

Additions underlined
 Deletions [bracketed]

NYSE Arca Equities

FEES AND CHARGES

Effective Date: July [7]20, 2021

NYSE ARCA MARKETPLACE: TRADE RELATED FEES AND CREDITS¹

EXCHANGE TRANSACTIONS

ETP HOLDERS AND MARKET MAKERS²

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 Liquidity” means the execution of an order on the Exchange that provided 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.
- “Nasdaq Auction” would mean orders routed for execution in the open or closing auction on Nasdaq.

¹ 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 [average daily volume (“ADV[”] and US CADV (as defined [in note 3]) 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.

² No Change.

- “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 Liquidity” means the execution of an order that removed liquidity.
- “US CADV” means 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 US CADV.

II. General:

- Rebates indicated by parentheses ().
- All fees and credits and tier requirements apply to ETP Holders and Market Makers.
- All fees and credits are per share unless noted otherwise.

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

<u>Category</u>	<u>Adding Liquidity^{(a)(b)}</u>	<u>Adding Liquidity - Retail Orders^(c)</u>	<u>Adding Liquidity - MPL Orders</u>	<u>Removing Liquidity^(d)</u>	<u>Opening Orders^{(e)(g)}</u>	<u>Closing Orders^{(f)(g)}</u>
<u>Securities priced at or above \$1.00</u>	<u>(\$0.0020)</u>	<u>(\$0.0032)</u>	<u>(\$0.0010)</u>	<u>\$0.0030</u>	<u>\$0.0015; \$0.0005 for Retail Orders</u>	<u>\$0.0012; \$0.0008 for Retail Orders</u>
<u>Securities priced below \$1.00</u>	<u>(\$0.00004)</u>	<u>(\$0.00004)</u>	<u>(\$0.00004)</u>	<u>0.295% of Dollar Value</u>	<u>0.1% of Dollar Value</u>	<u>0.1% of Dollar Value</u>

- (a) 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 provide 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 provide 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 Tape A Securities, Tape C Securities, and NYSE Arca primary listed securities (includes all ETFs/ETNs).
- (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.
- \$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.

V. Standard Rates - Routing:

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

^(a) 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)

<p>Tier 1: For ETP Holders and Market Makers that provide liquidity an average daily volume (ADV) per month of 0.70% or more of the US CADV^[3] or 84 million shares of providing ADV:</p>	<p>Tape A, Tape B and Tape C Securities: * * * * *</p>
<p>Tier 2: For ETP Holders and Market Makers that either provide liquidity an average daily share volume per month of 0.30% or more, but less than 0.70% of the US CADV^[3] or (a) provide liquidity an average daily share volume per month of 0.25% or more, but less than 0.70% of the US CADV, (b) execute removing volume in Tape B Securities equal to at least 0.40% of US Tape B CADV, and (c) 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 0.25% of total Customer equity and ETF option ADV as reported by OCC:</p>	<p>Tape A, Tape B and Tape C Securities: * * * * *</p>
<p>Tier 3: For ETP Holders and Market Makers that provide liquidity an average daily share volume per month of 0.20% or more, but less than 0.30% of the US CADV^[3]:</p>	<p>Tape A, Tape B and Tape C Securities: * * * * *</p>
<p>* * * * *</p>	<p>* * * * *</p>
<p>Cross-Asset Tier: For ETP Holders and Market Makers that (a) provide liquidity of 0.30% or more of the US CADV^[3] per month, and (b) are affiliated with an OTP Holder or OTP Firm that provides an ADV^[4] of electronic posted Customer and Professional Customer</p>	<p>Tape A, Tape B, and Tape C Securities: * * * * *</p>

^[3] US CADV means United States Consolidated Average Daily Volume for transactions reported to the Consolidated Tape, excluding odd lots through January 31, 2014 (except for purposes of Lead Market Maker pricing), and excludes volume on days when the market closes early and on the date of the annual reconstitution of the Russell Investments Indexes. Transactions that are not reported to the Consolidated Tape are not included in US CADV.]

^[4] ADV means Average Daily Volume.]

<p>executions in all issues on NYSE Arca Options (excluding mini options) of at least 0.80% of total Customer equity and ETF option ADV as reported by OCC, of which at least 0.20% of total Customer equity and ETF option ADV as reported by OCC is from Customer and Professional Customer executions in non-Penny Pilot issues on NYSE Arca Options:</p>	
<p>Tape B Tier 1: For ETP Holders and Market Makers on a daily basis, measured monthly, that directly execute providing volume in Tape B Securities during the billing month (“Tape B Adding ADV^[4]”) that is equal to at least 1.50% of US Tape B CADV^[3] for the billing month:</p>	<p>Tape B Securities: * * * * *</p>
<p>Tape B Tier 2: For ETP Holders and Market Makers on a daily basis, measured monthly, that directly execute Tape B Adding ADV^[4] that is either (1) equal to at least 1.0% of the US Tape B CADV^[3] or (2) equal to at least 0.20% of the US Tape B CADV^[3] for the billing month over the ETP Holder’s or Market Maker’s Q2 2015 Tape B Adding ADV taken as a percentage of Tape B CADV^[3] or (3) equal to at least 0.25% of the US Tape B CADV^[3] for the billing month over the ETP Holder’s or Market Maker’s April 2020 Tape B Adding ADV taken as a percentage of Tape B CADV^[3]:</p>	<p>Tape B Securities: * * * * *</p>
<p>* * * * *</p>	<p>* * * * *</p>
<p>Retail Order Tier: For ETP Holders, including Market Makers, that execute an ADV^[4] of Retail Orders that provide liquidity during the month that is 0.15% or more of the US CADV^[3]:</p>	<p>Tape A, Tape B, and Tape C Securities: * * * * *</p>
<p>Retail Order Step-Up Tier 1: For ETP Holders, including Market Makers, that</p>	<p>Tape A, Tape B, and Tape C Securities:</p>

<p>provide liquidity an average daily share volume per month of 1.00% or more of the US CADV^[3], and execute an ADV^[4] of Retail Orders with a time-in-force of Day that add or remove liquidity during the month that is an increase of 0.40% or more of the US CADV above their April 2018 ADV taken as a percentage of US CADV:</p>	<p style="text-align: center;">* * * * *</p>
<p style="text-align: center;">* * * * *</p>	<p style="text-align: center;">* * * * *</p>
<p>[Basic Rates (applicable when tier rates do not apply)]</p>	<p>Tape A, Tape B and Tape C Securities:</p> <p>\$0.0035 per share (fee) for orders routed to any away market center that remove liquidity, including PO Orders.</p> <p>\$0.0006 per share (fee) for executions in an Early Open Auction, Core Open Auction, Trading Halt Auction and Closing Auction, other than executions resulting from Market Orders, Auction-Only Orders, Market-On-Close Orders and Limit-On-Close Orders.</p> <p>Tape A Securities:</p> <p>\$0.0020 per share (credit) for orders that provide liquidity</p> <p>\$0.003 per share (fee) for orders that take liquidity</p> <p>Primary Until 9:45 Orders and Primary After 3:55 Orders that are designated as Retail Orders and routed to the primary listing market will be charged \$0.0010 per share (fee)</p> <p>For MPL orders providing liquidity:</p> <p style="padding-left: 40px;">\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 3 million shares;</p>

	<p>\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares;</p> <p>\$0.0010 per share (credit) if MPL Adding ADV during the billing month is less than 1.5 million shares.</p> <p>\$0.0030 per share (fee) for MPL orders removing liquidity that are not designated as Retail Orders</p> <p>\$0.0010 per share (fee) for MPL orders removing liquidity that are designated as Retail Orders</p> <p>\$0.0015 per share (fee) for Market and Auction-Only Orders executed in an Early Open Auction, Core Open Auction or Trading Halt Auction, or \$0.0005 per share (fee) if designated as Retail Orders, capped at \$20,000 per month per Equity Trading Permit ID</p> <p>\$0.0012 per share (fee) for Market, Market-On-Close, Limit-On-Close, and Auction-Only Orders executed in a Closing Auction, or \$0.0008 per share (fee) if designated as Retail Orders</p> <p>\$0.0012 per share (credit) for PO Orders that provide liquidity to the NYSE</p> <p>\$0.0010 per share (fee) for PO Orders routed to the NYSE that execute in the opening or closing auction</p> <p>No fee or credit for Limit Non-Displayed Orders that provide liquidity</p> <p>\$0.0030 per share (fee) for Limit Non-Displayed Orders that take liquidity</p>
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	<p>\$0.0032 per share (credit) for Retail Orders that provide liquidity</p> <p>Tape B Securities:</p> <p>\$0.0020 per share (credit) for orders that provide liquidity. An additional credit shall apply to ETP Holders and Market Makers affiliated with LMMs that provide 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).</p> <p>\$0.003 per share (fee) for orders that take liquidity</p> <p>\$0.0030 per share (fee) for PO orders routed to Cboe BZX Exchange that execute in the opening or closing auction</p> <p>Primary Until 9:45 Orders and Primary After 3:55 Orders that are designated as Retail Orders and routed to the primary listing market will be charged \$0.0010 per share (fee)</p> <p>No per share (credit) for PO orders routed to NYSE American that provide liquidity to the NYSE American Book</p> <p>For MPL orders providing liquidity:</p> <p style="padding-left: 40px;">\$0.0020 per share (credit) if MPL Adding ADV during the billing month is at least 3 million shares;</p> <p style="padding-left: 40px;">\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares;</p> <p style="padding-left: 40px;">\$0.0010 per share (credit) if MPL</p>
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	<p>Adding ADV during the billing month is less than 1.5 million shares.</p> <p>\$0.0030 per share (fee) for MPL orders removing liquidity that are not designated as Retail Orders</p> <p>\$0.0010 per share (fee) for MPL orders removing liquidity that are designated Retail Orders</p> <p>\$0.0015 per share (fee) for Market and Auction-Only Orders executed in an Early Open Auction, Core Open Auction or Trading Halt Auction, or \$0.0005 per share (fee) if designated as Retail Orders, capped at \$20,000 per month per Equity Trading Permit ID</p> <p>\$0.0012 per share (fee) for Market, Market-On-Close, Limit-On-Close, and Auction-Only Orders executed in a Closing Auction in NYSE Arca primary listed securities (includes all ETFs/ETNs), or \$0.0008 per share (fee) if designated as Retail Orders</p> <p>\$0.0005 per share (fee) for PO Orders routed to NYSE American that execute in the opening or closing auction</p> <p>No fee or credit for Limit Non-Displayed Orders that provide liquidity</p> <p>\$0.0030 per share (fee) for Limit Non-Displayed Orders that take liquidity</p> <p>\$0.0032 per share (credit) for Retail Orders that provide liquidity</p> <p>\$0.0030 per share (fee) for PO orders routed to Cboe BZX Exchange that execute in the opening or closing auction</p> <p>Tape C Securities:</p>
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	<p>\$0.0020 per share (credit) for orders that provide liquidity</p> <p>\$0.003 per share (fee) for orders that take liquidity</p> <p>Primary Until 9:45 Orders and Primary After 3:55 Orders that are designated as Retail Orders that are routed to the primary listing market will be charged \$0.0010 per share (fee)</p> <p>For MPL orders providing liquidity:</p> <p style="padding-left: 40px;">\$0.0020 per share (credit) if MPL Adding ADV during the billing month is at least 3 million shares;</p> <p style="padding-left: 40px;">\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares;</p> <p style="padding-left: 40px;">\$0.0010 per share (credit) if MPL Adding ADV during the billing month is less than 1.5 million shares.</p> <p>\$0.0030 per share (fee) for MPL orders removing liquidity that are not designated as Retail Orders</p> <p>\$0.0010 per share (fee) for MPL orders removing liquidity that are designated as Retail Orders</p> <p>\$0.0015 per share (fee) for Market and Auction-Only Orders executed in an Early Open Auction, Core Open Auction or Trading Halt Auction, or \$0.0005 per share (fee) if designated as Retail Orders, capped at \$20,000 per month per Equity Trading Permit ID</p>
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	<p>\$0.0012 per share (fee) for Market, Market-On-Close, Limit-On-Close, and Auction-Only Orders executed in a Closing Auction, or \$0.0008 per share (fee) if designated as Retail Orders</p> <p>\$0.0030 per share (fee) for PO orders routed to NASDAQ that execute in the opening or closing auction</p> <p>No fee or credit for Limit Non-Displayed Orders that provide liquidity</p> <p>\$0.0030 per share (fee) for Limit Non-Displayed Orders that take liquidity</p> <p>\$0.0032 per share (credit) for Retail Orders (as defined in Rule 7.44-E(a)(3) that provide liquidity]</p>
IOI Credit	<p>Tape A, Tape B, and Tape C Securities:</p> <p>No Credit</p>
<u>MPL Orders</u>	<p><u>For MPL orders providing liquidity:</u></p> <p><u>Tape A Securities:</u></p> <p><u>\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 3 million shares</u></p> <p><u>\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares</u></p> <p><u>Tape B Securities and Tape C Securities:</u></p> <p><u>\$0.0020 per share (credit) if MPL Adding ADV during the billing month is at least 3 million shares</u></p> <p><u>\$0.0015 per share (credit) if MPL Adding ADV during the billing month is at least 1.5 million shares and less than 3 million shares</u></p>

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VII. Tier Rates - Round Lots and Odd Lots (Per Share Price Below \$1.00)^{[5]3}

[Tape A, Tape B, and Tape C Securities:	0.295% fee of the total dollar value for orders that take liquidity from the Book \$0.00004 per share credit for orders that provide liquidity to the Book]
Sub-Dollar Adding Step Up Tier: For ETP Holders and Market Makers on a daily basis, measured monthly, that have an Adding ADV of 1 million shares with a per share price below \$1.00 (“Sub-Dollar Adding Orders”) and directly execute providing volume in Sub-Dollar Adding Orders equal to at least 0.20% of the CADV with a per share price below \$1.00 (“Sub-Dollar CADV”) over the ETP Holder’s or Market Maker’s July 2020 Sub-Dollar Adding ADV taken as a percentage of Sub-Dollar CADV (“Sub-Dollar Baseline”):	A credit for orders that provide liquidity to the Book in Sub-Dollar Adding Orders, as follows: <ul style="list-style-type: none"> • 0.05% of the total dollar value for an increase of at least 0.20% more but less than 0.50% of Sub-Dollar CADV over the Sub-Dollar Baseline • 0.10% of the total dollar value for an increase of at least 0.50% more but less than 0.75% of Sub-Dollar CADV over the Sub-Dollar Baseline • 0.125% of the total dollar value for an increase of least 0.75% more but less than 1.0% of Sub-Dollar CADV • 0.15% of the total dollar value for an increase of at least 1.0% more of Sub-Dollar CADV over the Sub-Dollar Baseline
[Routing Services:	0.3% fee of the total dollar value (applicable to orders of listed and Nasdaq securities routed away and executed by another market center or participant)]
[Auctions	0.1% of the total dollar value for orders that execute in the Early Open, Core Open, Trading Halt or Closing Auctions.]

^{[5]3} No Change.

NYSE ARCA MARKETPLACE: ETP FEES

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 [Allied Person ⁶ or] Approved Person ^{[7]4} listed on Schedule A or B of Form BD or Market Maker Authorized Trader for whom required information is not available on Web CRD [®])

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NYSE ARCA MARKETPLACE: MARKET MAKER FEES AND CREDITS^{[8]5}

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

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

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Late Payment of Dues, Fees, Fines and Charges ^{[9]6}	
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

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^[6] As defined by NYSE Arca Rule 1.1(b).]

^{[7]4} No Change.

^{[8]5} No Change.

^{[9]6} No Change.