

13.2.3 Lynx ATS – Notice of Proposed Changes and Request for Comment

LYNX ATS

NOTICE OF PROPOSED CHANGES AND REQUEST FOR COMMENT

Omega Securities Inc. (OSI) is publishing this Notice of Proposed Changes and Request for Comment in accordance with the “Process for the Review and Approval of the Information Contained in Form 21-101F2 (F2) and the Exhibits Thereto”. Market participants are invited to provide the Commission with comments on the proposed changes.

Comments on the proposed changes should be in writing and submitted by April 6, 2020 to:

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Ontario Securities Commission
22nd Floor
20 Queen Street West
Toronto, Ontario
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OSI is proposing to implement the following enhancements to the Lynx ATS (**Lynx**) trading book. Collectively, OSI refers to all the proposed changes as (“**Lynx 2.0**”):

1. Introduce broker preferencing;
2. Amend hidden trading functionality; and
3. Create LST trader ID definition and limit LST trader IDs orders to Post Only.

The proposed features are described in greater detail below and OSI has included execution examples at Appendix A of this cover letter. If approved, the proposed trading fees for hidden executions will be filed with the OSC closer to the implementation date.

A. Description:

1. Introduce broker preferencing

The current matching priority on Lynx is price / time priority. OSI is proposing to introduce broker preferencing into the matching priority for both lit and hidden executions.

The new matching priority will be based on Price/Broker/Time priority except for crosses, which will be granted time priority over other orders on the book at the same price level. The matching priority for hidden orders will be price/broker (attributed and anonymous)/time priority and will be based on the Protected National Best Bid Offer (**PNBBO**). The matching priority for lit orders will be price/broker (attributed only)/time priority. Any hidden executions at the PNBB or PNBO will include lit over dark as per CSA/IIROC dark trading rules. Pegged orders will be given new timestamps at each quote level change, however, they will maintain their original priority levels if multiple orders exist at each pricing level.

2. Amend hidden trading functionality

Currently, Lynx offers hidden mid-point pegged order functionality in equities, ETFs, and listed fixed income products. OSI is proposing to offer hidden trading at and within the PNBBO.

In addition, OSI is proposing to introduce new hidden pegged order functionality that allows for minimum price improvement (**MPI**) order functionality and at the PNBB or PNBO. Hidden trading on Lynx is based on the PNBBO and the following:

- Hidden orders can be entered during regular trading hours between 8:00am and 5:00 pm EST;
- Passive hidden orders can be entered as regular hidden orders, or they can be entered as hidden pegged orders;
- All hidden pegged orders will automatically adjust with the changes in the PNBBO until they are either executed or reach their limit price (i.e. dynamic reprice);
- Hidden pegged MPI orders are based on a full tick improvement to either the PNBB or PNBO;
- Hidden orders will be subject to the recently amended CSA/IROC dark trading rules;
- The hidden orders can be entered at any pricing point, but will only execute at or between the PNBBO on UMIR based tick increments;
- MPI orders will only trade when the PNBBO is two ticks or greater. During a one tick spread PI orders will be booked and existing orders will maintain their priority but will only trade once the spread widens to two ticks or greater; and
- MPI orders will NOT execute against mid-point orders.

3. *Create LST Trader ID definition and limit LST trader IDs to Post Only*

OSI is proposing to create a latency sensitive trader (**LST**) definition category. A trader ID will meet the LST definition if they submit orders that;

- are entered by proprietary traders of dealers or direct electronic access (**DEA**) clients of dealers using automated, co-location trading strategies.
- Co-location is defined as the participant having a server located in the same data center as any Canadian exchange or ATS and using it for automated trading strategies.

Lynx will only accept lit or hidden "Post Only" orders from LST trader ID's. Marketplace participants will be required to provide a list of LST trading IDs to OSI prior to implementation. Most Canadian dealers have already determined trading ID's to be either Retail/Institutional and or LST. Prior to launch we will work with subscribers to identify their LST trading ID's. We will have a process in place to monitor ID's based on a variety of metrics such as numbers of orders per day, cancel to trade ratios, number of executions, etc. If we determine that a trader ID is not classified correctly, we will immediately notify the subscriber and ask for written clarification as to the status of that trader ID.

B. Expected date of implementation

OSI is planning on launching Lynx 2.0 in or about Q3 or Q4, 2020 which is dependent on receiving all required regulatory approvals and meeting all scheduled timelines.

OSI plans to reach out to its subscribers and require them to fill out a newly created Lynx trading certification form where subscribers must indicate which of their trading IDs meet the definition of LST. OSI will have a software program that limits these trading IDs to post only. After receiving the trading certification forms and ensuring that the declared LST IDs can only provide post only orders, OSI will begin a full GTE session that adheres to the testing and technology timelines of section 12.3 of NI 21-101 and OSC Staff Notice 21-706.

C. The Rationale for proposed Change:

1. *Introduce broker preferencing*

The rationale for introducing broker preferencing is to streamline Lynx's functionality to industry standards.

2. *Amend hidden trading functionality*

All Canadian marketplaces either have a dark trading book or they support hidden orders within their lit trading books. The rationale for introducing additional hidden trading opportunities in Lynx is to allow OSI subscribers to seek better fills through hidden price improvement trading opportunities without having adverse price movements on the underlying security.

3. *Create LST Trader ID definition and limit LST trader IDs to Post Only*

Canadian regulators have created a market structure that allows investors choice and have created enough competition to lower overall costs and to foster innovation. As a result of this, market participants in Canada can choose where and how to route

orders in their quest to seek best execution for their clients. These venues chosen are comprised of dark, lit, or speedbump marketplaces. Despite this, natural Canadian market participants continue to be frustrated by their inability to trade without the interference from latency sensitive traders, and they continue to experience quote fade, and smaller fill rates leading to increased back office and transaction costs.

Our rationale for concluding that Lynx will lead to an improved market experience for dealers and their clients was in part inspired by the results of a similar market structure model introduction in Europe.

This market was launched as a result of pushback against proprietary predatory trading practices which was harming natural investors. Its main attraction to dealers is that it offers an order book that does not allow aggressive automated non client proprietary trading. This market model has been approved by European regulators and supported by clients, and there has been no evidence of harm to the European equity market structure.

D. The expected impact of the proposed Significant Change on Market structure for Subscribers, Investors and capital markets:

1. *Introduce broker preferencing*

OSI sees no impact on subscribers, investors, and capital markets as other marketplaces in Canada offer broker preferencing which has become an industry standard in the way orders are executed.

2. *Amend hidden trading functionality*

OSI sees no impact on subscribers, investors, and capital markets as other marketplaces in Canada offer hidden order functionality. This proposed change will allow Lynx subscribers to seek better executions for their clients through price improvement trading strategies.

3. *Create LST Trader ID definition and limit LST trader IDs to Post Only*

OSI sees minimal impact on subscribers, investors, and capital markets with the proposed LST definition and limiting LST trader ID's to only using post only orders. Our definition of an LST trader ID will apply to a very small subset of subscribers and those subscribers are already accustomed to similar restrictions on other Canadian marketplaces.

E. The proposed Significant Change's effect on the systemic risk in the Canadian financial system:

OSI does not see any effect on the systemic risk in the Canadian financial system as Lynx is an unprotected lit marketplace where marketplace participants can avoid quotes or trade through quotes on Lynx if they do not see any improved trading opportunities for their clients.

F. Expected impact of the Significant Change on Omega Securities compliance with Ontario securities law and the requirements of fair access and the maintenance of a fair and orderly market:

1. *Introduce broker preferencing*

Broker preferencing will not impact OSI's compliance with Ontario securities law and the requirements for fair access and maintenance of fair and orderly markets. Broker preference has been embedded in Canadian market structure for several decades as it has provided significant benefits to dealers with multiple orders and has reduced the amount of off market crossing or internalization.

2. *Amend hidden trading functionality*

The proposed hidden trading functionality will not impact OSI's compliance with Ontario securities law and the requirements for fair access and maintenance of fair and orderly markets. Dark pools and hidden orders within lit pools exist in all the marketplaces in Canada and have not had any negative impacts to compliance and fair access.

3. *Create LST Trader ID definition and limit LST trader IDs to Post Only*

This proposed change will comply with securities laws and the requirements for fair access and maintenance of fair and orderly markets will be met.

Order Protection Rule

Considering the rules related to the Order Protection Rule (OPR) and the corresponding companion policy guidance, OSI is of the view that no OPR issues exist for either Lynx or any of its subscribers.

Part 6 of National Instrument 23-101 – Trading Rules (NI 23-101) details marketplace requirements for order protection and marketplace participants. In addition, section 6.5 of NI 23-101 details requirements related to locked / crossed orders.

Currently, Lynx is an unprotected lit market as it does not meet the minimum market share threshold that was set by the Canadian Securities Administrators (CSA)¹. Subsequently, lit orders entered on Lynx do not meet the definition of protected bid or protected offer. As a result, a marketplace participant may decide to avoid or trade through orders entered on Lynx.

Lynx provides functionality² to prevent locked / crossed markets. Despite Lynx’s ability to prevent locked / crossed markets, marketplace participants also must not intentionally lock or cross a displayed order on a marketplace. NI 23-101CP provides additional guidance on marketplace participants related to locking / crossing markets with unprotected lit orders. Specifically, Section 6.4(1) of NI 23-101CP states that, “the intention of section 6.5 of the instrument is to prevent intentional locks and crosses of protected orders”. Section 6.4(2) of NI 23-101CP further states that, “A displayed order that is not a protected order that becomes locked or crossed with a subsequently entered protected order does not need to be repriced or cancelled”.

While subscribers who enter orders on Lynx must still not lock or cross orders with orders on other protected marketplaces, however, once an order is booked on Lynx passively, any marketplace participants can trade through or lock / cross existing orders in Lynx. OSI is of the view that no OPR issues exist for active LST traders, as active LST traders can still seek liquidity on other protected markets and can trade through passive orders entered on Lynx. So long as Lynx remains an unprotected marketplace, trading through or locking/crossing a better priced order on Lynx fits within OPR and the companion policy.

Should Lynx significantly grow its market share beyond the CSA’s minimum market share threshold, Lynx would need to re-evaluate the active lit LST limitation as the proposed model can only function if displayed orders on Lynx remain unprotected. Should Lynx meet the CSA market share threshold, OSI would seek to implement a de minimis speed bump as the speed bump would ensure continuous unprotected status for orders entered on Lynx.

Fair Access

The concept of allowing differentiated treatment in dark pools has been around for several years. The chart below highlights specific examples of differentiated treatment in existing dark markets.

	Proposed Lynx	Alpha IntraSpread	Liquidnet
Hidden orders	Yes	Yes	Yes
Differentiated treatment	LST traders can only enter post only orders.	Active liquidity removing orders could only be entered from Retail Trader ID’s. LST trader IDs were restricted from removing liquidity.	Mainly limited to buy-side only trading participants.

The chart above highlights the existence and precedent for allowing differentiated treatment in hidden pools. Therefore, allowing differentiated treatment in hidden orders or dark pools fits within Canada’s regulatory fair access framework. Considering these points, OSI respectfully submits that limiting hidden LST trader ID orders to post only is consistent with the existing fair access framework as it applies to dark/hidden trading pools.

Today, in lit markets, post only orders provide a significant amount of lit order flow, while certain LST restrictions have been approved and continue to exist. For comparison, the chart below highlights the three unprotected lit marketplaces and their respective differentiated treatment that exists in each of them.

	Proposed Lynx	NEO – N	Alpha
Unprotected lit orders	Yes	Yes	Yes
Speed bump	No	Yes	Yes
Differentiated treatment	LST trader IDs can only submit post only orders.	Active LST traders are subject to a random speed bump.	1. Post only that meets minimum size orders are not subject to speed bump; 2. Different active trading fees between retail and non-retail;

¹ https://www.osc.gov.on.ca/documents/en/Securities-Category2/csa_20190131_23-324-order-protection-rule.pdf.

² The functionality includes cancel and/or reprice.

			3. Different passive trading fees between post only and non-post only.
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For greater context of the fair access discussion and why OSI believes that the overall benefits of an improved market experience outweigh the active LST restrictions, OSI points to a recent UK regulator paper from the Financial Conduct Authority (FCA) Occasional Paper published in January 2020.³ This paper quantifies the high frequency trading “Arms Race” and calculates its main estimates suggest that eliminating latency arbitrage would reduce the cost of trading by 17% and that the total sums at stake in global equity markets are in the order of \$5 billion annually. While this is a UK paper, the paper specifically highlights estimated trader revenues from latency arbitrage in 2018 from the TMX Group to be \$61 million alone. Further, the paper concludes that liquidity provision is useful and latency arbitrage is harmful.

While Canadian speedbump models are designed to limit or reduce latency arbitrage, OSI’s proposed Lynx 2.0 model is designed to eliminate latency arbitrage outright.

The OSC continues to support competition and innovation in Canadian capital markets and has stated in previous filings that, in certain circumstances, equal access does not necessarily equate to fair access. With that in mind, OSI respectfully submits that the differentiated treatment of LST’s in the unprotected Lynx trading book is consistent with the same policy rationale that has been applied to other Canadian venues which allowed them to treat certain marketplace participants differently. Given that post only orders are a significant amount of existing lit order flow, and that certain differentiated treatment exists within unprotected lit markets, OSI is of the view that Lynx meets the fair access requirements.

G. Consultation Details:

OSI is in the process of improving Lynx’s competitive structure and have discussed the proposed changes with some of our subscribers.

H. Estimated time for Subscriber and Vendor system modifications for implementation of the proposed Significant Change:

Subscribers and vendors will have enough time to prepare for the implementation of the proposed changes as OSI plans on allowing at a minimum 90 days post approval to implement.

I. Rationale for not requiring public comment:

N/A.

J. Discussion of any alternatives considered:

The only other alternative would be to introduce a complex speed bump model.

³ https://www.fca.org.uk/publication/occasional-papers/occasional-paper-50.pdf?mod=article_inline

APPENDIX A

EXAMPLES INVOLVING TRADING ON LYNX

The following examples demonstrate the proposed functionality of Lynx.

For all examples, the PNBBO is \$10.00 to \$10.05. The mid-point is \$10.025. Minimum price improvement on bid side is \$10.01. Minimum price improvement on sell side is \$10.04.

Example 1: Non-Natural marketplace participants adding quotes to Lynx.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Lit – Buy	02 – LST	10:00:01	3,000	10.05		rejected
PNBBO						10.00	10.05	
Lynx	2	Lit – Buy	02 – LST post only	10:00:02	3,000	10.01		accepted
NBBO						10.01	10.05	
PNBBO						10.00	10.05	

Outcome: Order number 1 is rejected as it is an LST order that is NOT marked as post only.

Order number 2 is accepted as it is an LST order that IS marked as post only.

Example 2: Active natural participant removing liquidity.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	74 – Natural	10:00:01	22,000 Minimum quantity of 2,000		10.025	Hidden offer
Lynx	2	Hidden – sell MPI peg	74 – LST post only	10:00:02	1,000		10.04	Hidden offer
Lynx	3	Lit – sell limit	74 – Natural	10:00:03	4,000		10.05	Lit offer
Lynx	4	Hidden – sell pegged at touch	74 – LST post only	10:00:04	6,000		10.05	Hidden offer
Lynx	5	Hidden IOC buy	02 – Natural		1,000	10.05 limit		Filled at 10.04

Outcome: 02 buys 1,000 shares from 74 at \$10.04 due to not meeting mid-point minimum quantity.

Example 3: Active natural participant (non-LST) removing liquidity.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	74 – Natural	10:00:01	22,000 Minimum quantity of 2,000		10.025	Hidden offer
Lynx	2	Hidden – sell MPI peg	74 – LST post only	10:00:02	1,000		10.04	Hidden offer
Lynx	3	Lit – sell limit	74 – Natural	10:00:03	4,000		10.05	Lit offer
Lynx	4	Hidden – sell limit	74 – LST post only	10:00:04	6,000		10.05	Hidden offer
Lynx	5	Hidden IOC buy	02 – Natural		3,000	10.05 limit		Filled at 10.025

Outcome: 02 buys 3,000 shares from 74 at \$10.025 due to meeting mid-point minimum quantity.

Example 4: Active natural participant (non-LST) removing liquidity.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	74 – Natural	10:00:01	22,000 Minimum quantity of 2,000		10.025	Hidden offer
Lynx	2	Hidden – sell MPI peg	74 – LST post only	10:00:02	1,000		10.04	Hidden offer
Lynx	3	Lit	74 – Natural	10:00:03	4,000		10.05	Lit offer
Lynx	4	Hidden – sell limit at touch	74 – LST post only	10:00:04	6,000		10.05	Hidden offer
Lynx	5	Hidden IOC buy	74 – Natural		5,000	10.05 limit		Filled at 10.025

Outcome: 74 buys 5,000 shares from 74 at \$10.025 due to meeting mid-point minimum quantity.

If other passive participants were selling at mid-point, 74 would still execute due to broker preferencing.

Example 5: Active natural participant (non-LST) removing liquidity.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	74 – Natural	10:00:01	500		10.025	Hidden offer
Lynx	2	Hidden – sell MPI peg	74 – LST post only	10:00:02	1,000		10.04	Hidden offer

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Lynx	3	Lit offer at touch	09 – Natural	10:00:03	4,000		10.05	Lit offer
Lynx	4	Hidden – sell limit	74 – LST post only	10:00:04	6,000		10.05	Hidden offer
Lynx	5	Hidden IOC buy	02 – Natural		3,000	10.05 limit		Filled at multiple prices

Outcome: 02 buys 500 shares from 74 at \$10.025.
 02 buy 1,000 shares from 74 at \$10.04.
 02 buys 1,500 shares from 09 at \$10.05.

Example 6: Active LST with higher limit price.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	74 - Natural	10:00:01	1,000		10.025	Hidden offer
Lynx	2	Hidden – sell MPI peg	74 – LST post only	10:00:02	1,000		10.04	Hidden offer
Lynx	3	Lit offer at touch	74 - Natural	10:00:03	4,000		10.05	Lit offer
Lynx	4	Hidden – sell limit at touch	74 – LST post only	10:00:04	6,000		10.05	Hidden offer
Lynx	5	Hidden – buy limit at \$10.05. Repriced to \$10.04	09 – LST post only		2,000	10.04 repriced		Repriced hidden offer. Buys 1,000 shares at 10.04.

Outcome: 09 order is not able to trade with lit quote and reprices as hidden post only bid at \$10.04. 74 natural sell mid-point peg sells 1,000 shares to 09 at \$10.04 and gets a better fill. 09 locks the hidden quote at \$10.04 with 74 as both orders are post only. In this case, there would be a hidden locked market. Locked/crossed markets can and often do happen in hidden pools.

Example 7: Two LST orders posting post only at mid-point causing a locked market.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	02 – LST post only	10:00:01	1,000		10.025	Hidden mid-point offer
Lynx	2	Hidden – buy mid-peg	74 – LST post only	10:00:02	1,000	10.025		Hidden mid-point bid

Outcome: No fill as both order 1 and 2 are LST and can only trade passively. They are **NOT ELIGIBLE** to trade actively and can only post passively. In this case, there would be a hidden locked market. Locked/crossed markets can and do happen in hidden pools.

Example 8: Active non-natural participant (LST) with buy marketable limit above PNBO.

	Order Ref #	Lit / Dark	Public Broker #	Timestamp	Volume	Bid	Ask	Status
PNBBO						10.00	10.05	
Lynx	1	Hidden – sell mid-peg	02 – LST post only	10:00:01	1,000		10.025	Hidden mid-point offer
Lynx	2	Hidden – buy limit 10.06	74 – LST post only	10:00:02	1,000	10.04		Order reprices due to post only instructions
PNBBO				10:00:05		\$10.01	\$10.07	
Lynx	1	Hidden – sell mid-peg	02 – LST post only	10:00:06	1,000		10.04	Sell order reprices to 10.04
Lynx	2	Hidden – buy limit 10.06	74 – LST post only	10:00:06	1,000	10.06		Buy order dynamically reprices up to limit price

Outcome A: Order #2 is not eligible to trade with lit offering and is subsequently backed off and booked at one tick (\$10.04) below the PNBO. A hidden crossed market now exists on Lynx.

Outcome after PNBBO price change: Order #1 reprices to new mid-point price at 10.04 as a hidden order. Order #2 dynamically reprices up to its limit of 10.06. Hidden crossed market continues to exist.

The following examples demonstrates the proposed broker preferencing to hidden orders including non-attributed hidden orders.

Example 9: Hidden orders on Omega including matching priority based on the **PNBBO**. The chart applies independently for each action and result below.

	Order Ref #	Order Type	Lit/Dark	Timestamp	Volume	BID	ASK
PNBBO						10.00	10.05
Lynx	1	Buy – mid as LST	Hidden #02	10:00:00:00	2,000	10.025	
Lynx	2	Buy – mid as LST	Hidden #07	10:00:00:50	1,000	10.025	
Lynx	3	Buy – mid as LST	Hidden #02 entered as #01	10:00:01:00	2,000	10.025	

Action 1: Order #4 received at 10:00:02:00 – a sell mid-point order from #65 for 1,500 shares with a limit price of \$10.00.

Result: #65 sells 1,500 shares to #02 at \$10.025 as a result of time priority.

Action 2: Order #4 received at 10:00:02:00 – an IOC sell mid-point order from #07 for 2,000 shares.

Result: #07 sells 1,000 shares to #07 (order 2) at \$10.025 as a result of broker preferencing.

#07 sells 1,000 shares to #02 (order 1) at \$10.025 as a result of time priority.

Action 3: Order #4 received at 10:00:02:00 – a sell order from #02 for 4,500 shares with a limit price of \$10.00.

Result: #02 sells 2,000 shares to #02 (order 1) at \$10.025 as a result of time priority.
 #02 sells 2,000 shares to #02 (order 3) at \$10.025 as a result of hidden non-attributed broker preferencing.
 #02 sells 500 shares to #07 (order 2) at \$10.025 as a result of remaining order with time priority.

Example 10: Hidden pegged orders on Omega including matching priority based on the PNBBO. The chart applies independently for each action and result below.

	Order Ref #	Order Type	Lit/Dark	Timestamp	Volume	BID	ASK
PCBBO						10.00	10.05
Lynx	1	Buy -mid as LST	Hidden #02	10:00:00:00	2,000	10.025	
Lynx	2	Buy – mid peg limit 10.10 as LST	Hidden #07	10:00:00:50	1,000	10.025	
Lynx	3	Buy – Natural	Hidden #74	10:00:01:00	2,000	10.02	
Lynx	4	Buy – MPI as LST	Hidden #09	10:00:02:00	3,000	10.01	
Lynx	5	Buy – at touch peg	Hidden #05	10:00:03:00	2,000	10.00	
Lynx	6	Buy – lit order	Lit quote #07	10:00:04:00	2,000	10.00	

Action 1: Order #7 received at 10:00:05:00 – an IOC sell order from #80 for 1,500 shares with a limit price of \$10.00 that does not seek dark liquidity.

Result: #80 sells 1,500 shares to #07 (order 6) at \$10.00 as a result of trading at quote without seeking hidden price improvement. Lit trades over hidden at the quote.

Action 2: Order #7 received at 10:00:05:00 – a IOC sell order from #80 for 9,000 shares with a limit price of \$10.00 that seeks dark liquidity.

Result: #80 sells 2,000 shares to #02 (order 1) at \$10.025 as a result of price / time priority.
 #80 sells 1,000 shares to #07 (order 2) at \$10.025 due to price / time priority.
 #80 sells 2,000 shares to #74 (order 3) at \$10.02 due to price priority.
 #80 sells 3,000 shares to #09 (order 4) at \$10.01 due to price improvement.
 #80 sells 1,000 shares to #07 (order 6) at \$10.00 due to lit over dark priority at the touch.

Example 11: Hidden at the touch trading subject to meeting dark rules. The chart applies independently for each action and result below.

	Order Ref #	Order Type	Lit/Dark	Timestamp	Volume	BID	ASK
PCBBO						10.00	10.05
Lynx	1	Buy – mid peg limit 10.10 as LST	Hidden #07	10:00:00:50	1,000	10.025	
Lynx	2	Buy – MPI as LST	Hidden #09	10:00:02:00	1,000	10.01	
Lynx	3	Buy – at touch peg	Hidden #05	10:00:03:00	4,000	10.00	
Lynx	4	Buy – lit order	Lit quote #07	10:00:04:00	2,000	10.00	

Action 1: Order #5 received at 10:00:05:00 – an IOC sell order from #80 for 5,500 shares with a limit price of \$10.00 that seeks dark liquidity. The sell order is greater than 50 standard trading units (STUs) and greater than \$30,000 and could trade at the PNBB.

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Result: #80 sells 1,000 shares to #07 (order 1) at \$10.025 due to price priority.
 #80 sells 1,000 shares to #09 (order 2) at \$10.01 due to price priority.
 #80 sells 2,000 shares to #07 (order 4) at \$10.00 due to lit priority over dark priority at the touch.
 #80 sells 1,500 shares to #05 (order 3) at \$10.00 due to eligible hidden at the PNBB.

Action 2: Order 5 received at 10:00:05:00 – an IOC sell order from #05 for 4,500 shares with a price limit of \$10.00 that seeks dark liquidity. The sell order is NOT an eligible dark order and cannot trade at the PNBB as it is less than 50 STUs.

Result: #05 sells 1,000 shares to #07 (order 1) at \$10.025 due to price priority.
 #05 sells 1,000 shares to #09 (order 2) at \$10.01 due to price priority.
 #05 sells 2,000 shares to #07 (order 4) at \$10.00 due to lit priority over dark priority at the touch.
 Remaining 500 shares cancelled back to subscriber as it not eligible to trade at hidden at the PNBB.

Action 3: Order 5 received at 10:00:05:00 – a sell order, marked OPR reprice, from #05 for 4,500 shares with a price limit of \$10.00 that seeks dark liquidity. The sell order is NOT an eligible dark order as it is less than 50 STUs.

Result: #05 sells 1,000 shares to #07 (order 1) at \$10.025 due to price priority.
 #05 sells 1,000 shares to #09 (order 2) at \$10.01 due to price priority.
 #05 sells 2,000 shares to #07 (order 4) at \$10.00 due to lit priority over dark priority at the touch.
 The remaining 500 shares from #05 (order 5) are repriced as a sell lit order at \$10.01. The updated trading book is shown below. This order will dynamically reprice until executed or limit price is reached.

	Order Ref #	Order Type	Lit/Dark	Timestamp	Volume	BID	ASK
PCBBO						10.00	10.05
Lynx	3	Buy – at touch peg	Hidden #05	10:00:03:00	4,000	10.00	10.05
Lynx	5	Sell – limit 10.00	Lit #05	10:00:05:00	500		10.01
PNBBO						10.00	10.05
NBBO						10.00	10.01