



FEE SCHEDULE

AS OF SEPTEMBER 30, 2019

All Exchange invoices are due in full on a timely basis and payable in accordance with MIAX Emerald Rule 208. All disputes related to fees, dues or other charges must be submitted to the Exchange in writing no later than sixty (60) days after the date of the monthly invoice and must be accompanied by supporting documentation.

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MIAX Emerald Fee Schedule

Definitions

For purposes of assessing fees, the following definitions should serve as guidance. Any definitions that are also defined in Exchange Rules include a cross reference to the corresponding Exchange Rule. Rebates and fees are listed per contract per leg unless otherwise noted.

“ABBO” means the best bid(s) or offer(s) disseminated by other Eligible Exchanges (defined in Exchange Rule 1400(f)) and calculated by the Exchange based on market information received by the Exchange from OPRA. See Exchange Rule 100.

“Affiliate” means (i) an affiliate of a Member of at least 75% common ownership between the firms as reflected on each firm’s Form BD, Schedule A, or (ii) the Appointed Market Maker of an Appointed EEM (or, conversely, the Appointed EEM of an Appointed Market Maker). An “Appointed Market Maker” is a MIAX Emerald Market Maker (who does not otherwise have a corporate affiliation based upon common ownership with an EEM) that has been appointed by an EEM and an “Appointed EEM” is an EEM (who does not otherwise have a corporate affiliation based upon common ownership with a MIAX Emerald Market Maker) that has been appointed by a MIAX Emerald Market Maker, pursuant to the following process. A MIAX Emerald Market Maker appoints an EEM and an EEM appoints a MIAX Emerald Market Maker, for the purposes of the Fee Schedule, by each completing and sending an executed Volume Aggregation Request Form by email to membership@miaxoptions.com no later than 2 business days prior to the first business day of the month in which the designation is to become effective. Transmittal of a validly completed and executed form to the Exchange along with the Exchange’s acknowledgement of the effective designation to each of the Market Maker and EEM will be viewed as acceptance of the appointment. The Exchange will only recognize one designation per Member. A Member may make a designation not more than once every 12 months (from the date of its most recent designation), which designation shall remain in effect unless or until the Exchange receives written notice submitted 2 business days prior to the first business day of the month from either Member indicating that the appointment has been terminated. Designations will become operative on the first business day of the effective month and may not be terminated prior to the end of the month. Execution data and reports will be provided to both parties.

A Complex PRIME or “cPRIME” Order is a complex order (as defined in Rule 518(a)(5)) that is submitted for participation in a cPRIME Auction. Trading of cPRIME Orders is governed by Rule 515A, Interpretation and Policy .12. See Exchange Rule 518(b)(7).

A “cross-connect” occurs when the affected third-party system is sited at the same data center where MIAX Emerald systems are sited, and the third-party connects to MIAX Emerald through the data center, rather than connecting directly to MIAX Emerald outside of the data center.

“Dedicated” (cross-connect) means cross-connect that provides network connectivity solely to the trading platforms, market data systems, and test systems of MIAX Emerald. The following connection is Dedicated to MIAX Emerald: 10 Gigabit ULL.

“Shared” (cross-connect) means cross-connect that provides network connectivity to the trading platforms, market data systems, test systems, and/or disaster recovery facilities of MIAX Emerald, MIAX and MIAX PEARL via a single, shared connection. The following connections can be Shared across MIAX Emerald, MIAX and MIAX PEARL: 1 Gigabit, 1 Gigabit Disaster Recovery, and 10 Gigabit Disaster Recovery.

“CTCV” means Customer Total Consolidated Volume calculated as the total national volume cleared at The Options Clearing Corporation in the Customer range in those classes listed on MIAX Emerald for the month for which fees apply, excluding volume cleared at the Options Clearing Corporation in the Customer range executed during the period of time in which the Exchange experiences an Exchange System Disruption (solely in the option classes of the affected Matching Engine).

“CTD Port” or “Clearing Trade Drop Port” provides an Exchange Member with a real-time clearing trade updates. The updates include the Member’s clearing trade messages on a low latency, real-time basis. The trade messages are routed to a Member’s connection containing certain information. The information includes, among other things, the following: (i) trade date and time; (ii) symbol information; (iii) trade price/size information; (iv) Member type (for example, and without limitation, Market Maker, Electronic Exchange Member, Broker-Dealer); and (v) Exchange MPID for each side of the transaction, including Clearing Member MPID.

“EEM Clearing Firm” means an EEM that solely clears transactions on the Exchange and does not connect to the Exchange via either the FIX Interface or MEI.

“EENI” means the Emerald Express Network Interconnect, which is a network infrastructure which provides Members and non-Members network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facilities of MIAX Emerald. When utilizing a Shared cross-connect, the EENI can also be configured to offer network connectivity to the trading platforms, market data systems, test systems, and disaster recovery facilities of MIAX and MIAX PEARL. When utilizing a Dedicated cross-connect, the EENI can only be configured to offer network connectivity to the trading platforms, market data systems, and test systems of MIAX Emerald. The EENI consists of the low latency and ultra-low latency (“ULL”) connectivity options set forth in the Exchange’s Fee Schedule.

“Electronic Exchange Member” or “EEM” means the holder of a Trading Permit who is not a Market Maker. Electronic Exchange Members are deemed “members” under the Exchange Act.

“Exchange System Disruption” means an outage of a Matching Engine or collective Matching Engines for a period of two consecutive hours or more, during trading hours.

“Excluded Contracts” means any contracts routed to an away market for execution.

“Extranet Provider” means a technology provider that connects with MIAX Emerald systems and in turn provides such connectivity to MIAX Emerald participants that do not connect directly with MIAX Emerald.

“FIX Port” means an interface with MIAX Emerald systems that enables the Port user to submit simple and complex orders electronically to MIAX Emerald.

“Full Service MEI Ports” means a port which provides Market Makers with the ability to send Market Maker simple and complex quotes, eQuotes, and quote purge messages to the MIAX Emerald System. Full Service MEI Ports are also capable of receiving administrative information. Market Makers are limited to two Full Service MEI Ports per Matching Engine.

“Limited Service MEI Ports” means a port which provides Market Makers with the ability to send simple and complex eQuotes and quote purge messages only, but not Market Maker Quotes, to the MIAX Emerald System. Limited Service MEI Ports are also capable of receiving administrative information. Market Makers initially receive two Limited Service MEI Ports per Matching Engine.

“Market Maker” refers to “Lead Market Maker” (“LMM”), “Primary Lead Market Maker” (“PLMM”) and “Registered Market Maker” (“RMM”), collectively. See Exchange Rule 100.

“Matching Engine” means a part of the MIAX Emerald electronic system that processes options orders and trades on a symbol-by-symbol basis. Some Matching Engines will process option classes with multiple root symbols, and other Matching Engines may be dedicated to one single option root symbol (for example, options on SPY may be processed by one single Matching Engine that is dedicated only to SPY). A particular root symbol may only be assigned to a single designated Matching Engine. A particular root symbol may not be assigned to multiple Matching Engines.

MIAX Emerald Express Interface (“MEI”) is a connection to the MIAX Emerald System that enables Market Makers to submit simple and complex electronic quotes to MIAX Emerald.

“Member” means an individual or organization approved to exercise the trading rights associated with a Trading Permit. Members are deemed “members” under the Exchange Act. See Exchange Rule 100.

“MIAX” means Miami International Securities Exchange, LLC. See Exchange Rule 100.

“MIAX PEARL” means MIAX PEARL, LLC. See Exchange Rule 100.

Price Improvement Mechanism (“PRIME”) is a process by which a Member may electronically submit for execution (“Auction”) an order it represents as agent (“Agency Order”) against principal interest, and/or an Agency Order against solicited interest. See Exchange Rule 515A(a).

“Priority Customer” means a person or entity that (i) is not a broker or dealer in securities, and (ii) does not place more than 390 orders in listed options per day on average during a calendar month for its own beneficial accounts(s). The number of orders shall be counted in accordance with Interpretation and Policy .01 of Exchange Rule 100. See Exchange Rule 100, including Interpretation and Policy .01.

“Public Customer” means a person that is not a broker or dealer in securities. See Exchange Rule 100.

“Purge Ports” provide Market Makers with the ability to send quote purge messages to the MIAX Emerald System. Purge Ports are not capable of sending or receiving any other type of messages or information.

“Service Bureau” means a technology provider that offers and supplies technology and technology services to a trading firm that does not have its own proprietary system.

“Third Party Vendor” means a subscriber of MIAX Emerald’s market and other data feeds, which they in turn use for redistribution purposes.

“Waiver Period” means, for each applicable fee, the period of time from the initial effective date of the MIAX Emerald Fee Schedule until such time that the Exchange has an effective fee filing establishing the applicable fee. The Exchange will issue a Regulatory Circular announcing the establishment of an applicable fee that was subject to a Waiver Period at least fifteen (15) days prior to the termination of the Waiver Period and effective date of any such applicable fee.

Except as otherwise provided in this Fee Schedule as described below, all fees set forth in this Fee Schedule are specific to and assessed exclusively for use of MIAX Emerald and do not include access to and/or use of MIAX or MIAX PEARL.

1) Transaction Fees

a) Exchange Rebates/Fees

i) Transaction Fees

Tiers and their application are defined in Tier section 1)a)ii)

Members and Their Affiliates In Penny Classes Simple/Complex/PRIME/cPRIME									
Origin	Tier	Simple		Complex [#]			PRIME/cPRIME ^o		
		Maker	Taker [^]	Maker (Contra Origins ex Priority Customer)	Maker (Contra Priority Customer Origin)	Taker	Agency	Contra	Responder
Market Maker	1	(\$0.35)	\$0.50	\$0.10	\$0.47	\$0.50	\$0.05	\$0.05	\$0.05
	2	(\$0.35)	\$0.50	\$0.10	\$0.47	\$0.50	\$0.05	\$0.05	\$0.05
	3	(\$0.35)	\$0.50	\$0.10	\$0.47	\$0.50	\$0.05	\$0.05	\$0.05
	4	(\$0.45)	\$0.48	\$0.10	\$0.47	\$0.50	\$0.05	\$0.05	\$0.05
Non-MIAX Emerald Market Maker	1	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.48	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
Firm Proprietary/ Broker- Dealer	1	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.49	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
Non-Priority Customer	1	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.50	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.49	\$0.20	\$0.50	\$0.50	\$0.05	\$0.05	\$0.05
Priority Customer*	1	(\$0.48) [∇]	\$0.47	(\$0.25)	(\$0.25)	(\$0.25)	\$0.00	\$0.05	\$0.05
	2	(\$0.48) [∇]	\$0.47	(\$0.40)	(\$0.40)	(\$0.40)	\$0.00	\$0.05	\$0.05
	3	(\$0.48) [∇]	\$0.47	(\$0.45)	(\$0.45)	(\$0.45)	\$0.00	\$0.05	\$0.05
	4	(\$0.53)	\$0.45	(\$0.50)	(\$0.50)	(\$0.50)	\$0.00	\$0.05	\$0.05

Members and Their Affiliates In Non-Penny Classes Simple/Complex/PRIME/cPRIME									
Origin	Tier	Simple		Complex [#]			PRIME/cPRIME ^o		
		Maker	Taker [^]	Maker (Contra Origins ex Priority Customer)	Maker (Contra Priority Customer Origin)	Taker [~]	Agency	Contra	Responder
Market Maker	1	(\$0.45)	\$0.99	\$0.20	\$0.86	\$0.88	\$0.05	\$0.05	\$0.05
	2	(\$0.45)	\$0.99	\$0.20	\$0.86	\$0.88	\$0.05	\$0.05	\$0.05
	3	(\$0.45)	\$0.99	\$0.20	\$0.86	\$0.86	\$0.05	\$0.05	\$0.05
	4	(\$0.75)	\$0.94	\$0.20	\$0.86	\$0.86	\$0.05	\$0.05	\$0.05
Non-MIAX Emerald Market Maker	1	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.94	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
Firm Proprietary/ Broker-Dealer	1	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.94	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
Non-Priority Customer	1	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	2	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	3	(\$0.25)	\$0.99	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
	4	(\$0.25)	\$0.94	\$0.20	\$0.88	\$0.88	\$0.05	\$0.05	\$0.05
Priority Customer*	1	(\$0.85)	\$0.85	(\$0.40)	(\$0.40)	(\$0.40)	\$0.00	\$0.05	\$0.05
	2	(\$0.85)	\$0.85	(\$0.60)	(\$0.60)	(\$0.60)	\$0.00	\$0.05	\$0.05
	3	(\$0.85)	\$0.85	(\$0.70)	(\$0.70)	(\$0.75)	\$0.00	\$0.05	\$0.05
	4	(\$1.05)	\$0.82	(\$0.87)	(\$0.87)	(\$0.85)	\$0.00	\$0.05	\$0.05

[^] Contra to Priority Customer Simple Orders, Origins ex Priority Customer Simple Orders will be charged \$0.50 and Priority Customer Simple Orders will be charged \$0.49 in Penny classes, and Origins ex Priority Customer Simple Orders will be charged \$1.10 and Priority Customer Simple Orders will be charged \$0.85 in Non-Penny classes.

* Priority Customer Complex Orders contra to Priority Customer Complex Orders are neither charged nor rebated. Priority Customer Complex Orders that leg into the Simple book are neither charged nor rebated.

[~] A \$0.05 Complex surcharge for Origins ex Priority Customer for Complex Orders that take liquidity from the Complex Order Book in Non-Penny classes.

[#] For orders in a Complex Auction, Priority Customer Complex Orders will receive the Complex Taker rebate based on the tier achieved when contra to an Origin that is not a Priority Customer. Origins that are not a Priority Customer will be charged the applicable Maker fee depending on the contra, based on the tier achieved.

^o For PRIME and cPRIME, the per contract rebate or fee for the preexisting contra-side interest that trades with the Agency side will be waived. PRIME/cPRIME Responder side interest that trades with unrelated Agency side interest trades as Taker will be subject to Simple or Complex rates, as applicable.

[∇] Simple Maker rebate in SPY, QQQ and IWM is (\$0.50) for Priority Customer Origin in Tiers 1, 2 and 3.

Notes Accompanying Tables Above

During the Opening Rotation and the ABBO uncrossing, the per contract rebate or fee will be waived for all Origins.

ii) Tiers and their Application

Tiers are determined on a monthly basis. Tiers are determined based on three (3) alternative calculation methods. The calculation method that results in the highest Tier achieved by the Member shall apply to all Origin types by the Member. Following are the three (3) alternative calculation methods:

1. Total Member sides volume, based on % of CTCV (“Method 1”);
2. Total Emerald Market Maker sides volume, based on % of CTCV (“Method 2”);
3. Total Priority Customer, Maker sides volume, based on % of CTCV (“Method 3”).

Tier	Method 1	Method 2	Method 3
1	0.00% - 0.40%	0.00% - 0.10%	0.00% - 0.10%
2	Above 0.40% - 0.80%	Above 0.10% - 0.50%	Above 0.10% - 0.35%
3	Above 0.80% - 1.20%	Above 0.50% - 0.75%	Above 0.35% - 0.60%
4	Above 1.20%	Above 0.75%	Above 0.60%

Each method is calculated based on the total monthly sides executed by the Member in all options classes on MIAX Emerald in the relevant Origin(s) and/or applicable liquidity (i.e. Priority Customer Maker), not including Excluded Contracts, (as the numerator) expressed as a percentage of (divided by) CTCV (as the denominator). The per contract transaction rebates and fees shall be applied retroactively to all eligible volume once the Tier has been reached by the Member. The Exchange aggregates the volume of Members and their Affiliates in the Tiers.

iii) QCC Fees

Types of Market Participants	QCC Order		
	Per Contract Fee for Initiator	Per Contract Fee for Contra-side	Per Contract Rebate for Initiator
<i>Priority Customer</i>	\$0.00	\$0.00	(\$0.10)
<i>Public Customer that is Not a Priority Customer</i>	\$0.15	\$0.15	(\$0.10)
<i>MIAX Emerald Market Maker</i>	\$0.15	\$0.15	(\$0.10)
<i>Non-MIAX Emerald Market Maker</i>	\$0.15	\$0.15	(\$0.10)
<i>Non-Member Broker-Dealer</i>	\$0.15	\$0.15	(\$0.10)
<i>Firm</i>	\$0.15	\$0.15	(\$0.10)

Rebates will be delivered to the Member that enters the order into the MIAX Emerald system, but will only be paid on the initiating side of the QCC transaction. However, no rebates will be paid for QCC transactions for which both the initiator and contra-side orders are Priority Customers. A QCC transaction is comprised of an ‘initiating order’ to buy (sell) at least 1,000 contracts coupled with a contra-side order to sell (buy) an equal number of contracts.

iv) cQCC Fees

Types of Market Participants	cQCC Order		
	Per Contract Fee for Initiator	Per Contract Fee for Contra-side	Per Contract Rebate for Initiator
<i>Priority Customer</i>	\$0.00	\$0.00	(\$0.10)
<i>Public Customer that is Not a Priority Customer</i>	\$0.15	\$0.15	(\$0.10)
<i>MIAX Emerald Market Maker</i>	\$0.15	\$0.15	(\$0.10)
<i>Non-MIAX Emerald Market Maker</i>	\$0.15	\$0.15	(\$0.10)
<i>Non-Member Broker-Dealer</i>	\$0.15	\$0.15	(\$0.10)
<i>Firm</i>	\$0.15	\$0.15	(\$0.10)

All fees and rebates are per contract per leg. Rebates will be delivered to the Member that enters the order into the MIAX Emerald system, but will only be paid on the initiating side of the cQCC transaction. However, no rebates will be paid for cQCC transactions for which both the initiator and contra-side orders are Priority Customers. A cQCC transaction is comprised of an ‘initiating complex order’ to buy (sell) where each component is at least 1,000 contracts that is identified as being part of a qualified contingent trade, coupled with a contra-side complex order or orders to sell (buy) an equal number of contracts.

v) C2C and cC2C Fees

Types of Market Participants	C2C and cC2C Order Per Contract Fee/Rebate
<i>Priority Customer</i>	\$0.00

All fees and rebates are per contract per leg. A C2C Order is comprised of a Priority Customer Order to buy and a Priority Customer Order to sell at the same price and for the same quantity. A cC2C Order is comprised of one Priority Customer complex order to buy and one Priority Customer complex order to sell at the same price and for the same quantity.

vi) Complex Stock-Option Order Fees

The Exchange will charge a stock handling fee of \$0.0010 per share (capped at \$50 per order, per day) for the stock leg of stock-option orders (including stock-option eQuotes) executed against other stock-option orders in the complex order book, which the Exchange must route to an outside venue. In addition, the Exchange will pass through to the Member any fees assessed by the routing broker-dealer utilized by the Exchange with respect to the execution of the stock leg of any such order (with such fees to be passed through at cost).

b) Fees for Customer Orders Routed to another Options Exchange

MIAX Emerald will assess a Routing Fee to market participants on all orders routed to and executed on an away market as set forth in the table below.

Description	Fees
Routed, Priority Customer, Penny Pilot, to: NYSE American, BOX, Cboe, Cboe EDGX Options, MIAX Options, Nasdaq MRX, Nasdaq PHLX (except SPY), Nasdaq BX Options	\$0.15
Routed, Priority Customer, Penny Pilot, to: NYSE Arca Options, Cboe BZX Options, Cboe C2, Nasdaq GEMX, Nasdaq ISE, NOM, Nasdaq PHLX (SPY only), MIAX PEARL	\$0.65
Routed, Priority Customer, Non-Penny Pilot, to: NYSE American, BOX, Cboe, Cboe EDGX Options, MIAX Options, Nasdaq ISE, Nasdaq MRX, Nasdaq PHLX, Nasdaq BX Options	\$0.15
Routed, Priority Customer, Non-Penny Pilot, to: NYSE Arca Options, Cboe BZX Options, Cboe C2, MIAX PEARL, Nasdaq GEMX, NOM	\$1.00
Routed, Public Customer that is not a Priority Customer, Penny Pilot, to: NYSE American, NYSE Arca Options, Cboe BZX Options, BOX, Cboe, Cboe C2, Cboe EDGX Options, Nasdaq GEMX, Nasdaq ISE, Nasdaq MRX, MIAX Options, MIAX PEARL, NOM, Nasdaq PHLX, Nasdaq BX Options	\$0.65
Routed, Public Customer that is not a Priority Customer, Non-Penny Pilot, to: MIAX Options, NYSE American, Cboe, Nasdaq PHLX, Nasdaq ISE, Cboe EDGX Options	\$1.00
Routed, Public Customer that is not a Priority Customer, Non-Penny Pilot, to: Cboe C2, BOX, Nasdaq MRX, Nasdaq BX Options, NOM, MIAX PEARL	\$1.15
Routed, Public Customer that is not a Priority Customer, Non-Penny Pilot, to: Cboe BZX Options, NYSE Arca Options, Nasdaq GEMX	\$1.25

2) Regulatory Fees

a) Sales Value Fee

Current Fee Rate: Defined amount per \$1,000,000 of the aggregate dollar amount of covered sales.

The Sales Value Fee is assessed by the Exchange to each Member for sales on the Exchange for which the Exchange is obligated to pay a fee to the SEC pursuant to Section 31 of the Exchange Act. The Sales Value Fee is equal to the Section 31 fee rate multiplied by the Member's aggregate dollar amount of covered sales resulting from options transactions occurring on the Exchange during any computational period. To the extent there may be any excess monies collected under this rule, the Exchange may retain those monies to help fund general operating expenses. The sales transactions to which the fee applies are sales of options (other than options on a security index) and the sales of securities resulting from the exercise of physical-delivery options. For a detailed description of the Sales Value Fee, see MIAX Emerald Rule 1207.

Sales Value Fee	Per Executed Sell Contract side and Sales of Securities Resulting from the Exercise of Physical Delivery Options (per million dollars in notional value)
All Classes	Rate set annually and sometimes adjusted semi-annually by the SEC. See http://www.sec.gov/divisions/marketreg/sec31info.htm for the current rate.

b) Options Regulatory Fee

The per-contract Options Regulatory Fee ("ORF") is assessed by MIAX Emerald to each MIAX Emerald Member for all options transactions, including Mini Options, cleared or ultimately cleared by the Member that are cleared by OCC in the "customer" range, regardless of the exchange on which the transaction occurs. The ORF is not assessed on outbound linkage trades. The ORF is collected by OCC on behalf of MIAX Emerald from either (1) a Member that was the ultimate clearing firm for the transaction or (2) a non-Member that was the ultimate clearing firm where a Member was the executing clearing firm for the transaction. The Exchange uses reports from OCC to determine the identity of the executing clearing firm and ultimate clearing firm. The Exchange may only increase or decrease the ORF 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 Regulatory Circular of any change in the amount of the fee at least 30 calendar days prior to the effective date of the change; except in the case of the September 30th ORF rate change.

Options Regulatory Fee (ORF)	Per Executed Contract side
All Classes	\$0.00060 \$0.0013, effective solely for the September 30, 2019 trading day (the "September 30 th ORF rate")

c) Web CRD Fees

The following fees will be collected and retained by FINRA through the Web Central Registration Depository (CRDSM) registration system for the registration of associated persons of Electronic Exchange Members and Market Maker organizations that are not also FINRA members:

GENERAL REGISTRATION FEES:

\$100.00	FINRA CRD Processing Fee
\$110.00	FINRA Disclosure Processing Fee (Form U4, Form U5, Form BD & amendments)
\$45.00	FINRA Annual System Processing Fee assessed only during Renewals

FINRA Fingerprint Card Processing Fees:

\$29.50	First card submission (electronic)
\$44.50	First card submission (hard copy)
\$15.00	Second card submission (electronic)
\$30.00	Second card submission (hard copy)
\$29.50	Third card submission (electronic)
\$44.50	Third card submission (hard copy)
\$30.00	FINRA Processing Fee for Fingerprint Results Submitted by Other SROs
\$00.00	MIAX Emerald Initial Registration Fee (Individual)
\$00.00	MIAX Emerald Annual Individual Renewal Fee
\$00.00	MIAX Emerald Transfer Fee
\$00.00	MIAX Emerald Termination Fee
\$00.00	MIAX Emerald Broker-Dealer Registration Fee
\$00.00	MIAX Emerald Broker-Dealer Renewal Fee

Continuing Education Fees:

\$55.00	Continuing Education Session Fee for All Registrations
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Qualification Examination Fee:

\$120.00	Series 57 Examination Fee
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Notes to Web CRD Fees:

The FINRA CRD Processing Fee applies to all initial, transfer, relicense, and dual registration Form U4 filings. This fee is assessed when a non-FINRA firm (i.e., a firm that is not a member of FINRA) submits its first initial, transfer, relicense, or dual registration Form U4 filing on behalf of a registered person. The FINRA Disclosure Processing Fee (Form U4, Form U5, Form BD, and Amendments) applies to all registration, transfer, or termination filings with new or amended disclosure information or that require certification, as well as any amendment to disclosure information. The Continuing Education Fee applies to each individual who is required to complete the Regulatory Element of the Continuing Education Requirements pursuant to MIAX Emerald Rule 1304.

3) Membership Fees

a) Application for MIAX Emerald Membership (One-Time Fee)

Type of Membership	Application Fee
Electronic Exchange Member	Fee waived for the Waiver Period
Market Maker	Fee waived for the Waiver Period

MIAX Emerald will assess a one-time Membership Application Fee on the earlier of (i) the date the applicant is certified in the membership system, or (ii) once an application for MIAX Emerald membership is finally denied.

b) Monthly Trading Permit Fee

MIAX Emerald will issue Trading Permits to Members that confer the ability to transact on MIAX Emerald. (For a complete description of MIAX Emerald Trading Permits, see MIAX Emerald Rule 200.) Members receiving Trading Permits during a particular calendar month will be assessed Trading Permit Fees according to the schedules below.

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee
Electronic Exchange Member	Fee waived for the Waiver Period

Monthly Trading Permit Fees will be assessed with respect to EEMs (other than Clearing Firms) in any month the EEM is certified in the membership system and the EEM is credentialed to use one or more FIX Ports in the production environment.

Monthly Trading Permit Fees will be assessed with respect to EEM Clearing Firms in any month the Clearing Firm is certified in the membership system to clear transactions on the Exchange.

Monthly Trading Permit Fees will be assessed with respect to Market Makers in any month the Market Maker is certified in the membership system, is credentialed to use one or more MEI Ports in the production environment and is assigned to quote in one or more classes.

Notwithstanding the foregoing, the calculation of the Trading Permit Fee for the first month in which the Trading Permit is issued will be pro-rated based on the number of trading days on which the Trading Permit was in effect divided by the total number of trading days in that month multiplied by the monthly rate.

Type of Trading Permit	Monthly MIAX Emerald Trading Permit Fee	Market Maker Assignments (the lesser of the applicable measurements below)	
		Per Class	% of National Average Daily Volume
Market Maker (includes RMM, LMM, PLMM)	Fee waived for the Waiver Period	Up to 10 Classes	Up to 20% of Classes by volume
	Fee waived for the Waiver Period	Up to 40 Classes	Up to 35% of Classes by volume
	Fee waived for the Waiver Period	Up to 100 Classes	Up to 50% of Classes by volume
	Fee waived for the Waiver Period	Over 100 Classes	Over 50% of Classes by volume up to all Classes listed on MIAX Emerald

For the calculation of the monthly Market Maker Trading Permit Fees, the number of classes is defined as the greatest number of classes the Market Maker was assigned to quote in on any given day within the calendar month and the class volume percentage is based on the total national average daily volume in classes listed on MIAX Emerald in the prior calendar quarter. Newly listed option classes are excluded from the calculation of the monthly Market Maker Trading Permit Fee until the calendar quarter following their listing, at which time the newly listed option classes will be included in both the per class count and the percentage of total national average daily volume. The Exchange will assess MIAX Emerald Market Makers the monthly Market Maker Trading Permit Fee based on the greatest number of classes listed on MIAX Emerald that the MIAX Emerald Market Maker was assigned to quote in on any given day within a calendar month and the applicable fee rate that is the lesser of either the per class basis or percentage of total national average daily volume measurement.

4) Testing and Certification Fees

a) Member Application Programming Interface (“API”) Testing and Certification Fee

Type of Member	API Testing and Certification Fee
Electronic Exchange Member	Fee waived for the Waiver Period
Market Maker	Fee waived for the Waiver Period

API Testing and Certification Fees for EEMs (other than Clearing Firms) will be assessed (i) initially per API for FIX, FXD and CTD in the month the EEM has been credentialed to use one or more ports in the production environment for the tested API, and (ii) each time an EEM initiates a change to its system that requires testing and certification.

API Testing and Certification Fees for EEM Clearing Firms will be assessed (i) initially per API in the month the EEM Clearing Firm has been credentialed to use one or more CTD Ports in the production environment, and (ii) each time an EEM Clearing Firm initiates a change to its system that requires testing and certification.

API Testing and Certification Fees for Market Makers will be assessed (i) initially per API for CTD and MEI in the month the Market Maker has been credentialed to use one or more ports in the production environment for the tested API and the Market Maker has been assigned to quote in one or more classes, and (ii) each time a Market Maker initiates a change to its system that requires testing and certification.

API Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange’s system that requires testing and certification.

b) Non-Member API Testing and Certification Fee

Non-Member	API Testing and Certification Fee
Third Party Vendors and Service Bureaus and other non-Members	Fee waived for the Waiver Period

API Testing and Certification Fees for Third Party Vendors, Service Bureaus and other non-Members will be assessed (i) initially per API for FIX, FXD, CTD and MEI in the month the non-Member has been credentialed to use one or more ports in the production environment for the tested API, and (ii) each time a Third Party Vendor, Service Bureau, or other non-Member initiates a change to its system that requires testing and certification.

API Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange’s system that requires testing and certification.

c) Member Network Connectivity Testing and Certification Fee

Type of Member	1 Gigabit Fee Per Connection	10 Gigabit ULL Fee Per Connection
Individual Firm	Fee waived for the Waiver Period	Fee waived for the Waiver Period

Member Network Connectivity Testing and Certification Fees will be assessed (i) initially per connection in the month the Individual Firm has been credentialed to use any API or market data feeds in the production environment utilizing the tested network connection, and (ii) each time an Individual Firm initiates a change to its system that requires network connectivity testing and certification.

Network Connectivity Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange’s system that requires testing and certification. Member Network Connectivity Testing and Certification Fees will not be assessed for testing and certification of connectivity to the Exchange’s Disaster Recovery Facility.

Members utilizing a single, Shared cross-connect to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange, MIAX PEARL, and MIAX will only be assessed one Network Connectivity Testing and Certification Fee per connection tested, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

d) Non-Member Network Connectivity Testing and Certification Fee

Non-Member	1 Gigabit Fee Per Connection	10 Gigabit ULL Fee Per Connection
Service Bureau/Extranet Provider and other non-Members	Fee waived for the Waiver Period	Fee waived for the Waiver Period

Non-Member Network Connectivity Testing and Certification fees will be assessed (i) initially per connection in the month the Service Bureau, Extranet Provider or other non-Member has been credentialed to use any API or market data feeds in the production environment using the tested network connection, and (ii) each time a Service Bureau, Extranet Provider or other non-Member initiates a change to its system that requires network connectivity testing and certification.

Network Connectivity Testing and Certification Fees will not be assessed in situations where the Exchange initiates a mandatory change to the Exchange’s system that requires testing and certification. Non-Member Network Connectivity Testing and Certification Fees will not be assessed for testing and certification of connectivity with the Exchange’s Disaster Recovery Facility.

Non-Members utilizing a single, Shared cross-connect to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange, MIAX PEARL, and MIAX will only be assessed one Network Connectivity Testing and Certification Fee per connection tested, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

5) System Connectivity Fees

a) Monthly Member Network Connectivity Fee

Member Network Connectivity Per Month	Primary/ Secondary Facility 1 Gigabit Per Connection	Disaster Recovery Facility 1 Gigabit Per Connection	Disaster Recovery Facility 10 Gigabit Per Connection	Primary/ Secondary Facility 10 Gigabit ULL Per Connection
Individual Firm	\$1,400.00	\$550.00	\$2,750.00	\$6,000.00

Monthly Member Network Connectivity fees for connectivity with the Primary/Secondary Facility will be assessed in any month the Member is credentialed to use any of the APIs or Market Data feeds via the network connection in the production environment and will be pro-rated when a Member makes a change to the connectivity (by adding or deleting connections) with such pro-rated fees based on the number of trading days that the Member has been credentialed to utilize any of the APIs or Market Data feeds in the production environment through such connection, divided by the total number of trading days in such month multiplied by the applicable monthly rate. Monthly Member Network Connectivity fees for connectivity with the Disaster Recovery Facility will be assessed in each month during which the Member has established connectivity with the Disaster Recovery Facility.

Members utilizing the MENI to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange, MIAX PEARL, and MIAX Options via a single, Shared connection will only be assessed one Monthly Member Network Connectivity Fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

b) Monthly Non-Member Network Connectivity Fee

Non-Member Network Connectivity Per Month	Primary/ Secondary Facility 1 Gigabit Per Connection	Disaster Recovery Facility 1 Gigabit Per Connection	Disaster Recovery Facility 10 Gigabit Per Connection	Primary/ Secondary Facility 10 Gigabit ULL Per Connection
Service Bureau/ Extranet Provider and other non-Members	\$1,400.00	\$550.00	\$2,750.00	\$6,000.00

Monthly Non-Member Network Connectivity fees for connectivity with the Primary/Secondary Facility will be assessed in each month the Non-Member has been credentialed to use any of the APIs or Market Data feeds via the network connection in the production environment and will be pro-rated when a Non-Member makes a change to the connectivity (by adding or deleting connections) with such pro-rated fees based on the number of trading days that the Non-Member has been credentialed to utilize any of the APIs or Market Data feeds in the production environment through such connection, divided by the total number of trading days in such month multiplied by the applicable monthly rate. Monthly Non-Member Network Connectivity fees for connectivity with the Disaster Recovery Facility will be assessed in each month during which the Non-Member has established connectivity with the Disaster Recovery Facility.

Non-Members utilizing the MENI to connect to the trading platforms, market data systems, test systems, and disaster recovery facilities of the Exchange, MIAX PEARL, and MIAX Options via a single, Shared connection will only be assessed one Monthly Non-Member Network Connectivity Fee per connection, regardless of the trading platforms, market data systems, test systems, and disaster recovery facilities accessed via such connection.

c) Pass-Through of External Connectivity Fees

MIAX Emerald will assess External Connectivity Fees to Members and non-Members that establish connections with MIAX Emerald through a third-party. Fees assessed to MIAX Emerald by third-party external vendors on behalf of a Member or non-Member connecting to MIAX Emerald (including cross-connects), will be passed through to the Member or non-Member. The External Connectivity Fees passed through can include one-time set-up fees, monthly charges, and other fees charged to MIAX Emerald by a third-party for the benefit of a Member or non-Member.

d) Port Fees

i) FIX Port Fees

MIAX Emerald will assess monthly Financial Information Exchange (“FIX”) Port Fees on Members in each month the Member is credentialed to use a FIX Port in the production environment and based upon the number of credentialed FIX Ports.

FIX Port Fees	MIAX Emerald Monthly Port Fees Includes Connectivity to the Primary, Secondary and Disaster Recovery Data Centers
1st FIX Port	Fee waived for the Waiver Period
FIX Ports 2 through 5	Fee waived for the Waiver Period
Additional FIX Ports over 5	Fee waived for the Waiver Period

ii) MEI Port Fees

Monthly MIAX Emerald MEI Fees	Market Maker Assignments (the lesser of the applicable measurements below)	
	Per Class	% of National Average Daily Volume
Fee waived for the Waiver Period*	Up to 5 Classes	Up to 10% of Classes by volume
Fee waived for the Waiver Period*	Up to 10 Classes	Up to 20% of Classes by volume
Fee waived for the Waiver Period*	Up to 40 Classes	Up to 35% of Classes by volume
Fee waived for the Waiver Period*	Up to 100 Classes	Up to 50% of Classes by volume
Fee waived for the Waiver Period*	Over 100 Classes	Over 50% of Classes by volume up to all Classes listed on MIAX Emerald

* Fees for Additional Limited Service MEI Ports are not subject to the Waiver Period.

MIAX Emerald will assess monthly MIAX Emerald Express Interface (“MEI”) Port Fees on Market Makers in each month the Member has been credentialed to use the MEI Port in the production environment and has been assigned to quote in at least one class. The amount of the monthly MEI Port Fee will be based upon the number of classes in which the Market Maker was assigned to quote on any given day within the calendar month, and upon the class volume percentages set forth in the above table. The class volume

percentage is based on the total national average daily volume in classes listed on MIAX Emerald in the prior calendar quarter. Newly listed option classes are excluded from the calculation of the monthly MEI Port Fee until the calendar quarter following their listing, at which time the newly listed option classes will be included in both the per class count and the percentage of total national average daily volume. The Exchange will assess MIAX Emerald Market Makers the monthly MEI Port Fee based on the greatest number of classes listed on MIAX Emerald that the MIAX Emerald Market Maker was assigned to quote in on any given day within a calendar month and the applicable fee rate that is the lesser of either the per class basis or percentage of total national average daily volume measurement.

MEI Port users will be allocated two (2) Full Service MEI Ports and two (2) Limited Service MEI Ports per Matching Engine to which they connect. MEI Port Fees include MEI Ports at the Primary, Secondary and Disaster Recovery data centers. MIAX Emerald Market Makers may request additional Limited Service MEI Ports (“Additional Limited Service MEI Ports”) for which MIAX Emerald will assess MIAX Emerald Market Makers \$50 per month per Additional Limited Service MEI Port for each Matching Engine. Market Makers are limited to six Additional Limited Service MEI Ports per Matching Engine, for a total of eight per Matching Engine.

A MIAX Emerald Market Maker may request and be allocated two (2) Purge Ports per Matching Engine to which it connects. For each month in which the MIAX Emerald Market Maker has been credentialed to use Purge Ports in the production environment and has been assigned to quote in at least one class, the Exchange will assess the MIAX Emerald Market Maker a flat fee which will be waived for the Waiver Period, regardless of the number of Purge Ports allocated to the MIAX Emerald Market Maker.

iii) Clearing Trade Drop Port Fees

Description	Monthly Fee
Real-Time CTD Information	Fee waived for the Waiver Period

Clearing Trade Drop (“CTD”) provides Exchange Members with real-time clearing trade updates. The updates include the Member’s clearing trade messages on a low latency, real-time basis. The trade messages are routed to a Member's connection containing certain information. The information includes, among other things, the following: (i) trade date and time; (ii) symbol information; (iii) trade price/size information; (iv) Member type (for example, and without limitation, Market Maker, Electronic Exchange Member, Broker-Dealer); (v) Exchange Member Participant Identifier (“MPID”) for each side of the transaction, including Clearing Member MPID; and (vi) strategy specific information for complex transactions. CTD Port Fees will be assessed in any month the Member is credentialed to use the CTD Port in the production environment.

iv) FIX Drop Copy Port Fees

Description	MIAX Emerald Monthly Port Fees
	Includes connectivity to the Primary, Secondary and Disaster Recovery Data Centers
FIX Drop Copy Port	Fee waived for the Waiver Period

The FIX Drop Copy (“FXD”) Port is a messaging interface that will provide a copy of real-time trade execution, trade correction and trade cancellation information to FXD Port users who subscribe to the service. FXD Port users are those users who are designated by an EEM to receive the information and the information is restricted for use by the EEM. FXD Port Fees will be assessed in any month the Member is credentialed to use the FXD Port in the production environment.

e) Electronic Exchange Member MPID Fees

MIAX Emerald will assess monthly Exchange MPID fees to EEMs, based upon the number of MPIDs assigned to the particular EEM in a given month in each month the Member is credentialed to use such MPIDs in the production environment.

EEM MPID Fees	EEM Monthly MPID Fees
1st MPID per EEM	Fee waived for the Waiver Period
2 nd through 5 th EEM MPID	Fee waived for the Waiver Period
Each Additional EEM MPID over 5	Fee waived for the Waiver Period

f) Member and Non-Member Technical Support Request Fee

Members and non-Members that request MIAX Emerald technical support at any of the MIAX Emerald data centers will be assessed a fee of \$200 per hour for such technical support.

6) Market Data Fees

a) MIAX Emerald Top of Market (“ToM”) and Complex Top of Market (“cToM”)

Distributor Type	ToM Monthly Fee	cToM Monthly Fee
Internal Distributor	Fee waived for the Waiver Period	Fee waived for the Waiver Period
External Distributor	Fee waived for the Waiver Period	Fee waived for the Waiver Period

MIAX Emerald will assess Market Data Fees (as applicable) to ToM and cToM on Internal and External Distributors in each month the Distributor is credentialed to use ToM or cToM in the production environment. A Distributor of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. Market Data Fees for ToM and/or cToM, as applicable, will be reduced for new Distributors for the first month during which they subscribe to ToM and/or cToM, as applicable, based on the number of trading days that have been held during the month prior to the date on which they have been credentialed to use ToM and/or cToM, as applicable, in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees described above, which is the percentage of the number of trading days remaining in the affected

calendar month as of the date on which they have been credentialed to use ToM and/or cToM in the production environment, divided by the total number of trading days in the affected calendar month.

b) Administrative Information Subscriber (“AIS”)

Distributor Type	Monthly Fee
Internal Distributor	Fee waived for the Waiver Period
External Distributor	Fee waived for the Waiver Period

MIAX Emerald will assess Market Data Fees applicable to AIS on Internal and External Distributors in each month the Distributor is credentialed to use AIS in the production environment. A Distributor of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. Market Data Fees for AIS will be reduced for new Distributors for the first month during which they have been credentialed to use AIS in the production environment, based on the number of trading days that have been held during the month prior to the date on which they have been credentialed to use AIS in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees described above, which is the percentage of the number of trading days remaining in the affected calendar month as of the date on which they have been credentialed to use AIS in the production environment, divided by the total number of trading days in the affected calendar month. AIS includes administrative information for simple and complex orders.

c) MIAX Order Feed (“MOR”)

Distributor Type	Monthly Fee
Internal Distributor	Fee waived for the Waiver Period
External Distributor	Fee waived for the Waiver Period

MIAX Emerald will assess Market Data Fees applicable to MOR on Internal and External Distributors in each month the Distributor is credentialed to use MOR in the production environment. A Distributor of MIAX Emerald data is any entity that receives a feed or file of data either directly from MIAX Emerald or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All Distributors are required to execute a MIAX Emerald Distributor Agreement. Market Data Fees for MOR will be reduced for new Distributors for the first month during which they have been credentialed to use MOR in the production environment, based on the number of trading days that have been held during the month prior to the date on which they have been credentialed to use MOR in the production environment. Such new Distributors will be assessed a pro-rata percentage of the fees described above, which is the percentage of the number of trading days remaining in the affected calendar month as of the date on which they have been credentialed to use MOR in the production environment, divided by the total number of trading days in the affected calendar month. MOR subscribers will receive information for simple and complex orders.