



More Opportunities for Price Improvement

Alan Grigoletto

VP Business Development
Boston Options Exchange



“What’s New”



- BOX lists over 1100 classes with plans to expand to 1500 by year end 2007.
- BOX listed classes cover 91% of industry volume.
- BOX traded 1,223,666 contracts on July 26, 2007, its all time record.
- BOX named 2007 U.S.Options Exchange of the Year by FOW, the global derivatives magazine.



The “PIP” Mechanism



Price Improvement Statistics



- \$147 million saved by investors since 2004.
- \$6 million saved in September 2007 alone.
- \$3.96 per contract improvement in September 2007.
- Over 80,000 contracts receive price improvement on an average day.

How Price Improvement Works on *Other* Exchanges



- Order to sell 10 contracts at market received by one of the other five exchanges.

NBBO (OPRA) Market			
Qty	Bid	Ask	Qty
350	5.10	5.20	100

- NBBO is \$5.10 - \$5.20.
- There is little possibility of price improvement since tick is 10 cents.
- Customer order executed at \$5.10.
- Specialist and market makers share 10 contracts.
- Exchange pays broker PFOF.

How Price Improvement Works on *Other* Exchanges



- On BOX, price improvement is possible anywhere inside NBBO as long as quote is $>.02$ wide.
- Multiple market makers are competing for customer orders.
- At other exchanges executions between \$5.10 or \$5.20 are less likely to occur.
- Customer selling at market will usually trade at \$5.10.
- PFOF, if any, goes to broker, not customer.

PIP "Zone"

Customer buying, PIP offer must be at most \$5.19

Customer selling, PIP bid must be at least \$5.11

NBBO (OPRA) Market			
Qty	Bid	Ask	Qty
350	5.10	5.20	100

BOX Order Book					
ABC SEP 45 Call					
No	Qty	Bid	Offer	Qty	No
6	300	5.10	5.30	85	4
3	180	5.00	5.40	450	5
2	500	4.90	5.50	60	1
1	250	4.80	5.60	250	1
4	580	4.70	5.70	850	4

How BOX Price Improvement Works



- Any BOX participant acting as agent may take opposite side of a customer trade as long as he improves the customer's price by at least 1¢ over NBBO.
- BOX participant submits a PIP initial order to BOX trading engine providing option series, quantity of the order, initial price and "must be filled side".

How BOX Price Improvement Works (cont'd)



- Assuming initial price is better than NBBO and at least three market makers quoting on instrument, BOX trading engine broadcasts an advisory to all BOX participants announcing:
 - Launch of a PIP;
 - Initial price, option series, “must be filled side” and time PIP will end.

How BOX Price Improvement Works (cont'd)



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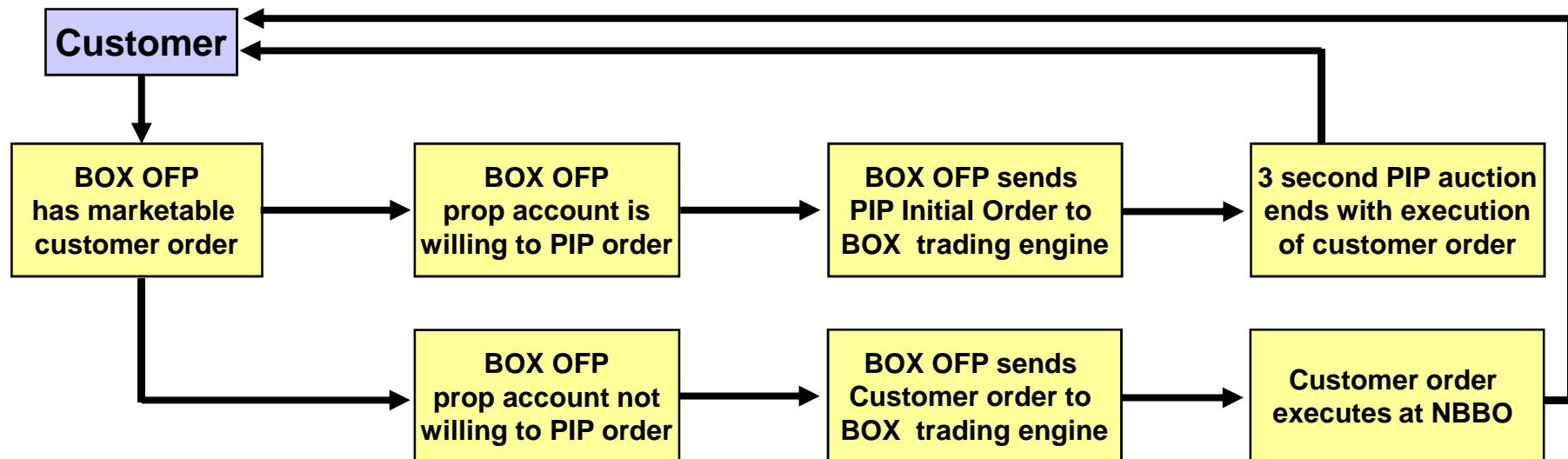


- BOX market makers may submit PIP improvement orders to compete with agent who launched PIP, improving ultimate price to customer.
- At the end of 3 seconds, the improvement orders are matched and PIP is concluded with customer receiving full execution at a price better than NBBO.

How BOX Price Improvement Works (cont'd)



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How BOX Price Improvement Works (cont'd)



- BOX participant acting as agent may be unable to offer price improvement to his customer due to:
 - Agent does not have proprietary trading account;
 - Customer order is on an option series that the participant does not trade for his own account;
 - Participant does not have necessary technology.

- BOX “directed orders” allow BOX participants who are unable to offer price improvement to their customers a means of obtaining this service by sending a marketable customer order to another BOX participant who is able to provide price improvement.

How BOX Price Improvement Works (cont'd)



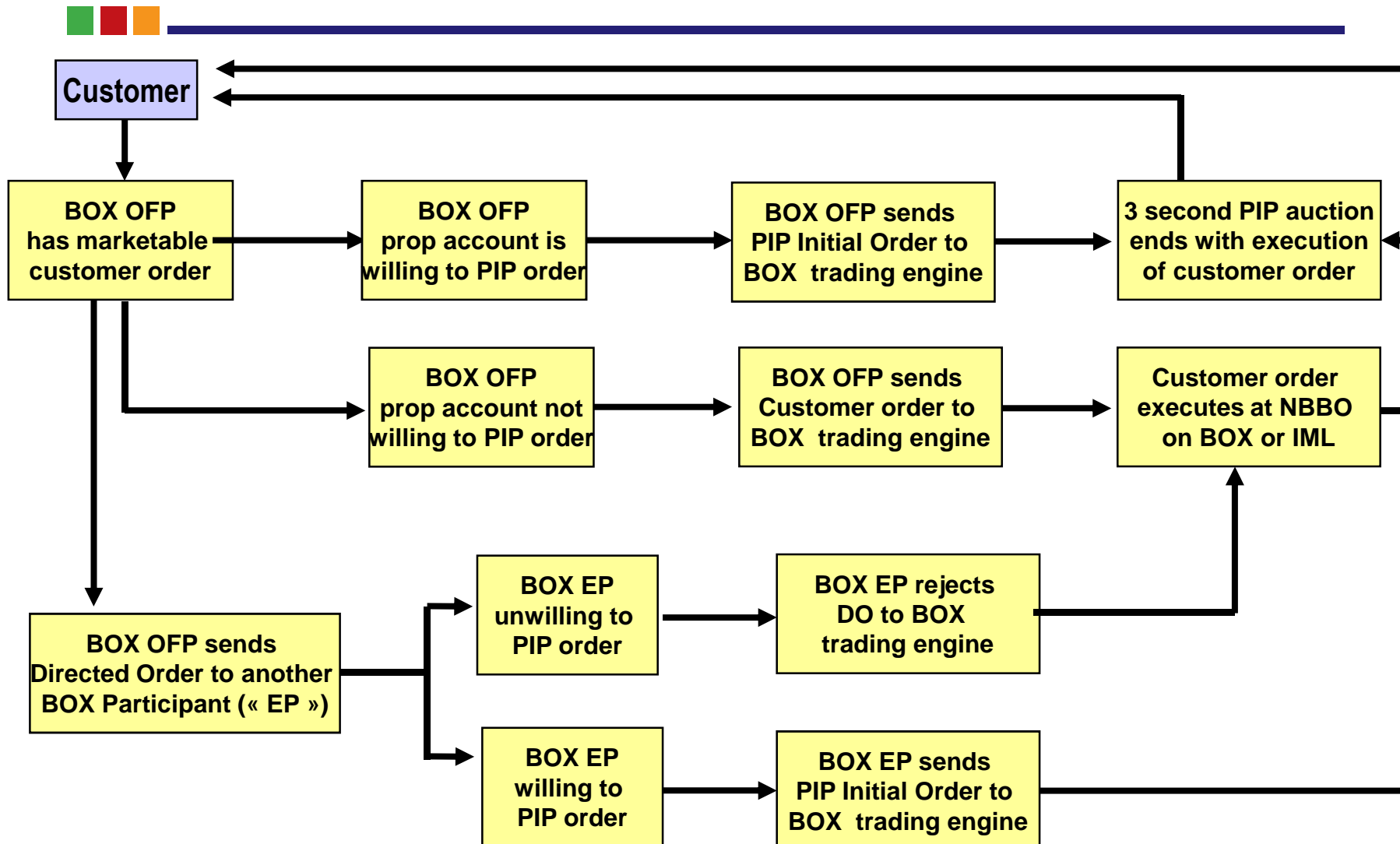
- A BOX directed order (“DO”) is a simple order with an intermediate step before entering the BOX Central Limit Order Book (“CLOB”).
 - Participant may send a simple order to a BOX market maker (the “EP”).
 - EP must be “logged on” to receive directed orders.

How BOX Price Improvement Works (cont'd)



- EP must, immediately, either agree to improve the DO (or “PIP it”) or release it to BOX CLOB.
- If latter, BOX will ensure that order does not execute against existing EP order on CLOB for three seconds.
- EP’s existing order is “shelved” for three seconds and will be executed against DO if no other participant wants the trade.

Directed Orders and BOX PIP





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UIIP

Universal Price Improvement

Pending SEC approval



www.bostonoptions.com



- Creates additional opportunities for price improvement.
- Order submitted to entire electronic crowd as opposed to a single participant.
- Order may be improved in part or in whole.
- Order may be cancelled anytime prior to the end of auction.

Overview of UIP Proposal



- Any Public Customer order which is marketable against NBBO will automatically cause a UIP to start:
 - If BBO equals NBBO, start price is one penny better.
 - If BBO is worse than NBBO, start price is NBBO.
- Auction is three seconds or less.
- No guarantee of any improvement, but full guarantee of “no worse than BBO” for quantity on BOX Book at start of UIP.
- Any Participant may submit improvement order for any account.
- Improvement orders may be submitted in penny increments.
- UIP Initiating broadcast indicates that it is a UIP, not a PIP.

Overview of UPIP Proposal (cont'd)



- Price and time priority trade allocation:
 - NBBO price: priority for improvement orders submitted for accounts which were on BOX Book at NBBO prior to auction.
 - 11a: customer priority.
 - No 40% guarantee.
 - Unrelated order/early termination rules similar to PIP.
- Firm quote protection for all orders with early termination as required.
- NBBO filtering at the end of auction. Book priority for opposite side orders in case of unexecuted quantity.

BOX “Five Best” Broadcast



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Buy			Sell		
	Qty	Price	Price	Qty	
4	70	2.00	2.05	100	2
1	20	1.95	2.10	200	3
3	100	1.90	2.15	10	1
2	200	1.85	2.20	20	1
1	100	1.80	2.30	100	2

The first time is actually
composed of four orders



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Buy			Sell		
ID	Qty	Price	Price	Qty	ID
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			

The first time is actually
composed of four orders



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Buy			Sell		
ID	Qty	Price	Price	Qty	ID
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			



NBBO is \$2.00 - \$2.05

Buy			Sell		
ID	Qty	Price	Price	Qty	ID
			2.01	50	UIP
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			

BOX receives public customer order to sell 50 contracts at \$2.00.

Since order is marketable against NBBO and BBO=NBBO, BOX Trading Engine sends announcement of UIP auction starting on sell side at \$2.01 for 50 contracts.



NBBO is \$2.00 - \$2.05

Buy			Sell		
ID	Qty	Price	Price	Qty	ID
BD1	10	2.02			
MMC	50	2.01			
MMB	20	2.01			
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			

At end of UPIP auction, three improvement orders have been received:

50 contracts executed as follows:

- BD1: 10 contracts at \$2.02
- MMB: 10 contracts at \$2.01
- MMC: 30 contracts at \$2.01



NBBO is \$2.00 - \$2.05

Buy			Sell		
ID	Qty	Price	Price	Qty	ID
MMA	50	2.01			
MMC	50	2.01			
MMB	50	2.01			
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			

At end of UPIP auction, three improvement orders have been received:

50 contracts executed as follows:

- MMA: 10 contracts at \$2.01
- MMB: 10 contracts at \$2.01
- MMC: 30 contracts at \$2.01



NBBO is \$2.00 - \$2.05

Buy			Sell		
ID	Qty	Price	Price	Qty	ID
BD1	10	2.02			
MMA	10	2.01			
MMB	10	2.01			
PC1	20	2.00	2.05	100	MMD
MMB	10	2.00			
MMC	30	2.00			
MMA	10	2.00			

Suppose customer order in UPIP is to sell 70 contracts at market:

At “second two”, there are three improvement orders...

...at that point, BOX receives quote cancel request from MMC

UPIP terminated and 70 contracts executed as follows:

- BD1: 10 contracts at \$2.02
- MMA: 10 contracts at \$2.01
- MMB: 10 contracts at \$2.01
- PC1: 20 contracts at \$2.00
- MMB: 10 contracts at \$2.00
- MMA: 10 contracts at \$2.00



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AAO

Auto Auction Order

Available late October



www.bostonoptions.com

Overview of “Auto Auction Order” (AAO)



- OFP, on behalf of public customer accounts, may submit order in pennies.
- If on a series that does not trade in pennies, BOX trading engine will convert to standard quotable price (“AAO Limit Order”).
- AAO Improvement order will automatically be generated by BOX trading engine at *end* of PIP or UPIP.
 - AAO Improvement price will be the lesser/great (buy/sell) of the AAO penny price and the price of the “best” improvement order or quote.
 - AAO Improvement quantity will be the lesser of the PIP/UPIP order and the AAO remaining quantity.
- AAO Improvement order will have time priority of the booked limit order for the purposes of trade allocation at the end of the improvement auction (“NBBO Prime”).
- AAO limit order on book will be decremented for any quantity executed in auction (no risk of double execution).



NBBO is \$2.00 - \$2.05

Buy			Sell		
ID	Qty	Price	Price	Qty	ID
BD1	10	2.02			
MMC	50	2.01			
MMB	20	2.01			
MMB	10	2.00	2.05	100	MMD
MMC	30	2.00			
MMA	10	2.00			

At end of UPIP auction, there are three improvement orders:

PC1 order on the BOX book is an “Auto Auction” order with max improvement price of \$2.03.

50 contracts executed as follows:

- PC1: 20 contracts at \$2.02
- BD1: 10 contracts at \$2.02
- MMB: 10 contracts at \$2.01
- MMC: 10 contracts at \$2.01

PC1 order removed from BOX book before any other orders are processed.