

DATE: February 24, 2017

TO: MIAX PEARL Members

FROM: MIAX PEARL Regulatory Department

RE: Market for Underlying Security Used for Openings on MIAX PEARL for Newly Listed Option Classes Effective February 27, 2017

The following underlying symbols will start trading on MIAX PEARL beginning Monday, February 27, 2017, and, as set forth in MIAX PEARL Rule 503(a)(3), Market for the Underlying Security, MIAX PEARL shall use the exchange identified below as the “market for the underlying security” for purposes of Openings on the Exchange.

UNDERLYING SYMBOL	SECURITY NAME	OPTION SYMBOL	EXCHANGE FOR OPENING
ABBV	ABBVIE, INC.	ABBV	NYSE
ANF	ABERCROMBIE & FITCH COMPANY	ANF	NYSE
ATVI	ACTIVISION BLIZZARD, INC.	ATVI	NASDAQ
AEM	AGNICO-EAGLE MINES LIMITED	AEM	NYSE
AKAM	AKAMAI TECHNOLOGIES, INC.	AKAM	NASDAQ
BABA	ALIBABA GROUP HOLDING LIMITED	BABA	NYSE
AGN	ALLERGAN PLC	AGN	NYSE
ALLY	ALLY FINANCIAL, INC.	ALLY	NYSE
GOOGL	ALPHABET, INC. CLASS A	GOOGL	NASDAQ
GOOG	ALPHABET, INC. CLASS C	GOOG	NASDAQ
MO	ALTRIA GROUP, INC.	MO	NYSE
AMBA	AMBARELLA, INC.	AMBA	NASDAQ
AEO	AMERICAN EAGLE OUTFITTERS, INC.	AEO	NYSE
AIG	AMERICAN INTERNATIONAL GROUP, INC.	AIG	NYSE
FOLD	AMICUS THERAPEUTICS, INC.	FOLD	NASDAQ
AAPL	APPLE, INC.	AAPL	NASDAQ
ADM	ARCHER-DANIELS-MIDLAND COMPANY	ADM	NYSE
ADSK	AUTODESK, INC.	ADSK	NASDAQ
CAR	AVIS BUDGET GROUP, INC.	CAR	NASDAQ
BHI	BAKER HUGHES, INC.	BHI	NYSE
BAC	BANK OF AMERICA CORPORATION	BAC	NYSE
BCS	BARCLAYS PLC	BCS	NYSE
BBBY	BED BATH & BEYOND, INC.	BBBY	NASDAQ
BRKB	BERKSHIRE HATHAWAY, INC.	BRKB	NYSE
BMJ	BRISTOL-MYERS SQUIBB COMPANY	BMJ	NYSE
AVGO	BROADCOM LIMITED	AVGO	NASDAQ

COG	CABOT OIL & GAS CORPORATION	COG	NYSE
CPN	CALPINE CORPORATION	CPN	NYSE
CNQ	CANADIAN NATURAL RESOURCES LIMITED	CNQ	NYSE
CSIQ	CANADIAN SOLAR, INC.	CSIQ	NASDAQ
CCL	CARNIVAL CORPORATION	CCL	NYSE
CAT	CATERPILLAR, INC.	CAT	NYSE
CELG	CELGENE CORPORATION	CELG	NASDAQ
CX	CEMEX, S.A.B. DE C.V.	CX	NYSE
CTL	CENTURYLINK, INC.	CTL	NYSE
CF	CF INDUSTRIES HOLDINGS, INC.	CF	NYSE
LNG	CHENIERE ENERGY, INC.	LNG	NYSE MKT
CHK	CHESAPEAKE ENERGY CORPORATION	CHK	NYSE
CIT	CIT GROUP, INC.	CIT	NYSE
CME	CME GROUP, INC.	CME	NASDAQ
COH	COACH, INC.	COH	NYSE
CTSH	COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION	CTSH	NASDAQ
CL	COLGATE-PALMOLIVE COMPANY	CL	NYSE
CMA	COMERICA, INC.	CMA	NYSE
CLR	CONTINENTAL RESOURCES, INC.	CLR	NYSE
CREE	CREE, INC.	CREE	NASDAQ
CMI	CUMMINS, INC.	CMI	NYSE
FXE	CURRENCYSHARES EURO ETF	FXE	NYSE ARCA
DHI	D.R. HORTON, INC.	DHI	NYSE
DVA	DAVITA, INC.	DVA	NYSE
DAL	DELTA AIR LINES, INC.	DAL	NYSE
DKS	DICK'S SPORTING GOODS, INC.	DKS	NYSE
FAS	DIREXION DAILY FINANCIAL BULL 3X ETF	FAS	NYSE ARCA
NUGT	DIREXION DAILY GOLD MINERS BULL 3X ETF	NUGT	NYSE ARCA
TZA	DIREXION DAILY SMALL CAP BEAR 3X ETF	TZA	NYSE ARCA
TNA	DIREXION DAILY SMALL CAP BULL 3X ETF	TNA	NYSE ARCA
ETFC	E*TRADE FINANCIAL CORPORATION	ETFC	NASDAQ
EBAY	EBAY, INC.	EBAY	NASDAQ
EW	EDWARDS LIFESCIENCES CORPORATION	EW	NYSE
ETE	ENERGY TRANSFER EQUITY, L.P.	ETE	NYSE
ETP	ENERGY TRANSFER PARTNERS, L.P.	ETP	NYSE
EXEL	EXELIXIS, INC.	EXEL	NASDAQ
ESRX	EXPRESS SCRIPTS HOLDING COMPANY	ESRX	NASDAQ
XOM	EXXON MOBIL CORPORATION	XOM	NYSE
FB	FACEBOOK, INC.	FB	NASDAQ
FDX	FEDEX CORPORATION	FDX	NYSE
FCAU	FIAT CHRYSLER AUTOMOBILES N.V.	FCAU	NYSE
FITB	FIFTH THIRD BANCORP	FITB	NASDAQ
XLF	FINANCIAL SELECT SECTOR SPDR ETF	XLF	NYSE ARCA
AG	FIRST MAJESTIC SILVER CORPORATION	AG	NYSE

FCX	FREEMPORT-MCMORAN, INC.	FCX	NYSE
GSK	GLAXOSMITHKLINE PLC	GSK	NYSE
GFI	GOLD FIELDS LIMITED	GFI	NYSE
GPRO	GOPRO, INC.	GPRO	NASDAQ
HOG	HARLEY-DAVIDSON, INC.	HOG	NYSE
HL	HECLA MINING COMPANY	HL	NYSE
HTZ	HERTZ GLOBAL HOLDINGS, INC.	HTZ	NYSE
HES	HESS CORPORATION	HES	NYSE
HPE	HEWLETT PACKARD ENTERPRISE COMPANY	HPE	NYSE
HLT	HILTON WORLDWIDE HOLDINGS, INC.	HLT	NYSE
HFC	HOLLYFRONTIER CORPORATION	HFC	NYSE
HON	HONEYWELL INTERNATIONAL, INC.	HON	NYSE
HZNP	HORIZON PHARMA, PLC	HZNP	NASDAQ
HPQ	HP, INC.	HPQ	NYSE
HUM	HUMANA, INC.	HUM	NYSE
HUN	HUNTSMAN CORPORATION	HUN	NYSE
IAG	IAMGOLD CORPORATION	IAG	NYSE
INFY	INFOSYS LIMITED	INFY	NYSE
INTC	INTEL CORPORATION	INTC	NASDAQ
VXX	IPATH S&P 500 VIX ST FUTURES ETN	VXX	NYSE ARCA
TLT	ISHARES BARCLAYS 20+ YEAR TREASURY BOND	TLT	NASDAQ
LQD	ISHARES IBOXX \$ INVST GRADE CRP BOND	LQD	NYSE ARCA
EWZ	ISHARES MSCI BRAZIL CAPPED INDEX	EWZ	NYSE ARCA
EWY	ISHARES MSCI SOUTH KOREA CAPPED INDEX	EWY	NYSE ARCA
SLV	ISHARES SILVER TRUST	SLV	NYSE ARCA
JCP	J. C. PENNEY COMPANY, INC.	JCP	NYSE
JNJ	JOHNSON & JOHNSON	JNJ	NYSE
JNPR	JUNIPER NETWORKS, INC.	JNPR	NYSE
KBH	KB HOME	KBH	NYSE
KEY	KEYCORP	KEY	NYSE
KKR	KKR & COMPANY, L.P.	KKR	NYSE
LVS	LAS VEGAS SANDS CORPORATION	LVS	NYSE
LEN	LENNAR CORPORATION	LEN	NYSE
LOW	LOWE'S COMPANIES, INC.	LOW	NYSE
MNKD	MANNKIND CORPORATION	MNKD	NASDAQ
MPC	MARATHON PETROLEUM CORPORATION	MPC	NYSE
MAR	MARRIOTT INTERNATIONAL, INC.	MAR	NASDAQ
MTDR	MATADOR RESOURCES COMPANY	MTDR	NYSE
MPEL	MELCO CROWN ENTERTAINMENT LIMITED	MPEL	NASDAQ
KORS	MICHAEL KORS HOLDINGS LIMITED	KORS	NYSE
MBLY	MOBILEYE N.V.	MBLY	NYSE
TAP	MOLSON COORS BREWING COMPANY	TAP	NYSE
MDLZ	MONDELEZ INTERNATIONAL, INC.	MDLZ	NASDAQ
NTES	NETEASE, INC.	NTES	NASDAQ
NGD	NEW GOLD, INC.	NGD	NYSE MKT

NOK	NOKIA CORPORATION	NOK	NYSE
NQ	NQ MOBILE, INC.	NQ	NYSE
NVDA	NVIDIA CORPORATION	NVDA	NASDAQ
OAS	OASIS PETROLEUM, INC.	OAS	NYSE
OCLR	OCLARO, INC.	OCLR	NASDAQ
OCN	OCWEN FINANCIAL CORPORATION	OCN	NYSE
ORCL	ORACLE CORPORATION	ORCL	NYSE
PANW	PALO ALTO NETWORKS, INC.	PANW	NYSE
P	PANDORA MEDIA, INC.	P	NYSE
PYPL	PAYPAL HOLDINGS, INC.	PYPL	NASDAQ
PBR	PETROLEO BRASILEIRO PETROBRAS S.A.	PBR	NYSE
PFE	PFIZER, INC.	PFE	NYSE
PM	PHILIP MORRIS INTERNATIONAL, INC.	PM	NYSE
POT	POTASH CORPORATION OF SASKATCHEWAN, INC.	POT	NYSE
UUP	POWERSHARES DB US DOLLAR BULLISH ETF	UUP	NYSE ARCA
SVXY	PROSHARES SHORT VIX SHORT-TERM FUTURES	SVXY	NYSE ARCA
UCO	PROSHARES ULTRA BLOOMBERG CRUDE OIL	UCO	NYSE ARCA
SQQQ	PROSHARES ULTRAPRO SHORT QQQ	SQQQ	NASDAQ
PRU	PRUDENTIAL FINANCIAL, INC.	PRU	NYSE
RTN	RAYTHEON COMPANY	RTN	NYSE
RAI	REYNOLDS AMERICAN, INC.	RAI	NYSE
RAD	RITE AID CORPORATION	RAD	NYSE
COL	ROCKWELL COLLINS, INC.	COL	NYSE
SEAS	SEAWORLD ENTERTAINMENT, INC.	SEAS	NYSE
SIRI	SIRIUS XM HOLDINGS, INC.	SIRI	NASDAQ
SWKS	SKYWORKS SOLUTIONS, INC.	SWKS	NASDAQ
LUV	SOUTHWEST AIRLINES COMPANY	LUV	NYSE
KBE	SPDR S&P BANK ETF	KBE	NYSE ARCA
XME	SPDR S&P METALS & MINING ETF	XME	NYSE ARCA
KRE	SPDR S&P REGIONAL BANKING ETF	KRE	NYSE ARCA
XRT	SPDR S&P RETAIL ETF	XRT	NYSE ARCA
S	SPRINT CORPORATION	S	NYSE
SQ	SQUARE, INC.	SQ	NYSE
SPWR	SUNPOWER CORPORATION	SPWR	NASDAQ
STI	SUNTRUST BANKS, INC.	STI	NYSE
SYF	SYNCHRONY FINANCIAL	SYF	NYSE
SGYP	SYNERGY PHARMACEUTICALS, INC.	SGYP	NASDAQ
TASR	TASER INTERNATIONAL, INC.	TASR	NASDAQ
AMTD	TD AMERITRADE HOLDING CORPORATION	AMTD	NASDAQ
THC	TENET HEALTHCARE CORPORATION	THC	NYSE
TSLA	TESLA, INC.	TSLA	NASDAQ
TXN	TEXAS INSTRUMENTS, INC.	TXN	NASDAQ
BK	THE BANK OF NEW YORK MELLON CORPORATION	BK	NYSE
SCHW	THE CHARLES SCHWAB CORPORATION	SCHW	NYSE
KO	THE COCA-COLA COMPANY	KO	NYSE

GS	THE GOLDMAN SACHS GROUP, INC.	GS	NYSE
GT	THE GOODYEAR TIRE & RUBBER COMPANY	GT	NASDAQ
HD	THE HOME DEPOT, INC.	HD	NYSE
KR	THE KROGER COMPANY	KR	NYSE
PCLN	THE PRICELINE GROUP INCORPORATED	PCLN	NASDAQ
PG	THE PROCTER & GAMBLE COMPANY	PG	NYSE
WMB	THE WILLIAMS COMPANIES, INC.	WMB	NYSE
TXMD	THERAPEUTICSMD, INC.	TXMD	NYSE MKT
TIF	TIFFANY & COMPANY	TIF	NYSE
TMUS	T-MOBILE US, INC.	TMUS	NASDAQ
RIG	TRANSOCEAN, LTD.	RIG	NYSE
TRIP	TRIPADVISOR, INC.	TRIP	NASDAQ
TWTR	TWITTER, INC.	TWTR	NYSE
UAL	UNITED CONTINENTAL HOLDINGS, INC.	UAL	NYSE
UTX	UNITED TECHNOLOGIES CORPORATION	UTX	NYSE
VFC	V.F. CORPORATION	VFC	NYSE
VRX	VALEANT PHARMACEUTICALS INTERNATIONAL, INC.	VRX	NYSE
VLO	VALERO ENERGY CORPORATION	VLO	NYSE
GDX	VANECK VECTORS GOLD MINERS ETF	GDX	NYSE ARCA
OIH	VANECK VECTORS OIL SERVICES ETF	OIH	NYSE ARCA
SMH	VANECK VECTORS SEMICONDUCTOR ETF	SMH	NYSE ARCA
VIAB	VIACOM, INC.	VIAB	NASDAQ
V	VISA, INC.	V	NYSE
VOD	VODAFONE GROUP PLC	VOD	NASDAQ
WBA	WALGREENS BOOTS ALLIANCE, INC.	WBA	NASDAQ
WMT	WAL-MART STORES, INC.	WMT	NYSE
W	WAYFAIR, INC.	W	NYSE
WFT	WEATHERFORD INTERNATIONAL PLC	WFT	NYSE
WBMD	WEBMD HEALTH CORPORATION	WBMD	NASDAQ
WTW	WEIGHT WATCHERS INTL., INC.	WTW	NYSE
WFC	WELLS FARGO & COMPANY	WFC	NYSE
WDC	WESTERN DIGITAL CORPORATION	WDC	NASDAQ
WHR	WHIRLPOOL CORPORATION	WHR	NYSE
HEDJ	WISDOMTREE EUROPE HEDGED EQUITY ETF	HEDJ	NYSE ARCA
EPI	WISDOMTREE INDIA EARNINGS ETF	EPI	NYSE ARCA
DXJ	WISDOMTREE JAPAN HEDGED EQUITY FUND	DXJ	NYSE ARCA
WDAY	WORKDAY, INC.	WDAY	NYSE
XLNX	XILINX, INC.	XLNX	NASDAQ
AUY	YAMANA GOLD, INC.	AUY	NYSE
YELP	YELP, INC.	YELP	NYSE
ZNGA	ZYNGA, INC.	ZNGA	NASDAQ

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