Form 1 Page 1 Execution Page

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 ARRIVATION FOR AND AMENDMENTS TO ARRIVE CATION FOR

APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION

Date filed (MM/DD/YY):

OFFICIAL USE ONLY

FROM REGISTRATION PURSUANT TO SECTION 5 OF THE EXCHANGE ACT WARNING: Fallure to keep this form current and to file accurate supplementery information on a timely basis, or the failure to keep accurate books and records or otherwise to comply with the provisions of law applying to the conduct of the applicant would violate the federal securities laws and may result in disciplinary, administrative, or criminal action. INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS APPLICATION AMENDMENT NYSE Arca, Inc. 1. State the name of the applicant: SEC Provide the applicant's primary street address (Do not use a P.O. Box): Mail Processing 11 Wall Street, New York, NY 10005 Section. Provide the applicant's mailing address (if different): MAY 05 2016 11 Wall Street, New York, NY 10005 Wasnington DC 412 Provide the applicant's business telephone and facsimile number: 212-656-2938 212-656-8101 (Telephone) (Facsimile) Provide the name, title, and telephone number of a contact employee: Martha Redding 16019040 Assistant Secretary 212-656-293 (Name) (Telephone Number) 6. Provide the name and address of counsel for the applicant: SECURITIES AND EACH MIDE LUNIVISIBLE Martha Redding RECEPTOD NYSE Holdings LLC 7010 11 Wall Street, New York, NY 10005 December 31 PHYSIGH OF TRAUMIS & MARKETS 7. Provide the date applicant's fiscal year ends: □ Partnership 8. Indicate legal status of applicant:

Corporation □ Sole Proprietorship ☐ Limited Liability Company ☐ Other (specify): If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant entity was formed): (a) Date (MM/DD/YY): (b) State/Country of formation: (c) Statute under which applicant was organized: — Delaware General Corporation Law EXECUTION: The applicant consents that service of any civil action brought by , or notice of any proceeding before, the Securities and Exchange Commission in connection with the applicant's activities may be given by registered or certified mail or confirmed telegram to the applicant's contact employee at the main address, or mailing address if different, given in Items 2 and 3. The undersigned, being first duty sworm, deposes and says that he/she has executed this form on behalf of , and with the authority of , said applicant. The undersigned and applicant represent that the information and statements contained herein, including exhibits, schedules, or other documents att ached hereto. nation filed herewith, all of which are made a part hereot are current, true, and complete. NYSE Arca, Inc Date: (Name of applicant) Martha Redding, Assistant Secretary By: (Printed Name and Title) day of Subscribed and swom before me this (Notary Public) (Month) (Year) My Commission expires May 29, 2016 County of west chester State of NOW YORK

> Watery Public State of New York No. 01MA6262613 Qualified in Westehoster County Quantitation States May 29, 201

This page must always be completed in full with original, manual signature and notarization.

Affix notary stamp or seal where applicable.

SECURITIES AND EXCHANGE COMMISSION

Exhibits Accompanying Amendment
to

FORM 1 REGISTRATION STATEMENT
of
NYSE ARCA, INC.

May 3, 2016

EXHIBIT F

ACCOMPANYING AMENDMENT TO FORM 1 REGISTRATION STATEMENT

OF

NYSE Arca, Inc.

May 2016

A complete set of NYSE Arca, Inc.'s forms pertaining to application for membership, participation, or subscription, and application for approval as a person associated with a member, participant, or subscriber follows.

This information is publicly available on the Exchange's website at www.nyse.com.

NYSE Arca Equities, Inc.

Equity Trading Permit Short Form Application

NYSE Arca Equities Short Form ETP Membership Application and Agreement

To qualify for Short Form Equities Trading Permit (ETP) Membership on NYSE Arca, the applicant must be an approved NYSE Arca Options Trading Permit (OTP) Holder. Current OTP Holder applicants are eligible for expedited approval. To apply, please complete and submit this Short Form Application, Membership Agreement, Clearing Letter of Consent and NYSE Arca Equities User Agreement to:

NYSE Arca Equities
Attn: Client Relationship Services
Email: crs@nyx.com

KEY PERSONNEL		
Please identify the key pers functional equivalent of suc communications pertaining	connel who hold the below positions (or the individual the position, regardless of actual titles used by the Apple to our equities markets.	l whose responsibilities are the plicant Firm) and who will want to receive
Chief Executive Officer ("Cl	EO")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Financial Officer ("CF	0")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Compliance Officer ("	CCO")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Operations Officer ("C	000")	
Name:		CRD:
Phone:	Fax:	
Email:		
Head of Clearing		
Name:		CRD:
Phone:	Fax:	w
Email:		
Head of Connectivity		
Name:		CRD:
Phone:	Fax:	
Email:		
Head of Trading		
Name:		CRD:
Phone:	Fax:	
Email:		

SECTION 1 – Short Form Membersh	SECTION 1 – Short Form Membership Application				
Short Form Eligibility:					
Applicant is currently	a member in good standing of N	YSE Arca Options			
General Information					
Name of Applicant Broker-Dealer:			_		
Business Address:					
City:		State:	Zip Code:		
Business Phone:		Fax:			
Email:			<u> </u>		
Web Address, if any:					
CRD Number:		-			
NYSE Arca Options OTP ID:		_			
Designated Examining Authority:		-			
Contact Information					
Contact Name:					
Job Title / Position					
Phone:		Fax:			
Email:			<u></u>		
Type of Business to be Conducted	With Equity Trading Permit (C	heck all that apply)			
☐ Market Maker*		Public Customer			
☐ Clearing Services		Proprietary Tradi	ng		
Other					
* Please also complete Application for Registral	ion of Market Makers/Odd Lot Dealers				

SECTION 2 - Membership Agr	eement			
	to abide by the Bylaws and Rules of NYSE Arca Equities, Inc., as amended from time , interpretations, directives or decisions adopted by NYSE Arca Equities, Inc.			
Applicant Broker-Dealer authorizes any SRO, commodities exchange, governmental agency or similar entity to furnish to NYSE Arca, upon its request, any information that such person may have concerning the ability, business activities, and reputation of Applicant Broker-Dealer or its associated persons, and releases such person or entity from any and all liability in furnishing such information. Applicant Broker-Dealer authorizes NYSE Arca to make available to any governmental agency, SRO, commodities exchange or similar entity, any information it may have concerning the Applicant Broker-Dealer or its associated persons, and releases NYSE Arca from any and all liability in furnishing such information.				
application, including termination	eledges its obligation to update any and all information contained in any part of this of membership with another SRO, which may cause a change in the Applicant rstood that in that event, additional information may be required by NYSE Arca.			
Applicant Broker-Dealer:				
Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor:	Date:			
Print Name:	Title:			

NYSE Area ETP Short Form April 2014

SECTION 3 – Clearing Letter of Consent	
Notice of Consent – To be completed by Clea	ring ETP Holder of Application Broker-Dealer
The undersigned hereby represents the clearing Corporation ("NSCC"), and an approved ETP Ho	agency named below, a member of the National Securities Clearing lder of NYSE Arca, LLC, a facility of NYSE Arca.
	grees to accept full financial responsibility for all transactions effected illowing Applicant Broker-Dealer with the clearing agency:
Applicant Broker-Dealer	CRD# and/or SEC File#
Equities Rules and may be relied upon by NYSE	ee, letter of authorization, or notice of consent pursuant to NYSE Arca Arca Equities, NYSE Arca, Inc., the NSCC, and their respective of to NYSE Arca Equities Rules, as amended from time to time, and the Clearing ETP Holder.
Clearing ETP Holder (Broker-Dealer Name)	
Clearing ETP Holder (NSCC Clearing #)	·
Signature of Authorized Officer, Partner or Managing Member of Clearing ETP Holder ETP Holder	Signature of Authorized Officer, Partner or Managing Member, or Sole Proprietor of
Print Name / Title	Print Name / Title
Date	Date

SECTION 4 - NYSE Arca SM USER AGREEMENT	
and between NYSE Arca, an Illinois corporation, with its prin 60606 and the User, as identified below. NYSE Arca operat NYSE Arca will provide User with services of NYSE Arca pu	executed by NYSE Arca, LLC (hereinafter "NYSE Arca"), is made by icipal offices located at 100 S. Wacker Drive, Suite 1800, Chicago, IL les an exchange trading facility of NYSE Arca Equities for securities, rsuant to the terms of this User Agreement. Use of NYSE Arca is and Procedures of NYSE Arca Equities, as amended from time to
User:	
Business Address:	
Corporate Form:	
State of Incorporation:	
Telephone: F	Primary Contact:
Fax:	Email:
hereto and incorporated herein by reference. The following Aginitialed the space below. Routing Agreement (Required for Ethrough Archipelago Securities, LL market centers and Broker-Dealers	er Agreement General Terms and Conditions, which are attached ireement will be incorporated herein by reference, if the User has ETP Holders or Sponsored Participants that elect to route orders C, a registered broker-dealer and facility of NYSE Arca, Inc., to other is. By initialing the space provided, User agrees to be bound by the reement and to pay the requisite fees, if any, for order routing.)
In witness whereof, the parties hereby cause this User Agreem on this cover sheet is in lieu of and has the same effect as sign	nent to be executed by their duly authorized representatives. Signature lature on each page of the attached documents.
Accepted on behalf of User:	Accepted on behalf of NYSE Arca, Inc.:
(Print Company Name)	
By (Signature):	By (Signature):
Name:	Name:
Title:	
Date:	Date:
With Notices To:	
User Name:	NYSE Arca, Inc.
Contact Name:	
Address:	100 S. Wacker Drive, Suite 1800
City, State, Zip:	Chicago, IL 60606

Provided that User is an authorized ETP Holder (as defined herein) or a Sponsored Participant (as defined herein) in good standing with NYSE Arca and has paid the requisite fees, NYSE Arca will provide User with access pursuant to these general terms and conditions, which User hereby acknowledges and accepts. User agrees to abide by these general terms and conditions and be bound by the Certificate of Incorporation, Bylaws, Rules and Procedures of NYSE Arca Equities, as amended from time to time, ("NYSE Arca Equities Rules") with respect to NYSE Arca.

For purposes of this Agreement, an "ETP" shall refer to an Equity Trading Permit issued by NYSE Arca Equities for effecting approved securities transactions on NYSE Arca. An "ETP Holder" shall refer to a Sole Proprietorship, Partnership, Corporation, LLC or other organization in good standing that has been issued an ETP in accordance with NYSE Arca Equities Rules. A Sponsored Participant shall refer to a person that has entered into a sponsorship arrangement with an ETP Holder (a "Sponsoring ETP Holder") as described in Section 1(e) below. An Authorized Trader shall refer to a person authorized to submit orders to NYSE Arca on behalf of his or her User. As used in this Agreement, the requirement that a User "comply with NYSE Arca Equities Rules" or "act in compliance with NYSE Arca Equities Rules" (or such other similar phrases) shall mean, with respect to a Sponsored Participant, that such Sponsored Participant shall comply with NYSE Arca Equities Rules as if it were an ETP Holder.

1. RIGHTS AND OBLIGATIONS.

- (a) NYSE Arca, LLC ("NYSE Arca"). Pursuant to the terms and conditions of this User Agreement, NYSE Arca grants the User a personal, non-exclusive, non-transferable right to access NYSE Arca solely for the intended purpose and only in accordance with the then-current NYSE Arca Equities Rules. For purposes of this User Agreement, the "intended purpose" is to place orders with NYSE Arca for execution and to receive information from NYSE Arca about such orders. The User is solely and exclusively responsible for any hardware, software, communication equipment, communication services, information formatting requirements or other items or services necessary for accessing and using NYSE Arca.
- (b) Restrictions on Use; Security. User may not sell, lease, furnish or otherwise permit or provide access to NYSE Arca or any information or data made available therein to any other entity or to any individual that is not User's employee, customer or agent or a User's Sponsored Participant. User accepts full responsibility for its employee's, customers', and agent's use of NYSE Arca, including any Sponsored Participants' use, which use must comply with NYSE Arca Equities Rules and the User's obligations under this User Agreement. User will take reasonable security precautions to prevent unauthorized use of or access to NYSE Arca, including unauthorized entry of information into NYSE Arca, or the information and data made available therein. User understands and agrees that User is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of Authorized Traders, and for the trading and other consequences thereof.
- (c) <u>User Information</u>. User hereby grants to NYSE Arca a perpetual, non-exclusive, world-wide, irrevocable, royalty-free, fully-paid-up license to use, reproduce, display, compile and modify the information and data supplied by User to NYSE Arca, including without limitation, information or data of or related to User's customers and agents. User represents and warrants that, with respect to such information and data (i) User owns or has sufficient rights in and to such information and data to authorize NYSE Arca to perform all of its obligations under this User Agreement with respect thereto and that may be required for User's or NYSE Arca's use of such information, (ii) use or delivery of such information by User or NYSE Arca will not violate the proprietary rights (including, without limitation, any privacy rights) of any party, and (iii) use or delivery of the information by User or NYSE Arca will not violate any applicable law or regulation.
- (d) <u>Fees.</u> User will pay when due all amounts payable to third parties arising from User's access to NYSE Arca. Such amounts include, but are not limited to, applicable exchange and regulatory fees.
- (e) <u>Sponsored Participants</u>. Notwithstanding NYSE Arca's execution and delivery to User of a copy of this Agreement, if User is a Sponsored Participant, and not an ETP Holder, as a condition to initiating and continuing access to NYSE Arca, (i) User must enter into and maintain customer agreements with one or more Sponsoring ETP Holders establishing proper relationship(s) and account(s) through which User may trade on NYSE Arca. Such customer agreement(s) must incorporate the Sponsorship Provisions set forth in NYSE Arca Equities Rules.
- (f) <u>Order Designation</u>. All orders other than orders entered into NYSE Arca by a Sponsored Participant, and any trades resulting there from shall be the responsibility of the ETP Holder from which they originated.

2. NYSE Arca RULES.

(a) <u>Compliance with NYSE Arca Equities Rules</u>. User represents and warrants that: (i) it will use NYSE Arca only if and when it is duly authorized to use NYSE Arca pursuant to NYSE Arca Equities Rules and User is an ETP Holder or User is a Sponsored Participant; (ii) it will only use NYSE Arca in compliance with NYSE Arca Equities Rules; and, (iii) it is and will remain responsible for its use of NYSE Arca and the use of NYSE Arca by any of its employees, customers, and agents or by any Sponsored Participants whose use of NYSE Arca is sponsored by the User; (iv) it will maintain and keep current a list of all Authorized Traders who may obtain access to NYSE Arca on behalf of the User and/or the User's Sponsored Participant(s); and (v) it will familiarize all Authorized Traders with all of User's obligations under this Agreement and will assure that they receive appropriate training prior to any use or access to NYSE Arca.

- (b) <u>Monitoring</u>. User acknowledges and agrees that NYSE Arca Equities will monitor the use of NYSE Arca by User for compliance with all applicable laws and regulations, including, without limitation, NYSE Arca Equities Rules. User acknowledges its responsibility to monitor its employees, agents and customers for compliance with NYSE Arca Equities Rules, the rules and regulations of any self-regulatory organizations of which User is a member and all applicable federal and state laws.
- (c) Integrity of NYSE Arca. User will not (i) materially alter the information or data supplied to or received from NYSE Arca in violation of NYSE Arca Equities Rules, (ii) materially affect the integrity of the information or data supplied to or received from NYSE Arca, or (iii) supply or render information or data to or from NYSE Arca that is illegal, inaccurate, unfair, uninformative, fictitious, misleading or discriminatory. User will not permit its employees, agents or customers to interfere with or adversely affect NYSE Arca or any use thereof by any other authorized individuals or entities.
- (d) <u>Indemnity</u>. User agrees to indemnify, defend and hold NYSE Arca, NYSE Arca, Inc. and NYSE Arca Equities harmless from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, and attorneys' fees, arising from or as a result of User's breach of its obligations under this User Agreement or otherwise from its use of NYSE Arca.

3. CHANGE OF NYSE Arca, LLC.

User acknowledges and agrees that nothing in this User Agreement constitutes an understanding by NYSE Arca to continue any aspect in its current form. NYSE Arca may from time to time make additions, deletions or modifications to NYSE Arca. User acknowledges and agrees that NYSE Arca may temporarily or permanently, unilaterally condition, modify or terminate the right of any individuals or entities to access, receive or use NYSE Arca in accordance with NYSE Arca Equities Rules. Further, NYSE Arca may temporarily or permanently terminate the right of any individuals or entities to access NYSE Arca at any time if so instructed by NYSE Arca Equities.

4. OWNERSHIP.

User acknowledges and agrees that all patents, copyrights, trade secrets, trademarks and other property rights in or related to NYSE Arca and the information and data made available through NYSE Arca (including compilation rights in information and data) are and will remain the exclusive property of NYSE Arca or its licensors. User will attribute the source as appropriate under all circumstances.

5. INFORMATION.

- (a) <u>Confidentiality</u>. Both parties acknowledge that (i) NYSE Arca and the information and data made available therein, incorporate confidential and proprietary information developed, acquired by or licensed to NYSE Arca, including confidential information of NYSE Arca Equities or other entities, and (ii) each party may receive or have access to other proprietary or confidential information disclosed and marked as confidential by the disclosing party (collectively, the "Information"). The receiving party will use the disclosing party's Information solely to perform its obligations under this User Agreement. The receiving party will take all precautions necessary to safeguard the confidentiality of the disclosing party's Information, including without limitation, (i) those taken by the receiving party to protect its own confidential information and (ii) those which the disclosing party may reasonably request from time to time.
- (b) <u>Disclosure</u>. The receiving party will not disclose, in whole or in part, the disclosing party's Information to any person, except as specifically authorized under this User Agreement. User may not disclose any data or compilations of data made available to User by NYSE Arca without the express, prior written authorization of NYSE Arca. User acknowledges that any and all information provided to NYSE Arca by the User will be disclosed to NYSE Arca Equities for use in accordance with NYSE Arca Equities Rules. User hereby consents to such disclosure. NYSE Arca may also disclose Information in accordance with its regulatory obligations.
- (c) <u>Unauthorized Use or Disclosure</u>. The parties acknowledge that any unauthorized use or disclosure of the disclosing party's Information may cause irreparable damage to the disclosing party. If an unauthorized use or disclosure occurs, the receiving party will immediately notify the disclosing party and take at its expense all steps necessary to recover the disclosing party's Information and to prevent its subsequent unauthorized use or dissemination, including availing itself of actions for seizure and injunctive relief. If the receiving party fails to take these steps in a timely and adequate manner, the disclosing party may take them at the receiving party's expense, and the receiving party will provide the disclosing party with its reasonable cooperation in such actions that the disclosing party may request.
- (d) <u>Limitation</u>. The receiving party will have no confidentiality obligation with respect to any portion of the disclosing party's Information that (i) the receiving party independently developed before receiving the Information from the disclosing party, (ii) the receiving party lawfully obtained from a third party under no obligation of confidentiality, (iii) is or becomes available to the public other than as a result of an act or omission of the receiving party or any of its employees or (iv) the receiving party is compelled to disclose pursuant to legal process provided by a court of competent jurisdiction or other governmental entity to whose jurisdiction the receiving party is subject.

6. DISCLAIMER OF WARRANTY.

NYSE Arca IS MADE AVAILABLE "AS IS" AND WITHOUT WARRANTY OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE NYSE Arca AND ANY DATA, SOFTWARE OR INFORMATION MADE AVAILABLE THEREIN BY NYSE Arca, NYSE Arca EQUITIESOR ITS OR THEIR LICENSORS, WHETHER EXPRESS, IMPLIED, OR STATUTORY, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY NYSE Arca, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES, LICENSORS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, ACCURACY, UNINTERRUPTED USE, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR NON-INFRINGEMENT AND ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED.

7. NO LIABILITY FOR TRADES.

USER UNDERSTANDS AND AGREES THAT (I) NYSE Arca IS NOT DIRECTLY OR INDIRECTLY A PARTY TO OR A PARTICIPANT IN ANY TRADE OR TRANSACTION ENTERED INTO OR OTHERWISE CONDUCTED THROUGH NYSE Arca, AND (II) NYSE Arca IS NOT LIABLE IN ANY MANNER TO ANY PERSON (INCLUDING WITHOUT LIMITATION THE USER AND ANY PERSON FOR WHOM THE USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACT BY

MEANS OF NYSE Arca TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. NEITHER NYSE Arca, NYSE Arca EQUITIES, OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF NYSE Arca OR ITS USE. ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF NYSE Arca TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, NYSE Arca WILL BE ABSORBED BY THE USER OR THE ETP HOLDER SPONSORING THE USER, THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO NYSE Arca. IF THIS SECTION IS DEEMED TO CONFLICT WITH ANY OTHER SECTION OF THIS USER AGREEMENT, THIS SECTION WILL SUPERCEDE SUCH OTHER SECTION.

8. NO CONSEQUENTIAL DAMAGES.

UNDER NO CIRCUMSTANCES WILL NYSE Arca, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF NYSE Arca, INTERRUPTION IN USE OR AVAILABILITY NYSE Arca, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION.

9. TERM AND TERMINATION.

This User Agreement will be effective as of the Effective Date and will remain in effect thereafter until terminated by either party upon notice to the other party. Termination will be effective at the close of trading in the affected markets and applications on the day that notice of termination is received by the other party hereto. NYSE Arca may terminate this User Agreement immediately if (i) the User is in breach of this User Agreement for any reason, (ii) any representations made by the User in connection with this User Agreement are or become false or misleading or (iii) NYSE Arca is notified that User is no longer an ETP Holder or Sponsored Participant in good standing with NYSE Arca Equities or otherwise is no longer authorized to access NYSE Arca. Upon the termination of this User Agreement for any reason, all rights granted to User hereunder will cease. The provisions of Sections 2(d), 5, 6, 7, 8, 9, and 12 will survive the termination or expiration of this User Agreement for any reason. In no event will termination of this User Agreement relieve User of any obligations incurred through its use of NYSE Arca.

10. ASSIGNMENT.

User shall not assign, delegate or otherwise transfer this User Agreement or any of its rights or obligations hereunder without NYSE Arca's prior approval, which will not be unreasonably withheld. NYSE Arca may assign or transfer this User Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

11. FORCE MAJEURE.

Notwithstanding any other term or condition of this User Agreement to the contrary, neither NYSE Arca nor User will be obligated to perform or observe their obligations undertaken in this User Agreement if prevented or hindered from doing so by any circumstances found to be beyond their control.

12. MISCELLANEOUS.

NYSE Arca ETP Short Form April 2014

All notices or approvals required or permitted under this User Agreement must be given in writing to the address specified above. Any waiver or modification of this User Agreement will not be effective unless executed in writing and signed by the other party. This User Agreement will bind each party's successors-in-interest. This User Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. All disputes, claims or controversies between the parties hereto will be submitted to arbitration in New York, New York pursuant to the applicable NYSE Arca Equities Rules, if permissible under such rules, and otherwise under the rules of the American Arbitration Association; provided, however, that nothing herein will prevent NYSE Arca from seeking interim injunctive relief in any court of competent jurisdiction. Both parties submit to the non-exclusive jurisdiction of the state and federal courts in and for New York, New York, USA for the resolution of any dispute arising under this User Agreement. If any provision of this User Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this User Agreement. No action arising out of any claimed breach of this User Agreement may be brought by either party more than one (1) year after the cause of action arose. This User Agreement, together with the applicable NYSE Arca Equities Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between NYSE Arca and User with respect to its subject matter and supersedes all prior writings or understandings.

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SECTION 5- ARCHIPELAGO SECURITIES™ ROUTING AGREEMENT

Provided that User is an ETP Holder or Sponsored Participant of NYSE Arca Equities and subject to a valid, ongoing User Agreement with NYSE Arca, LLC; Archipelago Securities, LLC (hereinafter "Archipelago Securities"), a broker-dealer registered in accordance with Section 15(a) of the Securities Exchange Act of 1934, agrees to act as agent to User for the purpose of providing certain routing services, as described herein, provided that User is bound by the terms and conditions of this Routing Agreement and any applicable rules and interpretations of NYSE Arca Equities Rules. Whereas Archipelago Securities provides certain order routing services for NYSE Arca Equities, and User desires to use the order routing facilities of NYSE Arca Equities and NYSE Arca, for good and valuable consideration, User and Archipelago Securities agree as follows:

1. ROUTING SERVICES.

Archipelago Securities, a wholly owned subsidiary of Archipelago Holdings, Inc., agrees to act as agent of the User for routing orders entered into NYSE Arca to the applicable market centers or broker-dealers for execution, whenever such routing is required in accordance with NYSE Arca Equities Rules. User understands and agrees that orders executed on its behalf shall at all times be subject to the terms and conditions of NYSE Arca Equities Rules.

2. ORDERS NOT ELIGIBLE FOR ROUTING SERVICES.

User agrees that Archipelago Securities will not execute any orders that are not eligible for order routing in accordance with NYSE Arca Equities Rules. For example, NYSE Arca Equities Rules may provide that if a User has indicated that an order must not be routed to another market center for execution (*i.e.*, by designating an order as a fill-or-return or fill-or-return plus order), the order will not be eligible for routing services provided by Archipelago Securities.

3. CANCELLATION: MODIFICATION OF ORDERS.

User agrees that any requests regarding cancellation or modification of orders shall be subject to NYSE Arca Equities Rules. User understands that such rules may provide that requests to cancel orders while the order is routed away to another market center and remains outside NYSE Arca will be processed by Archipelago Securities, subject to the applicable trading rules of the relevant market center.

4. TRANSMISSION OF ORDER INSTRUCTIONS.

User agrees that all orders on its behalf must be transmitted to Archipelago Securities through NYSE Arca. User agrees that NYSE Arca is its exclusive mechanism for purposes of transmitting orders on its behalf to Archipelago Securities and for receiving notice regarding such orders. Archipelago Securities shall be entitled to rely upon and act in accordance with any order instructions received from NYSE Arca on behalf of User. User agrees that all order executions effected on behalf of User pursuant to this agreement shall be reported by Archipelago Securities to NYSE Arca. The User shall be notified of such executions through NYSE Arca.

5. CLEARANCE AND SETTLEMENT.

User agrees that all transactions executed on its behalf shall be processed in accordance with NYSE Arca Equities Rules. If User is an ETP Holder, User agrees that orders executed or its behalf by Archipelago Securities shall be automatically processed by NYSE Arca for clearance and settlement on a locked-in basis. If User is a Sponsored Participant, User agrees that all orders executed on its behalf by Archipelago Securities shall be cleared and settled, using the relevant Sponsoring ETP Holder's mnemonic (or its clearing firm's mnemonic as applicable).

6. TERM OF AGREEMENT.

This Routing Agreement will be effective as of the Effective Date and will remain in effect thereafter until terminated by either party upon notice to the other party. Termination will be effective at the close of trading in the affected markets and applications on the day that notice of termination is received by the other party hereto. Archipelago Securities may terminate this Routing Agreement immediately if (i) the User is in breach of this Routing Agreement for any reason, (ii) any representations made by the User in connection with this Agreement or the User Agreement are or become false or misleading or (iii) User is no longer a ETP Holder or Sponsored Participant of NYSE Arca Equities or otherwise authorized to access NYSE Arca. Upon the termination of this Agreement or the User Agreement for any reason, all rights granted to User hereunder will cease. The provisions of Paragraphs 7, 8, 9 and 10 will survive the termination or expiration of this Routing Agreement for any reason. In no event will termination of this Routing Agreement relieve User of any obligations incurred through its use of NYSE Arca.

SECTION 5- ARCHIPELAGO SECURITIES™ ROUTING AGREEMENT (CONTINUED)

7. INDEMNITY.

User agrees to indemnify, defend and hold Archipelago Securities harmless from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, and attorneys' fees, arising from or as a result of User's breach of its obligations under this Agreement or otherwise from its use of the Archipelago Securities routing services.

8. DISCLAIMER OF WARRANTY.

ROUTING SERVICES ARE PROVIDED "AS IS" AND WITHOUT WARRANTY OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE ROUTING SERVICE, WHETHER EXPRESS, IMPLIED, OR STATUTORY, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY ARCHIPELAGO SECURITIES, NYSE Area EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES, LICENSORS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, ACCURACY, UNINTERRUPTED USE, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR NON-INFRINGEMENT AND ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED.

9. NO LIABILITY FOR TRADES.

USER UNDERSTANDS AND AGREES THAT (I) ARCHIPELAGO SECURITIES IS NOT LIABLE IN ANY MANNER TO ANY PERSON (INCLUDING WITHOUT LIMITATION THE USER AND ANY PERSON FOR WHOM THE USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACTION BY MEANS OF NYSE Area TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. NEITHER ARCHIPELAGO SECURITIES, OR ITS AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF THE ROUTING SERVICE OR ITS USE. ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF ARCHIPELAGO SECURITIES TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, NYSE Area WILL BE ABSORBED BY THE USER OR THE ETP HOLDER SPONSORING THE USER, THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO NYSE Area. IF THIS SECTION IS DEEMED TO CONFLICT WITH ANY OTHER SECTION OF THIS USER AGREEMENT, THIS SECTION WILL SUPERCEDE SUCH OTHER SECTION.

10. NO CONSEQUENTIAL DAMAGES. UNDER NO CIRCUMSTANCES WILL ARCHIPELAGO SECURITIES, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF ROUTING SERVICES, INTERRUPTION IN USE OR AVAILABILITY OF ARCHIPELAGO SECURITIES, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION.

11. ASSIGNMENT.

User shall not assign, delegate or otherwise transfer this Routing Agreement or any of its rights or obligations hereunder without Archipelago Securities' prior approval, which will not be unreasonably withheld. Archipelago Securities may assign or transfer this Routing Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

12. FORCE MAJEURE,

Notwithstanding any other term or condition of this Routing Agreement to the contrary, neither Archipelago Securities nor User will be obligated to perform or observe their obligations undertaken in this Routing Agreement if prevented or hindered from doing so by any circumstances found to be beyond their control.

SECTION 5- ARCHIPELA	GO SECURITIES ''* ROUTING AGREEMENT (CONTINUED)			
13. MISCELLANEOUS. All notices or approvals required or permitted under this Routing Agreement must be given in writing to the address specified above. Any waiver or modification of this Routing Agreement will not be effective unless executed in writing and signed by the other party, provided that this agreement shall at all times be interpreted to effect the rules and interpretations of NYSE Arca Equities, as applicable. This Routing Agreement will bind each party's successors-in-interest. This Routing Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. All disputes, claims or controversies between the parties hereto will be submitted to arbitration in New York, New York. This Routing Agreement, together with the applicable NYSE Arca Equities Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between Archipelago Securities and User with respect to its subject matter and supersedes all prior writings or understandings.				
Execution of this Agreeme alternatively, by signing in the	nt by an ETP Holder may be effected by initialing the User Agreement for NYSE Arca or, he space provided below:			
Accepted on behalf of ETP Ho	ilder:			
Ву:				
Name:				
Title:				
Date:	· · · · · · · · · · · · · · · · · · ·			

NYSE Arca Equities Retail Order Tier Form

Instructions: This form is to be completed by NYSE Arca ETP Holders who would like to participate in the Retail Order Tier.

A "Retail Order" is an agency order <u>or a riskless principal order that meets the criteria of FINRA Rule 5320.03</u> that originates from a natural person and is submitted to the Exchange by an ETP Holder, provided that no change is made to the terms of the order with respect to price or side of market and the order does not originate from a trading algorithm or any other computerized methodology.

Please note: If an NYSE Arca ETP Holder uses an algorithm to determine to send an existing Retail Order into the NYSE Arca Equities Retail Order Tier program, such order is eligible for the Retail Order Tier and is not deemed to have originated from a trading algorithm strictly as a result of the brokerage firm's algorithm, provided that the NYSE Arca ETP Holder assures that the Retail Order meets the underlying requirements, including that the routing algorithm does not change the terms of the order with respect to price or side of the market. Additionally, the Retail Order provision preventing changes to the terms of the order (e.g. price or side) is not meant to prevent an NYSE Arca ETP Holder from ensuring a better execution experience for the retail customer, such as by adding a limit to a Retail Order.

An NYSE Arca ETP Holder may submit Retail Orders in a riskless principal capacity, as well as an agency capacity, provided that the member (1) submits a report, contemporaneously with the execution of the facilitated order, identifying the trade as riskless principal to FINRA (or another self-regulatory organization if not required under FINRA rules); and (2) has written policies and procedures to ensure that riskless principal transactions for which the member is relying on this exception comply with applicable FINRA rules.

1. Customer Information

convenience.

Name of NYSE Arca ETP Holder			¥ ,		
Web CRD Number		 			
Business Contact Name					
Business Contact Phone		-		-	
Business Contact E-Mail					

2. Business and Technology Questions

As an NYSE Arca ETP Member Organization, do you currently have connectivity to the Exchange?	— Yes	No
Is this connection utilized for order routing, receiving market data or both?	Order Ro Receiving Both	outing g Market Data
If you are routing retail order flow on behalf of one or more broker-dealer customers, you separate document with this firm or firms. We have a Broker Dealer Customer Form that		

3. Retail Order Tier Supervisory Requirements

By executing this Application, the Applicant attests that substantially all orders submitted to NYSE Arca by the Applicant via Retail Order Ports or tagged as "Retail Orders" in the order entry message are Retail Orders and would meet the qualifications for such orders under the Retail Order Tier. An ETP Holder would be required to designate its Retail Order Ports, including adding new Retail Order Ports or removing existing Retail Order Ports that would no longer be used to submit Retail Orders, no later than the fifth trading day of the month in which the desired change is to become effective.

Applicant further attests that it has in place Written Supervisory Procedures (WSPs). Such WSPs require Applicant to:

(i) exercise due diligence before entering a Retail Order to assure that entry as a Retail Order is in compliance with the requirements specified by the Exchange, including that the Applicant maintain adequate substantiation that substantially all orders sent to the Exchange as Retail Orders meet the definition and that those orders not meeting the definition are agency orders that cannot be segregated from Retail Orders due to system limitations and are de minimis in terms of the overall number of Retail Orders submitted and (ii) monitor whether orders entered as Retail Orders meet the applicable requirements.

In addition, if Applicant represents Retail Orders from another broker-dealer customer, Applicant's WSPs must be reasonably designed to assure that the orders it receives from such broker-dealer customer that it designates as Retail Orders meet the definition of a Retail Order.

The Applicant must (i) obtain an annual written representation, in a form acceptable to the Exchange, from each broker-dealer customer that sends it orders to be designated as Retail Orders that entry of such orders as Retail Orders will be in compliance with the requirements specified by the Exchange; and (ii) monitor whether its broker-dealer customer's Retail Order flow meets the applicable requirements.

Name (Printed)		 	-	-		
Name (Signature)						
Title						
Date						

ATTACHMENT A

An ETP Holder is required to either designate certain of its order entry ports as "Retail Order Ports" and attest that substantially all orders submitted to the Exchange via such Retail Order Ports are Retail Orders or tag each order as a "Retail Order" in the order entry message. Additionally, an ETP Holder is required to designate its Retail Order Ports, including adding new Retail Order Ports or removing existing Retail Order Ports that would no longer be used to submit Retail Orders, no later than the fifth trading day of the month in which the desired change is to become effective.

If your firm would like to <u>create new</u> ports to be designated as "Retail Order Ports" please complete the **Customer Session**Request Form found here: http://usequities.nyx.com/sites/usequities.nyx.com/files/customer_session_request_form_0.pdf and email this form to the Connectivity team at connectivity@nyx.com. Please Note: These new ports should be created prior to completing this form. Once you have established these new ports with the Connectivity team you may then submit this form stating which ports will be designated as "Retail Order Ports."

Provide a list below designated by the Fi	of all ports that will be used irm as "Retail Order Ports".	d as Retail Order Ports	Please Note: These	order entry ports mus	st be
			·		
	4.1.				
,			· -,		
		·	-		
SenderSubID. Chec Holde	Holder may designate Retaking this box identifies the er attests that all orders sub	ETP Holder's intention	to mark Retail Orders	by FIX or ArcaDirect	
NYSE Arca ETP H	lolder				
Authorized Signato	ory of the Firm				
Print Contact Nam	e				
Title					
Date	Please return to	Client Relationship S	ervices at crs@nvx (com.	

October 2013 3

AP Form

NYSE Arca, Inc.

This Form is to be completed by persons required to be Approved Persons with the Exchange and for whom the required disclosure information is not available on Web CRD®.

Instructions

Prior to completing this form, the persons seeking Approved Person status ("Applicant") should be familiar with the NYSE Arca, Inc. and NYSE Arca Equities, Inc. (collectively, the "Exchange") Rules, particularly those relating to "Approved Persons," including but not limited to Arca Rule 1.1(c), 2.4, and 2.14, and Arca Equities Rule 1.1(d), 2.3, and 2.13.

- A copy of the completed Form must be retained by the Applicant and the member organization with which the Applicant is or will be associated ("Member Organization").
- To the extent necessary, provide additional information via a separate attachment referencing the section and question to which the additional information applies.
- The list of Approved Persons must be kept up-to-date with the Exchange and FINRA.
 - o A new AP Form should be completed upon the occurrence of a change (e.g., a change in ownership, a new Approved Person)
 - The elimination of an existing Approved Person should be provided to the Exchange and FINRA in writing (email is acceptable)
 - o Notification of changes should be provided to the Exchange (<u>crs@nyx.com</u>) and FINRA (<u>Q&RNY@finra.org</u>) within 30 days

For Applicants associated with firms <u>seeking</u> NYSE Arca membership, please email a signed and completed copy of the AP Form to Client Relationship Services at <u>crs@nyx.com</u>.

Sectio	n I
1.	Full Name of the Applicant:
2.	Full name and Web CRD # of the Member Organization with which the Applicant is or will be associated:
	Member Organization:
	Web CRD#:
2	Approved Person Status is requested pursuant to the rules of the Exchange because the Applicant is not an ETP/OTP Holder, nor an employee or an Allied Person of a ETP/OTP Firm, and who:
3.	 is a director of an ETP/OTP Firm controls an ETP/OTP Firm beneficially owns, directly or indirectly, 5% or more of the outstanding equity securities of an ETP/OTP Firm has contributed 5% or more of the partnership capital
4.	Is the applicant subject to a <i>Statutory Disqualification</i> – as the term is defined in Section 3(a)(39) of the Securities Exchange Act of 1934?
	Yes No If an Applicant or any person associated with the Applicant, subsequently become subject to a <i>Statutory Disqualification</i> after initial approval, this information must promptly be communicated to the Exchange by sending notification to FINRA at Q&RNY@finra.org .

AP Form – October 2013

Se	ction II
1.	Address of Applicant's principal place of business (complete address of actual location):
2.	Date and place of incorporation or jurisdiction under the laws of which Applicant was formed:
3.	Indicate whether the Applicant has operated under any other names and identify all such names:
Se	ction III
Bv	signing below, the Applicant represents and acknowledges the following:
The agr	e Applicant is not relying upon the Exchange to provide any information concerning or relating to the Member Organization and ees that the Exchange has no responsibility to disclose to the Applicant any information concerning or relating to the Member ranization that it may have now or obtain at any future time. The Applicant agrees for itself, its personal representatives, successors I assigns that neither the Exchange, nor any investor, officer, trustee, agent, nor employee of said Exchange shall be liable to the oblicant with respect to the Applicant's investment or interest in the Member Organization or with respect to any repayment of any such estment or interest.
inve	understood that the statements made in connection with this Form will be relied upon by the Exchange and may be verified by estigation. The Applicant declares that all such statements are true, complete, current and accurate. It is also recognized that the change reserves the right to request additional information.
The the 1.1	Applicant undertakes and agrees to subject itself to the jurisdiction of the Exchange and to abide by such provisions of the Rules of Exchange as would at any time apply to an "Approved Person" as such term is defined in Arca Rule 1.1(c) and Arca Equities Rule (d).
dea exis amo	Applicant hereby agrees to comply with the relevant provisions of the Securities Exchange Act of 1934, as amended, and the Rules Regulations thereunder, and to furnish said Exchange with such information with respect to the Applicant's relationship and lings with its affiliated member organization as the Exchange may require, to supply the Exchange with information relating to the stence of any "statutory disqualification" (as such term is defined in Section 3(a)(39) of the Securities Exchange Act of 1934, as ended) to which the Applicant or any person associated therewith may be subject, to permit examination by the Exchange or its ignee of Applicant's books and records in order to verify the accuracy of the aforesaid information, and to subject itself to and abide the Exchange' disciplinary authority.
ass	olicant represents that except as is specifically indicated on this form or any supplement thereto, nelther it nor any person ociated therewith is subject to a statutory disqualification. (See Section 3(a)(39) of the Securities Exchange Act of 1934, as ended).
full	olicant covenants and agrees that the foregoing statements, warranties, representations and undertakings will continue to apply with force and effect notwithstanding that the Member Organization may have changed its name or form of organization, or legal status that the Member Dealer number) unless Applicant shall have otherwise notified the Exchange, in writing.
Sia	nature: Date:
	nature: Date: (A Duly Authorized Executive Officer, Senior Partner, Managing Member or equivalent of the Applicant)
Prir	nted Name:
Title	e:

NYSE Arca Equities, Inc.

Application to Become a Lead Market Maker* In a Particular NYSE Arca Primary Listed Security

*Must be an existing Lead Market Maker ETP in order to submit this application

LIST OF SECURITIES FO	R LMM REGISTRA	ATION		
Trading Permit ("LETP") hold In addition to the information	er that seeks to apply requested below, any nd), may submit such	to become a Lead Market Note to become a Lead Market Note that wishes information with its application with the second control of the control	bmitted only by a registered L Maker in a particular NYSE Ard to provide additional informati ion. Note that any written info curate.	ca Equities listed security. on to the listed company
Date:	SEC #:	CRD#:	MPID:	
Name of Applicant LETP:				(If NASDAQ Participant)
Business Contact:		Bus	siness Phone:	
Business Email:				
Solicitations for LMM Applications should be sent to this Email at		urities ——		
			he Lead Market Maker Design	ee:
Name:	Phone	e:	Email:	·····
This Designee should be listed MMAT. The Designee will se connection with an LMM Application.	erve as the main conta	the LETP's Market Maker A act for the LMM firm and mu	pplication and may, but need r st be present at any interviews	not, be registered as a s with a listing company in
LMM applicants are required	to ensure the followin	g information on file with the	e Exchange is accurate and up	to date:
 Organizational Profile 				
□ Other SRO affiliations of	the Applicant			
☐ A list of registered MMAT	s, including NYSE Ar	ca requirements regarding f	the Market Maker Orientation (Program for each
□ Supervisory procedures	of the Applicant relatir	ng to Market Making		
Each LMM applicant is also Officer, Partner, Managing I answer, please supply addi	Member, or the Sole	Proprietor of the Applicar	Each item should be initialent. If any of the below items	ed by an authorized results in a "Yes"
Has the physical makeup of the disclosure to the Corporation	he trading floor/facilitie?	es or actual location of the N	MMAT(s) for the Applicant cha	nged since previous
DDADAGED DEGICEDAT	1010 51 11 1			
* LMM applicants will be required Equities Rule 7.25	to be registered as an (the security in which your did not be also in value in va	ou are applying to becom which they are designated as LMM	e the LMM*: I, pursuant to NYSE Arca
Security Name:		-	Symbol:	
Designated Market Maker Au	thorized Trader(s) for	this security:	·	
Name:			CRD#:	
Name:			CRD #:	
Name:			CRD #:	
For future additions or change	es to your list of secur	ities, you will be required to	submit additional copies of Se	ections 7 & 8.

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nere have not been any contacts, please so	
Name of Company	Description and Date of Contact
•	
•	

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INFORMATION FOR LEAD MARKET MAKER

LMMs are subject to NYSE Arca Equities rules. To ensure compliance, please consult your compliance department and/or legal counsel to determine the rules that are applicable, including the rules referenced below.

NYSE Arca Equities Rule 7.22: Registration of Market Makers in a Security

(d) Designated Market Makers and Lead Market Makers shall be selected by the Corporation. Such selection shall be based on, but is not limited to, the following: experience with making markets in equities; adequacy of capital; willingness to promote the Exchange as a marketplace; issuer preference; operational capacity; support personnel; and history of adherence to Exchange rules and securities laws.

NYSE Arca Equities Rule 7.24: Designated Market Maker Performance Standards

- (a) Designated Market Makers will be required to maintain minimum performance standards the levels of which may be determined from time to time by the Corporation. Such levels will vary depending on the price, liquidity, and volatility of the security in which the Designated Market Maker is registered. The performance measurements will include (i) percent of time at the NBBO; (ii) percent of executions better than the NBBO; (iii) average displayed size; (iv) average quoted spread; and (v) in the event the security is a derivative security, the ability of the Designated Market Maker to transact in underlying markets.
- (b) Designated Market Makers that are Lead Market Makers will be held to higher performance standards in the securities in which they are registered as Lead Market Makers than Designated Market Makers that are not Lead Market Makers.

NYSE Arca Equities Rule 8.201(g): Commodity-Based Trust Shares; Market Maker Accounts

Market Maker Accounts. An ETP Holder acting as a registered Market Maker in Commodity-Based Trust Shares must file with the Exchange in a manner prescribed by the Exchange and keep current a list identifying all accounts for trading in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, which the Market Maker may have or over which it may exercise investment discretion. No Market Maker shall trade in an underlying commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, in an account in which a Market Maker, directly or indirectly, controls trading activities, or has a direct interest in the profits or losses thereof, which has not been reported to the Exchange as required by this Rule.

In addition to the existing obligations under Exchange rules regarding the production of books and records, the ETP Holder acting as a Market Maker in Commodity-Based Trust Shares shall make available to the Exchange such books, records or other information pertaining to transactions by such entity or registered or non-registered employee affiliated with such entity for its or their own accounts for trading the underlying physical commodity, related commodity futures or options on commodity futures, or any other related commodity derivatives, as may be requested by the Exchange

AUTHORIZED ACKNOWLEDGEMENT OF THE CONTENTS HEREIN	
The undersigned attests that the contents submitted on behalf of required. Further, the Applicant will abide by all rules of the Excl	f the Applicant are complete and agrees to update information as hange, as may be amended from time to time.
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name	Title

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NYSE Arca Equities, Inc.

Equity Trading Permit Application and Contracts

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APPLICATION PROCESS

Filing Requirements

Prior to submitting the <u>Application for Equity Trading Permit ("ETP")</u>, an Applicant Broker-Dealer must file a Uniform Application for Broker-Dealer Registration (Form-BD) with the Securities and Exchange Commission and register with the FINRA Central Registration Depository ("Web CRD®").

Checklist

Applicant Broker-Dealer must complete and submit all applicable materials addressed in the Application Checklist (page 4):

crs@nyx.com

Or via mail to: NYSE Arca, Inc.

Attn: Client Relationship Services 100 South Wacker Drive, Suite 1800

Chicago, IL 60606

Note: All application materials sent to NYSE Arca will be reviewed by NYSE Arca's Client Relationship Services ("CRS") Department for completeness. The applications are then submitted to FINRA who performs the application approval recommendation. All applications are deemed confidential and are handled in a secure environment. CRS or FINRA may request applicants to submit documentation in addition to what is listed in the Application Checklist during the application review process, pursuant to NYSE Arca Equities Rule 2.3. If you have questions on completing the application, you may direct them to: Client Relationship Services: Email: crs@nyx.com or (888) 689-7739 option 3.

Application Process

- Following submission of the <u>Application for Equity Trading Permit</u>, fees and supporting documents to NYSE Arca, Inc. ("NYSE Arca"), the application will be reviewed for accuracy and regulatory or other disclosures. NYSE Arca will submit the application to FINRA for review and approval recommendation; NYSE Arca Compliance and Regulation complete the final review and approval.
- Applicant Broker Dealer is required to consult with an NYSE Relationship Manager or CRS Account Manager to determine the
 most beneficial connectivity option. NYSE Arca will then coordinate the connectivity between the Applicant Broker Dealer and the
 Exchange.
- If review of Statutory Disqualification Disclosure information and/or a background investigation indicates that the Applicant Broker-Dealer has an associated person(s) with a possible statutory disqualification, NYSE Arca will contact the representative of the Applicant Broker-Dealer to discuss the statutory disqualification process.
- If it appears that the Applicant Broker-Dealer has outstanding debt, civil judgment actions and/or regulatory disciplinary actions, the Applicant Broker-Dealer will be contacted by NYSE Arca for further information.
- Applicants who have completed and returned all documents without indication of a statutory disqualification, outstanding debt, civil judgment actions and/or regulatory disciplinary actions will be presented to NYSE Arca for approval or disapproval without delay.
- ✓ Applicant Broker-Dealer will be subject to disciplinary action if false or misleading answers are given pursuant to the Application for Equity Trading Permit.
- NYSE Arca does not accept fingerprint cards. Fingerprint cards must be submitted directly to FINRA within 30 days of filing the Form U4. The fingerprint cards must be cleared by the FBI for individuals who seek to register with NYSE Arca or be approved by NYSE Arca. Firms may request FINRA-approved fingerprint cards through the Gateway Call Center at: (301) 590-6500. Fingerprint cards should be sent directly to: For Regular U.S. Mail: FINRA, Registration and Disclosure Department, P.O. Box 9495, Gaithersburg, MD 20898-9495. P.O. Boxes will not accept courier or overnight deliveries. For Express/Overnight Mail Delivery: FINRA, Registration and Disclosure Department, 9509 Key West Avenue, Rockville, MD 20850. If a phone number is required for the recipient, provide: (301) 590-6500. Your firm should receive the FBI search results in the "Fingerprint Status Received from FBI Notice Queue" within three business days after the card is sent to the FBI. Additional information regarding the submission of fingerprints to Web CRD may be obtained on the FINRA Web site: https://firms.finra.org/webcrd.
- NYSE Arca will promptly notify the Applicant Broker-Dealer, in writing, of their Membership decision.
- Once connectivity is established, your Relationship Manager or CRS Account Manager will inform you of your ability to trade.

In the event an Applicant Broker-Dealer is disapproved by NYSE Arca, the Applicant Broker-Dealer has an opportunity to be heard upon the specific grounds for the disapproval, in accordance with the provisions of NYSE Arca Rule 10.13. A disapproved applicant desiring to be heard must, within thirty (30) calendar days of the date upon which the Corporation's decision was mailed to the applicant, file a petition in accordance with the provisions of Rule 10.13

AF	PLICATION	I CHECKLIST & FEES1
		ON CHECKLIST FOR NON-NYSE ARCA DEA BROKER-DEALER APPLICANTS
	Application fo	r Equity Trading Permit
	0	Sections 1-6, and 8-10 are MANDATORY for all applicants Section 7 if applicant is not self-clearing If self-clearing, a Regional interoffice Operations (RIO) letter will need to be supplied after the Broker-Dealer has been approved.
	Form BD, inc	luding Schedules & Disclosure Reporting pages must be up to date and accurate on FINRA's WebCRD®
	A Form U-4 a	nd Fingerprint cards for the following individuals needs to be submitted directly to the FINRA, if not currently available on Web CRD® ²
	0	Direct/Indirect Owners, Allied Persons, and Approved Persons as listed on Form BD Schedules A & B Designated supervisors and principals
	Financial Doc	cumentation
	0 0	Four (4) Most Recent FOCUS Reports ³ and the Most Recent Audited Financial Statements, if applicable Most Recent Balance Sheet and Capital Computation Six Month Profit/Loss Projection
	All examination	on reports and corresponding responses from the Applicant Broker-Dealer for the last two exam reports
	Organizationa Agreen	al Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC") Agreements; Operating nent; or similar documentation
	Copy of Writte	en Supervisory Procedures ⁴ , Anti-Money Laundering Procedures, and Insider Trading Act Procedures (if separate)
DO	CUMENTATIO	ON CHECKLIST FOR NYSE ARCA DEA BROKER-DEALER APPLICANTS
	Application fo	r Equity Trading Permit
	0	Sections 1-6, and 8-10 are MANDATORY for all applicants Section 7 if applicant is not self-clearing If self-clearing, a Regional interoffice Operations (RIO) letter will need to be supplied after the Broker-Dealer has been approved.
۵	Form BD, incl	uding Schedules & Disclosure Reporting pages must be up to date and accurate on FINRA's WebCRD®
۵	A Form U-4 a	nd Fingerprint cards for the following individuals needs to be submitted directly to the FINRA, if not currently available on Web CRD® ²
	o o o	Direct/Indirect Owners, Allied Persons, and Approved Persons as listed on Form BD Schedules A & B Designated supervisors and principals All Authorized Traders
۵	NYSE Arca A informa	P Form to be completed by persons required to be Approved Persons with the Exchange and for whom the required disclosure tion is not available on Web CRD®.
	Financial Doc	umentation
	o o o	Four (4) Most Recent FOCUS Reports ³ and the Most Recent Audited Financial Statements, if applicable Most Recent Balance Sheet and Capital Computation Six Month Profit/Loss Projection Subordination Agreements, if applicable
<u> </u>	Proprietary A	ccounts of Introducing Broker-Dealers (PAIB) Agreements, if applicable
۵	All examination	on reports and corresponding responses from the Applicant Broker-Dealer for the last two exam reports
۵	Organizationa Agreem	Il Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC") Agreements; Operating lent; or similar documentation
۵		en Supervisory Procedures ⁴ , Anti-Money Laundering Procedures, and Insider Trading Act Procedures (if separate)
Note Arca	e: All ETP Holders Equities Rule 7.3	are responsible for maintaining a list of all Authorized Traders, and such list must be made available to NYSE Arca upon request as required by NYSE 30(a).

For a list of fees, please review the "Schedule of Fees and Charges for Exchange Services" found at http://usequities.nyx.com/markets/nyse-arca-equities/trading-fees.

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For a list of fees, please review the "Schedule of Fees and Charges for Exchange Services" found at http://usequities.nyx.com/markets/nyse-arca-equities/trading-fees.

Additional fees to those listed within this application may apply.

2 A \$125 Investigation Fee may be required for each Control Person, Allied Person, Approved Person, Designated Supervisor or Authorized Trader (DEA Applicants Only) for whom required information is not available on Web CRD®. Please make checks payable to NYSE Arca, Inc

3 Applicants must demonstrate that they have current net capital of 140% of their minimum net capital requirement or \$20,000 in excess of their minimum dollar net capital requirement, whichever is greater. If the Broker-Dealer has reported net losses for the period reviewed, the Firm's financial statements must demonstrate that its excess net capital can withstand six (6) consecutive months of average losses. Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements reflecting the Balance Sheet and Profit & Loss Statement detail for each month for the most recent six (6) months or since inception, whichever is less

whichever is less.

Market Maker applicants must include, but are not limited to, the following NYSE Arca Equity Rules: 6.3 (Prevention of the Misuse of Material, Nonpublic Information), 6.17 (Anti-Money Laundering Compliance Program), 6.18 (Supervision), and 7.20 – 7.25 (Market Makers).

EXPLANATION OF TERMS

For purposes of this application, the following terms shall have the following meanings:

Applicant Broker-Dealer - is the Broker-Dealer organization applying for an Equity Trading Permit or amending this form.

Associated Person - a person who is a partner, officer, director, member of a LLC, trustee of a Business Trust, or employee of an ETP Holder or any person directly or indirectly controlled by or under common control with an ETP Holder.

Authorized Trader – a person who may submit orders to NYSE Arca, LLC's trading facilities on behalf of his or her ETP Holder or Sponsored Participant.

Clearing Services - a Broker-Dealer who receives and executes customers' instructions, prepares trade confirmations, sends the money related to the trades, arranges for the physical movement of securities, and shares responsibility with an introducing broker-dealer for compliance with regulatory requirements.

Control – (as defined on Form-BD) the power, directly or indirectly, to direct the management or policies of a company, whether through ownership of securities, by contract or otherwise. Any person that (1) is a director, general partner or officer exercising executive responsibility (or having similar status or functions); (2) directly or indirectly has the right to vote 25% or more of a class of a voting security or has the power to sell or direct the sale of 25% or more of a class of voting securities; or (3) in the case of a partnership, has the right to receive upon dissolution, or has contributed, 25% or more of the capital, is presumed to control that company.

Central Registration Depository System ("Web CRD®") – A centralized electronic registration system maintained by FINRA which provides information on registered representatives and principals for members of participant organizations. This database contains employment history, exam scores, licensing information, disciplinary actions, fingerprint results, and other related registration information. NYSE Arca, Inc. is a participant of this system.

Designated Examining Authority ("DEA") – the SEC will designate one Self-Regulatory Organization ("SRO") to be a Broker-Dealer's examining authority, when the Broker-Dealer is a Member or ETP Holder of more than one SRO. Every Broker-Dealer is assigned a DEA, who will examine the Broker-Dealer for compliance with financial responsibility rules.

Designated Supervisor – refers to any person that is a partner, director, or officer exercising executive responsibility (or having similar status or functions) for supervising Authorized Trader(s) ("AT") (as defined in NYSE Arca Equities Rule 1.1(g)).

Direct Owners/Executive Officers – Allied Persons and Approved Persons, as those terms are defined by NYSE Arca Equities Rules 1.1(c) and 1.1(d), respectively, and generally refer to (1) a director, general partner or officer exercising executive responsibility (or having similar status or function); or (2) directly or indirectly has the right to vote 5% or more of a class of voting security or has the power to sell or direct the sale of 5% or more of a class of voting securities; (3) is entitled to receive 5% or more of the net profits; (4) in the case of a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution or have contributed, 5% or more of the capital; or (5) in the case of a LLC, those members that have the right to receive upon dissolution, or have contributed, 5% or more of the LLC's capital, and if managed by elected managers, all elected managers.

ETP or ETP Holder— an Equity Trading Permit issued by the Corporation for effecting approved securities transactions on the Corporation's trading facilities. An ETP may be issued to a Sole Proprietor, Partnership, Corporation, LLC or other organization which is a registered Broker or Dealer, pursuant to Section 15 of the Securities Exchange Act of 1934, as amended, and which has been approved by the Corporation.

Financial Arrangement – (1) the direct financing of an ETP Holder's dealings upon the Exchange; (2) any direct equity investment or profit sharing arrangement; or (3) any consideration over the amount of \$5,000.00 including, but not limited to, gifts, loans, annual salaries or bonuses.

Market Maker -is obligated to maintain continuous two-sided Q Orders in those securities in which the Market Maker is registered to trade, pursuant to NYSE Arca Equities Rule 7.23(a).

Market Maker Authorized Trader ("MMAT") – an authorized trader who performs market-making activities pursuant to Rule 7, on behalf of a Market Maker.

NYSE Arca, Inc. ("NYSE Arca" or the "Corporation") – a Delaware corporation as described in the Corporation's Certificate of Incorporation and Bylaws. NYSE Arca is a national securities exchange as that term is defined by Section 6 of the Securities Exchange Act of 1934, as amended. NYSE Arca, Inc. is the Self-Regulatory Organization for NYSE Arca, LLC

NYSE Arca, LLC - The equities marketplace and a trading facility of NYSE Arca, Inc.

NYSE Arca Equities - NYSE Arca Equities, Inc. (a wholly owned subsidiary of NYSE Arca, Inc.).

Primary Business – refers to greater than 50% of the ETP Holder's business.

Self-Regulatory Organization ("SRO") - each exchange or national securities association is an SRO. Each SRO must have rules that provide for the expulsion, suspension and other discipline of member Broker-Dealers for violation of the SRO's rules.

NYSE Arca Equities, Inc.

Equity Trading Permit Application and Clearing Letter of Consent

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SECTION 1 - ORGANIZATIO	NAL PROFILE		
Date:	SEC#:	CRD#: N	MPID:(If NASDAQ Participant)
	Application	Amendment	
GENERAL INFORMATION			
Name of Applicant Broker-Dealer	·		
Business Address:			
	City:	State: 2	Zip Code:
Business Phone:		Fax:	
Contact Name:		Title:	
Phone:		Fax:	·
Email Address:			
TYPE OF ORGANIZATION			
☐ Corporation	Limited Liability Company	☐ Partnership	☐ Sole Proprietor
TYPE OF BUSINESS TO BE	CONDUCTED WITH EQUITY	TRADING PERMIT (Check all	that apply)
☐ Market Maker*	☐ Public Customer Business	Clearing Services	☐ Proprietary Trading
Other			
* Please also complete Application fo	r Market Maker/Odd Lot Dealer Regis	ration	
OTHER BUSINESS ACTIVIT	IES CONDUCTED BY APPLI	CANT BROKER_DEALER (Che	eck all that apply)
☐ Investment Banking	☐ Public Customer Business	Options Market Mak	ing
☐ Proprietary Trading	Other		
OTHER SELF-REGULATOR	Y ORGANIZATION MEMBER	SHIPS (Check all that apply)	
☐ American Stock Exch	ange (AMEX)	☐ Boston Stock Excha	nge (BSE)
☐ Chicago Board Option	ns Exchange (CBOE)	☐ Chicago Stock Exch	ange (CHX)
☐ National Stock Excha	nge (NSX)	☐ International Securit	ies Exchange (ISE)
☐ Financial Industry Reg	gulatory Authority, Inc. (FINRA)	☐ New York Stock Exc	change (NYSE)
☐ Philadelphia Stock Ex	change (PHLX)	☐ BATS (BATS)	
☐ Nasdaq Stock Market	(NQX)		
APPLICANT'S DESIGNATED	DEXAMINING AUTHORITY (DEA")	
NYSE Arca, Inc. (NYS	SE Arca / NYSE Arca Equities)	Other	

SECTION 2 - MEMBERSHIP AGREEMENT	
Applicant Broker-Dealer agrees to abide by the Bylaws and Rules of NYS circulars, notices, interpretations, directives or decisions adopted by NYSE	E Arca Equities, Inc., as amended from time to time, and all E Arca Equities, Inc.
Applicant Broker-Dealer authorizes any SRO, commodities exchange, govupon its request, any information that such person may have concerning to Broker-Dealer or its associated persons, and releases such person or entity applicant Broker-Dealer authorizes NYSE Arca to make available to any gosimilar entity, any information it may have concerning the Applicant Broker from any and all liability in furnishing such information.	he ability, business activities, and reputation of Applicant ty from any and all liability in furnishing such information. povernmental agency, SRO, commodities exchange or
Applicant Broker-Dealer acknowledges its obligation to update any and all including termination of membership with another SRO, which may cause understood that in that event, additional information may be required by N	a change in the Applicant Broker-Dealer's DEA. It is
	•
Applicant Broker-Dealer	
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Title

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SECTION 3 – FINANCIAL DISCLOSURE
FINANCIAL STATEMENT
Copies of the required financial items as noted on the checklist including: the four (4) most recent FOCUS Reports ⁵ and most recent Audited Financial Statements, and all examination reports and corresponding responses.
SOURCE OF CAPITAL
Explain the source of Applicant Broker-Dealer's Capital
PROPRIETARY ACCOUNTS OF INTRODUCING BROKER-DEALERS (PAIB)
Do you hold a Proprietary Account as an Introducing Broker-Dealer (PAIB)
*If Yes: An introducing Broker-Dealer must notify its DEA in writing when it has entered into a PAIB Agreement with a clearing Brok Dealer regarding the net capital treatment of assets held in proprietary accounts. Assets (cash and securities) held in trading accounts without a PAIB Agreement are considered to be non-allowable in the computation of net capital under SEC Rule 15c3-1. NYSE Arca will be your DEA, please enclose a copy of all PAIB Agreements you have entered into with a clearing broker-dealer.
SUBORDINATED LOANS
Have any subordinated loans been made to Applicant Broker-Dealer? Yes (Explain below) No
FINANCIAL OR CONTROLLING INTERESTS
Does the Applicant Broker-Dealer have a financial or controlling (as defined in Form-BD) interest (through direct or indirect stock or bond ownership, through outstanding loans, or otherwise) in any organization engaged in a securities, financial or related business Yes (Explain below) No
FINANCIAL ARRANGEMENT
Does the Applicant Broker-Dealer have a financial arrangement with any other Broker-Dealer?
☐ Yes (Explain below) ☐ No
Type of Arrangement: Direct Equity Investment Profit Shanng Direct Financing Other
Terms of Arrangement (include the names of all participants in the arrangement, and the nature and terms of the arrangement):
OUTSTANDING DEDT (Charles) 46-4 and by
OUTSTANDING DEBT (Check all that apply)
Does the Applicant Broker-Dealer owe money to any of the following?
Any NYSE Arca member or member organization or NYSE Arca ETP Holder
Any other national securities or commodities exchange or national securities association
Any member of any other national securities or commodities exchange or national securities association
Explain to whom the money is owed and the dollar amount. Attach a copy of arrangements made for repayment of this debt and evidence of an agreement of repayment.
No, the Applicant Broker-Dealer does not owe money to any of the above referenced persons or entities.

⁵ Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements for the most recent six (6) months or since inception, whichever is less.

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SECTION 4 - DIR	ECT OWNERS / INDIRECT OWNERS / EXECUTIVE OFFICERS	
Please list the following individuals: (A) each Allied Person as defined in NYSE Arca Equities Rule 1.1(c) ⁵ ; (B) each		
Approved Person as defined in NYSE Arca Equities Rule 1.1(d) ⁷ ; and (C) each Person as defined in NYSE Arca Equities Rule		
6.18(b)(2)°. <u>You ma</u>	y submit multiple copies of this form, if needed, or attach a copy of Sche	dule A and Schedule B of Form
BU. For individual	Is required to be disclosed pursuant to (A), (B), or (C) above who do not he RD®, the Applicant may be required to submit an investigation fee of \$12	ave required information
available on Web C	ADO. the Applicant may be required to submit an investigation lee of \$12	5 per individual.
APPLYING AS:	ALLIED DEDOON ADDROVED DEDOON	
APPLIING AS:	ALLIED PERSON APPROVED PERSON	
Name:	Title:	CRD#
Firm Name::	Phone:	
	Designated Supervisor of Authorized Traders	
Email:	Signature:	
	Form U4 and fingerprint information ⁸ is current and accessible for this person	n on Web CRD™
APPLYING AS:	ALLIED PERSON APPROVED PERSON	
Name:	Title:	CRD#
Firm Name::	Phone:	
	Designated Supervisor of Authorized Traders	
Email:		
	Signature:	
	rotti o4 and imgerprint information is current and accessible for this person	on Web CRD'
APPLYING AS:	ALLIED PERSON APPROVED PERSON	
Name:	Title:	CRD#
Firm Name::	Phone:	
	Designated Supervisor of Authorized Traders	
Email:	Signature:	
	Form U4 and fingerprint information ⁸ is current and accessible for this person	
APPLYING AS:	ALLIED PERSON APPROVED PERSON	
		000#
Name:	Title:	CRD#
Firm Name::	Phone:	
	Designated Supervisor of Authorized Traders	
Email:	Signature:	
	Form U4 and fingerprint information ⁸ is current and accessible for this person	on Web CRD™
<u> </u>		

Pursuant to NYSE Arca Equities Rule 1.1(d), the term "Approved Person" shall refer to a person who is not an ETP Holder, nor an employee or an Allied Person of an ETP Holder, and who: (1) is a director of an ETP Holder, or (2) controls an ETP Holder, or (3) beneficially owns, directly or indirectly, 5% or more of the outstanding equity securities of an ETP holder, or (4) has contributed 5% or more of the partnership capital; and who has been approved by the Corporation as an Approved Person.

⁶ Pursuant to NYSE Arca Equities Rule 1.1(c), the term "Allied Person" shall refer to an individual, who is: (1) an employee of an ETP Holder who controls such firm, or (2) an employee of an ETP Holder corporation who is a director or a principal executive officer of such corporation, or (3) an employee of an ETP Holder Ilmited liability company who is a manager or a principal executive officer of such limited liability company, or (4) a general partner in an ETP Holder partnership; and who has been approved by the Corporation as an Allied Person.

NYSE Arca Equities Rule 6.18(b)(2) refers to the designation of a person with authority to reasonably discharge his/her duties and obligations in connection with supervision and control of the activities of the Associated Persons of the ETP Holder. Pursuant to NYSE Arca Equities Rule 1.1(f), the term "Associated Person" shall refer to a person who is a partner, officer, director, member of a limited liability company, trustee of a business trust, employee of an ETP Holder or any person directly or indirectly controlling, controlled by or under common control with an ETP Holder.

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SECTION 5 – STATUTORY DISQUALIFICATION DISCLOSURE		
Pursuant to the Securities Exchange Act of 1934, as amended ("the Act"), NYSE Arca, Inc. ("NYSE Arca") may deny (or may condition) trading privileges or may bar a natural person from becoming associated (or may condition an association) with an ETP Holder for the same reasons that the Securities and Exchange Commission may deny or revoke a broker-dealer registration under the Act. The Act provides for Statutory Disqualification if a person has:		
 Been expelled, barred or suspended from membership in or being associated with an member of a self regulatory organization; had broker, dealer or similar privileges denied or suspended or caused such denial or suspension of another; Violated any provision of the Act; or Been convicted of a theft or securities related misdemeanor or any felony within ten (10) years of the date of applying for membership status or becoming an Associated Person. 		
Check here if you DO NOT have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.		
Check here if you DO have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.*		
Please identify any such person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification. Additionally, identify any such person(s) who are associated with the Applicant Broker-Dealer and who have been approved for association or continued association by another SRO due to a Statutory Disqualification.		
 Attach a sheet identifying any such person(s), including the following information: Name of the person(s). Copies of documents relating to the Statutory Disqualification. Description of each such person's duties (for non-registered individuals, this should include a statement indicating if the position allows access to books, records, funds or securities). Explanation of action taken or approval given by any other SRO regarding each person. 		
On behalf of		
Signature of Authorized Officer, Partner, Managing Member, or Sole Date , Proprietor		
Print Name of Authorized Officer, Partner, Managing Member, or Sole Proprietor Title		

SECTION 6 - SUPERVISION

Each ETP Holder must identify the person(s) that is a member, partner, director, or officer exercising executive responsibility (or having similar status or functions) for supervising an Authorized Trader(s) as defined in NYSE Arca Equities Rule 1.1(g). ETP Holders must provide a copy of their Written Supervisory Procedures ("WSP") with their Application.

Name and Title of Person responsible for mai	ntaining WSPs:
----------------------------------------------	----------------

NYSE Arca Equities Rules state:

- (a) Adherence to Law No Equity Trading Permit Holder or Associated Person of an Equity Trading Permit Holder may engage in conduct in violation of the federal securities laws, the Constitution or the Rules of the Exchange. Every Equity Trading Permit Holder must supervise persons associated with the Equity Trading Permit Holder as to assure compliance therewith.
- (b) Supervisory System Each Equity Trading Permit Holder for whom NYSE Arca is DEA must establish and maintain a system to supervise the activities of its associated persons and the operations of its business. Such system must be reasonably designed to ensure compliance with applicable federal securities laws and regulations and NYSE Arca Equities Rules. Final responsibility for proper supervision will rest with the Equity Trading Permit Holder. The Equity Trading Permit Holder's supervisory system must provide, at a minimum, for the following:
 - (1) The establishment and maintenance of written procedures as required by paragraph (c) of this Rule.
 - (2) The designation of a person with authority to reasonably discharge his/her duties and obligations in connection with supervision and control of the activities of the associated persons of the Equity Trading Permit Holder.
 - (3) The Equity Trading Permit Holder must undertake reasonable efforts to determine that all supervisory personnel are qualified by virtue of experience or training to carry out their assigned responsibilities.
 - (4) Each Equity Trading Permit Holder must designate and specifically identify to NYSE Arca one or more persons who will be responsible for such supervision.
- (c) Written Procedures Each Equity Trading Permit Holder must establish, maintain, and enforce written procedures to supervise the business in which it engages and to supervise the activities of its associated persons that are reasonably designed to ensure compliance with applicable federal securities laws and regulations, and with NYSE Arca Equities Rules.

Pursuant to this rule, WSPs should describe the following:

- Specific identification of the individual(s) responsible for supervision either by name or by title and position.
- The supervisory steps and reviews to be taken by the appropriate supervisor this process should identify any exception reports
 and/or other documents being reviewed and the substantive area being reviewed (e.g., limit order protection, trade reporting,
 etc.). If an ETP Holder employs automated systems as part of its supervisory system, those systems should also be generally
 described
- The frequency of such reviews this should be more specific than simply providing for "a review" or a "review from time to time." The frequency of reviews should be described (i.e., daily, weekly, monthly, quarterly, or annually).
- How reviews will be documented, for example, initialing order tickets or filling out review logs. The procedures should also
 provide for the documentation of steps taken as a result of supervisory reviews.

For Market Makers, the WSPs and supervisory systems of firms engaged in market making activities must address, at a minimum, trading practice rules (i.e., passive market making, firm quote rule compliance, limit order protection), trading systems, trade reporting, rules compliance and any other material aspect of the firm's market making business. WSPs should include the following subject areas:

- Size conventions
- Coordination of quotations, trades and trade reports
- Improper collaboration and coordination of Market Maker activities
- Failure to honor quotations
- Harassment
- Late and inaccurate trade reporting

ALL EQUITY TRADING PERMIT HOLDERS MUST KEEP ABREAST OF CHANGES IN LAWS, RULES AND REGULATIONS, MARKET PRACTICES AND INDICATED PATTERNS OF NON-COMPLIANCE AND MUST MODIFY THEIR SUPERVISORY PROCEDURES AND SYSTEMS AS NECESSARY.

SECTION 7 - CLEARING LETTER OF C			
Notice of Consent – To be completed by Clearing ETP Holder of Application Broker-Dealer			
The undersigned hereby represents the clearing agency named below, a member of the National Securities Clearing Corporation ("NSCC"), and an approved ETP Holder of NYSE Arca, LLC, a facility of NYSE Arca.			
The undersigned Clearing ETP Holder hereby agrees to accept full financial responsibility for all transactions effected through and carried in all accounts held by the following Applicant Broker-Dealer with the clearing agency:			
Applicant Broker-Dealer	CRD# and/or SEC File#		
Rules and may be relied upon by NYSE Arca	Intee, letter of authorization, or notice of consent pursuant to NYSE Arca Equities Equities, NYSE Arca, Inc., the NSCC, and their respective members. This Notice of es Rules, as amended from time to time, and shall remain in effect until revoked in		
Clearing ETP Holder (Broker-Dealer Name)	_		
Clearing ETP Holder (NSCC Clearing #)	_		
Signature of Authorized Officer, Partner or Managing Member of Clearing ETP Holder	Signature of Authorized Officer, Partner or Managing Member, or Sole Proprietor of ETP Holder		
Print Name / Title	Print Name / Title		
Date	Date		

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NYSE Arca Equities, Inc.

Contracts

This User Agreement, with an Effective Date by and between NYSE Arca, a Delaware conchicago, IL 60606 and the User, as identified for securities. NYSE Arca will provide User of NYSE Arca is governed by the Certificate amended from time to time, ("NYSE Arca Education of NYSE	rporation, with its principal offices located below. NYSE Arca operates an excluding with the services of NYSE Arca pursuate of Incorporation, Bylaws, Rules and P	ted at 100 S. Wacker Drive, Suite 1800, hange trading facility of NYSE Arca Equities ant to the terms of this User Agreement. Use
User:		
Business Address:		
Corporate Form		
State of Incorporation:		
Type of User: (Check one)	ETP Holder Sponsored Participant	
Telephone:	Primary Contact:	·
Fax:	Email:	
IYSE Arca will provide User with services pursule ereto and incorporated herein by reference. The itialed the space below.	uant to the User Agreement General Ter ne following Agreement will be incorpora	rms and Conditions, which are attached ated herein by reference, if the User has
ereto and incorporated herein by reference. The	ne following Agreement will be incorpora s User Agreement to be executed by the e effect as signature on each page of the	ated herein by reference, if the User has eir duly authorized representatives. Signature
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same	ne following Agreement will be incorpora s User Agreement to be executed by the e effect as signature on each page of the	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User:	ne following Agreement will be incorpora s User Agreement to be executed by the e effect as signature on each page of the	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same accepted on behalf of User: (Print Company Name)	ne following Agreement will be incorporate solutions and the second of the second	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User: (Print Company Name) By (Signature):	s User Agreement to be executed by the effect as signature on each page of the Accepted By (Signature):	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User: (Print Company Name) By (Signature): Name:	s User Agreement to be executed by the effect as signature on each page of the Accepted By (Signature):	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User: (Print Company Name) By (Signature): Name: Title:	s User Agreement to be executed by the effect as signature on each page of the Accepted By (Signature): Name:	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User: (Print Company Name) By (Signature): Name: Title: Date: With Notices To:	By (Signature): Name: Title: Date:	eir duly authorized representatives. Signature e attached documents. on behalf of NYSE Arca, Inc.:
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same Accepted on behalf of User: (Print Company Name) By (Signature): Name: Title: Date:	By (Signature): Name: Title: Date:	eited herein by reference, if the User has eir duly authorized representatives. Signature e attached documents.
ereto and incorporated herein by reference. The nitialed the space below. In witness whereof, the parties hereby cause this in this cover sheet is in lieu of and has the same accepted on behalf of User: (Print Company Name) By (Signature): Name: Title: Date: With Notices To: User Name:	By (Signature): Name: Title: Date:	eir duly authorized representatives. Signature e attached documents. on behalf of NYSE Arca, Inc.:

Provided that User is an authorized ETP Holder (as defined herein) or a Sponsored Participant (as defined herein) in good standing with NYSE Arca and has paid the requisite fees, NYSE Arca will provide User with access pursuant to these general terms and conditions, which User hereby acknowledges and accepts. User agrees to abide by these general terms and conditions and be bound by the Certificate of Incorporation, Bylaws, Rules and Procedures of NYSE Arca Equities, as amended from time to time, ("NYSE Arca Equities Rules") with respect to NYSE Arca.

For purposes of this Agreement, an "ETP" shall refer to an Equity Trading Permit issued by NYSE Arca Equities for effecting approved securities transactions on NYSE Arca. An "ETP Holder" shall refer to a Sole Proprietorship, Partnership, Corporation, LLC or other organization in good standing that has been issued an ETP in accordance with NYSE Arca Equities Rules. A Sponsored Participant shall refer to a person that has entered into a sponsorship arrangement with an ETP Holder (a "Sponsoring ETP Holder") as described in Section 1(e) below. An Authorized Trader shall refer to a person authorized to submit orders to NYSE Arca on behalf of his or her User. As used in this Agreement, the requirement that a User "comply with NYSE Arca Equities Rules" or "act in compliance with NYSE Arca Equities Rules" (or such other similar phrases) shall mean, with respect to a Sponsored Participant, that such Sponsored Participant shall comply with NYSE Arca Equities Rules as if it were an ETP Holder.

1. RIGHTS AND OBLIGATIONS.

- (a) NYSE Arca, LLC ("NYSE Arca"). Pursuant to the terms and conditions of this User Agreement, NYSE Arca grants the User a personal, non-exclusive, non-transferable right to access NYSE Arca solely for the intended purpose and only in accordance with the then-current NYSE Arca Equities Rules. For purposes of this User Agreement, the "intended purpose" is to place orders with NYSE Arca for execution and to receive information from NYSE Arca about such orders. The User is solely and exclusively responsible for any hardware, software, communication equipment, communication services, information formatting requirements or other items or services necessary for accessing and using NYSE Arca.
- (b) Restrictions on Use; Security. User may not sell, lease, furnish or otherwise permit or provide access to NYSE Arca or any information or data made available therein to any other entity or to any individual that is not User's employee, customer or agent or a User's Sponsored Participant. User accepts full responsibility for its employee's, customers', and agent's use of NYSE Arca, including any Sponsored Participants' use, which use must comply with NYSE Arca Equities Rules and the User's obligations under this User Agreement. User will take reasonable security precautions to prevent unauthorized use of or access to NYSE Arca, including unauthorized entry of information into NYSE Arca, or the information and data made available therein. User understands and agrees that User is responsible for any and all orders, trades and other messages and instructions entered, transmitted or received under identifiers, passwords and security codes of Authorized Traders, and for the trading and other consequences thereof.
- (c) <u>User Information</u>. User hereby grants to NYSE Arca a perpetual, non-exclusive, world-wide, irrevocable, royalty-free, fully-paid-up license to use, reproduce, display, compile and modify the information and data supplied by User to NYSE Arca, including without limitation, information or data of or related to User's customers and agents. User represents and warrants that, with respect to such information and data (i) User owns or has sufficient rights in and to such information and data to authorize NYSE Arca to perform all of its obligations under this User Agreement with respect thereto and that may be required for User's or NYSE Arca's use of such information, (ii) use or delivery of such information by User or NYSE Arca will not violate the proprietary rights (including, without limitation, any privacy rights) of any party, and (iii) use or delivery of the information by User will not violate any applicable law or regulation.

Notwithstanding the foregoing, unless otherwise required by law, regulation, or governmental authority, or as otherwise agreed to by User, NYSE Arca shall not make information and data supplied by User available outside of the NYSE Euronext group of companies (other than to their directors or professional advisors pursuant to a non-disclosure agreement) in a manner that would reasonably be expected to directly or indirectly identify User as the source of such information or data.

- (d) <u>Fees.</u> User will pay when due all amounts payable to third parties arising from User's access to NYSE Arca. Such amounts include, but are not limited to, applicable exchange and regulatory fees.
- (e) <u>Sponsored Participants</u>. Notwithstanding NYSE Arca's execution and delivery to User of a copy of this Agreement, if User is a Sponsored Participant, and not an ETP Holder, as a condition to initiating and continuing access to NYSE Arca, (i) User must enter into and maintain customer agreements with one or more Sponsoring ETP Holders establishing proper relationship(s) and account(s) through which User may trade on NYSE Arca. Such customer agreement(s) must incorporate the Sponsorship Provisions set forth in NYSE Arca Equities Rules.
- (f) <u>Order Designation</u>. All orders other than orders entered into NYSE Arca by a Sponsored Participant, and any trades resulting there from shall be the responsibility of the ETP Holder from which they originated.

2. NYSE Arca RULES.

(a) Compliance with NYSE Arca Equities Rules. User represents and warrants that: (i) it will use NYSE Arca only if and when it is duly authorized to use NYSE Arca pursuant to NYSE Arca Equities Rules and User is an ETP Holder or User is a Sponsored Participant; (ii) it will only use NYSE Arca in compliance with NYSE Arca Equities Rules; and, (iii) it is and will remain responsible for its use of NYSE Arca and the use of NYSE Arca by any of its employees, customers, and agents or by any Sponsored Participants whose use of NYSE Arca is sponsored by the User; (iv) it will maintain and keep current a list of all Authorized Traders who may obtain access to NYSE Arca on behalf of the User and/or the User's Sponsored Participant(s); and (v) it will familiarize all Authorized Traders with all of User's obligations under this Agreement and will assure that they receive appropriate training prior to any use or access to NYSE Arca.

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- (b) <u>Monitoring</u>. User acknowledges and agrees that NYSE Arca Equities will monitor the use of NYSE Arca by User for compliance with all applicable laws and regulations, including, without limitation, NYSE Arca Equities Rules. User acknowledges its responsibility to monitor its employees, agents and customers for compliance with NYSE Arca Equities Rules, the rules and regulations of any self-regulatory organizations of which User is a member and all applicable federal and state laws.
- (c) Integrity of NYSE Arca. User will not (i) materially alter the information or data supplied to or received from NYSE Arca in violation of NYSE Arca Equities Rules, (ii) materially affect the integrity of the information or data supplied to or received from NYSE Arca, or (iii) supply or render information or data to or from NYSE Arca that is illegal, inaccurate, unfair, uninformative, fictitious, misleading or discriminatory. User will not permit its employees, agents or customers to interfere with or adversely affect NYSE Arca or any use thereof by any other authorized individuals or entities.
- (d) <u>Indemnity</u>. User agrees to indemnify, defend and hold NYSE Arca, NYSE Arca, Inc. and NYSE Arca Equities harmless from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, and attorneys' fees, arising from or as a result of User's breach of its obligations under this User Agreement or otherwise from its use of NYSE Arca.

3. CHANGE OF NYSE Arca, LLC.

User acknowledges and agrees that nothing in this User Agreement constitutes an understanding by NYSE Arca to continue any aspect in its current form. NYSE Arca may from time to time make additions, deletions or modifications to NYSE Arca. User acknowledges and agrees that NYSE Arca may temporarily or permanently, unilaterally condition, modify or terminate the right of any individuals or entities to access, receive or use NYSE Arca in accordance with NYSE Arca Equities Rules. Further, NYSE Arca may temporarily or permanently terminate the right of any individuals or entities to access NYSE Arca at any time if so instructed by NYSE Arca Equities.

4. OWNERSHIP.

User acknowledges and agrees that all patents, copyrights, trade secrets, trademarks and other property rights in or related to NYSE Arca and the information and data made available through NYSE Arca (including compilation rights in information and data) are and will remain the exclusive property of NYSE Arca or its licensors. User will attribute the source as appropriate under all circumstances.

5. INFORMATION.

- (a) <u>Confidentiality</u>. Both parties acknowledge that (i) NYSE Arca and the information and data made available therein, incorporate confidential and proprietary information developed, acquired by or licensed to NYSE Arca, including confidential information of NYSE Arca Equities or other entities, and (ii) each party may receive or have access to other proprietary or confidential information disclosed and marked as confidential by the disclosing party (collectively, the "Information"). The receiving party will use the disclosing party's Information solely to perform its obligations under this User Agreement. The receiving party will take all precautions necessary to safeguard the confidentiality of the disclosing party's Information, including without limitation, (i) those taken by the receiving party to protect its own confidential information and (ii) those which the disclosing party may reasonably request from time to time.
- (b) <u>Disclosure</u>. The receiving party will not disclose, in whole or in part, the disclosing party's Information to any person, except as specifically authorized under this User Agreement. User may not disclose any data or compilations of data made available to User by NYSE Arca without the express, prior written authorization of NYSE Arca. User acknowledges that any and all information provided to NYSE Arca by the User will be disclosed to NYSE Arca Equities for use in accordance with NYSE Arca Equities Rules. User hereby consents to such disclosure. NYSE Arca may also disclose Information in accordance with its regulatory obligations.
- (c) <u>Unauthorized Use or Disclosure</u>. The parties acknowledge that any unauthorized use or disclosure of the disclosing party's Information may cause irreparable damage to the disclosing party. If an unauthorized use or disclosure occurs, the receiving party will immediately notify the disclosing party and take at its expense all steps necessary to recover the disclosing party's Information and to prevent its subsequent unauthorized use or dissemination, including availing itself of actions for seizure and injunctive relief. If the receiving party fails to take these steps in a timely and adequate manner, the disclosing party may take them at the receiving party's expense, and the receiving party will provide the disclosing party with its reasonable cooperation in such actions that the disclosing party may request.
- (d) <u>Limitation</u>. The receiving party will have no confidentiality obligation with respect to any portion of the disclosing party's Information that (i) the receiving party independently developed before receiving the Information from the disclosing party, (ii) the receiving party lawfully obtained from a third party under no obligation of confidentiality, (iii) is or becomes available to the public other than as a result of an act or omission of the receiving party or any of its employees or (iv) the receiving party is compelled to disclose pursuant to legal process provided by a court of competent jurisdiction or other governmental entity or regulatory or self-regulatory authority to whose jurisdiction the receiving party is subject.

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6. DISCLAIMER OF WARRANTY.

NYSE Arca IS MADE AVAILABLE "AS IS" AND WITHOUT WARRANTY OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE NYSE Arca AND ANY DATA, SOFTWARE OR INFORMATION MADE AVAILABLE THEREIN BY NYSE Arca, NYSE Arca EQUITIESOR ITS OR THEIR LICENSORS, WHETHER EXPRESS, IMPLIED, OR STATUTORY, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY NYSE Arca, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES, LICENSORS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, ACCURACY, UNINTERRUPTED USE, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR NON-INFRINGEMENT AND ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED.

7. NO LIABILITY FOR TRADES.

USER UNDERSTANDS AND AGREES THAT (I) NYSE Arca IS NOT DIRECTLY OR INDIRECTLY A PARTY TO OR A PARTICIPANT IN ANY TRADE OR TRANSACTION ENTERED INTO OR OTHERWISE CONDUCTED THROUGH NYSE Arca, AND (II) NYSE Arca IS NOT LIABLE IN ANY MANNER TO ANY PERSON (INCLUDING WITHOUT LIMITATION THE USER AND ANY PERSON FOR WHOM THE USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACT BY MEANS OF NYSE Arca TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. NEITHER NYSE Arca, NYSE Arca EQUITIES, OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF NYSE Arca OR ITS USE. ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF NYSE Arca TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, NYSE Arca WILL BE ABSORBED BY THE USER OR THE ETP HOLDER SPONSORING THE USER, THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO NYSE Arca. IF THIS SECTION IS DEEMED TO CONFLICT WITH ANY OTHER SECTION OF THIS USER AGREEMENT, THIS SECTION WILL SUPERCEDE SUCH OTHER SECTION.

8. NO CONSEQUENTIAL DAMAGES.

UNDER NO CIRCUMSTANCES WILL NYSE Arca, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF NYSE Arca, INTERRUPTION IN USE OR AVAILABILITY NYSE Arca, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION.

9. TERM AND TERMINATION.

This User Agreement will be effective as of the Effective Date and will remain in effect thereafter until terminated by either party upon notice to the other party. Termination will be effective at the close of trading in the affected markets and applications on the day that notice of termination is received by the other party hereto. NYSE Arca may terminate this User Agreement immediately if (i) the User is in breach of this User Agreement for any reason, (ii) any representations made by the User in connection with this User Agreement are or become false or misleading or (iii) NYSE Arca is notified that User is no longer an ETP Holder or Sponsored Participant in good standing with NYSE Arca Equities or otherwise is no longer authorized to access NYSE Arca. Upon the termination of this User Agreement for any reason, all rights granted to User hereunder will cease. The provisions of Sections 2(d), 5, 6, 7, 8, 9, and 12 will survive the termination or expiration of this User Agreement for any reason. In no event will termination of this User Agreement relieve User of any obligations incurred through its use of NYSE Arca.

10. ASSIGNMENT.

User shall not assign, delegate or otherwise transfer this User Agreement or any of its rights or obligations hereunder without NYSE Arca's prior approval, which will not be unreasonably withheld. NYSE Arca may assign or transfer this User Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

11. FORCE MAJEURE.

Notwithstanding any other term or condition of this User Agreement to the contrary, neither NYSE Arca nor User will be obligated to perform or observe their obligations undertaken in this User Agreement if prevented or hindered from doing so by any circumstances found to be beyond their control.

12. MISCELLANEOUS.

All notices or approvals required or permitted under this User Agreement must be given in writing to the address specified above. Any waiver or modification of this User Agreement will not be effective unless executed in writing and signed by the other party. This User Agreement will bind each party's successors-in-interest. This User Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. All disputes, claims or controversies between the parties hereto will be submitted to arbitration in New York, New York pursuant to the applicable NYSE Arca Equities Rules, if permissible under such rules, and otherwise under the rules of the American Arbitration Association; provided, however, that nothing herein will prevent NYSE Arca from seeking interim injunctive relief in any court of competent jurisdiction. Both parties submit to the non-exclusive jurisdiction of the state and federal courts in and for New York, New York, USA for the resolution of any dispute arising under this User Agreement. If any provision of this User Agreement is held to be unenforceable, in whole or in part, such holding will not affect the validity of the other provisions of this User Agreement. No action arising out of any claimed breach of this User Agreement may be brought by either party more than one (1) year after the cause of action arose. This User Agreement, together with the applicable NYSE Arca Equities Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between NYSE Arca and User with respect to its subject matter and supersedes all prior writings or understandings.

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SECTION 9 - ARCHIPELAGO SECURITIES™ ROUTING AGREEMENT

Provided that User is an ETP Holder or Sponsored Participant of NYSE Arca Equities and subject to a valid, ongoing User Agreement with NYSE Arca, LLC; Archipelago Securities, LLC (hereinafter "Archipelago Securities"), a broker-dealer registered in accordance with Section 15(a) of the Securities Exchange Act of 1934, agrees to act as agent to User for the purpose of providing certain routing services, as described herein, provided that User is bound by the terms and conditions of this Routing Agreement and any applicable rules and interpretations of NYSE Arca Equities Rules. Whereas Archipelago Securities provides certain order routing services for NYSE Arca Equities, and User desires to use the order routing facilities of NYSE Arca Equities and NYSE Arca, for good and valuable consideration, User and Archipelago Securities agree as follows:

1. ROUTING SERVICES.

Archipelago Securities, a wholly owned subsidiary of Archipelago Holdings, Inc., agrees to act as agent of the User for routing orders entered into NYSE Arca to the applicable market centers or broker-dealers for execution, whenever such routing is required in accordance with NYSE Arca Equities Rules. User understands and agrees that orders executed on its behalf shall at all times be subject to the terms and conditions of NYSE Arca Equities Rules.

2. ORDERS NOT ELIGIBLE FOR ROUTING SERVICES.

User agrees that Archipelago Securities will not execute any orders that are not eligible for order routing in accordance with NYSE Arca Equities Rules. For example, NYSE Arca Equities Rules may provide that if a User has indicated that an order must not be routed to another market center for execution (i.e., by designating an order as a fill-or-return or fill-or-return plus order), the order will not be eligible for routing services provided by Archipelago Securities.

3. CANCELLATION; MODIFICATION OF ORDERS.

User agrees that any requests regarding cancellation or modification of orders shall be subject to NYSE Arca Equities Rules. User understands that such rules may provide that requests to cancel orders while the order is routed away to another market center and remains outside NYSE Arca will be processed by Archipelago Securities, subject to the applicable trading rules of the relevant market center.

4. TRANSMISSION OF ORDER INSTRUCTIONS.

User agrees that all orders on its behalf must be transmitted to Archipelago Securities through NYSE Arca. User agrees that NYSE Arca is its exclusive mechanism for purposes of transmitting orders on its behalf to Archipelago Securities and for receiving notice regarding such orders. Archipelago Securities shall be entitled to rely upon and act in accordance with any order instructions received from NYSE Arca on behalf of User. User agrees that all order executions effected on behalf of User pursuant to this agreement shall be reported by Archipelago Securities to NYSE Arca. The User shall be notified of such executions through NYSE Arca.

5. CLEARANCE AND SETTLEMENT.

User agrees that all transactions executed on its behalf shall be processed in accordance with NYSE Arca Equities Rules. If User is an ETP Holder, User agrees that orders executed or its behalf by Archipelago Securities shall be automatically processed by NYSE Arca for clearance and settlement on a locked-in basis. If User is a Sponsored Participant, User agrees that all orders executed on its behalf by Archipelago Securities shall be cleared and settled, using the relevant Sponsoring ETP Holder's mnemonic (or its clearing firm's mnemonic as applicable).

6. TERM OF AGREEMENT.

This Routing Agreement will be effective as of the Effective Date and will remain in effect thereafter until terminated by either party upon notice to the other party. Termination will be effective at the close of trading in the affected markets and applications on the day that notice of termination is received by the other party hereto. Archipelago Securities may terminate this Routing Agreement immediately if (i) the User is in breach of this Routing Agreement for any reason, (ii) any representations made by the User in connection with this Agreement or the User Agreement are or become false or misleading or (iii) User is no longer a ETP Holder or Sponsored Participant of NYSE Arca Equities or otherwise authorized to access NYSE Arca. Upon the termination of this Agreement or the User Agreement for any reason, all rights granted to User hereunder will cease. The provisions of Paragraphs 7, 8, 9 and 10 will survive the termination or expiration of this Routing Agreement for any reason. In no event will termination of this Routing Agreement relieve User of any obligations incurred through its use of NYSE Arca.

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SECTION 9 - ARCHIPELAGO SECURITIES™ ROUTING AGREEMENT (CONTINUED)

7. INDEMNITY.

User agrees to indemnify, defend and hold Archipelago Securities harmless from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including interest, penalties, and attomeys' fees, arising from or as a result of User's breach of its obligations under this Agreement or otherwise from its use of the Archipelago Securities routing services.

8. DISCLAIMER OF WARRANTY.

ROUTING SERVICES ARE PROVIDED "AS IS" AND WITHOUT WARRANTY OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE ROUTING SERVICE, WHETHER EXPRESS, IMPLIED, OR STATUTORY, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY ARCHIPELAGO SECURITIES, NYSE Area EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES, LICENSORS OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, ACCURACY, UNINTERRUPTED USE, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE OR NON-INFRINGEMENT AND ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED.

9. NO LIABILITY FOR TRADES.

USER UNDERSTANDS AND AGREES THAT (I) ARCHIPELAGO SECURITIES IS NOT LIABLE IN ANY MANNER TO ANY PERSON (INCLUDING WITHOUT LIMITATION THE USER AND ANY PERSON FOR WHOM THE USER IS AUTHORIZED TO TRADE OR ACT) FOR THE FAILURE OF ANY PERSON ENTERING INTO A TRADE OR TRANSACTION BY MEANS OF NYSE Area TO PERFORM SUCH PERSON'S SETTLEMENT OR OTHER OBLIGATIONS UNDER SUCH TRADE OR TRANSACTION. NEITHER ARCHIPELAGO SECURITIES, OR ITS AGENTS, AFFILIATES OR LICENSORS WILL BE LIABLE FOR ANY LOSSES, DAMAGES, OR OTHER CLAIMS, ARISING OUT OF THE ROUTING SERVICE OR ITS USE. ANY LOSSES, DAMAGES, OR OTHER CLAIMS, RELATED TO A FAILURE OF ARCHIPELAGO SECURITIES TO DELIVER, DISPLAY, TRANSMIT, EXECUTE, COMPARE, SUBMIT FOR CLEARANCE AND SETTLEMENT, OR OTHERWISE PROCESS AN ORDER, MESSAGE, OR OTHER DATA ENTERED INTO, OR CREATED BY, NYSE Area WILL BE ABSORBED BY THE USER OR THE ETP HOLDER SPONSORING THE USER, THAT ENTERED THE ORDER, MESSAGE OR OTHER DATA INTO NYSE Area. IF THIS SECTION IS DEEMED TO CONFLICT WITH ANY OTHER SECTION OF THIS USER AGREEMENT, THIS SECTION WILL SUPERCEDE SUCH OTHER SECTION.

10. NO CONSEQUENTIAL DAMAGES. UNDER NO CIRCUMSTANCES WILL ARCHIPELAGO SECURITIES, NYSE Arca EQUITIES OR ITS OR THEIR AGENTS, AFFILIATES OR LICENSORS BE LIABLE FOR ANY LOSS, DAMAGE, CLAIM OR EXPENSE, INCLUDING WITHOUT LIMITATION ANY DIRECT, CONSEQUENTIAL, INDIRECT, SPECIAL, PUNITIVE OR INCIDENTAL DAMAGES OR LOST PROFITS, WHETHER FORESEEABLE OR UNFORESEEABLE, BASED ON USER'S CLAIMS OR THE CLAIMS OF ITS CUSTOMERS, EMPLOYEES OR AGENTS (INCLUDING, BUT NOT LIMITED TO, CLAIMS FOR LOSS OF DATA, GOODWILL, USE OF MONEY OR USE OF ROUTING SERVICES, INTERRUPTION IN USE OR AVAILABILITY OF ARCHIPELAGO SECURITIES, STOPPAGE OF OTHER WORK OR IMPAIRMENT OF OTHER ASSETS), ARISING OUT OF BREACH OR FAILURE OF EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, MISREPRESENTATION, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE. THIS SECTION WILL NOT APPLY ONLY WHEN AND TO THE EXTENT THAT APPLICABLE LAW SPECIFICALLY REQUIRES LIABILITY, DESPITE THE FOREGOING EXCLUSION AND LIMITATION.

11. ASSIGNMENT.

User shall not assign, delegate or otherwise transfer this Routing Agreement or any of its rights or obligations hereunder without Archipelago Securities' prior approval, which will not be unreasonably withheld. Archipelago Securities may assign or transfer this Routing Agreement or any of its rights or obligations hereunder to a related or unrelated party upon notice to User.

12. FORCE MAJEURE.

Notwithstanding any other term or condition of this Routing Agreement to the contrary, neither Archipelago Securities nor User will be obligated to perform or observe their obligations undertaken in this Routing Agreement if prevented or hindered from doing so by any circumstances found to be beyond their control.

SECTION 9 - ARCHIPELA	GO SECURITIES™ ROUTING AGREEMENT (CONTINUED)	
13. MISCELLANEOUS. All notices or approvals required or permitted under this Routing Agreement must be given in writing to the address specified above. Any waiver or modification of this Routing Agreement will not be effective unless executed in writing and signed by the other party, provided that this agreement shall at all times be interpreted to effect the rules and interpretations of NYSE Arca Equities, as applicable. This Routing Agreement will bind each party's successors-in-interest. This Routing Agreement will be governed by and interpreted in accordance with the internal laws of the State of New York, USA. All disputes, claims or controversies between the parties hereto will be submitted to arbitration in New York, New York. This Routing Agreement, together with the applicable NYSE Arca Equities Rules, constitutes the complete and entire statement of all conditions and representations of the agreement between Archipelago Securities and User with respect to its subject matter and supersedes all prior writings or understandings.		
	nt by an ETP Holder may be effected by initialing the User Agreement for NYSE Arca or,	
alternatively, by signing in th	le space provided below:	
Accepted on behalf of ETP Ho	lder:	
Ву:		
Name:		
Title:		
Date:		
_		

SECTION 10 – INDIVIDUAL REGISTRATION Provide the information requested below for each of the requested individuals associated with the Applicant Broker-Dealer. Pursuant to NYSE Arca Equities Rule 6.18, all applicants must designate a Series 24 licensed principal. Applicants subject to Exchange Act Rule 15c3-1 are required to have a designated Series 27 licensed principal, pursuant to NYSE Arca Equities Rules 4.5 Additionally, Authorized Traders for whom NYSE Arca will be the DEA are required to have successfully passed the Series 7 examination, pursuant to NYSE Arca Equities Rule 2.4. Proof of examination requirements, fingerprint card submission, and Form U-4s should be submitted by the Applicant to Web CRD® for review by NYSE Arca. For individuals required to be disclosed below who do not have required information available on Web CRD®, the Applicant may be required to submit an investigation fee of \$125 per individual DESIGNATED SERIES 24 LICENSED PRINCIPAL

DESIGNATED SERIES 24 LICENSED PRINCIPAL		
Name:		CRD:
Phone:	Fax:	
Email:		
DESIGNATED SERIES 27 LICENSED PRINCIPAL		
Name:		CRD:
Phone:	Fax:	
Email:		
AUTHORIZED TRADER		
Name:		CRD:
Phone:	Fax:	
Email:		•
AUTHORIZED TRADER		
Name:		CRD:
Phone:	Fax:	
Email:		
AUTHORIZED TRADER		
Name:	<u>-</u>	CRD:
Phone:	Fax:	
Email:		
AUTHORIZED TRADER		
Name:		CRD:
Phone:	Fax:	
Email:		

Additional Authorized Traders are submitted in a separate document attached hereto

SECTION 10 (CONTINUE		
Please identify the key personnel who hold the below positions (or the individual whose responsibilities are the functional equivalent of such position, regardless of actual titles used by the Applicant Firm) and who will want to receive		
communications pertaining	to our equities markets.	
Chief Executive Officer ("C	EO")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Financial Officer ("CF	O")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Compliance Officer ("	CCO")	
Name:		CRD:
Phone:	Fax:	
Email:		
Chief Operations Officer ("C	000")	
Name:		CRD:
Phone:	Fax:	
Email:		
Head of Clearing		
Name:		CRD:
Phone:	Fax:	
Email:		
Head of Connectivity		
Name:	·	CRD:
Phone:	Fax:	
Email:		
Head of Trading		
Name:		CRD:
Phone:	Fax:	
Email:		

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NYSE Arca Equities, Inc.

DEA Application Requirements

SECTION 11- DESIGNATED EXAMINING AUTHORITY (DEA) REQUI	REMENTS
ITSFEA COMPLIANCE ACKNOWLEDGEMENT	
This form should be completed by a Director, Officer, General Partner or Inc Dealer's ITSFEA Compliance Procedures are followed. In the future, this NYSE Arca along with the Broker-Dealer's year-end FOCUS Report (Form X	s certification must be completed and filed with
Broker-Dealer:	
SEC #	
The undersigned states and certifies as follows:	
It is understood that should any Director, Officer, General Partner or Associated F of the Broker-Dealer acquire material, non-public information concerning a corpo a violation of NYSE Arca Equities Rules and Federal securities laws to misuse s corporation, or any options or other derivative securities based thereon, while suc It is further understood that should any Director, Officer, General Partner or Assonon-public information concerning the market in a security or group of securities and Federal securities laws to make improper use of such information in connect any option or other derivative based thereon. It is also understood that it may be a violation of NYSE Arca Equities Rules and F or entity any non-public, material corporate or market information that may be accecurities. Additionally, the Broker-Dealer represents that it has established written proceedures. Associated Persons, taking into consideration the nature of the Broker-Dealer's but The Individual(s) responsible for overseeing and supervising the specific elent Compliance procedures has reviewed (or supervised the review of) the Broker-D brokerage securities accounts of Directors, Officers, General Partners, and Associated Persons including timing and type of review) detailed in an procedures. Based upon the assessment of the adequacy of those procedures and of the absociated procedures (except as to any securities transactions involving the possible been reported to NYSE Arca), there is no reasonable cause to believe that an Persons of the Broker-Dealer has misused, made improper use of, or disclosed in violation of NYSE Arca Equities Rule 6.3	ration whose securities are publicly traded, it may be such information or trade any securities issued by the h information remains non-public. ociated Person of the Broker-Dealer obtain material, is, it may be a violation of NYSE Arca Equities Rules attended to make the security, group of securities or dederal securities laws to disclose to any other person quired regarding a publicly traded security or group of securities reasonably designed to prevent misuse of expedices. Directors, Officers, General Partners or usiness. The member firm or organization's ITSFEA realer's proprietary, error account(s), and any outside ciated Persons with the Broker-Dealer, in accordance direquired by the firm's written ITSFEA compliance authority and diligence of the person(s) carrying out misuse of non-public information which already have my Director, Officer, General Partner, or Associated
Accepted on behalf of ETP Holder:	
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name of Authorized Officer, Partner, Managing Member, or Sole	Title
Proprietor	

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NYSE Arca Equities, Inc.

Application for Market Maker* Registration

*Includes Market Maker & Lead Market Maker

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Application Process

Filing Requirements

Prior to submitting the <u>Application to become a Market Maker</u>, an applicant Broker-Dealer must have completed the Equity Trading Permit ("ETP") application. A firm will not be eligible for approval as a Market Maker until after their ETP application is approved.

Checklist

Applicant ETP must complete and submit all materials as required in this Application Checklist (page 4) to crs@nyse.com.

If you have questions regarding the application, you may direct them to NYSE Arca Client Relationship Services: Email: crs@nyse.com; Phone: (212) 896-2830, option 5.

Application Process

- Following submission of the <u>Application for Market Maker Registration</u> and supporting documents, NYSE Arca will review the application for completeness, assess the firm's capital sufficiency, review registration and disclosure information for the Applicant and each listed Market Maker Authorized Trader, and review the Applicant's written supervisory procedures.
- Applicant ETP Broker-Dealers must designate within Section 1 whether they are applying as a Market Maker ETP ("METP"), and/or as a Lead Market Maker ETP ("LETP").
- Applicant Broker Dealer is required to consult with an NYSE Arca Sales Representative to determine the most beneficial
 connectivity option. NYSE Arca will then coordinate the connectivity between the Applicant Broker Dealer and the Exchange. For
 Lead Market Maker applicants, the Exchange will assess the Applicant's trading systems by using the NYSE Arca LMM
 Certification Test.
- If review of Statutory Disqualification Disclosure information and/or a background investigation indicates that the applicant Broker-Dealer has an associated person(s) with a possible statutory disqualification, NYSE Arca will contact the representative of the applicant Broker-Dealer to discuss the statutory disqualification process.
- If it appears that the applicant Broker-Dealer has outstanding debt, civil judgment actions and/or regulatory disciplinary actions, the applicant Broker-Dealer will be contacted by NYSE Arca for further information.
- Applicants who have completed and returned all documents without indication of a statutory disqualification, outstanding debt, civil judgment actions and/or regulatory disciplinary actions will be presented to NYSE Arca for approval or disapproval without delay.
- NYSE Arca will promptly notify the applicant Broker-Dealer in writing of their decision.
- Upon approval and once connectivity is established, your NYSE Arca Sales Representative will inform you of your ability to trade.
- In the event an applicant Broker-Dealer is disapproved by NYSE Arca, the applicant Broker-Dealer has an opportunity to be heard
 upon the specific grounds for the disapproval, in accordance with the provisions of NYSE Arca Equities Rule 10.13. A
 disapproved applicant desiring an opportunity to be heard shall file a written application with the Secretary of the Corporation
 within thirty (30) calendar days after such action has been taken.

Approved Lead Market Maker ETP Firms:

Approved LETP firms will receive all Green Sheet postings via e-mail and may apply to become the LMM in a particular security with NYSE Arca as its primary listing venue by completing the LMM Registration Application. Eligible LETP firms may be selected as the LMM for a particular security based on input by the listing company, or may be selected randomly from a list of LETPs who have submitted their LMM application for that security. LMM selection based on input by the listing company will require interviews between the LMM applicant(s) and the listing company.

APPLICATION CHECKLIST & FEES - NEW NYSE ARCA MARKET MAKER APPLICANTS □ Approved Equity Trading Permit ("ETP") application Application for Market Maker Registration, Sections 1 through 6 Form U4 and fingerprint cards for each Market Maker Authorized Trader listed in Section 3 are available on Web CRD® Proof of Passing Series 7 (prior to May 1, 2016) or Series 57 (Effective May 1, 2016) Test Score for each Market Maker Authorized Trader listed in Section 3; or Request for a Series 57 Waiver has been requested via WebCRD been granted by NYSE Arca. Market Maker Orientation Acknowledgement https://www.nyse.com/publicdocs/nyse/markets/liquidity-programs/arca mm_orientation.pdf Copy of Applicant's Written Supervisory Procedures ("WSPs") for Market Making on NYSE Arca, LLC Financial Documentation Four (4) Most Recent FOCUS Reports¹ and Most Recent Audited Financial Statements, if applicable Most Recent Balance Sheet and Capital Computation Six Month Profit/Loss Projection Subordination Agreements, if applicable All examination reports and corresponding responses from the Applicant Broker-Dealer for the previous two (2) years Organizational Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC")

ADDITIONAL CHECKLIST FOR BROKER-DEALERS REQUESTING TO BECOME A LEAD MARKET MAKER ETP ON NYSE ARCA

Copy of Written Supervisory Procedures, Anti-Money Laundering Procedures, and Insider Trading Act Procedures (if separate)

- Application for Market Maker Registration (if not completed concurrently with Market Maker application):
 - Section 1 to identify intent to apply as a Lead Market Maker ETP

Agreements; Operating Agreement; or similar documentation

- Sections 3 & 4 for any previously undisclosed Market Maker Authorized Traders
- Section 6
- □ NYSE Arca LMM Certification Test
 - Approved Lead Market Makers must confirm in writing that they have tested and are able to maintain continuous two-sided quotes.

1 Applicants must demonstrate that they have current net capital of 140% of their minimum net capital requirement or \$20,000 in excess of their minimum dollar net capital requirement, whichever is greater. If the Broker-Dealer has reported net losses for the period reviewed, the Firm's financial statements must demonstrate that its excess net capital can withstand six (6) consecutive months of average losses. Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements for the most recent six (6) months or since inception, whichever is less.

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EXPLANATION OF TERMS & PROCESSES

For purposes of this application, the following terms shall have the following meanings:

Applicant Broker-Dealer – the Broker-Dealer applying as a registered Market Maker or amending this form to become a registered Market Maker.

Associated Person - a person who is a partner, officer, director, member of a LLC, trustee of a Business Trust, or employee of an ETP Holder or any person directly or indirectly controlling, controlled by or under common control with an ETP Holder.

Control – (as defined on Form-BD) the power, directly or indirectly, to direct the management or policies of a company, whether through ownership of securities, by contract or otherwise. Any person that (1) is a director, general partner or officer exercising executive responsibility (or having similar status or functions); (2) directly or indirectly has the right to vote 25% or more of a class of a voting security or has the power to sell or direct the sale of 25% or more of a class of voting securities; or (3) in the case of a partnership, has the right to receive upon dissolution, or has contributed, 25% or more of the capital, is presumed to control that company.

Central Registration Depository System (Web CRD®) – A centralized electronic registration system maintained by FINRA which provides information on registered representatives and principals for members of participant organizations. This database contains employment history, exam scores, licensing information, disciplinary actions, fingerprint results, and other related registration information. NYSE Arca, Inc. is a participant of this system.

Designated Examining Authority (DEA) – the SEC will designate one Self-Regulatory Organization ("SRO") to be a Broker-Dealer's examining authority, when the Broker-Dealer is a Member or ETP Holder of more than one SRO. Every Broker-Dealer is assigned a DEA, who will examine the Broker-Dealer for compliance with financial responsibility rules. The SEC will make the DEA assignment based on the SRO examination program and the Broker-Dealer's primary business location.

Designated Market Maker ("DMM") - a registered Market Maker that participates in the Directed Order Process

Direct Owners/Executive Officers – refers to (1) a director, general partner or officer exercising executive responsibility (or having similar status or function); or (2) directly or indirectly has the right to vote 5% or more of a class of voting security or has the power to sell or direct the sale of 5% or more of a class of voting securities; (3) is entitled to receive 5% or more of the net profits; (4) in the case of a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution or have contributed, 5% or more of the capital; or (5) in the case of a LLC, those members that have the right to receive upon dissolution, or have contributed, 5% or more of the LLC's capital, and if managed by elected managers, all elected managers.

Financial Arrangement – (1) the direct financing of an ETP Holder's dealings upon the Exchange; (2) any direct equity investment or profit sharing arrangement; or (3) any consideration over the amount of \$5,000.00 including, but not limited to, gifts, loans, annual salaries or bonuses.

Lead Market Maker ("LMM") – a registered Market Maker that is the exclusive DMM in listings for which the Corporation is the primary market

Lead Market Maker ETP ("LETP") - an approved Market Maker with NYSE Arca, Inc. eligible to apply as an LMM

Market Maker – an ETP Holder approved by the Corporation to act as a Market Maker pursuant to NYSE Arca Equities Rule 7.20

Market Maker Authorized Trader ("MMAT") – an authorized trader who performs market-making activities pursuant to NYSE Arca Equities Rule 7.21, on behalf of a Market Maker.

NYSE Arca, Inc. ("NYSE Arca" or the "Corporation") – a Delaware corporation as described in the Corporation's Certificate of Incorporation and Bylaws. NYSE Arca is a national securities exchange as that term is defined by Section 6 of the Securities Exchange Act of 1934, as amended. NYSE Arca, Inc. is the Self-Regulatory Organization for NYSE Arca, LLC

NYSE Arca, LLC - The equities marketplace and a trading facility of NYSE Arca, Inc.

NYSE Arca Equities - NYSE Arca Equities, Inc. (a wholly owned subsidiary of the NYSE Arca, Inc.).

Self-Regulatory Organization (SRO) - each exchange or national securities association is an SRO. Each SRO must have rules that provide for the expulsion, suspension and other discipline of member Broker-Dealers for conduct inconsistent with just and equitable principles of trade.

Symbols – refers to stock symbols that may be assigned to a MMAT. Symbols are assigned at the firm level and are traded by the MMATs. Symbols may be added or removed on a daily basis, based on requests emailed to Exchange Security Operations, operationsclearing@nyx.com, with said request. At this time, OTC symbols are not eligible for market making. Upon approval, by default, two test symbols (ZVV and M.TEST) will be assigned to the firm for testing purposed

SECTION 1 - ORGANIZATIO	NAL PROFILE		
Date: SE	EC #: CRI)#: M	PID NASDAQ Participant)
Application	Amendment		
THE APPLICANT INTENDS TO R	EGISTER AS A(N) (Check all tha	t apply):	
☐ Market Maker (METP)	Lead Market Maker	(LETP)	
GENERAL INFORMATION			
Name of Applicant ETP:			
Business Address:			
City:		State:	Zip Code:
Business Phone:		Fax:	
		Title:	
Phone:		Fax:	
Email:		<u></u>	
			·
ETP APPROVAL STATUS			
Applicant organization is * All Market Maker Applic	currently an approved Equity Tra cants must be approved ETP hold	ers	1
NET CAPITAL			
Amount:	As of Date:	Focus Report Line Item	*:
*Submitting the firm's most recent section.	Quarterly FOCUS report and hig	nlighting the Net Capital is an	alternative to completing this
Source of Net Capital (check all	that apply):		
☐ Long Proprietary Positions	☐ Interest/Dividends/Commis	sions Secured D	emand Note
☐ Subordinated Loan	☐ Clearing/Good Faith Depos	its Other	
SECURITIES			
List the number of securities for which your firm requests approval:			
OTHER BUSINESS ACTIVITI	ES		
Check all that apply:			
☐ Investment Banking	☐ Public Securities Business	☐ Proprietar	y Trading
☐ Options Market Maker	☐ Other		

SECTION 2 - OTHER AFF	ILIATIONS		
Is the Applicant a dealer/specialist or Market Maker on a registered national securities exchange(s) or association? If yes, please provide the relevant information below.			
☐ Yes ☐ No			
Applicants who currently act a pursuant to NYSE Rules 36 a	Applicants who currently act as a Specialist on the New York Stock Exchange, LLC ("NYSE") are reminded of their requirements pursuant to NYSE Rules 36 and 98.		
SRO:			
Operating Capacity:			
List Securities			
•			
SRO:			
Operating Capacity:			
List Securities			
SRO:			
One and in a Comparity			
Operating Capacity:			
List Securities			

SECTION 3 – MARKET MAKER AUTHORIZED TRADER APPLICANT LIST Ensure a Form U4 for each of the individuals identified below is available on Web CRD®. To be eligible for registration as a MMAT, as defined in NYSE Arca Equities Rule 1.1(v), a person must (i) have successfully completed the General Securities Representative Examination (Series 7) prior to May 1, 2016 or successfully complete the Securities Trader Qualification Examination (Series 57) effective May 1, 2016, (ii) complete the NYSE Arca Equities sponsored training and orientation program, and (iii) register each individual on Web CRD® in the appropriate NYSE Arca registration category (MT). NYSE Arca Equities sponsored training and orientation program is available at: https://www.nyse.com/publicdocs/nyse/markets/liquidity-programs/arca_mm_orientation.pdf LEAD MARKET MAKER DESIGNEE (Required for Lead Market Maker ETP Applicants Only) Full Name: Date of Birth: Street Address: Suite/Floor: State: Zip Code: City: Phone Number: Fax Number: E-Mail Address: Will this individual be registered as a Market Maker Authorized Trader: ☐ No Yes (Please complete the information below) Employer Broker-Dealer: Operating Capacity: Employment Dates: SRO Affiliation: Form U4, Proof of Series 7/Series 57, and Fingerprint Card Information is current and accessible for this person on WebCRD® MARKET MAKER AUTHORIZED TRADER Date of Birth: Full Name: NYSE Arca Orientation: Yes No CRD #: _____ Qualifying Exam: Yes No Employer CRD #: Employer Broker-Dealer: Form U4, Proof of Series 7/Series 57, and Fingerprint Card Information is current and accessible for this person on WebCRD® MARKET MAKER AUTHORIZED TRADER _____ Date of Birth: Full Name: CRD #: Qualifying Exam: ☐ Yes ☐ No NYSE Arca Orientation: ☐ Yes ☐ No

Form U4, Proof of Series 7/Series 57, and Fingerprint Card Information is current and accessible for this person on WebCRD®

PLEASE USE MULTIPLE COPIES OF THIS FORM TO LIST ADDITIONAL MARKET MAKER AUTHORIZED TRADERS

Employer CRD #:

Employer Broker-Dealer:

SECTION 4 - MARKET MAKER ORIENTATION ACKNOWLEDGEMENT	
The firm acknowledges responsibility that each MMAT listed within the entire Market Maker Orientation program offered on the NYSE Ahttp://www.nyse.com/equities/nysearcaequities/1158747143951.htm by each MMAT is a requirement of application approval.	Arca website:
The Applicant Broker-Dealer also acknowledges that failure by any NYSE Arca, LLC may result in disciplinary action against the Broker	MMAT to complete the orientation program prior to trading on r-Dealer and the MMAT.
Applicant Broker-Dealer	
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name	Title

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SECTION 5 - DESIGNEE ASSIGNMENT	
A "Designee" is a person assigned by the firm who is authorized to Designee refers to any person that is a partner, director, or officer functions) for supervising MMATs (as defined in NYSE Arca Equiti Designee function authority to other members of the firm. By defaupersons are required to be designated below.	exercising executive responsibility (or having similar status or es Rule 1.1(v)). This section allows a Designee to assign the lit, Head Traders fall under this category; however, such
DESIGNEE	
Full Name:	- -
Title:	-
Email Address:	
DESIGNEE	
Full Name:	_
Title:	· -
Email Address:	Phone Number:
DESIGNEE	
Full Name:	_
Title:	-
Email Address:	Phone Number:
DESIGNEE	
Full Name:	-
Title:	-
Email Address:	Phone Number:
AUTHORIZED ACKNOWLEDGEMENT	
	•
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name	Title

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SECTION	6 – F	REQUIRED INFORMATION & ACKNOWLEDGEMENT
rules and r	egula	applying for registration as a Market Maker*, accepts full responsibility for having knowledge of and adhering to all tions governing the equities trading facility of NYSE Arca Equities called NYSE Arca LLC. The undersigned following requirements:
1.	Note:	mum Net Capital Requirements: the requirements in items 1(a) and (b) apply only to the registered Market Maker rather than to each MMAT idually.
	(a)	Market Makers Subject to the Aggregate Indebtedness Requirement Maintain minimum net capital that is the greater of: (i) \$100,000; (ii) \$2,500 for each security that it is registered as a Market Maker (unless a security in which it makes a market has a market value of \$5 or less, in which event the amount of net capital shall be not less than \$1,000 for each such security) based on the average number of securities that such Market Maker is registered during the 30 days immediately preceding the computation date; (iii) 6 2/3 percent of aggregate indebtedness; or (iv) the amount prescribed by SEC Rule 15c3-1.
	(b)	Market Makers Subject to the Alternative Net Capital Requirement Maintain minimum net capital that is the greater of (i) \$250,000; (ii) 2 percent of aggregate indebtedness; or (iii) the amount prescribed by SEC Rule 15c3-1.
2.		ide monthly financial statements consisting of FOCUS Form X-17A-5 to FINRA's Risk Oversight & Oper. Reg artment for Market Maker capital compliance review.
3.		ide detailed financial reports and such other operational reports to FINRA's Risk Oversight & Oper. Reg department may require.
4.		lose promptly any material change in financial or operational condition, or in personnel in accordance with the rules procedures of NYSE Arca Equities.
5.	activ laws	blish, maintain, and enforce written procedures to supervise the business in which it engages and to supervise the ities of its associated persons that are reasonably designed to ensure compliance with applicable federal securities and regulations and NYSE Arca Equities' rules. Such written procedures shall at all times be available for inspection YSE Arca Equities staff.
*Includes M	larket	Maker and/or Lead Market Maker
AUTHORI	ZED	ACKNOWLEDGEMENT OF THE CONTENTS HEREIN

The undersigned attests that the contents submitted on behalf of the Applicant are complete and agrees to update information as required. Further, the Applicant will abide by all rules of the Exchange, as may be amended from time to time.

Date

Title

Signature of Authorized Officer, Partner, Managing

Member, or Sole Proprietor

Print Name

OTP Request Form

This form should be used to request an Options Trading Permit ("OTP") and to assign that OTP to a nominee of an OTP Firm. This form designates an OTP Firm's nominee as an OTP Holder on behalf of that firm, and must be executed prior to the commencement of trading of that nominee. This form must be approved by NYSE Arca's Client Relationship Services Department. A separate form must be executed for each OTP Holder.

Please	issue		("OTP Firm")
	(name of OTP Firm)	 -
(numb	Options Trading Permit(s), effective er of OTPs being requested)	(e	(open of business).
(This)/	(these) OTP(s) will be held in the name	of	
	("OTP Ho	older").	, hereby established as an OTP Holder, until further notice.
	(name of nominee)	,	,
□ (Tr	nis is a) / (these are) new or additional OT nis is an) / (these are) existing OTP(s) of t nced OTP Holder.	P(s) of the OTF	the OTP Firm P Firm; this form is being executed to assign said OTP(s) to the above
Туре	of Business activity to be conducted w	ith this	/these OTP(s):
	Lead Market Maker (LMM)		Remote Market Maker (RMM)
	Clearing Services		Proprietary and/or Agency Trading
	Floor Broker (FB) - If Floor Broker (FB)	is ched	cked, do you require a LiquidPoint Login?
transac	ctions effected on NYSE Arca, all obligation	ons owe	or all Exchange obligations, including all obligations arising in connection with ed to NYSE Arca or any subsidiary of NYSE Arca, the payment of all NYSE Arca ourse of the OTP Firm's and the OTP Holder's NYSE Arca business.
The O	TP issued pursuant to NYSE Arca's accepation provisions delineated in NYSE Arca	otance Rule 2	of this form will be associated with the OTP Firm until terminated pursuant to the .22(a).
Signat	ture of OTP Holder:		
Teleph	none Number of OTP Holder:		Email Address:
Autho	rized Signature for OTP Firm:		
Print N	lame of Authorized Signatory:		
Teleph	none Number of Authorized Signatory:		Email Address:
Date:	·		
Clearin	ng member authorization for electronic col	lection	of NYSE Arca invoices for this OTP:
Name	of Clearing Firm		<u> </u>
OCC A	account Number		

Floor Broker Letter of Authorization Revocation

То:	NYSE Arca Client Relationship Services Departr	nent
From:	OTP Clearing Member	
Effective Date:		(Close of Business)
	informed that the Letter of Authorization issued for t ked effective on the above date.	the following Floor Broker has
OTP Firm	Name	
Floor Brok	er Name	Symbol
Authorized	I Signature – Clearing Member	·
Printed Na	ıme	Title

TERMINATION OF FLOOR BROKER

10:	NYSE Arca Client Relationship Services Dep	artment
From:	OTP Member Firm	
Re:	Floor Broker Name	Acronym(s)
Date of	termination:	(Close of Business)
□ Tem	porary Termination (1-120 days) - Date of Return:	
☐ Pern	nanent Termination	
	Authorized Signature of OTP Firm	Date

Checklist for Terminating an OTP Floor Broker

- 1. OTP holders must notify the Exchange no later than one (1) business day in advance of the proposed termination date.
- 2. Temporary terminations cannot exceed 180 day s.
- 3. OTP holders must return Floor Badge and Handheld to Arca Floor Staff
- 4. In conjunction with a permanent termination, a Form U-5 for the "FB" registration category should be submitted on WebCRD within ten (10) business days of termination.
- 5. Individuals who are registered and wish to remain registered in the NYSE Arca Interim Member Floor Broker Program should not submit this form or the Form U-5. *For more information about the NYSE Arca Interim Member Floor Broker Program, please contact Client Relationship Services via email at crs@nyx.com.

FLOOR EMPLOYEE REGISTRATION REQUEST Incomplete applications will not be accepted. Applications will not be approved without proper identification, fingerprint clearance, U-4 and CRD registration. Accordingly, failure to respond accurately to the following questions will delay approval of your floor access application and may result in denial of floor access. **GENERAL INFORMATION** Name of Applicant: Member Firm: _____ Member Firm CRD#: _____ **Business Address:** State: Zip: City: Member Firm Contact: _____ Title: _____ Phone: _____ Email: _____ APPLICANT PERSONAL INFORMATION Home Address: State: ____ Zip: ____ City: Member Firm Contact: Phone: Email: TYPE OF BUSINESS TO BE CONDUCTED Floor Employee Trade Support Clerk All individuals requesting access to the NYSE Arca Options Floor must register as ("FE") on WebCRD **APPLICATION CHECKLIST** A Form U-4 requesting ("FE") registration has been submitted to FINRA through WebCRD A Fingerprint Card has been submitted to FINRA APPLICANT ACKNOWLEDGEMENT I authorize NYSE Arca, Inc. and its affiliates to give any information they may have concerning me to any employer or prospective employer, any federal, state, or municipal agency, or any other SRO, and I release NYSE Arca, Inc., its affiliates and any person acting on their behalf from any and all liability of whatever nature by reason of furnishing such information. I swear or affirm that I have read and understand the items and instructions on this form and that my answers are true and complete to the best of my knowledge. Signature of Applicant: OTP FIRM ACKNOWLEDGEMENT Is authorized to enter into the NYSE Arca Options trading floor as I hereby certify that (Name of Applicant) referenced above, on behalf of this OTP Firm (Name of OTP Firm) Start Date: Authorized Signature:

MARKET MAKER LETTER OF GUARANTEE

Pursuant to NYSE Arca Rule 6 and 5.32

Dear Market Maker:

You have represented to the undersigned Clearing Member, a member of the Options Clearing Corporation, that you are a registered market maker pursuant to Rule 6.33 of the Rules of NYSE Arca. You have requested the undersigned Clearing Member to issue a Letter of Guarantee for you in order to enable you to meet the requirements of NYSE Arca Rule 6.36. In response to your request, the undersigned Clearing Member hereby agrees to accept full financial responsibility: □ For all Exchange options transactions [as defined in NYSE Arca Rule 6.1(a)(6)] made by □ For all Flex Options transactions [as defined in NYSE Arca Rule 5.32] made by you* *Check all that apply. This letter shall be deemed to be a Letter of Guarantee pursuant to NY SE Arca Rule 6.36 and may be relied upon by the NYSE Arca, the Options Clearing Corporation and their respective members. This Letter of Guarantee shall be subject to the NYSE Arca Rules as amended from time to time, and shall remain in effect until revoked in accordance with the NYSE Arca. Accepted and agreed to this _____ day of _____, 20 ___. Clearing Firm Name **OTP Firm Name** Clearing Member Representative (Please Print) Market Maker (Please Print) Authorized Signature of Clearing Member Authorized Signature of Market Maker Symbol of Market Maker Clearing member authorization for electronic collection of NYSE Arca invoices for the above symbol: Name on OCC Account _____

Revised November 2012

OCC Account Number

Market Maker Letter of Guarantee Revocation

To:	NYSE Arca Client Relations	ship Services Depart	ment	
From:				
	Clearing Member			
Effective Date:		·	(Close of Business	9
	informed that the Letter of Gua fective on the above date:	arantee issued for the	e following Market Make	r has been
Firm Name	e			
Market Ma	ıker Name		· · · · · · · · · · · · · · · · · · ·	_
Market Ma	ıker Symbol	 :::		
Authorized Clearing F	l Signature irm	Date		
Print Name	<u> </u>	Title	· · · · · · · · · · · · · · · · · · ·	_

NYSE Arca Options Market Maker and Floor Broker Orientation Manual

Market Making

Appointment of Market Makers

Market Makers may select from among any option issues traded on the Exchange for inclusion in their Appointment, subject to the approval of the Exchange. In considering the approval of the Appointment of a Market Maker, the Exchange will consider financial resources, experience, past performance in making markets, and operational capability. The Exchange may appoint an unlimited number of Market Makers in each class. The Exchange reserves the right to limit the number of Market Makers appointed to a particular option class due to system constraints.

The number of issues a Market Maker can trade is determined by the number of Options Trading Permits (OTPs) acquired:

OTPS	ISSUES
1	100
2	250
3	750
4	All Issues

Market Makers may change the option issues that are included in their Appointment periodically, subject to the approval of the Exchange. The OTP Firm has full discretion in distributing issues among its Authorized Traders and Market Makers. However, Market Makers (including Lead Market Makers) registered on the same OTP are not allowed to trade the same issue simultaneously.

Market Makers may withdraw from trading an option issue that is within their Appointment by providing the Exchange with a three business day written notice of such withdrawal. Market Makers who fail to give an advance written notice of withdrawal to the Exchange may be subject to disciplinary action.

Quoting Obligations

Within Market Maker Appointment

All Market Makers must contribute to the maintenance of a fair and orderly market. Market Makers must honor the number of contracts associated with the quotations they have submitted to the system in all series of options classes within their Appointment. Any change to a quote (including a reduction of size) causes the quote to lose priority. The minimum size for all quotes is one contract. Neither LMMs or MMs are required to quote on the Opening Auction.

Lead Market Makers

Lead Market Maker must provide continuous two-sided quotes 90% of the time during which the Exchange is open for trading in each of their appointed issues. This obligation is applied collectively to all series for each issue in the Lead Market Maker's Appointment. Compliance will be determined on a monthly basis. The Exchange will not include in its review the duration of any periods where a technical failure on the part of the Exchange prevents the LMM from providing continuous quotations. The Exchange also retains the discretion to consider other exceptions to this continuous electronic quote obligation based on demonstrated legal or regulatory requirements or other mitigating circumstances. Lead Market Makers may operate from on or off the floor.

Market Makers

Market Makers must provide continuous two-sided quotations 60% of all times during which the Exchange is open in each of their appointed issues. This obligation is applied collectively to all series for each issue in the Market Maker's Appointment. Although Market Makers are not required to quote in each series, the amount of time a Market Maker provides quotes in all series will be aggregated to determine compliance with the quoting obligation requirement. Additionally, compliance with the 60% quoting obligation is measured on a monthly basis.

A Market Maker may be called upon by a Trading Official to submit a single quote or maintain continuous quotes in one or more series of an option issue within its Appointment whenever it is deemed that it is necessary to do so in the interest of maintaining a fair and orderly market.

Revised May 2012

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Quote Width

The spread differential (difference between the bid and offer) of Market Maker quotes may not exceed \$5. For open outcry purposes, the spread differentials shall be as follows:

BID PRICE	MAXIMUM RANGE
0 to \$1.99	\$0.25
\$2.00 to \$5.00	\$0.40
\$5.01 to \$10.00	\$0.50
\$10.01 to \$20.00	\$0.80
\$20.01 or greater	\$1.00

Trading Obligations

At least 75% of the trading activity of a Market Maker (including Lead Market Makers), measured in terms of contract volume per quarter, must be in classes within the Market Maker's Appointment.

Market Makers and Lead Market Makers may not stream quotes in issues outside their Appointment. Market Makers who wish to trade outside their Appointment may do so by using orders. Market Makers should consult their Clearing Firm for information related to margin treatment of orders vs. quotes.

When trading in issues outside their Appointment, Market Makers should not engage in transactions for an account in which they have an interest that are disproportionate in relation to, or in derogation of, the performance of their obligations with respect to the classes in their Appointment. Additionally, Market Makers should not individually (or as a group) intentionally or unintentionally, dominate the market in option contracts of a particular class.

Lead Market Maker Guarantees

LMMs will be allocated 40% of the size of an incoming order or their share in the order of ranking, whichever is greater, provided they are quoting at the NBBO prior to order entry and provided there are no Customer orders ranked ahead of the LMM. LMMs will be entitled to their 40% participation on "open outcry" trades only when present in the trading crowd and when quoting at the best price. LMM participation may be greater than 40% as a result of successful competition by means of "open outcry."

Market Maker Risk Limitations (MMRL)

NYSE Arca will maintain a "trade counter" for each Market Maker in each class within the Market Maker's Primary Appointment. The trade counter will be incremented by one every time the Market Maker executes a trade on any series in the appointed class. The MMRL is configurable by the Market Maker and will be activated when the trade counter has reached "n" executions within one second. This counter applies to trades against Market Maker quotes only; it does not apply to trades against Market Maker orders. The minimum setting is 5 executions per second and the maximum is 100. The Exchange will automatically default the "n" setting to 50 executions per second if the Market Maker does not submit a setting. When the threshold is met, the trading engine will automatically cancel all quotes posted by the Market Maker in that class by generating a "bulk cancel" message.

Because the timer resets every second, rather than at the time of the first execution, the maximum number of trades that may occur before the bulk cancel message is generated is 2n-1 trades over a one second period. For instance, suppose the MMRL is set to 8 executions and the first execution occurs at 0.6 seconds. Up to 6 more executions (for a total of 7) may occur before 0.99 seconds. At 1.0 seconds the counter is reset, and 8 more executions may take place over the next 0.59 seconds for a total of 15 transactions ((2 x 8) – 1) before the bulk cancel message is generated.

The MMRL records separate executions against resting quotes. However, an incoming quote that executes against multiple trading interests at the same price in the Consolidated Book will be counted as a single event.

The bulk cancel message will be processed in time priority with any other quote or order message received by NYSE Arca. Any orders or quotes that are matched with the Market Maker's quote and were received by the system prior to the receipt of the bulk cancel message will be executed. Orders or quotes received by NYSE Arca after receipt of the bulk cancel message will not be executed against the Market Maker. Once the MMRL has been activated for an option class, any bulk quote messages sent by the Market Maker on that class will be rejected until the Market Maker submits a system message to enable new quotes.

In the event that there are no Market Makers quoting in the issue, the best bid orders and best offer orders residing in the Book will be disseminated as the BBO. If there are no Market Maker quotes and no orders in the book on the bid and/or the offer, the Exchange will disseminate a bid of zero and/or an offer of zero.

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Routing to Away Markets

The NYSE Arca trading system will automatically route orders to other exchanges if the National Best Bid or Offer ("NBBO") is not available on NYSE Arca. NYSE Arca uses Archipelago Securities and private routing brokers to route orders to other market centers based on preset parameters in its automated routing algorithm. NYSE Arca may route regardless of order capacity (Customer, Firm, Customer Broker/Dealer, and Market Maker). Please note, however, that only orders are routed; quotes that lock the NBBO are not routed.

Consistent with the Options Order Protection and Locked/Crossed Market Plan, locked markets are to be avoided. If a Market Maker's quote should lock or cross another market center's quote, the MM should either (a) promptly unlock or uncross the market, or (b) cause an order to be sent to the away exchange in order to move the market. This may be done through a MM's own order entry system directly to the away market, or by submitting an order to NYSE Arca to route to any markets at the NBBO. A NOW order submitted to NYSE Arca will route to any markets at the NBBO, but will not rest in the NYSE Arca book if not filled.

For a complete description of the rules governing routing and order protection, review NYSE Arca Rules 6.92 through 6.96 at http://nysearcarules.nyse.com/pcx/

Trade Allocation

Order/Quoting Ranking

Orders and quotes are treated equally and maintained in the NYSE Arca Book according to price-time priority. The Consolidated Book (except for certain working orders with conditional price or size instructions) will be displayed to all Users. Market orders and/or marketable limit orders will be matched for execution using the following algorithm. All orders executed in Step 1 or 2 must be at the NBBO, or be routed according to Step 3.

Diagram 1: Order Matching Process

Display Order Process	Step 1: A marketable bid or offer will first attempt to be matched for execution against bids or offers at the display price for the total amount of option contracts available at that
LMM Participation	price or for the size of the incoming order, whichever is smaller. Order matching is subject to the LMM participation rules defined below

Work Order Process

Step 2: Marketable orders will then be matched against working orders such as the undisplayed portion of a Reserve Order or an All-or-None Order in the order of their ranking, for the total amount of option contracts available at that price or for the size of the incoming bid or offer, whichever is smaller



Routing Away

Step 3: If the order cannot be matched on NYSE Arca, the order will be routed in whole or in part to another Market Center(s) as a limit order equal to the price and up to the size of the quote published by the Market Center. The remaining portion of the order, if any, shall be ranked and displayed in the Book.

If there is no LMM quoting at the NBBO in the options series, the incoming marketable bid or offer will be matched against orders and quotes in the Display Order Process base upon their price-time rankings.

Internally locked or crossed quotes trade immediately with orders or other quotes on NYSE Arca when executions are possible. The system will not delay or prevent Market Maker quotes from trading with orders or other Market Maker quotes. NYSE Arca posts and disseminates quotes that lock or cross the quotes of other options exchanges. Individual market makers are responsible for taking appropriate actions to avoid locking or crossing other exchange's markets as required by Linkage rules.

Example:

Market Orders to sell 500 entered.

Submitter Ranked in Time of Entry	Bids	Size	Execution
Broker Dealer 1 Order	1.00	200	200
Customer 1 Order	1.00	200	200
Market Maker 1 Quote	1.00	300	100
Customer Order	1.00	1000	0
Market Maker 2 Quote	1.00	400 .	0

- (1) Broker Dealer 1 order buys 200 (leaves 300 on incoming order) price time
- (2) Customer 1 order buys 200 (leaves 100 on incoming order) price time
- (3) Market Maker 1 quote buys 100 (incoming order filled) price time

LMM PARTICIPATION in the Display Order Process

If there is an LMM quoting at the best price in the option series, the incoming marketable bid or offer will be matched against the quote of the LMM for the greater of an amount equal to 40% of the balance of the incoming bid or offer up to the LMM's disseminated quote size or the LMM's share in the order of price/time ranking. The remaining balance of the incoming marketable bid or offer will be matched against remaining orders and quotes in the Display Order Process in the order of their price/time ranking.

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Market order to Sell 500 entered

Submitter Ranked in Time of Entry	Bids	Size	Execution
Broker Dealer 1 order	1.00	200	200
Market Maker 1 quote	1.00	200	100
Marker Maker 2 quote	1.00	300	0
Lead Market Maker	1.00	300	200
Customer 1 order	1.00	1,000	0
Market Maker 3 quote	1.00	400	0

- (1) Lead Market Maker buys 200 (leaves 300 on incoming order) LMM Guarantee 40%
- (2) Broker Dealer 1 order buys 200 (leaves 100 on incoming order) price time
- (3) Market Maker 1 buys 100 (incoming order filled) price time

If there is a Customer order ahead of the LMM in time priority the LMM will not receive a guaranteed allocation. The System will process the transaction in strict price time.

Submitter Ranked in Time of Entry	Price	Size	Execution
Broker Dealer 1 order	1.00	200	200
Customer 1 order	1.00	200	200
Market Maker 1 quote	1.00	300	100
Lead Market Maker	1.00	300	0
Customer 2 order	1.00	1,000	0
Market Maker 2 quote	1.00	400	0

- (4) Broker Dealer 1 order Buys 200 (leave 300 on incoming order) price time
- (5) Customer 1 order buys 200 (leaves 100 on incoming order) price time
- (6) Market Maker 1 buys 100 (incoming order filled) price time

Open Outcry - Priority and Order Allocation

The Trading Floor in San Francisco will be available for execution of orders that are not eligible for electronic trading or that a customer wishes to have negotiated. However, in order to reward fully disclosed trading interest, the NYSE Arca book, including any orders and quotes, will have priority over same priced trading interest on the floor.

A Floor Broker who wishes to cross orders at the Consolidated Book price must trade against all NYSE Arca interest at the price before crossing. Additionally, once the book has been satisfied, the Trading Crowd may not join or match the book price unless the order has not been filled in its entirety. Crosses within the OX System's market will continue to be conducted per conventional open outcry procedures.

Four manual crossing scenarios are available: Non Facilitation, Facilitation, Solicitation and Mid-point. All scenarios require that the Agency Order is executed at a price equal to or better than the NBBO, and the Floor Broker may not trade through any trading interest in the Consolidated Book.

Non-Facilitation (Regular Way) Crosses

A Floor Broker who is holding orders to buy and sell the same option contract may cross such orders, provided that he/she proceeds in the following manner:

- (1) The initiating order must be systematized in the LiquidPoint Floor Broker system. The Floor Broker must request a Final quote market for a cross, and disclose the size of the cross. The floor Broker must make the Trading Crowd and the Trading Official aware of the request for a market.
- (2) Bid above the highest bid or offer below the lowest offer in the crowd by at least the MPV. This is the cross price.
- (3) If the cross price is inside the Final Quote market, the Floor Broker may cross the entire order. If the cross price is equal to the Final Quote bid or offer, the Floor Broker must trade with all previously announced trading interest at that price, and then may cross the balance, if any.
- (4) After crossing the orders in the crowd, the broker sends the initial trade, then hits resend button, switches the ticket from buy to sell and selects Targeted Response to indicate a cross with himself.

Facilitation Crosses

Floor Brokers holding a customer order ("Agency Order") of 50 contracts or more and a contra order for the proprietary account of an OTP Holder/Firm (or an organization under common control with a Market Maker) that is representing that customer (the "Facilitation Order") may cross those orders. The proprietary account must be willing to facilitate the entire size of the Agency Order.

All executions against the Agency Order must be on or better than the NBBO.

- (1) The Agency Order must be systematized into the LiquidPoint Floor Broker system.
- (2) The Agency Order must be represented in the Trading Crowd by open outcry. Members of the Trading Crowd will be given a reasonable time to respond.
- (3) If there are members of the Trading Crowd willing to execute the entire size of the Agency Order at an improved price, the Facilitation Order may participate in at least 40% of the Agency Order at the improved price. Thereafter, the Trading Crowd members may participate in the balance of the Agency Order based upon price-time priority.
- (4) If the entire Agency Order cannot be executed with the available size in the Trading Crowd at an improved price, the 40% of the available size of the Agency Order will be executed against the Facilitation Order, after better priced interest is matched against the Agency Order.
- (5) If, at the time of execution, there is sufficient size to execute the entire Agency Order at an improved price, the Agency Order will be executed at the improved price. Customer orders will be executed first, followed by Non-Customer orders in time priority.

The availability of the Facilitation Procedure does not alter an OTP Firm's best execution duty. Should a firm cancel a Facilitation Order when there was a superior price available on the Exchange and subsequently re-enter the Facilitation Order at the same price after the better price was no longer available, there would be a presumption that the Firm did so to avoid execution of its Customer Order at the better price.

Solicited Order Crosses

A Floor Broker who holds an order for a customer of an OTP Holder or OTP Firm (the "Original Order") may solicit an opposing side for such order (the "Solicited Order"). The Solicited Order shall be entitled to priority of execution on the Original Order, provided the following criteria are met.

- (1) The Orders must be systematized into the LiquidPoint Floor Broker system.
- (2) The Original Order shall first be represented in the Trading Crowd by open outcry. The Original Order must remain active in the Trading Crowd during the entire solicitation process. If a Floor Broker announces an original order in the trading crowd, and then steps out of the trading crowd to solicit interest, but continues to be within hearing distance, the Floor Broker need not re-announce the original order upon returning to the trading crowd.
- (3) Members of the Trading Crowd will be given a reasonable time to respond with the prices and sizes at which they would be willing to participate in the execution of the Original Order.
- (4) If at the time of execution there is insufficient size to execute the entire Original Order at an improved price (or prices), the Original Order will be executed against the Solicited Order at the proposed execution price.
- (5) If at the time of execution there is sufficient size on the Exchange to execute the entire Original Order at an improved price (or prices), the Original Order will be executed at the improved price(s), provided the execution price is equal to or better than the best bid or offer on the Exchange (and on or better than the NBBO), and the Solicited Order will be cancelled. The aggregate size of all orders and quotes at each price will be used to determine whether the entire Original Order can be executed at an improved price (or prices).
- (6) When executing the Original Order against bids or offers in accordance with paragraph (3) above, or at an improved price in accordance with paragraph (4) above, Customer orders will be executed first. Non-Customers participate in the execution of the Original Order based upon time priority as determined by the Floor Broker.
- (7) "Solicited" must be entered in the "Optional Data" field of the LiquidPoint order ticket.

Opening Auction

The system will begin accepting quotes and orders for inclusion in the Opening Auction process at 3:30 a.m. Eastern Time each trading day. The Opening Auction is a process whereby trading is initiated in each series. Contingency Orders will not participate in the Auction Process. Any eligible open orders residing in the Book from the previous trading session (GTC's) will be included in the Opening Auction. After the primary market for the underlying security disseminates the opening trade and a logical bid/ask market, the related option series will be opened automatically based on the following:

- (1) Time is equal to or greater than 9:30 a.m. Eastern Time.
- (2) The combination of MM quote bids and offers in the system and bids and offers received from OPRA resulted in a "legal width" quote.

Once these requirements have been met, the system determines the price at which a particular option series will be opened.

Orders and quotes in the system will be matched up with one another based on price-time priority. To determine the opening price in a series, upon receipt of the first consolidated trade of the underlying security, the system will check for an OPRA NBBO market or an NYSE Arca BBO. If OPRA NBBO market is present, NYSE Arca will base the opening auction price on the better of the OPRA NBBO market or the internal NYSE Arca BBO. NYSE Arca will generate an opening trade if possible or open a series on the quoted market. NYSE Arca then will send the BBO quote to OPRA.

The opening price is determined as the price at which the most volume can be traded, within the auction parameter.

- (1) The opening prices must be within a configurable parameter based on:
 - a. The Best Bid (MM quotes only) or a National Best Bid
 - b. The Best Offer (MM quotes only) or a National Best Offer
- (2) In the case of crossed markets on NYSE Arca and no OPRA quote, parameters to either side of *the inverted market* will be used. e.g. 1.20 1.00 yields parameter based on 1.20 for buy imbalances and 1.00 for sell imbalances. If no auction occurs, no opening trade will be reported to OPRA.

For cases when no buy or sell imbalance exists and an auction will occur, the opening price of a series will be the price at which the greatest number of contracts will trade at or nearest to the midpoint of the initial NBBO disseminated by OPRA, if any, or at or nearest to the midpoint of the best quoted bids and offers in the Consolidated Book. The same process will be followed to reopen an option class after a trading halt.

Description of Post Auction "Sweep"

Orders and quotes in the Book that were not executed during the Auction Process will be eligible for the Core Trading Session immediately after the conclusion of the Auction Process. Unmatched marketable orders and Marker Maker quotes will "sweep" through the Book, with collar protection in place to prevent executions based against orders and quotes priced outside a configurable parameter, and will be executed in price/time priority. If the best price is at an away Market Center(s), orders will be routed away to the relevant Market Center(s).

Penny Pilot Trading

Introduction

The Penny Pilot was approved by the Securities and Exchange Commission and launched on January 26, 2007. It provides for trading options in penny increments in certain issues, previously only nickel increments were allowed. With the introduction of this trading increment, NYSE Arca introduced changes to its market and pricing models.

Post/Take Pricing

The Post/Take pricing model in Penny Pilot issues is designed to reward liquidity providers and tighten spreads. Those who provide liquidity (resting quotes or orders that are filled) receive a credit; those who take liquidity pay a transaction fee. These rates apply to electronic trades only and no other transaction or marketing fees are applied. ¹

Execution Type	Posi	Valke
Customer	\$0.25 credit	\$0.45
Broker Dealer	\$0.25 credit	\$0.45
Market Maker	\$0.25 credit	\$0.45

Currently, there is no Lead Market Maker in QQQQ or IWM. Thus, execution priority in these issues is based strictly on price and time priority.

¹ Rates are subject to change.

Quote Mitigation

NYSE Arca's quote mitigation policy is based on the premise that quotes in inactive series are less valuable than those in active series. Active options series are defined as the following:

- The series has traded on any options exchange in the previous 14 calendar days; or
- The series is solely listed on NYSE Arca; or
- The series has been trading 10 days or less; or
- The Exchange has an order in the series

Series that fall outside of these categories are deemed inactive, and the Exchange collects and processes quotes internally but does not disseminate the quotes to OPRA. If a trade occurs in the series on any exchange or if NYSE Arca receives an order or request for a quote, then the series is activated and quote dissemination is resumed. This policy applies to all multiply issues listed on the Exchange, not just issues included in the Pilot Program. Additional details on the mitigation plan can be found at http://www.nysearca.com/regulation/filings.asp

Obvious Errors

Description

The Exchange shall either bust a transaction or adjust the execution price of a transaction that results from an Obvious Error, as defined herein. An Obvious Error will be deemed to have occurred when the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price Minimum Amount	
Below \$2	.25
\$2 to \$5	.40
Above \$5 to \$10	.50
Above 10 to \$20	.80
Above \$20	1.00

The Theoretical Price of an option is determined as follows:

- A. If the series is traded on at least one other options exchange, the last bid price with respect to an erroneous sell transaction and the last offer price with respect to an erroneous buy transaction, just prior to the trade, disseminated by the competing options exchange that has the most liquidity in that option; or
- B. If there are not quotes for comparison purposes, as determined by designated personnel of the Exchange.

If a Market Maker believes that it participated in a transaction that was the result of an Obvious Error, it must notify the Exchange within five minutes of the execution. If an OTP Holder or OTP Firm not serving as a Market Maker believes that an order it executed on the Exchange was the result of an Obvious Error, it must notify the Exchange within twenty minutes of the execution. With few exceptions, the Exchange will not grant relief unless notification is made within the prescribed time periods.

Customers must notify the Exchange within 20 minutes of the trade if they believe an execution was part of an obvious error. They have until 4:30 PM Eastern time to notify the Exchange of possible obvious errors on the opening auction.

If it is determined that an Obvious Error has occurred, the Exchange shall promptly notify both parties to the trade. When each party to the transaction is a Market Maker, the execution price of the transaction will be adjusted by the Exchange to the prices described below unless both parties agree to adjust the transaction to a different price or agree to bust the trade within ten minutes of being notified by the Exchange of the Obvious Error.

Erroneous buy transactions will be adjusted to their Theoretical Price plus \$.15 if the Theoretical Price is under \$3 and plus \$.30 if the Theoretical Price is at or above \$3.

Erroneous sell transactions will be adjusted to their Theoretical Price minus \$.15 if the Theoretical Price is under \$3 and minus \$.30 if the Theoretical Price is at or above \$3.

When at least one party to the transaction is not a Market Maker, the trade will be busted unless both parties agree to an adjustment price for the transaction within thirty minutes of being notified by the Exchange of the Obvious Error.

Review Procedures – Parties to obvious errors may request that the Obvious Error Panel ("OE Panel") review decisions made by the Exchange including whether an obvious error occurred and whether the correct action was implemented. The OE Panel will be comprised of the NYSE Arca Chief Regulatory Officer ("CRO"), or a designee, and a representative from two (2) different OTP Firms. One representative on the OE Panel will be from a Market Maker Firm and one representative will be from a public customer order sending Firm. The OE Panel may overturn or modify an action taken by the Exchange under this Rule and all determinations shall constitute final action. If the OE Panel votes to uphold the decision the Exchange will assess a \$500.00 fee against the party or parties who initiated the request for appeal.

Order Types

NYSE Arca Order Types

Order Types	Descriptions
All or None (AON)	A Limit Order that is to be executed in its entirety or not at all. Non-marketable AON orders will rest in the working book but not be displayed. AON orders will not route to other exchanges.
Day Order	An order to buy or sell which, if not executed, expires at the end of the day on which it was entered. All orders by their terms are Day Orders unless otherwise specified.
Opening Only Order	A Market or Limit order that is to be executed only during the opening auction. Any remaining portions of the order are automatically cancelled at the end of the auction.
Fill or Kill (FOK)	A Market or Limit Order that is to be executed in its entirety on NYSE Arca as soon as the order is received, and if not so executed is to be cancelled. FOK orders will not route to other exchanges.
Good till Cancelled Order (GTC)	An order to buy or sell that remains in force until the order is filled, cancelled or the option contract expires. GTC Orders will be cancelled in the event of a corporate action that results in an adjustment to the terms of the option contract.
Immediate or Cancel (IOC)	A Market or Limit Order immediately executed, in whole or part on NYSE Arca, with the unexecuted amount cancelled. IOC orders are not routed to other exchanges.
Limit	Marketable Limit Orders that cannot be filled in their entirety at the NBBO on NYSE Arca will be routed to other exchanges. Any unfilled portion of the order will not be routed to the next best price level until all quotes at the current best bid or offer are exhausted. If the order is no longer marketable it will be ranked in the NYSE Arca Book.
Market	An order to buy or sell a stated number of contracts that is to be executed at the best price obtainable when the order reaches NYSE Arca. If the order cannot achieve the NBBO on NYSE Arca, it will be routed to other exchanges.
NOW	A Market or Marketable Limit Order that is to be executed in whole or in part on NYSE Arca and any unexecuted portion will be routed to other exchanges for immediate execution. Any portion not immediately executed by the other exchange shall be cancelled. If a NOW Order is not marketable when it is submitted to NYSE Arca, it will be cancelled.

WAIT Order	An order modifier the will allow a firm interested in facilitating their customer orders to enter both an agency order and a facilitation WAIT order at the same time. The WAIT modifier ensures the agency order is exposed for 1 second prior to allowing the facilitation order to interact with it to ensure compliance with the exposure requirements of Exchange rules.
Post No Preference (PNP)	A Limit Order that is to be executed in whole or in part on NYSE Arca. Any portion not executed is posted in the NYSE Arca Book without routing any portion of the order to another exchange. PNP Orders that would lock or cross the NBBO will be cancelled.
Post No Preference Blind (PNP B)	The PNP B order are limit orders that do not route. If upon receipt, a PNP Blind order locks/crosses an away market: it will first trade any available size at the NBBO (National best Bid or Offer) on NYSE Arca and then go blind, rather than cancel back to the firm. It will never route out and remains blind until the NBBO unlocks. While blind, if a contra sided order arrives at NYSE Arca, the PNP B will still receive a posting credit. Once posted and disseminated, the PNP Blind order will stand its ground and not go blind under any circumstance.
Post No Preference Light Only (PNP LO)	PNP LO orders do not route. If NYSE Arca is not at the NBBO upon receipt of PNP LO, the order cancels back to the firm. PNP LO orders also cancel if the order is marketable against any interest that is not disseminated to OPRA, e.g. resting PNP B orders (if PNP B is in blind state), or the nondisplayed portion of reserve orders. Nonmarketable PNP LO orders will post to book and follow standard order processing.
Post No Preference Plus (PNP+)	PNP + for complex orders designed to provide the sender the opportunity for price improvement over the screen markets. A PNP + order type will allow clients to send complex orders in all issues and it includes both options only and options with stock orders.
Reserve	A Limit Order with a portion of the size displayed and with a reserve portion of the size that is not displayed on NYSE Arca.
Tracking Orders	Tracking Orders are undisplayed limit orders that are eligible for execution after volume in the Display Order Process has been exhausted at the NBBO price. Tracking Orders will only execute against orders that are about to route out and only against such orders when the routable quantity is less than or equal to the size of the Tracking Order. If the routable size of the contra order is greater than the size of the Tracking Order then the Tracking Order will not be executed. A Tracking Order shall not trade through the NBBO.

Adding Liquidity Only (ALO) Order	The ALO order is a limit order that is posted to the NYSE Arca book in order to add liquidity. The Order assists Users in controlling their costs. Once accepted and placed in the NYSE Arca book, ALO orders will not route to away market centers. The ALO order shall be Day Only, and may not be designated as Good Till Cancel (GTC).
Stop	A Stop Order becomes an active Market Order when the stop price is reached. A Stop Order to buy is triggered when the option is bid on NYSE Arca or trades on NYSE Arca (or any exchange) at or above the specified stop price. A Stop Order to sell is activated when the option is offered on NYSE Arca or trades on NYSE Arca (or any exchange) at or below the specified stop price. Order execution is fully automated.
Stop Limit	A Stop Limit Order becomes an active Limit Order when the stop price is reached. A Stop Limit Order to buy is triggered when the option is bid or trades on NYSE Arca (or any exchange) at or above the specific stop price. A Stop Limit Order to sell becomes a Limit Order when the option is offered or trades on NYSE Arca (or any exchange) at or below the specified stop price. Order execution is fully automated. If the active limit order is not marketable it will post in the NYSE Arca Book.
Intermarket Sweep Order(ISO) for IOC	A designation on an IOC limit order that allows the order to sweep the Book without regard to any external quotes (manual or protected).

Option Trading Permits

Description

Trading rights are granted through Options Trading Permits (OTPs). These permits entitle holders of OTPs to trade options on the options trading facilities of the Exchange, including the electronic platform and the physical trading floor. The NYSE Arca platform provides for four types of Market Participants: Lead Market Makers, Market Makers, Authorized Traders and Order Flow Providers.

Market Makers

A Market Maker is an OTP Holder or OTP Firm registered with the Exchange for the purpose of submitting quotes electronically and making transactions as a dealer-specialist. Market Makers may operate on or off the Exchange trading floor.

Lead Market Makers

Lead Market Makers ("LMMs") are approved Market Makers deemed qualified by the Exchange for acting in such capacity. An LMM's quoting obligation is more stringent than that of Market Makers and they receive participation guarantees in certain circumstances. Lead Market Makers may operate on or off the Exchange trading floor. Any OTP Holder/Firm registered as a Market Maker may apply to become a LMM. LMMs must maintain a minimum of cash or liquid assets of \$1 million.

Market Makers Authorized Traders

Market Maker Authorized Traders (MMATs) shall be an individual OTP Holder or officer, partner, employee or associated person of the OTP firm authorized to enter quotes and orders on the Exchange for the account of a registered Market Maker firm. MMATs must register with the Exchange and pass the appropriate Market Maker exam.

Order Flow Providers

To enter orders to the Exchange, an Order Flow firm must either acquire an OTP or become a "Sponsored Participant" by entering into an agreement with an approved OTP Holder ("Sponsoring OTP"). Sponsoring OTP Holders are broker-dealers that have been designated by a Sponsored Participant to execute, clear and settle transactions on NYSE Arca on their behalf. Authorized Traders (ATs) are individuals designated by the OTP Holders and/or Sponsored Participants to enter orders on their behalf.

NYSE Arca Options

Nominee Application

EXPLANATION OF TERMS

For purposes of this application, the following terms shall have the following meanings:

Applicant Nominee – the Nominee applying to be an OTP Holder or amending this form.

Associated Person - a person who is a partner, officer, director, member of a Limited Liability Company, trustee of a Business Trust, or employee of an OTP Firm or any person directly or indirectly controlled by or under common control with an OTP Firm.

Central Registration Depository ("Web CRD®") – A centralized electronic registration system maintained by NASD which provides information on registered representatives and principals for members of participant organizations. This database contains employment history, exam scores, licensing information, disciplinary actions, fingerprint results, and other related registration information. NYSE Arca, Inc. is a participant of this system.

Clearing Member – an Exchange OTP Firm which has been admitted to membership in the Options Clearing Corporation pursuant to the provisions of the rules of the Options Clearing Corporation. A broker-dealer who receives and executes customers' instructions, prepares trade confirmations, sends money related to trades, arranges for physical movement of securities, and shares responsibility with the introducing broker for compliance with regulatory requirements.

Control – the power, directly or indirectly, to direct the management or policies of a company, whether through ownership of securities, by contract or otherwise. A person shall be presumed to control another person if such person: (i) is a director, general partner or officer exercising executive responsibility (or having similar status or functions); (ii) directly or indirectly has the right to vote 25% or more of a class of a voting security or has the power to sell or direct the sale of 25% or more of a class of voting securities; or (iii) is entitled to receive 25% or more of the net profits; or (iv) in the case of a partnership, has the right to receive upon dissolution, or has contributed, 25% or more of the capital of the other person.

Designated Examining Authority (DEA) – the SEC will designate one SRO to be a broker-dealer's examining authority, when the broker-dealer is a member of more than one SRO. Every broker-dealer is assigned a DEA, who will examine the broker-dealer for compliance with financial responsibility rules. The SEC will make the DEA assignment based on the SRO examination program and the broker-dealer's primary business location.

Direct Owners/Executive Officers – Allied Persons and Approved Persons, as those terms are defined by NYSE Arca Rules 1.1(b) and 1.1(c), respectively, and generally refer to (1) a director, general partner or officer exercising executive responsibility (or having similar status or function); or (2) directly or indirectly has the right to vote 5% or more of a class of voting security or has the power to sell or direct the sale of 5% or more of a class of voting securities; (3) is entitled to receive 5% or more of the net profits; (4) in the case of a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution or have contributed, 5% or more of the capital; or (5) in the case of a LLC, those members that have the right to receive upon dissolution, or have contributed, 5% or more of the LLC's capital, and if managed by elected managers, all elected managers.

Financial Arrangement - 1) the direct financing of a Member's dealings upon the Exchange, or 2) any direct equity investment or profit sharing arrangement, or 3) any consideration over the amount of \$5,000.00 including, but not limited to, gifts, loans, annual salaries or bonuses.

Firm Proprietary and/or Trading – an OTP Firm engaging in off-floor trading that is unrelated to the performance of that OTP Firm's registered market maker or floor broker functions.

Floor Broker – an individual who is registered with the Exchange for the purpose, while on the Exchange Floor, of accepting and executing options orders received from OTP Holders and OTP Firms.

Market Maker - an individual who is registered with the Exchange for the purpose of making transactions as a dealer-specialist on the Floor of the Exchange.

Market Maker Authorized Trader – an individual registered with the Exchange for the purpose of entering quotes and orders remotely through the facilities of the Exchange for the account of an OTP Holder registered as a Market Maker with which the Market Maker Authorized Trader is associated.

Nominee – an individual who is authorized by an OTP Firm, in accordance with NYSE Arca Rule 2.4, to conduct business on the Exchange's Trading Facilities and to represent such OTP Firm in all matters relating to the Exchange. A Nominee shall agree to be bound by the Bylaws and Rules of the Exchange, and by all applicable rules and regulations of the Securities and Exchange Commission.

NYSE Arca, Inc. ("NYSE Arca", the "Exchange", or the "Corporation") – a Delaware corporation as described in the company's Certificate of Incorporation and Bylaws. The NYSE Arca, Inc. is a national securities exchange as that term is defined by Section 6 of the Securities Exchange Act of 1934, as amended. NYSE Arca, Inc. is also a Self-Regulatory Organization.

Authorized Trader - a person who is directly or indirectly compensated by a NYSE Arca OTP Firm or who is any other associated person of a NYSE Arca OTP Firm and who trades, makes trading decisions with respect to, or otherwise engages in the proprietary and/or agency trading of securities from off NYSE Arca floor.

Office Nominee - a Nominee for an OTP Firm that is an order service firm, off-floor trading firm, or provides clearing services on the Exchange and is not conducting market maker or floor broker activities.

EXPLANATION OF TERMS (continued)

ÓTP – an Options Trading Permit issued by the Exchange for effecting approved securities transactions on the Exchange's Trading Facilities. An OTP may be issued to a sole proprietor, partnership, corporation, limited liability company or other organization which is a registered broker-dealer pursuant to Section 15 of the Securities Exchange Act of 1934, as amended, and which has been approved by the Exchange.

OTP Firm – a sole proprietor, partnership, corporation, limited liability company or other organization in good standing who holds an OTP or upon whom an individual OTP Holder has conferred trading privileges on the Exchange's Trading Facilities. An OTP Firm shall agree to be bound by the Certificate of Incorporation, Bylaws and Rules of the Exchange, and by all applicable rules and regulations of the Securities and Exchange Commission.

OTP Holder - a natural person who has been issued an OTP, or has been named as a Nominee of an OTP Firm.

Self-Regulatory Organization (SRO) - Each exchange or national securities association is an SRO. Each SRO must have rules that provide for the expulsion, suspension and other disciplining of member broker-dealers for conduct inconsistent with just and equitable principles of trade.

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NOMINEE APPLICATION PROCESS

Checklist

Applicant Nominees must complete and submit all materials addressed in the Application Checklist along with applicable fees*.

Application Process

- > Following submission of the Nominee Application, fees and supporting documents to the Client Relationship Services Department, the application will be reviewed for accuracy and regulatory or other disclosures. For NYSE Arca-DEA applicants, an investigation may be conducted by an independent entity. This process generally requires two to four weeks.
- In consideration for approved by the Exchange, the applicant Nominee must complete NYSE Arca Orientation Program and take a written qualification exam. NYSE Arca will provide orientation materials upon receipt of the Orientation Fee (see fees below). Office Nominees are not subject to this requirement.
- If review of Statutory Disqualification Disclosure information and/or the background investigation indicates that the applicant has a possible statutory disqualification, the Client Relationship Services Department will contact the applicant to discuss the statutory disqualification process. Client Relationship Services will consult with NYSE Arca Legal Department regarding matters involving statutory disqualification.
- > If it appears that the applicant Nominee has outstanding debt, civil judgment actions and/or regulatory disciplinary actions the applicant will be contacted by the Client Relationship Services Department for further information.
- Applicants who have completed and returned all documents to the Client Relationship Services Department without indication of a statutory disqualification, outstanding debt, civil judgment actions and/or regulatory disciplinary actions will be reviewed by NYSE Arca staff. The applicant Nominee will be posted in NYSE Arca Weekly Bulletin for a period of three business days.
- > The Client Relationship Services Department will notify the applicant Nominee, in writing, promptly of the Exchange's decision.
- A Nominee must activate within six months of Exchange approval. <u>Applicant Nominees that have been approved by the Exchange are not considered active until becoming an OTP Holder (i.e., the applicant Nominee's broker-dealer has assigned an OTP in the Nominee's name).</u>
- In the event an applicant is disapproved by the Exchange, the applicant will have an opportunity to be heard upon the specific grounds for the disapproval, in accordance with the provisions of NYSE Arca Rule 10.14. A disapproved applicant desiring to be heard must, within thirty calendar days of the applicant's receipt of notice of disapproval, notify NYSE Arca by certified mail and file with NYSE Arca a Petition for Review of such disapproval

Activation of Nominee

The applicant Nominee achieves "active" status by becoming an OTP Holder on behalf of an OTP Firm.

NOMINEE APPLICATION CHECKLIST

- □ Completed Nominee Application
- Uniform Application for Securities Industry Registration or Transfer (Form U-4) and Fingerprint Cards have been submitted to Web CRD® for the applicant Nominee

NOMINEE APPLICATION FEES *

- □ \$500 Orientation and Testing Fee not applicable to Office Nominees
- \$125 Investigation Fee (will be assessed if the applicant Nominee's registration and/or fingerprint information is not available on Web CRD® or through another SRO)

OTP Firms may be assessed fees by NASD for posting of registration and fingerprint information to the Web CRD® system. OTP Firms should monitor their Web CRD® Daily Account to ensure adequate funds are available in order to avoid delays in processing.

* For a list of all fees, please review the "Schedule of Fees and Charges for Exchange Services" found at http://www.nyse.com/productservices/nysearcaoptions/1147128317287.html. Additional fees to those listed within this application may apply.

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SECTION 1 – OTP NOMINEE AGREEMENT

Applicant Nominee has read, understands and agrees to abide by the Bylaws and Rules of NYSE Arca as they now exist and may from time to time be amended, and all circulars, notices, interpretations, directives or decisions adopted by NYSE Arca. Applicant also agrees to comply with all rules, regulations, directives or other actions of the Securities and Exchange Commission.

Applicant Nominee authorizes any SRO, commodities exchange, governmental agency or similar entity to furnish to NYSE Arca, upon its request, any information that such person may have concerning the character, ability, business activities and reputation of the applicant Nominee, and releases such person or entity from any and all liability in furnishing such information. Applicant Nominee authorizes NYSE Arca to make available to any governmental agency, SRO, commodities exchange or similar entity, any information it may have concerning the applicant Nominee and releases NYSE Arca from any and all liability in furnishing such information. Applicant Nominee authorizes NYSE Arca to make available to the applicant's prospective OTP Firm information relating to processed fingerprint cards and/or such other records.

Applicant Nominee acknowledges his/her obligation to update any and all information contained in any part of this application, including amending any and all disclosures listed on Form U-4 that may arise during applicant's active status with NYSE Arca. In such cases, applicant Nominee understands that NYSE Arca may require additional information.

Applicant Nominee understands and agrees that if he/she is found to be in violation of a NYSE Arca rule (other than a minor rule violation), the applicant Nominee will be required to file an amendment to Form U-4 listing such violation(s).

Applicant Nominee agrees that at any time, upon request of any committee or department of NYSE Arca, he/she will appear before such committee or department and give evidence upon any subject under investigation by such committee or department and that the applicant will produce, upon request of NYSE Arca, all records or documents relative to any inquiry being made by NYSE Arca

Applicant Nominee agrees to immediately notify NYSE Arca if he/she becomes subject to any of the following:

- Investigation or proceeding by any governmental, or securities or commodities industry self-regulatory body;
- Litigation or arbitration alleging violations of any provisions of any securities or commodities industry self-regulatory body's constitution, by-laws, or rules or any securities or commodities law or regulation;
- Material allegation that the applicant has acted in a way which may be inconsistent with a just and equitable principle or established practice of NYSE Arca;
- Violations of NYSE Arca Bylaws, any rule adopted by NYSE Arca's Board of Directors, any securities law or regulation, or any agreement with NYSE Arca;
- Refusal of registration, or injunction, censure, suspension, expulsion or other disciplinary action by any governmental, or securities or commodities industry self-regulatory body;
- Major complaint by a customer of an OTP Firm or by a broker-dealer in securities or commodities;
- Bankruptcy or contempt proceeding, cease and desist order, injunction or civil judgment; or
- Conviction for criminal offenses by applicant Nominee.

If, during the one year period immediately following NYSE Arca's receipt of written notice of the applicant Nominee's permanent termination of association with an OTP Firm, NYSE Arca gives written notice to applicant Nominee and/or that person's associated OTP Firm that NYSE Arca is making an inquiry into any specified matter or matters occurring prior to such termination, the applicant Nominee agrees to thereafter comply with any request by NYSE Arca for testimony, submission of records, response to written requests and attendance at hearings with respect to the matter or matters specified in such notice, in accordance with the Bylaws, Rules and policies by NYSE Arca, in the same manner and to the same extent as would have been required prior to such termination. If applicant Nominee refuses to accept such written notice, or after having been served with such notice, refuses or fails to comply with any such request of NYSE Arca, applicant Nominee agrees that such refusal or failure may, at the discretion of NYSE Arca, act as a bar to future NYSE Arca approval of association with an OTP Firm until such time as NYSE Arca has completed its investigation into the matter or matters specified in such notice and has determined whether a sanction or penalty shall be imposed; and applicant Nominee further acknowledges that such bar shall continue in effect until such penalty or sanction, if any, has been carried out and any fine(s) have been paid.

SECTION 1 – OTP NOMINEE AGREEMENT (continued)				
Failure to comply with any of the terms and conditions of this OTP Agreement, or the accompanying Nominee Application may be cause for termination of applicant Nominee's approval or association with an OTP Firm.				
The undersigned applicant Nominee represents that the information and statements contained herein, including the attachments hereto, and other information filed herewith, all of which are parts hereof, are current, true and complete.				
Signature of Applicant Nominee	Date			
Signature or Applicant Nominee	Date			
Print Name Title				

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SEC	CTION 2 – CERTIFICATE OF RESOI	LUTION			
	form must be submitted for all Nominee Appli				
gene	ral partner, or managing member (as appropr	iate) of the OTP F	irm with whom Nominee appi	icant will be associated.	
The u	undersigned hereby certifies that he/she is an	Officer	General Partner	Manager of	
		("OTP Firm").			
The u	undersigned hereby certifies that OTP Firm has ac	dopted resolutions t	nat:		
1.	Authorize	("Applica Arca, for and on be	nt") to enter into contracts and analf of the OTP Firm.	agreements with NYSE Arca,	
2.	2. Authorize Applicant to obligate the OTP Firm to pay and discharge all obligations arising from any such contracts or agreements.				
3.	Provide that the OTP Firm shall be liable for all dues, fees, charges and assessments levied by or due to NYSE Arca in connection with OTPs issues by NYSE Arca to an OTP Firm and associated OTP Holders.				
4.	Provide that the OTP Firm shall be subject to th Rules of NYSE Arca, as now in affect and as th			rovisions of, the Bylaws and	
	undersigned further certifies that the OTP Firm re- notice of modification or repeal thereof has been				
	Name of Officer, General Partner or LLC Manager Member		Title		
	Signature		Date		

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SECTION 3 – NOMINEE PROFILE	
Date:	
☐ APPLICATION	☐ AMENDMENT
GENERAL INFORMATION	
First Name: Middle Name:	Last Name:
Date of Birth (MM/DD/YYYY)	CRD No.:
Business Address:	
City: State: _	Zip Code:
Business Phone Number:	Business Fax Number:
Supervisor:	Title:
Supervisor's Phone Number:	Supervisor's Fax Number:
Home Address:	
City: State: _	Zip Code:
Home Phone Number:	Home Fax Number:
Email Address:	
OIT FIRM AFTIDIATION	
Name of OTP Firm with which applicant Nominee is affiliate	:d:
TYPE OF BUSINESS ACTIVITY TO BE CONDUCTED	AT NYSE Arca (Check all that apply) [CRD Registration Category]
☐ Market Maker (Floor)[MM] ☐ Market Maker Auth	orized Trader [MM]
☐ Authorized Trader [OT] ☐ Office Nominee	□ Other
OTHER BUSINESS ACTIVITIES CONDUCTED BY AP	PLICANT NOMINEE (Check all that apply)
☐ Investment Banking ☐ Public Customer Business	☐ Proprietary and/or Agency Trading
Other	
OTHER SELF-REGULATORY ORGANIZATION MEM	ABERSHIPS (Check all that apply)
☐ American Stock Exchange (AMEX) ☐ Boston Stock	ck Exchange (BSE) tock Exchange (NSX) Chicago Board Options Exchange (CBOE) International Securities Exchange (ISE) New York Stock Exchange (NYSE)

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SECTION 3 – NOMINEE PROFIL	E (continued)	
CLEARING ARRANGEMENT		
☐ Broker-dealer is self-clearing ☐	Broker-dealer is not self-clearing	
If broker-dealer is not self-clearing, please indiand/or Floor Broker Authorization:	icate NYSE Arca Clearing Member that wi	II be issuing a Market Maker Guarantee
Options Clearing Corporation (OCC) Number:	· 	
APPLICANT NOMINEE AFFILIATIONS		
Are you currently affiliated with any other broken	ker-dealer (U.S. or otherwise)?	□ yes □ no
If yes, please list the names of all broker-deale	r affiliations	
Broker-dealer:	Title/Affiliation:	
Broker-dealer:		

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SECTION 4 – NOMINEE FINANCIAL DISCLOSURE
FINANCIAL OR CONTROLLING INTERESTS
Do you have a financial or controlling interest (through direct or indirect stocks, bond, outstanding loans, or otherwise) in any organization engaged in a securities, financial or related business? Yes (Explain below) No
FINANCIAL ARRANGEMENT
Do you have a financial arrangement with a current NYSE Arca OTP Firm or OTP Holder? ☐ Yes (Explain below) ☐ No
Type of Arrangement: Direct Equity Investment Direct Financing Direct Financing Direct Financing Direct Financing
Terms of Arrangement (include the names of all participants and the nature and terms of the arrangement):
SUBORDINATED LOANS Did you (or will you) make a subordinated loan to the broker-dealer with which you will be affiliated? Yes (Explain below) No Did you (or will you be) a contributor to a Secured Demand Note? Yes (Explain below) No
OUTSTANDING DEBT (Check all that apply)
Do you owe funds to any of the following?
 □ Any NYSE Arca OTP Firm or OTP Holder □ Any other national securities or commodities exchange or national securities association □ A member of any other national securities or commodities exchange or national securities association
Explain to whom funds are owed and the dollar amount. Attach a copy of arrangements made for repayment of this debt and evidence of an agreement of repayment.
□ No, I do not owe funds to any of the above referenced persons or entities.

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SECTION 5 – INSIDER TRADING AND SECURITIES FRAUD ENFORCEMENT ACT OF 1988

ITSFEA COMPLIANCE ACKNOWLEDGMENT

INSIDER TRADING AND SECURITIES FRAUD ENFORCEMENT ACT OF 1988 (ITSFEA)

I understand that should I acquire material, non-public information concerning a corporation whose securities are publicly traded, it may be a serious violation of NYSE Arca Rules and Federal securities laws for me or my OTP Firm to misuse such information or trade any securities issued by the corporation, or any options or other derivative securities based thereon, while such information remains non-public.

I understand that should I obtain material, non-public information concerning the market in a security or group of securities, neither I nor my OTP Firm may make improper use of such information in connection with trading in the security, group of securities or any option or other derivative based thereon.

I understand that it may be a serious violation of NYSE Arca Rules and Federal securities laws for me or my OTP Firm to disclose to another person any non-public, material corporate or market information that I may acquire regarding a publicly traded security or group of securities.

To the best of my knowledge and belief, I have not misused, made improper use of, or disclosed non-public, material information and I believe myself to be in full compliance with NYSE Arca Rule I1.3 regarding the prevention of insider trading.

Signature of Applicant Nominee	Date

NYSE Arca Options Floor Broker's Letter of Authorization

This Letter of Authorization is made as of	, 20 by
the "Clearing Member" ir	respect of the "OTP
Firm" on behalf of the "F	
WHEREAS Floor Broker is an OTP Holde Firm;	r of NYSE Arca ("Exchange") and nominee of an OTP
WHEREAS Clearing Member is an OTP F Corporation ("OCC");	irm of the Exchange and member of Options Clearing
WHEREAS Floor Broker is registered with Arca Rule 6.44, and Floor Broker desires that optic cleared through the OCC by Clearing Member; and	
WHEREAS OTP Firm has requested Clear Broker.	aring Member to issue a Letter of Authorization for Floo
the Clearing Member hereby agrees, for the benef	nancial responsibility for the clearance of the Exchange
with the Exchange. If such written notice has not trading on a particular business day on the options	day. A revocation shall not relieve Clearing Member o
agreement may not be revoked or terminated exce	horization shall be filed with the Exchange. This pt as stated above, and this agreement shall not be either heretofore or hereinafter executed) unless the
WITNESS the due execution of the Letter	of Authorization as of the day and year above written.
Print Name of Authorized Signatory of Floor Broke OTP Firm	r's Print Name of Clearing Member
Signature of Authorized Signatory of Floor Broker's OTP Firm	Print Name of Authorized Signatory of Clearing Member
	Signature of Authorized Signatory of Clearing Member

NYSE Arca Options Floor Broker Letter of Authorization For FLEX Equity Options

This Letter of Authorization is made as of	, 20
by	"Clearing Member"
In respect of	"Floor Broker"
	Holder of NYSE Arca ("Exchange"), and Clearing Member is an of the Options Clearing ("Clearing Corporation"); and
	ed with the Exchange as a Floor Broker pursuant to NYSE Arca tions transactions effected by it on the Exchange be cleared through per, and
WHEREAS Floor Broker has reque Broker;	sted Clearing Member to issue a Letter of Authorization for Floor
order to induce the Exchange to approve C Broker, the Clearing Member hereby agrees their respective members, that Clearing Members	on of the premises and the agreements hereinafter set forth, and in learing M ember's issuance of a Letter of Authorization to Floor s, for the benefit of Clearing Corporation and the Exchange, and m ber shall accept full financial responsibility for the clearance of the uity Options (as defined in NYSE Arca Rule 6.1(b)(6) and 5.32) earing Member is given up.
the Exchange and has been posted on the written notice has not been posted for a leaday on the options floor of the Exchange, so	nain in effect until a written notice or revocation has been filed with bulletin board of the Options Trading Floor of the Exchange. If such st one hour prior to the opening of trading on a particular business uch revocation shall not become effective until the close of trading Clearing Member of responsibility for transactions guaranteed prior
may not be revoked or terminated except as	of Authorization shall be filed with the Exchange. This agreement stated above, and this agreement shall not be modified or heretofore or hereinafter executed) unless the approval of the
WITNESS the due execution of the	Letter of Authorization as of the day first above written.
Print name of Floor Broker	Print name of Clearing Member
Authorized Signature of Floor Broker	Authorized Signature of Clearing Member
Symbol	Title

NYSE Arca Options

Options Trading Permit Short Form Application

NYSE Arca Short Form OTP Membership Application and Agreement

To qualify for Short Form Options Trading Permit (OTP) Membership on NYSE Arca, the applicant must be an approved NYSE Arca Equities Trading Permit (ETP) Holder. Current ETP Holder applicants are eligible for expedited approval. To apply, please complete and submit this Short Form Application, Membership Agreement, and Clearing Letter of Consent to:

NYSE Arca, Inc.
Attn: Client Relationship Services
Email: crs@nyx.com

KEY PERSONNEL			
Please identify the key personnel who hold the below positions (or the individual whose responsibilities are the functional equivalent of such position, regardless of actual titles used by the Applicant Firm) and who will want to receive communications pertaining to our options markets.			
Chief Executive Officer ("Cl	EO")		
Name:		CRD:	
Phone:	Fax:		
Email:		_	
Chief Financial Officer ("CF	0")		
Name:		CRD:	
Phone:	Fax:		
Email:		_	
Chief Compliance Officer ("	CCO")		
Name:		CRD:	
Phone:	Fax:		
Email:		_	
Chief Operations Officer ("C	000")		
Name:		_ CRD:	
Phone:	Fax:		
Email:		- -	
Head of Options Clearing			
Name:		CRD:	
Phone:	Fax:		
Email:		_	
Head of Options Connectivi	ty		
Name:		CRD:	
Phone:	Fax:		
Email:		_	
Head of Options Trading			
Name:		CRD:	
Phone:	Fax:		
Email:		_	

SECTION 1 - Short Form OTP Me	mbership Application			
Short Form Eligibility:				
Applicant is currently a member in good standing of NYSE Arca Equities				
General Information				
Name of Applicant Broker-Dealer:				
Business Address:				
City:		State:	Zip Code:	
Business Phone:		Fax:		
Email:				
Web Address, if any:			_	
CRD Number:		•		
NYSE Arca Equities ETP ID:				
Designated Examining Authority:		-		
Contact Information				
Contact Name:				
Job Title / Position				
Phone:		Fax:		
Email:				
Type of Business to be Conducte	d With Options Trading Permit (Check all that apply)		
☐ Market Maker*		Public Customer Bu	usiness	
☐ Floor Broker		Proprietary and/or A	Agency Trading	
Clearing Services		Order Service Firm		
☐ Other	·			
*Please complete Application for Registration of Market Makers				
All applicants must complete the Nominee Application available at http://www.nyse.com/membershiplibrary				

SECTION 2	<u> – Membership</u>	Agreement

Applicant Broker-Dealer agrees to abide by the Bylaws and Rules of NYSE Arca, Inc., as amended from time to time, and all circulars, notices, interpretations, directives or decisions adopted by NYSE Arca, Inc.

Applicant Broker-Dealer authorizes any SRO, commodities exchange, governmental agency or similar entity to furnish to NYSE Arca, upon its request, any information that such person may have concerning the ability, business activities, and reputation of Applicant Broker-Dealer or its associated persons, and releases such person or entity from any and all liability in furnishing such information. Applicant Broker-Dealer authorizes NYSE Arca to make available to any governmental agency, SRO, commodities exchange or similar entity, any information it may have concerning the Applicant Broker-Dealer or its associated persons, and releases NYSE Arca from any and all liability in furnishing such information.

Applicant Broker-Dealer acknowledges its obligation to update any and all information contained in any part of this application, including termination of membership with another SRO, which may cause a change in the Applicant Broker-Dealer's DEA. It is understood that in that event, additional information may be required by NYSE Arca

Applicant Broker-Dealer:	
Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor:	Date:
Print Name:	Title:

SECTION 3 – Clearing Letter of Consent								
Notice of Consent – To be completed by Cle	aring OTP Holder of Application Broker-Dealer							
The undersigned hereby represents the clearing agency named below, a member of the National Securities Clearing Corporation ("NSCC"), the Options Clearing Corporation ("OCC"), and an approved OTP Holder of NYSE Arca, Inc.								
	agrees to accept full financial responsibility for all transactions effected following Applicant Broker-Dealer with the clearing agency:							
Applicant Broker-Dealer	CRD# and/or SEC File#							
Rules and may be relied upon by NYSE Arca, In	tee, letter of authorization, or notice of consent pursuant to NYSE Arca nc., the NSCC, the OCC, and their respective members. This Notice of as amended from time to time, and shall remain in effect until revoked							
Clearing OTP Holder (Broker-Dealer Name)								
Clearing OTP Holder (OCC Clearing #)								
Clearing OTP Holder (NSCC Clearing #)								
Signature of Authorized Officer, Partner or Managing Member of Clearing OTP Holder OTP Holder	Signature of Authorized Officer, Partner or Managing Member, or Sole Proprietor of							
Print Name / Title	Print Name / Title							
Date	Date							

AP Form

NYSE Arca, Inc.

This Form is to be completed by persons required to be Approved Persons with the Exchange and for whom the required disclosure information is not available on Web CRD®.

Instructions

Prior to completing this form, the persons seeking Approved Person status ("Applicant") should be familiar with the NYSE Arca, Inc. and NYSE Arca Equities, Inc. (collectively, the "Exchange") Rules, particularly those relating to "Approved Persons," including but not limited to Arca Rule 1.1(c), 2.4, and 2.14, and Arca Equities Rule 1.1(d), 2.3, and 2.13.

- A copy of the completed Form must be retained by the Applicant and the member organization with which the Applicant is or will be associated ("Member Organization").
- To the extent necessary, provide additional information via a separate attachment referencing the section and question to which the additional information applies.
- The list of Approved Persons must be kept up-to-date with the Exchange and FINRA.
 - A new AP Form should be completed upon the occurrence of a change (e.g., a change in ownership, a new Approved Person)
 - o The elimination of an existing Approved Person should be provided to the Exchange and FINRA in writing (email is acceptable)
 - o Notification of changes should be provided to the Exchange (<u>crs@nyx.com</u>) and FINRA (<u>Q&RNY@finra.org</u>) within 30 days

For Applicants associated with firms <u>seeking NYSE Arca membership</u>, please email a signed and completed copy of the AP Form to Client Relationship Services at <u>crs@nyx.com</u>.

Sectio	ni
1.	Full Name of the Applicant:
2.	Full name and Web CRD # of the Member Organization with which the Applicant is or will be associated:
	Member Organization:
	Web CRD#:
3.	Approved Person Status is requested pursuant to the rules of the Exchange because the Applicant is not an ETP/OTP Holder, nor an employee or an Allied Person of a ETP/OTP Firm, and who:
3.	is a director of an ETP/OTP Firm
	☐ controls an ETP/OTP Firm
	beneficially owns, directly or indirectly, 5% or more of the outstanding equity securities of an ETP/OTP Firm has contributed 5% or more of the partnership capital
4.	Is the applicant subject to a Statutory Disqualification – as the term is defined in Section 3(a)(39) of the Securities Exchange Act of 1934?
	☐ Yes
	□ No
	If an Applicant or any person associated with the Applicant, subsequently become subject to a <i>Statutory Disqualification</i> after initial approval, this information must promptly be communicated to the Exchange by sending notification to FINRA at Q&RNY@finra.org .

AP Form – October 2013

Se	ction II										
00	Short ii										
1.	Address of Applicant's principal place of business (complete address of actual location):										
2.	Date and place of incorporation or jurisdiction under the laws of which Applicant was formed:										
3.	3. Indicate whether the Applicant has operated under any other names and identify all such names:										
Se	ction III										
Ву	signing below, the Applicant represents and acknowledges the following:										
org and App	Applicant is not relying upon the Exchange to provide any information concerning or relating to the Member Organization and sees that the Exchange has no responsibility to disclose to the Applicant any information concerning or relating to the Member anization that it may have now or obtain at any future time. The Applicant agrees for itself, its personal representatives, successors assigns that neither the Exchange, nor any investor, officer, trustee, agent, nor employee of said Exchange shall be liable to the discant with respect to the Applicant's investment or interest in the Member Organization or with respect to any repayment of any such estment or interest.										
inve	It is understood that the statements made in connection with this Form will be relied upon by the Exchange and may be verified by investigation. The Applicant declares that all such statements are true, complete, current and accurate. It is also recognized that the Exchange reserves the right to request additional information.										
the	The Applicant undertakes and agrees to subject itself to the jurisdiction of the Exchange and to abide by such provisions of the Rules of the Exchange as would at any time apply to an "Approved Person" as such term is defined in Arca Rule 1.1(c) and Arca Equities Rule 1.1(d).										
dea exis ame des	The Applicant hereby agrees to comply with the relevant provisions of the Securities Exchange Act of 1934, as amended, and the Rules and Regulations thereunder, and to furnish said Exchange with such information with respect to the Applicant's relationship and dealings with its affiliated member organization as the Exchange may require, to supply the Exchange with information relating to the existence of any "statutory disqualification" (as such term is defined in Section 3(a)(39) of the Securities Exchange Act of 1934, as amended) to which the Applicant or any person associated therewith may be subject, to permit examination by the Exchange or its designee of Applicant's books and records in order to verify the accuracy of the aforesaid information, and to subject itself to and abide by the Exchange' disciplinary authority.										
ass	olicant represents that except as is specifically indicated on this form or any supplement thereto, neither it nor any person ociated therewith is subject to a statutory disqualification. (See Section 3(a)(39) of the Securities Exchange Act of 1934, as ended).										
full	licant covenants and agrees that the foregoing statements, warranties, representations and undertakings will continue to apply with force and effect notwithstanding that the Member Organization may have changed its name or form of organization, or legal status has retained its same SEC Broker Dealer number) unless Applicant shall have otherwise notified the Exchange, in writing.										
Sign	nature: Date:										
Oigi	(A Duly Authorized Executive Officer, Senior Partner, Managing Member or equivalent of the Applicant)										
Prin	ted Name:										
Title											

NYSE Arca Options

Lead Market Maker Application

EXPLANATION OF TERMS

For purposes of this application, the following terms shall have the following meanings:

Applicant – the Broker-Dealer applying as a registered Lead Market Maker or amending this form to become a registered Lead Market Maker.

Appointment - on a form or forms prescribed by the Exchange, a registered Market Maker must apply for a Primary Appointment, having the obligations hereunder, and of Rule 6.37, in one or more option classes.

Associated Person - a person who is a partner, officer, director, member of a LLC, trustee of a Business Trust, or employee of an OTP Firm or any person directly or indirectly controlling, controlled by or under common control with an OTP Firm.

Control – as defined on Form-BD, the power, directly or indirectly, to direct the management or policies of a company, whether through ownership of securities, by contract or otherwise. Any person that (1) is a director, general partner or officer exercising executive responsibility (or having similar status or functions); (2) directly or indirectly has the right to vote 25% or more of a class of a voting security or has the power to sell or direct the sale of 25% or more of a class of voting securities; or (3) in the case of a partnership, has the right to receive upon dissolution, or has contributed, 25% or more of the capital, is presumed to control that company.

Central Registration Depository System ("Web CRD®") – a centralized electronic registration system maintained by FINRA which provides information on registered representatives and principals for members of participant organizations. This database contains employment history, exam scores, licensing information, disciplinary actions, fingerprint results, and other related registration information. NYSE Arca, Inc. is a participant of this system.

Designated Examining Authority ("DEA") – the SEC will designate one Self-Regulatory Organization ("SRO") to be a Broker-Dealer's examining authority, when the Broker-Dealer is a Member or OTP Firm of more than one SRO. Every Broker-Dealer is assigned a DEA, who will examine the Broker-Dealer for compliance with financial responsibility rules. The SEC will make the DEA assignment based on the SRO examination program and the Broker-Dealer's primary business location.

Direct Owners/Executive Officers – refers to (1) a director, general partner or officer exercising executive responsibility (or having similar status or function); or (2) directly or indirectly has the right to vote 5% or more of a class of voting security or has the power to sell or direct the sale of 5% or more of a class of voting securities; (3) is entitled to receive 5% or more of the net profits; (4) in the case of a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution or have contributed, 5% or more of the capital; or (5) in the case of a LLC, those members that have the right to receive upon dissolution, or have contributed, 5% or more of the LLC's capital, and if managed by elected managers, all elected managers.

Eligible Issues – an LMM may be allocated any one or more of the options issues opened for trading at the Exchange.

Financial Arrangement – (1) the direct financing of an OTP Holder's dealings upon the Exchange; (2) any direct equity investment or profit sharing arrangement; or (3) any consideration over the amount of \$5,000.00 including, but not limited to, gifts, loans, annual salaries or bonuses.

Lead Market Maker ("LMM") – an individual or entity that has been deemed qualified by the Exchange for the purpose of making transactions on the Exchange in accordance with the provisions of Rule 6.82. Each LMM or nominee thereof must be registered with the Exchange as a Market Maker. Any OTP Holder or OTP Firm registered as a Market Maker with the Exchange is eligible to be qualified as an LMM.

Lead Market Maker OTP - an approved Lead Market Maker with NYSE Arca, Inc. eligible to act as an LMM in options classes.

Market Maker ("MM") - an OTP Holder approved by the Corporation to act as a Market Maker pursuant to NYSE Arca Rule 6.

Market Maker Authorized Trader ("MMAT") – an authorized individual who performs market-making activities pursuant to NYSE Arca Rule 6, on behalf of a OTP Firm or OTP Holder registered as a Market Maker or Lead Market Maker.

NYSE Arca, Inc. ("NYSE Arca", the "Corporation", or the "Exchange") – a Delaware corporation as described in the Corporation's Certificate of Incorporation and Bylaws. NYSE Arca is a national securities exchange as that term is defined by Section 6 of the Securities Exchange Act of 1934, as amended.

Quotations – OTP Holders who are registered as Lead Market Makers are required by rules 6.37 and 6.82 to generate and automatically update two-sided market quotations throughout the trading day in each of their appointed series for 90% of the time the Exchange is open for trading in each series.

Self-Regulatory Organization ("SRO") - each national securities exchange or national securities association is an SRO. Each SRO must have rules that provide for the expulsion, suspension and other discipline of member Broker-Dealers for conduct inconsistent with just and equitable principles of trade.

APPLICATION PROCESS

Filing Requirements:

Prior to submitting the <u>Application to become a Lead Market Maker</u>, an applicant Broker-Dealer must have completed the Options Trading Permit ("OTP") application, identifying "Market Making" as a business to be conducted on NYSE Arca, Inc. A firm will not be eligible for approval as a Lead Market Maker until after their OTP application, with this indication, is approved.

Checklist:

Applicant OTP must complete and submit all materials as required in the Application Checklist (page 3) to crs@nyse.com.

If you have questions regarding the application, you may direct them to Client Relationship Services: Email: crs@nyse.com; Phone: 212-896-2830, Option 5.

Application Process:

- Following submission of the <u>Lead Market Maker Application</u>, and supporting documents, NYSE Arca will review the
 application for completeness prior to submission to FINRA for review.
- If review of Statutory Disqualification Disclosure information and/or a background investigation indicates that the applicant Broker-Dealer has an associated person(s) with a possible statutory disqualification, NYSE Arca or FINRA on behalf of NYSE Arca, will contact the representative of the applicant Broker-Dealer to discuss the statutory disqualification process.
- If it appears that the Applicant has outstanding debt, civil judgment actions and/or regulatory disciplinary actions, the applicant Broker-Dealer will be contacted by NYSE Arca or FINRA on behalf of NYSE Arca for further information.
- NYSE Area will notify the Applicant in writing of their decision.
- In the event an applicant Broker-Dealer is disapproved by NYSE Arca, the applicant Broker-Dealer has an opportunity to be heard upon the specific grounds for the disapproval, in accordance with the provisions of NYSE Arca Rule 10.14. A disapproved applicant desiring an opportunity to be heard shall file a written application with the Secretary of the Corporation within thirty (30) calendar days after such action has been taken.

APPLICATION CHECKLIST

CHECKLIST FOR BROKER-DEALERS TO BECOME A LEAD MARKET MAKER

- Approved Options Trading Permit (OTP) Application.
- Application for Lead Market Maker, All Sections.
- Copy of the Applicant's Written Supervisory Procedures ("WSPs") for Market Making on NYSE Arca, Inc.
- Financial Documentation
 - Four (4) Most Recent FOCUS Reports¹ and the Most Recent Audited Financial Statements, if applicable
 - Most Recent Balance Sheet and Capital Computation
 - Six Month Profit/Loss Projection
 - Subordination Agreements, if applicable²
- Organization Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC") Agreements; Operating Agreement; or similar documentation
- All examination reports and corresponding responses from the Applicant Broker-Dealer for the previous two (2) years.

Applicants must demonstrate that they have current net capital of 140% of their minimum net capital requirement or \$20,000 in excess of their minimum dollar net capital requirement, whichever is greater. If the Broker-Dealer has reported net losses for the period reviewed, the Firm's financial statements must demonstrate that its excess net capital can withstand six (6) consecutive months of average losses. Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements for the most recent six (6) months or since inception, whichever is less.

Required for NYSE Arca-DEA Broker-Dealers only

SECTION 1 - ORGANIZATIO	NAL PROFILE		
Date:	SEC #:	CRD#	:
	☐ Application	on 🗆 A	mendment
GENERAL INFORMATION			
Name of Applicant Broker-Dealer:			
Business Address:			·
	City:	Sta	ate: Zip Code:
Business Phone:		Fax	;
Contact Name:		Title	·
Phone:		Email	·
OTP APPROVAL STATUS		· · · · · · · · · · · · · · · · · · ·	
	er applicants must		nit Holder and Market Maker with NYSE Arca. * nd Market Makers with NYSE Arca.
Amount:			S Report Line Item*
Source of Net Capital (chec	ck all that apply):		
☐ Long Proprietary Posit	ions 🔲 In	terest/Dividends/Commission	Secured Demand Note
☐ Cash	□ s	ubordinated Loan	☐ Clearing / Good Fait Deposits
☐ Other		_	
*Submitting the firm's most this section	recent Quarterly I	FOCUS report and highlightin	g the Net Capital is an alternative to completing
SECURITIES			
Estimate the number of iss	ues in which the A	applicant intends to become re	egistered as a LMM:
OTHER BUSINESS ACTIVITI	ES		
Check all that apply:			
☐ Investment Banking			Public Securities Business
☐ Proprietary Trading			Equities Market Maker
Other		-	

SECTION 2 - INFORMATION FOR LEAD MARKET MAKERS

LMMs are subject to all applicable State and Federal Laws, and the rules promulgated thereunder, as well as the Rules of NYSE Arca. To ensure compliance, please consult your compliance department and/or legal counsel to determine the rules that are applicable, including, but not limited to, those referenced below. In particular, you should determine whether Rule 6.82 applies to your firm, including reporting requirements.

NYSE Arca Rule 6.82(b): Qualification of Lead Market Makers

- (1) Qualification of LMMs. The qualification of LMMs shall be conducted by the Exchange. The LMM Qualification Process is as follows:
- (A) Applications for qualification as an LMM shall be general and shall not specify a particular option issue or issues. Applicants for qualification as an LMM may present any matter they wish the Exchange to consider in conjunction with its decision. The Exchange may require that presentation to be solely or partially in writing, and may require the submission of additional information from an applicant, OTP Holder or OTP Firm, or any person associated with an OTP Holder or OTP Firm.
- (B) The Exchange may also specify one or more conditions on the applicant in respect to any representations made in the application process, including but not limited to representations regarding capital operations, personnel or technical resources.

NYSE Arca Rule 6.82(c): Obligations of Lead Market Makers

Each LMM must meet the following obligations:

- (1) Assure that disseminated market quotations are accurate:
- (2) Honor guaranteed markets, including markets required by Rule 6.86 and any better markets pledged during the allocation process;
- (3) Generate and automatically update two-sided market quotations with size in all appointed series in accordance with Rule 6.37B (b) through the LMMs own proprietary autoquoting system;
- (4) Fulfill general Market Maker obligations under Rule 6.37 and 6.37A:
- (5) Be accessible throughout every business day. An LMM shall promptly notify a Trading Official if such LMM shall not be accessible at anytime during the day. The Exchange may designate an approved LMM to act as a back-up LMM in the event such appointed LMM is not accessible;
- (6) With respect to trading as a Market Maker, effect trades that have a high degree of correlation with the overall pattern of trading for each series in the option issues involved;
- (7) Reserved
- (8) Reserved
- (9) Promote the Exchange as a marketplace by assisting in meeting and educating market participants and taking the time for travel related thereto:
- (10) Maintain communications with member firms in order to respond to suggestions and complaints;
- (11) Respond to competition by offering competitive markets and competitively-priced services;
- (12) Maintain a cash or liquid asset position of at least \$1,000,000. In the event that two or more LMMs are associated with each other and deal for the same LMM account, this requirement will apply to such LMMs collectively, rather than to each LMM individually;
- (13) Fully satisfy conditions of appointments pursuant to Subsection (b)(1)(B) of this Rule;
- (14) Promptly inform the Exchange of any material change in financial or operational condition or in personnel.

SECTION 3 - REQUIRED INFORMATION & AKNOWLEDGEMENT

The undersigned, applying for registration as a Lead Market Maker, accepts full responsibility for having knowledge of and adhering to all applicable rules and regulations governing the trading facility of NYSE Arca, including its subsidiaries and affiliates. The undersigned acknowledges the following requirements:

- 1. Maintain the net capital requirements as prescribed by NYSE Arca Rule 4 and SEC Rule 15c3-1, whichever is greater. The net capital requirements apply only to the registered Lead Market Maker firm rather than to each MMAT individually.
- Maintain a cash or liquid asset position of at least \$1,000,000. In the event that two or more LMMs are associated with each
 other and deal for the same LMM account, this requirement will apply to such LMMs collectively, rather than to each LMM
 individually.
- The LMM's clearing firm will provide daily equity information to FINRA, acting as agent for NYSE Arca, for LMM cash or liquid asset position review.
- Provide monthly financial statements consisting of FOCUS Form X-17A-5 to FINRA, acting as agent for NYSE Arca, for Market Maker capital compliance review.
- 5. Provide detailed financial reports and such other operational reports to NYSE Arca or FINRA, acting as agent for NYSE Arca as may be required.
- 6. Disclose promptly any material change in financial or operational condition, or in personnel in accordance with the rules and procedures of NYSE Arca.
- 7. Establish, maintain, and enforce written procedures to supervise the business in which it engages and to supervise the activities of its associated persons that are reasonably designed to ensure compliance with applicable federal securities laws and regulations and NYSE Arca's rules. Such written procedures shall at all times be available for inspection by staff or agents of NYSE Arca.

		-
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date	
Print Name of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Title	
THORIZED ACKNOWLEDGEMENT OF THE APPLICANT'S C	LEARING FIRM	
Signature of Authorized Clearing Firm Representative	Date	

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NYSE Arca Options

Registered Trader & Nominee Application

REGISTERED TRADERS Each Applicant is required to register employees, nominees and associated persons in accordance with NYSE Arca rules. Pursuant to these Rules. Applicants must complete the necessary documentation and submit such documentation in the manner prescribed in Rule 2.23. Individual traders of the Applicant must successfully pass any required examination and identify registration with the Exchange within any and all applicable categories on Form U4. Proof of examination requirements, fingerprint card submission, and Form U-4s should be submitted by the Applicant to the Central Registration Depository ("Web CRD®") for review by NYSE Arca. Registration categories include, but are not limited to, the following: MM - Market Maker Authorized Traders of the Applicant (Series 57 prerequisite) FB - Floor Broker (Series 57 prerequisite) APPLICANT FIRM INFORMATION Firm Name: CRD: Type of Business: Contact Name: Title: Phone: Email: REGISTERED TRADER / NOMINEE INFORMATION Name of Applicant: Date of Birth: Phone: Email: TYPE OF BUSINESS ACTIVITY TO BE CONDUCTED (Please check appropriate box below) ■ Lead Market Maker (LMM) ☐ Remote Market Maker (RMM) ☐ Floor Market Maker (FMM) ☐ Floor Broker (FB) ■ Market Maker Authorized Trader (MMAT) ☐ Office Nominee **APPLICATION CHECKLIST** A Form U-4 and Fingerprint card has been submitted directly to WebCRD© Individual has passed or been granted a waiver of the required examination AUTHORIZED ACKNOWLEDGEMENT OF APPLICANT FIRM Signature of Authorized Officer, Partner, Managing Date Member **Print Name** Title APPLICANT AGREEMENT The undersigned applicant represents that the information and statements contained herein, including the attachments hereto, and other information filed herewith, all of which are parts hereof, are current, true and complete Signature of Applicant CRD# Print Name Title

NYSE Arca Options

Options Trading Permit Application

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NYSE Arca OTP Application January 2016

APPLICATION PROCESS

Filing Requirements

Prior to submitting the <u>Application for Options Trading Permit ("OTP"</u>), an Applicant Broker-Dealer must file a Uniform Application for Broker-Dealer Registration (Form-BD) with the Securities and Exchange Commission and register with the FINRA Central Registration Depository ("Web CRD®").

Checklist

Applicant Broker-Dealer must complete and submit all applicable materials addressed in the Application Checklist (page 4) to:

crs@nyse.com

Note: All application materials sent to NYSE Arca will be reviewed by NYSE Arca's Client Relationship Services Department for completeness. The applications are submitted to FINRA who performs the application approval recommendation. All applications are deemed confidential and are handled in a secure environment. CRS or FINRA may request applicants to submit documentation in addition to what is listed in the Application Checklist during the application review process, pursuant to NYSE Arca Rule 2.4. If you have questions on completing the application, you may direct them to: Client Relationship Services: Email: crs@nyse.com or (212) 896-2830 option 5.

Application Process

- Following submission of the Application for Options Trading Permit and supporting documents to NYSE Arca, Inc. ("NYSE Arca"),
 the application will be reviewed for accuracy and regulatory or other disclosures. NYSE Arca will submit the application to FINRA for
 overall review and approval recommendation; NYSE Arca Compliance and Regulation complete the final review and approval.
- If review of Statutory Disqualification Disclosure information and/or a background investigation indicates that the Applicant has an
 associated person(s) with a possible statutory disqualification, NYSE Arca will contact the representative of the Applicant to discuss
 the statutory disqualification process.
- If it appears that the Applicant has outstanding debt, civil judgment actions and/or regulatory disciplinary actions, the Applicant will be contacted by NYSE Arca for further information.
- Applicants who have completed and returned all documents without indication of a statutory disqualification, outstanding debt, civil
 judgment actions and/or regulatory disciplinary actions will be presented to NYSE Arca for approval or disapproval without delay.
 NYSE Arca shall post the name of the Applicant Broker-Dealer and its proposed Nominee for a period of three (3) business days in
 the NYSE Arca Weekly Bulletin.
 - Applicants will be subject to disciplinary action if false or misleading answers are given pursuant to the Application for Options Trading Permit
- All individuals required to be registered with NYSE Arca, pursuant to the Rules, shall file documentation with the Exchange in the manner prescribed in NYSE Arca Rule 2.23 requesting such registration. NYSE Arca does not accept fingerprint cards. Fingerprint cards must be submitted directly to FINRA within 30 days of filing the Form U4. The fingerprint cards must be cleared by the FBI for individuals who seek to register with NYSE Arca or be approved by NYSE Arca. Firms may request FINRA-approved fingerprint cards through the Gateway Call Center at: (301) 590-6500. Fingerprint cards should be sent directly to: For Regular U.S. Mail: FINRA, Registration and Disclosure Department, P.O. Box 9495, Gaithersburg, MD 20898-9495. P.O. Boxes will not accept courier or overnight deliveries. For Express/Overnight Mail Delivery: FINRA, Registration and Disclosure Department, 9509 Key West Avenue, Rockville, MD 20850. If a phone number is required for the recipient, provide: (301) 590-6500. Your firm should receive the FBI search results in the "Fingerprint Status Received from FBI Notice Queue" within three business days after the card is sent to the FBI. Additional information regarding the submission of fingerprints to Web CRD may be obtained on the FINRA Web site: https://firms.finra.org/webcrd.
- NYSE Arca will promptly notify the Applicant, in writing, of their membership decision.
- An OTP must be activated within six months of approval by NYSE Arca. Applicant Broker-Dealers that have been approved by
 NYSE Arca are not considered active OTP Firms until an OTP has been placed in the name of a Nominee. Nominees must be
 approved by NYSE Arca before becoming an OTP Holder on behalf of an OTP Firm. OTP Firms that are off-floor trading firms or
 provide clearing services on NYSE Arca and are not conducting market maker or floor broker activities are required to designate an
 "Office Nominee" as its OTP Holder. This Office Nominee must be a Direct Owner/Executive Officer appearing on Schedule A of the
 OTP Firm's Form BD.
- In the event an Applicant is disapproved by NYSE Arca, the Applicant has an opportunity to be heard upon the specific grounds for the disapproval, in accordance with the provisions of NYSE Arca Rule 10.14. A disapproved applicant desiring to be heard must, within thirty (30) calendar days of the date upon which the Corporation's decision was mailed to the applicant, file a petition in accordance with the provisions of NYSE Arca Rule 10.14.

APPLICATION CHECKLIST & FEES

CHECKLIST FOR NON-NYSE Area DEA BROKER-DEALER APPLICANTS

- ☐ Application for Options Trading Permit
 - Section 1 through 7 MANDATORY
 - Section 8 only if you are not self-clearing
- Form BD, including Schedules & Disclosure Reporting pages must be up to date and accurate on FINRA's Web CRD®.
- A Form U-4 and Fingerprint cards for the following individuals needs to be submitted directly to the FINRA, if not currently available on Web CRD®:
 - Direct/Indirect Owners, Allied Persons, and Approved Persons as listed on Form BD Schedules A & B
 - Designated supervisors and principals
 - All Authorized Traders
- Financial Documentation
 - Four (4) Most Recent FOCUS Reports¹ and the Most Recent Audited Financial Statements, if applicable
 - Most Recent Balance Sheet and Capital Computation
 - Six Month Profit/Loss Projection
- All examination reports and corresponding responses from the Applicant Broker-Dealer for the last two exam reports
- Copy of Written Supervisory Procedures², Anti-Money Laundering Procedures, and Insider Trading Act Procedures (if separate)
- Organizational Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC")
 Agreements; Operating Agreement; or similar documentation

CHECKLIST FOR NYSE Arca DEA BROKER-DEALER APPLICANTS

- Application for Options Trading Permit
 - Section 1 through 7, and 9 MANDATORY
 - Section 8 only if you are not self-clearing
- Form BD, including Schedules & Disclosure Reporting pages must be up to date and accurate on FINRA's Web CRD®.
- A Form U-4 and Fingerprint cards for the following individuals needs to be submitted directly to the FINRA, if not currently available on Web CRD®¹.
 - Direct/Indirect Owners, Allied Persons, and Approved Persons as listed on Form BD Schedules A & B
 - Designated supervisors and principals
 - All Authorized Traders
- Financial Documentation
 - Four (4) Most Recent FOCUS Reports² and the Most Recent Audited Financial Statements, if applicable
 - Most Recent Balance Sheet and Capital Computation
 - Six Month Profit/Loss Projection
 - Subordination Agreements, if applicable
- Proprietary Accounts of Introducing Broker-Dealers (PAIB) Agreements, if applicable
- Organization Documents: Articles of Incorporation and Bylaws; Partnership Agreement; Limited Liability Company ("LLC")
 Agreements; Operating Agreement; or similar documentation
- All examination reports and corresponding responses from the Applicant Broker-Dealer for the last two exam reports
- Copy of Written Supervisory Procedures³, Anti-Money Laundering Procedures, and Insider Trading Act Procedures (if separate)

Note: For a list of all fees, please review the "Schedule of Fees and Charges for Exchange Services" found at https://www.nyse.com/markets/fees

Applicants must demonstrate that they have current net capital of 140% of their minimum net capital requirement or \$20,000 in excess of their minimum dollar net capital requirement, whichever is greater. If the Broker-Dealer has reported net losses for the period reviewed, the Firm's financial statements must demonstrate that its excess net capital can withstand six (6) consecutive months of average losses. Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements reflecting the Balance Sheet and Profit & Loss Statement detail for each month for the most recent six (6) months or since inception, whichever is less.

² Market Maker applicants must include, but are not limited to, the following NYSE Arca Option Rules: 6.32 – 6.41 (Market Makers), 6.82, 6.84 & 6.85 (Lead Market Makers), 6.83 (Limitations on Dealings of Lead Market Makers/Information Barriers), 11.3 (Prevention of the Misuse of Material, Nonpublic Information), 11.18 (Supervision), and 11.19 (Anti-Money Laundering Compliance Program).

EXPLANATION OF TERMS

For purposes of this application, the following terms shall have the following meanings:

Applicant – the Broker-Dealer organization applying for an Options Trading Permit or amending this form.

Associated Person - a person who is a partner, officer, director, member of a LLC, trustee of a Business Trust, or employee of an OTP Holder or any person directly or indirectly controlling, controlled by or under common control with an OTP Holder.

Authorized Trader ("AT") – an individual who may submit orders to the Exchange on behalf of his or her OTP Firm or Sponsored Participant.

Central Registration Depository System ("Web CRD®") – A centralized electronic registration system maintained by FINRA which provides information on registered representatives and principals for members of participant organizations. This database contains employment history, exam scores, licensing information, disciplinary actions, fingerprint results, and other related registration information. NYSE Arca, Inc. is a participant of this system.

Clearing Member – an OTP Firm which has been admitted to membership in the Options Clearing Corporation ("OCC") pursuant to the provisions of the rules of the OCC. A Broker-Dealer who receives and executes customers' instructions, prepares trade confirmations, sends the money related to the trades, arranges for the physical movement of securities, and shares responsibility with an introducing broker-dealer for compliance with regulatory requirements.

Control – (as defined on Form-BD) the power, directly or indirectly, to direct the management or policies of a company, whether through ownership of securities, by contract or otherwise. Any person that (1) is a director, general partner or officer exercising executive responsibility (or having similar status or functions); (2) directly or indirectly has the right to vote 25% or more of a class of a voting security or has the power to sell or direct the sale of 25% or more of a class of voting securities; or (3) in the case of a partnership, has the right to receive upon dissolution, or has contributed, 25% or more of the capital, is presumed to control that company.

Designated Examining Authority ("DEA") – the SEC will designate one Self-Regulatory Organization ("SRO") to be a Broker-Dealer's examining authority, when the Broker-Dealer is a Member or OTP Holder of more than one SRO. Every Broker-Dealer is assigned a DEA, who will examine the Broker-Dealer for compliance with financial responsibility rules.

Designated Supervisor – refers to any person that is a partner, director, or officer exercising executive responsibility (or having similar status or functions) for supervising registered employees.

Direct Owners/Executive Officers – Allied Persons and Approved Persons, as those terms are defined by NYSE Arca Rules 1.1(b) and 1.1(c), respectively, and generally refer to (1) a director, general partner or officer exercising executive responsibility (or having similar status or function); or (2) directly or indirectly has the right to vote 5% or more of a class of voting security or has the power to sell or direct the sale of 5% or more of a class of voting securities; (3) is entitled to receive 5% or more of the net profits; (4) in the case of a partnership, all general partners and those limited and special partners that have the right to receive upon dissolution or have contributed, 5% or more of the capital; or (5) in the case of a LLC, those members that have the right to receive upon dissolution, or have contributed, 5% or more of the LLC's capital, and if managed by elected managers, all elected managers.

Financial Arrangement – (1) the direct financing of an OTP Holder's dealings upon the Exchange; (2) any direct equity investment or profit sharing arrangement; or (3) any consideration over the amount of \$5,000.00 including, but not limited to, gifts, loans, annual salaries or bonuses.

Firm Proprietary and/or Agency Trading – an OTP Firm that engages in off-floor trading that is unrelated to the performance of that OTP Firm's registered market maker or floor broker functions.

Market Maker – an OTP Firm or OTP Holder that acts as a Market Maker pursuant to Rule 6.32A and submits quotes electronically and makes transactions as a dealer-specialist through the facilities of the Exchange from on the trading floor or remotely from off the trading floor.

Market Maker Authorized Trader ("MMA,T") – an Authorized Trader who performs market making activities pursuant to Rules 6 and 6A on behalf of an OTP Firm or OTP Holder registered as a Market Maker. To be approved as an MMAT, a person must demonstrate knowledge of the Rules of the Exchange by passing an examination prescribed by the Exchange. MMATs may be officers, partners, employees, or associated persons of OTP Firms that are registered with the Exchange as Market Maker.

EXPLANATION OF TERMS (CONTINUED)

Nominee – an individual who is authorized by an OTP Firm, in accordance with NYSE Arca Rule 2.4, to conduct business on the trading facilities of NYSE Arca and to represent such OTP Firm in all matters relating to the Exchange. A Nominee shall agree to be bound by the Bylaws and Rules of NYSE Arca, and by all applicable rules and regulations of the Securities Exchange Commission.

NYSE Arca, Inc. ("NYSE Arca", the "Exchange", or the "Corporation") – a Delaware corporation as described in the Corporation's Certificate of Incorporation and Bylaws. NYSE Arca is a national securities exchange as that term is defined by Section 6 of the Securities Exchange Act of 1934, as amended. NYSE Arca, Inc. is also a Self-Regulatory Organization.

OTP – an Options Trading Permit issued by the Corporation for effecting approved securities transactions on the Corporation's trading facilities. An OTP may be issued to a Sole Proprietor, Partnership, Corporation, LLC or other organization which is a registered Broker or Dealer, pursuant to Section 15 of the Securities Exchange Act of 1934, as amended, and which has been approved by the Corporation.

OTP Firm – a sole proprietor, partnership, corporation, limited liability company or other organization in good standing who holds an OTP or upon whom an individual OTP Holder has conferred trading privileges on the Corporation's trading facilities. An OTP Firm shall agree to be bound by the Certificate of Incorporation, Bylaws and Rules of NYSE Arca, and by all applicable rules and regulations of the Securities and Exchange Commission.

OTP Holder – a natural person who has been issued an OTP, or has been named as a Nominee of an OTP Firm in accordance with NYSE Arca Rules.

Primary Business - refers to greater than 50% of the OTP Holder's business.

Self-Regulatory Organization ("SRO") - each exchange or national securities association is an SRO. Each SRO must have rules that provide for the expulsion, suspension and other discipline of member Broker-Dealers for violation of the SRO's rules

KEY PERSONNEL		
Please identify the key personnel who hold the below position functional equivalent of such position, regardless of actual communications pertaining to our options markets.	ions (or the individua titles used by the Ap	al whose responsibilities are the oplicant Firm) and who will want to receive
Chief Executive Officer ("CEO")		
Name:		CRD:
Phone:	Fax:	·
Email:		_
Chief Financial Officer ("CFO")		
Name:		CRD:
Phone:		
Email:		<u>.</u>
Chief Compliance Officer ("CCO")		
Name:		CRD:
Email:		-
Chief Operations Officer ("COO")		
Name:	·	CRD:
Phone:	Fax:	
Email:		-
Head of Options Clearing		
Name:		CRD:
Phone:		
Email:		_
Head of Options Connectivity		
Name:		CRD:
Phone:	Fax:	
Email:		_
Head of Options Trading	····	
Name:		CRD:
Phone:	Fax:	
Email:		-

SECTIO	N 1 – ORGANIZATIO	NAL PRO	OFILE			
Date:		SEC	#	CRD	#:	
			Application		Amendment	
GENER	AL INFORMATION					
Name of	Applicant Broker-Dealer:	:				
Business	Address:					
	·	City:		8	State: Zip Code:	
Business	Phone:			Fa	эх:	
Contact N	Name:		·	Titl	le:	
Phone:					ail:	
				·		
TYPE O	FORGANIZATION			·		
			nited Liability Company		Partnership Sole Proprietor	
TYPE O	F BUSINESS TO BE	CONDUC	TED WITH OPTIONS	TRADIN	G PERMIT (Check all that apply)	
	Market Maker	☐ Flo	or Broker		☐ Public Customer Business	
	Clearing Services	☐ Pro	prietary and/or Agency T	Trading	Other	
OTHER	BUSINESS ACTIVITI	ES CON	DUCTED BY APPLICA	ANT BRO	OKER_DEALER (Check all that apply)	
	Market Maker	_ □ Flo	or Broker		☐ Public Customer Business	
	Clearing Services	☐ Pro	oprietary and/or Agency T	Frading	☐ Other	
OTHER	SELF-REGULATORY	ORGAN	IZATION MEMBERS	HIPS (Ch	eck all that apply)	
	American Stock Excha	ange (AME	(X)		Boston Stock Exchange (BSE)	
	Chicago Board Option	s Exchang	e (CBOE)		Chicago Stock Exchange (CHX)	
	National Stock Exchar	nge (NSX)			International Securities Exchange (ISE)	
	☐ Financial Industry Regulatory Authority, Inc. (FINRA)				New York Stock Exchange (NYSE)	
	Philadelphia Stock Ex	change (Pl	HLX)		BATS (BATS)	
	Nasdaq Stock Market	(NQX)				
APPLIC	ANT'S DESIGNATED	EXAMIN	ING AUTHORITY ("D	EA")		
	NYSE Arca, Inc. (NYS	SE Arca / N	NYSE Arca Options)		Other	
An	plicants for whom NYSE	Arca will I	be the DEA must also co	mplete Se	ction 9 of this application	

			÷Ν								

Applicant Broker-Dealer agrees to abide by the Bylaws and Rules of NYSE Arca, Inc., as amended from time to time, and all circulars, notices, interpretations, directives or decisions adopted by NYSE Arca, Inc.

Applicant Broker-Dealer authorizes any SRO, commodities exchange, governmental agency or similar entity to furnish to NYSE Arca, upon its request, any information that such person may have concerning the ability, business activities, and reputation of Applicant Broker-Dealer or its associated persons, and releases such person or entity from any and all liability in furnishing such information. Applicant Broker-Dealer authorizes NYSE Arca to make available to any governmental agency, SRO, commodities exchange or similar entity, any information it may have concerning the Applicant Broker-Dealer or its associated persons, and releases NYSE Arca from any and all liability in furnishing such information.

Applicant Broker-Dealer acknowledges its obligation to update any and all information contained in any part of this application, including termination of membership with another SRO, which may cause a change in the Applicant Broker-Dealer's DEA. It is understood that in that event, additional information may be required by NYSE Arca

Applicant Broker-Dealer:	CRD#:
Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor:	Date:
Print Name:	Title:

SECTION 3 - FINANCIAL DISCLOSURE
FINANCIAL STATEMENT
Copies of the required financial items as noted on the checklist including: the four (4) most recent FOCUS Reports ³ , most recent Audited Financial Statements, and examination reports and corresponding responses.
SOURCE OF CAPITAL
Explain the source of Applicant Broker-Dealer's Capital
PROPRIETARY ACCOUNTS OF INTRODUCING BROKER-DEALERS (PAIB)
Do you hold a Proprietary Account as an Introducing Broker-Dealer (PAIB)
*If Yes: An introducing Broker-Dealer must notify its DEA in writing when it has entered into a PAIB Agreement with a clearing Broker-Dealer regarding the net capital treatment of assets held in proprietary accounts. Assets (cash and securities) held in trading accounts without a PAIB Agreement are considered to be non-allowable in the computation of net capital under SEC Rule 15c3-1. If NYSE Arca will be your DEA, please enclose a copy of all PAIB Agreements you have entered into with a clearing broker-dealer.
SUBORDINATED LOANS .
Have any subordinated loans been made to Applicant Broker-Dealer? Yes (Explain below) No
FINANCIAL OR CONTROLLING INTERESTS
Does the Applicant Broker-Dealer have a financial or controlling (as defined in Form-BD) interest (through direct or indirect stock or bond ownership, through outstanding loans, or otherwise) in any organization engaged in a securities, financial or related business? Yes (Explain below) No
FINANCIAL ARRANGEMENT
Does the Applicant Broker-Dealer have a financial arrangement with any other Broker-Dealer?
Yes (Explain below) No
Type of Arrangement: Direct Equity Investment Profit Sharing Direct Financing Direct Financing
Terms of Arrangement (include the names of all participants in the arrangement, and the nature and terms of the arrangement):
OUTSTANDING DEBT (Check all that apply)
Does the Applicant Broker-Dealer owe money to any of the following?
Any NYSE Arca member or member organization or NYSE Arca OTP Holder
Any other national securities or commodities exchange or national securities association
Any member of any other national securities or commodities exchange or national securities association
Explain to whom the money is owed and the dollar amount. Attach a copy of arrangements made for repayment of this debt and evidence of an agreement of repayment.
No, the Applicant Broker-Dealer does not owe money to any of the above referenced persons or entities.

³ Applicant Broker-Dealers that do not have the requested financial information available are required to submit Pro Forma Financial statements for the most recent six (6) months or since inception, whichever is less.

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					CECUTIVE OFFICERS	
as defined in	NYSE	Arca Rule 1.1	(c)°; and (C) each P	erson as d	efined in NYSE Arca Rule 11	1.1(b) ⁴ ; (B) each Approved Person 1.18(b)(2) ⁶ . You may submit
multiple cop	ies of t	his form, if ne	eded, or attach a co	ppy of Sche	dule A and Schedule B of F	orm BD.
APPLYING	G AS:		ALLIED PERSON		APPROVED PERSON	
		_	_	_		
Name:						CRD#
Firm Name::			F	Phone: _		
Email:						•
		_	Supervisor of Authoria			
					nt and accessible for this person	on on Web CRD™
APPLYING	G AS:		ALLIED PERSON		APPROVED PERSON	
Name:				Title:		CRD#
Firm Name::			F	Phone: _		
Email:						
		=	Supervisor of Authoriz			
		Form U4 and	I fingerprint information	on ⁸ is currer	nt and accessible for this perso	on on Web CRD™
APPLYING	S AS:		ALLIED PERSON		APPROVED PERSON	
Name:			7	Γitle:		CRD#
Firm Name::			F			
Email:					•	
		Designated S	Supervisor of Authoria	zed Traders		
		Form U4 and	fingerprint information	on ⁸ is currer	nt and accessible for this perso	on on Web CRD™
APPLYING	S AS:		ALLIED PERSON		APPROVED PERSON	
Name:				Γitle:		CRD#
Firm Name::			F			
Email:				_		
		Designated S	Supervisor of Authoria	zed Traders		
		Form U4 and	fingerprint information	on ⁸ is currer	nt and accessible for this person	on on Web CRD™
		· · · · · · · · · · · · · · · · · · ·			·	

Pursuant to NYSE Arca Rule 1.1(c), the term "Approved Person" shall refer to a person who is not an OTP Holder, nor an employee or an Allied Person of an OTP Holder, and who: (1) is a director of an OTP Holder, or (2) controls an OTP Holder, or (3) beneficially owns, directly or indirectly, 5% or more of the outstanding equity securities of an OTP holder, or (4) has contributed 5% or more of the partnership capital; and who has been approved by the Composition as an Approved Person.

by the Corporation as an Approved Person.

NYSE Arca Rule 11.18(b)(2) refers to the designation of a person with authority to reasonably discharge his/her duties and obligations in connection with supervision and control of the activities of the Associated Persons of the OTP Holder. Pursuant to NYSE Arca Rule 1.1(d), the term "Associated Person" shall refer to a person who is a partner, officer, director, member of a limited liability company, trustee of a business trust, employee of an OTP Holder or any person directly or indirectly controlling, controlled by or under common control with an OTP Holder.

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⁴ Pursuant to NYSE Arca Rule 1.1(b), the term "Allied Person" shall refer to an individual, who is: (1) an employee of an OTP Holder who controls such firm, or (2) an employee of an OTP Holder corporation who is a director or a principal executive officer of such corporation, or (3) an employee of an OTP Holder limited liability company who is a manager or a principal executive officer of such limited liability company, or (4) a general partner in an OTP Holder partnership; and who has been approved by the Corporation as an Allied Person.
⁵ Pursuant to NYSE Arca Rule 1.1(c), the term "Approved Person" shall refer to a person who is not an OTP Holder, nor an employee or an Allied

SECTION 5 - REGISTERED TRADERS	
Each Applicant is required to register employees and associated porthese Rules, Applicants must complete the necessary documentation prescribed in Rule 2.23. Individual traders of the Applicant must surregistration with the Exchange within any and all applicable catego fingerprint card submission, and Form U-4s should be submitted by CRD®") for review by NYSE Arca. Registration categories include	on and submit such documentation in the manner accessfully pass any required examination and identify ries on Form U4. Proof of examination requirements, the Applicant to the Central Registration Depository ("Web
 MM – Market Maker Authorized Traders of the Applica FB – Floor Broker (Series 57 prerequisite) 	nt (Series 57 prerequisite)
Please list all individuals who will conduct trading activity on the Ex	change оп behalf of the Applicant
REGISTERED TRADER INFORMATION	
Name of Applicant:	CRD:
Date of Birth:	·
Phone:	Email:
TYPE OF BUSINESS ACTIVITY TO BE CONDUCTED (Please ch	eck appropriate box below)
☐ Lead Market Maker (LMM)	Remote Market Maker (RMM)
☐ Floor Market Maker (FMM)	☐ Floor Broker (FB)
☐ Market Maker Authorized Trader (MMAT)	
APPLICATION CHECKLIST	
☐ A Form U-4 and Fingerprint card has been submitted direc	tly to WebCRD©
☐ Individual has passed or been granted a waiver of the requ	ired examination
REGISTERED TRADER INFORMATION	
Name of Applicant:	CRD:
Date of Birth:	·
Phone:	Email:
TYPE OF BUSINESS ACTIVITY TO BE CONDUCTED (Please of	eck appropriate box below)
Lead Market Maker (LMM)	Remote Market Maker (RMM)
☐ Floor Market Maker (FMM)	Floor Broker (FB)
☐ Market Maker Authorized Trader (MMAT)	
APPLICATION CHECKLIST	
☐ A Form U-4 and Fingerprint card has been submitted direct	tly to WebCRD©
☐ Individual has passed or been granted a waiver of the requ	ired examination

You may submit multiple copies of this page, if needed

SECTION 6 – STATUTORY DISQUALIFICATION DISCLOSURE
Pursuant to the Securities Exchange Act of 1934, as amended ("the Act"), NYSE Arca, Inc. ("NYSE Arca") may deny (or may condition) trading privileges or may bar a natural person from becoming associated (or may condition an association) with an OTP Holder for the same reasons that the Securities and Exchange Commission may deny or revoke a broker-dealer registration under the Act. The Act provides for Statutory Disqualification if a person has:
 Been expelled, barred or suspended from membership in or being associated with an member of a self regulatory organization; had broker, dealer or similar privileges denied or suspended or caused such denial or suspension of another; Violated any provision of the Act; or Been convicted of a theft or securities related misdemeanor or any felony within ten (10) years of the date of applying for membership status or becoming an Associated Person.
Check here if you DO NOT have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.
Check here if you DO have person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification.*
Please identify any such person(s) associated with the Applicant Broker-Dealer who is or may be subject to Statutory Disqualification. Additionally, identify any such person(s) who are associated with the Applicant Broker-Dealer and who have been approved for association or continued association by another SRO due to a Statutory Disqualification.
 * Attach a sheet identifying any such person(s), including the following information: Name and CRD number of the person(s). Copies of documents relating to the Statutory Disqualification. Description of each such person's duties (for non-registered individuals, this should include a statement indicating if the position allows access to books, records, funds or securities). Explanation of action taken or approval given by any other SRO regarding each person.
On behalf of
Signature of Authorized Officer, Partner, Managing Member or Sole Proprietor: Date:
Print Name: Title:

SECTION 7 - SUPERVISION	
Each OTP Holder must identify the person(s) that is a member, partner, director, or officer day-to-day compliance and maintenance of the firms written supervisory procedures ("WSF Exchange Act Rule 15c3-1 are required to have a designated Series 27 licensed principal,	Ps"). Additionally, applicants subject to
Name of Person responsible for maintaining WSPs:	CRD#:
Applicant Broker-Dealer's WSPs are enclosed.	
Name of Series 27 licensed principal (if applicable):	CRD#:
NYSE Arca Rules state: (a) Adherence to Law – No Options Trading Permit Holder or Associated Person of a	

- (a) Adherence to Law No Options Trading Permit Holder or Associated Person of an Options Trading Permit Holder may engage in conduct in violation of the federal securities laws, the Constitution or the Rules of the Exchange. Every Options Trading Permit Holder must supervise persons associated with the Options Trading Permit Holder as to assure compliance therewith.
- (b) Supervisory System Each Options Trading Permit Holder for whom NYSE Arca is DEA must establish and maintain a system to supervise the activities of its associated persons and the operations of its business. Such system must be reasonably designed to ensure compliance with applicable federal securities laws and regulations and NYSE Arca Rules. Final responsibility for proper supervision will rest with the Options Trading Permit Holder. The Options Trading Permit Holder's supervisory system must provide, at a minimum, for the following:
 - (1) The establishment and maintenance of written procedures as required by paragraph (c) of this Rule.
 - (2) The designation of a person with authority to reasonably discharge his/her duties and obligations in connection with supervision and control of the activities of the associated persons of the Options Trading Permit Holder.
 - (3) The Options Trading Permit Holder must undertake reasonable efforts to determine that all supervisory personnel are qualified by virtue of experience or training to carry out their assigned responsibilities.
 - (4) Each Options Trading Permit Holder must designate and specifically identify to NYSE Arca one or more persons who will be responsible for such supervision.
- (c) Written Procedures Each Options Trading Permit Holder must establish, maintain, and enforce written procedures to supervise the business in which it engages and to supervise the activities of its associated persons that are reasonably designed to ensure compliance with applicable federal securities laws and regulations, and with NYSE Arca Rules.

Pursuant to this rule, WSPs should describe the following:

- Specific identification of the individual(s) responsible for supervision either by name or by title and position.
- The supervisory steps and reviews to be taken by the appropriate supervisor this process should identify any exception
 reports and/or other documents being reviewed and the substantive area being reviewed (e.g., limit order protection, trade
 reporting, etc.). If an OTP Holder employs automated systems as part of its supervisory system, those systems should also
 be generally described.
- The frequency of such reviews this should be more specific than simply providing for "a review" or a "review from time to time." The frequency of reviews should be described (i.e., daily, weekly, monthly, quarterly, or annually).
- How reviews will be documented, for example, initialing order tickets or filling out review logs. The procedures should also
 provide for the documentation of steps taken as a result of supervisory reviews.

For Market Makers, the WSPs and supervisory systems of firms engaged in market making activities must address, at a minimum, trading practice rules (i.e., passive market making, firm quote rule compliance, limit order protection), trading systems, trade reporting, rules compliance and any other material aspect of the firm's market making business. WSPs should include the following subject areas:

- Size conventions
- Coordination of quotations, trades and trade reports
- Improper collaboration and coordination of Market Maker activities
- Failure to honor quotations
- Harassment
- Late and inaccurate trade reporting

ALL OPTIONS TRADING PERMIT HOLDERS MUST KEEP ABREAST OF CHANGES IN LAWS, RULES AND REGULATIONS, MARKET PRACTICES AND INDICATED PATTERNS OF NON-COMPLIANCE AND MUST MODIFY THEIR SUPERVISORY PROCEDURES AND SYSTEMS AS NECESSARY.

SECTION 8 – CLEARING LETTER OF CONS	ENT
Notice of Consent - To be completed by Cle	earing OTP Holder of Application Broker-Dealer
The undersigned hereby represents the clearing Corporation ("NSCC"), the Options Clearing Co	ng agency named below, a member of the National Securities Clearing orporation ("OCC"), and an approved OTP Holder of NYSE Arca, Inc.
The undersigned Clearing OTP Holder hereby through and carried in all accounts held by the	agrees to accept full financial responsibility for all transactions effected following Applicant Broker-Dealer with the clearing agency:
Applicant Broker-Dealer	CRD# and/or SEC File#
Rules and may be relied upon by NYSE Arca, I	ntee, letter of authorization, or notice of consent pursuant to NYSE Arca Inc., the NSCC, the OCC, and their respective members. This Notice of as amended from time to time, and shall remain in effect until revoked
Clearing OTP Holder (Broker-Dealer Name)	
Clearing OTP Holder (OCC Clearing #)	
Clearing OTP Holder (NSCC Clearing #)	
Signature of Authorized Officer, Partner or Managing Member of Clearing OTP Holder OTP Holder	Signature of Authorized Officer, Partner or Managing Member, or Sole Proprietor of
Print Name / Title	Print Name / Title
Date	Date

NYSE Arca, Inc.

DEA Application Requirements

SECTION 9- DESIGNATED EXAMINING AUTHORITY (DEA) REQUIREM	IENTS
This form should be completed by a Director, Officer, General Partner or Indivi- Dealer's ITSFEA Compliance Procedures are followed. In the future, this ce NYSE Arca along with the Broker-Dealer's year-end FOCUS Report (Form X-17)	ertification must be completed and filed with
Broker-Dealer:	
SEC #	
The undersigned states and certifies as follows:	
It is understood that should any Director, Officer, General Partner or Associated Per Broker-Dealer acquire material, non-public information concerning a corporation will violation of NYSE Arca Rules and Federal securities laws to misuse such information or any options or other derivative securities based thereon, while such information rer	hose securities are publicly traded, it may be a or trade any securities issued by the corporation,
It is further understood that should any Director, Officer, General Partner or Association-public information concerning the market in a security or group of securities, Federal securities laws to make improper use of such information in connection with option or other derivative based thereon.	it may be a violation of NYSE Arca Rules and
It is also understood that it may be a violation of NYSE Arca Rules and Federal securany non-public, material corporate or market information that may be acquired rescurities.	
Additionally, the Broker-Dealer represents that it has established written procedumaterial non-public information by the Broker-Dealer or by any of the Broker-D Associated Persons, taking into consideration the nature of the Broker-Dealer's busing	ealer's Directors, Officers, General Partners or
The Individual(s) responsible for overseeing and supervising the specific elemen Compliance procedures has reviewed (or supervised the review of) the Broker-Deale brokerage securities accounts of Directors, Officers, General Partners, and Associate with the specific provisions (including timing and type of review) detailed in and reprocedures.	er's proprietary, error account(s), and any outside ed Persons with the Broker-Dealer, in accordance
Based upon the assessment of the adequacy of those procedures and of the auth those procedures (except as to any securities transactions involving the possible mis been reported to NYSE Arca), there is no reasonable cause to believe that any leading to the Broker-Dealer has misused, made improper use of, or disclosed material in violation of NYSE Arca Rule 11.3	suse of non-public information which already have Director, Officer, General Partner, or Associated
Signature of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Date
Print Name of Authorized Officer, Partner, Managing Member, or Sole Proprietor	Title

Print Form

NYSE Arca Options

TERMINATION OF MARKET MAKER

То:	NYSE Arca Options Client Relationship	Services Department	
From:	Classing Maushau		<u>.</u>
	Clearing Member		
Date of ter	mination:	(Close of Business)	
☐ Ter	mporary Termination (1 to 120 days) *		
	- Date of Return:		_
∐ Per	rmanent Termination**		
Market Ma	ker:	Acronym(s):	-
OTP Firm:			
(as defined as all position	ng Member will continue to accept full fina I in NYSE Arca Rule 6.36) made in the ac ions in the account have been li quidated a by the Exchange.	count of the above-specified Market Ma	ker, until such time
Authorized	Signature of Clearing Member	Date	_
Print Name	•	Title	_

* OTP holders(OTP) must notify the Exchange no later than one (1) business day in advance of the proposed temporary termination date. A temporary termination cannot exceed 180 days.

Trade activity in a market maker account that is subject to a Temporary Termination must be limited to "closing only" transactions. Closing only shall generally mean submission of orders for the purpose of closing positions or reducing risk. Trade activity in terminated accounts may be subject to regulatory review.

** A Letter of Guarantee Revocation is required to be filed with the NYSE Arca Client Relationship Services Department after all accounts have cleared.

NYSE Arca Options

TERMINATION OF ORDER SENDING & CLEARING FIRM

From:		
	OTP Member Firm	
Re:		
	OTPID	Acronym(s)
Type of	OTP:	
☐ Clear	ing Firm	
Date of ⁻	Termination:	(Close of Business)
☐ Temp	porary Termination (1-120 days)	
	– Date of Return:	
Perm	anent Termination	

Checklist for Terminating an OTP Order Sending & Clearing Firm

- 1. OTP holders must notify the Exchange no later than one (1) business day in advance of the proposed termination date.
- 2. Temporary terminations cannot exceed 180 day s.