

up and match the prices bid or offered during the PIP. Therefore, the OFP attempting to trade against its own order through the PIP process, as well as the Market Makers who are competing to participate on that order, all have a strong incentive to put their best prices forward first before the PIP ends. In the PIP, the Market Maker would need to match or improve the price proposed by the OFP's Primary Improvement Order (or its modification) if the Market Maker is to participate in the execution. The PIP process is not a face-to-face or screen-based negotiation, but a true auction—where market participants are anonymous, where all the prices are firm from the beginning, where the auction cannot be cancelled by the facilitation firm, and where no one gets a last look to change one's price before the auction ends. Since the PIP is an anonymous trading environment where there is no specialist or market maker who controls the process and there is no physical, technological or procedural impediment to posting a better price and breaking into a trade, BOX Market Makers would have the opportunity and incentive not to let trades happen at uncompetitive prices.

#### (6) PIP Duration Is Three Seconds

The PIP auction process would be 3 seconds in duration because the BSE believes it is enough time for a vigorous, multi-round, electronic price improvement auction among the BOX Market Makers and the OFP who initiates the PIP, and yet is not so long that it is economically infeasible for OFPs to be firm for the Customer Order for at least a penny better than the prevailing NBBO at the inception of the PIP. This gives the Customer price protection against market movements but also exposes the OFP to full market risk during the entire course of the PIP. This exposure cannot be hedged because the OFP has no way of knowing with certainty how much—if any—of the trade the OFP would receive because the OFP's price may be matched or bettered by any Market Maker during the PIP.<sup>60</sup>

Balanced against the fact that the OFP is held firm and bears full market risk during the PIP, the PIP must nonetheless be long enough to assure that the OFP's price to the Customer is a fair one—meaning among other things that a competitive, multi-round auction is possible between and among the OFP and the Market Makers in the relevant class. As a practical matter, the PIP

process for all Options Participants would necessarily be governed by computerized systems, not by human traders. Market Makers and OFPs can easily either develop their own software to manage trading on BOX, or utilize one of the many front-end solutions that have been written to connect with electronic-based exchanges.

In addition to the fact that BOX OFP and Market Maker prices must be firm during the PIP, the three second duration of the PIP reflects the processing speed of the trading system upon which BOX would be operated and the speed of network transmissions.<sup>61</sup> The BOX system would implement full multi-round and multi-participant auctions during a PIP of three seconds. Therefore, the Exchange believes that a three second PIP is the best way to minimize the market risk borne by OFPs so that they can provide firm, aggressive pricing to Improvement Orders, and yet assure that those prices are tested by a reasonable electronic auction process.

#### (7) PIP Trade Allocation

As mentioned earlier, at the conclusion of the PIP, the Customer Order is executed against all orders on the opposite side of the BOX Book (both Improvement Orders, Market Maker quotes, unrelated orders and the Primary Improvement Order submitted by the OFP) following price priority. When two or more orders on the opposite side of the BOX Book are at an identical price limit, time priority is used with two exceptions.

As discussed below, if the OFP Primary Improvement Order as modified (if at all) is equal to the best limit price, the Primary Improvement Order has priority over all orders for 40 percent of the Customer Order. If there is a Market Maker Prime for this PIP, and the Market Maker Prime's Improvement Order is also at the best limit, the Market Maker Prime has priority over all other Market Maker Improvement Orders and unrelated orders up to one third of the unexecuted portion of the Customer Order remaining at that price level.<sup>62</sup>

#### (8) OFP Priority Over Other Orders at Identical Price

Upon conclusion of the PIP, the OFP who submitted the Primary Improvement Order retains certain priority privileges. If the OFP's Primary

Improvement Order as modified (if at all) during the PIP is matched by or matches a competing Improvement Order or unrelated order at any price level, the OFP retains priority for only forty percent (40%) of any unexecuted portion of the Customer Order available at that price level, notwithstanding the time priority of the Primary Improvement Order, competing Improvement Order or unrelated order. The OFP will receive additional allocation only after all other orders have been filled at that price level.<sup>63</sup>

#### (E). Market Maker Prime

The Market Maker Prime is a BOX Market Maker who has partial time priority over all other Market Makers in the matching mechanism of the PIP. The Market Maker Prime is a Market Maker who has a quote<sup>64</sup> that is equal to or better than the NBBO on the same side of the market as the Primary Improvement Order at the instant the PIP is initiated. If more than one Market Maker meets the criteria, the Market Maker whose quote has time priority would be the Market Maker Prime for that PIP.<sup>65</sup>

At the conclusion of the PIP, the Market Maker Prime (if he has entered an Improvement Order during the PIP at a limit price which is executable against the Customer Order at the end of the PIP) would have a trade allocation priority of up to one third of the unexecuted portion of the Customer Order remaining at that price level after any priorities accorded the OFP have been met. The Market Maker Prime would have priority over all other Market Maker Improvement Orders and unrelated orders up to one third of the unexecuted portion of the Customer Order remaining at that price level.

If the Market Maker Prime modifies his quote on BOX during the PIP to meet the best limit price instead of entering an Improvement Order into the PIP process, the Market Maker Prime rules do not apply to the modified quote. The trade matching follows the normal PIP priority rules where the Market Maker Prime's modified quote would be treated as an unrelated order. If the Market Maker Prime cancels his quote during the PIP, the Market Maker keeps his status of Market Maker Prime for any Improvement Order previously entered

<sup>63</sup> See proposed BOX Rules, Chapter V, *Doing Business on BOX*, Sec. 18(f), *The Price Improvement Period*.

<sup>64</sup> In this context a Market Maker's "quote" is derived from his order on the BOX Book and does not include any Improvement Orders in the PIP process.

<sup>65</sup> See proposed BOX Rules, Chapter V, *Doing Business on BOX*, Sec. 19, *Market Maker Prime*.

<sup>60</sup> See proposed BOX Rules, Chapter V, *Doing Business on BOX*, Sec. 18, *The Price Improvement Period*.

<sup>61</sup> The communication of PIP orders from the BOX hub to BOX market participants is not reliant on OPRA and does not impact OPRA system capacity.

<sup>62</sup> See proposed BOX Rules, Chapter V, *Doing Business on BOX*, Sec. 19, *Market Maker Prime*.