

## NYSE Arca Equities

### FEES AND CHARGES

**Effective Date: May 2, 2022**

#### NYSE ARCA MARKETPLACE: TRADE RELATED FEES AND CREDITS<sup>1</sup>

##### EXCHANGE TRANSACTIONS

##### ETP HOLDERS AND MARKET MAKERS<sup>2</sup>

Round Lots and Odd Lots (Per Share Price \$1.00 or Above and Per Share Price Below \$1.00)

##### **I. Definitions (applicable for purposes of fees and credits):**

- “**ADV**” means average daily volume.
- “**Adding**” means the execution of an order on the Exchange that added liquidity.
- “**Auction**” means Early Open Auction, Core Open Auction, Trading Halt Auction and Closing Auction on NYSE Arca.
- “**Auction Orders**” means Market Orders, Market-On-Close Orders, Limit-On-Close Orders and Auction-Only Orders executed in a NYSE Arca auction.
- “**Cboe BZX Auction**” would mean orders routed for execution in the open or closing auction on Cboe BZX.
- “**Closing Orders**” means Market, Market-On-Close, Limit-On-Close, and Auction-Only Orders executed in a Closing Auction.
- “**ETP Holders**” means ETP Holders and Market Makers.

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<sup>1</sup> Trade activity on days when the market closes early and on the date of the annual reconstitution of the Russell Investments Indexes does not count toward volume tiers. For purposes of determining trade related fees and credits based on ADV and US CADV (as defined below), the Exchange may exclude 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.

<sup>2</sup> These transaction fees do not apply to: (1) Directed Orders, regardless of account type, that are matched within the Directed Order Process; (2) Directed Orders for the account of a retail public customer that are executed partially or in their entirety via the Directed Order, Display Order, Working Order, and Tracking Order processes (however, any unfilled or residual portion of a retail customer’s order that is routed away and executed by another market center or participant will incur this transaction fee); (3) Cross Orders; and (4) participants in the Nasdaq UTP Plan that transmit orders via telephone. Orders with specific rates (e.g., MPL, Tracking, PL, Retail Add, RPI, RMO) may be used to qualify for volume thresholds but are not eligible for tiered rates.

- “**Nasdaq Auction**” would mean orders routed for execution in the open or closing auction on Nasdaq.
- “**NYSE American Auction**” would mean orders routed for execution in the open or closing auction on NYSE American.
- “**NYSE Auction**” would mean orders routed for execution in the open or closing auction on NYSE.
- “**Opening Orders**” means Market and Auction-Only Orders executed in an Early Open Auction, Core Open Auction or Trading Halt Auction.
- “**Removing**” means the execution of an order that removed liquidity.
- “**TCADV**” means total Customer equity and ETF option ADV as reported by The Options Clearing Corporation (OCC).
- “**CADV**” means unless otherwise stated, the United States consolidated average daily volume of transactions reported to a securities information processor (“SIP”). Transactions that are not reported to a SIP are not included in the CADV. If CADV is preceded by a reference to a Tape or to Sub-Dollar, then CADV would refer to all consolidated average daily volume of transactions reported to a SIP for all securities in that Tape or to all Sub-Dollar securities.

**II. General:**

- Tape A, Tape B and Tape C refers to securities executions reported to the Consolidated Tape A, Consolidated Tape B, and Consolidated Tape C, respectively.
- Rebates indicated by parentheses ( ).
- All fees and credits and tier requirements apply to ETP Holders.
- All fees and credits are per share unless noted otherwise.

**III. Standard Rates - Transactions (applicable when Tier Rates do not apply):**

Category	Adding Liquidity <sup>(a)(b)</sup>	Adding Liquidity - Retail Orders <sup>(c)</sup>	Adding Liquidity - MPL Orders	Removing Liquidity <sup>(d)</sup>	Opening Orders <sup>(e)(g)</sup>	Closing Orders <sup>(f)(g)</sup>
Securities priced at or above \$1.00	(\$0.0020)	(\$0.0032)	(\$0.0010)	\$0.0030	\$0.0015; \$0.0005 for Retail Orders	\$0.0012; \$0.0008 for Retail Orders
Securities priced below \$1.00	0.0% of Dollar Value	(0.05% of Dollar Value)	0.0% of Dollar Value	0.30% of Dollar Value	0.1% of Dollar Value	0.1% of Dollar Value

<sup>(a)</sup> In securities priced at or above \$1.00, an additional credit in Tape B Securities shall apply to LMMs and to Market Makers affiliated with LMMs that add displayed liquidity based on the number of Less Active ETP Securities in which the LMM is registered as

the LMM. The applicable tiered-credits are noted below (See LMM Transaction Fees and Credits).

- (b) In securities priced below \$1.00, this credit applies to all orders that add liquidity.
- (c) Retail Order means an order as defined in Rule 7.44-E(a)(3).
- (d) In securities priced at or above \$1.00, this fee also applies to Non-Displayed Limit Orders that remove liquidity.
- (e) In securities priced at or above \$1.00, this fee is capped at \$20,000 per month per Equity Trading Permit ID.
- (f) Fee applies to orders in all Securities.
- (g) In securities priced at or above \$1.00, this fee applies to executions resulting from Auction Orders. In securities priced below \$1.00, this fee applies to all orders executed in the Early Open Auction, Core Open Auction, Trading Halt Auction or Closing Auction.

**IV. Other Standard Rates for Securities with a Per Share Price \$1.00 or Above:**

- No fee or credit for Non-Displayed Limit Orders that add liquidity or for executions resulting from IOIs.
- \$0.0030 fee for MPL Orders removing liquidity; \$0.0010 if such orders are designated as Retail Orders.
- \$0.0006 fee for executions in an Auction other than for executions from Auction Orders.
- (\$0.0005) credit for Discretionary Pegged Orders that add liquidity.

**V. Standard Rates - Routing:**

Category	Orders routed that remove liquidity	Primary Until 9:45 Orders and Primary After 3:55 Orders designated as Retail Orders and routed to the primary market	Primary Only (“PO”) Orders in Tape A Securities routed to NYSE that add liquidity	PO Orders in Tape B Securities routed to NYSE American that add liquidity	PO Orders in Tape A Securities routed to NYSE Auction	PO Orders in Tape B Securities routed to NYSE American Auction	PO Orders in Tape B Securities routed to Cboe BZX Auction and in Tape C Securities routed to NASDAQ Auction
Securities priced at or above \$1.00	\$0.0035	\$0.0010	(\$0.0012)	No Credit	\$0.0010	\$0.0005	\$0.0030
Securities priced	0.3% of Dollar Value <sup>(a)</sup>	n/a	n/a	n/a	n/a	n/a	n/a

below \$1.00							
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<sup>(a)</sup> Applicable to orders of listed and Nasdaq securities routed away and executed by another market center or participant.

**VI. Tier Rates - Round Lots and Odd Lots (Per Share Price \$1.00 or Above):**

<b>Adding Tiers</b>					
<b>Tier</b>	<b>Minimum Requirement</b>		<b>Credit for Adding</b>		
			<b>Tape A</b>	<b>Tape B<sup>(a)</sup></b>	<b>Tape C</b>
Tier 1	0.70% Adding of CADV, or	84 million shares Adding ADV	(\$0.0031)	(\$0.0023)	(\$0.0032)
Tier 2	0.50% Adding of CADV		(\$0.0030)	(\$0.0023)	(\$0.0031)
Tier 3	0.30% Adding of CADV, or	0.25% Adding CADV, 0.40% Tape B Remove of Tape B CADV, and 0.25% Customer and Professional Customer Electronic Posting Volume of TCADV on NYSE Arca Options by OTP Holder or OTP Firm affiliated with the ETP Holder	(\$0.0029)	(\$0.0022)	(\$0.0029)
Tier 4	0.20% Adding of CADV		(\$0.0025)*	(\$0.0022)	(\$0.0025)*
ETP Holders that qualify for Tier 1, Tier 2, Tier 3 or Tier 4 are subject to the following fees:					
Routing	\$0.0030				

Removing Liquidity in Tape B	\$0.0029
Closing Orders	\$0.0010
*ETP Holders that qualify for Tier 4 and add 0.05% of CADV above May 2019 receive an incremental credit of (\$0.0002) for Tape A and C Adding	

- (a) An additional credit in Tape B shall apply to ETP Holders affiliated with LMMs that add displayed liquidity based on the number of Less Active ETP Securities in which the LMM is registered as the LMM. The applicable tiered-credits are noted below (See LMM Transaction Fees and Credits).

Step Up Tiers							
	Minimum Requirement			Credit for Adding Displayed Liquidity			
Tier	Adding ADV of CADV	Removing ADV of CADV	Adding Increase of CADV	Adding Increase Baseline	Tape A	Tape B	Tape C
Step Up Tier 1	0.22%		0.06%	May 2018	(\$0.0028)	(\$0.0022)	(\$0.0028)
Step Up Tier 2 <sup>(b)</sup>			0.40%	September 2019	(\$0.0033)	(\$0.0034)	(\$0.0033)
Step Up Tier 3			0.35% or	September 2019	(\$0.0031)	(\$0.0031)	(\$0.0031)
		0.50%	0.25%				

- (b) ETP Holders that qualify for Step Up Tier 2 shall not receive additional Tape B Tier credits for adding displayed liquidity, including any additional credits associated with Less Active ETP Securities, however, ETP Holders that are registered as a LMM may receive up to a combined credit of \$0.0036 per share on all its adding volume if that ETP Holder, together with its affiliates, executes Tape B adding ADV that is at least 40% over the ETP Holder's adding ADV in Q3 2019, as a percentage of Tape B CADV.

**Cross-Asset Tier**

<b>Minimum Requirement</b>		<b>Credit for Adding</b>			
<b>Equity Volume</b>	<b>Option Customer and Professional Customer Electronic Posting Volume of TCADV by OTP Holder or OTP Firm affiliated with the ETP Holder</b>				
	<b>All Issues</b>	<b>Non-Penny Issues</b>	<b>Tape A</b>	<b>Tape B</b>	<b>Tape C</b>
0.30% Adding of CADV	0.80% of TCADV	0.20% of TCADV	(\$0.0030)	(\$0.0030)	(\$0.0030)
0.30% Adding of CADV and 0.35% Adding of Tape C CADV	0.80% of TCADV	0.20% of TCADV	n/a	n/a	Additional (\$0.0004)
0.65% Adding of CADV	0.80% of TCADV	0.20% of TCADV	Additional (\$0.0002)	Additional (\$0.0002)	n/a
0.30% Adding of CADV and 0.40% Adding and Removing of CADV above Q1 2020 Add and Remove	0.80% of TCADV	0.20% of TCADV	Additional (\$0.0001) for Adding, All Tapes		

<b>MPID Adding Tier</b>					
	<b>Minimum Requirement by MPID</b>		<b>Credit for MPIDs Adding</b>		
<b>Tier</b>	<b>Adding Increase of CADV over Q2 2021, as a percentage of CADV</b>	<b>Adding ADV</b>	<b>Tape A</b>	<b>Tape B</b>	<b>Tape C</b>
MPID Adding Tier 2	2 Times	4 Million or	(\$0.0028)	(\$0.0022)	(\$0.0028)
		2 Million in Tape B			
MPID Adding Tier 1	2 Times	9 Million	(\$0.0029)	(\$0.0022)	(\$0.0029)

<b>BBO Setter Tier</b>							
	<b>Minimum Requirement</b>				<b>Credit for Orders that set a new BBO<sup>(c)</sup></b>		
<b>Tier</b>	<b>Adding ADV of CADV</b>	<b>ETP ID Adding ADV of CADV</b>	<b>ETP ID Setting the Arca Best Bid or Offer of CADV</b>	<b>ETP ID Setting the Arca Best Bid or Offer as percent of ETP ID Adding ADV</b>	<b>Tape A</b>	<b>Tape B</b>	<b>Tape C</b>
BBO Setter Tier	0.70%	0.20%	0.10%	40%	(\$0.0004)	(\$0.0002)	(\$0.0004)

<sup>(c)</sup> This credit shall be in addition to the ETP Holder's Tiered or Basic Rate credit(s), and for Tape B and Tape C, the credit shall be in addition to any capped credit.

<b>Retail Tiers</b>					
<b>Tier</b>	<b>Minimum Requirement of CADV</b>			<b>Rates for Retail Orders</b>	
	<b>Retail Adding ADV</b>	<b>Retail Orders with a time-in-force of Day that add and remove that is an increase over April 2018</b>	<b>Adding ADV</b>	<b>Credit for Retail Adding</b>	<b>Fee for Retail Removing with a Time-in-force of Day</b>
Retail Order Tier	0.15%			(\$0.0033)	
Retail Order Step-Up Tier 1 <sup>(d)(e)</sup>		0.40% or 55 Million ADV of Retail Orders with a time-in-force of Day that add and remove	1.00%	(\$0.0038)	No Fee
Retail Order Step-Up Tier 2 <sup>(e)</sup>		0.10%		(\$0.0035)	No Fee
Retail Order Step-Up Tier 3 <sup>(e)</sup>		0.20%		(\$0.0036)	No Fee

<sup>(d)</sup> ETP Holders that qualify for Retail Order Step-Up Tier 1 are subject to the following rates in Tape C:

- (\$0.0035) for Adding displayed liquidity.
- \$0.0027 for Removing.
- Additional (\$0.0002) for Adding non-displayed liquidity.

<sup>(e)</sup> ETP Holders that qualify for Retail Order Step-Up Tier 1, Retail Order Step-Up Tier 2 and Retail Order Step-Up Tier 3 are subject to the following rates:

- No fee charged or credit paid for Retail Orders where each side of the executed order (1) shares the same MPID and (2) is a Retail Order with a time-in-force of Day.



<b>MPL Order Tiers</b>				
<b>Tier</b>	<b>Minimum Requirement</b>		<b>Credit for MPL Adding</b>	
	<b>MPL Adding ADV</b>	<b>MPL Adding ADV Increase over May 2019</b>	<b>Tape A</b>	<b>Tape B and Tape C</b>
MPL Orders	3.0 Million		(\$0.0015)	(\$0.0020)
	1.5 Million		(\$0.0015)	(\$0.0015)
MPL Orders Step Up Tier 1		2 Million	(\$0.0026)	(\$0.0026)
MPL Orders Step Up Tier 2		1 Million	(\$0.0025)	(\$0.0025)

<b>Limit Non-Display Step Up Tier</b>		
	<b>Minimum CADV Requirement</b>	<b>Credit for Limit Non-Displayed Orders Adding</b>
<b>Tier</b>	<b>Limit-Non-Display and MPL Order Combined ADV Increase over July 2020</b>	<b>All Tapes</b>
Limit Non-Display Order Step Up Tier	0.02%	(\$0.0004)
	0.05%	(\$0.0010)
	0.10%	(\$0.0015)
	0.15%	(\$0.0020)

<b>Tracking Order Tier</b>		
<b>Tier</b>	<b>Minimum ADV Requirement</b>	<b>Credit for Tracking Orders that result in executions</b>
Tracking Order Tier 1	1 Million	(\$0.0010)

<b>Tape B Tiers</b>						
	<b>Minimum Requirement for Tape B</b>			<b>Minimum Requirement for NYSE Arca Options</b>	<b>Credit for Tape B Adding</b>	
<b>Tier</b>	<b>Adding ADV of Tape B CADV</b>	<b>Adding Increase in Tape B of Tape B CADV</b>	<b>Adding Increase Baseline</b>	<b>Market Maker Electronic Posting Volume of TCADV by OTP Holder or OTP Firm affiliated with the ETP Holder</b>	<b>Tape B Credit</b>	<b>Tape B Additional Credit<sup>(f)</sup></b>
Tier 1 <sup>(g)</sup>	1.50%				(\$0.0030)	
Tier 2 <sup>(g)</sup>	1.00% or				(\$0.0028)	
	0.25% above April 2020					
Tier 3 <sup>(g)</sup>	0.15% above April 2020 or				(\$0.0025)	
	0.20%			0.50%		
Step Up	0.50%	20%	Q3 2019			(\$0.0002)
	0.50%	30%	Q3 2019			(\$0.0003)
	0.50%	40%	Q3 2019			(\$0.0004)

(f) This credit shall be in addition to the ETP Holder's Tiered or Standard credit(s) and such combined credit(s) in Tape B shall not exceed \$0.0032, except that for ETP Holders registered as a Lead Market Maker or Market Maker in at least 100 Less Active ETPs in which it meets at least two Performance Metrics, where the ETP Holder, together with any affiliates, has Adding Tape B ADV that is an increase of at least 60% over the ETP Holder's Adding ADV in Q3 2019, as a percentage of Tape B CADV, in which case the ETP Holder can receive a combined credit of up to:

- \$0.0033 per share if the ETP Holder, together with any affiliates, has Tape B Adding ADV equal to at least 0.65% of Tape B CADV, or
- \$0.0034 per share if the ETP Holder, together with any affiliates, has Tape B Adding ADV equal to at least 0.70% of Tape B CADV.

(g) LMMs cannot qualify for this Tier.

Tape C Tiers for Adding		
Tier	Minimum Criteria for Tape C Adding	Rate
Tier 3	0.20% of CADV	(\$0.0030)
Tier 2	0.35% of CADV	(\$0.0033)
Tier 1	0.40% of CADV	(\$0.0034) \$0.0029 fee for Removing Liquidity

#### VII. Tier Rates - Round Lots and Odd Lots (Per Share Price Below \$1.00)<sup>3</sup>

Sub-Dollar Adding Step Up Tier		
	Minimum Requirement	Credit for Sub-Dollar Adding Orders of total dollar value
<b>Tier</b>	<b>1 Million Adding ADV with a per share price below \$1.00 (“Sub-Dollar Adding Orders”) and Adding Increase of CADV in Sub-Dollar Adding Orders over July 2020, as a percentage of CADV with a per share price below \$1.00</b>	<b>All Tapes</b>
Sub-Dollar Adding Step Up Tier	0.30%	0.050%
	0.60%	0.100%
	1.00%	0.150%

#### NYSE ARCA MARKETPLACE: ETP FEES

<sup>3</sup> These fees are consistent with the limitations of Regulation NMS, SEC Rule 610(c), for securities with a price of less than \$1.00. Rebates will not be paid for executions in securities priced under \$1.00.

ETP Fee	\$15,000 per year per ETP Holder (billed monthly for each month during which the ETP is held for any portion of the month)
ETP Application Fees	
Initial Processing Fee	Waived
Investigation Fee	\$125 fee per individual for registration as an ETP Holder (includes any Approved Person <sup>4</sup> listed on Schedule A or B of Form BD or Market Maker Authorized Trader for whom required information is not available on Web CRD ®)

## REGULATORY FEES

FOCUS Filing Fee	\$100 annual filing fee for ETP Holders for which NYSE Arca is the Designated Examining Authority
Gross FOCUS Fee: Amount per \$1,000 Gross FOCUS Revenue	\$0.075 monthly fee per firm \$0.069 as of January 1, 2021
DEA Fee	\$2,000 monthly fee per firm \$250 annual fee per trader
Application Resulting in Statutory Disqualification Proceedings	\$2,000 fee per application
Late Payment of Dues, Fees, Fines and Charges	
Number of Times Late Within Previous Twelve Months	Amount of Charge
1	\$250 or 1.0% of Invoice Amount, Whichever is Greater
2	\$500 or 1.5% of Invoice Amount, Whichever is Greater

### CRD Fees for ETP Holders that are not FINRA Members

Each initial Form U4 filed for the registration of a representative or principal	\$125
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

<sup>4</sup> As defined by NYSE Arca Rule 1.1(c).

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

## **NYSE ARCA MARKETPLACE: MARKET MAKER FEES AND CREDITS<sup>5</sup>**

Lead Market Maker (“LMM”) Transaction Fees and Credits

Round Lots (Per Share Price \$1.00 or Above)

### **I. Definitions for purposes of LMM Transaction Fees and Credits**

1. “**CADV**” means the consolidated average daily volume in a security in the prior month.
2. “**ETP**” means Exchange Traded Products listed on NYSE Arca.
3. “**ETP Price**” means the average Official Closing Price in that ETP in the prior month.
4. “**Less Active ETPs**” means ETPs that have a CADV in the prior calendar quarter that is the greater of either less than 100,000 shares or less than 0.013% of Consolidated Tape B ADV.

<sup>5</sup> Market Maker fees for the NYSE Arca marketplace will not apply to MPL Orders (except MPL Orders will be eligible for transaction credit with respect to Tape A and Tape C Securities).

5. “**Leveraged ETP**” means an ETP that tracks an underlying index by a ratio other than on a one-to-one basis.

6. “**Maximum LMM Spread**” means time-weighted average LMM spread (LMM Offer minus LMM Bid) divided by the average of the LMM Bid and LMM Offer, in basis points.

7. “**Minimum LMM Shares within 1% of NBBO**” means the average number of LMM shares quoted throughout the trading day that are within 1% of the National Best Bid and Best Offer divided by two.

8. “**Minimum LMM Shares at the Core Open Auction within 1.5% of the Auction Reference Price**” means the average of LMM buy shares and LMM sell shares for Limit Orders quoted within 1.5% of the Auction Reference Price divided by two.

9. “**Minimum LMM Shares at the Closing Auction within 1% of the NBBO**” means the average number of LMM buy shares and LMM sell shares for Limit Orders quoted within 1% of the National Best Bid and Best Offer before the end of Core Trading Hours divided by two.

**II. LMM Base Fees and Credits per Share:** Base rates for LMMs in ETPs in which the LMM is registered as a LMM for the billing month, based on the ETP’s CADV in the prior month.

ETP CADV	Credit for Adding Displayed Liquidity	Fee for Removing Liquidity	Credit for Adding Non-Displayed Limit Orders	Credit for Adding Undisplayed Liquidity in Non-Routable Limit Orders	Fee for Orders in the Closing Auction
< 1,000,000	(\$0.0045)				
1,000,000 to 3,000,000	(\$0.0040)	\$0.0029	(\$0.0015)	(\$0.0030)	No Fee
> 3,000,000	(\$0.0033)				

**III. LMM Performance Metrics-based Incremental Base Credit Adjustments:**

LMMs that meet the Performance Metrics in the table below are entitled to enhanced credits based on the quality of the market in an assigned ETP. The Performance Metrics that the Exchange will measure are:

- (1) Maximum LMM Spread;
- (2) Minimum LMM Shares within 1% of NBBO;
- (3) Minimum LMM Shares in Core Open Auction within 1.5% of Auction Reference Price; and
- (4) Minimum LMM Shares at the Closing Auction within 1% of the NBBO.

Each assigned ETP is grouped based on its prior month CADV and its price. An LMM is considered to have met a Performance Metric for an assigned ETP for a billing month if it meets the following:

<b>Monthly Average LMM Performance Metrics</b>					
<b>ETP CADV</b>	<b>ETP Price</b>	<b>Maximum LMM Spread (bps)</b>	<b>Minimum LMM Shares within 1% of National BBO</b>	<b>Minimum LMM Shares in Core Open Auction within 1.5% of Auction Reference Price</b>	<b>Minimum LMM Shares at the Closing Auction within 1% of the National BBO</b>
> 1,000,000	> \$50	55	6,000	4,000	12,250
	\$25 - \$50	45	20,000	8,500	14,250
	Under \$25	40	42,000	22,000	30,000
100,001 - 1,000,000	> \$50	35	2,500	2,500	3,250
	\$25 - \$50	35	3,500	4,000	4,750
	Under \$25	65	10,000	5,750	7,250
10,000 - 100,000	> \$50	40	2,200	2,000	2,250
	\$25 - \$50	55	2,400	2,050	2,500

	Under \$25	70	4,000	2,200	4,500
Under 10,000	> \$50	50	2,000	1,750	2,000
	\$25 -\$50	60	3,000	1,800	3,000
	Under \$25	75	3,000	1,800	3,000

The base credit earned by an LMM for Adding Displayed Liquidity (as provided in Section II above) in an assigned ETP will be adjusted based on the number of Performance Metrics met by the LMM in the billing month for each assigned ETP, as follows:

# of Performance Metrics Met	Incremental Base Credit Adjustment per ETP	Incremental Base Credit Adjustment per Leveraged ETP
4	(\$0.0001)	(\$0.0001)
3	(\$0.00005)	(\$0.00005)
2	\$0.0000	\$0.0000
1	\$0.0001	\$0.0000
0	\$0.0002	\$0.0000

#### IV. Additional Tape B Credits for LMMs and Market Makers

LMMs may earn an additional credit on all Tape B Securities if the LMM meets at least two Performance Metrics in each of the Less Active ETPs in which the LMM is registered as the LMM. As set forth in the table below, the additional credit available for Tape B Securities is based on the number of Less Active ETPs assigned to an LMM.

The number of Less Active ETPs for a billing month will be calculated as the average number of Less Active ETPs in which an LMM is registered on the first and last business day of the previous month.

To determine which Less Active ETP Tier will be applicable to an LMM, the Exchange will count the number of Less Active ETPs assigned to that LMM as follows:

- Each Less Active ETP in which an LMM is registered and meets at least two Performance Metrics will count as one Less Active ETP. Each Less Active ETP that is a Leveraged ETP in which an LMM is registered will count as one Less Active ETP regardless of the number of Performance Metrics met.



An ETP Holder registered as a Market Maker is also eligible to earn this additional credit on all Tape B securities if:

- The Market Maker notifies the Exchange on or before the first trading day that the additional credit is available in a calendar month of which new Less Active ETPs for which the Market Maker is registered that it is seeking to count towards or remove from qualifying for this additional credit in that month.
- The Market Maker cannot also be the registered LMM in a Less Active ETP that it is seeking to count to qualify for the additional credit as a Market Maker.
- Every two Less Active ETPs that a Market Maker identifies and meets at least two Performance Metrics will count as one Less Active ETP for purposes of determining the applicable additional credit.
- If an ETP Holder is both an LMM and a Market Maker in Less Active ETPs and has notified the Exchange of Less Active ETPs that it seeking to count for the additional credit as a Market Maker, the number of Less Active ETPs calculated for the Market Maker above will be combined with the number of Less Active ETPs in which the LMM is registered.

<b>Less Active ETP Tiers</b>	<b># of Less Active ETPs per LMM/Market Maker</b>	<b>Additional Credit on all Tape B Securities</b>
Tier 5	50 - 74 ETPs	(\$0.00005)
Tier 4	75 – 99 ETPs	(\$0.0001)
Tier 3	100 – 199 ETPs	(\$0.0002)
Tier 2	200 - 399 ETPs, or 200 - 299 ETPs if the LMM or Market Maker and its affiliates add liquidity of at least 1.00% of US CADV	(\$0.0003)
Tier 1	At Least 400 ETPs, or at least 300 ETPs if the LMM or Market Maker and its affiliates add liquidity of at least 1.00% of US CADV	(\$0.0004)

**FEES AND CREDITS APPLICABLE TO EXECUTIONS IN THE RETAIL LIQUIDITY PROGRAM**

Retail Liquidity Provider (“RLP”) or Non-RLP Retail Price Improvement Order (“RPI”) that executes against a Retail Member Organization (“RMO”) Retail Order:	Tape B and Tape C Securities: \$0.0003 credit.
Other non-displayed liquidity and displayable odd lot interest priced better than the best protected bid (“PBB”) or the best protected offer (“PBO”) (together, the “PBBO”) (“other price-improving interest”) that executes against an RMO Retail Order:	Tape B and Tape C Securities: Tiered or Basic Rates apply based on a firm’s qualifying levels.
RMO Retail Order that executes against an RLP or Non-RLP RPI or against other price-improving interest:	Tape B and Tape C Securities: No fee or credit applies.

**NYSE ARCA MARKETPLACE: OTHER FEES AND CHARGES**

Connectivity Fees

Line Connection	(Variable pass-through charge for each line installation)
Port Fee (not applicable to ports used for Risk Management Gateway (“RMG”SM), which are not charged)  Ports for order/quote entry:	\$550 per port per month, except that no fee shall apply to ports in the backup datacenter that are not utilized during the relevant month, and no fee shall apply to ports in the backup datacenter that are utilized when the primary datacenter is unavailable. If a port in the backup datacenter is utilized when the primary datacenter is available, then the fee shall apply. Effective October 1, 2017, the monthly fee for a port activated after August 18, 2017, will be prorated to the number of trading days in such billing month, including any scheduled early closing days, that the port is connected to the Exchange.

Ports for drop copies:	\$550 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 Options), except that no fee shall apply to ports in the backup datacenter if configured such that it is duplicative of another drop copy port of the same user. Effective October 1, 2017, the monthly fee for a port activated after August 18, 2017, will be prorated to the number of trading days in such billing month, including any scheduled early closing days, that the port is connected to the Exchange.
Risk Management Gateway:	Amount of Charge:
Number of Connections (Monthly): First Connection (up to 1000 messages per second)	\$3,000.00
Every additional Connection (up to 1000 messages per second)	\$1,000.00

## RATIO THRESHOLD FEES

### *Ratio Threshold for Priority 2 - Display Orders (“RT - Display Fee”)*

For orders ranked Priority 2 - Display Orders, ETP Holders are charged an RT - Display Fee on a monthly basis. For purposes of determining the RT - Display Fee:

- The “Weighted Order Total” is the total number of orders ranked Priority 2 - Display Orders entered by that ETP Holder in a month, as adjusted by a “Weighting Factor.” The Weighted Order Total calculation excludes (i) all orders in securities in which an ETP Holder is registered as a Market Maker or Lead Market Maker and (ii) all orders for an ETP Holder that is registered as a Market Maker or Lead Market Maker in 100 or more securities.
- The “Weighting Factor” applied to each order based on its price in comparison to the national best bid or best offer (“NBBO”) at the time of order entry is:

Order’s Price versus NBBO at Entry	Weighting Factor
Less than 0.20% away	0x
0.20% to 0.99% away	1x
1.00% to 1.99% away	2x
2.00% or more away	3x

For example, an order more than 2.0% away from the NBBO would be equivalent to three orders. Due to the applicable Weighting Factor of 0x, orders entered less than 0.20% away from the NBBO would not be included in the Weighted Order Total, but would be included in the “executed” orders component of the Order Entry Ratio if they execute in full or part.

- The “Order Entry Ratio” is calculated by dividing the ETP Holder’s Weighted Order Total by the greater of (i) the number of orders ranked Priority 2 - Display Orders that execute in full or in part, or (ii) the number one (1).
- “Excess Weighted Orders” are calculated by subtracting (i) the Weighted Order Total that would result in the ETP Holder having an Order Entry Ratio of 100 from (ii) the ETP Holder’s actual Weighted Order Total.

An ETP Holder with a daily average Weighted Order Total of 100,000 or more during a month will be charged the RT - Display Fee, which is calculated by multiplying the Applicable Rate in the chart below by the number of Excess Weighted Orders.

ETP Holders that exceed the Order Entry Ratio threshold of 1,000:1 will pay a fee of \$0.01 on each order that caused the ETP Holder to surpass the threshold.

ETP Holders that exceed the Order Entry Ratio threshold of 100:1 but less than 1,000:1 will pay a fee of \$0.005 on all orders that caused ETP Holder's ratio to exceed 100:1.

Order Entry Ratio	Applicable Rate
0-100	\$0.00
101 - 1,000	\$0.005
More than 1,000	\$0.01

*Ratio Threshold for Auction-Only Orders During the Period When Auction Imbalance Information is Being Disseminated for a Core Open Auction or Closing Auction (“RT - Auction Fee”)*

For Auction-Only Orders, ETP Holders with an average daily number of orders of 10,000 or more are charged an RT - Auction Fee on a monthly basis, as described below:

- The number of “Ratio Shares” is the average daily number of shares of Auction-Only Orders that are cancelled by the ETP Holder at a disproportionate ratio to the average daily number of shares executed by that ETP Holder. Orders ranked Priority 2 - Display Orders designated for the Core Trading Session only that are entered during the period when Auction Imbalance Information for the Core Open Auction is being disseminated are included in the Ratio Shares calculation. All orders entered by an ETP Holder for

securities in which it is registered as a Lead Market Maker are not included the calculation of Ratio Shares.

- The “Ratio Shares Threshold” is an ETP Holder’s Ratio Shares divided by the average daily executed shares by the ETP Holder.

A Ratio Shares Threshold less than 50	No Charge
A Ratio Shares Threshold greater than or equal to 50	<p>ETP Holders with an average of fewer than 20 million Ratio Shares per day:</p> <ul style="list-style-type: none"> <li>• No Charge</li> </ul> <p>ETP Holders with an average of 20 million to 200 million Ratio Shares per day:</p> <ul style="list-style-type: none"> <li>• \$1.00 per million Ratio Shares</li> </ul> <p>ETP Holders with an average of more than 200 million Ratio Shares per day:</p> <ul style="list-style-type: none"> <li>• \$10.00 per million Ratio Share</li> </ul>

ETP Holders will be charged for the entirety of their Ratio Shares at a rate of \$1.00 per million Ratio Shares if the ETP Holder has an average of 20 million to 200 million Ratio Shares; and \$10.00 per million Ratio Shares if the ETP Holder has an average of more than 200 million Ratio Shares.

The combined RT - Display Fee and RT - Auction Fee for an ETP Holder is capped at \$2,000,000 per month.

## **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 Options Fee Schedule or by the Exchange's affiliates New York Stock Exchange LLC (NYSE), NYSE American LLC (NYSE American), NYSE Chicago, Inc. (NYSE Chicago), and NYSE National, Inc. (NYSE National).

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 a service that includes access to the LCN or IP network, it receives the ability to access the trading and execution systems of the NYSE, NYSE American, NYSE Arca, NYSE Chicago, and NYSE National (together, the Exchange Systems) as well as of Global OTC (the Global OTC System), subject, in each case, to authorization by the NYSE, NYSE American, NYSE Arca, NYSE Chicago, NYSE National, or Global OTC, 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, NYSE Arca, NYSE Chicago, NYSE National or Global OTC. NYSE, NYSE American, NYSE Arca, NYSE Chicago and NYSE National 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. Global OTC offers access to the Global OTC System to its subscribers, such that a User does not have to purchase access to the LCN or IP network to obtain access to the Global OTC System.

5. When a User purchases a service that includes 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
CTA
CQ
OPRA

NYSE: NYSE Alerts NYSE BBO NYSE Integrated Feed NYSE OpenBook NYSE Order Imbalances NYSE Trades
NYSE American: NYSE American Alerts NYSE American BBO NYSE American Integrated Feed NYSE American OpenBook NYSE American Order Imbalances NYSE American 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 Chicago
NYSE National

6. When a User purchases a service that includes access to the NMS network, upon its request it will receive connectivity to the NMS network and any of the NMS feeds that it selects, subject to any technical provisioning requirements and authorization from the provider of the data feed. Market data fees for the NMS feeds are charged by the provided of the NMS feed. The NMS network provides connectivity to the NMS feeds only.

NMS feeds CTA CQ OPRA
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7. Cabinet and Power Purchasing Limits. If (i) unallocated cabinet inventory is at or below 40 cabinets, whether or not such cabinets are configured to be subdivided into partial cabinets (“Cabinet Threshold”), or (ii) the unallocated power capacity in co-location is at or below 350 kW (the “Power Threshold”), the following limits on the purchase of new cabinets (“Purchasing Limits”) will apply:



a. Cabinet Limits. If only the Cabinet Threshold is reached, the following measures (the “Cabinet Limits”) will apply:

- All Users with PNU cabinets will be required to either convert their PNU cabinets into dedicated cabinets or relinquish their PNU cabinets. The Exchange will notify each User with a PNU cabinet that the User has 30 business days to decide whether to contract to convert the PNU cabinet to a dedicated cabinet. If the User does not contract to use the PNU cabinet as a dedicated cabinet within such time, the PNU cabinet will be relinquished.
- The Exchange will limit each User’s purchase of new cabinets (dedicated and partial) to a maximum of four dedicated cabinets. The maximum may be comprised of a mix of dedicated and partial cabinets, with two partial cabinets counting as one dedicated cabinet.
- If a User requests, in writing, a number of cabinets that, if provided, would cause the available cabinet inventory to be below 40 cabinets, the Cabinet Limits will only apply to the portion of the User’s order below the Cabinet Threshold.
- A User that has purchased cabinets subject to this Cabinet Limit, or any Affiliate of such User, will have to wait 30 days from the date of the User’s signed order form before purchasing new cabinets again while such Cabinet Limit remains in effect.
- If the Cabinet Threshold is reached, the Exchange will cease offering or providing new PNU cabinets to all Users and Users will not be permitted to convert a currently used dedicated cabinet to a PNU cabinet.
- When unallocated cabinet inventory is more than 40 cabinets, the Exchange will discontinue the Cabinet Limits.

b. Combined Limits. If only the Power Threshold is reached or both the Cabinet Threshold and the Power Threshold are reached, the following measures (the “Combined Limits”) will apply:

- All Users with PNU cabinets will be required to either convert their PNU cabinets into dedicated cabinets or relinquish their PNU cabinets. The Exchange will notify each User with a PNU cabinet that the User has 30 business days to decide whether to contract to convert the PNU cabinet to a dedicated cabinet. If the User does not contract to use the PNU cabinet as a dedicated cabinet within such time, the PNU cabinet will be relinquished.
- A User may purchase either or both of the following, so long as the combined power usage of such purchases is no more than a maximum of 32 kW:
  - a. New cabinets (dedicated and partial), subject to a maximum of four dedicated cabinets with standard power allocations of 4 kW or 8 kW (“Standard

Cabinets”). The purchase may be comprised of a mix of dedicated and partial cabinets, with two partial cabinets counting as one dedicated cabinet.

b. Additional power for new or existing cabinets.

- If a User requests, in writing, a number of Standard Cabinets and/or an amount of additional power that, if provided, would cause the unallocated power capacity to be below the Power Threshold or Cabinet Threshold, the Combined Limits would apply only to the portion of the User’s order below the relevant threshold.
- A User that has purchased Standard Cabinets or additional power subject to these Combined Limits, or any Affiliate of such User, will have to wait 30 days from the date of the User’s signed order form before purchasing new Standard Cabinets or additional power again while such Combined Limits remain in effect.
- If the Power Threshold or Cabinet Threshold is reached, the Exchange will cease offering or providing new PNU cabinets to all Users and Users will not be permitted to convert a currently used dedicated cabinet to a PNU cabinet.
- When unallocated power capacity is above the Power Threshold, the Exchange will discontinue the Combined Limits. If at that time the unallocated cabinet inventory is 40 or fewer cabinets, the Cabinet Limits would enter into effect.

c. Applicability. If the Cabinet Threshold is reached before the Power Threshold, the Cabinet Limits will be in effect until the Power Threshold is reached, after which the Combined Limits will apply.

8. Cabinet and Combined Waitlists.

a. Cabinet Waitlist. Unless a Combined Waitlist is in effect, the Exchange will create a cabinet waitlist (“Cabinet Waitlist”) if the available cabinet inventory is zero, or a User requests, in writing, a number of cabinets that, if provided, would cause the available inventory to be zero. The Exchange will place Users seeking cabinets on a Cabinet Waitlist, as follows:

- Users with PNU cabinets will be required to either convert their PNU cabinets into dedicated cabinets or relinquish their PNU cabinets in accordance with the measures set forth in General Note 7(a), above.
- A User will be placed on the Cabinet Waitlist based on the date its signed order is received. A User may only have one order for new cabinets on the Cabinet Waitlist at a time, and the order is subject to the Cabinet Limits. If a User changes the size of its order while it is on the Cabinet Waitlist, it will maintain its place on the Cabinet Waitlist, provided that the User may not increase the size of its order such that it would exceed the Cabinet Limits. While a User is on the Cabinet Waitlist, no Affiliate of such User may also be on the Cabinet Waitlist.

- As cabinets become available, the Exchange will offer them to the User at the top of the Cabinet Waitlist. If the User's order is completed, it will be removed from the Cabinet Waitlist. If the User's order is not completed, it will remain at the top of the Cabinet Waitlist.
  - A User will be removed from the Cabinet Waitlist (a) at the User's request or (b) if the User turns down an offer of a cabinet of the same size it requested in its order. If the Exchange offers the User a cabinet of a different size than the User requested in its order, the User may turn down the offer and remain at the top of the Cabinet Waitlist until its order is completed.
  - A User that is removed from the Cabinet Waitlist but subsequently submits a new written order for cabinets will be added back to the bottom of the Cabinet Waitlist.
  - When unallocated cabinet inventory is more than 10 cabinets, the Exchange will cease use of the Cabinet Waitlist.
- b. Combined Waitlist. The Exchange would create a power and cabinet waitlist ("Combined Waitlist") if the unallocated power capacity is zero, or if a User requests, in writing, an amount of power (whether power allocated to a Standard Cabinet or additional power) that, if provided, would cause the unallocated power capacity to be below zero. The Exchange would place Users seeking cabinets or power on the Combined Waitlist, as follows:
- All Users with PNU cabinets will be required to either convert their PNU cabinets into dedicated cabinets or relinquish their PNU cabinets in accordance with the measures set forth in General Note 7(b), above.
  - If a Cabinet Waitlist exists when the requirements to create a Combined Waitlist are met, the Cabinet Waitlist will automatically convert to the Combined Waitlist. If a Combined Waitlist exists when the requirements to create a Cabinet Waitlist are met, no new waitlist will be created, and the Combined Waitlist will continue in effect.
  - A User will be placed on the Combined Waitlist based on the date its signed order for cabinets and/or additional power is received. A User may only have one order for new cabinets and/or additional power on the Combined Waitlist at a time, and the order would be subject to the Combined Limits. If a User changes the size of its order while it is on the Combined Waitlist, it will maintain its place on the Combined Waitlist, provided that the User may not increase the size of its order such that it would exceed the Combined Limits. While a User is on the Combined Waitlist, no Affiliate of such User may also be on the Combined Waitlist.
  - As additional power and/or cabinets become available, the Exchange will offer them to the User at the top of the Combined Waitlist. If the User's order is completed, the order will be removed from the Combined Waitlist. If the User's order is not completed, it will remain at the top of the Combined Waitlist.

- A User will be removed from the Combined Waitlist (a) at the User's request; or (b) if the User turns down an offer that is the same as its order (e.g. the offer includes cabinets of the same size and/or the amount of additional power that the User requested in its order). If the Exchange offers the User an offer that is different than its order, the User may turn down the offer and remain at the top of the Combined Waitlist until its order is completed.
- A User that is removed from the Combined Waitlist but subsequently submits a new written order for cabinets and/or additional power will be added back to the bottom of the waitlist.
- If the Combined Waitlist is in effect, when unallocated power capacity in co-location is 100 kW or more, the Exchange will cease use of the Combined Waitlist. If at that time the unallocated cabinet inventory is 10 or fewer cabinets, the Cabinet Waitlist would enter into effect.

<b>Initial Fee per Cabinet</b>	
Dedicated Cabinet	\$5,000
8-Rack Unit of a Partial Cabinet	\$2,500
<b>Monthly Fee for Cabinets</b>	
<b>Dedicated Cabinet</b>	
Monthly fee is based on total kW's allocated to all of a User's dedicated cabinets	
<b>Number of kW's</b>	<b>Per kW Fee Monthly</b>
4 - 8	\$1,200
9 - 20	\$1,050
21 - 40	\$950
41+	\$900
<b>8-Rack Unit of a Partial Cabinet</b>	
<b>Number of kW's</b>	<b>Total Fee Monthly</b>
1	\$1,500
2	\$2,700
<b>Cabinet Upgrade Fee</b>	
Dedicated Cabinet	\$9,200 (\$4,600 for a User that submitted a written order for a Cabinet Upgrade by January 31, 2014, provided that the Cabinet Upgrade became fully operational by March 31, 2014)
<b><u>PNU Cabinet</u></b>	monthly charge of \$360 per kW allocated to PNU Cabinet
<b><u>Cage Fees</u></b>	
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 and NMS Network Access	10 Gb LX LCN Circuit and 10 Gb NMS Network Circuit	<p>\$15,000 initial charge per connection to both the LCN and NMS Network plus \$22,000 monthly charge per connection to both the LCN and NMS Network.</p> <p>For purposes of these charges, the LCN Circuit and NMS Network Circuit are together considered to be one connection, and so Users are not subject to two initial or two monthly charges.</p>
LCN and NMS Network Access	40 Gb LCN Circuit and 40 Gb NMS Network Circuit	<p>\$15,000 initial charge per connection to both the LCN and NMS Network plus \$22,000 monthly charge per connection to both the LCN and NMS Network.</p> <p>For purposes of these charges, the LCN Circuit and NMS Network Circuit are together considered to be one connection, and so Users are not subject to two initial or two monthly charges.</p>
<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</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"> <li>• For Users that order on or before December 31, 2020: \$3,000 monthly for first 24 months of service, and \$6,000 monthly thereafter</li> <li>• For Users that order after December 31,</li> </ul>

Cabinet Solution bundle. See Note 2 under “General Notes.”		2020: \$6,000 monthly
	Option B: 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	\$7,500 initial charge per bundle plus monthly charge per bundle as follows: <ul style="list-style-type: none"> <li>For Users that order on or before December 31, 2020: \$3,500 monthly for first 24 months of service, and \$7,000 monthly thereafter</li> <li>For Users that order after December 31, 2020: \$7,000 monthly</li> </ul>
	Option C: 1 kW partial cabinet, 1 LCN connection (10 Gb LX), 1 IP network connection (10 Gb), 2 NMS Network connections (10 Gb each), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol	\$10,000 initial charge per bundle plus monthly charge per bundle as follows: <ul style="list-style-type: none"> <li>For Users that order on or before December 31, 2020: \$7,000 monthly for first 24 months of service, and \$14,000 monthly thereafter</li> <li>For Users that order after December 31, 2020: \$14,000 monthly</li> </ul>
	Option D: 2 kW partial cabinet, 1 LCN connection (10 Gb LX), 1 IP network connection (10 Gb), 2 NMS Network connections (10 Gb each), 2 fiber cross connections and either the Network Time Protocol Feed or Precision Timing Protocol	\$10,000 initial charge per bundle plus monthly charge per bundle as follows: <ul style="list-style-type: none"> <li>For Users that order on or before December 31, 2020: \$7,500 monthly for first 24 months of service, and \$15,000 monthly thereafter</li> <li>For Users that order after December 31, 2020: \$15,000 monthly</li> </ul>
IP Network Access	1 Gb Circuit	\$2,500 per connection

		initial charge plus \$2,500 monthly per connection
IP Network and NMS Network Access	10 Gb IP Network Circuit and 10 Gb NMS Network Circuit	<p>\$10,000 initial charge per connection to both the IP Network and NMS Network plus \$11,000 monthly charge per connection to both the IP Network and NMS Network.</p> <p>For purposes of these charges, the IP Network Circuit and NMS Network Circuit are together considered to be one connection, and so Users are not subject to two initial or two monthly charges.</p>
IP Network and NMS Network Access	40 Gb IP Network Circuit and 40 Gb NMS Network Circuit	<p>\$10,000 initial charge per connection to both the IP Network and NMS Network plus \$18,000 monthly charge per connection to both the IP Network and NMS Network.</p> <p>For purposes of these charges, the IP Network Circuit and NMS Network Circuit are together considered to be one connection, and so Users are not subject to two initial or two monthly charges.</p>
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 Cboe Pitch BZX Gig shaped data and Cboe Pitch BYX Gig shaped data	<p>\$5,000 per connection initial charge plus monthly charge per connection of \$6,000</p> <p>Fees are subject to a 30-day testing period, during which</p>



		the monthly charge per connection is waived.
Wireless Connection for Third Party Data	Wireless connection of Cboe EDGX Gig shaped data and Cboe EDGA Gig shaped 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.
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.
Wireless Connection for Third Party Data	Wireless connection of NASDAQ Totalview Ultra (FPGA)	\$5,000 per connection initial charge plus monthly charge per connection of \$11,000  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 and BX Totalview-ITCH data	\$5,000 per connection initial charge plus monthly charge per connection of \$12,000  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 Ultra (FPGA) and BX Totalview-ITCH data	\$5,000 per connection initial charge plus monthly charge per connection of \$14,500  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 Toronto Stock Exchange (TSX)	\$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	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
	10Mb	\$800 monthly charge
	25Mb	\$1,200 monthly charge

	50Mb	\$1,800 monthly charge
	100Mb	\$2,500 monthly charge
Hosting Fee		\$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
Hot Hands Service****†	Allows Users to use on-site data center personnel to maintain User equipment, support network troubleshooting, rack	\$100 per half hour

	and stack, power recycling, and install and document cable.	
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.

† Fees for Hot Hands Services will be waived beginning on March 16, 2020 through the reopening of the Mahwah, New Jersey data center. The date of the reopening will be announced through a customer notice

## **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.

<b>Bandwidth of connection to Third Party System</b>	<b>Monthly recurring fee per connection to Third Party System</b>
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

<b>Third Party Systems</b>
Americas Trading Group (ATG)
BM&F Bovespa
Boston Options Exchange (BOX)
Canadian Securities Exchange (CSE)
Cboe BYX Exchange, Cboe BZX Exchange, Cboe EDGA Exchange, and Cboe EDGX Exchange
Cboe Exchange (Cboe) and Cboe C2 Exchange (C2)
Chicago Mercantile Exchange (CME Group)
Credit Suisse
Euronext Optiq Cash and Derivatives Unicast (EUA)
Euronext Optiq Cash and Derivatives Unicast (Production)
Investors Exchange (IEX)
ITG TriAct Matchnow
Miami International Securities Exchange
MIAX PEARL
Nasdaq
NASDAQ Canada (CXC, CXD, CX2)
NASDAQ ISE
Neo Aequitas
NYFIX Marketplace
Omega
OneChicago
OTC Markets Group
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.

<b>Third Party Data Feed</b>	<b>Monthly Recurring Connectivity Fee per Third Party Data Feed</b>
BM&F Bovespa	\$3,000
Boston Options Exchange (BOX)	\$1,000
Canadian Securities Exchange (CSE)	\$1,000
Cboe BZX Exchange (CboeBZX) and Cboe BYX Exchange (CboeBYX)	\$2,000
Cboe EDGX Exchange (CboeEDGX) and Cboe EDGA Exchange (CboeEDGA)	\$2,000
Cboe Exchange (Cboe) and Cboe C2 Exchange (C2)	\$2,000
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 $\leq$ 100 Mb	\$200
ICE Data Services Consolidated Feed > 100 Mb to $\leq$ 1 Gb	\$500
ICE Data Services Consolidated Feed > 1 Gb	\$1,000
ICE Data Services Consolidated Feed Shared Farm $\leq$ 100Mb	\$200
ICE Data Services Consolidated Feed Shared Farm > 100 Mb to $\leq$ 1 Gb	\$500
ICE Data Services Consolidated Feed Shared Farm > 1 Gb	\$1,000
ICE Data Services PRD	\$200
ICE Data Services PRD CEP	\$400
Intercontinental Exchange (ICE)	\$1,500
Investors Exchange (IEX)	\$1,000
ITG TriAct Matchnow	\$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
NASDAQ Canada (CXC, CXD, CX2)	\$1,500
NASDAQ ISE	\$1,000
Neo Aequitas	\$1,200
Omega	\$1,000
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

*\* ICE will cease to offer the GIF as a stand-alone product, which the Exchange has been informed by ICE is currently expected to occur before the end of 2020. The Exchange will announce the operative date through a customer notice. Any change fees that a User would otherwise incur as a result of the proposed change will be waived.*

#### *Connectivity to Suspended Third Party Systems and Suspended Third Party Data Feeds*

Connectivity to the Third Party Systems and Third Party Data Feeds listed below (“Suspended Services”) is available until May 24, 2021 (“Transition Period”). During the Transition Period, the Exchange will not charge any fees for the Suspended Services. At the conclusion of the Transition Period, any remaining customers of Suspended Services will have their Suspended Services terminated.

<b>Suspended Third Party Systems</b>
Long Term Stock Exchange (LTSE)
Members Exchange (MEMX)
MIAX Emerald
MIAX PEARL Equities
Morgan Stanley
TD Ameritrade

<b>Suspended Third Party Data Feeds</b>
ICE Data Services - ICE TMC
Members Exchange (MEMX)
MIAX Emerald



MIAX PEARL Equities
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*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

Late Payment of Dues, Fees, Fines and Charges <sup>6</sup>	
Number of Times Late Within Previous Twelve Months:	Amount of Charge
1	\$250 or 1.0% of Invoice Amount, Whichever is Greater
2	\$500 or 1.5% of Invoice Amount, Whichever is Greater

## NYSE ARCA MARKETPLACE: GENERAL

### I. 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.

### II. Aggregate Billing of Affiliated ETP Holders

(a) For purposes of applying any provision of the Schedule of Fees and Charges for Exchange Services (“Schedule of Fees”) where the charge assessed, or credit provided, by the Exchange depends upon the volume of a ETP Holder's activity, a ETP Holder may request that the Exchange aggregate its eligible activity with the eligible activity of its affiliate(s).

(1) A ETP Holder requesting aggregation of eligible affiliate activity shall be required to certify to the Exchange which affiliate it seeks to aggregate prior to receiving approval for aggregation, and shall be required to inform the Exchange immediately of any event that causes an entity to cease to be an affiliate. The Exchange shall review available information regarding the entities and reserves the right to request additional information to verify the affiliate status of an entity. The Exchange shall approve a request, unless it determines that the certificate is not accurate.

(2) If two or more ETP Holders become affiliated on or prior to the sixteenth day of a month, and submit the required request for aggregation on or prior to the twenty-second day of the month, an approval of the request by the Exchange shall be deemed to be effective as of the first day of that month. If two or more members become affiliated after the sixteenth day of a month, or submit a request for aggregation after the twenty-second day of the month, an approval of the request by the Exchange shall be deemed to be effective as of the first day of the next calendar month.

(b) For purposes of applying any provision of the Schedule of Fees where the charge assessed, or credit provided, by the Exchange depends upon the volume of a ETP Holder's activity,

<sup>6</sup> Transaction fees are excluded from the late payment of dues, fees, fines and charges.

references to an entity (excluding references to DMMs and where otherwise not permitted on the Price List) shall be deemed to include the entity and its affiliate(s) that have been approved for aggregation.

**(c)** For purposes of this Schedule of Fees, the term “affiliate” shall mean any ETP Holder under 75% common ownership or control of that ETP Holder.

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