

Application of the Indicative Opening Price Rules

Rule 1: Determine the maximum matching quantity at a price level.

Maximum Matching Quantity				
Cumulative Sum of Bids	Bid Quantity	Price	Ask Quantity	Cumulative Sum of Offers
10	10	51	30	357
30	20	50	100	327
60	30	49	1	227
100	40	48	25	226
150	50	47	1	201
220	70	46	100	200
320	100	45	90	100
321	1	44	4	10
351	30	43	6	6



Executed Quantity = 200

The largest cumulative quantity of bids and offers that can be executed is at the price level of 46. The 200 offer instruments can be matched with the 220 Bid instruments available providing the greatest number of instruments matched of 200. So, the Indicative Opening Price is 46.

If Rule 1 does not produce an Indicative Opening Price then include Rule 2.

Rule 2: Determine the minimum non-matching quantity.

Minimum Non-Matching Quantity				
Cumulative Sum of Bids	Bid Quantity	Price	Ask Quantity	Cumulative Sum of Offers
10	10	51	30	306
30	20	50	100	276
60	30	49	1	176
100	40	48	25	175
150	50	47	0	150
180	30	46	50	150
280	100	45	90	100
281	1	44	4	10
311	30	43	6	6



Executed Quantity = 150

At price levels of 46 and 47 there is a tie for the number of instruments that can match, 150 at each price level. At price level 47, the non-matching quantity is 0 (150 Bid - 150 offer = 0).

At price level 46, the non-matching quantity is 30 (180 Bid - 150 offer = 30). So, the Indicative Opening Price is 47, where there is the least number of unmatched instruments.

If Rules 1 and 2 do not produce a Indicative Opening Price, then include Rule 3.

Rule 3: Determine the highest price if the non-matching quantity is on the buy side for all prices.

Highest Price				
Cumulative Sum of Bids	Bid Quantity	Price	Ask Quantity	Cumulative Sum of Offers
10	10	51	30	306
30	20	50	100	276

60	30	49	1	176
100	40	48	25	175
180	80	47	0	150
180	0	46	50	150
200	20	45	90	100
230	30	44	4	10
260	30	43	6	6



Executed Quantity = 150

At price level 47, the largest cumulative quantity of Bids is 180. The largest cumulative quantity of offers is 150. The number of instruments that can match at price 47 is 150 instruments. The remaining non-matching Bid instruments = 30 (180 Bid - 150 offer = 30).

At price level 46, the largest cumulative quantity value of Bids is 180. The largest cumulative quantity of offers is 150. The number of instruments that can match at price 46 is 150 instruments. The remaining non-matching Bid instruments = 30 (180 Bid - 150 offer = 30).

The Indicative Opening Price is 47, which is the highest price where the unmatched instruments are Bid instruments.

Rule 4: Determine the lowest price if the non-matching quantity is on the sell side for all prices.

Lowest Price				
Cumulative Sum of Bids	Bid Quantity	Price	Ask Quantity	Cumulative Sum of Offers
10	10	51	30	306
30	20	50	100	276
60	30	49	1	176
100	40	48	25	175
110	10	47	0	150
110	0	46	50	150
130	20	45	90	100
160	30	44	4	10
190	30	43	6	6



Executed Quantity = 110

At price level 47, the largest cumulative quantity of Bids is 110. The largest cumulative quantity value of offers is 150. The number of instruments that can match at price 47 is 110 instruments. The remaining non-matching quantity is 40 (150 offer - 110 Bid = 40).

At price level 46, the largest cumulative quantity value of Bids is 110. The largest cumulative quantity value of offers is 150. The number of instruments that can match at price 46 is 110 instruments. The remaining non-matching quantity is 40 (150 offer - 110 Bid = 40).

The Indicative Opening Price is 46, which is the lowest price where the unmatched instruments are Offer instruments.

If Rule 3 and 4 have a tie then include Rule 5.

Rule 5: Determine the closest price to the settlement price (reference price).

Closest Price to the Settlement Price (Reference Price)				
Cumulative Sum of Bids	Bid Quantity	Price	Ask Quantity	Cumulative Sum of Offers
50	50	51	30	280
70	20	50	100	250
150	80	49	0	150
150	0	48	0	150
150	0	47	0	150
150	0	46	0	150
150	0	45	70	150

150	0	44	60	80
150	0	43	20	20



Executed Quantity = 150

Settlement Price (Reference Price) = 46

At price levels 45 through 49, matches can occur at the calculated maximum number of 150 instruments. Each price level shows accumulated totals of 150 Bids and 150 Offers which when matched results in zero remaining instruments. Indicative Opening Price is the price closest to settlement.