**NYSE Arca Equities**

**FEES AND CHARGES**

**Effective Date:** May 10, 2019

**NYSE ARCA MARKETPLACE: TRADE RELATED FEES AND CREDITS**

**EXCHANGE TRANSACTIONS**

**ETP HOLDERS AND MARKET MAKERS**

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

<table>
<thead>
<tr>
<th><strong>Tier 2:</strong></th>
<th><strong>Tape A, Tape B and Tape C Securities:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>For ETP Holders and Market Makers that either (1) provide liquidity an average daily share volume per month of 0.30% or more, but less than 0.70% of the US CADV or (2) provide liquidity of 0.10% or more of the US CADV per month, and are affiliated with an OTP Holder or OTP Firm that provides an ADV of electronic posted Customer and Professional Customer executions in all issues on NYSE Arca Options (excluding mini options) of at least 1.50% of total Customer equity and ETF option ADV as reported by OCC:</td>
<td>$0.0030 per share (fee) for orders routed outside the Book to any away market center that remove liquidity, including PO Orders</td>
</tr>
<tr>
<td></td>
<td>Tape A and Tape C Securities:</td>
</tr>
<tr>
<td></td>
<td>$0.0029 per share (credit) for orders that provide liquidity to the Book, or $0.0031 per share (credit) for orders that provide displayed liquidity to the Book for ETP Holders and Market Makers that meet the requirements of Tier 2 and, for the billing month, (1) execute providing volume equal to at least 0.30% of US CADV, (2) execute removing volume equal to at least 0.285% of US CADV, and (3) execute Market-On-Close and Limit-On-Close Orders executed in a Closing Auction of at least 0.075% of US CADV</td>
</tr>
<tr>
<td></td>
<td>$0.0030 per share (fee) for orders that take liquidity from the Book</td>
</tr>
<tr>
<td></td>
<td>For MPL orders providing liquidity to the Book:</td>
</tr>
</tbody>
</table>
$0.0015 per share (credit) in Tape A Securities and $0.0020 per share (credit) in Tape C Securities if MPL Adding ADV during the billing month is at least 3 million shares;

$0.0015 per share (credit) in Tape A Securities and Tape C Securities if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares;

$0.0010 per share (credit) in Tape A and Tape C Securities for MPL orders providing liquidity to the Book if MPL Adding ADV during the billing month is less than 1.5 million shares.

$0.0030 per share (fee) for MPL orders removing liquidity from the Book that are not designated as Retail Orders

$0.0010 per share (fee) for MPL orders removing liquidity from the Book that are designated as Retail Orders

$0.0015 per share (fee) for Market and Auction-Only Orders executed in an Early Open Auction, Core Open Auction or Trading Halt Auction, capped at $20,000 per month per Equity Trading Permit ID

$0.0010 per share (fee) for Market, Market-On-Close, Limit-On-Close, and Auction-Only Orders executed in a Closing Auction

$0.0010 per share (fee) for PO orders routed to NASDAQ that execute in the opening or closing auction

No fee or credit for Limit Non-Displayed Orders that provide liquidity to the Book

$0.0030 per share (fee) for Limit Non-Displayed Orders that take liquidity from the Book

Tape A Securities:

$0.0012 per share (credit) for PO Orders that provide liquidity to the NYSE
$0.0010 per share (fee) for 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, or $0.0024 per share (credit) for orders that provide displayed liquidity to the Book for ETP Holders and Market Makers that meet the requirements of Tier 2 and, for the billing month, (1) execute providing volume equal to at least 0.30% of US CADV, (2) execute removing volume equal to at least 0.285% of US CADV, and (3) execute Market-On-Close and Limit-On-Close Orders executed in a Closing Auction of at least 0.075% of US CADV. An additional credit shall apply to ETP Holders and Market Makers affiliated with LMMs that provide displayed liquidity to the Book 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).

* * * * *