

## NYSE Arca Equities, Inc.

### SCHEDULE OF FEES AND CHARGES FOR EXCHANGE SERVICES

#### 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)<sup>3</sup>

<p>Tier 1: For ETP Holders and Market Makers that (i) transact an average daily share volume per month greater than 80 million shares (including transactions that take liquidity, provide liquidity, or route to away market centers) AND (ii) provide liquidity an average daily share volume per month greater than 25 million shares</p>	<p><u>Tape A and Tape C Securities:</u></p> <p>\$0.0027 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.0027 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.0029 per share (fee) for orders routed outside the Book to any away market centers other than the NYSE</p> <p>\$0.003 per share (fee) for PO+ orders routed outside the Book to NASDAQ</p> <p>\$0.002 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity in Tape A and Tape C securities</p> <p>\$0.0007 per share (fee) for Market-On-Close and Limit-On-Close orders executed in the Closing Auction</p> <p><u>Tape A Securities:</u></p> <p>\$0.0018 per share (fee) for orders in Tape A securities routed outside</p>
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<sup>1</sup> Trade related charges for the NYSE Arca marketplace will not apply to Mid-Point Passive Liquidity Orders (except Mid-Point Passive Liquidity Orders will be eligible for ETP Holder and Market Maker Transaction Credits with respect to Tape A and Tape C Securities). Credits will not be applied to Open Orders (e.g., GTC Orders) executed after the trading date on which they were entered. Trade activity on days when the market closes early does not count toward volume tiers.

<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) orders executed in the Opening Auction and Market Order Auction; (4) Cross Orders; and (5) participants in the Nasdaq UTP Plan that transmit orders via telephone.

<sup>3</sup> Rebates will not be paid for executions in securities priced under \$1.00.

	<p>the Book to the NYSE</p> <p>\$0.0016 per share (fee) for Primary Sweep Orders in Tape A securities routed outside the book to the NYSE</p> <p>\$0.0018 per share (fee) for Primary Only Plus (“PO+”) Orders routed to the NYSE that remove liquidity.</p> <p>\$0.0010 per share (credit) for PO+ Orders that provide liquidity to the NYSE</p> <p>\$0.0007 per share (fee) for PO and PO+ Orders routed to the NYSE that execute in the opening or closing auction</p> <p><u>Tape B Securities:</u></p> <p>\$0.0023 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.0028 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.0029 per share (fee) for orders routed outside the Book to any away market centers</p> <p>\$0.0030 per share (credit) for PO and PO+ orders routed to Amex that provide liquidity to the NYSE Amex Book</p> <p>\$0.0025 per share (fee) for PO and PO+ orders routed to Amex that remove liquidity from the NYSE Amex Book</p> <p>\$0.003 per share (fee) for PO+ orders routed outside the Book to NASDAQ</p> <p>\$0.001 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity to the Book</p> <p>\$0.0007 per share (fee) for orders executed in the Opening or Market Order Auction, and for Market-On-Close and Limit-On-Close orders executed in the Closing Auction in NYSE Arca primary listed securities (includes all ETFs/ETNs)</p> <p>\$0.0007 per share (fee) for PO and PO+ Orders routed to NYSE Amex that execute in the opening or closing auction</p>
<p>Tier 2: For ETP Holders and Market Makers that (i) transact an average daily share volume per month greater than 50 million shares (including transactions that take liquidity, provide liquidity, or route to away market</p>	<p><u>Tape A and Tape C Securities:</u></p> <p>\$0.0026 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.0028 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.0029 per share (fee) for orders routed outside the Book to any away market centers other than the NYSE</p> <p>\$0.003 per share (fee) for PO+ orders routed outside the Book to</p>

centers) AND (ii) provide liquidity an average daily share volume per month greater than 15 million shares

## NASDAQ

\$0.002 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity in Tape A and Tape C securities

\$0.0007 per share (fee) for Market-On-Close and Limit-On-Close orders executed in the Closing Auction

### Tape A Securities:

\$0.0018 per share (fee) for orders in Tape A securities routed outside the Book to the NYSE

\$0.0016 per share (fee) for Primary Sweep Orders in Tape A securities routed outside the book to the NYSE

\$0.0018 per share (fee) for PO+ Orders routed to the NYSE that remove liquidity.

\$0.0010 per share (credit) for PO+ Orders that provide liquidity to the NYSE

\$0.0007 per share (fee) for PO and PO+ Orders routed to the NYSE that execute in the opening or closing auction

### Tape B Securities:

\$0.0022 per share (credit) for orders that provide liquidity to the Book

\$0.0028 per share (fee) for orders that take liquidity from the Book

\$0.0029 per share (fee) for orders routed outside the Book to any away market centers

\$0.0030 per share (credit) for PO and PO+ orders routed to Amex that provide liquidity to the NYSE Amex Book

\$0.0025 per share (fee) for PO and PO+ orders routed to Amex that remove liquidity from the NYSE Amex Book

\$0.003 per share (fee) for PO+ orders routed outside the Book to NASDAQ

\$0.001 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity to the Book

\$0.0007 per share (fee) for orders executed in the Opening or Market Order Auction, and for Market-On-Close and Limit-On-Close orders executed in the Closing Auction in NYSE Arca primary listed securities (includes all ETFs/ETNs)

\$0.0007 per share (fee) for PO and PO+ Orders routed to NYSE Amex that execute in the opening or closing auction

<p>Provide Tier: For ETP Holders and Market Makers that transact an average daily share volume per month greater than 35 million shares in transactions that provide displayed liquidity</p>	<p><u>Tape A and Tape C Securities:</u></p> <p>\$0.0027 per share (credit) for orders that provide displayed liquidity to the Book</p> <p>Basic Rate pricing applies for removing liquidity unless tiered rate volume levels are obtained.</p>
<p>Basic Rates (applicable when tier rates do not apply)</p>	<p><u>Tape A Securities:</u></p> <p>\$0.0023 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.003 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.003 per share (fee) for orders routed outside the Book to any away market centers other than the NYSE</p> <p>\$0.002 per share (fee) for orders routed outside the Book to the NYSE</p> <p>\$0.0016 per share (fee) for Primary Sweep Orders in Tape A securities routed outside the book to the NYSE</p> <p>\$0.002 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity to the Book</p> <p>\$0.0018 per share (fee) for PO+ Orders routed to the NYSE that remove liquidity.</p> <p>\$0.0010 per share (credit) for PO+ Orders that provide liquidity to the NYSE</p> <p>\$0.0007 per share (fee) for PO and PO+ Orders routed to the NYSE that execute in the opening or closing auction</p> <p><u>Tape B Securities:</u></p> <p>\$0.0022 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.003 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.0035 per share (fee) for orders routed outside the Book to any away market centers</p> <p>\$0.0030 per share (credit) for PO and PO+ orders routed to Amex that provide liquidity to the NYSE Amex Book</p> <p>\$0.0025 per share (fee) for PO and PO+ orders routed to Amex that remove liquidity from the NYSE Amex Book</p> <p>\$0.001 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity to the Book</p>

	<p>\$0.0007 per share (fee) for orders executed in the Opening or Market Order Auction, and for Market-On-Close and Limit-On-Close orders executed in the Closing Auction in NYSE Arca primary listed securities (includes all ETFs/ETNs)</p> <p>\$0.0007 per share (fee) for PO and PO+ Orders routed to NYSE Amex that execute in the opening or closing auction</p> <p><u>Tape C Securities:</u></p> <p>\$0.0023 per share (credit) for orders that provide liquidity to the Book</p> <p>\$0.003 per share (fee) for orders that take liquidity from the Book</p> <p>\$0.0035 per share (fee) for orders routed outside the Book to any away market centers</p> <p>\$0.002 per share (credit) for Mid-Point Passive Liquidity orders providing liquidity to the Book</p> <p>\$0.0007 per share (fee) for Market-On-Close and Limit-On-Close orders executed in the Closing Auction</p>
<p>IOI Credit: Tier 1: For ETP Holders and Market Makers that send an IOI to the Exchange resulting in an execution with an average daily share volume per month greater than or equal to 10 million shares</p>	<p><u>Tape A, Tape B, and Tape C Securities:</u></p> <p>\$0.0012 per share (credit) for IOI's that result in an execution up to and including 15 million shares.</p> <p>\$0.0015 per share (credit) for each IOI that results in an execution in excess of 15 million shares.<sup>4</sup></p>
<p>IOI Credit: Tier 2: For ETP Holders and Market Makers that send an IOI to the Exchange resulting in an execution with an average daily share volume per month between 5 million shares and 9,999,999 shares</p>	<p><u>Tape A, Tape B, and Tape C Securities:</u></p> <p>\$0.001 per share (credit) for IOI's that result in an execution</p>
<p>IOI Credit: Tier 3: For ETP Holders and Market Makers that send an IOI to the Exchange resulting in an execution with an average daily share volume per month between</p>	<p><u>Tape A, Tape B, and Tape C Securities:</u></p> <p>\$0.0005 per share (credit) for IOI's that result in an execution</p>

<sup>4</sup> This incremental credit rebates ETP Holders \$.0012 for each share up to and including 15 million ADV, and \$.0015 for each share in excess of 15 million ADV.

2.5 million shares and 4,999,999 shares	
Tracking Order Tier 1: For ETP Holders and Market Makers that send Tracking Orders to the Exchange resulting in executions with an average daily share volume per month greater than or equal to 5 million shares	<u>Tape A, Tape B, and Tape C Securities:</u>  \$0.0012 per share (credit) for Tracking Orders that result in executions up to and including 15 million shares.  \$0.0015 per share (credit) for each Tracking Order that results in executions in excess of 15 million shares.
Tracking Order Tier 2: For ETP Holders and Market Makers that send Tracking Orders to the Exchange resulting in executions with an average daily share volume per month between 2.5 million shares and 4,999,999 shares	<u>Tape A, Tape B, and Tape C Securities:</u>  \$0.001 per share (credit) for Tracking Orders that result in executions
Tracking Orders Tier 3: For ETP Holders and Market Makers that send Tracking Orders to the Exchange resulting in executions with an average daily share volume per month between 1 million shares and 2,499,999 shares	<u>Tape A, Tape B, and Tape C Securities:</u>  \$0.0005 per share (credit) for Tracking Orders that result in executions

Round Lots and Odd Lots (Per Share Price Below \$1.00)<sup>5</sup>

Tape A and Tape B Securities:	0.1% of the total dollar value for orders that take liquidity from the Book
Tape C Securities:	0.1% of the total dollar value for orders that take liquidity from the Book (including inbound orders executed against orders residing in the Book)
Routing Services:	0.3% of the total dollar value (applicable to orders of listed and Nasdaq securities routed away and executed by another market center or participant)

<sup>5</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.

Self Trade Prevention Modifiers (Tape A, Tape B, and Tape C Securities)<sup>6</sup>

STP credits and fees shall be capped at a net total of \$25,000.00 per month.

STP Cancel Newest (STPN)	\$0.00
STP Cancel Oldest (STPO)	\$0.00
STP Cancel Both (STPC) <sup>7</sup>	<p>\$0.0029 per share (credit) for resting STP orders returned to the ETP Holder</p> <p>\$0.0030 per share (fee) for incoming STP orders returned to the ETP Holder</p>
STP Decrement and Cancel (STPD)	<p>\$0.0029 per share (credit) for the portion of the resting STP order returned to the ETP Holder</p> <p>\$0.0030 per share (fee) for the portion of the incoming STP order returned to the ETP Holder</p>

## NYSE ARCA MARKETPLACE: ETP FEES

Monthly ETP Fee	Waived
ETP Application Fees	
Initial Processing Fee	Waived
Investigation Fee	\$125 fee per individual for registration as an ETP Holder (includes any Allied Person <sup>8</sup> or Approved Person <sup>9</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 ®)

## NYSE ARCA EQUITIES: REGULATORY FEES

FOCUS Filing Fee	\$100 annual filing fee for ETP Holders for which NYSE Arca is the Designated Examining Authority
Registration Fee	\$55 annual fee for new applications, maintenance, or transfer of registration status for each Registered Representative and each Registered Principal (fee collected by NASD). Only one fee will be assessed per Registered Representative per trading permit. Accordingly, a participant that has both an OTP and

<sup>6</sup> The incoming order (last received order) marked with one of the STP Modifiers controls the billing treatment of both interacting orders marked with STP Modifiers.

<sup>7</sup> An incoming order marked with a STPC Modifier will be billed only up to the equivalent size of the contra order marked with a STP Modifier.

<sup>8</sup> As defined by NYSE Arca Equities Rule 1.1(c).

<sup>9</sup> As defined by NYSE Arca Equities Rule 1.1(d).

	ETP will be assessed only once per registered representative \$30 NASD CRD Processing Fee \$85 NASD CRD Processing Fee \$95 NASD Disclosure Processing Fee \$30 NASD Annual System Processing Fee \$13 NASD Manual Processing Fee for Fingerprint Results submitted by Other SROs \$55 NYSE Arca Transfer/Relicense Individual Fee
DEA Fee	\$2,000 monthly fee per firm \$250 annual fee per trader \$75 one-time registration 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

## NYSE ARCA MARKETPLACE: MARKET MAKER FEES AND CREDITS<sup>10</sup>

Lead Market Maker Transaction Fees and Credits

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

NYSE Arca Marketplace Primary Listed Securities <sup>11</sup>	\$0.004 per share (credit) for orders that provide displayed liquidity to the Book in securities for which they are registered as the LMM  \$0.0025 per share (fee) for orders that take liquidity from the Book  No fee for orders executed in the Closing Auction
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## NYSE ARCA MARKETPLACE: OTHER FEES AND CHARGES

Connectivity Fees

<sup>10</sup> Market Maker fees for the NYSE Arca marketplace will not apply to Mid-Point Passive Liquidity Orders (except Mid-Point Passive Liquidity Orders will be eligible for transaction credit with respect to Tape A and Tape C Securities). Credits available to Market Makers will not apply to Open Orders (e.g., GTC Orders) executed after the trading date on which they were entered.

<sup>11</sup> No transaction fee or credit for orders executed as Directed Orders against a Directed Fill.

Line Connection	(Variable pass-through charge for each line installation)
RealTick Interface	Variable pass-through charge(s) for each product requested per workstation.

### Market Data Revenue Sharing Credit<sup>12</sup>

Cross Order: Tape A Securities	50% tape revenue credit per qualifying trade (applicable to any Cross Order, as defined in NYSE Arca Equities Rule 7.31(s), where the ETP Holder or Sponsored Participant represents all of one side of the transaction and all or a portion of the other side)
Cross Order: Tape B Securities	50% tape revenue credit per qualifying trade (applicable to any Cross Order, as defined in NYSE Arca Equities Rule 7.31(s), where the ETP Holder or Sponsored Participant represents all of one side of the transaction and all or a portion of the other side)
Cross Order: Tape C Securities	A percentage of ETP Operating Revenue (“ETPOR”) associated with Cross Orders in Tape C Securities shall be eligible for sharing with ETP Holders. ETPOR is defined as operating revenue that is generated by ETP Holders and consists of transaction fees and market data revenue that is attributable to ETP Holders’ Cross Order executions. ETPOR shall not include any investment income or regulatory monies. The sharing of ETPOR shall be based on each ETP Holder’s pro rata contribution to ETPOR and the amount shared shall not exceed ETPOR.
Late Payment of Dues, Fees, Fines and Charges <sup>13</sup>	
Number of Times Late Within Previous Twelve Months:	Amount of Charge
1	\$250 or 1.0% of Invoice Amount, Whichever is Greater

<sup>12</sup> An ETP Holder that submits a Tracking Order, Passive Liquidity Order, or a Mid-Point Passive Liquidity Order (excluding transactions in Tape A and Tape C securities for Mid-Point Passive Liquidity Orders) that subsequently matches against an inbound marketable order will not be entitled to receive the Liquidity Provider Credit. LMMs will not be eligible for a market data revenue credit in securities for which they are registered as the LMM except for executions against Directed Fills. Open orders (e.g., GTC Orders) will not be eligible for a market data revenue credit if such orders are executed after the trading date on which they were entered.

<sup>13</sup> Transaction fees are excluded from the late payment of dues, fees, fines and charges.

2	\$500 or 1.5% of Invoice Amount, Whichever is Greater
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