC     | RAVN   |
| RAYMOND JAMES FINANCIAL  | RJF    |
| RAYONIER ADV MATERIALS   | RYAM   |
| RAYONIER INC             | RYN    |

| Company                  | Ticker |
|--------------------------|--------|
| PTC INC                  | PTC    |
| PTC THERAPEUTICS INC     | PTCT   |
| PUBLIC STORAGE INC       | PSA    |
| PUBLIC SVC ENTERPRISE    | PEG    |
| PULSE BIOSCIENCES INC    | PLSE   |
| PULTEGROUP INC           | PHM    |
| PUMA BIOTECHNOLOGY INC   | PBYI   |
| PURE STORAGE INC         | PSTG   |
| PURECYCLE CORP           | PCYO   |
| PURPLE INNOVATION INC    | PRPL   |
| PVH CORP                 | PVH    |
| PYXUS INTERNATIONAL INC  | PYX    |
| PZENA INVESTMENT MGMT    | PZN    |
| Q2 HLDGS INC             | QTWO   |
| QAD INC                  | QADA   |
| QCR HOLDINGS INC         | QCRH   |
| QEP RESOURCES INC        | QEP    |
| QIAGEN NV                | QGEN   |
| QORVO INC                | QRVO   |
| QTS REALTY TRUST INC     | QTS    |
| QUAD / GRAPHICS INC      | QUAD   |
| QUAKER CHEMICAL CORP     | KWR    |
| REGIONAL MGMT CORP       | RM     |
| REGIONS FINANCIAL CORP   | RF     |
| REGIS CORP               | RGS    |
| REINSURANCE GRP OF AMER  | RGA    |
| RELIANCE STEEL & ALUM    | RS     |
| RELIANT BANCORP INC      | RBNC   |
| RENAISSANCERE HOLDINGS   | RNR    |
| RENASANT CORP            | RNST   |
| RENEWABLE ENER GROUP INC | REGI   |
| RENT A CENTER INC        | RCII   |
| REPLIGEN CORP            | RGEN   |
| REPLIMUNE GROUP INC      | REPL   |
| REPUBLIC BANCORP INC KY  | RBCAA  |
| REPUBLIC FIRST BANCORP   | FRBK   |
| REPUBLIC SERVICES INC    | RSG    |
| RESIDEO TECHNOLOGIES     | REZI   |
| RESMED INC               | RMD    |
| RESOURCES CONNECTION     | RECN   |
| RESTORBIO INC            | TORC   |
| RETAIL OPPORTUNITY INVTS | ROIC   |
| RETAIL PPTYS AMER INC    | RPAI   |
| RETAIL VALUE INC         | RVI    |
| RETROPHIN INC            | RTRX   |
| REV GROUP INC            | REVG   |
| REVANCE THERAPEUTICS INC | RVNC   |
| REVLON INC               | REV    |



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| RAYTHEON CO              | RTN    |
| RBB BANCORP              | RBB    |
| RBC BEARINGS INC         | ROLL   |
| RCI HOSPITALITY HLDGS    | RICK   |
| RE/MAX HOLDINGS INC      | RMAX   |
| READING INTERNATIONAL    | RDI    |
| READY CAPITAL CORP       | RC     |
| REALOGY HOLDINGS CORP    | RLGY   |
| REALPAGE INC             | RP     |
| REALTY INCOME CORP       | O      |
| REATE PHARMACEUTICALS    | RETA   |
| RECRO PHARMA INC         | REPH   |
| RED HAT INC              | RHT    |
| RED LION HOTELS CORP     | RLH    |
| RED RIVER BANCSHARES     | RRBI   |
| RED ROBIN GOURMET BURGER | RRGB   |
| RED ROCKS RESORTS INC    | RRR    |
| REDFIN CORP              | RDFN   |
| REDWOOD TRUST INC        | RWT    |
| REGAL BELOIT CORP        | RBC    |
| REGENCY CENTERS CORP     | REG    |
| REGENERON PHARMACEUTICAL | REGN   |
| REGENXBIO INC            | RGNX   |
| ROCKY BRANDS INC         | RCKY   |
| ROGERS CORP              | ROG    |
| ROKU INC                 | ROKU   |
| ROLLINS INC              | ROL    |
| ROPER TECHNOLOGIES INC   | ROP    |
| ROSEHILL RESOURCES INC   | ROSE   |
| ROSETTA STONE INC        | RST    |
| ROSS STORES INC          | ROST   |
| ROYAL CARIBBEAN CRUISES  | RCL    |
| ROYAL GOLD INC           | RGLD   |
| RPC INC                  | RES    |
| RPM INTERNATIONAL INC    | RPM    |
| RPT REALTY               | RPT    |
| RTI SURGICAL HOLDINGS    | RTIX   |
| RTW RETAILWINDS INC      | RTW    |
| RUBICON PROJ INC         | RUBI   |
| RUBIUS THERAPEUTICS      | RUBY   |
| RUDOLPH TECHNOLOGIES INC | RTEC   |
| RUSH ENTERPRISES INC     | RUSHA  |
| RUSH ENTERPRISES INC     | RUSHB  |
| RUTH'S HOSPITALITY GROUP | RUTH   |
| RYDER SYSTEM INC         | R      |
| RYERSON HOLDING CORP     | RYI    |
| RYMAN HOSPITALITY PPTYS  | RHP    |
| S & T BANCORP INC        | STBA   |

| Company                  | Ticker |
|--------------------------|--------|
| REX AMERICAN RESOURCES   | REX    |
| REXFORD INDUSTRIAL RLTY  | REXR   |
| REXNORD CORP             | RXN    |
| RGC RES INC              | RGCO   |
| RH                       | RH     |
| RHYTHM PHARMACEUTICALS   | RYTM   |
| RIBBON COMMUNICATIONS    | RBBN   |
| RIGEL PHARMACEUTICALS    | RIGL   |
| RIGNET INC               | RNET   |
| RIMINI STREET INC        | RMNI   |
| RING ENERGY INC          | REI    |
| RINGCENTRAL INC          | RNG    |
| RITE AID CORP            | RAD    |
| RIVERVIEW BANCORP INC    | RVSB   |
| RLI CORP                 | RLI    |
| RLJ LODGING TR           | RLJ    |
| RMR GROUP INC            | RMR    |
| ROADRUNNER TRNSN SVCS    | RRTS   |
| ROAN RESOURCES           | ROAN   |
| ROBERT HALF INTL INC     | RHI    |
| ROCKET PHARMACEUTICALS   | RCKT   |
| ROCKWELL AUTOMATION INC  | ROK    |
| ROCKWELL MEDICAL INC     | RMTI   |
| SBA COMMUNICATIONS CORP  | SBAC   |
| SCANSOURCE INC           | SCSC   |
| SCHEIN HENRY INC         | HSIC   |
| SCHLUMBERGER LTD         | SLB    |
| SCHNEIDER NATIONAL INC   | SNDR   |
| SCHNITZER STEEL INDS     | SCHN   |
| SCHOLAR ROCK HOLDING     | SRRK   |
| SCHOLASTIC CORP          | SCHL   |
| SCHWAB CHARLES CORP      | SCHW   |
| SCHWEITZER-MAUDUIT INTL  | SWM    |
| SCIENCE APPLICATIONS INT | SAIC   |
| SCIENTIFIC GAMES CORP    | SGMS   |
| SCORPIO BULKERS INC      | SALT   |
| SCORPIO TANKERS INC      | STNG   |
| SCOTTS MIRACLE-GRO CO    | SMG    |
| SCRIPPS E W CO           | SSP    |
| SEABOARD CORP            | SEB    |
| SEACOAST BANKING CORP FL | SBCF   |
| SEACOR HOLDINGS INC      | CKH    |
| SEACOR MARINE HOLDINGS   | SMHI   |
| SEADRILL LIMITED         | SDRL   |
| SEALED AIR CORP          | SEE    |
| SEASPINE HOLDINGS CORP   | SPNE   |
| SEATTLE GENETICS INC     | SGEN   |
| SEAWORLD ENTMT INC       | SEAS   |

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| SABRA HEALTH CARE REIT   | SBRA   |
| SABRE CORP               | SABR   |
| SAFE BULKERS INC         | SB     |
| SAFEGUARD SCIENTIFICS    | SFE    |
| SAFEHOLD INC             | SAFE   |
| SAFETY INSURANCE GRP INC | SAFT   |
| SAGA COMMUNICATIONS INC  | SGA    |
| SAGE THERAPEUTICS INC    | SAGE   |
| SAIA INC                 | SAIA   |
| SAILPOINT TECHNOLOGIES   | SAIL   |
| SALESFORCE COM INC       | CRM    |
| SALLY BEAUTY HOLDINGS    | SBH    |
| SANDERSON FARMS INC      | SAFM   |
| SANDRIDGE ENERGY INC     | SD     |
| SANDY SPRING BANCORP     | SASR   |
| SANFILIPPO JOHN B & SON  | JBSS   |
| SANGAMO THERAPEUTICS INC | SGMO   |
| SANMINA CORPORATION      | SANM   |
| SANTANDER CNSMR USA HLDG | SC     |
| SAREPTA THERAPEUTICS INC | SRPT   |
| SAUL CENTERS INC         | BFS    |
| SAVARA INC               | SVRA   |
| SB ONE BANCORP           | SBBX   |
| SHERWIN WILLIAMS CO      | SHW    |
| SHIP FINANCE INTL        | SFL    |
| SHOCKWAVE MEDICAL        | SWAV   |
| SHOE CARNIVAL INC        | SCVL   |
| SHORE BANCSHARES INC     | SHBI   |
| SHOTSPOTTER              | SSTI   |
| SHUTTERFLY INC           | SFLY   |
| SHUTTERSTOCK INC         | SSTK   |
| SI-BONE                  | SIBN   |
| SIEBERT FINANCIAL CORP   | SIEB   |
| SIENTRA INC              | SIEN   |
| SIERRA BANCORP           | BSRR   |
| SIGA TECHNOLOGIES INC    | SIGA   |
| SIGNATURE BANK           | SBNY   |
| SIGNET JEWELERS LTD      | SIG    |
| SILGAN HOLDINGS INC      | SLGN   |
| SILICON LABORATORIES INC | SLAB   |
| SILK ROAD MEDICAL        | SILK   |
| SILVERBOW RESOURCES      | SBOW   |
| SILVERCREST ASSET MNGMT  | SAMG   |
| SIMMONS FIRST NATIONAL   | SFNC   |
| SIMON PROPERTY GROUP INC | SPG    |
| SIMPLY GOOD FOODS        | SMPL   |
| SIMPSON MANUFACTURING    | SSD    |

| Company                  | Ticker |
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| SECUREWORKS CORP         | SCWX   |
| SEI INVESTMENTS CO       | SEIC   |
| SELECT BANCORP INC       | SLCT   |
| SELECT ENERGY SERVICES   | WTTR   |
| SELECT INTERIOR CONCEPTS | SIC    |
| SELECT MEDICAL HOLDINGS  | SEM    |
| SELECTIVE INSURANCE GRP  | SIGI   |
| SEMGROUP CORP            | SEMG   |
| SEMPRA ENERGY            | SRE    |
| SEMTECH CORP             | SMTC   |
| SENECA FOODS CORP        | SENEA  |
| SENIOR HOUSING PPTYS TR  | SNH    |
| SENSATA TECHNOLOGIES     | ST     |
| SENSEONICS HOLDINGS INC  | SENS   |
| SENSIENT TECHNOLOGIES    | SXT    |
| SERES THERAPEUTICS INC   | MCRB   |
| SERITAGE GROWTH PROP     | SRG    |
| SERVICE CORP INTL        | SCI    |
| SERVICEMASTER GLOBAL     | SERV   |
| SERVICENOW INC           | NOW    |
| SERVISFIRST BANCSHARES   | SFBS   |
| SHAKE SHACK INC          | SHAK   |
| SHARPSRING INC           | SHSP   |
| SHENANDOAH TELECOMM CO   | SHEN   |
| SOLITON INC              | SOLY   |
| SONIC AUTOMOTIVE INC     | SAH    |
| SONIM TECHNOLOGIES       | SONM   |
| SONOCO PRODUCTS CO       | SON    |
| SONOS INC                | SONO   |
| SORRENTO THERAPEUTICS    | SRNE   |
| SOTHEBYS                 | BID    |
| SOUTH JERSEY INDUSTRIES  | SJI    |
| SOUTH PLAINS FINANCIAL   | SPFI   |
| SOUTH STATE CORPORATION  | SSB    |
| SOUTHERN CO              | SO     |
| SOUTHERN COPPER CORP     | SCCO   |
| SOUTHERN FIRST BANCSHARE | SFST   |
| SOUTHERN MO BANCORP INC  | SMBC   |
| SOUTHERN NATL BANCORP    | SONA   |
| SOUTHSIDE BANCSHARES INC | SBSI   |
| SOUTHWEST AIRLINES CO    | LUV    |
| SOUTHWEST GAS HOLDINGS   | SWX    |
| SOUTHWESTERN ENERGY CO   | SWN    |
| SP PLUS CORPORATION      | SP     |
| SPARK ENERGY INC         | SPKE   |
| SPARK THERAPEUTICS INC   | ONCE   |
| SPARTAN MOTORS INC       | SPAR   |
| SPARTANNASH COMPANY      | SPTN   |

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| Company                  | Ticker |
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| SIMULATIONS PLUS INC     | SLP    |
| SINCLAIR BROADCAST GROUP | SBGI   |
| SIRIUS XM HOLDINGS INC   | SIRI   |
| SITE CENTERS CORPORATION | SITC   |
| SITEONE LANDSCAPE SUPPLY | SITE   |
| SIX FLAGS ENTMT CORP     | SIX    |
| SJW GROUP                | SJW    |
| SKECHERS USA INC         | SKX    |
| SKYLINE CHAMPION CORP    | SKY    |
| SKYWEST INC              | SKYW   |
| SKYWORKS SOLUTIONS INC   | SWKS   |
| SL GREEN REALTY CORP     | SLG    |
| SLEEP NUMBER CORPORATION | SNBR   |
| SLM CORP                 | SLM    |
| SM ENERGY CO             | SM     |
| SMART GLOBAL HOLDINGS    | SGH    |
| SMART SAND INC           | SND    |
| SMARTFINANCIAL INC       | SMBK   |
| SMARTSHEET               | SMAR   |
| SMITH A O CORP           | AOS    |
| SMUCKER J M CO           | SJM    |
| SNAP ON INC              | SNA    |
| SOLARIS OILFIELD         | SOI    |
| SOLARWINDS               | SWI    |
| SOLID BIOSCIENCES INC    | SLDB   |
| STAMPS COM INC           | STMP   |
| STANDARD MOTOR PRODUCTS  | SMP    |
| STANDEX INTERNATIONAL    | SXI    |
| STANLEY BLACK & DECKER   | SWK    |
| STARBUCKS CORP           | SBUX   |
| STARTEK INC              | SRT    |
| STARWOOD PPTY TRUST INC  | STWD   |
| STATE AUTO FINANCIAL     | STFC   |
| STATE STREET CORP        | STT    |
| STEEL DYNAMICS INC       | STLD   |
| STEELCASE INC            | SCS    |
| STEMLINE THERAPEUTICS    | STML   |
| STEPAN CO                | SCL    |
| STERICYCLE INC           | SRCL   |
| STERIS PLC               | STE    |
| STERLING BANCORP         | STL    |
| STERLING BANCORP INC     | SBT    |
| STERLING CONSTRUCTION CO | STRL   |
| STEWART INFORMATION      | STC    |
| STIFEL FINANCIAL CORP    | SF     |
| STITCH FIX CLASS A       | SFIX   |
| STOCK YARDS BANCORP INC  | SYBT   |
| STONERIDGE INC           | SRI    |

| Company                  | Ticker |
|--------------------------|--------|
| SPECTRUM BRANDS HOLDINGS | SPB    |
| SPECTRUM PHARMACEUTICALS | SPPI   |
| SPEEDWAY MOTORSPORTS INC | TRK    |
| SPERO THERAPEUTICS INC   | SPRO   |
| SPIRE INC                | SR     |
| SPIRIT AEROSYSTEMS       | SPR    |
| SPIRIT AIRLS INC         | SAVE   |
| SPIRIT MTA REIT          | SMTA   |
| SPIRIT OF TEXAS BNCSHRES | STXB   |
| SPIRIT RLTY CAP INC      | SRC    |
| SPLUNK INC               | SPLK   |
| SPOK HOLDINGS INC        | SPOK   |
| SPORTSMANS WHSE HLDGS    | SPWH   |
| SPOTIFY TECHNOLOGY SA    | SPOT   |
| SPRINT CORP              | S      |
| SPROUTS FRMRS MKT INC    | SFM    |
| SPS COMM INC             | SPSC   |
| SPX CORP                 | SPXC   |
| SPX FLOW INC             | FLOW   |
| SQUARE INC               | SQ     |
| SRC ENERGY INC           | SRCI   |
| SS&C TECHNOLOGIES HLDGS  | SSNC   |
| ST JOE CO                | JOE    |
| STAAR SURGICAL CO        | STAA   |
| STAG INDL INC            | STAG   |
| SYMANTEC CORP            | SYMC   |
| SYNALLOY CORP            | SYNL   |
| SYNAPTICS INC            | SYNA   |
| SYNCHRONOSS TECHNOLOGY   | SNCR   |
| SYNCHRONY FINANCIAL      | SYF    |
| SYNDAX PHARMACEUTICALS   | SNDX   |
| SYNEOS HEALTH INC        | SYNH   |
| SYNLOGIC INC             | SYBX   |
| SYNNEX CORP              | SNX    |
| SYNOPSYS INC             | SNPS   |
| SYNOVUS FINANCIAL CORP   | SNV    |
| SYNTHORX                 | THOR   |
| SYROS PHARMACEUTICALS    | SYRS   |
| SYSCO CORP               | SYF    |
| SYSTEMAX INC             | SYX    |
| TABLEAU SOFTWARE INC     | DATA   |
| TABULA RASA HEALTHCARE   | TRHC   |
| TACTILE SYSTEMS TECH     | TCMD   |
| TAILORED BRANDS INC      | TLRD   |
| TAKE-TWO INTERACTIVE     | TTWO   |
| TALOS ENERGY INC         | TALO   |
| TANDEM DIABETES CARE INC | TNDM   |
| TANGER FACTORY OUTLET    | SKT    |

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| STRATASYS LTD            | SSYS   |
| STRATEGIC EDUCATION INC  | STRA   |
| STRATUS PPTYS INC        | STRS   |
| STRONGBRIDGE BIOPHARMA   | SBBP   |
| STRYKER CORP             | SYK    |
| STURM RUGER & CO INC     | RGR    |
| SUMMIT FINANCIAL GROUP   | SMMF   |
| SUMMIT HOTEL PPTYS       | INN    |
| SUMMIT MATLS INC         | SUM    |
| SUN COMMUNITIES INC      | SUI    |
| SUNCOKE ENERGY INC       | SXC    |
| SUNPOWER CORP            | SPWR   |
| SUNRUN INC               | RUN    |
| SUNSTONE HOTEL INVS INC  | SHO    |
| SUNTRUST BANKS INC       | STI    |
| SUPERIOR ENERGY SERVICES | SPN    |
| SUPERIOR GROUP OF CO     | SGC    |
| SUPERNUS PHARMACEUTICALS | SUPN   |
| SURGERY PARTNERS INC     | SGRY   |
| SURMODICS INC            | SRDX   |
| SUTRO BIOPHARMA          | STRO   |
| SVB FINANCIAL GROUP      | SIVB   |
| SVMK                     | SVMK   |
| SWITCH INC               | SWCH   |
| SYKES ENTERPRISES INC    | SYKE   |
| TENET HEALTHCARE CORP    | THC    |
| TENNANT CO               | TNC    |
| TENNECO INC              | TEN    |
| TERADATA CORP            | TDC    |
| TERADYNE INC             | TER    |
| TEREX CORP               | TEX    |
| TERRAFORM POWER INC      | TERP   |
| TERRENO REALTY CORP      | TRNO   |
| TERRITORIAL BANCORP INC  | TBNK   |
| TESLA INC                | TSLA   |
| TESSCO TECHNOLOGIES INC  | TESS   |
| TETRA TECH INC           | TTEK   |
| TETRA TECHNOLOGIES INC   | TTI    |
| TEXAS CAPITAL BANCSHARES | TCBI   |
| TEXAS INSTRUMENTS INC    | TXN    |
| TEXAS ROADHOUSE INC      | TXRH   |
| TEXTAINER GROUP HLDGS    | TGH    |
| TEXTRON INC              | TXT    |
| TFS FINL CORP            | TFSL   |
| TG THERAPEUTICS INC      | TGTX   |
| THE CHEMOURS COMPANY     | CC     |
| THE CONTAINER STORE GRP  | TCS    |

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| TAPESTRY INC             | TPR    |
| TARGA RESOURCES INC      | TRGP   |
| TARGET CORP              | TGT    |
| TARGET HOSPITALITY (A)   | TH     |
| TAUBMAN CENTERS INC      | TCO    |
| TAYLOR MORRISON HOME II  | TMHC   |
| TCF FINANCIAL CORP       | TCF    |
| TCR2 THERAPEUTICS        | TCRR   |
| TD AMERITRADE HOLDING    | AMTD   |
| TEAM INC                 | TISI   |
| TECH DATA CORP           | TECD   |
| TECHTARGET INC           | TTGT   |
| TEEKAY CORP              | TK     |
| TEEKAY TANKERS LTD       | TNK    |
| TEGNA INC                | TGNA   |
| TEJON RANCH CO           | TRC    |
| TELADOC HEALTH INC       | TDOC   |
| TELARIA INC              | TLRA   |
| TELEDYNE TECHNOLOGIES    | TDY    |
| TELEFLEX INC             | TFX    |
| TELENAV INC              | TNAV   |
| TELEPHONE & DATA SYSTEMS | TDS    |
| TELLURIAN INC            | TELL   |
| TEMPUR SEALY INTL INC    | TPX    |
| TENABLE HOLDINGS         | TENB   |
| T-MOBILE US INC          | TMUS   |
| TOOTSIE ROLL INDUSTRIES  | TR     |
| TOPBUILD CORP            | BLD    |
| TORCHMARK CORP           | TMK    |
| TORO CO                  | TTC    |
| TOTAL SYSTEM SERVICES    | TSS    |
| TOWER INTERNATIONAL INC  | TOWER  |
| TOWNEBANK PORTSMOUTH VA  | TOWN   |
| TPG RE FINANCE TRUST     | TRTX   |
| TPI COMPOSITES INC       | TPIC   |
| TRACTOR SUPPLY CO        | TSCO   |
| TRANSCAT INC             | TRNS   |
| TRANSCONTINENTAL REALTY  | TCI    |
| TRANSDIGM GROUP INC      | TDG    |
| TRANSENTERIX INC         | TRXC   |
| TRANSLATE BIO INC        | TBIO   |
| TRANSMEDICS GROUP        | TMDX   |
| TRANSOCEAN LTD           | RIG    |
| TRANSUNION               | TRU    |
| TRAVELERS COS INC        | TRV    |
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| TREDEGAR CORP            | TG     |

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| THE KRAFT HEINZ COMPANY  | KHC    | TREX INC                 | TREX   |
| THE MEET GROUP           | MEET   | TRI POINTE GROUP INC     | TPH    |
| THE TRADE DESK INC       | TTD    | TRIBUNE MEDIA CO         | TRCO   |
| THE WENDY'S COMPANY      | WEN    | TRIBUNE PUBLISHING CO    | TPCO   |
| THERAPEUTICSMD INC       | TXMD   | TRICIDA INC              | TCDA   |
| THERAVANCE BIOPHARMA INC | TBPH   | TRICO BANCSHARES         | TCBK   |
| THERMO FISHER SCIENTIFIC | TMO    | TRIMAS CORP              | TRS    |
| THERMON GROUP HLDGS INC  | THR    | TRIMBLE INC              | TRMB   |
| THIRD POINT REINSURANCE  | TPRE   | TRINET GROUP INC         | TNET   |
| THOR INDUSTRIES INC      | THO    | TRINITY INDUSTRIES INC   | TRN    |
| TIDEWATER INC            | TDW    | TRINSEO SA               | TSE    |
| TIFFANY & CO             | TIF    | TRIPADVISOR INC          | TRIP   |
| TILE SHOP HLDGS INC      | TTS    | TRIPLE-S MANAGEMENT CORP | GTS    |
| TILLYS INC               | TLYS   | TRISTATE CAP HLDGS INC   | TSC    |
| TIMBERLAND BANCORP INC   | TSBK   | TRITON INTERNATIONAL LTD | TRTN   |
| TIMKEN CO                | TKR    | TRIUMPH BANCORP INC      | TBK    |
| TIMKENSTEEL CORPORATION  | TMST   | TRIUMPH GROUP INC        | TGI    |
| TIPTREE INC              | TIPT   | TRONOX HOLDINGS PLC      | TROX   |
| TITAN INTERNATIONAL INC  | TWI    | TRUEBLUE INC             | TBI    |
| TITAN MACHINERY INC      | TITN   | TRUECAR INC              | TRUE   |
| TIVITY HEALTH INC        | TVTY   | TRUPANION INC            | TRUP   |
| TIVO CORPORATION         | TIVO   | TRUSTCO BANK CORP NY     | TRST   |
| TJX COMPANIES INC        | TJX    | TRUSTMARK CORP           | TRMK   |
| TOCAGEN INC              | TOCA   | TTEC HOLDINGS INC        | TTEC   |
| TOLL BROTHERS INC        | TOL    | TTM TECHNOLOGIES INC     | TTMI   |
| TOMPKINS FINANCIAL CORP  | TMP    | TUCOWS INC               | TCX    |
| TUPPERWARE BRANDS CORP   | TUP    | UNITED STATES STEEL CORP | X      |
| TURNING POINT BRANDS INC | TPB    | UNITED TECHNOLOGIES      | UTX    |
| TURNING PT THERAPEUTICS  | TPTX   | UNITED THERAPEUTICS      | UTHR   |
| TUTOR PERINI CORP        | TPC    | UNITEDHEALTH GROUP INC   | UNH    |
| TWILIO INC               | TWLO   | UNITI GROUP INC          | UNIT   |
| TWIN DISC INC            | TWIN   | UNITIL CORP              | UTL    |
| TWIN RIVER WORLDWIDE     | TRWH   | UNITY BANCORP INC        | UNTY   |
| TWIST BIOSCIENCE         | TWST   | UNITY BIOTECHNOLOGY      | UBX    |
| TWITTER INC              | TWTR   | UNIVAR INC               | UNVR   |
| TWO HBRS INVT CORP       | TWO    | UNIVERSAL CORP           | UVV    |
| TYLER TECHNOLOGIES INC   | TYL    | UNIVERSAL DISPLAY CORP   | OLED   |
| TYME                     | TYME   | UNIVERSAL ELECTRONICS    | UEIC   |
| TYSON FOODS INC          | TSN    | UNIVERSAL FOREST PRODS   | UFPI   |
| U S CONCRETE INC         | USCR   | UNIVERSAL HEALTH REALTY  | UHT    |
| U S PHYSICAL THERAPY INC | USPH   | UNIVERSAL HEALTH SVCS    | UHS    |
| U S SILICA HLDGS INC     | SLCA   | UNIVERSAL INSURANCE      | UVE    |
| U.S. WELL SERVICES       | USWS   | UNIVERSAL LOGISTICS HLDG | ULH    |
| UBER TECHNOLOGIES        | UBER   | UNIVEST FINANCIAL CORPOR | UVSP   |
| UBIQUITI NETWORKS INC    | UBNT   | UNUM GROUP               | UNM    |
| UDR INC                  | UDR    | UPLAND SOFTWARE INC      | UPLD   |
| UFP TECHNOLOGIES INC     | UFPT   | UPWORK                   | UPWK   |

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| ULTRAGENYX PHARMA        | RARE   |
| UMB FINANCIAL CORP       | UMBF   |
| UMH PROPERTIES INC       | UMH    |
| UMPQUA HOLDINGS CORP     | UMPQ   |
| UNDER ARMOUR CLASS A     | UAA    |
| UNDER ARMOUR CLASS C     | UA     |
| UNIFI INC                | UFI    |
| UNIFIRST CORP MASS       | UNF    |
| UNION BANKSHARES INC     | UNB    |
| UNION PACIFIC CORP       | UNP    |
| UNISYS CORP              | UIS    |
| UNIT CORP                | UNT    |
| UNITED AIRLINES HOLDINGS | UAL    |
| UNITED BANKSHARES INC    | UBSI   |
| UNITED CMNTY FINL CO     | UCFC   |
| UNITED COMMUNITY BANKS   | UCBI   |
| UNITED FINANCIAL BANCORP | UBNK   |
| UNITED FIRE GROUP INC    | UFCS   |
| UNITED INS HLDGS CORP    | UIHC   |
| UNITED NATURAL FOODS INC | UNFI   |
| UNITED PARCEL SERVICE    | UPS    |
| UNITED RENTALS INC       | URI    |
| UNITED SECURITY BANC     | UBFO   |
| UNITED STATES CELLULAR   | USM    |
| UNITED STATES LIME & MIN | USLM   |
| VEECO INSTRUMENTS INC    | VECO   |
| VEEVA SYSTEMS INC        | VEEV   |
| VENTAS INC               | VTR    |
| VERA BRADLEY INC         | VRA    |
| VERACYTE INC             | VCYT   |
| VEREIT INC               | VER    |
| VERICEL CORP             | VCEL   |
| VERINT SYS INC           | VRNT   |
| VERISIGN INC             | VRSN   |
| VERISK ANALYTICS INC     | VRSK   |
| VERITEX HOLDINGS         | VBTX   |
| VERITIV CORPORATION      | VRTV   |
| VERIZON COMMUNICATIONS   | VZ     |
| VERRA MOBILITY CORP      | VRRM   |
| VERRICA PHARMACEUTICALS  | VRCA   |
| VERSO CORPORATION        | VRS    |
| VERSUM MATERIALS         | VSM    |
| VERTEX PHARMACEUTICALS   | VRTX   |
| VIACOM INC CL A          | VIA    |
| VIACOM INC CL B          | VIAB   |

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| URANIUM ENERGY CORP      | UEC    |
| URBAN EDGE PROPERTIES    | UE     |
| URBAN OUTFITTERS INC     | URBN   |
| UROGEN PHARMA            | URGN   |
| URSTADT BIDDLE PPTYS INS | UBA    |
| US BANCORP               | USB    |
| US ECOLOGY INC           | ECOL   |
| US FOODS HOLDING CORP    | USFD   |
| US XPRESS ENTERPRISES    | USX    |
| USA TECHNOLOGIES INC     | USAT   |
| USANA HEALTH SCIENCES    | USNA   |
| UTAH MED PRODS INC       | UTMD   |
| V F CORP                 | VFC    |
| VAIL RESORTS INC         | MTN    |
| VALERO ENERGY CORP       | VLO    |
| VALHI INC                | VHI    |
| VALLEY NATIONAL BANCORP  | VLV    |
| VALMONT INDUSTRIES INC   | VMI    |
| VALUE LINE INC           | VALU   |
| VALVOLINE INC            | VVV    |
| VANDA PHARMACEUTICALS    | VNDA   |
| VAPOTHERM                | VAPO   |
| VAREX IMAGING            | VREX   |
| VARIAN MEDICAL SYSTEMS   | VAR    |
| VARONIS SYSTEMS INC      | VRNS   |
| VBI VACCINES INC         | VBIV   |
| VECTOR GROUP LTD         | VGR    |
| VECTRUS INC              | VEC    |
| W&T OFFSHORE INC         | WTI    |
| WABASH NATIONAL CORP     | WNC    |
| WABCO HOLDINGS INC       | WBC    |
| WABTEC CORP              | WAB    |
| WADDELL & REED FINANCIAL | WDR    |
| WAGeworks INC            | WAGE   |
| WAITR HOLDINGS INC       | WTRH   |
| WALGREENS BOOTS ALLIANCE | WBA    |
| WALKER & DUNLOP INC      | WD     |
| WALMART INC              | WMT    |
| WARRIOR MET COAL INC     | HCC    |
| WASHINGTON FED INC       | WAFD   |
| WASHINGTON PRIME GROUP   | WPG    |
| WASHINGTON REAL ESTATE   | WRE    |
| WASHINGTON TRUST BANCORP | WASH   |
| WASTE MGMT INC           | WM     |
| WATERS CORP              | WAT    |
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| WATFORD HOLDINGS         | WTRE   |
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| VICOR CORP               | VICR   |
| VIEWRAY INC              | VRAY   |
| VIKING THERAPEUTICS INC  | VKTX   |
| VILLAGE SUPER MARKET INC | VLGEA  |
| VINCE HOLDING CORP       | VNCE   |
| VIRNETX HOLDING CORP     | VHC    |
| VIRTU FINL INC           | VIRT   |
| VIRTUS INVESTMENT PTNRS  | VRTS   |
| VIRTUSA CORP             | VRTU   |
| VISA INC                 | V      |
| VISHAY INTERTECHNOLOGY   | VSH    |
| VISHAY PRECISION GROUP   | VPG    |
| VISTA OUTDOOR INC        | VSTO   |
| VISTEON CORP             | VC     |
| VISTRA ENERGY CORP       | VST    |
| VIVINT SOLAR INC         | VSLR   |
| VMWARE INC               | VMW    |
| VOCERA COMMUNICATIONS    | VCRA   |
| VONAGE HLDGS CORP        | VG     |
| VORNADO REALTY TRUST     | VNO    |
| VOYA FINANCIAL INC       | VOYA   |
| VOYAGER THERAPEUTICS INC | VYGR   |
| VSE CORP                 | VSEC   |
| VULCAN MATERIALS CO      | VMC    |
| W P CAREY INC            | WPC    |
| WEYCO GROUP INC          | WEYS   |
| WEYERHAEUSER CO          | WY     |
| WHIRLPOOL CORP           | WHR    |
| WHITE MTNS INS GROUP LTD | WTM    |
| WHITESTONE REIT          | WSR    |
| WHITING PETROLEUM CORP   | WLL    |
| WIDOPENWEST              | WOW    |
| WILEY JOHN & SONS INC    | JW.A   |
| WILLDAN GROUP INC        | WLDN   |
| WILLIAM LYON HOMES       | WLH    |
| WILLIAMS COMPANIES INC   | WMB    |
| WILLIAMS SONOMA INC      | WSM    |
| WILLIS LEASE FINANCE     | WLFC   |
| WILLIS TOWERS WATSON PLC | WLTW   |
| WILLSCOT CORPORATION     | WSC    |
| WINGSTOP INC             | WING   |
| WINMARK CORP             | WINA   |
| WINNEBAGO INDUSTRIES INC | WGO    |
| WINTRUST FINANCIAL CORP  | WTFC   |

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| WATTS WATER TECH INC     | WTS    |
| WAVE LIFE SCIENCES LTD   | WVE    |
| WAYFAIR INC              | W      |
| WD-40 CO                 | WDFC   |
| WEBSTER FINANCIAL CORP   | WBS    |
| WEC ENERGY GROUP INC     | WEC    |
| WEIGHT WATCHERS INTL INC | WW     |
| WEINGARTEN RLTY INVS     | WRI    |
| WEIS MARKETS INC         | WMK    |
| WELBILT                  | WBT    |
| WELLCARE HEALTH PLANS    | WCG    |
| WELLS FARGO & CO         | WFC    |
| WELLTOWER INC            | WELL   |
| WERNER ENTERPRISES INC   | WERN   |
| WESBANCO INC             | WSBC   |
| WESCO AIRCRAFT HLDGS INC | WAIR   |
| WESCO INTERNATIONAL INC  | WCC    |
| WEST BANCORPORATION INC  | WTBA   |
| WEST PHARMACEUTICAL SVCS | WST    |
| WESTAMERICA BANCORP      | WABC   |
| WESTERN ALLIANCE BANCORP | WAL    |
| WESTERN ASSET MTG CAP    | WMC    |
| WESTERN DIGITAL CORP     | WDC    |
| WESTERN NEW ENGLAND      | WNEB   |
| WESTERN UNION CO         | WU     |
| WESTLAKE CHEMICAL CORP   | WLK    |
| WESTROCK CO              | WRK    |
| WESTWOOD HOLDINGS GROUP  | WHG    |
| WEX INC                  | WEX    |
| YETI HOLDINGS            | YETI   |
| YEXT INC                 | YEXT   |
| YORK WATER COMPANY       | YORW   |
| YOUNGEVITY INTERNATIONAL | YGYI   |
| YRC WORLDWIDE INC        | YRCW   |
| YUM CHINA HOLDINGS INC   | YUMC   |
| YUM! BRANDS INC          | YUM    |
| ZAGG INC                 | ZAGG   |
| ZAYO GROUP HOLDINGS INC  | ZAYO   |
| ZEBRA TECHNOLOGIES CORP  | ZBRA   |
| ZENDESK INC              | ZEN    |
| ZILLOW GROUP INC CLASS A | ZG     |
| ZILLOW GROUP INC CLASS C | Z      |
| ZIMMER BIOMET HOLDINGS   | ZBH    |
| ZION BANCORPORATION NA   | ZION   |
| ZIOPHARM ONCOLOGY INC    | ZIOP   |
| ZIX CORP                 | ZIXI   |
| ZOETIS INC               | ZTS    |
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| WOLVERINE WORLD WIDE     | WWW    |
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| WORKDAY INC              | WDAY   |
| WORKIVA INC              | WK     |
| WORLD ACCEPTANCE CORP    | WRLD   |
| WORLD FUEL SVCS CORP     | INT    |
| WORLD WRESTLING ENTMTNT  | WWE    |
| WORLDPAY INC             | WP     |
| WORTHINGTON INDUSTRIES   | WOR    |
| WPX ENERGY INC           | WPX    |
| WRAP TECHNOLOGIES        | WRTC   |
| WRIGHT MEDICAL GROUP N V | WMGI   |
| WSFS FINANCIAL CORP      | WSFS   |
| WYNDHAM DESTINATIONS INC | WYND   |
| WYNDHAM HOTELS & RESORTS | WH     |
| WYNN RESORTS LTD         | WYNN   |
| X4 PHARMACEUTICALS INC   | XFOR   |
| XBIOTECH INC             | XBIT   |
| XCEL ENERGY INC          | XEL    |
| XENCOR INC               | XNCR   |
| XENIA HOTELS & RESORTS   | XHR    |
| XERIS PHARMACEUTICALS    | XERS   |
| XEROX CORP               | XRX    |
| XILINX INC               | XLNX   |
| XPERI CORPORATION        | XPER   |
| XPO LOGISTICS INC        | XPO    |
| XYLEM INC                | XYL    |
| YELP INC                 | YELP   |
| Y-MABS THERAPEUTICS      | YMAB   |

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| ZSCALER                 | ZS     |
| ZUMIEZ INC              | ZUMZ   |
| ZUORA                   | ZUO    |
| ZYNERBA PHARMACEUTICALS | ZYNE   |
| ZYNEX                   | ZYXI   |
| ZYNGA INC               | ZNGA   |



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