TSX Market Making Program Guide

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CHAPTER 1

Introduction

Whether referring to a well-known, large cap Canadian company, a junior mining producer or an ETF, liquidity is vital to the success of all publicly traded securities in order to attract investment capital and continue to grow. It is the mission of the TSX to power this investment and promote economic growth for clients by promoting a healthy and liquid market for every TSX-listed security. This is achieved through a combination of a globally-recognized marketplace where investors from around the world look to inject capital, a thoroughly entrenched market data distribution network that disseminates critical market information to traders, investment professionals and investors, and a carefully designed market infrastructure that attracts and rewards various market participants that contribute to the quality of the marketplace.

In order to foster the strongest marketplace possible, the Program) sets out various obligations and incentives for Participating Organizations willing to interact in our market in the role of a formal TSX Market Maker described within this document. Among these obligations, and a unique feature of the Canadian marketplace, is the MGF facility, which provides guaranteed fills for small-sized orders when liquidity in the CLOB is insufficient. This facility is invaluable in an increasingly fragmented trading environment and for smaller companies that struggle with attracting liquidity. The Program also features several carefully designed policies that also promote the long term health and vitality of TSX-listed issuers for their investors and Market Makers.

Currently, every security listed on TSX, with the exception of debentures and notes, may be assigned a Market Maker who has obligations to monitor trading activity in real-time and interact in the market when natural forces may be lacking to promote liquidity and a smooth and orderly market. The primary responsibilities of Market Makers are to augment liquidity and ensure a competitive two-sided market exists on TSX during continuous trading hours, providing support for the MGF facility, being present during the market opening, filling odd lots at the Protected NBBO, and reporting unusual behaviour to the appropriate regulators and authorities. A Market Maker's performance is monitored and assessed on a monthly basis and appropriate actions are taken when underperformance is identified.

Unless otherwise defined in Appendix B, terms have the meanings ascribed to them in the TSX Rule Book. In the event of an inconsistency between the definition in Appendix B and the TSX Rule Book, the definition contained in the TSX Rule Book shall govern.

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Entering the Program

2.1 APPROVAL PROCESS

A Participating Organization of TSX may apply to become a Market Maker by completing the TSX Market Maker Application. A DEA client accessing TSX through direct electronic access in accordance with National Instrument 23-103 Electronic Trading and Direct Access to Marketplaces is not eligible to apply to become a TSX Market Maker.

For an application to be approved, a Participating Organization must demonstrate that it is capable of performing market making activity that is acceptable to the TSX as well as demonstrate that it has sufficient trading desk and operations area support staff. This may include having sufficient technology and system capabilities that will permit it to properly carry out its market making responsibilities.

A Participating Organization that has been approved by TSX to act as Market Maker must execute a TSX Market Maker Agreement.

2.2 ASSIGNMENT OF SECURITIES

There are two Market Maker assignments available for each corporate security. A Market Maker is never assigned both assignments in respect of a security.

ETFs have only one Market Maker assignment. Market Makers for ETFs are typically endorsed by issuers in relation to their Designated Broker agreements.

There are several methods for assigning securities to Market Makers:

- (i) **Security specific assignments** apply when new security assignments become available. These circumstances include but are not limited to: a new listing, a Market Maker voluntarily relinquishing a security of responsibility, or due to underperformance of a Market Maker(s). Security specific assignments are made through the competitive bidding process described under the "Competitive Bidding Process" section.
- (ii) Competitive rebalance of assignments may occur from time to time on Market Maker assignments at the discretion of TSX. The purpose of this rebalancing process is to balance the allocation of securities across Market Makers while serving to update performance obligations in accordance with changing market conditions. Note that this process is not necessarily intended to equalize the number of security assignments per firm. Competitive rebalance assignments are made through the same competitive bidding process described under the "Competitive Bidding Process" section.

(iii) Other assignment methods:

a) Related Instrument Assignments - Certain securities may be classified by the TSX as related instrument assignments which may be directly allocated in accordance with a root security. Related instruments include rights, warrants, subscription receipts, preferred shares, US dollar equivalents or multiple classes of common shares (i.e., classes of with different voting rights, Canadian vs. US resident eligibility), when issued, or essentially any derived product based upon an existing issuer. Debentures and notes are not assigned to Market Makers.

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- **b)** Non-Voluntary Assignments In cases where no eligible competitive bids are submitted on a security, TSX assigns such security to the next Marker Makers based on a round robin allocation method (whereby assignments are made to all eligible Marker Makers in sequence, with the intention that non-voluntary assignments be equally allocated among firms). Market Makers must act in accordance with applicable requirements for all assigned securities of responsibility.
- **c. Temporary Assignments** Market Makers may be required to assume temporary responsibility for newly listed securities and other security assignments that become available, until such time that those specific securities are permanently assigned to a Market Maker(s).

2.3 TIER SYSTEM AND THE TIER A:B RATIO

TSX categorizes listed securities according to tiers based on the level of trading activity in the securities. Securities that fall into the Tier A category are the most actively traded securities based on the security's average daily value ("ADV") traded on TSX in the previous 12 month period, calculated quarterly. The Tier B category covers securities that, on average, trade less actively. The tiers are further divided into sub-tiers, which are also based on levels of trading activity.

TABLE 1 - TIER CLASSIFICATION OF SECURITIES

| IADEL I HER C | CASSII ICATION | of Secontifies |
|---------------|----------------|--|
| А | 1 | ADV = or > \$50 million |
| А | 2 | ADV of \$10 to < 50 million |
| А | 3 | ADV of \$1 to < 10 million |
| В | 1 | |
| В | 2 | |
| В | 3 | |
| В | 4 | |
| В | 5 | ADV < \$1 million. The security list is further divided into deciles according |
| В | 6 | to ADV, with B1 category having the highest ADV and B10 having the lowest ADV. |
| В | 7 | |
| В | 8 | |
| В | 9 | |
| В | 10 | |
| | | |

TSX allocates securities to firms in a manner that maintains, to a reasonable degree possible, a minimum ratio of Tier B securities for each Tier A. ETF securities are excluded from this calculation. The applicable ratio is adjusted periodically based on the ratio of the total number of Tier A securities to Tier B securities traded on the TSX. This ratio is important to ensure coverage for all TSX-listed securities while also maintaining a fair allocation of securities across Market Makers.

2.4 CONCENTRATION LIMITS

Additionally, in order to maintain fair allocation of securities across Market Makers and to mitigate against any over-reliance on any one Market Maker, no Market Maker may have greater than a specified percentage of security assignments within any given tier classification (A1, A2, A3 and B) unless special circumstances apply for which TSX retains ultimate discretion. **The current maximum concentration per tier is 35%** and is measured across all assignments of each firm.

2.5 MINIMUM ASSIGNMENTS

Market Maker firms are required to maintain a minimum number of security assignments as determined by TSX. **The minimum number of assignments is currently set at 50**. The minimum number may be adjusted or waived from time to time at the discretion of TSX in order to account for market factors.

2.6 COMPETITIVE BIDDING PROCESS

TSX uses a competitive bidding process to apply clear and objective criteria for security assignments that promote fairness and transparency and are designed to reward the Market Makers that commit to achieving the most favourable performance outcomes.

When a Market Maker security assignment becomes available, TSX publicizes the availability of the assignment through an email notification sent to the Market Maker contact designated by each Market Maker firm. The notice of availability includes details of the requirements for the service level bid. A Market Maker never holds both Market Maker assignments on any given security.

2.7 BIDDING PROCESS

2.7.1 New Listings and Stock Underperformance Reallocations

Where a brand new listing, or an existing stock subject to an Underperformance Reallocation is available for bidding, the following bidding process determines both the awarded Market Makers and the Stock Level Performance Obligations which both Market Makers will be subject to:

- Firms eligible to bid on assignments available as either new listings or as Stock Underperformance
 Reallocations (e.g., a firm that was not one of the Market Makers on a stock subject to a Stock
 Underperformance Reallocation and has not exceeded the threshold for underperformance) may submit
 their bids within the allotted time. TSX keeps all bids confidential until the assignment decision is made.
- Bids for assignments must include a Market Maker's commitments in respect of the following areas,
 subject to the published minimum and maximum levels defined in Appendix A Performance Guidelines
 - a) Spread Goal
 - b) % Time at NBB0
 - c) Top of Book Size

- The TSX Allocation Committee reviews and approves assignments. Tier B securities are assigned first in order to establish the total number of Tier A securities each Market Maker is eligible to be assigned. All securities are assigned to bidding firms using the following criteria, subject to TSX discretion:
 - a) The bid(s) with the highest Total Relative Score determine the stock level metrics and the Market Makers with the first and second best Total Relative score are awarded the assignment and both subject to the same stock level metrics. If the Market Maker with the second best relative score declines the assignment, the Market Maker with the 3rd highest Total Relative score is offered the assignment, and so on, until each assignment has two Market Makers. The Total Relative Score is calculated as follows:

For each metric, a Relative Score is assigned: 10 points are awarded to the most competitive bid, 0 points are awarded to the least competitive bid, and all bids in between earn a pro-rated number of points based on the difference between the best and worst bid. The Total Relative Score is calculated as the weighted average of all Relative Scores in accordance with the following weightings:

| | SPREAD GOAL | % TIME AT NBBO | TOP OF BOOK SIZE |
|-------------------|-------------|----------------|------------------|
| Tier A Securities | 10% | 50% | 40% |
| Tier B Securities | 50% | 25% | 25% |

Example: Scoring for a Tier A Security

| | В | IDDABLE METI | RICS | RELAT | IVE SCORE & | WEIGHTS | | |
|--------|----------------|------------------------|-------------------|-----------------------|-------------------------------|--------------------------|----------------------------|---------------|
| BROKER | SPREAD GOAL | TOP OF BOOK SIZE | % TIME AT NBBO | SPREAD GOAL 10% | TOP OF BOOK SIZE 40% | % TIME AT NBBO 50% | TOTAL RELATIVE SCORE | _ |
| А | 0.05 | 13,000 | 90% | 10.00 | 10.00 | 8.33 | 9.17 | WINNER R |
| В | 0.05 | 5,000 | 90% | 10.00 | 0.00 | 8.33 | 5.17 | - <u>></u> |
| С | 0.06 | 8,000 | 92% | 5.00 | 3.75 | 10.00 | 7.00 | _ |
| D | 0.07 | 7,000 | 80% | 0.00 | 2.50 | 0.00 | 1.00 | - |

- b) If there is a tie between 2 bids, then the assignments are awarded to the 2 firms involved in the tie.
- c) If there is a tie among more than 2 bids, the 2 firms with the lowest percentage of underperforming securities in the previous 12 months (the "lead bidders") that are better than all other firms involved in the tie by 10% or more are awarded the assignment. For greater certainty, if the lead bidders are not better than any other firm by 10% or more, all firms within such 10% threshold are considered to be in a tie with the lead bidders, and in such instance Subsection 2.7.1(3)d below applies. Net new Market Makers having less than one year of history in the Program by default fall in the 50th percentile of underperformance.

TSX may adjust the 10% threshold with advance notice.

d) If there is still a tie among multiple bids, TSX applies its discretion to award the security assignment. Other factors taken in consideration may include, but are not limited to:

- a Market Maker's market making experience;
- the issuer's recommendation;
- the strategic focus of the Market Maker;
- the desirability of maintaining a long-run balance, depth and breadth of Market Makers; and
- other factors which are likely to contribute to a Market Maker's ability to compete with other liquidity providers, such as the Market Maker's technological capability, market presence, global reach, and lines of business.
- Winning assignments are announced publicly.

2.7.2 SINGLE MARKET MAKER REPLACEMENT

Where a single Market Maker is removed from an existing assignment, the existing Stock Level Performance Obligations remain unchanged and the individual open assignment is awarded to another firm according to the following process:

- TSX notifies Market Makers of the availability of the open assignment and the existing stock level performance targets, and the Market Makers are invited to bid for the open assignment.
- Since the stock level performance target is already established, TSX awards the open assignment according to but not limited to the tie-break criteria in section 2.7.1(3)(b-d), and may also award in a manner to normalize anomalies in a firm's required Tier B ratios, and/or Tier Concentration Limits.

Responsibilities of Market Makers

3.1 ETFs

3.1.1 Performance Obligations - ETFs

The performance obligations of ETF Market Makers are measured under the following scoring system. Points are awarded to Market Makers for each of the following three performance criteria (each, an "ETF Performance Obligation"), and an overall performance score is calculated based on the average of the three scores, weighted equally. A score of 60 is considered a passing score for the month. Note that there is only a single Market Maker assigned to an ETF.

1. Spread Goal Attainment

- Spread goal attainment evaluates to what degree a Market Maker is maintaining a two-sided market in a security relative to their spread goal obligation. Market Makers achieve a higher score based on how narrow the natural spread in the market for such security is in relation to the spread goal.
- Spread goal attainment = average time weighted spread ("ATWS") Ratio/Spread Goal ("SG").
- Spread Goals are calculated as the ATWS for the previous 3 months times 2, and are communicated to Market Makers at the beginning of each month.
- Points are awarded as follows:

| SPREAD RATIO RANGES | POINTS AWARDED |
|--------------------------------|----------------|
| ATWS Ratio ≤ 50% of SG | 125 |
| 50% < ATWS Ratio ≤ 57.5% of SG | 100 |
| 57.5% < ATWS Ratio ≤ 65% of SG | 75 |
| 65% < ATWS Ratio ≤ 80% of SG | 50 |
| 80% < ATWS Ratio ≤ 110% of SG | 25 |
| ATWS Ratio >110% of SG | 0 |

• Demerit points are subtracted from the spread goal attainment score based on the number of spread goal exceptions or the average duration of the spread goal exceptions. A total of 25 demerit points is deducted for violation of either limit.

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2. Participation

- Participation measures the degree to which a Market Maker is trading actively in its securities of
 responsibility to improve its trading liquidity for the benefit of the marketplace. A higher score is
 achieved when Market Maker participation is relatively high as compared to the average Market Maker's
 participation within the associated security tier classification (based on value traded). The calculation
 excludes block trades and crosses in which the Market Maker did not participate.
- Participation Ratio ("PR") = Market Maker value traded/total value traded

| PR RATIO RANGES | POINTS AWARDED |
|--------------------------------------|----------------|
| PR stock ≥ 125% of PR tier avg | 100 |
| 75% ≤ PR stock < 125% of PR tier avg | 75 |
| 50% ≤ PR stock < 75% of PR tier avg | 50 |
| 25% ≤ PR stock < 50% of PR tier avg | 25 |
| PR stock < 25% of PR tier avg | 0 |

3. Liquidity Ratio

- Liquidity measures the proportion of trading that occurs within the spread goal. Market Makers achieve a higher score when a higher proportion of value traded is conducted within the spread goal.
- Liquidity Ratio ("LR") = value traded within the spread goal/total value traded

| LR RATIO RANGES | POINTS AWARDED | |
|----------------------|----------------|--|
| LR stock ≥ 95% | 100 | |
| 90% ≤ LR stock < 95% | 75 | |
| 80% ≤ LR stock < 90% | 50 | |
| 60% ≤ LR stock < 80% | 25 | |
| LR stock < 60% | 0 | |

3.1.2 Underperformance – ETFs

Each month, TSX advises ETF Market Makers of their securities of responsibility that underperformed in the previous month. All securities of responsibility with a score below 60 in the prior three consecutive months are placed on a probationary list. Securities of responsibility for which the security score has not improved to 60 or greater by the end of the fourth month may be re-assigned to another Market Maker. Exemptions may be made at the discretion of TSX in certain cases. Issuer endorsed Market Makers are still subject to performance measurement, regular reporting and the underperformance policy described in this section. However, TSX may maintain an issuer endorsed assignment at the issuer's request irrespective of underperformance.

3.2 CORPORATE EQUITIES

3.2.1 Performance Obligations - Stock Level

The performance of both Market Makers is measured at the security level without specific focus on the contribution that the Market Makers make on each security. For each assigned security, Market Makers must collectively meet the established service levels for all of the following five performance criteria (each, a "**Performance Obligation**") on a monthly basis in order for each Market Maker to be deemed as performing for that month.

The specific service levels or parameters for each Performance Obligation are established at the time of security assignment either through the bidding process, or in accordance with Appendix A - Performance Guidelines.

Each month, TSX provides Market Makers with performance reports showing the performance of the Market Maker that month. To better assist Market Makers with monitoring their progress, daily performance reports are also provided for all securities of responsibility. This provides an early warning if a security is at risk of failing for the month and allows the Market Makers to take corrective action.

Symbol performance is also shared with issuers via the **TSX InfoSuite** platform, a complimentary market data and shareholder solution for TSX and TSXV listed companies. This information includes: actual symbol level metrics, the top liquidity providers and takers for the issuer's security, as well as trade information of the security. This information, based on publicly disclosed end of day quote and trade data, is provided to issuers for informational purposes only and does not reflect the Market Maker's monthly performance.

A sample of the TSX InfoSuite display for illustrative purposes is set out in Appendix C – Performance Reports.

TSX shall, in its discretion, determine the primary responsibility of the Performance Obligations between both Market Makers assigned to a security, which determination of responsibility may include being jointly **primarily** responsibility for all Performance Obligations on a daily basis or alternating, on a daily basis, primary responsibility for one or more of the Performance Obligations. TSX shall provide reasonable notice to the Market Makers of any change of allocation of primary responsibility.

1. Spread Goal

- This requirement measures the cost of transacting immediately, reflecting the degree of liquidity provided on TSX.
- The Spread Goal is the difference between TSX Best Bid (TBB) and TSX Best Offer (TBO), measured in dollar terms (e.g., \$0.03), that the Market Maker needs to maintain.
- At the end of the month, the system calculates the percentage of time that the security's Spread Goal was maintained during the sum of all trading hours that month. In order to be considered a pass, the percentage of time must be equal to or greater than 95%.
- Measured during continuous trading hours only (9:30:00 AM 4:00 PM), and excludes periods where a security may be halted, suspended or delayed.

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2. % Time at NBBO

- The minimum % of time TSX is at the Protected NBBO requirement is intended to measure the degree of competitiveness of the TSX market, as compared to other protected marketplaces in Canada.
- % Time at NBBO = (average time TSX is at protected NBB per day + average time TSX is at protected NBO per day) / 2.
- If there is no protected NBB or protected NBO (meaning there is no quote on any marketplace including TSX), then this is treated as time that TSX is not at the Protected NBBO.
- Measured during continuous trading hours only (9:30 AM 4:00 PM), and excludes periods where a security may be halted, suspended or delayed or when quotes are locked or crossed.

3. Top of Book Size

- This minimum Top of the Book Size represents the minimum number of shares that must be available
 on any combination of the TSX best bid (TBB), TSX best offer (TBO) or the MGF facility at any given
 time. It may be distributed between the CLOB and MGF contributed by that Market Maker subject to the
 minimum MGF being met, and one board lot on each side of the CLOB.
- Measured at the security level for CLOB component and the Market Maker level for the MGF component.
- Average Size = time weighted average of (shares at TBB + shares at TBO + shares available through Individual MGF x 2).
- Measured during continuous trading hours only (9:30AM 4:00 PM), and excludes periods where a security may be halted, suspended or delayed.

4. Liquidity Factor

- This requirement measures the extent to which Market Makers are ensuring the book is lined with reasonable depth such that excessive price gaps do not occur.
- Liquidity Factor = count of CLOB trades within Spread Goal / count of all CLOB trades.
- A trade is considered to be within the Spread Goal if the difference in its trade price from the previous trade price within the same day is equal to or less than the Spread Goal.
- If no trades occur in a month, then the Market Maker is considered to have passed.
- Excludes crosses (when buying broker = selling broker).
- Measured during continuous trading hours only (9:30AM 4:00 PM), and excludes periods where a security may be halted, suspended or delayed.

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2. Opening Presence

- Opening presence is intended to measure the degree a market is established ahead of the market opening, which contributes to an orderly price discovery process at the open.
- Market Makers must ensure there is a two-sided market on the security at least 95% of the time between 9:25 AM and 9:30 AM.
- At the end of the month, the system calculates the percentage of time a two-sided quote is maintained on a security, which includes the time when the quote is locked/crossed during the sum of all 5 minute pre-opening periods that month. In order to be considered a pass, the percentage of time must be equal to or greater than 95%.
- Market Makers must also be available to TSX Market Operations officials to assist in the verification of market prices in the event a stock is exceeding its volatility settings.

In special circumstances such as extreme market volatility or where systems issues interfere with the ability of a Market Maker to reasonably meet its obligations, TSX may use its discretion to adjust performance obligations, either for a particular security or on a market wide basis.

3.2.2 Measurement of Each Market Maker's Contribution to Stock Level Performance Obligations

Each of the two MMs assigned to a security receives a Contribution Score which measures their contributions relative to each other in maintaining the symbol level performance targets. The Contribution Score is based on each MM's contribution to achieving each of the Spread Goal ("SG"), %Time at NBBO, and Top of Book ("TOB") Size symbol level performance targets. Spread Goal and % Time at NBBO contributions are assessed in terms of a net corrections component and a % time alone at target, called Alone Presence component, while TOB size contributions are assessed in terms of each MM's overall average contribution to the TOB size where not fulfilled by natural liquidity, called TOB Size Contribution.

The final overall Contribution Score is calculated by combining the MM's score in each of the three measured categories. Each of the three categories is given even weighting in calculating the final Contribution Score. The breakdown of the three categories is as follows:

- SG measurements = 33.33%
 - Relative Net SG corrections = 50% total SG weight
 - Relative SG Alone Presence = 50% total SG weight
- % Time at NBB0 measurements = 33.33%
 - Relative Net NBBO corrections = 50% total NBBO weight
 - Relative NBBO Alone Presence = 50% NBBO weight
- TOB size measurements = 33.33%

The measurements are detailed in Table 2 - Single Market Maker Measurement.

TABLE 2 - SINGLE MARKET MAKER MEASUREMENT

| METRIC | MM MEASUREMENT | MEASUREMENT DESCRIPTION | WEIGHTING IN CONTRIBUTION SCORE |
|--|-----------------------|---|---------------------------------|
| Spread Goal ("SG") – 33.33% of total | Net SG Corrections | Net SG Corrections = MAX (0 , Number of MM SG Corrections - Number of MM SG Violations) | 16.67% (50% of SG weighting) |
| | | MM SG Correction = a single event where the current spread is greater than the target spread goal, and the MM enters in an order that results in the spread being equal to or better than the target Spread Goal MM SG Violation = a single event where the current spread is equal to or better than the target spread goal, but the cancellation of an order by the MM results in the spread then being worse than the target Spread Goal Resulting Net SG Corrections cannot be less than zero | |
| | | Relative Net SG Correction % = Net SG Corrections / (MM1 Net SG Corrections + MM2 Net SG Corrections) | |
| | | Where the combined Net MM SG Corrections is below 10 Net SG Corrections per day average for that month, both MMs are assessed as equal at a 50% contribution in that category | |
| | SG Alone Presence | SG Alone Presence = The higher of: a) % of time that an MM maintains an order on the buy side which alone maintains the target spread goal; or b) % of time that an MM maintains on order on the sell side which alone maintains the target Spread Goal | 16.67% (50% of SG weighting) |
| | | E.g. an MM maintains an order on the buy side which alone maintains the target Spread Goal 5% of the time and maintains an order on the sell side which alone maintains the target Spread Goal 8% of the time. The SG Alone Presence for that MM is 8%, which is the higher of the two sides | |
| | | Relative SG Alone Presence % = SG Alone Presence for that MM / (MM1 SG Alone Presence + MM2 SG Alone Presence) | |
| | | Where the combined MM SG Alone Presence is less than 2%, both MMs are assessed at an equal 50% contribution | |

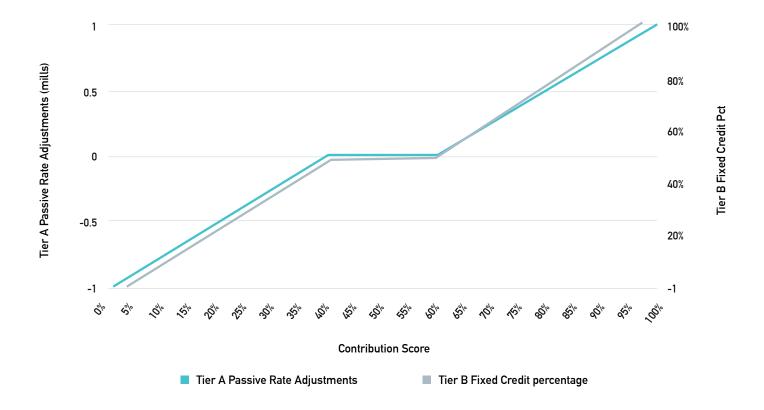
| %Time at NBBO – 33.33% of total | Net NBBO Corrections | Net NBBO Corrections = MAX (0 , Number of MM NBBO Corrections - Number of MM NBBO Violations) Where: MM NBBO Correction = a single event where the TBBO is worse than the NBBO, and the MM enters in an order that results in the TBBO being equal to or better than the NBBO MM NBBO Violation = a single event where the TBBO is at or better than the NBBO, but the cancellation of an order by the MM results in the TBBO being worse than the NBBO Resulting Net NBBO Corrections cannot be less than zero Relative Net NBBO Correction % = MM Net NBBO Corrections / (MM1 Net NBBO Corrections + MM2 Net NBBO Corrections) Where the combined Net MM NBBO Corrections is below 10 Net NBBO Corrections per day average for that month, both MMs are assessed as equal at a 50% contribution in that category | 16.67% (50% of NBBO weighting) |
|---------------------------------------|-------------------------|--|-----------------------------------|
| | NBBO Alone Presence | NBBO Alone Presence = % Time Alone on buy side + % Time Alone on sell side / 2 Where: % Time Alone = % of time that the MM maintains an order that is the only order that keeps the TBBO equal to the NBBO E.g. a MM's buy side time % Time Alone is 10% and their sell side % Time Alone is 5%. Their NBBO Alone Presence is 7.5%, the average of the two % Time Alone values. Relative NBBO Alone Presence % = NBBO Alone | 16.67% (50% of NBBO weighting) |
| | | Relative NBBO Alone Presence % = NBBO Alone Presence for that MM / (MM1 NBBO Alone Presence + MM2 NBBO Alone Presence) Where the combined MM NBBO Alone Presence is less than 5%, both MMs are assessed at an equal 50% contribution | |

Top of Book Size – 33.33% of Total TOB Size Contribution Each MM's contribution to that portion of the symbol TOB size target that is not being provided by natural (non-MM) TOB liquidity 33.33%

- TOB Size Contribution = Minimum of (MM average TOB size, TOB Size Deficit) / TOB Size Deficit
 Where:
 - TOB Size Deficit = Target TOB Size TOB Size not provided by MMs
- Relative TOB Size Contribution % = TOB Size Contribution / (MM1 TOB Size Contribution + MM2 TOB size Contribution)
- For example:
 - Target TOB Size = 5000, and TOB Size not provided by MMs ("natural liquidity") = 3000.
 TOB Size Deficit = 2000.
 - Scenario 1: MM1 contributes 1,500 shares and has a TOB Size Contribution of 1,500. MM2 contributes 2,500 shares, capped at the maximum 2,000 shares, so MM2 has a TOB Size Contribution of 2000. MM1 Relative TOB Contribution % = 43% (1500 / (1500 + 2000)) and MM2 Relative TOB Contribution % = 57% (2000 / (1500 + 2000))
 - Scenario 2: MM1 contributes 3,000 shares and MM2 contributes 2,500 shares. Both have a TOB Size Contribution capped at the maximum 2,000 shares, so therefore MM1's Relative TOB Size Contribution % = 50% vs MM2 Relative TOB Size Contribution = 50%
- Where the TOB Size Deficit is less than 10 board lots, both MMs are assessed at an equal 50% contribution.

Where unequal contributions exceed a 40-60% relative ratio, these measurements are utilized to determine the proportionate Market Maker fee incentives on a symbol basis.

A visual representation of the fee application is as follows:



For more information, please refer to the Trading Fee Schedule on the TSX website.

3.2.3 Underperformance by a Single Market Maker

A single MM may be removed from the assignment when they have:

- 3 consecutive months of 20% or less Contribution Score, or
- 4 months of 20% or less Contribution Score in the past 12 month period, or
- 3 underperforming months on a symbol level in the past 12 month period as detailed in Section 3.2.4 below, or
- Performed in a manner that may be otherwise deemed unsatisfactory at TSX discretion

In this case, the Market Maker is replaced in accordance with the policy detailed in Section 2.7.2 Single Market Maker Replacement.

3.2.4 Underperformance - Overall Stock Level

A failing result in any of a stock's five Performance Obligations is deemed as an underperforming month on that stock for both assigned Market Makers, provided that the assigned Market Maker has a Contribution Score of less than 80%. If a Market Maker assigned to the underperforming stock has a Contribution Score of 80% or greater, then that stock is not deemed as an underperforming month for that Market Maker. **

**Notwithstanding the above, TSX will monitor all assignments for stock level underperformance. Should TSX determine that a particular symbol underperforms consistently, regardless of a MM's Contribution Score, TSX may take such action as deemed appropriate to maintain symbol performance including removal of either or both assigned MMs.

If Market Makers are not performing to target on their assignments of related instruments (e.g., preferred shares, warrants, rights), then they may be considered to be underperforming on the root security and the Market Makers risk losing the assignments of the whole stock group.

TABLE 3 - IMPACT OF UNDERPERFORMANCE TO MARKET MAKERS ON ASSIGNMENTS

| MONTH | IMPACT TO MARKET MAKER | | |
|---|--|--|--|
| 1 st month of Underperformance | Monthly credits for that security revoked for that month, Market Maker rates as per TSX's fee schedule still apply. | | |
| 2 nd month of Underperformance | Monthly credits for that security revoked for that month, Market Maker rates as per TSX's fee schedule still apply. | | |
| 3 rd month of Underperformance | Monthly credits for that security revoked for that month, Market Maker rates as per TSX's fee schedule still apply. The security enters the next month's bidding process (i.e., the 4 th month) if both Market Makers are underperforming. Otherwise, the single Market Maker is replaced as detailed in 2.7.2 Single Market Maker Replacement. | | |
| 4 th month (bidding month) | Security enters bidding process if both Market Makers are underperforming. In this case, the Market Makers may not re-bid on the security that is up for rebidding as a result of their underperformance. The existing Market Makers are removed from the assignment at the end of the $4^{\rm th}$ month. | | |
| 5 th month (start of new assignment) | The new Market Makers who win the assignment, assume the assignment on the first business day of the month immediately following the bidding month (i.e., the 5 th month). Replaced single Market Makers are also effective as of the day of replacement. | | |

If through underperformance, a Market Maker has had one or more securities of responsibility reassigned and begins to have a disproportionate ratio of Tier A and Tier B securities, TSX reserves the discretion to also reassign one or more Tier A securities assigned to that firm.

If a Market Maker exceeds the Reassignment Threshold, such firm is not permitted to bid in any bidding cycles for the following 3 month period (the "3-Month Exclusion Period").

If immediately following the 3-Month Exclusion Period, the Market Maker has again exceeded the Reassignment Threshold (a "**Subject Firm**"), such Subject Firm is not permitted to bid in any bidding cycles for the following month (a "**1-Month Exclusion Period**"). Subject Firms may continue to be subject to 1-Month-Exclusion Periods until such time as they have not exceeded the Reassignment Threshold in a consecutive 3 month period.

For purposes of this Section 3.2.4, the Reassignment Threshold means the lesser of: 15 security reassignments and 15% security reassignments, in each case, due to underperformance in any consecutive 3 month period. The percentage of security reassignments is calculated as follows:

% Reassignments = Total # security reassignments in past 3 months /
Sum of total # common security assignments in past 3 months where there
was at least 1 security reassignment in that month

For greater certainty, all Market Makers are assessed at the beginning of every month using the Reassignment Threshold in respect of the immediately preceding 3 months. TSX may adjust the Reassignment Threshold with advance notice.

3.3 ADJUSTMENTS TO CORPORATE EQUITIES PERFORMANCE OBLIGATIONS

Performance Obligations for corporate equities assignments are first established through the competitive bidding process and become the responsibility of both the assigned Market Makers once a security is successfully assigned.

There are several procedures whereby these performance targets can be adjusted as prescribed below.

3.3.1 Voluntary Rebid

The assigned Market Makers may voluntarily submit a security to the next month's bidding process. Generally, a request for adjustment to Performance Obligations is processed in one of the following three manners:

- a) PERFORMANCE OBLIGATION ADJUSTMENT: If a security is entered for re-bidding and no new bids are received, then the incumbent Market Makers keep the assignment and are, at TSX's discretion, allowed to adjust their Performance Obligations subject to the minimum service levels set out in Appendix A Performance Guidelines for that security.
- **b) WITH ROFR RIGHTS:** If a more competitive bid is received, the incumbent Market Makers have "right of first refusal" to match the more competitive bid. The right of first refusal only applies if the incumbent Market Makers:
 - (i) At the time of the request, have performed successfully for a minimum of 3 months on the assignment, AND
 - (ii) At the time of the request, have less than two underperforming months on the assignment, AND (iii) the request is the result of either a corporate action, or a significant and permanent change of business to the issuer that affects its liquidity profile, or in the sole opinion of TSX, another valid reason exists.

(collectively, the "ROFR Criteria").

c) WITHOUT ROFR RIGHTS: If not ALL of the ROFR Criteria are satisfied, the incumbent Market Makers do NOT have "right of first refusal" to match and the security is awarded to the Market Makers with the most competitive bids.

Market Makers that are underperforming on their Performance Obligations may voluntarily enter this process for adjusting Performance Obligations before the end of the second underperforming month. Beyond that time, the underperformance policy applies.

3.3.2 Automatic Adjustments

Automatic adjustments to levels occur in the following cases:

- **a)** Where a price increase on an assignment results in a reduction of its board lot size, any existing TOB volume size targets that become greater than 100 board lots due to the board lot change are reduced automatically to 100 board lots on the day the stock begins trading at the smaller board lot size.
- **b)** Where an assignment closes at \$0.50 or higher, and the existing Spread Goal target is less than \$0.02, the Spread Goal target is increased to \$0.02 on the next trading day.

The above adjustments are intended to keep targets in line with maximum bidding levels.

3.3.3 TMX-initiated stock level targets

TSX, from time to time, assesses existing Market Maker performance targets and, where a stock split or decrease in price on an assignment results in an increase in board lot size or a price change from above \$0.50 to below \$0.50, TSX may request the Market Makers to increase their existing targets accordingly.

Should the incumbent Market Makers not wish to increase their targets as requested by TSX, TSX may, in its sole discretion, place the assignment into the next competitive bid process that is no less than 15 days from notification of the requested target change(s).

3.4 MGF FACILITY

The MGF facility is a uniquely Canadian facility designed to benefit investors by providing guaranteed fills at the TBBO when there is insufficient liquidity to provide a complete fill for an investor's order in the CLOB, subject to a maximum size. The facility is supported for all TSX-listed securities that have assigned Market Makers. Orders resting in the CLOB receive priority of fills ahead of MGF fills.

3.4.1 MGF Sizes

Each Market Maker assigned to a security must maintain their Individual MGF size at all times throughout market hours. The Total MGF is broadcast as the security's MGF on public feeds. Market Makers may adjust their Individual MGF size electronically intraday by entering their MGF size in total number of shares. If the Total MGF size changes, a public message notifies industry participants in real time.

Each security is subject to a maximum Total MGF size of 50 board lots. By default, each Market Maker has an individual maximum MGF size of 25 board lots. At any time, each Market Maker has the option to increase its Individual MGF size up to an amount that is the difference of the Individual MGF size of the other Market Maker assigned to the security and 50 board lots. For example, if one Market Maker is at the minimum Individual MGF size of 1 board lot, the other Market Maker has the option to increase its Individual MGF size to an amount that is up to 49 board lots. However, in order to maintain the Total MGF size of 50 board lots, a Market Maker's Individual MGF size may be adjusted automatically down to the default maximum of 25 board lots at any time. The following table below shows the effective Total MGF minimum and maximum sizes by security price set by the previous day's close and effective board lot size.

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TABLE 4: MGF MINIMUM AND MAXIMUM SIZES IN SHARES

| SECURITY PRICE RANGE | BOARD LOT SIZE | INDIVIDUAL MGF MINIMUM | INDIVIDUAL MGF MAXIMUM* | TOTAL MGF MAXIMUM |
|--------------------------|----------------|---------------------------|----------------------------|----------------------|
| \$1 and up | 100 | 100 | 2,500 | 5,000 |
| \$0.10 and less than \$1 | 500 | 500 | 12,500 | 25,000 |
| Under \$0.10 | 1,000 | 1,000 | 25,000 | 50,000 |

^{*} Individual MGF Maximum may go up to 49 board lots as long as the Total MGF Maximum stays at 50 board lots (e.g. MM1 MGF = 1 board lot and MM2 MGF = 49 board lots).

3.4.2 MGF Eligibility

Market participants opting to use the MGF facility need to pre-qualify a Trader ID as an "MGF-eligible Trader ID", which is a Trader ID used by a participant to enter orders on behalf of Retail Customers only or that is generally intended to be used to enter orders that are MGF-eligible.

To be MGF-eligible, an order must be a disclosed client order and must NOT be:

- 1. Part of a larger (parent) order except if the parent buy (sell) order is equal to or less than the specified MGF-Eligible Order Size, and the client order is sent to execute on TSX at the same time as the remainder of the parent order is sent to execute on other marketplaces;
- 2. From a DEA client (unless the DEA client is a broker acting as an "agent" for retail client order flow);
- 3. Generated by a computer algorithm;
- 4. From a customer who is involved in trading the markets directly on an active and continuous daily basis; or
- 5. From a U.S. broker-dealer ("**U.S. dealer**") except when acting on behalf of a client of a U.S. dealer.

Currently, the specified MGF-Eligible Order Size is the sum of the best ask (bid) size displayed on TSX plus the size of the MGF.

Orders that meet any or all of the conditions specified above are not considered MGF-eligible and must be marked as such. If the larger (parent) order size is not checked, smaller orders split from that parent order are not MGF-eligible and must be marked as such. The parent order, if sent to TSX in its entirety, may be MGF-eligible and is subject to a TSX MGF order size check, whereby the buy (sell) order size must be less than or equal to the MGF-Eligible Order Size for that security at the time the order is received by TSX to receive a MGF fill. Market participants can bypass this TSX MGF size check by marking each MGF-eligible order to indicate that the parent order has been checked for compliance with the MGF-Eligible Order Size prior to sending the order to TSX.

TSX regularly conducts reviews of MGF order usage to verify and enforce correct usage.

3.4.3 Allocation of MGF Fills

MGF-eligible orders may receive a fill up to the Total MGF size for that security if the CLOB does not have sufficient visible liquidity at the NBBO. MGF orders receiving a fill are allocated between each assigned Market Maker according to a pro-rata allocation based on each Market Maker's individual MGF size contribution to the Total MGF size, rounded to the nearest board lot.

For example, assume the following scenario:

- 500 shares available in the CLOB
- Total MGF = 2500 comprised of:
 - Market Maker 1's MGF = 1000 (40% of the Total MGF)
 - Market Maker 2's MGF = 1500 (60% of the Total MGF)
- An incoming MGF-eligible order for 2500 arrives:
 - 500 shares are filled by orders in the CLOB, leaving a balance of 2000 shares
 - 800 shares are allocated to the Market Maker 1 as a MGF fill (40% of 2000 shares)
 - 1200 shares are allocated to the Market Maker 2 as a MGF fill (60% of 2000 shares)

3.5 PARTICIPATION

From time to time, while providing market making services, it may be important for Market Makers to create or offset a position quickly in order to protect against losses inherent in performing their market making function. Responsible Designated Trader (also referred to as "Registered Trader" or "RT") participation is an optional feature that enables Market Makers to "participate in" (i.e., trade against) a fraction of incoming orders by receiving priority of execution within the CLOB in their assigned securities ("Participation"). Participation Option is a feature that allows Market Makers to determine the size of the order that they will participate with when they have Participation turned ON and the other market maker has Participation turned OFF. See Section 3.5.2 for more details on Participation Option.

Market Makers can electronically turn their Participation on or off independently for each side of the market intraday. When Participation is turned on, TSX automatically generates participation orders for a Market Maker to trade with a specified percentage of any incoming order that is equal to or less than the size of the Total MGF.

Market Makers may also specify a Maximum Volume Allocation for each security assignment, per side. This is the maximum number of Participation shares that a Market Maker will get filled on, after which TSX automatically turns Participation off for that security and side. This provides a mechanism to help Market Makers prevent accumulating an excessively large position in a short period of time. The accumulation of Participation shares is reset each time a Market Maker turns Participation on or off.

3.5.1 Allocation of Participation Fills

Market Makers can optionally turn Participation ON at their own discretion. If only one Market Maker turns Participation ON at a given time, then that Market Maker is allocated the full Participation eligible fill (up to 40% of the incoming order, rounded to the nearest board lot₁). If both Market Makers have Participation turned on at a given time, then the total Participation eligible fill remains at 40% of the incoming order, but is allocated between the two Market Makers on a pro-rata basis based on each Market Maker's individual contribution to the Total MGF size.

¹Except in the case of a 200 share order, the participation amount may be 50% as 100 shares are allocated to CLOB liquidity and 100 shares are allocated to Market Makers.

For example, assume the following scenario:

- 5000 shares available in the CLOB
- Total MGF = 2500 comprised of:
 - Market Maker 1's MGF = 1000 (40% of the Total MGF)
 - Market Maker 2's MGF = 1500 (60% of the Total MGF)
- An MGF-eligible incoming order for 2500 shares arrives:
 - 1000 shares (40% of 2500 share order) are allocated for Participation, with the balance of 1500 shares filled by the CLOB
 - 400 shares are allocated to Market Maker 1 as a Participation fill (40% of 1000 shares)
 - 600 shares are allocated to Market Maker 2 as a Participation fill (60% of 1000 shares)

TSX believes that the proportional allocation retains a direct and important balance between obligated liquidity via the MGF and the degree of participation incentive provided to Market Makers.

If the Market Maker has a booked order with time priority over all other booked orders at that price level, the incoming order trades against that booked Market Maker order at that price level. In cases where there are still remaining allocated Participation shares after the booked order has been filled, the Market Maker receives a separate fill for the remaining Participation shares, thereby getting its full allocated Participation shares.

3.5.2 Participation Option

Participation Option is a feature that allows Market Makers to determine the size of the order that they will participate with when they have participation ON and the other market maker has participation OFF. This can be set on a symbol basis, but applies to both buy and sell side. The options are detailed in the table below.

Note that when a Market Maker has Participation ON, they may also be called upon to guarantee MGF fills for client orders from MGF-eligible Trader IDs marked MGF-NO. The size of these orders depends on the Participation Option chosen (1 & 2 – Total MGF size, 3 – Individual MGF size). If there is only one Market Maker with Participation ON, the size of the MGF fill is limited to the Individual MGF size of the Market Maker that has Participation ON only.

TABLE 4: PARTICIPATION OPTIONS

| OPTION | SIZE OF INCOMING ORDER THAT CAN BE PARTICIPATED WITH | % OF INCOMING ORDER THAT CAN BE PARTICIPATED WITH | EXAMPLE: RT1 MGF = 500 (ON); RT2 MGF = 1500 (OFF); TOTAL MGF = 2,000 |
|--------|--|---|---|
| 1 | Total MGF size | Total MGF Size, capped at the Individual MGF size | Participate with all orders < 2000 shares Participation Fill = lesser of (40% of 2,000 = 800, and Individual MGF Size = 500) = 500 shares |
| 2 | Total MGF size | Individual MGF Size | Participate with all orders < 2000 shares Participation Fill = 40% of 500 = 200 |
| 3 | Individual MGF size | Individual MGF Size | Participate with all orders ≤ 500 shares Participation Fill = 40% of 500 = 20 |

3.5.3 Participation Anti-wash

In order to prevent wash trades, Market Makers can optionally define a self-trade key to associate with their Responsible Designated Trader's Trader ID. If an incoming order from the same broker as the Market Maker would generate a Participation fill, and that incoming order has the same self-trade key as the Market Maker, then the Participation fill is prevented. The exact behaviour depends on the self-trade instruction of the active order.

- If the active order has an 'EM' (execute match) instruction, then the Participation fill occurs but is suppressed from the tape. The fill is marked as a Self Trade.
- If the active order has an 'NM' (cancel newest), 'OM' (cancel oldest), or 'DM' (decrement larger and cancel smaller) instruction, then the Participation fill is prevented altogether.

Note that in cases where there are two Market Makers assigned to the symbol, the other Market Maker may still receive a Participation fill if they have Participation enabled.

3.6 ODD LOT FACILITY

Market Makers are obligated to maintain an odd lot market at the Protected NBBO for immediately tradeable incoming odd lots. Booked odd lots which become tradeable due to a change in the Protected NBBO execute at the Protected NBBO.

Odd lot responsibilities are allocated to both Market Makers based on a round robin allocation methodology (i.e., incoming odd lot orders alternate between the two Market Makers).

Each day, a designated Market Maker (MM1 or MM2) gets the first odd lot fill from the opening and is responsible for the odd lot from the closing auction. This Market Maker is designated as the "AuctionRT" for that day.

During the opening, odd lot fills are divided between the two Market Makers by side. Starting with the AuctionRT, each odd lot fill immediately after the opening is allocated, at the current protected NBBO price, to the Market Maker that currently has the smaller number of shares at that time for that side.

During continuous trading (post-open session), odd lot fills are allocated to each Market Maker according to a pre-determined ratio, by side. This ratio is currently set to 1:1. The order of the rotation is maintained from the previous day. For example, with a 1:1 ratio, if MM1 received the last buy odd lot in continuous trading the previous day, MM2 receives the first buy odd lot in continuous trading the next day.

The odd lots resulting from the closing auction are all assigned to the AuctionRT for that day. The AuctionRT's net boardlot position as a result of these odd lots is offset by a MOC Autofill to the AuctionRT, such that the AuctionRT's net position as a result of all MOC odd lots is always less than a board lot.

For more information on odd lots, please see the **TSX Order Types & Functionality Guide** available on the TSX website

3.7 ASSISTANCE TO ISSUERS AND OTHER MARKET PARTICIPANTS

Market Makers through their responsibilities may develop experience trading a particular security and are encouraged to use this knowledge to help educate and inform issuers of general trading activity. TSX encourages issuers and Market Makers, at their discretion, to communicate on a mutually agreed upon schedule. Such communication may generally consist of trading activity, trends, publicly-disclosed liquidity events, general observations or commentary of the market.

As a reminder, Market Makers are not entitled to, and must not solicit, any material information that has not been generally disclosed about their securities of responsibility and are responsible for complying with the Universal Market Integrity Rules, the TSX Rule Book, and applicable securities laws. Similarly, issuers must not disclose, offer, or suggest such information, and must understand that Market Makers are not responsible for guaranteeing a minimum or maximum price, and must not falsely generate trading volume.

3.8 GATEKEEPER ROLE

Gatekeeping is the term used for performing a surveillance role on each security and reporting suspicious or unusual behaviour to IIROC. Currently, Market Makers receive IIROC fee discounts for trades incurred on their securities of assignments in exchange for the gatekeeper function they perform.

IIROC published **Administrative Notice 16-0163** on July 7, 2016, which covers IIROC Fee Model Guidelines and, among other things, clarifies IIROC's position on the application of the 70% fee discount to trades executed by Market Makers with marketplace trading obligations.

The guidelines state that the number of trades executed by a "Qualified Market Maker" acting in furtherance of its marketplace trading obligations on the listing exchange shall be discounted by 70% for the purposes of calculating the Trade Fee for such Marketplace. For clarity, the discount will not be applied to trades for securities that are not listed on the listing exchange that entered into the trading obligations agreement with the Qualified Market Maker.

As market making functions continue the trend toward electronification, it is important for Market Makers to have capabilities to continue providing this valuable service to IIROC.

3.9 DESIGNATED MARKET MAKER CONTACT

Market Makers are responsible for designating an individual within the firm to manage the Market Maker's market making responsibilities and be the primary contact with TSX with respect to the Market Maker's security assignments (the "**Designated Market Maker Contact**"). The Designated Market Maker Contact or his or her back-up must be available during trading hours. The responsibilities of the Designated Market Maker Contact include:

- 1. Managing security assignments
- 2. Managing performance obligations
- 3. Notifying TSX regarding any new Responsible Designated Traders or changes to Responsible Designated Traders for any assigned securities

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3.10 RESPONSIBLE DESIGNATED TRADER

Market Makers are responsible for appointing an Approved Trader within the firm to be the Responsible Designated Trader that performs the requirements described in the Responsibilities of Market Makers section. The Responsible Designated Trader must have sufficient experience to effectively perform the market making responsibilities. The Market Maker must notify TSX of the name and Trader ID of such individual at the time the security is assigned to the Market Maker. Such Trader ID of the Responsible Designated Trader is used when assigning auto fills resulting from the MGF facility, Participation, and Odd Lot facility, in addition to any fee incentives.

3.11 MARKET MAKER FEES

For more information, please refer to the **Trading Fee Schedule** on the TSX website.

3.12 EXEMPTION FROM MARKET MAKING RESPONSIBILITIES

In the circumstances described below, a Market Maker may request an exemption from all or part of the requirements described in the Responsibilities of Market Makers section.

3.12.1 Expiring Rights and Warrants

A Market Maker may request to be relieved of their market making responsibilities in respect of rights and warrants for up to 10 business days prior to the date of expiry of the right or warrant. If a Market Maker chooses to remain assigned to the security during this time period, they are required to continue to fulfill their market making responsibilities up to the date of expiry.

3.12.2 Special Circumstances and Unusual Situations

A Market Maker may request to be relieved of all or part of their market making responsibilities in respect of any securities that are affected by special circumstances and/or unusual circumstances relative to that security. This may include a pending delisting that renders a security to be of no easily determinable value. Such requests are reviewed on a case by case basis and exemptions will be made at the discretion of TSX.

Exiting the Program

4.1 RELEASE OF SECURITIES

Security assignments may be removed by TSX under the following circumstances:

- **a)** A Market Maker has underperformed in some or all of their Performance Obligations or ETF Performance Obligations, as the case may be,
- **b)** A Market Maker has breached the TSX Rule Book, breached any TSX rule, policy or directive, beached applicable securities laws, or breached any term of the TSX Market Maker Agreement;
- c) The security is subject to a competitive rebalancing process, as described in the **Assignment of**Securities section, whereby securities may be re-assigned through the **Competitive Bidding Process**;
- d) A Market Maker undergoes a change in control;
- e) A Market Maker voluntarily submits the assignment to the **Competitive Bidding Process**. The Marker Maker may not, during any 30 day period, discharge one-third or more of the total number of securities assigned to it at the start of such 30 day period.

4.2 VOLUNTARY EXIT FROM THE TSX MARKET MAKER PROGRAM

Market Makers must provide 60 days' written notice to cease performance of its market making responsibilities and relinquishing all security assignments. The security assignments of Market Makers exiting the Program are made available in the next scheduled bidding process.

If a Market Maker is acquired through a merger or acquisition and the acquirer intends to purchase or has purchased the rights to perform the market making function on the assigned securities of the Market Maker, the Market Maker must notify TSX and request TSX's consent to the assignment of the TSX Market Maker Agreement by the Market Maker to the acquirer. If TSX consents to the assignment, the security assignments of the acquirer are reviewed by TSX and TSX may, at its discretion, rebalance the security assignments in accordance with maximum concentration limits, Tier A:B ratio restrictions, or impose such other conditions TSX deems necessary or appropriate..

A Market Maker that has left the Program may not re-apply to become a Market Maker for two calendar years.

4.3 TSX TERMINATION OF A MARKET MAKER

TSX may terminate a Market Maker from the Program under conditions outlined in the TSX Market Maker Agreement.

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Appendix

Performance Guideline

The table below sets out the minimum service levels and maximum bids for assigned securities by category.

| CATEGORY | NEW SECURITIES | EXISTING SECURITIES | MAX SPREAD GOAL* | MIN % OF TIME TSX AT NBBO** | MIN TOB SIZE*** (LESSER OF) | MIN LIQUIDITY FACTOR | MIN % OF TIME WITH OPENING PRESENCE |
|----------|--|---|--|--------------------------------------|---|----------------------------|--|
| 1 | Market Cap > 3 billion | S&P 60 or any security with ADV > 10 M (A1 & A2) | 1% of NLSP at the time of bidding | 90% | 25 board lots or \$25,000 in value | 90% | 95% |
| 2 | Market Cap >\$1 billion to \$3 billion | S&P Completion or any security with ADV >\$1 M (A3) | 3% of NLSP at the time of bidding | 90% | 10 board lots or \$20,000 in value | 90% | 95% |
| 3 | Market Cap >\$500 million to \$1 billion | All remaining securities (B1- B5) | 15% of NLSP at the time of bidding | 75% | 6 board lots or \$10,000 in value | 90% | 95% |
| 4 | Market Cap >\$50 million to \$500 million | All remaining securities (B5+ & >=\$0.10) | 30% of NLSP at the time of bidding | 75% | 2 board lots or \$5,000 in value | 90% | 95% |
| 5 | Market Cap \$0 to \$50 million | All remaining securities (B5+ & <\$0.10) | \$0.095 | 75% | 2 board lots or \$1,000 in value | 90% | 95% |
| 6 | n/a - assigned along with the root | Secondary issues (warrants, rights, etc.) & TSX discretion | - | 75% | 2 board lots or \$1 in value | - | - |

^{*}Spread goals are set in dollar terms, but for purposes of this table, the maximum is defined in percentage terms. The spread goal is never tighter than \$0.02 for securities priced at or above \$0.50, or \$0.01 for securities priced below \$0.50.

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^{**} The max bid accepted for %Time at NBBO is 99.5%. Bids should be entered in half percentage increments (e.g. 95.0%, 95.5%, 96.0%, etc) and are measured to 1/10th of a percent (0.1%).

^{***} The max bid accepted for TOB Size Bids is 100 board lots. Bids should be entered in board lot increments.

Definitions

Terms not defined in this Appendix B have the meanings ascribed to them in the TSX Rule Book.

1-Month Exclusion Period has the meaning ascribed thereto in Section 3.2.3.

3-Month Exclusion Period has the meaning ascribed thereto in **Section Error! Reference source not found.**

ADV has the meaning ascribed thereto in Section 3.1.1.

ATWS has the meaning ascribed thereto in Section 3.1.1.

CLOB means the TSX Central Limit Order Book.

Contribution Score has the meaning ascribed thereto in Section 3.2.2.

DEA client has the meaning set out in National Instrument 23-103 Electronic Trading and Direct Access to Marketplaces.

Designated Market Maker Contact has the meaning ascribed thereto in Section 3.9.

ETF means exchange traded fund.

ETF Performance Obligation has the meaning ascribed thereto in Section 3.1.1.

Individual Measurements has the meaning ascribed there to in Section 3.2.3.

Individual MGF means the MGF size contributed by a single MM on a security as described in the section **MGF Facility.**

IIROC means Investment Industry Regulatory Organization of Canada.

lead bidders has the meaning ascribed there to in Subsection 2.7.1(3)(c).

Liquidity Ratio or **LR** has the meaning ascribed thereto in Section 3.1.1.

Market Maker means an approved participating organization that has been approved by TSX to perform market making activities set out in this guide, and has been assigned one or more securities. Where the context requires, the term Market Maker means both Market Makers assigned to a security.

Maximum Volume Allocation means the maximum volume a Market Maker can accumulate in Participation fills, as set by the Market Maker.

MGF means minimum guaranteed fill.

Participation has the meaning ascribed thereto in Section 3.1.1.

Participation Option has the meaning ascribed thereto in Section 3.1.1.

Participation Ratio or PR has the meaning ascribed thereto in Section 3.1.1.

Performance Obligation has the meaning ascribed thereto in Section 3.2.1.

Program means the TSX Market Making Program.

Protected NBBO means CBBO as defined in the TSX Rule Book.

Reassignment Threshold has the meaning ascribed thereto in Section 3.2.2.

Related Instrument means rights, warrants, subscription receipts, preferred shares, US dollar equivalents, or multiple classes of common shares (i.e., classes with different voting rights, Canadian vs. US resident eligibility), when issued, or essentially any derived product based upon an existing issuer.

ROFR Criteria has the meaning ascribed thereto in Section 3.3.1.

SG has the meaning ascribed thereto in Section 3.1.1.

Stock Level Performance Obligations means the Performance Obligations and/or the ETF Performance, as the context may require.

Subject Firm has the meaning ascribed thereto in Section 3.2.2.

TBB means TSX best bid.

TBBO means TSX best bid and offer.

TBO means TSX best offer.

Top of Book or **TOB** means the best price level, comprising of the best (highest) bid and best (lowest) offer in the CLOB.

Total MGF means the aggregate sum of the MGF sizes contributed by all Market Makers on a security as described in the section **MGF Facility**.

Trader ID means the trading identifier associated with an Approved Trader.

TSX means Toronto Stock Exchange.

TSX Rule Book means the Toronto Stock Exchange Rule Book, as such may be amended from time to time.

Under Contribution Month has the meaning ascribed thereto in Section 3.2.3.

Performance Reports

The following is a sample of the performance reports provided to corporate issuers through Infosuite streamer platform under Float -> Trading Performance. This sample is provided for illustrative purposes only and the format and content of the performance reports are subject to change at the sole discretion of TSX.

For more information on TSX Infosuite, see TSX Infosuite.

For more information on the specific metrics included, please see Section 3.2.1 - Performance Obligations - Stock Level.



Definitions

| VERSION | DATE | DESCRIPTION OF CHANGES |
|---------|-----------------|---|
| 3.2 | July 5, 2021 | 3.2.2 - Added concept that if the underperforming month does not apply if the Market Maker has overcontributed over a certain threshold. 3.2.3 - Added single market maker measurement methodology 3.2.4 - Added criteria for single market maker removal from assignment Updated Appendix B - Definitions |
| 3.1 | Apr 1, 2021 | Revised sections 2.7.2, 3.23, and 3.24 that reference Individual Contribution measurement to reflect that this is still under evaluation and will not be implemented. |
| 3.0 | January 6, 2021 | 2.7 - Revised to reflect new bidding process for corporates and add process for individual market maker replacement. 3.2 - Added details for Individual Performance measurement. Added Section 3.3.2 Automatic Adjustments Added Section 3.3.3 TMX-initiated stock level targets 4.2 - Removed allowance for Dealer Sponsored Allocations. Appendix B - Added definitions for completeness Appendix C - Updated with screenshots of MM reports for issuers on InfoSuite. Multiple edits throughout for clarity and accuracy. |
| 2.6 | Oct 15, 2019 | Added Section 3.7.3 Participation Anti-wash effective Nov 4, 2019 |
| 2.5 | Sept 27, 2018 | 2.4 – Modified Table 2 - Impact of Underperformance to Market Makers on Secondary Assignments to push out timeline of underperformance rebids and reassignments by 1 month |
| 2.4.3 | Sept 6, 2018 | 2.3 – Removed current Tier B/A ratio. This will be provided on bidding templates going forward. |
| 2.4 | July 11, 2018 | 2.8 - Modified tie-break to give a threshold of 10% whereby firms are considered "equivalent" in performance for the purpose of tie-breaks. 3.4 - Defined threshold of reassignments and modified it to look back 3 months and be a 3 month ban. Also clarified that a firm may not re-bid on an assignment they just lost purely due to underperformance. |
| 2.3 | Mar 12, 2018 | 3.3 - Clarified %TimeAtNBBO (excludes times when quotes or locked or crossed), TOB Size measurement (only includes Individual MGF), Liquidity Factor measurement (only counts trades within same day) 3.8 - Clarified odd lot rotation during continuous trading Added Section 3.14 - Exemption from Market Making Responsibilities |
| 2.2 | Jan 19, 2018 | 2.8 – Added clarification that bids are subject to minimum and maximum levels Appendix A – Added maximum bid levels |
| 2.1 | Nov 20, 2017 | Appendix C - Updated sample report to issuers Formatting and branding changes |

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| 2.0 | Sept 20, 2017 | 2.5 – Added section on Minimum Assignments 3.3, Appendix C – Added sample performance reports to issuers |
|-----|---------------|--|
| | | 3.5 – Updated MGF Facility to guarantee fills at TBBO only (not NBBO as proposed) |
| | | 3.7.2 – Added section on Participation Option |
| | | 3.8 – Added detail to Odd Lot Facility |
| | | 2.11 - Added section on Designated Market Maker Contact |
| | | 3.12 – Added section on Responsible Designated Trader |
| | | 4 - Added detail to section Existing the Program |
| | | Appendix A – Updated values for Min Liquidity Factory and removed ETFs |
| | | from chart (ETFs not part of secondary assignments) |
| | | Appendix B - Added "Trader ID" to definitions |
| 1.6 | March 2017 | Draft version accompanying regulatory proposal |