



NYSE Arca Options Fees and Charges

Effective Date: January 19, 2018

NYSE Arca GENERAL OPTIONS and TRADING PERMIT (OTP) FEES

OTP TRADING PARTICIPANT RIGHTS

Office or Clearing Firms ¹	\$1,000 per month per OTP
Floor Broker ¹	\$500 per month per OTP

NYSE Arca Market Makers¹

Monthly Fee Per OTP	Number of Option Issues Permitted in Market Maker's Assignment
\$6,000 for 1 st OTP	Up to 175 option issues
\$5,000 for the 2 nd OTP	Up to 350 option issues
\$4,000 for the 3 rd OTP	Up to 1,000 option issues
\$3,000 for the 4 th OTP	All option issues traded on the Exchange
\$1,000 for the 5 th and additional OTPs	All option issues traded on the Exchange
\$175 for Reserve OTP	N/A

Lead Market Maker Rights ²	Average National Daily Customer Contracts	Monthly Issue Fee
	0 to 100	\$25 ²
	101 to 1,000	\$35 ²
	1,001 to 2,000	\$75 ²
	2,001 to 5,000	\$200*
	5,001 to 15,000	\$750*
	15,001 to 100,000	\$1,500*
	Over 100,000	\$3,000*

*Discount to Lead Market Maker ("LMM") Rights Fee: An LMM may earn a discount applied to issues in the four highest activity tiers. The discount is based on the amount of monthly (i) total electronic volume and/or (ii) total posted volume executed in the Market Maker range relative to other Market Makers appointed in that issue.

For each issue, each month, the following will apply:

LMM Ranking	Discount to LMM Rights Fee
1st in total electronic volume	50%
2nd in total electronic volume	40%
3rd in total electronic volume	30%
4th or lower ranking in total electronic volume	N/A
1st in total posted volume	50%
2nd in total posted volume	40%
3rd in total posted volume	30%
4th or lower ranking in total posted volume	N/A

The discounts are cumulative and the same LMM is eligible to achieve the discount for each monthly volume category. For example, if an LMM was 1st in Total Electronic Volume, and 3rd in Total Posting Volume, the LMM would achieve an 80% discount in that issue. .

LMM OPTIONS ISSUE TRANSFER FEE

\$100 per issue charged to transferor

SERIES 46 EXAMINATION FEE

\$200

INVESTIGATION FEE

\$125 (assessed if applicant is not assessed the Options Orientation Fee)

FINGERPRINTING FEE

\$35 (assessed if applicant is not assessed the Options Orientation Fee)

REGULATORY FEES

Focus Filing Fee

\$100 annual filing fee for OTP Firms for which the Exchange is the Designated Examining Authority

Options Regulatory Fee*

\$0.0055 per contract, effective February 3, 2014

* The Options Regulatory Fee will be assessed on each OTP Holder or OTP Firm for all options transactions executed or cleared by the OTP Holder or OTP Firm that are cleared by The Options Clearing Corporation ("OCC") in the customer range regardless of the exchange on which the transaction occurs. The fee is collected indirectly from OTP Holders and OTP Firms through their clearing firms by OCC on behalf of NYSE Arca. Effective December 1, 2012, an OTP Holder or OTP Firm shall not be assessed the fee until it has satisfied applicable technological requirements necessary to commence operations on NYSE Arca. The Exchange may only increase or decrease the

Options Regulatory Fee semi-annually, and any such fee change will be effective on the first business day of February or August. The Exchange will notify participants via a Trader Update of any change in the amount of the fee at least 30 calendar days prior to the effective date of the change.

DEA Fee \$2,000 monthly fee per firm³
 \$250 annual fee per trader³
 \$250 per quarter for firms not engaging in a public
 business⁴

APPLICATION RESULTING IN STATUTORY DISQUALIFICATION PROCEEDINGS \$2,000 fee per application

CRD Session Fees for Regulatory Element of Continuing Education Requirements

All Regulatory Element Programs	\$100
S101 Regulatory Element Program	\$55

CRD Fees for Qualification Examinations

Series 57 Examination	\$120
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CRD Fees for OTP Holders and OTP Firms that are not FINRA Members

Each initial Form U4 filed for the registration of a representative or principal	\$100
Additional processing of each initial or amended Form U4, Form U5 or Form BD that includes the initial reporting, amendment, or certification of one or more disclosure events or proceedings	\$110
Processing and posting to the CRD system each set of fingerprints submitted electronically to FINRA, plus any other charge that may be imposed by the U.S. Department of Justice for processing each set of fingerprints	\$15
Processing and posting to the CRD system each set of fingerprint cards submitted in non-electronic format to FINRA, plus any other charge that may be imposed by the U.S. Department of Justice for processing each set of fingerprints	\$30
Processing and posting to the CRD system each set of fingerprint results and identifying information that have been processed through another self-regulatory organization and submitted to FINRA	\$30
System processing for each registered representative and principal	\$45 annually

LATE PAYMENT OF FEES,
 FINES & CHARGES

Number of times late within previous 12 months Amount of Charge
 1 \$250 or 1.0% of invoice amount, whichever is greater

2 or more

\$500 or 1.5% of invoice amount, whichever is greater

NYSE Arca OPTIONS: TRADE-RELATED CHARGES FOR STANDARD OPTIONS¹⁴

Unless Professional Customer executions are specifically delineated, such executions will be treated as “Customer” executions for fee/credit purposes. Firms, Broker Dealers, and Market Makers are collectively referred to herein as “Non-Customers.”

TRANSACTION FEE FOR MANUAL EXECUTIONS - PER CONTRACT

Order Type	Manual Executions ⁵
LMM	\$0.18
NYSE Arca Market Maker	\$0.25
Firm and Broker Dealer	\$0.25
Professional Customer	\$0.25
Customer	\$0.00
Firm Facilitation and Broker Dealer facilitating a Customer or Professional Customer ⁷	\$0.00
Firm and Broker Dealer Orders in Select Symbols*	\$0.12

*Manual Executions in Select Symbols are all Firm and Broker Dealer Orders in VXX that are not facilitating a Customer or Professional Customer.

TRANSACTION FEE FOR ELECTRONIC EXECUTIONS - PER CONTRACT

Order Type	Electronic Executions in Penny Pilot Issues ⁶		Electronic Executions in Non Penny Pilot Issues ⁶	
	Post Liquidity	Take Liquidity	Post Liquidity	Take Liquidity
LMM	(\$0.32)**	\$0.50	(\$0.40)	\$1.10
NYSE Arca Market Maker	(\$0.28)	\$0.50	(\$0.05)	\$1.10
Firm and Broker Dealer	(\$0.10)	\$0.50	\$0.50	\$1.10
Customer	(\$0.25)	\$0.49	(\$0.75)	\$0.85
Professional Customer	(\$0.25)	\$0.50	(\$0.75)	\$1.10
Customer against LMM*	N/A	N/A	N/A	\$0.67

* This rate shall apply to electronic Customer executions that take liquidity in a non-Penny Pilot class from the trading interest of an LMM (including orders and quotes) if the OTP Holder or OTP Firm entering the Customer's order, during the month, (i) executes an average daily volume (“ADV”) on the Exchange of at least 15,000 contracts from electronic Customer orders that take liquidity in non-Penny Pilot classes or (ii) executes a combined ADV on the Exchange of at least 30,000 contracts in non-Penny Pilot classes from electronic Customer orders that take liquidity and affiliated electronic Market Maker orders and quotes that post liquidity in non-Penny Pilot classes. For purposes of calculating ADV for the qualification, the Take Liquidity threshold does not include orders that are routed to other exchanges for execution at the NBBO; Post or Take Liquidity

calculations do not include volume from Electronic Complex Orders. The Exchange may exclude from the calculation of ADV contracts traded any day that (1) the Exchange is not open for the entire trading day and/or (2) a disruption affects an Exchange system that lasts for more than 60 minutes during regular trading hours (“Exchange System Disruption”).

** Lead Market Makers will also receive an additional \$0.04 per contract credit on eligible executions in Penny Pilot issues in their LMM appointment, per the “Market Maker Penny Pilot and SPY Posting Credit Tiers.”

QUALIFIED CONTINGENT CROSS TRANSACTION FEES	
Fees/Rebates	Rate Per Contract
All Non-Customers in All Issues – Per Contract Side	\$0.20
All Customers in All Issues – Per Contract Side	\$0.00
Floor Broker Rebate for Executed Orders – Per Contract Side ¹³	\$0.035

CUSTOMER PENNY PILOT POSTING CREDIT TIERS

OTP Holders and OTP Firms meeting the qualifications below will receive the corresponding posting credit on all electronic executions of Customer posted interest in Penny Pilot Issues.^{8, 15}

Tier	Qualification Basis (Average Electronic Executions Per Day)		Credit Applied to Electronic Executions of Customer Posted Interest in Penny Pilot Issues
Base			(\$0.25)
Tier 1	At least 0.10% of TCADV from Customer posted interest in all issues		(\$0.27)
Tier 2	At least 0.25% of TCADV from Customer posted interest in all issues, or	At least 0.70% of TCADV from posted interest in Penny Pilot Issues, all account types	(\$0.43)
Tier 3	At least 0.40% of TCADV from Customer posted interest in all issues		(\$0.45)
Tier 4	At least 0.60% of TCADV from Customer posted interest in all issues, plus executed ADV of Retail Orders of 0.1% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market		(\$0.46)
Tier 5	At least 0.75% of TCADV from Customer posted interest in all issues, or	At least 0.85% of TCADV from posted interest in Penny Pilot Issues, all account types	(\$0.47)
Tier 6	At least 0.35% of TCADV from Customer posted	At least 0.50% of TCADV from Customer	(\$0.48)

Tier	Qualification Basis (Average Electronic Executions Per Day)		Credit Applied to Electronic Executions of Customer Posted Interest in Penny Pilot Issues
	interest in all Issues, plus Executed ADV of 0.80% of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market, or	posted interest in all issues, plus at least 0.45% of TCADV from Market Maker Total Electronic Volume	
Tier 7	At least 0.50% of TCADV from Customer posted interest in all issues, plus at least 0.60% of TCADV from Market Maker Total Electronic Volume		(\$0.49)
Tier 8	At least 1.00% of TCADV from Customer posted interest in all issues, or	At least 0.80% of TCADV from Customer posted interest in all issues, plus executed ADV of 0.30% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	(\$0.50)

NON-CUSTOMER, NON-PENNY PILOT POSTING CREDIT TIERS

OTP Holders and OTP Firms meeting the qualifications below will receive the corresponding credit on all electronic executions of Non-Customer posted interest in Non-Penny Pilot Issues.^{8, 15}

Tier	Qualification Basis (Average Electronic Executions Per Day)		Per Contract Credit Applied to Electronic Executions of Non-Customer Posted Interest in Non-Penny Pilot Issues
Tier 1	At least 0.05% of TCADV from Non-Customer posted interest in all non-Penny Issues		(\$0.32)
Tier 2	At least 0.10% of TCADV from Non-Customer posted interest in all non-Penny Issues		(\$0.52)
Tier 3	At least 0.20% of TCADV from Non-Customer posted interest in all non-Penny Issues		(\$0.82)

Customer Incentive Program^{8,15}	
At least 0.80% of TCADV from Customer posted interest in all Issues, of which at least 0.20% of TCADV is from Customer posted interest in non-Penny Pilot Issues	Additional \$0.03 Credit on Customer Posting Credits
At least 0.50% of Total Industry Customer equity and ETF option ADV from Customer posted interest in all issues, plus, an ADV from Market Maker posted interest in Penny Pilot Issues equal to at least 0.30% of TCADV	Additional \$0.01 Credit on Customer Posting Credits
An ADV from Market Maker Total Electronic Volume of at least 0.60% of TCADV, plus at least 0.10% of TCADV from Customer posted interest in non-Penny Pilot Issues	Additional \$0.03 Credit on Customer Posting Credits
Executed ADV of Retail Orders of 0.10% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	Additional \$0.03 Credit on Customer Posting Credits
Executed ADV of 0.80% of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	Additional \$0.03 Credit on Customer Posting Credits
At least 1.50% of TCADV from Customer posted interest in both Penny Pilot and non-Penny Pilot Issues, plus Executed ADV of 0.10% of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	Additional \$0.03 Credit on Customer Posting Credits
<i>OTP Holders and OTP Firms may earn one additional Credit from the alternatives listed above.</i>	

CUSTOMER POSTING CREDIT TIERS IN NON-PENNY PILOT ISSUES

OTP Holders and OTP Firms meeting the qualifications below will receive the corresponding credit on all electronic executions of Customer posted interest in Non-Penny Pilot issues.^{8,15}

	Customer and Professional Customer Posting Credit Tiers In Non-Penny Pilot Issues	Credit Applied to Electronic Executions of Customer Posted Interest in Non-Penny Pilot Issues
	Qualification Basis (Average Electronic Executions Per Day)	
Base		(\$0.75)
Tier A	At least 0.70% of TCADV from Customer posted interest in all issues,	(\$0.83)

	Customer and Professional Customer Posting Credit Tiers In Non-Penny Pilot Issues	Credit Applied to Electronic Executions of Customer Posted Interest in Non-Penny Pilot Issues
	Qualification Basis (Average Electronic Executions Per Day)	
	plus executed ADV of Retail Orders of 0.1% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	
Tier B	At least 0.80% of TCADV from Customer posted interest in all issues	(\$0.83)
Tier C	At least 0.50% of TCADV from Customer posted interest in all issues, plus an ADV from Market Maker Total Electronic Volume equal to 0.45% of TCADV	(\$0.94)
Tier D	At least 0.80% of TCADV from Customer posted interest in all issues, of which at least 0.10% of TCADV is from Customer posted interest in non-Penny Pilot Issues	(\$0.95)
Tier E	At least 0.50% of TCADV from Customer posted interest in all issues, plus, an ADV from Market Maker Total Electronic Volume equal to 0.60% of TCADV	(\$1.00)
Tier F	At least 0.80% of TCADV from Customer posted interest in all issues, plus executed ADV of 0.30% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	(\$1.02)

DISCOUNT IN TAKE LIQUIDITY FEES FOR PROFESSIONAL CUSTOMER AND NON -CUSTOMER LIQUIDITY REMOVING INTEREST^{8,15}

Take Fee Discount Qualification for Penny Pilot Issues	Discount Amount
At least 1.00% TCADV from Customer posted interest in all issues OR at least 2.00% of TCADV from Professional Customer and Non-Customer Liquidity Removing interest in all issues	\$0.02
At least 0.80% of TCADV from Customer posted interest in all issues, plus executed ADV of 0.30% ADV of U.S. Equity Market Share Posted and Executed on NYSE Arca Equity Market	\$0.04

Take Fee Discount Qualification for Non- Penny Pilot Issues	Discount Amount
At least 0.65% of TCADV from Professional Customer and Non-Customer Liquidity Removing interest in all issues	\$0.02

Market Maker Incentive For Penny Pilot Issues^{8,15}	
At least 0.75% of TCADV from Customer posted interest in all issues <i>and</i> an ADV from Market Maker posted interest equal to 0.70% of TCADV	\$0.41 Credit Applied to electronic executions of Market Maker posted interest in Penny Pilot Issues

Market Maker Incentive For Non-Penny Pilot Issues^{8,15}		
At least 0.55% of TCADV from Market Maker posted interest in all issues, or	At least 1.60% of TCADV from all orders in all issues, all account types, with at least 0.80% of TCADV from posted interest in all issues	\$0.55 Credit Applied to electronic executions of Market Maker posted interest in non-Penny Pilot Issues

Market Maker Incentive for SPY⁸	
At least 0.20% of TCADV from Market Maker posted interest in SPY	\$0.45 credit applied to electronic executions of Market Maker posted interest in SPY

MARKET MAKER PENNY PILOT AND SPY POSTING CREDIT TIERS

OTP Holders and OTP Firms meeting the qualifications below will receive the corresponding credit on electronic executions of Market Maker posted interest in Penny Pilot Issues and SPY.^{8,15}

Tier	Qualification Basis (Share of TCADV)		Credit Applied to Electronic Executions of Market Maker Posted Interest in Penny Pilot Issues (except SPY)	Credit Applied to Electronic Executions of Market Maker Posted Interest in SPY
Base			(\$0.28)	(\$0.28)
Select Tier	At least 0.25% of TCADV from Market Maker posted interest in all issues		(\$0.32)	(\$0.32)
Super Tier	At least 0.55% of TCADV from Market Maker posted interest in all issues, or	At least 1.60% of TCADV from all interest in all issues, all account types, with at least 0.80% TCADV from posted interest in all issues	(\$0.37)	(\$0.39)

Tier	Qualification Basis (Share of TCADV)		Credit Applied to Electronic Executions of Market Maker Posted Interest in Penny Pilot Issues (except SPY)	Credit Applied to Electronic Executions of Market Maker Posted Interest in SPY
Super Tier II	At least 0.20% of TCADV from Market Maker posted interest in all issues, plus ETP Holder and Market Maker posted volume in Tape B Securities ("Tape B Adding ADV") that is equal to at least 1.50% of US Tape B consolidated average daily volume ("CADV") for the billing month executed on NYSE Arca Equity Market; or	At least 1.60% of TCADV from Market Maker interest in all issues, with at least 0.90% of TCADV from Market Maker posted interest in all issues	(\$0.42)	(\$0.42)

ROUTING FEES

\$0.11 per contract on orders routed and executed on another exchange, plus (i) any transaction fees assessed by the away exchange (calculated on an order-by-order basis since different away exchanges charge different amounts) or (ii) if the actual transaction fees assessed by the away exchange(s) cannot be determined prior to the execution, the highest per contract charge assessed by the away exchange(s) for the relevant option class and type of market participant (e.g., Customer, Firm, Broker/Dealer, Professional Customer or Market Maker). The Routing Fee is in addition to NYSE Arca's customary execution fees applicable to the order.

ELECTRONIC COMPLEX

ORDER EXECUTIONS

Complex Orders executed against individual orders in the Consolidated Book will be subject to "Take Liquidity" rate per contract for that issue.

TRANSACTION FEE - PER CONTRACT

Order Type			Customer	Non-Customer
Complex Order to Complex Order	Customer vs. Non-Customer	Penny Pilot Issues	(\$0.39)	\$0.50
		Non Penny Pilot Issues	(\$0.75)	\$0.85
	Customer vs. Customer	All Issues	\$0.00	N/A
	Non-Customer vs. Non-Customer	Penny Pilot Issues	N/A	\$0.50
Non Penny Pilot Issues		N/A	\$0.85	

FIRM AND BROKER DEALER MONTHLY FEE CAP \$100,000 cap per month on combined Firm Proprietary Fees and Broker Dealer Fees for transactions in standard option contracts cleared in the customer range for Manual (Open Outcry) Executions, and QCC transactions executed by a Floor Broker from the Floor of the Exchange, exclusive of Strategy Executions, Royalty Fees and firm trades executed via a Joint Back Office agreement.⁹ The Monthly Firm and Broker Dealer Cap will decrease as set forth in the table below if Firms or Broker Dealers achieve the tier level set forth in the “ Customer Penny Pilot Posting Credit Tiers.”

FIRM AND BROKER DEALER MONTHLY FIRM CAP TIERS

CUSTOMER PENNY PILOT POSTING CREDIT TIER ACHIEVED	FIRM CAP
Base or Tier 1	\$ 100,000
Tier 2	\$ 85,000
Tier 3	\$ 80,000
Tier 4	\$ 75,000
Tier 5	\$ 70,000
Tier 6 , 7, or 8	\$ 65,000

LIMIT OF FEES ON OPTIONS STRATEGY EXECUTIONS

\$700 cap on transaction fees for Strategy Executions involving (a) reversals and conversions, (b) box spreads, (c) short stock interest spreads, (d) merger spreads, and (e) jelly rolls.¹⁰ The cap applies to each Strategy Execution executed in standard option contracts on the same trading day in the same option class. Transaction fees for Strategy Executions are further capped at \$25,000 per month per initiating firm. All Royalty fees associated with Strategy Executions on Index and Exchange Traded Funds will be passed through to trading participants on the Strategy Executions on a pro-rata basis. These Royalty fees will not be included in the calculation of the \$700 per trade cap or the \$25,000 per month strategy fee cap. Manual Broker Dealer and Firm Proprietary Strategy trades that do not reach the \$700 cap will be billed at \$0.25 per contract.

ROYALTY FEES¹¹		
	NDX, MNX	\$0.22
	KBW Bank Index (BKX)	\$0.10
	Russell 2000 Index (RUT)	\$0.40

Royalty Fees will be assessed on a per contract basis for firm, broker/dealer, and Market Maker transactions. For electronic executions in issues included in the Penny Pilot, Royalty Fees will be passed through to the trading participant on the “Take” side of the transaction.

RATIO THRESHOLD	Monthly order to execution ratio:	Monthly Charge:
FEE¹²	Between 10,000 and 14,999 to 1	\$5,000
	Between 15,000 and 19,999 to 1	\$10,000

Between 20,000 and 24,999 to 1	\$20,000
25,000 to 1 and greater	\$35,000

NYSE Arca OPTIONS: FLOOR and EQUIPMENT and CO-LOCATION FEES

FLOOR BROKER ORDER CAPTURE DEVICE \$175 per device per month, not to exceed \$4,200 in total per device.

FLOOR BROKER ORDER CAPTURE DEVICE Pass-through fees

MARKET DATA FEES

FLOOR BOOTHS \$350 per month per booth

Booth Fees are capped at \$3500 per month per OTP Firm ,
provided that, for the period June 1, 2014 through December 31, 2014, Booth Fees are capped at \$2450 per month
per OTP Firm

MARKET MAKER PODIUM FEES \$90 per month per podium

TELEPHONES \$95 / month per MX phone; \$30 /month per non-MX phone; \$14
per month per line (MX and non-MX phones); \$40/month per cordless phone; \$110 /month per drop phone

OPTIONS FLOOR ACCESS FEE \$125 per month for all registered floor personnel that do not
pay an OTP Fee

TRADE MATCH TERMINAL FEE \$80 per month per Exchange-provided dedicated terminal or
per user ID on firm-provided PCs that connect via the Exchange to SIAC \$50 per month per user ID on firm-provided
PCs that connect via the firm's SIAC connection

WIRE SERVICES Pass-through fees

VENDOR EQUIPMENT ROOM \$2,150 per cabinet per month.

CABINET FEE Firms not using a full cabinet will pay a pro rata portion

CONNECTIVITY FEE \$300 per line per month per order sending firm

TELECOM MOVE/ADD/CHANGE FEE \$100 per hour on pro-rated basis

PORT FEES:	
ORDER/QUOTE ENTRY PORT*	Ports 1-40: \$450 per port per month Ports 41 and greater: \$150 per port per month
QUOTE TAKEDOWN PORT*	For each order/quote entry port utilized, NYSE Arca Market Makers may utilize, free of charge, one port dedicated to quote cancellation or "quote takedown," which port(s) will not be included in the count of order/quote entry ports utilized. Any quote takedown port utilized by a NYSE Arca Market Maker that is in excess of the number of order/quote entry ports utilized will be counted and charged as an order/quote entry port.
* For purpose of calculating the number of order/quote entry ports and quote takedown ports, the Exchange shall aggregate the ports of affiliates.	
NYSE Arca Market Maker Open Outcry Discount	Any NYSE Arca Market Maker that executes 50% or more of their market maker volume in open outcry shall receive a discount on their monthly port fees of 60%, not to exceed a maximum dollar discount of \$10,000 per month
	Backup datacenter port: no fee unless utilized during the relevant month, in which case, above fees shall apply
DROP COPY PORT	\$500 per port per month (only one fee per drop copy port shall apply, even if receiving drop copies from multiple order/quote entry ports and/or from NYSE Arca Equities) Backup datacenter port: no fee shall apply if configured such that it is duplicative of another drop copy port of the same user

CO-LOCATION FEES

Definitions

The following definitions are for purposes of Co-Location Fees only:

An "Affiliate" of a User is any other User or Hosted Customer that is under 50% or greater common ownership or control of the first User.

"Aggregate Cabinet Footprint" of a User or Hosted Customer is (a) for a User, the total kW of the User's cabinets, including both partial and dedicated cabinets, and (b), for a Hosted Customer, the total kW of the portion of the Hosting User's cabinet, whether partial or dedicated, allocated to such Hosted Customer.

A "Hosted Customer" means a customer of a Hosting User that is hosted in a Hosting User's co-location space.

A "Hosting User" means a User of co-location services that hosts a Hosted Customer in

the User's co-location space.

A "User" means any market participant that requests to receive co-location services directly from the Exchange.

General Notes

1. A User that incurs co-location fees for a particular co-location service pursuant to this Fee Schedule shall not be subject to co-location fees for the same co-location service charged pursuant to the NYSE Arca Equities Fee Schedule or by the Exchange's affiliates NYSE American LLC and New York Stock Exchange LLC.

2. To qualify for a Partial Cabinet Solution bundle, a User must meet the following conditions: (1) it must purchase only one Partial Cabinet Solution bundle; (2) the User and its Affiliates must not currently have a Partial Cabinet Solution bundle; and (3) after the purchase of the Partial Cabinet Solution bundle, the User, together with its Affiliates, will have an Aggregate Cabinet Footprint of no more than 2 kW.

- A User requesting a Partial Cabinet Solution bundle will be required to certify to the Exchange (a) whether any other Users or Hosted Customers are Affiliates of the certifying User, and (b) that after the purchase of the Partial Cabinet Solution bundle, the User, together with its Affiliates, would have an Aggregate Cabinet Footprint of no more than 2 kW. The certifying User will be required to inform the Exchange immediately of any event that causes another User or Hosted Customer to become an Affiliate. The Exchange shall review available information regarding the entities and may request additional information to verify the Affiliate status of a User or Hosted Customer. The Exchange shall approve a request for a Partial Cabinet Solution bundle unless it determines that the certification is not accurate.
- If a User that has purchased a Partial Cabinet Solution bundle becomes affiliated with one or more other Users or Hosted Customers and thereby no longer meets the conditions for access to the Partial Cabinet Solution bundle, or if the User otherwise ceases to meet the conditions for access to the Partial Cabinet Solution bundle, the Exchange will no longer offer it to such User and the User will be charged for each of the services individually, at the price for each such service set out in the Price List. Such price change would be effective as of the date that the User ceased to meet the conditions.

In addition, a User that changes its Partial Cabinet Solution bundle from one option to another will not be subject to a second initial charge, but will be required to pay the difference, if any, between the bundles' initial charges.

3. The initial and monthly charge for 2 bundles of 24 cross connects will be waived for a User that is waitlisted for a cage for the duration of the waitlist period, provided that the cross connects may only be used to connect the User's non-contiguous cabinets. The charge will no longer be waived once a User is removed from the waitlist.

- If a waitlist is created, a User seeking a new cage will be placed on the waitlist based on the date a signed order for the cage is received.
- A User that turns down a cage because it is not the correct size will remain on the waitlist. A User that requests to be removed or that turns down a cage that is the size that it requested will be removed from the waitlist.
- A User that is removed from the waitlist but subsequently requests a cage will be added back to the bottom of the waitlist, provided that, if the User was removed from the waitlist because it turned down a cage that is the size that it requested, it will not receive a second waiver of the charge.

4. When a User purchases access to the LCN or IP network, it receives the ability to access the trading and execution systems of the NYSE, NYSE American and NYSE Arca (Exchange Systems), subject, in each case, to authorization by the NYSE, NYSE American or NYSE Arca, as applicable. Such access includes access to the customer gateways that provide for order entry, order receipt (i.e. confirmation that an order has been received), receipt of drop copies and trade reporting (i.e. whether a trade is executed or cancelled), as well as for sending information to shared data services for clearing and settlement. A User can change the access it receives at any time, subject to authorization by NYSE, NYSE American or NYSE Arca. NYSE, NYSE American and NYSE Arca also offer access to Exchange Systems to their members, such that a User does not have to purchase access to the LCN or IP network to obtain access to Exchange Systems.

When a User purchases access to the LCN or IP network it receives connectivity to any of the Included Data

Products that it selects, subject to any technical provisioning requirements and authorization from the provider of the data feed. Market data fees for the Included Data Products are charged by the provider of the data feed. A User can change the Included Data Products to which it receives connectivity at any time, subject to authorization from the provider of the data feed. The Exchange is not the exclusive method to connect to the Included Data Products.

The Included Data Products are as follows:

NMS feeds
NYSE: NYSE Alerts NYSE BBO NYSE Integrated Feed NYSE OpenBook NYSE Order Imbalances NYSE Trades
NYSE American Options
NYSE Arca: NYSE ArcaBook NYSE Arca BBO NYSE Arca Integrated Feed NYSE Arca Order Imbalances NYSE Arca Trades
NYSE Arca Options
NYSE Best Quote and Trades (BQT)
NYSE Bonds
NYSE American: NYSE American Alerts NYSE American BBO NYSE American Integrated Feed NYSE American OpenBook NYSE American Order Imbalances NYSE American Trades

Initial Fee per Cabinet

Dedicated Cabinet	\$5,000
8-Rack Unit of a Partial Cabinet	\$2,500

Monthly Fee per Cabinet

Dedicated Cabinet

Number of kW	Per kW Fee Monthly
4 - 8	\$1,200
9 - 20	\$1,050
21 - 40	\$950
41 +	\$900

8-Rack Unit of a Partial Cabinet

Number of kW	Total Fee Monthly
1	\$1,500

Cabinet Upgrade Fee

Dedicated Cabinet

\$9,200 (\$4,600 for a User that submits a written order for a Cabinet Upgrade by January 31, 2014, provided that the Cabinet Upgrade becomes fully operational by March 31, 2014)

PNU Cabinet

monthly charge of \$360 per kW allocated to PNU Cabinet

Cage Fees

2 – 14 Cabinets

\$5,000 initial charge plus
\$2,700 monthly charge

15 – 28 Cabinets

\$10,000 initial charge plus
\$4,100 monthly charge

29+ Cabinets

\$15,000 initial charge plus
\$5,500 monthly charge

Type of Service	Description	Amount of Charge
LCN Access	1 Gb Circuit	\$6,000 per connection initial charge plus \$5,000 monthly per connection
LCN Access	10 Gb Circuit	\$10,000 per connection initial charge plus \$14,000 monthly per connection. A User that purchases 5 10 GB LCN Circuits will receive the 6th 10 GB LCN Circuit without an additional monthly charge
LCN Access	10 GB LX Circuit	\$15,000 per connection initial charge plus \$22,000 monthly per connection.
LCN Access	40 GB Circuit	\$15,000 per connection initial charge plus \$20,000 monthly per connection.
Bundled Network Access (2 LCN connections, 2 IP network connections, and 2 optic connections to outside access center)	1 Gb Bundle	\$25,000 initial charge plus \$13,000 monthly charge
	10 Gb Bundle	\$50,000 initial charge plus \$53,000 monthly charge

Type of Service	Description	Amount of Charge
<p>Partial Cabinet Solution bundles</p> <p>Note: A User and its Affiliates are limited to one Partial Cabinet Solution bundle at a time. A User and its Affiliates must have an Aggregate Cabinet Footprint of 2 kW or less to qualify for a Partial Cabinet Solution bundle. See Note 2 under "General Notes."</p>	<p>Option A:</p> <p>1 kW partial cabinet, 1 LCN connection (1 Gb), 1 IP network connection (1 Gb), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol</p>	<p>\$7,500 initial charge per bundle plus monthly charge per bundle as follows:</p> <ul style="list-style-type: none"> For Users that order on or before December 31, 2018: \$3,000 monthly for first 24 months of service, and \$6,000 monthly thereafter For Users that order after December 31, 2018: \$6,000 monthly
	<p>Option B:</p> <p>2 kW partial cabinet, 1 LCN connection (1 Gb), 1 IP network connection (1 Gb), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol</p>	<p>\$7,500 initial charge per bundle plus monthly charge per bundle as follows:</p> <ul style="list-style-type: none"> For Users that order on or before December 31, 2018: \$3,500 monthly for first 24 months of service, and \$7,000 monthly thereafter For Users that order after December 31, 2018: \$7,000 monthly
	<p>Option C:</p> <p>1 kW partial cabinet, 1 LCN connection (10 Gb), 1 IP network connection (10 Gb), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol</p>	<p>\$10,000 initial charge per bundle plus monthly charge per bundle as follows:</p> <ul style="list-style-type: none"> For Users that order on or before December 31, 2018: \$7,000 monthly for first 24 months of service, and \$14,000 monthly thereafter For Users that order after December 31, 2018: \$14,000 monthly
	<p>Option D:</p> <p>2 kW partial cabinet, 1 LCN connection (10 Gb), 1 IP network connection (10 Gb), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol</p>	<p>\$10,000 initial charge per bundle plus monthly charge per bundle as follows:</p> <ul style="list-style-type: none"> For Users that order on or before December 31, 2018: \$7,500 monthly for first 24 months of service, and \$15,000 monthly thereafter For Users that order after December 31, 2018: \$15,000 monthly

Type of Service	Description	Amount of Charge
IP Network Access	1 Gb Circuit	\$2,500 per connection initial charge plus \$2,500 monthly per connection
IP Network Access	10 Gb Circuit	\$10,000 per connection initial charge plus \$11,000 monthly per connection
IP Network Access	40 Gb Circuit	\$10,000 per connection initial charge plus \$18,000 monthly per connection
Testing and certification IP Network Access	IP network circuit for testing and certification. Circuit can only be used for testing and certification and testing and certification period is limited to three months.	No charge.
Wireless Connection for Third Party Data	Wireless connection of Bats Pitch BZX Gig shaped data and Bats Pitch BYX Gig shaped data Note: Connection to Bats Pitch BYX Gig shaped data is expected to be available no later than December 31, 2016.	\$5,000 per connection initial charge plus monthly charge per connection of \$6,000 Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.
Wireless Connection for Third Party Data	Wireless connection of Bats EDGX Gig shaped data and Bats EDGA Gig shaped data Note: Connection to Bats EDGA Gig shaped data is expected to be available no later than December 31, 2016.	\$5,000 per connection initial charge plus monthly charge per connection of \$6,000 Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.
Wireless Connection for Third Party Data	Wireless connection of NASDAQ Totalview-ITCH data	\$5,000 per connection initial charge plus monthly charge per connection of \$8,500 Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.
Wireless Connection for Third Party Data	Wireless connection of NASDAQ BX Totalview-ITCH data	\$5,000 per connection initial charge plus monthly charge per connection of \$6,000 Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.

Type of Service	Description	Amount of Charge
Wireless Connection for Third Party Data	Wireless connection of NASDAQ Totalview Ultra (FPGA)	<p>\$5,000 per connection initial charge plus monthly charge per connection of \$11,000</p> <p>Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.</p>
Wireless Connection for Third Party Data	Wireless connection of NASDAQ Totalview-ITCH and BX Totalview-ITCH data	<p>\$5,000 per connection initial charge plus monthly charge per connection of \$12,000</p> <p>Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.</p>
Wireless Connection for Third Party Data	Wireless connection of NASDAQ Totalview Ultra (FPGA) and BX Totalview-ITCH data	<p>\$5,000 per connection initial charge plus monthly charge per connection of \$14,500</p> <p>Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.</p>
Wireless Connection for Third Party Data	<p>Wireless connection of Toronto Stock Exchange (TSX)</p> <p>Note: Service is expected to be available no later than June 30, 2017.</p>	<p>\$5,000 per connection initial charge plus monthly charge per connection of \$8,500</p> <p>Fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.</p> <p>Customers with an existing wireless connection to TSX at the time the Exchange makes the service available will not be subject to an initial charge or receive 30-day testing period</p>
Wireless Connection for Third Party Data	Port for wireless connection	\$3,000 monthly charge per port, excluding first port
Virtual Control Circuit between two Users	1Mb	\$200 monthly charge
	3Mb	\$400 monthly charge
	5Mb	\$500 monthly charge

Type of Service	Description	Amount of Charge
	10Mb	\$800 monthly charge
	25Mb	\$1,200 monthly charge
	50Mb	\$1,800 monthly charge
	100Mb	\$2,500 monthly charge
Hosting Fee		Effective through December 31, 2015: \$500 monthly charge per Hosted Customer
		Effective from January 1, 2016: \$1,000 monthly charge per cabinet per Hosted Customer for each cabinet in which such Hosted Customer is hosted
Data Center Fiber Cross Connect	Furnish and install 1 cross connect	\$500 initial charge plus \$600 monthly charge
	Furnish and install bundle of 6 cross connects	\$500 initial charge plus \$1,800 monthly charge
	Furnish and install bundle of 12 cross connects	\$500 initial charge plus \$3,000 monthly charge
	Furnish and install bundle of 18 cross connects	\$500 initial charge plus \$3,840 monthly charge
	Furnish and install bundle of 24 cross connects	\$500 initial charge plus \$4,680 monthly charge See General Note 3.
Connection to Time Protocol Feed	Network Time Protocol Feed (Note: LCN only)	\$300 initial charge plus \$100 monthly charge
	Precision Time Protocol	\$1,000 initial charge plus \$250 monthly charge
	GPS Time Source (Note: dedicated cabinets only)	\$3,000 initial charge plus \$400 monthly charge
Expedite Fee	Expedited installation/completion of a User's co-location service	\$4,000 per request
Change Fee***	Change to a co-location service that has already been installed/completed for a User	\$950 per request
Initial Install Services*** (Required per cabinet)	Dedicated Cabinet: Includes initial racking of equipment in cabinet and provision of cables (4 hrs).	\$800 per dedicated cabinet
	Partial Cabinet: Includes initial racking of equipment in cabinet and provision of cables (2 hrs).	\$400 per eight-rack unit in a partial cabinet

Type of Service	Description	Amount of Charge
Hot Hands Service***	Allows Users to use on-site data center personnel to maintain User equipment, support network troubleshooting, rack and stack, power recycling, and install and document cable.	\$100 per half hour
Shipping and Receiving***	Receipt of one shipment of goods at data center from User/supplier. Includes coordination of shipping and receiving.	\$100 per shipment
Badge Request***	Request for provision of a permanent data center site access badge for a User representative.	\$50 per badge
External Cabinet Cable Tray***	Engineer, furnish and install Rittal 5"H x 12"W cable tray on cabinet.	\$400 per tray
Custom External Cabinet Cable Tray***	Engineer, furnish and install 4" H x 24" W custom basket cable tray above client's cabinet rows.	\$100 per linear foot
Visitor Security Escort***	All User representatives are required to be accompanied by a visitor security escort during visits to the data center, unless visiting the User's cage. Requirement includes User representatives who have a permanent data center site access badge.	\$75 per visit

*** These fees are waived for the move of a User's equipment within the Data Center when incurred in connection with such a move required by the Exchange ("Migration Move"). A User selected by the Exchange for a Migration Move will receive written notice (the "Notice"). The Notice will identify the 90-day period during which a User must move its equipment, which period would commence at least 60 days from the date of the Notice. Monthly recurring fees for the User's existing space based on the rate of the monthly recurring fees that the User was paying as of the date of the Notice are also waived for the month during which a User's Migration Move takes place, so the User would not incur these fees for the period of overlapping use of equipment and services in the old and new locations. In addition, the monthly recurring charges are waived for the month following the completion of a User's Migration Move, based on the rate of the monthly recurring fees that the User was paying as of the date of the Notice. No User will be required to move more than once within any 12-month period.

Co-Location: Connectivity to Third Party Systems, Data Feeds, Testing and Certification Feeds, and DTCC

Connectivity to Third Party Systems

Pricing for access to the execution systems of third party markets and other service providers (Third Party Systems) is for connectivity only. Connectivity to Third Party Systems is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to Third Party Systems is over the IP network. Any applicable fees are charged independently by the relevant third party content service provider. The Exchange is not the exclusive method to connect to Third Party Systems.

Bandwidth of connection to Third Party System	Monthly recurring fee per connection to Third Party System
1Mb	\$200
3Mb	\$400
5Mb	\$500
10Mb	\$800
25Mb	\$1,200

50Mb	\$1,800
100Mb	\$2,500
200 Mb	\$3,000
1 Gb	\$3,500

Third Party Systems
Americas Trading Group (ATG)
BATS
Boston Options Exchange (BOX)
Chicago Board Options Exchange (CBOE)
Chicago Mercantile Exchange (CME Group)
Chicago Stock Exchange (CHX)
Credit Suisse
Euronext Optiq Cash and Derivatives Unicast (EUA)
Euronext Optiq Cash and Derivatives Unicast (Production)
International Securities Exchange (ISE)
Investors Exchange (IEX)
Miami International Securities Exchange
MIAX PEARL
Nasdaq
NYFIX Marketplace
OneChicago
TMX Group

Connectivity to Third Party Data Feeds

Pricing for data feeds from third party markets and other content service providers (Third Party Data Feeds) is for connectivity only. Connectivity to Third Party Data Feeds is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to Third Party Data Fees is over the IP network, with the exception that Users can connect to Global OTC and ICE Data Global Index over the IP network or LCN. Market data fees are charged independently by the relevant third party market or content service provider. The Exchange is not the exclusive method to connect to Third Party Data Feeds.

Third Party Data Feed providers may charge redistribution fees. When the Exchange receives a redistribution fee, it passes through the charge to the User, without change to the fee. The fee is labeled as a pass-through of a redistribution fee on the User's invoice. The Exchange does not charge third party markets or content providers for connectivity to their own feeds.

Third Party Data Feed	Monthly Recurring Connectivity Fee per Third Party Data Feed
Bats BZX Exchange (BZX) and Bats BYX Exchange (BYX)	\$2,000
Bats EDGX Exchange (EDGX) and Bats EDGA Exchange (EDGA)	\$2,000
Boston Options Exchange (BOX)	\$1,000
Chicago Board Options Exchange (CBOE)	\$2,000
Chicago Stock Exchange (CHX)	\$400
CME Group	\$3,000
Euronext Optiq Compressed Cash	\$900
Euronext Optiq Compressed Derivatives	\$600
Euronext Optiq Shaped Cash	\$1,200
Euronext Optiq Shaped Derivatives	\$900
Financial Industry Regulatory Authority (FINRA)	\$500
Global OTC	\$100
ICE Data Global Index	\$100

ICE Data Services Consolidated Feed ≤ 100 Mb	\$200
ICE Data Services Consolidated Feed > 100 Mb to ≤1 Gb	\$500
ICE Data Services Consolidated Feed > 1 Gb	\$1,000
ICE Data Services PRD	\$200
ICE Data Services PRD CEP	\$400
Intercontinental Exchange (ICE)	\$1,500
International Securities Exchange (ISE)	\$1,000
Investors Exchange (IEX)	\$1,000
Miami International Securities Exchange/MIAX PEARL	\$2,000
Montréal Exchange (MX)	\$1,000
MSCI 5 Mb	\$500
MSCI 25 Mb	\$1,200
NASDAQ Stock Market	\$2,000
NASDAQ OMX Global Index Data Service	\$100
NASDAQ OMDF	\$100
NASDAQ UQDF & UTDF	\$500
OneChicago	\$1,000
OTC Markets Group	\$1,000
SR Labs – SuperFeed <500 Mb	\$250
SR Labs – SuperFeed >500 Mb to <1.25 Gb	\$800
SR Labs – SuperFeed >1.25 Gb	\$1,000
TMX Group	\$2,500

Connectivity to Third Party Testing and Certification Feeds

The Exchange provides connectivity to third party testing and certification feeds provided by third party markets and other content service providers. Pricing for third party testing and certification feeds is for connectivity only. Connectivity to third party testing and certification feeds is subject to any technical provisioning requirements and authorization from the provider of the data feed. Connectivity to third party testing and certification feeds is over the IP network. Any applicable fees are charged independently by the relevant third party market or content service provider. The Exchange is not the exclusive method to connect to third party testing and certification feeds.

Connectivity to third party certification and testing feeds	\$100 monthly recurring fee per feed
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Connectivity to DTCC

Pricing for connectivity to DTCC feeds is for connectivity only. Connectivity to DTCC feeds is subject to any technical provisioning requirements and authorization from DTCC. Connectivity to DTCC feeds is over the IP network. Any applicable fees are charged independently by DTCC. The Exchange is not the exclusive method to connect to DTCC feeds.

5 Mb connection to DTCC	\$500 monthly recurring fee
50 Mb connection to DTCC	\$2,500 monthly recurring fee

NYSE Arca OPTIONS: REPORT FEES

OPTIONS REPORTS

User Activity Extracts (Batch)	\$0.002 per trade plus development and set-up costs
Online Data Extract	\$500 per month

SPECIALIZED REPORT, PRINTING AND PROCESSING	Development and production costs
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NYSE Arca OPTIONS: SERVICE FEES

Post-Trade Adjustments that do not affect the contractual terms of a trade*	\$5.00 per trade adjusted (\$1.00 per trade adjusted for the period December 1, 2014 through February 28, 2015)**
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*The Service Fee would only apply when the Exchange performs Post-Trade Adjustments on behalf of OTP Holders and/or OTP Firms when such Post-Trade Adjustments could otherwise have been self-executed. OTP Holders and OTP Firms may continue to make these Post-Trade Adjustments on their own without incurring the Service Fee.

**Only one \$5.00 fee will apply to each trade, even if multiple Post-Trade Adjustments are made in connection with a trade.

NYSE Arca OPTIONS: GENERAL

BILLING DISPUTES

All fee disputes concerning fees billed by the Exchange must be submitted to the Exchange in writing and must be accompanied by supporting documentation. All fee disputes must be submitted no later than sixty (60) days after receipt of a billing invoice.

1. Fee will be based on the maximum number of OTPs held by an OTP Firm or OTP Holder during a calendar month.
2. This fee is in addition to the Market Maker Fee and will be billed on a per issue basis to the OTP Firm acting as LMM in the issue. This fee will not apply to Interim LMMs acting in accordance with Rule 6.82-O(b)(4). This fee will not apply to issues that have been designated as "closing only" and are subject to delisting by the Exchange. An LMM with daily contract volume traded electronically of at least 0.40% Total Industry Customer equity and ETF option ADV ("TCADV), of which 0.08% TCADV are in its LMM appointment, will be charged 50% of the monthly Lead Market Maker Rights Fee. Whether an LMM will be charged 50% of the Lead Market Maker Rights Fee will be determined based on an average of the daily contract volume traded electronically by an LMM each trading day in a calendar month.

Fees for issues with Average National Daily Customer Contracts of 0 – 100 will be capped at 50 issues per OTP Firm and any additional issues in this volume range will not be charged.

Fees for issues with Average National Daily Customer Contracts of 101 – 1000 will be capped at 50 issues per OTP Firm and any additional issues in this volume range will not be charged.

Fees for issues with Average National Daily Customer Contracts of 1001 – 2000 will be capped at 50 issues per OTP Firm and any additional issues in this volume range will not be charged.

3. This fee will apply to OTP Firms for which the Exchange is the Designated Examining Authority. An exemption from this fee will be granted to any NYSE Arca registered Floor Broker or Market Maker that effects at least 25% of all securities transactions, as measured in contract or share volume, on any options trading facility of NYSE Arca.

4. This fee does not apply to those firms subject to the \$2,000 monthly fee.

5. Manual executions exclude certain electronic transactions as described below.

A manual order that executes in part against one or more electronic orders or quotes resting on the Consolidated Book prior to executing against interest in the Trading Crowd shall be assessed the applicable manual transaction fee for the entire order. A manual order that executes entirely against one or more electronic orders or quotes resting on the Consolidated Book shall be assessed the applicable electronic transaction fee for the entire order. In either case, the contra-side electronic order or quote shall be assessed the applicable electronic transaction fee or credit. In order to be eligible for the manual transaction fee, all manual orders must be entered into the Exchange's Electronic Order Capture System. Manual orders that are entered into an order entry device approved by the Exchange and contemporaneously recorded into the Electronic Order Capture System are also eligible for the manual transaction fee.

6. For Electronic Executions, Post Liquidity Fees are credited and Take Liquidity Fees are charged (except that Firms and Broker Dealers shall be charged for electronic executions in non-Penny Pilot issues that post liquidity). Transaction fees do not apply to executions occurring during the Opening Auction. Penny Pilot issues trade as part of a pilot program in accordance with Rule 6.72-O.

7. Firm Facilitation and Broker Dealer facilitating a Customer – Manual applies to any transaction involving a Firm proprietary trading account that has a customer of that same Firm on the contra side of the transaction, or a broker dealer facilitating a Customer order, where the broker dealer and the Customer both clear through the same clearing firm and the broker dealer clears in the customer range.

8. The calculations for qualifications for monthly posting credits or discounts only include electronic executions and the Exchange will include the activity of either (i) affiliates or (ii) an Appointed OFP or Appointed MM, per Endnote 15. Unless Professional Customer executions are specifically delineated, such executions will be treated as "Customer" executions in calculating qualifications for monthly posting credits or discounts. Customer equity and ETF option ADV does not include Electronic Complex Order Executions. The Exchange may exclude from the calculation of ADV contracts traded any day (1) the Exchange is not open for the entire trading day and/or (2) there is an Exchange System Disruption. QCC orders are neither posted nor taken; thus QCC transactions are not included in the calculation of posted or taken execution volumes. Orders routed to another market for execution are not included in the calculation of taking volume. Market Maker Total Electronic Volume does not include Electronic Complex Order Executions, QCC Transactions, or orders routed to another exchange for execution. Total Industry Customer equity and ETF option average daily volume ("TCADV") includes OCC calculated Customer volume of all types, including Complex Order Transactions and QCC transactions, in equity and ETF options. An affiliate of an OTP Holder or OTP Firm is as defined in NYSE Arca Rule 1.1(a). For purposes of calculating the executed Average Daily Volume ("ADV") of Retail Orders of U.S. Equity Market Share on the NYSE Arca Equity Market, a Retail Order must qualify for the Retail Order Tier set forth in the NYSE Arca Equities Fee Schedule.

9. Applies to OTP Holder proprietary orders ("F" origin code), QCC transactions executed by Floor Brokers from the Floor of the Exchange, and broker dealer orders clearing in the customer range in all products, except for orders of joint back-office ("JBO") participants, and does not include Strategy Executions or Royalty Fees. A JBO participant is a Member, Member Organization or non-member organization that maintains a JBO arrangement with a clearing broker-dealer ("JBO Broker") subject to the requirements of Regulation T Section 220.7 of the Federal Reserve System. See also NYSE Arca Rule 4.16-O(c). For purpose of the Monthly Firm Cap, JBO participant orders are excluded because the Exchange is unable to differentiate orders of a JBO participant from orders of its JBO Broker and therefore is unable to aggregate the JBO participant's orders.

10. (a) Reversals and Conversions. A "reversal" is established by combining a short security position with a short put and a long call position that shares the same strike and expiration. A "conversion" is established by combining a long position in the underlying security with a long put and a short call position that shares the same strike and expiration.

(b) Box spread. A “box spread” is defined as transactions involving a long call option and a short put option at one strike, combined with a short call option and long put at a different strike, to create synthetic long and synthetic short stock positions, respectively.

(c) Short stock interest spread. A “short stock interest spread” is defined as transactions done to achieve a short stock interest arbitrage involving the purchase, sale and exercise of in-the-money options of the same class.

(d) Merger spread. A “merger spread” is defined as transactions done to achieve a merger arbitrage involving the purchase, sale and exercise of options of the same class and expiration date, each executed prior to the date on which shareholders of record are required to elect their respective form of consideration, i.e., cash or stock.

(e) Jelly rolls. A “jelly roll” is created by entering into two separate positions simultaneously. One position involves buying a put and selling a call with the same strike price and expiration. The second position involves selling a put and buying a call, with the same strike price, but with a different expiration from the first position.

11. These fees will not be assessed on the customer side of transactions. Please refer to “Limit of Fees on Options Strategy Executions” section of this schedule for information regarding Royalty Fees associated with Options Strategy Executions.

12. The Ratio Threshold Fee is calculated on a monthly basis. This fee shall not apply to orders that improve the Exchange's prevailing best bid-offer (BBO) market at the time the orders are received.

13. QCC executions in which a Customer is on both sides of the QCC trade will not be eligible for the Floor Broker Rebate. The maximum Floor Broker Rebate paid shall not exceed \$375,000 per month per Floor Broker firm.

14. Binary Return Derivatives (“ByRDs”) transactions. ByRDs are exempt from all transaction fees and credits. Any volume in ByRDs will be included in the calculations to qualify for any volume-based incentives currently being offered on the Exchange.

15. Includes transaction volume from the OTP Holder's or OTP Firm's affiliates or its Appointed OFP or Appointed MM. An “Appointed MM” is an NYSE Arca Market Maker that has been designated by an Order Flow Provider (“OFP”) (as defined in NYSE Arca Rule 6.1A-O(a)(21)). An “Appointed OFP” is an OFP that has been designated by an NYSE Arca Market Maker. An NYSE Arca Options Market Maker appoints an OFP and an OFP appoints an NYSE Arca Options Market Maker for the purposes of the Fee Schedule, by each sending an email to optionsbilling@nyse.com. These corresponding emails will be viewed as acceptance of the appointment. The Exchange will recognize one such designation for each party. A party may make a designation not more than once every 12-months, which designation shall remain in effect unless or until the Exchange receives an email from either party indicating that the appointment has been terminated.