



DATE: April 26, 2019

TO: MIAX Emerald Members

FROM: MIAX Emerald Regulatory Department

RE: Market for Underlying Security Used for Openings on MIAX Emerald for Newly Listed Option Symbols Effective Monday, April 29, 2019

The following symbols will start trading on MIAX Emerald beginning Monday, April 29, 2019, and, as set forth in MIAX Emerald Rule 503(d), MIAX Emerald shall use the exchange identified below as the “market for the underlying security” for the purpose of Openings on the Exchange.

UNDERLYING SYMBOL	SECURITY NAME	OPTION SYMBOL	EXCHANGE FOR OPENING
AAN	Aaron's, Inc.	AAN	NYSE
ACGL	Arch Capital Group Ltd.	ACGL	NASDAQ
ACH	Aluminum Corporation of China Limited	ACH	NYSE
ACIW	ACI Worldwide, Inc.	ACIW	NASDAQ
ADRO	Aduro BioTech, Inc.	ADRO	NASDAQ
ADVM	Adverum Biotechnologies, Inc.	ADVM	NASDAQ
AEE	Ameren Corporation	AEE	NYSE
AEG	Aegon N.V.	AEG	NYSE
AFH	Atlas Financial Holdings, Inc.	AFH	NASDAQ
AFTY	CSOP FTSE China A50 ETF	AFTY	NYSE Arca
AGRO	Adecoagro S.A.	AGRO	NYSE
AI	Arlington Asset Investment Corp.	AI	NYSE
AINV	Apollo Investment Corporation	AINV	NASDAQ
AIR	AAR Corp.	AIR	NYSE
AIV	Apartment Investment and Management Company	AIV	NYSE
AJG	Arthur J. Gallagher & Co.	AJG	NYSE
AKBA	Akebia Therapeutics, Inc.	AKBA	NASDAQ
AKG	Asanko Gold Inc.	AKG	AMEX
ALDR	Alder BioPharmaceuticals, Inc.	ALDR	NASDAQ
ALGT	Allegiant Travel Company	ALGT	NASDAQ



ALIM	Alimera Sciences, Inc.	ALIM	NASDAQ
ALLE	Allegion plc	ALLE	NYSE
ALLT	Allot Ltd.	ALLT	NASDAQ
ALSK	Alaska Communications Systems Group, Inc.	ALSK	NASDAQ
AMCN	AirMedia Group Inc.	AMCN	NASDAQ
AMH	American Homes 4 Rent	AMH	NYSE
AMPH	Amphastar Pharmaceuticals, Inc.	AMPH	NASDAQ
AMR	Alta Mesa Resources, Inc.	AMR	NASDAQ
ANDE	The Andersons, Inc.	ANDE	NASDAQ
ANFI	Amira Nature Foods Ltd.	ANFI	NYSE
ANGO	AngioDynamcis, Inc.	ANGO	NASDAQ
ANIK	Anika Therapeutics, Inc.	ANIK	NASDAQ
ANIP	ANI Pharmaceuticals, Inc.	ANIP	NASDAQ
APDN	Applied DNA Sciences, Inc.	APDN	NASDAQ
APEI	American Public Education, Inc.	APEI	NASDAQ
APPS	Digital Turbine, Inc.	APPS	NASDAQ
APT	Alpha Pro Tech, Ltd.	APT	AMEX
AQXP	Aquinox Pharmaceuticals, Inc.	AQXP	NASDAQ
ARCB	ArcBest Corporation	ARCB	NASDAQ
ARCO	Arcos Dorados Holdings Inc.	ARCO	NYSE
ARE	Alexandria Real Estate Equities, Inc.	ARE	NYSE
AREX	Approach Resources, Inc.	AREX	NASDAQ
ARI	Apollo Commercial Real Estate Finance, Inc.	ARI	NYSE
ARR	ARMOUR Residential REIT, Inc.	ARR	NYSE
ARTX	Arotech Corporation	ARTX	NASDAQ
ASA	ASA Gold and Precious Metals Limited	ASA	NYSE
ASC	Ardmore Shipping Corporation	ASC	NYSE
ASHS	Xtrackers Harvest CSI 500 China-A Shares Small Cap ETF	ASHS	NYSE Arca
ASIX	AdvanSix Inc.	ASIX	NYSE
ASMB	Assembly Biosciences, Inc.	ASMB	NASDAQ
ASND	Ascendis Pharma A/S	ASND	NASDAQ
ASRT	Assertio Therapeutics, Inc.	ASRT	NASDAQ
AT	Atlantic Power Corporation	AT	NYSE



ATR	AptarGroup, Inc.	ATR	NYSE
ATU	Actuant Corporation	ATU	NYSE
AUDC	AudioCodes Ltd.	AUDC	NASDAQ
AUO	AU Optronics Corp.	AUO	NYSE
AUTO	AutoWeb, Inc.	AUTO	NASDAQ
AVD	American Vanguard Corporation	AVD	NYSE
AVDL	Avadel Pharmaceuticals plc	AVDL	NASDAQ
AVH	Avianca Holdings S.A.	AVH	NYSE
AVID	Avid Technology, Inc.	AVID	NASDAQ
AVNS	Avanos Medical, Inc.	AVNS	NYSE
AVY	Avery Dennison Corporation	AVY	NYSE
AXAS	Abraxas Petroleum Corporation	AXAS	NASDAQ
AY	Atlantica Yield plc	AY	NASDAQ
AYR	Aircastle Limited	AYR	NYSE
BABY	Natus Medical Incorporated	BABY	NASDAQ
BAP	Credicorp Ltd.	BAP	NYSE
BAS	Basic Energy Services, Inc.	BAS	NYSE
BBDC	Barings BDC, Inc.	BBDC	NYSE
BBH	VanEck Vectors Biotech ETF	BBH	NASDAQ
BBSI	Barrett Business Services, Inc.	BBSI	NASDAQ
BBW	Build-A-Bear Workshop, Inc.	BBW	NYSE
BCLI	Brainstorm Cell Therapeutics Inc.	BCLI	NASDAQ
BCOR	Blucora, Inc.	BCOR	NASDAQ
BCOV	Brightcove Inc.	BCOV	NASDAQ
BCPC	Balchem Corporation	BCPC	NASDAQ
BDC	Belden Inc.	BDC	NYSE
BEST	BEST Inc.	BEST	NYSE
BFB	Brown-Forman Corporation	BFB	NYSE
BGG	Briggs & Stratton Corporation	BGG	NYSE
BHR	Braemar Hotels & Resorts, Inc.	BHR	NYSE
BHVN	Biohaven Pharmaceutical Holding Company Ltd.	BHVN	NYSE
BIP	Brookfield Infrastructure Partners L.P.	BIP	NYSE
BIS	ProShares UltraShort Nasdaq Biotechnology	BIS	NASDAQ
BKEP	Blueknight Energy Partners,	BKEP	NASDAQ



	L.P.		
BKF	iShares MSCI BRIC ETF	BKF	NYSE Arca
BKH	Black Hills Corporation	BKH	NYSE
BMCH	BMC Stock Holdings, Inc.	BMCH	NASDAQ
BMS	Bemis Company, Inc.	BMS	NYSE
BNED	Barnes & Noble Education, Inc.	BNED	NYSE
BNFT	Benefitfocus, Inc.	BNFT	NASDAQ
BOKF	BOK Financial Corporation	BOKF	NASDAQ
BPFH	Boston Private Financial Holdings, Inc.	BPFH	NASDAQ
BRKR	Bruker Corporation	BRKR	NASDAQ
BSBR	Banco Santander (Brasil) S.A.	BSBR	NYSE
BSQR	BSQUARE Corporation	BSQR	NASDAQ
BWXT	BWX Technologies, Inc.	BWXT	NYSE
CACI	CACI International Inc	CACI	NYSE
CAMT	Camtek Ltd.	CAMT	NASDAQ
CAPL	CrossAmerica Partners LP	CAPL	NYSE
CBB	Cincinnati Bell Inc.	CBB	NYSE
CBT	Cabot Corporation	CBT	NYSE
CCEP	Coca-Cola European Partners plc	CCEP	NYSE
CCIH	ChinaCache International Holdings Ltd.	CCIH	NASDAQ
CCMP	Cabot Microelectronics Corporation	CCMP	NASDAQ
CCOI	Cogent Communications Holdings, Inc.	CCOI	NASDAQ
CCRN	Cross Country Healthcare, Inc.	CCRN	NASDAQ
CDZI	Cadiz Inc.	CDZI	NASDAQ
CECO	Career Education Corporation	CECO	NASDAQ
CEVA	CEVA, Inc.	CEVA	NASDAQ
CFR	Cullen/Frost Bankers, Inc.	CFR	NYSE
CGA	China Green Agriculture, Inc.	CGA	NYSE
CGEN	Compugen Ltd.	CGEN	NASDAQ
CHE	Chemed Corporation	CHE	NYSE
CHH	Choice Hotels International, Inc.	CHH	NYSE
CHIX	Global X MSCI China Financials ETF	CHIX	NYSE Arca
CHKR	Chesapeake Granite Wash	CHKR	NYSE



	Trust		
CHU	China Unicom (Hong Kong) Limited	CHU	NYSE
CHUY	Chuy's Holdings, Inc.	CHUY	NASDAQ
CIA	Citizens, Inc.	CIA	NYSE
CINF	Cincinnati Financial Corporation	CINF	NASDAQ
CKH	Seacor Holdings Inc.	CKH	NYSE
CLAR	Clarus Corporation	CLAR	NASDAQ
CLDT	Chatham Lodging Trust	CLDT	NYSE
CLDX	Celldex Therapeutics, Inc.	CLDX	NASDAQ
CLFD	Clearfield, Inc.	CLFD	NASDAQ
CLH	Clean Harbors, Inc.	CLH	NYSE
CLIR	ClearSign Combustion Corporation	CLIR	NASDAQ
CLLS	Collectis S.A.	CLLS	NASDAQ
CLS	Celestica Inc.	CLS	NYSE
CLUB	Town Sports International Holdings, Inc.	CLUB	NASDAQ
CLW	Clearwater Paper Corporation	CLW	NYSE
CMD	Cantel Medical Corp.	CMD	NYSE
CMRX	Chimerix, Inc.	CMRX	NASDAQ
CMS	CMS Energy Corporation	CMS	NYSE
CNCE	Concert Pharmaceuticals, Inc.	CNCE	NASDAQ
CNK	Cinemark Holdings, Inc.	CNK	NYSE
CNO	CNO Financial Group, Inc.	CNO	NYSE
CNXM	CNX Midstream Partners LP	CNXM	NYSE
CODI	Compass Diversified Holdings LLC	CODI	NYSE
COHU	Cohu, Inc.	COHU	NASDAQ
COLL	Collegium Pharmaceutical, Inc.	COLL	NASDAQ
COLM	Columbia Sportswear Company	COLM	NASDAQ
COR	CoreSite Realty Corporation	COR	NYSE
CORE	Core-Mark Holding Company, Inc.	CORE	NASDAQ
CORR	CorEnergy Infrastructure Trust, Inc.	CORR	NYSE
COWN	Cowen Inc.	COWN	NASDAQ
CPSS	Consumer Portfolio Services,	CPSS	NASDAQ



	Inc.		
CR	Crane Co.	CR	NYSE
CRCM	Care.com, Inc.	CRCM	NYSE
CRESY	Cresud Sociedad Anonima Comercial, Inmobiliaria, Financiera y Agropecuaria	CRESY	NASDAQ
CRH	CRH plc	CRH	NYSE
CRL	Charles River Laboratories International, Inc.	CRL	NYSE
CRS	Carpenter Technology Corporation	CRS	NYSE
CRY	CryoLife, Inc.	CRY	NYSE
CSGS	CSG Systems International, Inc.	CSGS	NASDAQ
CSII	Cardiovascular Systems, Inc.	CSII	NASDAQ
CSLT	Castlight Health, Inc.	CSLT	NYSE
CSU	Capital Senior Living Corporation	CSU	NYSE
CSV	Carriage Services, Inc.	CSV	NYSE
CTG	Computer Task Group, Incorporated	CTG	NASDAQ
CTIC	CTI BioPharma Corp.	CTIC	NASDAQ
CTLT	Catalent, Inc.	CTLT	NYSE
CUBE	CubeSmart	CUBE	NYSE
CUR	Neuralstem, Inc.	CUR	NASDAQ
CUTR	Cutera, Inc.	CUTR	NASDAQ
CVEO	Civeo Corporation	CVEO	NYSE
CVLT	Commvault Systems, Inc.	CVLT	NASDAQ
CWB	SPDR Bloomberg Barclays Convertible Securities ETF	CWB	NYSE Arca
CWENA	Clearway Energy, Inc.	CWENA	NYSE
CWST	Casella Waste Systems, Inc.	CWST	NASDAQ
CXDC	China XD Plastics Company Limited	CXDC	NASDAQ
CYB	WisdomTree Chinese Yuan Strategy Fund	CYB	NYSE Arca
CYD	China Yuchai International Limited	CYD	NYSE
CYTR	CytRx Corporation	CYTR	NASDAQ
CZZ	Cosan Limited	CZZ	NYSE
DAKT	Daktronics, Inc.	DAKT	NASDAQ
DBB	Invesco DB Base Metals Fund	DBB	NYSE Arca
DBVT	DBV Technologies S.A.	DBVT	NASDAQ



DCI	Donaldson Company, Inc.	DCI	NYSE
DEM	WisdomTree Emerging Markets High Dividend Fund	DEM	NYSE Arca
DFE	WisdomTree Europe SmallCap Dividend Fund	DFE	NYSE Arca
DFRG	Del Frisco's Restaurant Group, Inc.	DFRG	NASDAQ
DHX	DHI Group, Inc.	DHX	NYSE
DIG	ProShares Ultra Oil & Gas	DIG	NYSE Arca
DIOD	Diodes Incorporated	DIOD	NASDAQ
DKL	Delek Logistics Partners, LP	DKL	NYSE
DLB	Dolby Laboratories, Inc.	DLB	NYSE
DLNG	Dynagas LNG Partners LP	DLNG	NYSE
DLX	Deluxe Corporation	DLX	NYSE
DMLP	Dorchester Minerals, L.P.	DMLP	NASDAQ
DNN	Denison Mines Corp.	DNN	AMEX
DNOW	NOW, Inc.	DNOW	NYSE
DOG	ProShares Short Dow30	DOG	NYSE Arca
DRD	DRDGOLD Limited	DRD	NYSE
DRQ	Dril-Quip, Inc.	DRQ	NYSE
DRRX	DURECT Corporation	DRRX	NASDAQ
DUG	ProShares UltraShort Oil & Gas	DUG	NYSE Arca
DXPE	DXP Enterprises, Inc.	DXPE	NASDAQ
E	ENI S.p.A.	E	NYSE
EBS	Emergent BioSolutions, Inc.	EBS	NYSE
ECH	iShares MSCI Chile Capped ETF	ECH	BATS
ECOM	ChannelAdvisor Corporation	ECOM	NYSE
EDAP	EDAP TMS S.A.	EDAP	NASDAQ
EEV	ProShares UltraShort MSCI Emerging Mkts	EEV	NYSE Arca
EFAV	iShares Edge MSCI Min Vol EAFE ETF	EFAV	BATS
EGOV	NIC Inc.	EGOV	NASDAQ
EGRX	Eagle Pharmaceuticals, Inc.	EGRX	NASDAQ
EHTH	eHealth, Inc.	EHTH	NASDAQ
ELGX	Endologix, Inc.	ELGX	NASDAQ
ELS	Equity Lifestyle Properties, Inc.	ELS	NYSE
EMKR	EMCORE Corporation	EMKR	NASDAQ



ENBL	Enable Midstream Partners, LP	ENBL	NYSE
ENLC	EnLink Midstream, LLC	ENLC	NYSE
ENS	Energys	ENS	NYSE
ENV	Investnet, Inc.	ENV	NYSE
ENVA	Enova International, Inc.	ENVA	NYSE
ENZ	Enzo Biochem, Inc.	ENZ	NYSE
EPAM	EPAM Systems, Inc.	EPAM	NYSE
EPV	ProShares UltraShort FTSE Europe	EPV	NYSE Arca
EPZM	Epizyme, Inc.	EPZM	NASDAQ
EQC	Equity Commonwealth	EQC	NYSE
EQNR	Equinor ASA	EQNR	NYSE
ESRT	Empire State Realty Trust, Inc.	ESRT	NYSE
EV	Eaton Vance Corp.	EV	NYSE
EVC	Entravision Communications Corporation	EVC	NYSE
EVR	Evercore Inc.	EVR	NYSE
EVRG	Evergy, Inc.	EVRG	NYSE
EWM	iShares MSCI Malaysia ETF	EWM	NYSE Arca
EWP	iShares MSCI Spain Capped ETF	EWP	NYSE Arca
EWQ	iShares MSCI France ETF	EWQ	NYSE Arca
EWS	iShares MSCI Singapore Capped ETF	EWS	NYSE Arca
EYES	Second Sight Medical Products, Inc.	EYES	NASDAQ
EZU	iShares MSCI Eurozone ETF	EZU	BATS
FBC	Flagstar Bancorp, Inc.	FBC	NYSE
FBIO	Fortress Biotech, Inc.	FBIO	NASDAQ
FC	Franklin Covey Co.	FC	NYSE
FCN	FTI Consulting, Inc.	FCN	NYSE
FELP	Foresight Energy LP	FELP	NYSE
FENG	Phoenix New Media Limited	FENG	NYSE
FET	Forum Energy Technologies, Inc.	FET	NYSE
FICO	Fair Isaac Corporation	FICO	NYSE
FIX	Comfort Systems USA, Inc.	FIX	NYSE
FLDM	Fluidigm Corporation	FLDM	NASDAQ
FLNT	Fluent, Inc.	FLNT	NASDAQ
FLOW	SPX FLOW, Inc.	FLOW	NYSE
FLY	Fly Leasing Limited	FLY	NYSE



FM	iShares MSCI Frontier 100 ETF	FM	NYSE Arca
FMX	Fomento Economico Mexicano, S.A.B. de C.V.	FMX	NYSE
FNG	AdvisorShares New Tech and Media ETF	FNG	NYSE Arca
FOR	Forestar Group Inc.	FOR	NYSE
FPI	Farmland Partners Inc.	FPI	NYSE
FR	First Industrial Realty Trust, Inc.	FR	NYSE
FRGI	Fiesta Restaurant Group, Inc.	FRGI	NASDAQ
FSTR	L.B. Foster Company	FSTR	NASDAQ
FTAI	Fortress Transportation and Infrastructure Investors LLC	FTAI	NYSE
FULT	Fulton Financial Corporation	FULT	NASDAQ
FWONA	Formula One Group	FWONA	NASDAQ
FWONK	Formula One Group	FWONK	NASDAQ
FXP	ProShares UltraShort FTSE China 50	FXP	NYSE Arca
G	Genpact Limited	G	NYSE
GATX	GATX Corporation	GATX	NYSE
GDI	Gardner Denver Holdings, Inc.	GDI	NYSE
GEF	Greif, Inc.	GEF	NYSE
GEN	Genesis Healthcare, Inc.	GEN	NYSE
GEOS	Geospace Technologies Corporation	GEOS	NASDAQ
GFF	Griffon Corporation	GFF	NYSE
GGG	Graco Inc.	GGG	NYSE
GHL	Greenhill & Co., Inc.	GHL	NYSE
GIL	Gildan Activewear Inc.	GIL	NYSE
GLAD	Gladstone Capital Corporation	GLAD	NASDAQ
GLDD	Great Lakes Dredge & Dock Corporation	GLDD	NASDAQ
GLIBA	GCI Liberty, Inc.	GLIBA	NASDAQ
GLL	ProShares UltraShort Gold	GLL	NYSE Arca
GLOP	GasLog Partners LP	GLOP	NYSE
GLP	Global Partners LP	GLP	NYSE
GLYC	GlycoMimetics, Inc.	GLYC	NASDAQ
GNCA	Genocea Biosciences, Inc.	GNCA	NASDAQ
GNMX	Aevi Genomic Medicine, Inc.	GNMX	NASDAQ
GOOD	Gladstone Commercial Corporation	GOOD	NASDAQ



GPI	Group 1 Automotive, Inc.	GPI	NYSE
GROW	U.S. Global Investors, Inc.	GROW	NASDAQ
GSUM	Gridsum Holding Inc.	GSUM	NASDAQ
GTE	Gran Tierra Energy Inc.	GTE	AMEX
GTY	Getty Realty Corp.	GTY	NYSE
GURE	Gulf Resources, Inc.	GURE	NASDAQ
GV	The Goldfield Corporation	GV	AMEX
GVA	Granite Construction Incorporated	GVA	NYSE
GWR	Genesee & Wyoming Inc.	GWR	NYSE
GXG	Global X MSCI Colombia ETF	GXG	NYSE Arca
H	Hyatt Hotels Corporation	H	NYSE
HAO	Invesco China Small Cap ETF	HAO	NYSE Arca
HBM	HudBay Minerals Inc.	HBM	NYSE
HDGE	AdvisorShares Ranger Equity Bear ETF	HDGE	NYSE Arca
HE	Hawaiian Electric Industries, Inc.	HE	NYSE
HEP	Holly Energy Partners, L.P.	HEP	NYSE
HHC	The Howard Hughes Corporation	HHC	NYSE
HI	Hillenbrand, Inc.	HI	NYSE
HIFR	InfraREIT, Inc.	HIFR	NYSE
HIVE	Aerohive Networks, Inc.	HIVE	NYSE
HLIT	Harmonic Inc.	HLIT	NASDAQ
HLTH	Nobilis Health Corp.	HLTH	AMEX
HMHC	Houghton Mifflin Harcourt Company	HMHC	NASDAQ
HOLI	Hollysys Automation Technologies Ltd.	HOLI	NASDAQ
HOMB	Home Bancshares, Inc.	HOMB	NASDAQ
HPJ	Highpower International, Inc.	HPJ	NASDAQ
HR	Healthcare Realty Trust Incorporated	HR	NYSE
HRTG	Heritage Insurance Holdings, Inc.	HRTG	NYSE
HT	Hersha Hospitality Trust	HT	NYSE
HTA	Healthcare Trust of America, Inc.	HTA	NYSE
HTGC	Hercules Capital, Inc.	HTGC	NYSE
HTH	Hilltop Holdings Inc.	HTH	NYSE



HWC	Hancock Whitney Corporation	HWC	NASDAQ
HXL	Hexcel Corporation	HXL	NYSE
HYGS	Hydrogenics Corporation	HYGS	NASDAQ
HYLD	High Yield ETF	HYLD	NYSE Arca
HZO	MarineMax, Inc.	HZO	NYSE
IART	Integra LifeSciences Holdings Corporation	IART	NASDAQ
IAT	iShares U.S. Regional Banks ETF	IAT	NYSE Arca
IBKC	IBERIABANK Corporation	IBKC	NASDAQ
ICAD	iCAD Inc.	ICAD	NASDAQ
ICLR	ICON Public Limited Company	ICLR	NASDAQ
IDEX	Ideanomics, Inc.	IDEX	NASDAQ
IDRA	Idera Pharmaceuticals, Inc.	IDRA	NASDAQ
IEI	iShares 3-7 Year Treasury Bond ETF	IEI	NASDAQ
IEO	iShares U.S. Oil & Gas Exploration & Production ETF	IEO	BATS
IEV	iShares Europe ETF	IEV	NYSE Arca
IEX	IDEX Corporation	IEX	NYSE
IEZ	iShares U.S. Oil Equipment & Services ETF	IEZ	NYSE Arca
IGN	iShares North American Tech-Multimedia Networking ETF	IGN	NYSE Arca
IJS	iShares S&P Small-Cap 600 Value ETF	IJS	NYSE Arca
ILF	iShares Latin America 40 ETF	ILF	NYSE Arca
IMKTA	Ingles Markets, Incorporated	IMKTA	NASDAQ
IMO	Imperial Oil Limited	IMO	AMEX
INT	World Fuel Services Corporation	INT	NYSE
INVE	Identiv, Inc.	INVE	NASDAQ
INWK	InnerWorkings, Inc.	INWK	NASDAQ
IO	ION Geophysical Corporation	IO	NYSE
IRET	Investors Real Estate Trust	IRET	NYSE
IRT	Independence Realty Trust, Inc.	IRT	NYSE
ISEE	IVERIC bio, Inc.	ISEE	NASDAQ
ITGR	Integer Holdings Corporation	ITGR	NYSE
ITRI	Itron, Inc.	ITRI	NASDAQ
IVAC	Intevac, Inc.	IVAC	NASDAQ
IVR	Invesco Mortgage Capital Inc.	IVR	NYSE



IWB	iShares Russell 1000 ETF	IWB	NYSE Arca
IWC	iShares Micro-Cap ETF	IWC	NYSE Arca
IWP	iShares Russell Mid-Cap Growth ETF	IWP	NYSE Arca
IWR	iShares Russell Mid-Cap ETF	IWR	NYSE Arca
IWS	iShares Russell Mid-Cap Value ETF	IWS	NYSE Arca
IYE	iShares U.S. Energy ETF	IYE	NYSE Arca
IYM	iShares U.S. Basic Materials ETF	IYM	NYSE Arca
IYW	iShares U.S. Technology ETF	IYW	NYSE Arca
IYZ	iShares U.S. Telecommunications ETF	IYZ	BATS
JAKK	JAKKS Pacific, Inc.	JAKK	NASDAQ
JE	Just Energy Group Inc.	JE	NYSE
JILL	J.Jill, Inc.	JILL	NYSE
JO	iPath Series B Bloomberg Coffee Subindex Total Return ETN	JO	NYSE Arca
JRJC	China Finance Online Co. Limited	JRJC	NASDAQ
KALU	Kaiser Aluminum Corporation	KALU	NASDAQ
KBWB	Invesco KBW Bank ETF	KBWB	NASDAQ
KEP	Korea Electric Power Corporation	KEP	NYSE
KIE	SPDR S&P Insurance ETF	KIE	NYSE Arca
KIN	Kindred Biosciences, Inc.	KIN	NASDAQ
KIRK	Kirkland's, Inc.	KIRK	NASDAQ
KLIC	Kulicke and Soffa Industries, Inc.	KLIC	NASDAQ
KOL	VanEck Vectors Coal ETF	KOL	NYSE Arca
KOPN	Kopin Corporation	KOPN	NASDAQ
KRA	Kraton Corporation	KRA	NYSE
KRC	Kilroy Realty Corporation	KRC	NYSE
KRNY	Kearny Financial Corp.	KRNY	NASDAQ
KW	Kennedy-Wilson Holdings, Inc.	KW	NYSE
KYN	Kayne Anderson MLP/Midstream Investment Company	KYN	NYSE
LAMR	Lamar Advertising Company	LAMR	NASDAQ
LCII	LCI Industries (LCII)	LCII	NYSE



LDL	Lydall, Inc.	LDL	NYSE
LEAF	Leaf Group Ltd.	LEAF	NYSE
LECO	Lincoln Electric Holdings, Inc.	LECO	NASDAQ
LEE	Lee Enterprises, Incorporated	LEE	NYSE
LEJU	Leju Holdings Limited	LEJU	NYSE
LILA	Liberty Latin America Ltd.	LILA	NASDAQ
LILAK	Liberty Latin America Ltd.	LILAK	NASDAQ
LJPC	La Jolla Pharmaceutical Company	LJPC	NASDAQ
LMNX	Luminex Corporation	LMNX	NASDAQ
LN	LINE Corporation	LN	NYSE
LNDC	Landec Corporation	LNDC	NASDAQ
LNT	Alliant Energy Corporation	LNT	NASDAQ
LORL	Loral Space & Communications Inc.	LORL	NASDAQ
LPCN	Lipocine Inc.	LPCN	NASDAQ
LQDT	Liquidity Services, Inc.	LQDT	NASDAQ
LRN	K12 Inc.	LRN	NYSE
LSXMA	The Liberty SiriusXM Group	LSXMA	NASDAQ
LTC	LTC Properties, Inc.	LTC	NYSE
LTRPA	Liberty TripAdvisor Holdings, Inc.	LTRPA	NASDAQ
LX	LexinFintech Holdings Ltd.	LX	NASDAQ
LXP	Lexington Realty Trust	LXP	NYSE
LXU	LSB Industries, Inc.	LXU	NYSE
MACK	Merrimack Pharmaceuticals, Inc.	MACK	NASDAQ
MAIN	Main Street Capital Corporation	MAIN	NYSE
MANT	ManTech International Corporation	MANT	NASDAQ
MANU	Manchester United plc	MANU	NYSE
MATX	Matson, Inc.	MATX	NYSE
MBB	iShares MBS ETF	MBB	NASDAQ
MCF	Contango Oil & Gas Company	MCF	AMEX
MCRB	Seres Therapeutics, Inc.	MCRB	NASDAQ
MCRI	Monarch Casino & Resort, Inc.	MCRI	NASDAQ
MD	MEDNAX, Inc.	MD	NYSE
MDCA	MDC Partners Inc.	MDCA	NASDAQ



MDP	Meredith Corporation	MDP	NYSE
MEI	Method Electronics, Inc.	MEI	NYSE
MEIP	MEI Pharma, Inc.	MEIP	NASDAQ
MERC	Mercer International Inc.	MERC	NASDAQ
MGPI	MGP Ingredients, Inc.	MGPI	NASDAQ
MIDZ	Direxion Daily Mid Cap Bear 3X Shares	MIDZ	NYSE Arca
MIND	Mitcham Industries, Inc.	MIND	NASDAQ
MINI	Mobile Mini, Inc.	MINI	NASDAQ
MITT	AG Mortgage Investment Trust, Inc.	MITT	NYSE
MKTX	MarketAxess Holdings Inc.	MKTX	NASDAQ
MLNT	Melinta Therapeutics, Inc.	MLNT	NASDAQ
MNRO	Monro, Inc.	MNRO	NASDAQ
MNTX	Manitex International, Inc.	MNTX	NASDAQ
MOBL	MobileIron, Inc.	MOBL	NASDAQ
MODN	Model N, Inc.	MODN	NYSE
MOO	VanEck Vectors Agribusiness ETF	MOO	NYSE Arca
MPAA	Motorcar Parts of America, Inc.	MPAA	NASDAQ
MRC	MRC Global Inc.	MRC	NYSE
MSGN	MSG Networks, Inc.	MSGN	NYSE
MSTR	MicroStrategy Incorporated	MSTR	NASDAQ
MUB	iShares National Muni Bond ETF	MUB	NYSE Arca
MUFG	Mitsubishi UFJ Financial Group, Inc.	MUFG	NYSE
MUSA	Murphy USA Inc.	MUSA	NYSE
MVO	MV Oil Trust	MVO	NYSE
MWA	Mueller Water Products, Inc.	MWA	NYSE
NATI	National Instruments Corporation	NATI	NASDAQ
NCI	Navigant Consulting, Inc.	NCI	NYSE
NDSN	Nordson Corporation	NDSN	NASDAQ
NEOS	Neos Therapeutics, Inc.	NEOS	NASDAQ
NEP	NextEra Energy Partners, LP	NEP	NYSE
NHC	National HealthCare Corporation	NHC	AMEX
NHTC	Natural Health Trends Corp.	NHTC	NASDAQ
NLS	Nautilus, Inc.	NLS	NYSE



NM	Navios Maritime Holdings Inc.	NM	NYSE
NMFC	New Mountain Finance Corporation	NMFC	NYSE
NMIH	NMI Holdings, Inc.	NMIH	NASDAQ
NNN	National Retail Properties, Inc.	NNN	NYSE
NOAH	Noah Holdings Limited	NOAH	NYSE
NPO	EnPro Industries, Inc.	NPO	NYSE
NRE	NorthStar Realty Europe Corp.	NRE	NYSE
NRP	Natural Resource Partners L.P.	NRP	NYSE
NSA	National Storage Affiliates Trust	NSA	NYSE
NSTG	NanoString Technologies, Inc.	NSTG	NASDAQ
NTCT	NetScout Systems, Inc.	NTCT	NASDAQ
NTGR	NETGEAR, INC.	NTGR	NASDAQ
NTP	Nam Tai Property Inc.	NTP	NYSE
NTRP	Neurotrope, Inc.	NTRP	NASDAQ
NVMI	Nova Measuring Instruments Ltd.	NVMI	NASDAQ
NWPX	Northwest Pipe Company	NWPX	NASDAQ
NWS	News Corporation	NWS	NASDAQ
NX	Quanex Building Products Corporation	NX	NYSE
NYMT	New York Mortgage Trust, Inc.	NYMT	NASDAQ
OBE	Obsidian Energy Ltd.	OBE	NYSE
OCSL	Oaktree Specialty Lending Corporation	OCSL	NASDAQ
OEF	iShares S&P 100 ETF	OEF	NYSE Arca
OFIX	Orthofix Medical Inc.	OFIX	NASDAQ
OIS	Oil States International, Inc.	OIS	NYSE
OMN	OMNOVA Solutions Inc.	OMN	NYSE
ONDK	On Deck Capital, Inc.	ONDK	NYSE
ONVO	Organovo Holdings, Inc.	ONVO	NASDAQ
OPB	Opus Bank	OPB	NASDAQ
ORA	Ormat Technologies, Inc.	ORA	NYSE
ORAN	Orange S.A.	ORAN	NYSE
ORBC	ORBCOMM Inc.	ORBC	NASDAQ
ORI	Old Republic International Corporation	ORI	NYSE



ORMP	Oramed Pharmaceuticals Inc.	ORMP	NASDAQ
OSPN	OneSpan Inc.	OSPN	NASDAQ
OSUR	OraSure Technologies, Inc.	OSUR	NASDAQ
OTIC	Otonomy, Inc.	OTIC	NASDAQ
PAG	Penske Automotive Group, Inc.	PAG	NYSE
PBFX	PBF Logistics LP	PBFX	NYSE
PBRA	Petroleo Brasileiro S.A. - Petrobras	PBRA	NYSE
PBT	Permian Basin Royalty Trust	PBT	NYSE
PCH	PotlatchDeltic Corporation	PCH	NASDAQ
PCOM	Points International Ltd.	PCOM	NASDAQ
PCYG	Park City Group, Inc.	PCYG	NASDAQ
PDLI	PDL BioPharma, Inc.	PDLI	NASDAQ
PDS	Precision Drilling Corporation	PDS	NYSE
PEGA	Pegasystems Inc.	PEGA	NASDAQ
PERI	Perion Network Ltd.	PERI	NASDAQ
PETX	Aratana Therapeutics, Inc.	PETX	NASDAQ
PFSI	PennyMac Financial Services, Inc.	PFSI	NYSE
PFSW	PFSweb, Inc.	PFSW	NASDAQ
PGF	Invesco Financial Preferred ETF	PGF	NYSE Arca
PHX	Panhandle Oil and Gas Inc.	PHX	NYSE
PICO	PICO Holdings, Inc.	PICO	NASDAQ
PJC	Piper Jaffray Companies	PJC	NYSE
PJT	PJT Partners Inc.	PJT	NYSE
PKX	POSCO	PKX	NYSE
PLAB	Photronics, Inc.	PLAB	NASDAQ
PLOW	Douglas Dynamics, Inc.	PLOW	NYSE
PMT	Pennymac Mortgage Investment Trust	PMT	NYSE
PNFP	Pinnacle Financial Partners, Inc.	PNFP	NASDAQ
PNW	Pinnacle West Capital Corporation	PNW	NYSE
POWI	Power Integrations, Inc.	POWI	NASDAQ
PRAA	PRA Group, Inc.	PRAA	NASDAQ
PRAH	PRA Health Sciences, Inc.	PRAH	NASDAQ
PRI	Primerica, Inc.	PRI	NYSE
PRIM	Primoris Services Corporation	PRIM	NASDAQ



PSMT	PriceSmart, Inc.	PSMT	NASDAQ
PSQ	ProShares Short QQQ	PSQ	NYSE Arca
PST	ProShares UltraShort 7-10 Year Treasury	PST	NYSE Arca
PSXP	Phillips 66 Partners LP	PSXP	NYSE
PTR	PetroChina Company Limited	PTR	NYSE
PVL	Permianville Royalty Trust	PVL	NYSE
QGEN	QIAGEN N.V.	QGEN	NYSE
QTWO	Q2 Holdings, Inc.	QTWO	NYSE
QUAD	Quad/Graphics, Inc.	QUAD	NYSE
QUIK	QuickLogic Corporation	QUIK	NASDAQ
QUOT	Quotient Technology Inc.	QUOT	NYSE
RAIL	Freight Car America, Inc.	RAIL	NASDAQ
RBA	Ritchie Bros. Auctioneers Incorporated	RBA	NYSE
RCI	Rogers Communications Inc.	RCI	NYSE
RDI	Reading International, Inc.	RDI	NASDAQ
RDY	Dr. Reddy's Laboratories Limited	RDY	NYSE
RE	Everest Re Group, Ltd.	RE	NYSE
RECN	Resources Connection, Inc.	RECN	NASDAQ
REFR	Research Frontiers Incorporated	REFR	NASDAQ
REG	Regency Centers Corporation	REG	NASDAQ
REMX	VanEck Vectors Rare Earth/Strategic Metals ETF	REMX	NYSE Arca
RESN	Resonant Inc.	RESN	NASDAQ
RGLS	Regulus Therapeutics Inc.	RGLS	NASDAQ
RHP	Ryman Hospitality Properties, Inc.	RHP	NYSE
RICK	RCI Hospitality Holdings, Inc.	RICK	NASDAQ
RM	Regional Management Corp.	RM	NYSE
RNR	RenaissanceRe Holdings Ltd.	RNR	NYSE
RNWK	RealNetworks, Inc.	RNWK	NASDAQ
ROG	Rogers Corporation	ROG	NYSE
ROIC	Retail Opportunity Investments Corp.	ROIC	NASDAQ
RTEC	Rudolph Technologies, Inc.	RTEC	NYSE
RTH	VanEck Vectors Retail ETF	RTH	NYSE Arca
RUSHA	Rush Enterprises, Inc.	RUSHA	NASDAQ
RVNC	Revance Therapeutics, Inc.	RVNC	NASDAQ
RWM	ProShares Short Russell2000	RWM	NYSE Arca
RWR	SPDR Dow Jones REIT ETF	RWR	NYSE Arca
RWT	Redwood Trust, Inc.	RWT	NYSE
RXN	Rexnord Corporation	RXN	NYSE
RYI	Ryerson Holding Corporation	RYI	NYSE



RYN	Rayonier Inc.	RYN	NYSE
SAFT	Safety Insurance Group, Inc.	SAFT	NASDAQ
SANM	Sanmina Corporation	SANM	NASDAQ
SANW	S&W Seed Company	SANW	NASDAQ
SB	Safe Bulkers, Inc.	SB	NYSE
SBS	Companhia de Saneamento Basico do Estado de Sao Paulo	SBS	NYSE
SCHL	Scholastic Corporation	SCHL	NASDAQ
SDLP	Seadrill Partners LLC	SDLP	NYSE
SDR	SandRidge Mississippian Trust II	SDR	NYSE
SDT	SandRidge Mississippian Trust I	SDT	NYSE
SDY	SPDR S&P Dividend ETF	SDY	NYSE Arca
SEAC	SeaChange International, Inc.	SEAC	NASDAQ
SEIC	SEI Investments Company	SEIC	NASDAQ
SHO	Sunstone Hotel Investors, Inc.	SHO	NYSE
SHOO	Steven Madden, Ltd.	SHOO	NASDAQ
SHOS	Sears Hometown and Outlet Stores, Inc.	SHOS	NASDAQ
SIMO	Silicon Motion Technology Corporation	SIMO	NASDAQ
SITC	SITE Centers Corp.	SITC	NYSE
SIVR	Aberdeen Standard Physical Silver Shares ETF	SIVR	NYSE Arca
SJNK	SPDR Bloomberg Barclays Short Term High Yield Bond ETF	SJNK	NYSE Arca
SKYW	SkyWest, Inc.	SKYW	NASDAQ
SLGN	Silgan Holdings Inc.	SLGN	NASDAQ
SLX	VanEck Vectors Steel ETF	SLX	NYSE Arca
SMFG	Sumitomo Mitsui Financial Group, Inc.	SMFG	NYSE
SMRT	Stein Mart, Inc.	SMRT	NASDAQ
SND	Smart Sand, Inc.	SND	NASDAQ
SNN	Smith & Nephew plc	SNN	NYSE
SNR	New Senior Investment Group Inc.	SNR	NYSE
SOCL	Global X Social Media ETF	SOCL	NASDAQ
SOL	ReneSola Ltd	SOL	NYSE
SON	Sonoco Products Company	SON	NYSE
SOYB	Teucrium Soybean	SOYB	NYSE Arca
SPLV	Invesco S&P 500 Low Volatility ETF	SPLV	NYSE Arca
SPWH	Sportsman's Warehouse Holdings, Inc.	SPWH	NASDAQ



SPXC	SPX Corporation	SPXC	NYSE
SRC	Spirit Realty Capital, Inc.	SRC	NYSE
SREV	ServiceSource International, Inc.	SREV	NASDAQ
SRI	Stoneridge, Inc.	SRI	NYSE
SRS	ProShares UltraShort Real Estate	SRS	NYSE Arca
SRTY	ProShares UltraPro Short Russell2000	SRTY	NYSE Arca
SSI	Stage Stores, Inc.	SSI	NYSE
STAG	STAG Industrial, Inc.	STAG	NYSE
STAR	iStar Inc.	STAR	NYSE
STE	STERIS plc	STE	NYSE
STML	Stemline Therapeutics, Inc.	STML	NASDAQ
STON	StoneMor Partners L.P.	STON	NYSE
STRA	Strategic Education, Inc.	STRA	NASDAQ
STRL	Sterling Construction Company, Inc.	STRL	NASDAQ
SUP	Superior Industries International, Inc.	SUP	NYSE
SXC	SunCoke Energy, Inc.	SXC	NYSE
SYNC	Synacor, Inc.	SYNC	NASDAQ
SYNH	Syneos Health, Inc.	SYNH	NASDAQ
TBPH	Theravance Biopharma, Inc.	TBPH	NASDAQ
TCF	TCF Financial Corporation	TCF	NYSE
TCO	Taubman Centers, Inc.	TCO	NYSE
TCRD	THL Credit, Inc.	TCRD	NASDAQ
TCX	Tucows Inc.	TCX	NASDAQ
TEF	Telefonica, S.A.	TEF	NYSE
TEO	Telecom Argentina S.A.	TEO	NYSE
TERP	TerraForm Power, Inc.	TERP	NASDAQ
TFSL	TFS Financial Corporation	TFSL	NASDAQ
TGI	Triumph Group, Inc.	TGI	NYSE
THR	Thermon Group Holdings, Inc.	THR	NYSE
THRM	Gentherm Incorporated	THRM	NASDAQ
TI	Telecom Italia S.p.A.	TI	NYSE
TIP	iShares TIPS Bond ETF	TIP	NYSE Arca
TITN	Titan Machinery Inc.	TITN	NASDAQ
TLGT	Teligent, Inc.	TLGT	NASDAQ
TMK	Torchmark Corporation	TMK	NYSE
TMST	TimkenSteel Corporation	TMST	NYSE
TNK	Teekay Tankers Ltd.	TNK	NYSE
TNP	Tsakos Energy Navigation Limited	TNP	NYSE
TOUR	Tuniu Corporation	TOUR	NASDAQ



TOWN	TowneBank	TOWN	NASDAQ
TRMK	Trustmark Corporation	TRMK	NASDAQ
TRUE	TrueCar, Inc.	TRUE	NASDAQ
TRX	Tanzanian Gold Corporation	TRX	AMEX
TSE	Trinseo S.A.	TSE	NYSE
TSU	Tim Participacoes S.A.	TSU	NYSE
TTC	The Toro Company	TTC	NYSE
TTEK	Tetra Tech, Inc.	TTEK	NASDAQ
TTMI	TTM Technologies, Inc.	TTMI	NASDAQ
TU	TELUS Corporation	TU	NYSE
TUES	Tuesday Morning Corporation	TUES	NASDAQ
TVTY	Tivity Health, Inc.	TVTY	NASDAQ
TWI	Titan International, Inc.	TWI	NYSE
UAN	CVR Partners, LP	UAN	NYSE
UBIO	ProShares UltraPro Nasdaq Biotechnology	UBIO	NASDAQ
UDN	Invesco DB US Dollar Index Bearish Fund	UDN	NYSE Arca
UDR	UDR, Inc.	UDR	NYSE
UEIC	Universal Electronics Inc.	UEIC	NASDAQ
UFPI	Universal Forest Products, Inc.	UFPI	NASDAQ
UGI	UGI Corporation	UGI	NYSE
UGL	ProShares Ultra Gold	UGL	NYSE Arca
UIHC	United Insurance Holdings Corp.	UIHC	NASDAQ
UNT	Unit Corporation	UNT	NYSE
URE	ProShares Ultra Real Estate	URE	NYSE Arca
URTY	ProShares UltraPro Russell2000	URTY	NYSE Arca
USD	ProShares Ultra Semiconductors	USD	NYSE Arca
USMV	iShares Edge MSCI Min Vol USA ETF	USMV	BATS
USNA	USANA Health Sciences, Inc.	USNA	NYSE
VBLT	Vascular Biogenics Ltd.	VBLT	NASDAQ
VBR	Vanguard Small-Cap Value ETF	VBR	NYSE Arca
VCRA	Vocera Communications, Inc.	VCRA	NYSE
VCYT	Veracyte, Inc.	VCYT	NASDAQ
VDE	Vanguard Energy ETF	VDE	NYSE Arca
VEC	Vectrus, Inc.	VEC	NYSE
VEON	VEON Ltd.	VEON	NASDAQ
VFH	Vanguard Financials ETF	VFH	NYSE Arca
VIV	Telefonica Brasil S.A.	VIV	NYSE



VIVO	Meridian Bioscience, Inc.	VIVO	NASDAQ
VLRS	Controladora Vuela Compania de Aviacion, S.A.B. de C.V.	VLRS	NYSE
VOC	VOC Energy Trust	VOC	NYSE
VOE	Vanguard Mid-Cap Value ETF	VOE	NYSE Arca
VOXX	VOXX International Corporation	VOXX	NASDAQ
VREX	Varex Imaging Corporation	VREX	NASDAQ
VSTO	Vista Outdoor Inc.	VSTO	NYSE
VTNR	Vertex Energy, Inc.	VTNR	NASDAQ
VVUS	VIVUS, Inc.	VVUS	NASDAQ
VXUS	Vanguard Total International Stock Index Fund ETF Shares	VXUS	NASDAQ
VXZB	iPath Series B S&P 500 VIX Mid-Term Futures ETN	VXZB	BATS
VYGR	Voyager Therapeutics, Inc.	VYGR	NASDAQ
VYM	Vanguard High Dividend Yield ETF	VYM	NYSE Arca
WAIR	Wesco Aircraft Holdings, Inc.	WAIR	NYSE
WBAI	500.com Limited	WBAI	NYSE
WBT	Welbilt, Inc.	WBT	NYSE
WCC	WESCO International, Inc.	WCC	NYSE
WD	Walker & Dunlop, Inc.	WD	NYSE
WEX	WEX Inc.	WEX	NYSE
WIT	Wipro Limited	WIT	NYSE
WLKP	Westlake Chemical Partners LP	WLKP	NYSE
WMC	Western Asset Mortgage Capital Corporation	WMC	NYSE
WMS	Advanced Drainage Systems, Inc.	WMS	NYSE
WNC	Wabash National Corporation	WNC	NYSE
WPP	WPP plc	WPP	NYSE
WRLD	World Acceptance Corporation	WRLD	NASDAQ
WSBF	Waterstone Financial, Inc.	WSBF	NASDAQ
WSR	Whitestone REIT	WSR	NYSE
WTFC	Wintrust Financial Corporation	WTFC	NASDAQ
WTR	Aqua America, Inc.	WTR	NYSE
XAN	Exantas Capital Corporation	XAN	NYSE
XBIT	XBiotech Inc.	XBIT	NASDAQ
XHR	Xenia Hotels & Resorts, Inc.	XHR	NYSE
XNCR	Xencor, Inc.	XNCR	NASDAQ
XPER	Xperi Corporation	XPER	NASDAQ
XPP	ProShares Ultra FTSE China 50	XPP	NYSE Arca



YCS	ProShares UltraShort Yen	YCS	NYSE Arca
ZAGG	ZAGG Inc	ZAGG	NASDAQ
ZBIO	ProShares UltraPro Short Nasdaq Biotechnology	ZBIO	NASDAQ
ZEUS	Olympic Steel, Inc.	ZEUS	NASDAQ
ZFGN	Zafgen, Inc.	ZFGN	NASDAQ
ZNH	China Southern Airlines Company Limited	ZNH	NYSE
ZSL	ProShares UltraShort Silver	ZSL	NYSE Arca

Regulatory questions may be directed to the MIAX Emerald Regulatory Department at Regulatory@MIAXOptions.com or (609) 897-7309.