

# Membership list

## Russell 1000® Index

| Company                  | Ticker |
|--------------------------|--------|
| 2U INC                   | TWOU   |
| 3M CO                    | MMM    |
| ABBOTT LABORATORIES      | ABT    |
| ABBVIE INC               | ABBV   |
| ABIOMED INC              | ABMD   |
| ACADIA HEALTHCARE CO     | ACHC   |
| ACCENTURE PLC IRELAND    | ACN    |
| ACTIVISION BLIZZARD INC  | ATVI   |
| ACUITY BRANDS INC        | AYI    |
| ADOBE INC                | ADBE   |
| ADT INC                  | ADT    |
| ADVANCE AUTO PARTS INC   | AAP    |
| ADVANCED MICRO DEVICES   | AMD    |
| AECOM                    | ACM    |
| AES CORP                 | AES    |
| AFFILIATED MANAGERS GRP  | AMG    |
| AFLAC INC                | AFL    |
| AGCO CORP                | AGCO   |
| AGILENT TECHNOLOGIES INC | A      |
| AGIOS PHARMACEUTICALS    | AGIO   |
| AGNC INVESTMENT          | AGNC   |
| AIR LEASE CORP           | AL     |
| AIR PRODS & CHEMS INC    | APD    |
| AKAMAI TECHNOLOGIES      | AKAM   |
| ALASKA AIR GROUP INC     | ALK    |
| ALBEMARLE CORP           | ALB    |
| ALCOA CORPORATION        | AA     |
| ALEXANDRIA REAL ESTATE   | ARE    |
| ALEXION PHARMACEUTICALS  | ALXN   |
| ALIGN TECHNOLOGY INC     | ALGN   |
| ALKERMES PLC             | ALKS   |
| ALLEGHANY CORP           | Y      |
| ALLEGION PLC             | ALLE   |
| ALLERGAN PLC             | AGN    |
| ALLIANCE DATA SYSTEMS    | ADS    |
| ALLIANT ENERGY CORP      | LNT    |
| ALLISON TRANSMISSION     | ALSN   |
| ALLSTATE CORP            | ALL    |
| ALLY FINL INC            | ALLY   |
| ALNYLAM PHARMACEUTICALS  | ALNY   |
| ALPHABET INC CL A        | GOOGL  |
| ALPHABET INC CL C        | GOOG   |
| ALTERYX INC              | AYX    |
| ALTICE USA               | ATUS   |
| ALTRIA GROUP INC         | MO     |
| AMAZON COM INC           | AMZN   |
| AMC NETWORKS INC         | AMCX   |
| AMDOCS LTD               | DOX    |

| Company                  | Ticker |
|--------------------------|--------|
| AMERCO                   | UHAL   |
| AMEREN CORP              | AEE    |
| AMERICAN AIRLINES GROUP  | AAL    |
| AMERICAN CAMPUS COMMUN   | ACC    |
| AMERICAN ELECTRIC POWER  | AEP    |
| AMERICAN EXPRESS CO      | AXP    |
| AMERICAN FINANCIAL GROUP | AFG    |
| AMERICAN HOMES 4 RENT    | AMH    |
| AMERICAN INTL GROUP      | AIG    |
| AMERICAN NATIONAL INS CO | ANAT   |
| AMERICAN TOWER CORP      | AMT    |
| AMERICAN WTR WKS CO INC  | AWK    |
| AMERICOLD REALTY TRUST   | COLD   |
| AMERIPRISE FINANCIAL INC | AMP    |
| AMERISOURCEBERGEN CORP   | ABC    |
| AMETEK INC               | AME    |
| AMGEN INC                | AMGN   |
| AMPHENOL CORP            | APH    |
| ANADARKO PETROLEUM CORP  | APC    |
| ANALOG DEVICES INC       | ADI    |
| ANAPLAN                  | PLAN   |
| ANNALY CAPITAL MGMT INC  | NLY    |
| ANSYS INC                | ANSS   |
| ANTERO MIDSTREAM CORP    | AM     |
| ANTERO RESOURCES CO      | AR     |
| ANTHEM INC               | ANTM   |
| AON PLC                  | AON    |
| APACHE CORP              | APA    |
| APARTMENT INVT & MGMT    | AIV    |
| APERGY CORPORATION       | APY    |
| APPLE HOSPITALITY REIT   | APLE   |
| APPLE INC                | AAPL   |
| APPLIED MATLS INC        | AMAT   |
| APTARGROUP INC           | ATR    |
| APTIV PLC                | APTV   |
| AQUA AMERICA INC         | WTR    |
| ARAMARK                  | ARMK   |
| ARCH CAP GROUP LTD       | ACGL   |
| ARCHER DANIELS MIDLAND   | ADM    |
| ARCONIC INC              | ARNC   |
| ARDAGH GROUP SA          | ARD    |
| ARISTA NETWORKS INC      | ANET   |
| ARMSTRONG WORLD INDS INC | AWI    |
| ARROW ELECTRONICS INC    | ARW    |
| ASHLAND GLOBAL HOLDINGS  | ASH    |
| ASPEN TECHNOLOGY INC     | AZPN   |
| ASSOCIATED BANC CORP     | ASB    |
| ASSURANT INC             | AIZ    |

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| ASSURED GUARANTY LTD     | AGO    |
| AT&T INC                 | T      |
| ATHENE HOLDING LTD       | ATH    |
| ATLASSIAN CORP PLC       | TEAM   |
| ATMOS ENERGY CORP        | ATO    |
| AUTODESK INC             | ADSK   |
| AUTOMATIC DATA PROCESS   | ADP    |
| AUTONATION INC           | AN     |
| AUTOZONE INC             | AZO    |
| AVALARA INC              | AVLR   |
| AVALONBAY CMNTYS INC     | AVB    |
| AVANGRID INC             | AGR    |
| AVERY DENNISON CORP      | AVY    |
| AVNET INC                | AVT    |
| AXA EQUITABLE HOLDINGS   | EQH    |
| AXALTA COATING SYSTEMS   | AXTA   |
| AXIS CAPITAL HOLDINGS    | AXS    |
| BAKER HUGHES GE          | BHGE   |
| BALL CORP                | BLL    |
| BANK OF AMERICA CORP     | BAC    |
| BANK OF HAWAII CORP      | BOH    |
| BANK OF NEW YORK MELLON  | BK     |
| BANK OZK                 | OZK    |
| BANKUNITED INC           | BKU    |
| BAXTER INTERNATIONAL INC | BAX    |
| BB&T CORP                | BBT    |
| BECTON DICKINSON & CO    | BDX    |
| BERKLEY W R CORP         | WRB    |
| BERKSHIRE HATHAWAY INC   | BRK.B  |
| BERRY GLOBAL GROUP       | BERY   |
| BEST BUY INC             | BBY    |
| BEYOND MEAT              | BYND   |
| BGC PARTNERS INC         | BGCP   |
| BIOGEN INC               | BIIB   |
| BIOMARIN PHARMACEUTICAL  | BMRN   |
| BIO-RAD LABORATORIES INC | BIO    |
| BIO-TECHNE CORP          | TECH   |
| BLACK KNIGHT             | BKI    |
| BLACKROCK INC            | BLK    |
| BLOCK H & R INC          | HRB    |
| BLUEBIRD BIO INC         | BLUE   |
| BOEING CO                | BA     |
| BOK FINANCIAL CORP       | BOKF   |
| BOOKING HOLDINGS INC     | BKNG   |
| BOOZ ALLEN HAMILTON HLDG | BAH    |
| BORG WARNER INC          | BWA    |
| BOSTON PROPERTIES INC    | BXP    |
| BOSTON SCIENTIFIC CO     | BSX    |

| Company                  | Ticker |
|--------------------------|--------|
| BRIGHT HORIZON FAMILY    | BFAM   |
| BRIGHTHOUSE FINANCIAL    | BHF    |
| BRISTOL MYERS SQUIBB     | BMJ    |
| BRIXMOR PROPERTY GROUP   | BRX    |
| BROADCOM INC             | AVGO   |
| BROADRIDGE FINANCIAL INC | BR     |
| BROOKFIELD PROPERTY REIT | BPR    |
| BROWN & BROWN INC        | BRO    |
| BROWN FORMAN CORP CL A   | BF.A   |
| BROWN FORMAN CORP CL B   | BF.B   |
| BRUKER CORP              | BRKR   |
| BRUNSWICK CORP           | BC     |
| BUNGE LIMITED            | BG     |
| BURLINGTON STORES INC    | BURL   |
| BWX TECHNOLOGIES INC     | BWXT   |
| C H ROBINSON WORLDWIDE   | CHRW   |
| CABLE ONE INC            | CABO   |
| CABOT CORP               | CBT    |
| CABOT OIL & GAS CORP     | COG    |
| CACI INTERNATIONAL INC   | CACI   |
| CADENCE DESIGN SYSTEMS   | CDNS   |
| CAESARS ENTMT CORP       | CZR    |
| CAMDEN PROPERTY TRUST    | CPT    |
| CAMPBELL SOUP CO         | CPB    |
| CANTEL MEDICAL CORP      | CMD    |
| CAPITAL ONE FINANCIAL    | COF    |
| CAPRI HOLDINGS LIMITED   | CPRI   |
| CARDINAL HEALTH INC      | CAH    |
| CARLISLE COS INC         | CSL    |
| CARMAX INC               | KMX    |
| CARNIVAL CORP            | CCL    |
| CARTER INC               | CRI    |
| CARVANA CO               | CVNA   |
| CASEYS GENERAL STORES    | CASY   |
| CATALENT INC             | CTLT   |
| CATERPILLAR INC          | CAT    |
| CBOE GLOBAL MARKETS INC  | CBOE   |
| CBRE GROUP INC           | CBRE   |
| CBS CORPORATION          | CBS    |
| CDK GLOBAL INC           | CDK    |
| CDW CORPORATION          | CDW    |
| CELANESE CORP            | CE     |
| CELGENE CORP             | CELG   |
| CENTENE CORP             | CNC    |
| CENTENNIAL RESOURCE DEV  | CDEV   |
| CENTERPOINT ENERGY INC   | CNP    |
| CENTURYLINK INC          | CTL    |
| CERIDIAN HCM HOLDING     | CDAY   |

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| BRANDYWINE REALTY TRUST  | BDN    |
| CF INDUSTRIES HOLDINGS   | CF     |
| CHARLES RIVER LABS INTL  | CRL    |
| CHARTER COMM INC         | CHTR   |
| CHEMED CORPORATION       | CHE    |
| CHENIERE ENERGY INC      | LNG    |
| CHESAPEAKE ENERGY CORP   | CHK    |
| CHEVRON CORP             | CVX    |
| CHIMERA INVESTMENT CORP  | CIM    |
| CHIPOTLE MEXICAN GRILL   | CMG    |
| CHOICE HOTELS INTL INC   | CHH    |
| CHUBB LIMITED            | CB     |
| CHURCH & DWIGHT INC      | CHD    |
| CIENA CORP               | CIEN   |
| CIGNA CORP               | CI     |
| CIMAREX ENERGY CO        | XEC    |
| CINCINNATI FINANCIAL     | CINF   |
| CINEMARK HOLDINGS INC    | CNK    |
| CINTAS CORP              | CTAS   |
| CISCO SYSTEMS INC        | CSCO   |
| CIT GROUP INC            | CIT    |
| CITIGROUP INC            | C      |
| CITIZENS FINANCIAL INC   | CFG    |
| CITRIX SYSTEMS INC       | CTXS   |
| CLEAN HARBORS INC        | CLH    |
| CLOROX CO                | CLX    |
| CME GROUP INC            | CME    |
| CMS ENERGY CORP          | CMS    |
| CNA FINANCIAL CORP       | CNA    |
| COCA COLA CO             | KO     |
| COGNEX CORP              | CGNX   |
| COGNIZANT TECH SOLUTIONS | CTSH   |
| COHERENT INC             | COHR   |
| COLFAX CORP              | CFX    |
| COLGATE PALMOLIVE CO     | CL     |
| COLONY CAPITAL INC       | CLNY   |
| COLUMBIA PPTY TR INC     | CXP    |
| COLUMBIA SPORTSWEAR CO   | COLM   |
| COMCAST CORP CL A        | CMCSA  |
| COMERICA INC             | CMA    |
| COMMERCE BANCSHARES INC  | CBSH   |
| COMMSCOPE HOLDING CO     | COMM   |
| CONAGRA BRANDS INC       | CAG    |
| CONCHO RESOURCES INC     | CXO    |
| CONOCOPHILLIPS           | COP    |
| CONSOLIDATED EDISON INC  | ED     |
| CONSTELLATION BRANDS     | STZ    |
| CONTINENTAL RESOURCES    | CLR    |

| Company                  | Ticker |
|--------------------------|--------|
| CERNER CORP              | CERN   |
| COPART INC               | CPRT   |
| CORELOGIC INC            | CLGX   |
| CORESITE REALTY CORP     | COR    |
| CORNING INC              | GLW    |
| CORPORATE OFFICE PPTYS   | OFC    |
| CORTEVA                  | CTVA   |
| COSTAR GROUP INC         | CSGP   |
| COSTCO WHOLESALE CORP    | COST   |
| COTY INC                 | COTY   |
| COUPA SOFTWARE INC       | COUP   |
| COUSINS PROPERTIES INC   | CUZ    |
| COVETRUS INC             | CVET   |
| CRANE CO                 | CR     |
| CREDIT ACCEP CORP MICH   | CACC   |
| CREE INC                 | CREE   |
| CROWN CASTLE INTL CORP   | CCI    |
| CROWN HOLDINGS INC       | CCK    |
| CSX CORP                 | CSX    |
| CUBESMART                | CUBE   |
| CULLEN FROST BANKERS     | CFR    |
| CUMMINS INC              | CMI    |
| CURTISS WRIGHT CORP      | CW     |
| CVS HEALTH CORPORATION   | CVS    |
| CYPRESS SEMICONDUCTOR    | CY     |
| CYRUSONE INC             | CONE   |
| D R HORTON INC           | DHI    |
| DANAHER CORP             | DHR    |
| DARDEN RESTAURANTS INC   | DRI    |
| DAVITA INC               | DVA    |
| DEERE & CO               | DE     |
| DELL TECHNOLOGIES        | DELL   |
| DELTA AIR LINES INC      | DAL    |
| DENTSPLY SIRONA INC      | XRAY   |
| DEVON ENERGY CORP        | DVN    |
| DEXCOM INC               | DXCM   |
| DIAMONDBACK ENERGY INC   | FANG   |
| DICKS SPORTING GOODS INC | DKS    |
| DIGITAL REALTY TRUST INC | DLR    |
| DISCOVER FINANCIAL SRVC  | DFS    |
| DISCOVERY INC SERIES A   | DISCA  |
| DISCOVERY INC SERIES C   | DISCK  |
| DISH NETWORK CORP        | DISH   |
| DISNEY WALT CO           | DIS    |
| DOCUSIGN                 | DOCU   |
| DOLBY LABORATORIES INC   | DLB    |
| DOLLAR GENERAL CORP      | DG     |
| DOLLAR TREE INC          | DLTR   |

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| COOPER COMPANIES INC     | COO    |
| COPA HOLDINGS SA         | CPA    |
| DOMTAR CORPORATION       | UFS    |
| DONALDSON INC            | DCI    |
| DOUGLAS EMMETT INC       | DEI    |
| DOVER CORP               | DOV    |
| DOW INC                  | DOW    |
| DROPBOX                  | DBX    |
| DTE ENERGY CO            | DTE    |
| DUKE ENERGY CORP         | DUK    |
| DUKE REALTY CORP         | DRE    |
| DUNKIN BRANDS GROUP INC  | DNKN   |
| DUPONT DE NEMOURS INC    | DD     |
| DXC TECHNOLOGY COMPANY   | DXC    |
| E TRADE FINANCIAL CORP   | ETFC   |
| EAGLE MATERIALS INC      | EXP    |
| EAST WEST BANCORP INC    | EWBC   |
| EASTMAN CHEMICAL CO      | EMN    |
| EATON CORP PLC           | ETN    |
| EATON VANCE CORP         | EV     |
| EBAY INC                 | EBAY   |
| ECHOSTAR CORP            | SATS   |
| ECOLAB INC               | ECL    |
| EDISON INTERNATIONAL     | EIX    |
| EDWARDS LIFESCIENCES     | EW     |
| ELANCO ANIMAL HEALTH     | ELAN   |
| ELASTIC N.V.             | ESTC   |
| ELECTRONIC ARTS INC      | EA     |
| ELEMENT SOLUTIONS INC.   | ESI    |
| EMERSON ELECTRIC CO      | EMR    |
| EMPIRE STATE REALTY      | ESRT   |
| ENCOMPASS HEALTH CORP    | EHC    |
| ENERGIZER HOLDINGS INC   | ENR    |
| ENTEGRIS INC             | ENTG   |
| ENTERGY CORP             | ETR    |
| EOG RESOURCES INC        | EOG    |
| EPAM SYSTEMS INC         | EPAM   |
| EPR PROPERTIES           | EPR    |
| EQT CORPORATION          | EQT    |
| EQUIFAX INC              | EFX    |
| EQUINIX INC              | EQIX   |
| EQUITRANS MIDSTREAM CORP | ETRN   |
| EQUITY COMMONWEALTH      | EQC    |
| EQUITY LIFESTYLE PROP    | ELS    |
| EQUITY RESIDENTIAL       | EQR    |
| ERIE INDEMNITY CO        | ERIE   |
| ESSEX PROPERTY TRUST INC | ESS    |
| ESTEE LAUDER COMPANIES   | EL     |

| Company                  | Ticker |
|--------------------------|--------|
| DOMINION ENERGY INC      | D      |
| DOMINOS PIZZA INC        | DPZ    |
| EVEREST RE GROUP LTD     | RE     |
| EVERGY INC               | EVERG  |
| EVERSOURCE ENERGY        | ES     |
| EXACT SCIENCES CORP      | EXAS   |
| EXELIXIS INC             | EXEL   |
| EXELON CORP              | EXC    |
| EXPEDIA GROUP INC        | EXPE   |
| EXPEDITORS INTL OF WASH  | EXPD   |
| EXTENDED STAY AMERICA    | STAY   |
| EXTRA SPACE STORAGE INC  | EXR    |
| EXXON MOBIL CORP         | XOM    |
| F5 NETWORKS INC          | FFIV   |
| FACEBOOK INC             | FB     |
| FACTSET RESEARCH SYSTEMS | FDS    |
| FAIR ISAAC CORP          | FICO   |
| FASTENAL CO              | FAST   |
| FEDERAL REALTY INVT      | FRT    |
| FEDEX CORP               | FDX    |
| FIDELITY NATL INFO SVCS  | FIS    |
| FIFTH THIRD BANCORP      | FITB   |
| FIREEYE INC              | FEYE   |
| FIRST AMERICAN FINL CORP | FAF    |
| FIRST CITIZENS BANCSHRS  | FCNCA  |
| FIRST DATA CORPORATION   | FDC    |
| FIRST HAWAIIAN INC       | FHB    |
| FIRST HORIZON NATL CORP  | FHN    |
| FIRST REP BK SAN FRAN    | FRC    |
| FIRST SOLAR INC          | FSLR   |
| FIRSTENERGY CORP         | FE     |
| FISERV INC               | FISV   |
| FIVE BELOW               | FIVE   |
| FLEETCOR TECHNOLOGIES    | FLT    |
| FLIR SYSTEMS INC         | FLIR   |
| FLOOR & DECOR HOLDINGS   | FND    |
| FLOWERS FOODS INC        | FLO    |
| FLOWSERVE CORP           | FLS    |
| FLUOR CORP               | FLR    |
| FMC CORP                 | FMC    |
| FNB CORP                 | FNB    |
| FNF GROUP                | FNF    |
| FOOT LOCKER INC          | FL     |
| FORD MOTOR CO            | F      |
| FORTINET INC             | FTNT   |
| FORTIVE CORPORATION      | FTV    |
| FORTUNE BRDS HOME & SEC  | FBHS   |
| FOX CORPORATION CLASS A  | FOXA   |

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| ETSY INC                 | ETSY   |
| EURONET WORLDWIDE INC    | EEFT   |
| EVERCORE INC             | EVR    |
| FRONTDOOR INC            | FTDR   |
| GALLAGHER ARTHUR J & CO  | AJG    |
| GAMING AND LEISURE PPTYS | GLPI   |
| GAP INC                  | GPS    |
| GARDNER DENVER HOLDINGS  | GDI    |
| GARMIN LTD               | GRMN   |
| GARTNER INC              | IT     |
| GATES INDUSTRIAL CORP    | GTES   |
| GCI LIBERTY INC          | GLIBA  |
| GENERAL DYNAMICS CORP    | GD     |
| GENERAL ELECTRIC CO      | GE     |
| GENERAL MILLS INC        | GIS    |
| GENERAL MTRS CO          | GM     |
| GENESEE & WYOMING INC    | GWR    |
| GENPACT LTD              | G      |
| GENTEX CORP              | GNTX   |
| GENUINE PARTS CO         | GPC    |
| GILEAD SCIENCES INC      | GILD   |
| GLOBAL PAYMENTS INC      | GPN    |
| GODADDY INC              | GDDY   |
| GOLDMAN SACHS GROUP INC  | GS     |
| GOODYEAR TIRE & RUBBER   | GT     |
| GRACE W R & CO           | GRA    |
| GRACO INC                | GCG    |
| GRAFTECH INTERNATIONAL   | EAF    |
| GRAHAM HOLDINGS COMPANY  | GHC    |
| GRAINGER WW INC          | GWW    |
| GRAND CANYON EDUCATION   | LOPE   |
| GRAPHIC PACKAGING HLDG   | GPK    |
| GRUBHUB INC              | GRUB   |
| GUARDANT HEALTH          | GH     |
| GUIDEWIRE SOFTWARE INC   | GWRE   |
| HAIR CELESTIAL GROUP     | HAIN   |
| HALLIBURTON CO           | HAL    |
| HANESBRAND INC           | HBI    |
| HANOVER INSURANCE GROUP  | THG    |
| HARLEY DAVIDSON INC      | HOG    |
| HARTFORD FINL SVCS GRP   | HIG    |
| HASBRO INC               | HAS    |
| HAWAIIAN ELECTRIC INDS   | HE     |
| HCA HEALTHCARE INC       | HCA    |
| HCP INC                  | HCP    |
| HD SUPPLY HOLDINGS INC   | HDS    |
| HEALTHCARE TR AMER INC   | HTA    |
| HEICO CORP CL A          | HEI.A  |

| Company                  | Ticker |
|--------------------------|--------|
| FOX CORPORATION CLASS B  | FOX    |
| FRANKLIN RESOURCES INC   | BEN    |
| FREEPORT-MCMORAN INC     | FCX    |
| HERSHEY COMPANY          | HSY    |
| HESS CORP                | HES    |
| HEWLETT PACKARD ENT      | HPE    |
| HEXCEL CORP              | HXL    |
| HIGHWOODS PROPERTIES INC | HIW    |
| HILL-ROM HOLDINGS INC    | HRC    |
| HILTON GRAND VACATIONS   | HGV    |
| HILTON WORLDWIDE HOLDING | HLT    |
| HOLLYFRONTIER CORP       | HFC    |
| HOLOGIC INC              | HOLX   |
| HOME DEPOT INC           | HD     |
| HONEYWELL INTERNATIONAL  | HON    |
| HORIZON THERAPEUTICS PLC | HZNP   |
| HORMEL FOODS CORP        | HRL    |
| HOSPITALITY PPTYS TRUST  | HPT    |
| HOST HOTELS & RESORTS    | HST    |
| HOWARD HUGHES CORP       | HHC    |
| HP INC                   | HPQ    |
| HUBBELL INC              | HUBB   |
| HUBSPOT INC              | HUBS   |
| HUDSON PAC PPTYS INC     | HPP    |
| HUMANA INC               | HUM    |
| HUNTINGTON BANCSHARES    | HBAN   |
| HUNTINGTON INGALLS IND   | HII    |
| HUNTSMAN CORP            | HUN    |
| HYATT HOTELS CORP        | H      |
| IAA                      | IAA    |
| IAC INTERACTIVECORP      | IAC    |
| ICU MEDICAL INC          | ICUI   |
| IDACORP INC              | IDA    |
| IDEX CORP                | IEX    |
| IDEXX LABS INC           | IDXX   |
| IHS MARKIT LTD           | INFO   |
| ILLINOIS TOOL WORKS INC  | ITW    |
| ILLUMINA INC             | ILMN   |
| INCYTE CORP              | INCY   |
| INGERSOLL-RAND PLC       | IR     |
| INGREDION INC            | INGR   |
| INSULET CORP             | PODD   |
| INTEGRA LIFESCIENCES     | IART   |
| INTEL CORP               | INTC   |
| INTERACTIVE BROKERS GRP  | IBKR   |
| INTERCONTINENTAL EXCH    | ICE    |
| INTERNATIONAL GAME TECH  | IGT    |
| INTERNATIONAL PAPER CO   | IP     |

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| HEICO CORP COMMON        | HEI    |
| HELMERICH & PAYNE INC    | HP     |
| HENRY JACK & ASSOCIATES  | JKHY   |
| HERBALIFE NUTRITION LTD  | HLF    |
| INTUITIVE SURGICAL INC   | ISRG   |
| INVESCO LTD              | IVZ    |
| INVITATION HOMES INC     | INVH   |
| IONIS PHARMACEUTICALS    | IONS   |
| IPG PHOTONICS CORP       | IPGP   |
| IQVIA HOLDINGS INC       | IQV    |
| IRON MOUNTAIN INC        | IRM    |
| ITT INC                  | ITT    |
| JABIL INC                | JBL    |
| JACOBS ENGINEERING GRP   | JEC    |
| JANUS HENDERSON GROUP    | JHG    |
| JAZZ PHARMACEUTICALS PLC | JAZZ   |
| JB HUNT TRANS SVCS INC   | JBHT   |
| JBG SMITH PROPERTIES     | JBGS   |
| JEFFERIES FINANCIAL GRP  | JEF    |
| JETBLUE AIRWAYS CORP     | JBLU   |
| JOHNSON & JOHNSON        | JNJ    |
| JOHNSON CONTROLS INTNL   | JCI    |
| JONES LANG LASALLE INC   | JLL    |
| JPMORGAN CHASE & CO      | JPM    |
| JUNIPER NETWORKS INC     | JNPR   |
| KANSAS CITY SOUTHERN     | KSU    |
| KAR AUCTION SERVICES INC | KAR    |
| KELLOGG CO               | K      |
| KEMPER CORPORATION       | KMPR   |
| KEURIG DR PEPPER INC     | KDP    |
| KEYCORP                  | KEY    |
| KEYSIGHT TECHNOLOGIES    | KEYS   |
| KILROY REALTY CORP       | KRC    |
| KIMBERLY CLARK CORP      | KMB    |
| KIMCO REALTY CORP        | KIM    |
| KINDER MORGAN INC        | KMI    |
| KIRBY CORP               | KEX    |
| KLA-TENCOR CORP          | KLAC   |
| KNIGHT-SWIFT TRANSPORT   | KNX    |
| KOHL'S CORP              | KSS    |
| KOSMOS ENERGY LTD        | KOS    |
| KROGER CO                | KR     |
| L BRANDS INC             | LB     |
| L3 TECHNOLOGIES          | LLL    |
| L3HARRIS TECHNOLOGIES    | LHX    |
| LABORATORY CORP OF AMER  | LH     |
| LAM RESEARCH CORP        | LRCX   |
| LAMAR ADVERTISING CO     | LAMR   |

| Company                  | Ticker |
|--------------------------|--------|
| INTERPUBLIC GROUP OF COS | IPG    |
| INTL BUSINESS MACHINES   | IBM    |
| INTL FLAVORS & FRAGRANCE | IFF    |
| INTUIT                   | INTU   |
| LEGG MASON INC           | LM     |
| LEGGETT & PLATT INC      | LEG    |
| LEIDOS HOLDINGS INC      | LDOS   |
| LENDINGTREE INC          | TREE   |
| LENNAR CORP CL A         | LEN    |
| LENNAR CORP CL B         | LEN.B  |
| LENNOX INTERNATIONAL INC | LII    |
| LIBERTY BROADBAND CL A   | LBRDA  |
| LIBERTY BROADBAND CL C   | LBRDK  |
| LIBERTY FORMULA 1 SER A  | FWONA  |
| LIBERTY FORMULA 1 SER C  | FWONK  |
| LIBERTY PROPERTY TRUST   | LPT    |
| LIBERTY SIRIUSXM SER A   | LSXMA  |
| LIBERTY SIRIUSXM SER C   | LSXMK  |
| LIFE STORAGE INC         | LSI    |
| LILLY ELI & CO           | LLY    |
| LINCOLN ELECTRIC HLDGS   | LECO   |
| LINCOLN NATIONAL CORP    | LNC    |
| LINDE PLC                | LIN    |
| LIONS GATE ENT CLASS A   | LGF.A  |
| LIONS GATE ENT CLASS B   | LGF.B  |
| LITTELFUSE INC           | LFUS   |
| LIVE NATION ENT INC      | LYV    |
| LKQ CORP                 | LKQ    |
| LOCKHEED MARTIN CORP     | LMT    |
| LOEWS CORP               | L      |
| LOGMEIN INC              | LOGM   |
| LOWES COS INC            | LOW    |
| LPL FINANCIAL HOLDINGS   | LPLA   |
| LULULEMON ATHLETICA INC  | LULU   |
| LYFT                     | LYFT   |
| LYONDELLBASELL INDS      | LYB    |
| M & T BANK CORP          | MTB    |
| MACERICH CO              | MAC    |
| MACQUARIE INFRASTRUCTURE | MIC    |
| MACYS INC                | M      |
| MADISON SQUARE GARDEN CO | MSG    |
| MANHATTAN ASSOCS INC     | MANH   |
| MANPOWERGROUP            | MAN    |
| MARATHON OIL CORP        | MRO    |
| MARATHON PETROLEUM CORP  | MPC    |
| MARKEL CORP              | MKL    |
| MARKETAXESS HOLDINGS INC | MKTX   |
| MARRIOTT INTL INC        | MAR    |

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| Company                  | Ticker |
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| LAMB WESTON HOLDINGS     | LW     |
| LANDSTAR SYSTEMS INC     | LSTR   |
| LAS VEGAS SANDS CORP     | LVS    |
| LAZARD LTD               | LAZ    |
| LEAR CORP                | LEA    |
| MASTERCARD INC           | MA     |
| MATCH GROUP INC          | MTCH   |
| MATTEL INC               | MAT    |
| MAXIM INTEGRATED PRODS   | MXIM   |
| MCCORMICK & CO INC       | MKC    |
| MCDONALDS CORP           | MCD    |
| MCKESSON CORP            | MCK    |
| MDU RESOURCES GROUP INC  | MDU    |
| MEDICAL PROPERTIES TRUST | MPW    |
| MEDIDATA SOLUTIONS INC   | MDSO   |
| MEDNAX INC               | MD     |
| MEDTRONIC PLC            | MDT    |
| MERCK & CO INC           | MRK    |
| MERCURY GENERAL CORP     | MCY    |
| METLIFE INC              | MET    |
| METTLER TOLEDO INTL INC  | MTD    |
| MFA FINANCIAL INC        | MFA    |
| MGIC INVESTMENT CORP     | MTG    |
| MGM RESORTS INTL         | MGM    |
| MICROCHIP TECHNOLOGY     | MCHP   |
| MICRON TECHNOLOGY INC    | MU     |
| MICROSOFT CORP           | MSFT   |
| MID-AMER APT CMNTYS      | MAA    |
| MIDDLEBY CORP            | MIDD   |
| MKS INSTRUMENTS INC      | MKSI   |
| MODERNA                  | MRNA   |
| MOHAWK INDUSTRIES INC    | MHK    |
| MOLINA HEALTHCARE INC    | MOH    |
| MOLSON COORS BREWING CO  | TAP    |
| MONDELEZ INTERNATIONAL   | MDLZ   |
| MONGODB                  | MDB    |
| MONOLITHIC POWER SYSTEMS | MPWR   |
| MONSTER BEVERAGE CORP    | MNST   |
| MOODYS CORP              | MCO    |
| MORGAN STANLEY           | MS     |
| MORNINGSTAR INC          | MORN   |
| MOSAIC COMPANY           | MOS    |
| MOTOROLA SOLUTIONS INC   | MSI    |
| MSC INDL DIRECT INC      | MSM    |
| MSCI INC                 | MSCI   |
| MURPHY OIL CORP          | MUR    |
| MYLAN NV                 | MYL    |
| NASDAQ INC               | NDAQ   |

| Company                  | Ticker |
|--------------------------|--------|
| MARSH & MCLENNAN COS     | MMC    |
| MARTIN MARIETTA MTLs     | MLM    |
| MARVELL TECHNOLOGY GROUP | MRVL   |
| MASCO CORP               | MAS    |
| MASIMO CORPORATION       | MASI   |
| NEKTAR THERAPEUTICS      | NKTR   |
| NETAPP INC               | NTAP   |
| NETFLIX INC              | NFLX   |
| NEUROCRINE BIOSCIENCES   | NBIX   |
| NEW RELIC INC            | NEWR   |
| NEW RESIDENTIAL INVT     | NRZ    |
| NEW YORK CMNTY BANCORP   | NYCB   |
| NEW YORK TIMES CO        | NYT    |
| NEWELL BRANDS INC        | NWL    |
| NEWMARKET CORPORATION    | NEU    |
| NEWMONT GOLDCORP CORP    | NEM    |
| NEWS CORP CL A           | NWSA   |
| NEWS CORP CL B           | NWS    |
| NEXSTAR MEDIA GROUP INC  | NXST   |
| NEXTERA ENERGY INC       | NEE    |
| NIELSEN HOLDINGS PLC     | NLSN   |
| NIKE INC                 | NKE    |
| NISOURCE INC             | NI     |
| NOBLE ENERGY INC         | NBL    |
| NORDSON CORP             | NDSN   |
| NORDSTROM INC            | JWN    |
| NORFOLK SOUTHERN CORP    | NSC    |
| NORTHERN TRUST CORP      | NTRS   |
| NORTHROP GRUMMAN CORP    | NOC    |
| NORWEGIAN CRUISE LINE    | NCLH   |
| NRG ENERGY INC           | NRG    |
| NU SKIN ENTERPRISES      | NUS    |
| NUANCE COMMUNICATIONS    | NUAN   |
| NUCOR CORP               | NUE    |
| NUTANIX INC              | NTNX   |
| NVENT ELECTRIC PLC       | NVT    |
| NVIDIA CORP              | NVDA   |
| NVR INC                  | NVR    |
| O REILLY AUTOMOTIVE INC  | ORLY   |
| OCCIDENTAL PETE CORP     | OXY    |
| OGE ENERGY CORP          | OGE    |
| OKTA INC                 | OKTA   |
| OLD DOMINION FREIGHT     | ODFL   |
| OLD REPUBLIC INTL CORP   | ORI    |
| OLIN CORP                | OLN    |
| OLLIES BARGAIN OUTLET    | OLLI   |
| OMEGA HEALTHCARE INVS    | OHI    |
| OMNICOM GROUP INC        | OMC    |

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| NATIONAL FUEL GAS CO     | NFG    |
| NATIONAL INSTRS CORP     | NATI   |
| NATIONAL OILWELL VARCO   | NOV    |
| NATIONAL RETAIL PPTYS    | NNN    |
| NAVIENT CORPORATION      | NAVI   |
| NCR CORP                 | NCR    |
| OWENS CORNING            | OC     |
| OWENS ILLINOIS INC       | OI     |
| PACCAR INC               | PCAR   |
| PACKAGING CORP OF AMER   | PKG    |
| PACWEST BANCORP          | PACW   |
| PAGERDUTY                | PD     |
| PALO ALTO NETWORKS INC   | PANW   |
| PARAMOUNT GROUP INC      | PGRE   |
| PARK HOTELS & RESORTS    | PK     |
| PARKER HANNIFIN CORP     | PH     |
| PARSLEY ENERGY INC       | PE     |
| PATTERSON UTI ENERGY     | PTEN   |
| PAYCHEX INC              | PAYX   |
| PAYCOM SOFTWARE INC      | PAYC   |
| PAYLOCITY HLDG CORP      | PCTY   |
| PAYPAL HOLDINGS INC      | PYPL   |
| PBF ENERGY INC           | PBF    |
| PEGASYSTEMS INC          | PEGA   |
| PENSKE AUTOMOTIVE GROUP  | PAG    |
| PENTAIR PLC              | PNR    |
| PENUMBRA INC             | PEN    |
| PEOPLES UNITED FINANCIAL | PBCT   |
| PEPSICO INC              | PEP    |
| PERKINELMER INC          | PKI    |
| PERRIGO CO PLC           | PRGO   |
| PFIZER INC               | PFE    |
| PG&E CORP                | PCG    |
| PHILIP MORRIS INTL       | PM     |
| PHILLIPS 66              | PSX    |
| PILGRIMS PRIDE CORP      | PPC    |
| PINNACLE FINANCIAL       | PNFP   |
| PINNACLE WEST CAPITAL CO | PNW    |
| PIONEER NAT RESOURCES CO | PXD    |
| PLANET FITNESS INC       | PLNT   |
| PLURALSIGHT INC          | PS     |
| PNC FINANCIAL SVCS GROUP | PNC    |
| POLARIS INDUSTRIES INC   | PII    |
| POOL CORP                | POOL   |
| POPULAR INC              | BPOP   |
| POST HOLDINGS INC        | POST   |
| PPG INDUSTRIES INC       | PPG    |
| PPL CORP                 | PPL    |

| Company                  | Ticker |
|--------------------------|--------|
| ON SEMICONDUCTOR CORP    | ON     |
| ONEMAIN HOLDINGS INC     | OMF    |
| ONEOK INC                | OKE    |
| ORACLE CORP              | ORCL   |
| OSHKOSH CORP             | OSK    |
| OUTFRONT MEDIA INC       | OUT    |
| PROLOGIS INC             | PLD    |
| PROOFPOINT INC           | PFPT   |
| PROSPERITY BANCSHARES    | PB     |
| PRUDENTIAL FINANCIAL INC | PRU    |
| PTC INC                  | PTC    |
| PUBLIC STORAGE INC       | PSA    |
| PUBLIC SVC ENTERPRISE    | PEG    |
| PULTEGROUP INC           | PHM    |
| PURE STORAGE INC         | PSTG   |
| PVH CORP                 | PVH    |
| QIAGEN NV                | QGEN   |
| QORVO INC                | QRVO   |
| QUALCOMM INC             | QCOM   |
| QUANTA SERVICES INC      | PWR    |
| QUEST DIAGNOSTICS INC    | DGX    |
| QURATE RETAIL INC        | QRTEA  |
| RALPH LAUREN CORP        | RL     |
| RANGE RESOURCES CORP     | RRC    |
| RAYMOND JAMES FINANCIAL  | RJF    |
| RAYONIER INC             | RYN    |
| RAYTHEON CO              | RTN    |
| REALPAGE INC             | RP     |
| REALTY INCOME CORP       | O      |
| RED HAT INC              | RHT    |
| REGAL BELOIT CORP        | RBC    |
| REGENCY CENTERS CORP     | REG    |
| REGENERON PHARMACEUTICAL | REGN   |
| REGIONS FINANCIAL CORP   | RF     |
| REINSURANCE GRP OF AMER  | RGA    |
| RELiance STEEL & ALUM    | RS     |
| RENAISSANCE HOLDINGS     | RNR    |
| REPUBLIC SERVICES INC    | RSG    |
| RESIDEO TECHNOLOGIES     | REZI   |
| RESMED INC               | RMD    |
| RETAIL PPTYS AMER INC    | RPAI   |
| RINGCENTRAL INC          | RNG    |
| ROBERT HALF INTL INC     | RHI    |
| ROCKWELL AUTOMATION INC  | ROK    |
| ROKU INC                 | ROKU   |
| ROLLINS INC              | ROL    |
| ROPER TECHNOLOGIES INC   | ROP    |
| ROSS STORES INC          | ROST   |



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| Company                  | Ticker |
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| PRA HEALTH SCIENCES INC  | PRAH   |
| PREMIER INC              | PINC   |
| PRICE T ROWE GROUP INC   | TROW   |
| PRIMERICA INC            | PRI    |
| PRINCIPAL FINANCIAL GRP  | PFG    |
| PROCTER & GAMBLE CO      | PG     |
| PROGRESSIVE CORP         | PGR    |
| SALESFORCE COM INC       | CRM    |
| SANTANDER CNSMR USA HLDG | SC     |
| SAREPTA THERAPEUTICS INC | SRPT   |
| SBA COMMUNICATIONS CORP  | SBAC   |
| SCHEIN HENRY INC         | HSIC   |
| SCHLUMBERGER LTD         | SLB    |
| SCHNEIDER NATIONAL INC   | SNDR   |
| SCHWAB CHARLES CORP      | SCHW   |
| SCOTTS MIRACLE-GRO CO    | SMG    |
| SEABOARD CORP            | SEB    |
| SEALED AIR CORP          | SEE    |
| SEATTLE GENETICS INC     | SGEN   |
| SEI INVESTMENTS CO       | SEIC   |
| SEMPRA ENERGY            | SRE    |
| SENSATA TECHNOLOGIES     | ST     |
| SERVICE CORP INTL        | SCI    |
| SERVICEMASTER GLOBAL     | SERV   |
| SERVICENOW INC           | NOW    |
| SHERWIN WILLIAMS CO      | SHW    |
| SIGNATURE BANK           | SBNY   |
| SILGAN HOLDINGS INC      | SLGN   |
| SIMON PROPERTY GROUP INC | SPG    |
| SINCLAIR BROADCAST GROUP | SBGI   |
| SIRIUS XM HOLDINGS INC   | SIRI   |
| SITE CENTERS CORPORATION | SITC   |
| SIX FLAGS ENTMT CORP     | SIX    |
| SKECHERS USA INC         | SKX    |
| SKYWORKS SOLUTIONS INC   | SWKS   |
| SL GREEN REALTY CORP     | SLG    |
| SLM CORP                 | SLM    |
| SMARTSHEET               | SMAR   |
| SMITH A O CORP           | AOS    |
| SMUCKER J M CO           | SJM    |
| SNAP ON INC              | SNA    |
| SOLARWINDS               | SWI    |
| SONOCO PRODUCTS CO       | SON    |
| SOUTHERN CO              | SO     |
| SOUTHERN COPPER CORP     | SCCO   |
| SOUTHWEST AIRLINES CO    | LUV    |
| SPECTRUM BRANDS HOLDINGS | SPB    |
| SPIRIT AEROSYSTEMS       | SPR    |

| Company                  | Ticker |
|--------------------------|--------|
| ROYAL CARIBBEAN CRUISES  | RCL    |
| ROYAL GOLD INC           | RGLD   |
| RPM INTERNATIONAL INC    | RPM    |
| RYDER SYSTEM INC         | R      |
| S&P GLOBAL INC           | SPGI   |
| SABRE CORP               | SABR   |
| SAGE THERAPEUTICS INC    | SAGE   |
| STARBUCKS CORP           | SBUX   |
| STARWOOD PPTY TRUST INC  | STWD   |
| STATE STREET CORP        | STT    |
| STEEL DYNAMICS INC       | STLD   |
| STERICYCLE INC           | SRCL   |
| STERIS PLC               | STE    |
| STERLING BANCORP         | STL    |
| STORE CAPITAL CORP       | STOR   |
| STRYKER CORP             | SYK    |
| SUN COMMUNITIES INC      | SUI    |
| SUNTRUST BANKS INC       | STI    |
| SVB FINANCIAL GROUP      | SIVB   |
| SWITCH INC               | SWCH   |
| SYMANTEC CORP            | SYMC   |
| SYNCHRONY FINANCIAL      | SYF    |
| SYNNEX CORP              | SNX    |
| SYNOPSIS INC             | SNPS   |
| SYNOVUS FINANCIAL CORP   | SNV    |
| SYSCO CORP               | SYI    |
| TABLEAU SOFTWARE INC     | DATA   |
| TAKE-TWO INTERACTIVE     | TTWO   |
| TAPESTRY INC             | TPR    |
| TARGA RESOURCES INC      | TRGP   |
| TARGET CORP              | TGT    |
| TAUBMAN CENTERS INC      | TCO    |
| TCF FINANCIAL CORP       | TCF    |
| TD AMERITRADE HOLDING    | AMTD   |
| TELEDYNE TECHNOLOGIES    | TDY    |
| TELEFLEX INC             | TFX    |
| TELEPHONE & DATA SYSTEMS | TDS    |
| TEMPUR SEALY INTL INC    | TPX    |
| TERADATA CORP            | TDC    |
| TERADYNE INC             | TER    |
| TESLA INC                | TSLA   |
| TEXAS CAPITAL BANCSHARES | TCBI   |
| TEXAS INSTRUMENTS INC    | TXN    |
| TEXTRON INC              | TXT    |
| TFS FINL CORP            | TFSL   |
| THE CHEMOURS COMPANY     | CC     |
| THE KRAFT HEINZ COMPANY  | KHC    |
| THE TRADE DESK INC       | TTD    |

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| Company                  | Ticker |
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| SPIRIT RLTY CAP INC      | SRC    |
| SPLUNK INC               | SPLK   |
| SPOTIFY TECHNOLOGY SA    | SPOT   |
| SPRINT CORP              | S      |
| SPROUTS FRMRS MKT INC    | SFM    |
| SQUARE INC               | SQ     |
| SS&C TECHNOLOGIES HLDGS  | SSNC   |
| STANLEY BLACK & DECKER   | SWK    |
| TORCHMARK CORP           | TMK    |
| TORO CO                  | TTC    |
| TOTAL SYSTEM SERVICES    | TSS    |
| TRACTOR SUPPLY CO        | TSCO   |
| TRANSDIGM GROUP INC      | TDG    |
| TRANSOCEAN LTD           | RIG    |
| TRANSUNION               | TRU    |
| TRAVELERS COS INC        | TRV    |
| TREEHOUSE FOODS INC      | THS    |
| TRIBUNE MEDIA CO         | TRCO   |
| TRIMBLE INC              | TRMB   |
| TRINITY INDUSTRIES INC   | TRN    |
| TRIPADVISOR INC          | TRIP   |
| TWILIO INC               | TWLO   |
| TWITTER INC              | TWTR   |
| TWO HBRS INVT CORP       | TWO    |
| TYLER TECHNOLOGIES INC   | TYL    |
| TYSON FOODS INC          | TSN    |
| UBER TECHNOLOGIES        | UBER   |
| UBIQUITI NETWORKS INC    | UBNT   |
| UDR INC                  | UDR    |
| UGI CORP                 | UGI    |
| ULTA BEAUTY INC          | ULTA   |
| UMPQUA HOLDINGS CORP     | UMPQ   |
| UNDER ARMOUR CLASS A     | UAA    |
| UNDER ARMOUR CLASS C     | UA     |
| UNION PACIFIC CORP       | UNP    |
| UNITED AIRLINES HOLDINGS | UAL    |
| UNITED PARCEL SERVICE    | UPS    |
| UNITED RENTALS INC       | URI    |
| UNITED STATES CELLULAR   | USM    |
| UNITED STATES STEEL CORP | X      |
| UNITED TECHNOLOGIES      | UTX    |
| UNITED THERAPEUTICS      | UTHR   |
| UNITEDHEALTH GROUP INC   | UNH    |
| UNIVAR INC               | UNVR   |
| UNIVERSAL DISPLAY CORP   | OLED   |
| UNIVERSAL HEALTH SVCS    | UHS    |
| UNUM GROUP               | UNM    |
| URBAN OUTFITTERS INC     | URBN   |

| Company                  | Ticker |
|--------------------------|--------|
| THE WENDY'S COMPANY      | WEN    |
| THERMO FISHER SCIENTIFIC | TMO    |
| THOR INDUSTRIES INC      | THO    |
| TIFFANY & CO             | TIF    |
| TIMKEN CO                | TKR    |
| TJX COMPANIES INC        | TJX    |
| T-MOBILE US INC          | TMUS   |
| TOLL BROTHERS INC        | TOL    |
| VENTAS INC               | VTR    |
| VEREIT INC               | VER    |
| VERISIGN INC             | VRSN   |
| VERISK ANALYTICS INC     | VRSK   |
| VERIZON COMMUNICATIONS   | VZ     |
| VERSUM MATERIALS         | VSM    |
| VERTEX PHARMACEUTICALS   | VRTX   |
| VIACOM INC CL A          | VIA    |
| VIACOM INC CL B          | VIAB   |
| VIASAT INC               | VSAT   |
| VICI PROPERTIES INC      | VICI   |
| VIRTU FINL INC           | VIRT   |
| VISA INC                 | V      |
| VISTRA ENERGY CORP       | VST    |
| VMWARE INC               | VMW    |
| VORNADO REALTY TRUST     | VNO    |
| VOYA FINANCIAL INC       | VOYA   |
| VULCAN MATERIALS CO      | VMC    |
| W P CAREY INC            | WPC    |
| WABCO HOLDINGS INC       | WBC    |
| WABTEC CORP              | WAB    |
| WALGREENS BOOTS ALLIANCE | WBA    |
| WALMART INC              | WMT    |
| WASTE MGMT INC           | WM     |
| WATERS CORP              | WAT    |
| WATSCO INC               | WSO    |
| WAYFAIR INC              | W      |
| WEBSTER FINANCIAL CORP   | WBS    |
| WEC ENERGY GROUP INC     | WEC    |
| WEINGARTEN RLTY INVS     | WRI    |
| WELLCARE HEALTH PLANS    | WCG    |
| WELLS FARGO & CO         | WFC    |
| WELLTOWER INC            | WELL   |
| WESCO INTERNATIONAL INC  | WCC    |
| WEST PHARMACEUTICAL SVCS | WST    |
| WESTERN ALLIANCE BANCORP | WAL    |
| WESTERN DIGITAL CORP     | WDC    |
| WESTERN UNION CO         | WU     |
| WESTLAKE CHEMICAL CORP   | WLK    |
| WESTROCK CO              | WRK    |

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| Company                  | Ticker |
|--------------------------|--------|
| US BANCORP               | USB    |
| US FOODS HOLDING CORP    | USFD   |
| V F CORP                 | VFC    |
| VAIL RESORTS INC         | MTN    |
| VALERO ENERGY CORP       | VLO    |
| VALMONT INDUSTRIES INC   | VMI    |
| VALVOLINE INC            | VVV    |
| VARIAN MEDICAL SYSTEMS   | VAR    |
| VEEVA SYSTEMS INC        | VEEV   |
| WOODWARD INC             | WWD    |
| WORKDAY INC              | WDAY   |
| WORLD WRESTLING ENTMT    | WWE    |
| WORLDPAY INC             | WP     |
| WPX ENERGY INC           | WPX    |
| WYNDHAM DESTINATIONS INC | WYND   |
| WYNDHAM HOTELS & RESORTS | WH     |
| WYNN RESORTS LTD         | WYNN   |
| XCEL ENERGY INC          | XEL    |
| XEROX CORP               | XRX    |
| XILINX INC               | XLNX   |
| XPO LOGISTICS INC        | XPO    |
| XYLEM INC                | XYL    |
| YUM CHINA HOLDINGS INC   | YUMC   |
| YUM! BRANDS INC          | YUM    |
| 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   |
| ZOETIS INC               | ZTS    |
| ZSCALER                  | ZS     |
| ZYNGA INC                | ZNGA   |

| Company                  | Ticker |
|--------------------------|--------|
| WEX INC                  | WEX    |
| WEYERHAEUSER CO          | WY     |
| WHIRLPOOL CORP           | WHR    |
| WHITE MTNS INS GROUP LTD | WTM    |
| WILEY JOHN & SONS INC    | JW.A   |
| WILLIAMS COMPANIES INC   | WMB    |
| WILLIAMS SONOMA INC      | WSM    |
| WILLIS TOWERS WATSON PLC | WLTW   |
| WINTRUST FINANCIAL CORP  | WTFC   |

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