

# Membership list

## Russell 1000® Index

Company	Ticker
21ST CENTURY FOX CL A	FOXA
21ST CENTURY FOX CL B	FOX
3M CO	MMM
ABBOTT LABORATORIES	ABT
ABBVIE INC	ABBV
ABIOMED INC	ABMD
ACADIA HEALTHCARE CO	ACHC
ACADIA PHARMACEUTICALS	ACAD
ACCENTURE PLC IRELAND	ACN
ACTIVISION BLIZZARD INC	ATVI
ACUITY BRANDS INC	AYI
ADIANT PLC	ADNT
ADOBE SYSTEMS INC	ADBE
ADVANCE AUTO PARTS INC	AAP
ADVANCED MICRO DEVICES	AMD
AECOM	ACM
AES CORP	AES
AETNA INC	AET
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
AKORN INC	AKRX
ALASKA AIR GROUP INC	ALK
ALBEMARLE CORP	ALB
ALCOA CORPORATION	AA
ALERE INC	ALR
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
ALLIED WRLD ASSUR COM	AWH
ALLISON TRANSMISSION	ALSN
ALLSTATE CORP	ALL
ALLY FINL INC	ALLY
ALNYLAM PHARMACEUTICALS	ALNY
ALPHABET INC CL A	GOOGL
ALPHABET INC CL C	GOOG

Company	Ticker
ALTRIA GROUP INC	MO
AMAZON COM INC	AMZN
AMC NETWORKS INC	AMCX
AMDOCS LTD	DOX
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
AMERIPRISE FINANCIAL INC	AMP
AMERISOURCEBERGEN CORP	ABC
AMETEK INC	AME
AMGEN INC	AMGN
AMPHENOL CORP	APH
ANADARKO PETROLEUM CORP	APC
ANALOG DEVICES INC	ADI
ANNALY CAPITAL MGMT INC	NLY
ANSYS INC	ANSS
ANTERO RESOURCES CO	AR
ANTHEM INC	ANTM
AON PLC	AON
APACHE CORP	APA
APARTMENT INVT & MGMT	AIV
APPLE HOSPITALITY REIT	APLE
APPLE INC	AAPL
APPLIED MATLS INC	AMAT
APTARGROUP INC	ATR
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
ARRIS INTERNATIONAL PLC	ARRS
ARROW ELECTRONICS INC	ARW
ASHLAND GLOBAL HOLDINGS	ASH
ASPEN INSURANCE HOLDINGS	AHL
ASSOCIATED BANC CORP	ASB
ASSURANT INC	AIZ

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Company	Ticker
ASSURED GUARANTY LTD	AGO
AT&T INC	T
ATHENAHEALTH INC	ATHN
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
AVALONBAY CMNTYS INC	AVB
AVANGRID INC	AGR
AVERY DENNISON CORP	AVY
AVNET INC	AVT
AXALTA COATING SYSTEMS	AXTA
AXIS CAPITAL HOLDINGS	AXS
BAKER HUGHES INC	BHI
BALL CORP	BLL
BANK OF AMERICA CORP	BAC
BANK OF HAWAII CORP	BOH
BANK OF NEW YORK MELLON	BK
BANK OF THE OZARKS INC	OZRK
BANKUNITED INC	BKU
BAXTER INTERNATIONAL INC	BAX
BB&T CORP	BBT
BECTON DICKINSON & CO	BDX
BED BATH & BEYOND INC	BBBY
BEMIS INC	BMS
BERKLEY W R CORP	WRB
BERKSHIRE HATHAWAY INC	BRK.B
BERRY GLOBAL GROUP	BERY
BEST BUY INC	BBY
BGC PARTNERS INC	BGCP
BIOGEN INC	BIIB
BIOMARIN PHARMACEUTICAL	BMRN
BIO-RAD LABORATORIES INC	BIO
BIO-TECHNE CORP	TECH
BIOVERATIV	BIVV
BLACK KNIGHT FINL SVCS	BKFS
BLACKROCK INC	BLK
BLOCK H & R INC	HRB
BLUE BUFFALO PET PROD	BUFF
BOEING CO	BA
BOK FINANCIAL CORP	BOKF
BOOZ ALLEN HAMILTON HLDG	BAH
BORG WARNER INC	BWA
BOSTON PROPERTIES INC	BXP
BOSTON SCIENTIFIC CO	BSX

Company	Ticker
BRIGHT HORIZON FAMILY	BFAM
BRISTOL MYERS SQUIBB	BMJ
BRIXMOR PROPERTY GROUP	BRX
BROADCOM LIMITED	AVGO
BROADRIDGE FINANCIAL INC	BR
BROCADE COMMUNICATIONS	BRCD
BROOKDALE SENIOR LIVING	BKD
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
CA INC	CA
CABELAS INC	CAB
CABLE ONE INC	CABO
CABOT CORP	CBT
CABOT OIL & GAS CORP	COG
CADENCE DESIGN SYSTEMS	CDNS
CALATLANTIC GROUP INC	CAA
CALPINE CORP	CPN
CAMDEN PROPERTY TRUST	CPT
CAMPBELL SOUP CO	CPB
CAPITAL ONE FINANCIAL	COF
CARDINAL HEALTH INC	CAH
CARLISLE COS INC	CSL
CARMAX INC	KMX
CARNIVAL CORP	CCL
CARTER INC	CRI
CASEYS GENERAL STORES	CASY
CATERPILLAR INC	CAT
CAVIUM INC	CAVM
CBOE HLDGS INC	CBOE
CBRE GROUP INC	CBG
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
CERNER CORP	CERN
CF INDUSTRIES HOLDINGS	CF

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Company	Ticker
BRANDYWINE REALTY TRUST	BDN
CHARTER COMM INC	CHTR
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
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
COACH INC	COH
COCA COLA CO	KO
COGNEX CORP	CGNX
COGNIZANT TECH SOLUTIONS	CTSH
COHERENT INC	COHR
COLFAX CORP	CFX
COLGATE PALMOLIVE CO	CL
COLONY NORTHSTAR INC	CLNS
COLUMBIA PPTY TR INC	CXP
COMCAST CORP CL A	CMCSA
COMERICA INC	CMA
COMMERCE BANCSHARES INC	CBSH
COMMSCOPE HOLDING CO	COMM
CONAGRA BRANDS INC	CAG
CONCHO RESOURCES INC	CXO
CONDUENT INC	CNDT
CONOCOPHILLIPS	COP
CONSOL ENERGY INC	CNX
CONSOLIDATED EDISON INC	ED
CONSTELLATION BRANDS	STZ
CONTINENTAL RESOURCES	CLR
COOPER COMPANIES INC	COO
COPA HOLDINGS SA	CPA

Company	Ticker
CHARLES RIVER LABS INTL	CRL
CORELOGIC INC	CLGX
CORESITE REALTY CORP	COR
CORNING INC	GLW
CORPORATE OFFICE PPTYS	OFC
COSTAR GROUP INC	CSGP
COSTCO WHOLESALE CORP	COST
COTY INC	COTY
CR BARD INC	BCR
CRANE CO	CR
CREDIT ACCEP CORP MICH	CACC
CROWN CASTLE INTL CORP	CCI
CROWN HOLDINGS INC	CCK
CSRA INC	CSRA
CST BRANDS INC	CST
CSX CORP	CSX
CUBESMART	CUBE
CULLEN FROST BANKERS	CFR
CUMMINS INC	CMI
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
DCT INDUSTRIAL TRUST INC	DCT
DDR CORP	DDR
DEERE & CO	DE
DELL TECHNOLOGIES	DVMT
DELPHI AUTOMOTIVE PLC	DLPH
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 COMM CL A	DISCA
DISCOVERY COMM CL C	DISCK
DISH NETWORK CORP	DISH
DISNEY WALT CO	DIS
DOLBY LABORATORIES INC	DLB
DOLLAR GENERAL CORP	DG
DOLLAR TREE INC	DLTR
DOMINION ENERGY INC	D
DOMINOS PIZZA INC	DPZ

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Company	Ticker
COPART INC	CPRT
CORECIVIC INC	CXW
DOUGLAS EMMETT INC	DEI
DOVER CORP	DOV
DOW CHEMICAL CO	DOW
DR PEPPER SNAPPLE GROUP	DPS
DST SYSTEMS INC	DST
DTE ENERGY CO	DTE
DU PONT E I DE NEMOURS	DD
DUKE ENERGY CORP	DUK
DUKE REALTY CORP	DRE
DUN & BRADSTREET CORP	DNB
DUNKIN BRANDS GROUP INC	DNKN
DUPONT FABROS TECHNOLOGY	DFT
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
EDGEWELL PERSONAL CARE	EPC
EDISON INTERNATIONAL	EIX
EDWARDS LIFESCIENCES	EW
ELECTRONIC ARTS INC	EA
EMERSON ELECTRIC CO	EMR
EMPIRE STATE REALTY	ESRT
ENDO INTERNATIONAL PLC	ENDP
ENERGEN CORP	EGN
ENERGIZER HOLDINGS INC	ENR
ENTERGY CORP	ETR
ENVISION HEALTHCARE CORP	EVHC
EOG RESOURCES INC	EOG
EPR PROPERTIES	EPR
EQT CORPORATION	EQT
EQUIFAX INC	EFX
EQUINIX INC	EQIX
EQUITY COMMONWEALTH	EQC
EQUITY LIFESTYLE PROP	ELS
EQUITY RESIDENTIAL	EQR
ERIE INDEMNITY CO	ERIE
ESSEX PROPERTY TRUST INC	ESS
ESTEE LAUDER COMPANIES	EL
EURONET WORLDWIDE INC	EEFT
EVEREST RE GROUP LTD	RE

Company	Ticker
DOMTAR CORPORATION	UFS
DONALDSON INC	DCI
EXPEDIA INC	EXPE
EXPEDITORS INTL OF WASH	EXPD
EXPRESS SCRIPTS HOLD CO	ESRX
EXTENDED STAY AMERICA	STAY
EXTRA SPACE STORAGE INC	EXR
EXTRACTION OIL & GAS INC	XOG
EXXON MOBIL CORP	XOM
F5 NETWORKS INC	FFIV
FACEBOOK INC	FB
FACTSET RESEARCH SYSTEMS	FDS
FASTENAL CO	FAST
FEDERAL REALTY INVT	FRT
FEDERATED INVESTORS INC	FII
FEDEX CORP	FDX
FIDELITY NATL INFO SVCS	FIS
FIFTH THIRD BANCORP	FITB
FIREEYE INC	FEYE
FIRST AMERICAN FINL CORP	FAF
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
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
FOREST CITY REALTY TRUST	FCE.A
FORTINET INC	FTNT
FORTIVE CORPORATION	FTV
FORTUNE BRDS HOME & SEC	FBHS
FRANKLIN RESOURCES INC	BEN
FREEMPORT-MCMORAN INC	FCX
GALLAGHER ARTHUR J & CO	AJG
GAMESTOP CORP	GME
GAMING AND LEISURE PPTYS	GLPI
GAP INC	GPS

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Company	Ticker
EVERSOURCE ENERGY	ES
EXELIXIS INC	EXEL
EXELON CORP	EXC
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
GGP INC	GGP
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	GGG
GRAHAM HOLDINGS COMPANY	GHC
GRAINGER WW INC	GWW
GRAPHIC PACKAGING HLDG	GPK
GREAT PLAINS ENERGY INC	GXP
GUIDEWIRE SOFTWARE INC	GWRE
GULFPORT ENERGY CORP	GPOR
HAIN CELESTIAL GROUP	HAIN
HALLIBURTON CO	HAL
HANESBRAND INC	HBI
HANOVER INSURANCE GROUP	THG
HARLEY DAVIDSON INC	HOG
HARRIS CORP	HRS
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	HEIA
HEICO CORP COMMON	HEI
HELMERICH & PAYNE INC	HP
HENRY JACK & ASSOCIATES	JKHY
HERBALIFE LTD	HLF
HERSHEY COMPANY	HSY
HESS CORP	HES
HEWLETT PACKARD ENT	HPE
HEXCEL CORP	HXL
HIGHWOODS PROPERTIES INC	HIW

Company	Ticker
GARDNER DENVER HOLDINGS	GDI
GARMIN LTD	GRMN
GARTNER INC	IT
HOLOGIC INC	HOLX
HOME DEPOT INC	HD
HONEYWELL INTERNATIONAL	HON
HORMEL FOODS CORP	HRL
HOSPITALITY PPTYS TRUST	HPT
HOST HOTELS & RESORTS	HST
HOWARD HUGHES CORP	HHC
HP INC	HPQ
HUBBELL INC	HUBB
HUDSON PAC PPTYS INC	HPP
HUMANA INC	HUM
HUNTINGTON BANCSHARES	HBAN
HUNTINGTON INGALLS IND	HII
HUNTSMAN CORP	HUN
HYATT HOTELS CORP	H
IAC INTERACTIVECORP	IAC
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
INTEL CORP	INTC
INTERACTIVE BROKERS GRP	IBKR
INTERCEPT PHARMA INC	ICPT
INTERCONTINENTAL EXCH	ICE
INTERNATIONAL GAME TECH	IGT
INTERNATIONAL PAPER CO	IP
INTERPUBLIC GROUP OF COS	IPG
INTL BUSINESS MACHINES	IBM
INTL FLAVORS & FRAGRANCE	IFF
INTREXON CORP	XON
INTUIT	INTU
INTUITIVE SURGICAL INC	ISRG
INVESCO LTD	IVZ
INVITATION HOMES INC	INVH
IONIS PHARMACEUTICALS	IONS
IPG PHOTONICS CORP	IPGP
IRON MOUNTAIN INC	IRM
ITT INC	ITT
JABIL INC	JBL
JACOBS ENGINEERING GRP	JEC
JB HUNT TRANS SVCS INC	JBHT

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Company	Ticker
HILL-ROM HOLDINGS INC	HRC
HILTON GRAND VACATIONS	HGV
HILTON WORLDWIDE HOLDING	HLT
HOLLYFRONTIER CORP	HFC
JPMORGAN CHASE & CO	JPM
JUNIPER NETWORKS INC	JNPR
JUNO THERAPEUTICS INC	JUNO
KANSAS CITY SOUTHERN	KSU
KAR AUCTION SERVICES INC	KAR
KATE SPADE & CO	KATE
KELLOGG CO	K
KEYCORP	KEY
KEYSIGHT TECHNOLOGIES	KEYS
KILROY REALTY CORP	KRC
KIMBERLY CLARK CORP	KMB
KIMCO REALTY CORP	KIM
KINDER MORGAN INC	KMI
KIRBY CORP	KEY
KLA-TENCOR CORP	KLAC
KOHL'S CORP	KSS
KOSMOS ENERGY LTD	KOS
KROGER CO	KR
L BRANDS INC	LB
L3 TECHNOLOGIES	LLL
LABORATORY CORP OF AMER	LH
LAM RESEARCH CORP	LRCX
LAMAR ADVERTISING CO	LAMR
LAMB WESTON HOLDINGS	LW
LANDSTAR SYSTEMS INC	LSTR
LAREDO PETROLEUM INC	LPI
LAS VEGAS SANDS CORP	LVS
LAZARD LTD	LAZ
LEAR CORP	LEA
LEGG MASON INC	LM
LEGGETT & PLATT INC	LEG
LEIDOS HOLDINGS INC	LDOS
LENNAR CORP CL A	LEN
LENNAR CORP CL B	LEN.B
LENNOX INTERNATIONAL INC	LII
LEUCADIA NATIONAL CORP	LUK
LEVEL 3 COMMUNICATIONS	LVLT
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 INTERACTIVE QVC	QVCA
LIBERTY PROPERTY TRUST	LPT

Company	Ticker
JETBLUE AIRWAYS CORP	JBLU
JOHNSON & JOHNSON	JNJ
JOHNSON CONTROLS INTNL	JCI
JONES LANG LASALLE INC	JLL
LILLY ELI & CO	LLY
LINCOLN ELECTRIC HLDGS	LECO
LINCOLN NATIONAL CORP	LNC
LIONS GATE ENT CLASS A	LGF.A
LIONS GATE ENT CLASS B	LGF.B
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
LYONDELLBASELL INDS	LYB
M & T BANK CORP	MTB
MACERICH CO	MAC
MACQUARIE INFRASTRUCTURE	MIC
MACYS INC	M
MADISON SQUARE GARDEN CO	MSG
MALLINCKRODT PLC	MNK
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
MARSH & MCLENNAN COS	MMC
MARTIN MARIETTA MTLs	MLM
MARVELL TECHNOLOGY GROUP	MRVL
MASCO CORP	MAS
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
MEDNAX INC	MD
MEDTRONIC PLC	MDT
MERCK & CO INC	MRK
MERCURY GENERAL CORP	MCY

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Company	Ticker
LIBERTY SIRIUSXM SER A	LSXMA
LIBERTY SIRIUSXM SER C	LSXMK
LIBERTY VENTURES	LVNTA
LIFE STORAGE INC	LSI
LIFEPOINT HEALTH INC	LPNT
MICHAELS COS INC/THE	MIK
MICROCHIP TECHNOLOGY	MCHP
MICRON TECHNOLOGY INC	MU
MICROSEMI CORP	MSCC
MICROSOFT CORP	MSFT
MID-AMER APT CMNTYS	MAA
MIDDLEBY CORP	MIDD
MOHAWK INDUSTRIES INC	MHK
MOLSON COORS BREWING CO	TAP
MONDELEZ INTERNATIONAL	MDLZ
MONSANTO CO	MON
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
MURPHY USA INC	MUSA
MYLAN NV	MYL
NABORS INDUSTRIES LTD	NBR
NASDAQ INC	NDAQ
NATIONAL FUEL GAS CO	NFG
NATIONAL INSTRS CORP	NATI
NATIONAL OILWELL VARCO	NOV
NATIONAL RETAIL PPTY S	NNN
NAVIENT CORPORATION	NAVI
NCR CORP	NCR
NETAPP INC	NTAP
NETFLIX INC	NFLX
NEUROCRINE BIOSCIENCES	NBIX
NEW RESIDENTIAL INVT	NRZ
NEW YORK CMNTY BANCORP	NYCB
NEWELL BRANDS INC	NWL
NEWFIELD EXPLORATION CO	NFX
NEWMARKET CORPORATION	NEU
NEWMONT MINING CORP	NEM
NEWS CORP CL A	NWSA
NEWS CORP CL B	NWS
NEXTERA ENERGY INC	NEE
NIELSEN HOLDINGS PLC	NLSN

Company	Ticker
METLIFE INC	MET
METTLER TOLEDO INTL INC	MTD
MFA FINANCIAL INC	MFA
MGM RESORTS INTL	MGM
MICHAEL KORS HLDGS LTD	KORS
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
NVIDIA CORP	NVDA
NVR INC	NVR
NXP SEMICONDUCTORS NV	NXPI
O REILLY AUTOMOTIVE INC	ORLY
OCCIDENTAL PETE CORP	OXY
OCEANEERING INTL INC	OII
OGE ENERGY CORP	OGE
OLD DOMINION FREIGHT	ODFL
OLD REPUBLIC INTL CORP	ORI
OLIN CORP	OLN
OMEGA HEALTHCARE INVS	OHI
OMNICOM GROUP INC	OMC
ON SEMICONDUCTOR CORP	ON
ONEMAIN HOLDINGS INC	OMF
ONEOK INC	OKE
OPKO HEALTH INC	OPK
ORACLE CORP	ORCL
ORBITAL ATK INC	OA
OSHKOSH CORP	OSK
OUTFRONT MEDIA INC	OUT
OWENS CORNING	OC
OWENS ILLINOIS INC	OI
PACCAR INC	PCAR
PACKAGING CORP OF AMER	PKG
PACWEST BANCORP	PACW
PALO ALTO NETWORKS INC	PANW
PANDORA MEDIA INC	P
PANERA BREAD CO	PNRA
PARAMOUNT GROUP INC	PGRE
PARK HOTELS & RESORTS	PK
PARKER HANNIFIN CORP	PH
PARSLEY ENERGY INC	PE
PATHEON NV	PTHN
PATTERSON COS INC	PDCO
PATTERSON UTI ENERGY	PTEN
PAYCHEX INC	PAYX

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Company	Ticker
NIKE INC	NKE
NISOURCE INC	NI
NOBLE ENERGY INC	NBL
NORDSON CORP	NDSN
NORDSTROM INC	JWN
NORFOLK SOUTHERN CORP	NSC
PERKINELMER INC	PKI
PERRIGO CO PLC	PRGO
PFIZER INC	PFE
PG&E CORP	PCG
PHILIP MORRIS INTL	PM
PHILLIPS 66	PSX
PIEDMONT OFFICE RLTY TR	PDM
PILGRIMS PRIDE CORP	PPC
PINNACLE FINANCIAL	PNFP
PINNACLE FOODS INC	PF
PINNACLE WEST CAPITAL CO	PNW
PIONEER NAT RESOURCES CO	PXD
PITNEY BOWES INC	PBI
PLATFORM SPECIALTY PRODS	PAH
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
PRAXAIR INC	PX
PREMIER INC	PINC
PRICE T ROWE GROUP INC	TROW
PRINCIPAL FINANCIAL GRP	PFG
PROASSURANCE CORP	PRA
PROCTER & GAMBLE CO	PG
PROGRESSIVE CORP	PGR
PROLOGIS INC	PLD
PROSPERITY BANCSHARES	PB
PRUDENTIAL FINANCIAL INC	PRU
PTC INC	PTC
PUBLIC STORAGE INC	PSA
PUBLIC SVC ENTERPRISE	PEG
PULTEGROUP INC	PHM
PVH CORP	PVH
QEP RESOURCES INC	QEP
QIAGEN NV	QGEN
QORVO INC	QRVO
QUALCOMM INC	QCOM
QUANTA SERVICES INC	PWR
QUEST DIAGNOSTICS INC	DGX

Company	Ticker
PAYPAL HOLDINGS INC	PYPL
PBF ENERGY INC	PBF
PENSKE AUTOMOTIVE GROUP	PAG
PENTAIR PLC	PNR
PEOPLES UNITED FINANCIAL	PBCT
PEPSICO INC	PEP
REALTY INCOME CORP	O
RED HAT INC	RHT
REGAL BELOIT CORP	RBC
REGAL ENTMT GROUP	RGC
REGENCY CENTERS CORP	REG
REGENERON PHARMACEUTICAL	REGN
REGIONS FINANCIAL CORP	RF
REINSURANCE GRP OF AMER	RGA
RELIANCE STEEL & ALUM	RS
RENAISSANCERE HOLDINGS	RNR
REPUBLIC SERVICES INC	RSG
RESMED INC	RMD
RETAIL PPTYS AMER INC	RPAI
REYNOLDS AMERICAN INC	RAI
RICE ENERGY INC	RICE
RITE AID CORP	RAD
ROBERT HALF INTL INC	RHI
ROCKWELL AUTOMATION INC	ROK
ROCKWELL COLLINS INC	COL
ROLLINS INC	ROL
ROPER TECHNOLOGIES INC	ROP
ROSS STORES INC	ROST
ROYAL CARIBBEAN CRUISES	RCL
ROYAL GOLD INC	RGLD
RPC INC	RES
RPM INTERNATIONAL INC	RPM
RSP PERMIAN INC	RSPP
RYDER SYSTEM INC	R
S&P GLOBAL INC	SPGI
SABRE CORP	SABR
SALESFORCE COM INC	CRM
SALLY BEAUTY HOLDINGS	SBH
SANTANDER CNSMR USA HLDG	SC
SBA COMMUNICATIONS CORP	SBAC
SCANA CORP	SCG
SCHEIN HENRY INC	HSIC
SCHLUMBERGER LTD	SLB
SCHWAB CHARLES CORP	SCHW
SCOTTS MIRACLE-GRO CO	SMG
SCRIPPS NTWK INTERACTIVE	SNI
SEABOARD CORP	SEB
SEALED AIR CORP	SEE



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Company	Ticker
QUINTILES IMS HOLDINGS	Q
RALPH LAUREN CORP	RL
RANGE RESOURCES CORP	RRC
RAYMOND JAMES FINANCIAL	RJF
RAYONIER INC	RYN
RAYTHEON CO	RTN
REALOGY HOLDINGS CORP	RLGY
SERVICENOW INC	NOW
SHERWIN WILLIAMS CO	SHW
SIGNATURE BANK	SBNY
SIGNET JEWELERS LTD	SIG
SILGAN HOLDINGS INC	SLGN
SIMON PROPERTY GROUP INC	SPG
SIRIUS XM HOLDINGS INC	SIRI
SIX FLAGS ENTMT CORP	SIX
SKECHERS USA INC	SKX
SKYWORKS SOLUTIONS INC	SWKS
SL GREEN REALTY CORP	SLG
SLM CORP	SLM
SM ENERGY CO	SM
SMITH A O CORP	AOS
SMUCKER J M CO	SJM
SNAP ON INC	SNA
SONOCO PRODUCTS CO	SON
SOUTHERN CO	SO
SOUTHERN COPPER CORP	SCCO
SOUTHWEST AIRLINES CO	LUV
SOUTHWESTERN ENERGY CO	SWN
SPECTRUM BRANDS HOLDINGS	SPB
SPIRIT AEROSYSTEMS	SPR
SPIRIT AIRLS INC	SAVE
SPIRIT RLTY CAP INC	SRC
SPLUNK INC	SPLK
SPRINT CORP	S
SPROUTS FRMRS MKT INC	SFM
SQUARE INC	SQ
SS&C TECHNOLOGIES HLDGS	SSNC
STANLEY BLACK & DECKER	SWK
STAPLES INC	SPLS
STARBUCKS CORP	SBUX
STARWOOD PPTY TRUST INC	STWD
STATE STREET CORP	STT
STEEL DYNAMICS INC	STLD
STERICYCLE INC	SRCL
STERIS PLC	STE
STORE CAPITAL CORP	STOR
STRYKER CORP	SYK
SUN COMMUNITIES INC	SUI

Company	Ticker
SEATTLE GENETICS INC	SGEN
SEI INVESTMENTS CO	SEIC
SEMPRA ENERGY	SRE
SENIOR HOUSING PPTYS TR	SNH
SENSATA TECHNOLOGIES	ST
SERVICE CORP INTL	SCI
SERVICEMASTER GLOBAL	SERV
TABLEAU SOFTWARE INC	DATA
TAHOE RES INC	TAHO
TAKE-TWO INTERACTIVE	TTWO
TANGER FACTORY OUTLET	SKT
TARGA RESOURCES INC	TRGP
TARGET CORP	TGT
TAUBMAN CENTERS INC	TCO
TCF FINANCIAL CORP	TCF
TD AMERITRADE HOLDING	AMTD
TEGNA INC	TGNA
TELEDYNE TECHNOLOGIES	TDY
TELEFLEX INC	TFX
TELEPHONE & DATA SYSTEMS	TDS
TEMPUR SEALY INTL INC	TPX
TERADATA CORP	TDC
TERADYNE INC	TER
TEREX CORP	TEX
TESARO INC	TSRO
TESLA INC	TSLA
TESORO CORP	TSO
TEXAS INSTRUMENTS INC	TXN
TEXTRON INC	TXT
TFS FINL CORP	TFSL
THE CHEMOURS COMPANY	CC
THE KRAFT HEINZ COMPANY	KHC
THE PRICELINE GROUP INC	PCLN
THE WENDY'S COMPANY	WEN
THERMO FISHER SCIENTIFIC	TMO
THOR INDUSTRIES INC	THO
TIFFANY & CO	TIF
TIME WARNER INC	TWX
TIMKEN CO	TKR
TJX COMPANIES INC	TJX
TOLL BROTHERS INC	TOL
TORCHMARK CORP	TMK
TORO CO	TTC
TOTAL SYSTEM SERVICES	TSS
TRACTOR SUPPLY CO	TSCO
TRANSDIGM GROUP INC	TDG
TRANSOCEAN LTD	RIG
TRANSUNION	TRU

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## Russell 1000® Index

Company	Ticker
SUNTRUST BANKS INC	STI
SVB FINANCIAL GROUP	SIVB
SYMANTEC CORP	SYMC
SYNCHRONY FINANCIAL	SYF
SYNOPSYS INC	SNPS
SYNOVUS FINANCIAL CORP	SNV
SYSCO CORP	SYF
T-MOBILE US INC	TMUS
TWO HBRS INVT CORP	TWO
TYLER TECHNOLOGIES INC	TYL
TYSON FOODS INC	TSN
U S G CORP	USG
UDR INC	UDR
UGI CORP	UGI
ULTA BEAUTY INC	ULTA
ULTIMATE SOFTWARE GROUP	ULTI
UNDER ARMOUR CLASS A	UAA
UNDER ARMOUR CLASS C	UA
UNION PACIFIC CORP	UNP
UNITED CONTINENTAL HLDGS	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
UNITI GROUP INC	UNIT
UNIVAR INC	UNVR
UNIVERSAL DISPLAY CORP	OLED
UNIVERSAL HEALTH SVCS	UHS
UNUM GROUP	UNM
URBAN OUTFITTERS INC	URBN
US BANCORP	USB
US FOODS HOLDING CORP	USFD
V F CORP	VFC
VAIL RESORTS INC	MTN
VALERO ENERGY CORP	VLO
VALIDUS HOLDINGS LTD	VR
VALMONT INDUSTRIES INC	VMI
VALVOLINE INC	VVV
VANTIV INC	VNTV
VARIAN MEDICAL SYSTEMS	VAR
VCA INC	WOOF
VECTREN CORP	VVC
VEEVA SYSTEMS INC	VEEV
VENTAS INC	VTR
VEREIT INC	VER

Company	Ticker
TRAVELERS COS INC	TRV
TREEHOUSE FOODS INC	THS
TRIBUNE MEDIA CO	TRCO
TRIMBLE INC	TRMB
TRINITY INDUSTRIES INC	TRN
TRIPADVISOR INC	TRIP
TUPPERWARE BRANDS CORP	TUP
TWITTER INC	TWTR
VISTRA ENERGY CORP	VST
VMWARE INC	VMW
VORNADO REALTY TRUST	VNO
VOYA FINANCIAL INC	VOYA
VULCAN MATERIALS CO	VMC
VWR CORPORATION	VWR
W P CAREY INC	WPC
WABCO HOLDINGS INC	WBC
WABTEC CORP	WAB
WAL MART STORES INC	WMT
WALGREENS BOOTS ALLIANCE	WBA
WASTE MGMT INC	WM
WATERS CORP	WAT
WATSCO INC	WSO
WAYFAIR INC	W
WEATHERFORD INTL PLC	WFT
WEBSTER FINANCIAL CORP	WBS
WEC ENERGY GROUP INC	WEC
WEINGARTEN RLTY INVS	WRI
WELBILT	WBT
WELLCARE GROUP INC	WCG
WELLS FARGO & CO	WFC
WELLTOWER INC	HCN
WESCO INTERNATIONAL INC	WCC
WEST PHARMACEUTICAL SVCS	WST
WESTAR ENERGY INC	WR
WESTERN ALLIANCE BANCORP	WAL
WESTERN DIGITAL CORP	WDC
WESTERN UNION CO	WU
WESTLAKE CHEMICAL CORP	WLK
WESTROCK CO	WRK
WEX INC	WEX
WEYERHAEUSER CO	WY
WHIRLPOOL CORP	WHR
WHITE MTNS INS GROUP LTD	WTM
WHITING PETROLEUM CORP	WLL
WHOLE FOODS MARKET INC	WFM
WILEY JOHN & SONS INC	JW.A
WILLIAMS COMPANIES INC	WMB
WILLIAMS SONOMA INC	WSM

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Company	Ticker
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
VISA INC	V
VISTEON CORP	VC
XL GROUP LTD	XL
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
ZILLOW GROUP INC CLASS A	ZG
ZILLOW GROUP INC CLASS C	Z
ZIMMER BIOMET HOLDINGS	ZBH
ZIONS BANCORPORATION	ZION
ZOETIS INC	ZTS
ZYNGA INC	ZNGA

Company	Ticker
WILLIS TOWERS WATSON PLC	WLTW
WORKDAY INC	WDAY
WORLD FUEL SVCS CORP	INT
WPX ENERGY INC	WPX
WYNDHAM WORLDWIDE CORP	WYN
WYNN RESORTS LTD	WYNN
XCEL ENERGY INC	XEL
XEROX CORP	XRX
XILINX INC	XLNX



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