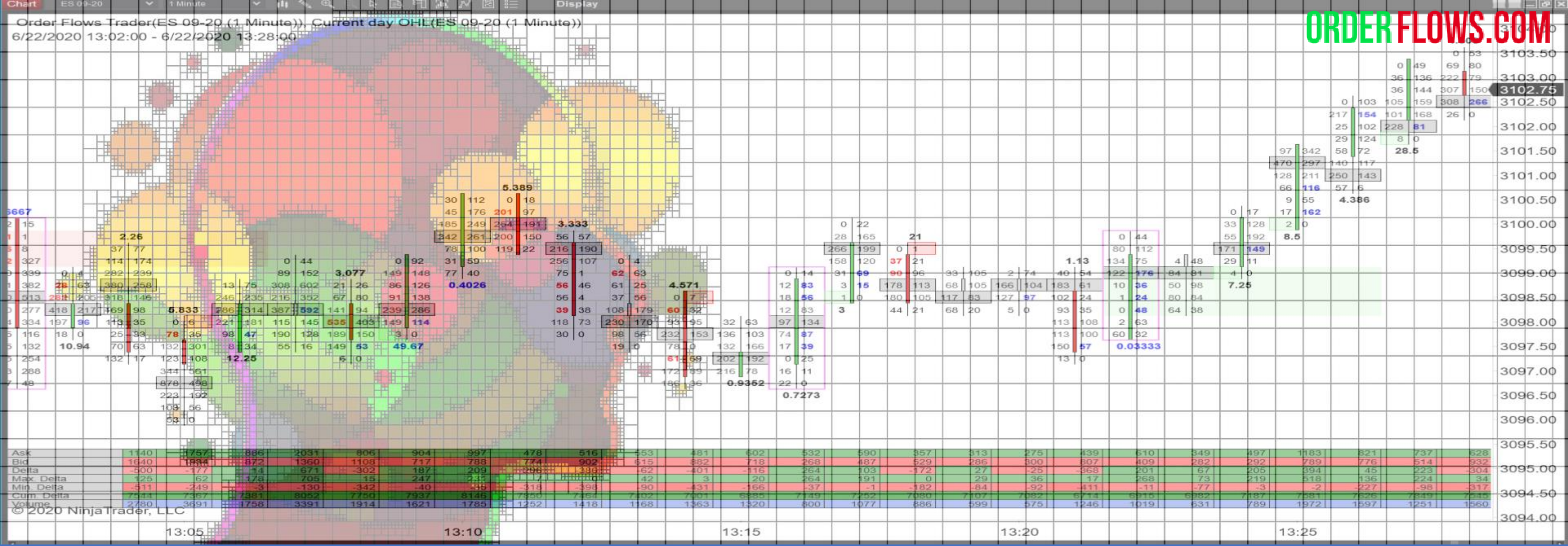

Order Flow Dynamics

By Michael Valtos – www.orderflows.com

Module 3 : Cumulative Delta

Disclaimer

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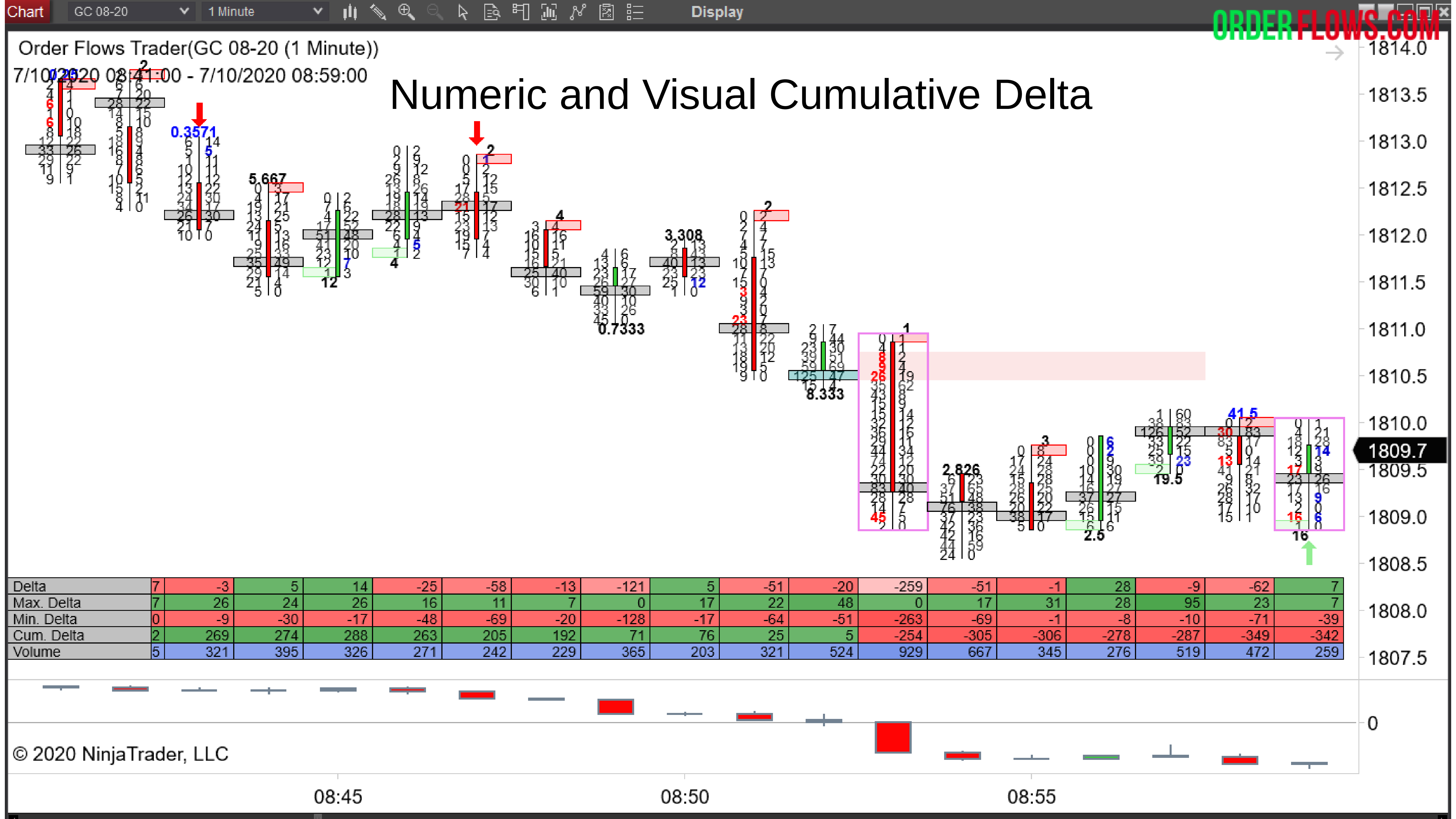
ORDERFLOWS.COM

Cumulative delta is the running delta total for the trading day up to a point in time.

There are two ways you can view cumulative delta.

1. Numerically – along the bottom of the chart with numbers
2. Visually – along the bottom, but in candle stick form.

Numeric and Visual Cumulative Delta



Delta	7	-3	5	14	-25	-58	-13	-121	5	-51	-20	-259	-51	-1	28	-9	-62	7
Max. Delta	7	26	24	26	16	11	7	0	17	22	48	0	17	31	28	95	23	7
Min. Delta	0	-9	-30	-17	-48	-69	-20	-128	-17	-64	-51	-263	-69	-1	-8	-10	-71	-39
Cum. Delta	2	269	274	288	263	205	192	71	76	25	5	-254	-305	-306	-278	-287	-349	-342
Volume	5	321	395	326	271	242	229	365	203	321	524	929	667	345	276	519	472	259

I have seen and heard many misuses of cumulative delta over the years and two of the most glaring are:

When cumulative delta is positive only take longs or when cumulative delta is negative only take shorts.

When cumulative delta crosses the 0 line from the below, get long or when cumulative delta crosses the 0 line from above, go short.

Overnight and last few hours.

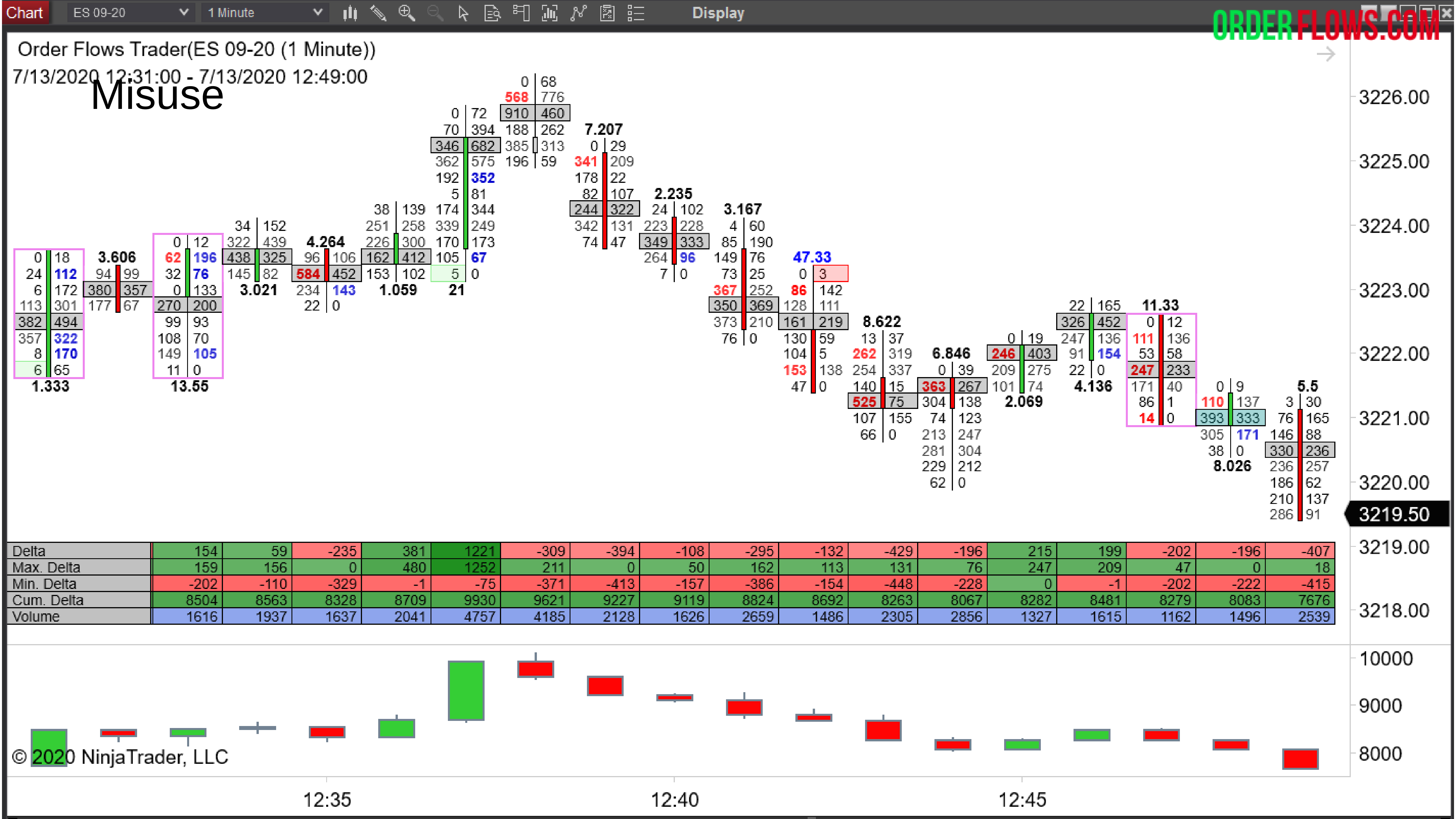


Chart
ES 09-20
1 Minute
Display
ORDERFLOWS.COM
Order Flows Trader(ES 09-20 (1 Minute))
7/13/2020 12:31:00 - 7/13/2020 12:49:00
Misuse
Delta 154 59 -235 381 1221 -309 -394 -108 -295 -132 -429 -196 215 199 -202 -196 -407
Max. Delta 159 156 0 480 1252 211 0 50 162 113 131 76 247 209 47 0 18
Min. Delta -202 -110 -329 -1 -75 -371 -413 -157 -386 -154 -448 -228 0 -1 -202 -222 -415
Cum. Delta 8504 8563 8328 8709 9930 9621 9227 9119 8824 8692 8263 8067 8282 8481 8279 8083 7676
Volume 1616 1937 1637 2041 4757 4185 2128 1626 2659 1486 2305 2856 1327 1615 1162 1496 2539
© 2020 NinjaTrader, LLC
12:35
12:40
12:45

It’s called cumulative delta, so it is total of the day up to a point.

Think about it. When it is at its most negative, in order to get back to 0 will take a lot of bars with positive delta and bars with strong positive delta. That doesn’t mean it can’t be done, in fact it is done quite regularly. But if you don’t take buys when the market is at its lowest point (when the signs are there to get long) you are missing great trading opportunities.

The same can be said when cumulative is most positive. It is right after the most positive cumulative delta levels that tremendous sells can occur.


Chart
ES 09-20
1 Minute
Display
ORDERFLOWS.COM
Current day OHL(ES 09-20 (1 Minute))
7/13/2020 11:48:00 - 7/13/2020 13:57:00
Cumulative Delta At Highs
3226.25
3225.00
3220.00
3215.00
3210.00
3205.00
3203.00
3200.00
3195.00
3190.00
Delta Candles(ES 09-20 (1 Minute))
5000
0
© 2020 NinjaTrader, LLC
12:00
12:10
12:20
12:30
12:40
12:50
13:00
13:10
13:20
13:30
13:40
13:50

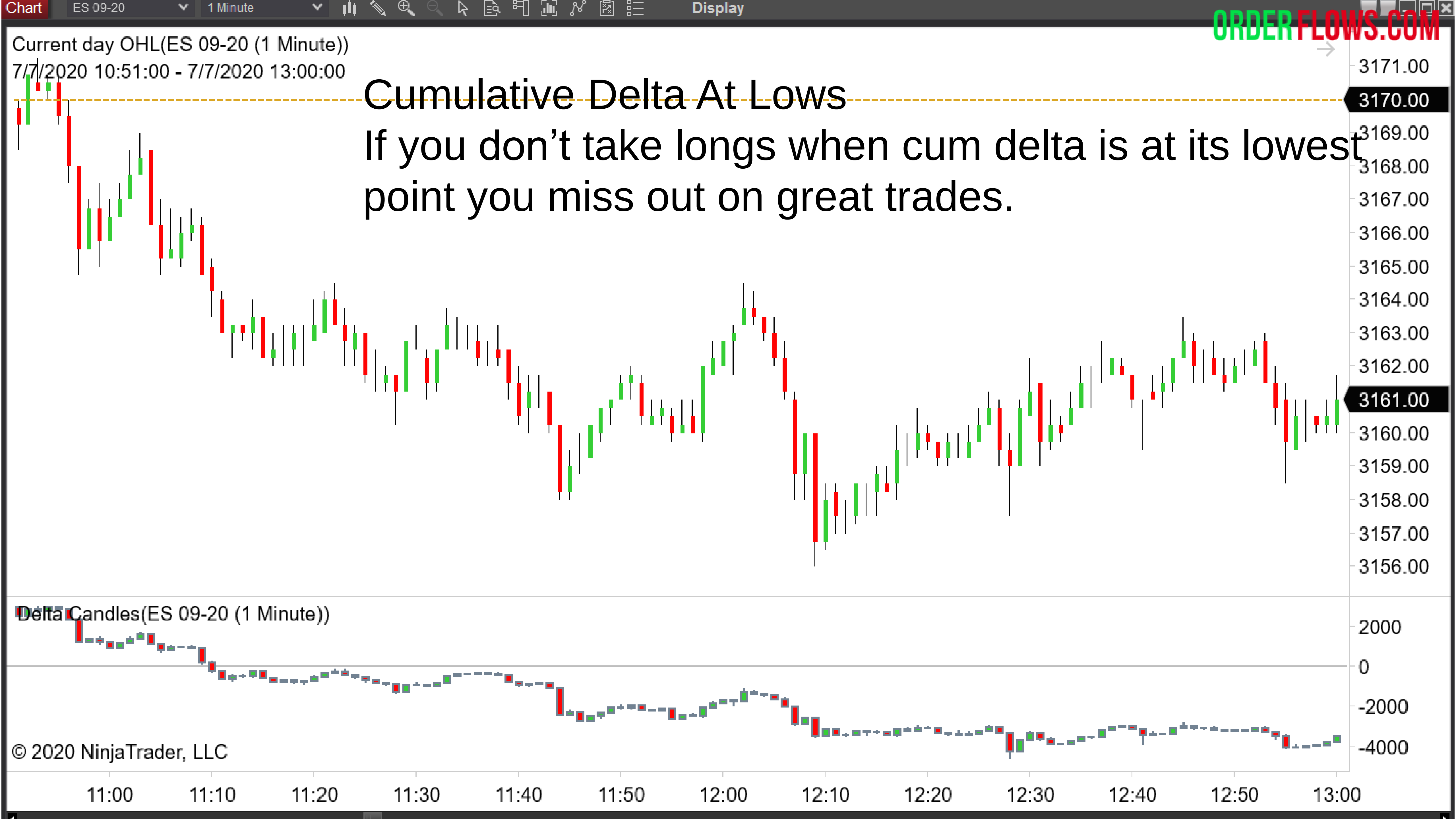


Chart
ES 09-20
1 Minute
Display
ORDERFLOWS.COM
Current day OHL(ES 09-20 (1 Minute))
7/7/2020 10:51:00 - 7/7/2020 13:00:00
Cumulative Delta At Lows
If you don’t take longs when cum delta is at its lowest point you miss out on great trades.
3171.00
3170.00
3169.00
3168.00
3167.00
3166.00
3165.00
3164.00
3163.00
3162.00
3161.00
3160.00
3159.00
3158.00
3157.00
3156.00
Delta Candles(ES 09-20 (1 Minute))
2000
0
-2000
-4000
© 2020 NinjaTrader, LLC
11:00
11:10
11:20
11:30
11:40
11:50
12:00
12:10
12:20
12:30
12:40
12:50
13:00

Cumulative delta is often most positive at highs


Chart
ES 09-20
1 Minute
Display
ORDERFLOWS.COM
Current day OHL(ES 09-20 (1 Minute))
7/6/2020 08:10:00 - 7/6/2020 10:19:00
Cumulative delta most positive then begins a move down
3174.50
3172.00
3169.50
3168.00
3166.00
3164.00
3162.00
3160.00
3158.00
3156.00
Delta Candles(ES 09-20 (1 Minute))
10000
5000
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08:20
08:30
08:40
08:50
09:00
09:10
09:20
09:30
09:40
09:50
10:00
10:10

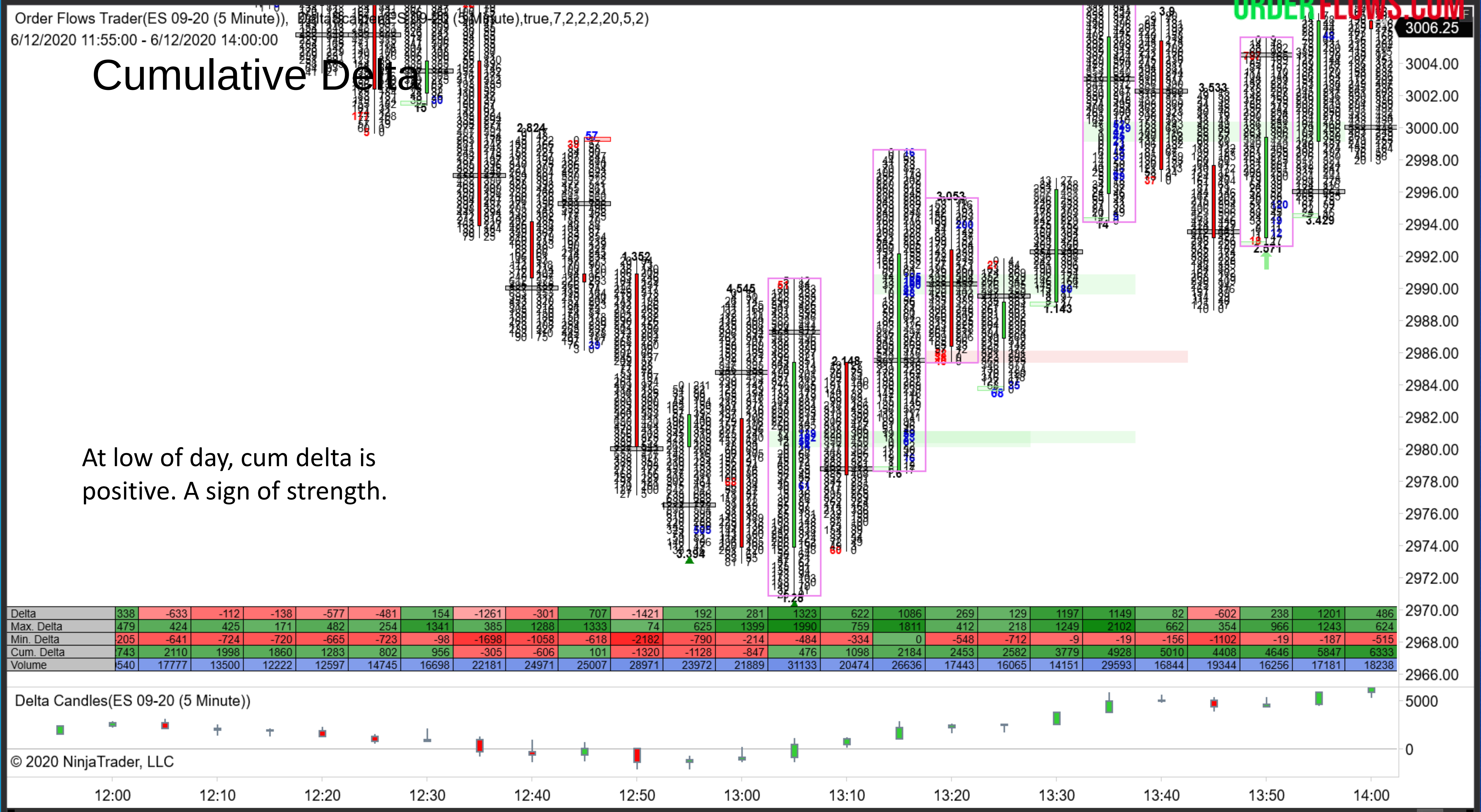

Chart
CL 08-20
5 Minute
Display
ORDER FLOWS.COM
Current day OHL(CL 08-20 (5 Minute))
7/10/2020 02:10:00 - 7/10/2020 13:50:00
Cumulative delta most negative then begins a move up
40.77
40.61
40.40
40.20
40.00
39.80
39.58
39.40
39.20
39.00
38.80
38.54
Delta Candles(CL 08-20 (5 Minute))
0
-1000
-2000
-3000
-4000
© 2020 NinjaTrader, LLC
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00

Chart
CL 08-20
5 Minute
Display
ORDERFLOWS.COM
Current day OHL(CL 08-20 (5 Minute))
7/7/2020 18:00:00 - 7/8/2020 15:55:00
Cumulative delta most negative then begin a move up
41.08
41.05
41.00
40.95
40.89
40.85
40.80
40.75
40.70
40.65
40.60
40.55
40.48
40.45
40.40
40.35
40.30
Delta Candles(CL 08-20 (5 Minute))
1000
0
-1000
-2000
© 2020 NinjaTrader, LLC
19:00
21:00
23:00
Jul 8
03:00
05:00
07:00
09:00
11:00
13:00
15:00

There are different ways to use cumulative delta as a tool for analysis.

Drawing support and resistance levels.
Divergences.
Recognizing when the market is exhibiting strength or weakness.

Cumulative Delta



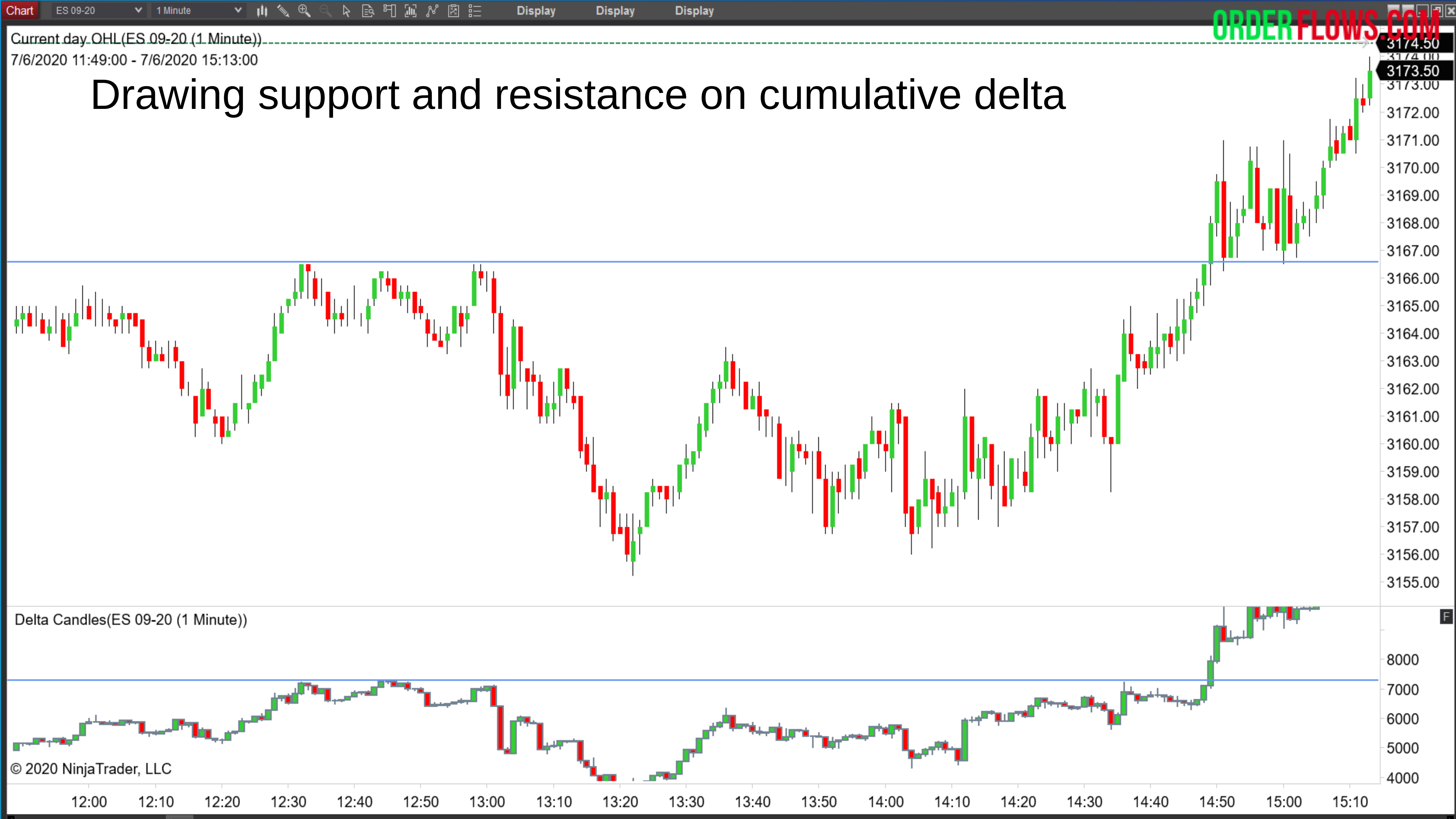
Delta	338	-633	-112	-138	-577	-481	154	-1261	-301	707	-1421	192	281	1323	622	1086	269	129	1197	1149	82	-602	238	1201	486
Max. Delta	479	424	425	171	482	254	1341	385	1288	1333	74	625	1399	1990	759	1811	412	218	1249	2102	662	354	966	1243	624
Min. Delta	205	-641	-724	-720	-665	-723	-98	-1698	-1058	-618	-2182	-790	-214	-484	-334	0	-548	-712	-9	-19	-156	-1102	-19	-187	-515
Cum. Delta	743	2110	1998	1860	1283	802	956	-305	-606	101	-1320	-1128	-847	476	1098	2184	2453	2582	3779	4928	5010	4408	4646	5847	6333
Volume	540	17777	13500	12222	12597	14745	16698	22181	24971	25007	28971	23972	21889	31133	20474	26636	17443	16065	14151	29593	16844	19344	16256	17181	18238

At low of day, cum delta is positive. A sign of strength.

Drawing support and resistance on cumulative delta.

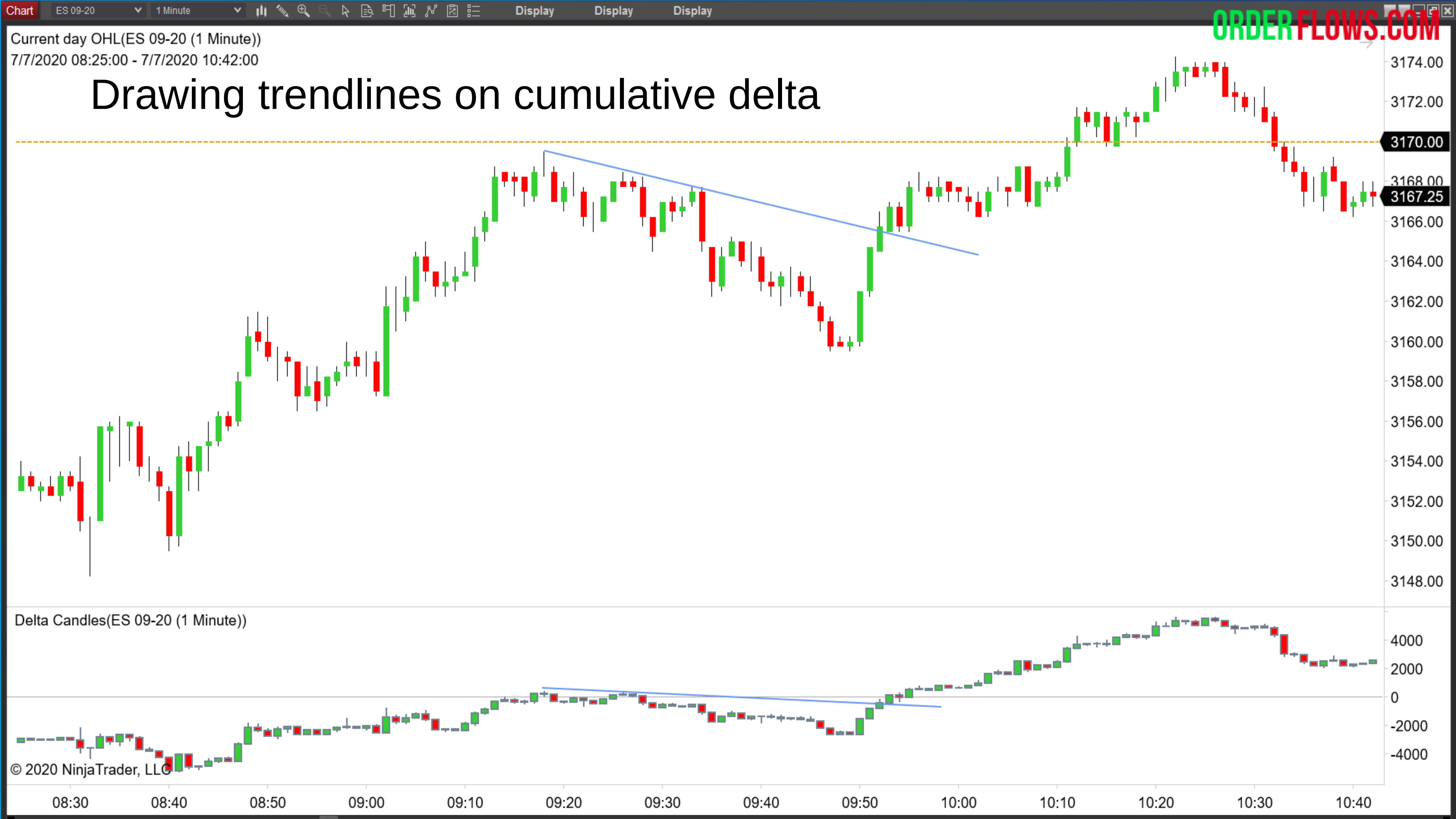
Cumulative delta can be charted and traditional technical analysis applied to it.

Drawing support and resistance on cumulative delta



Drawing support and resistance on cumulative delta

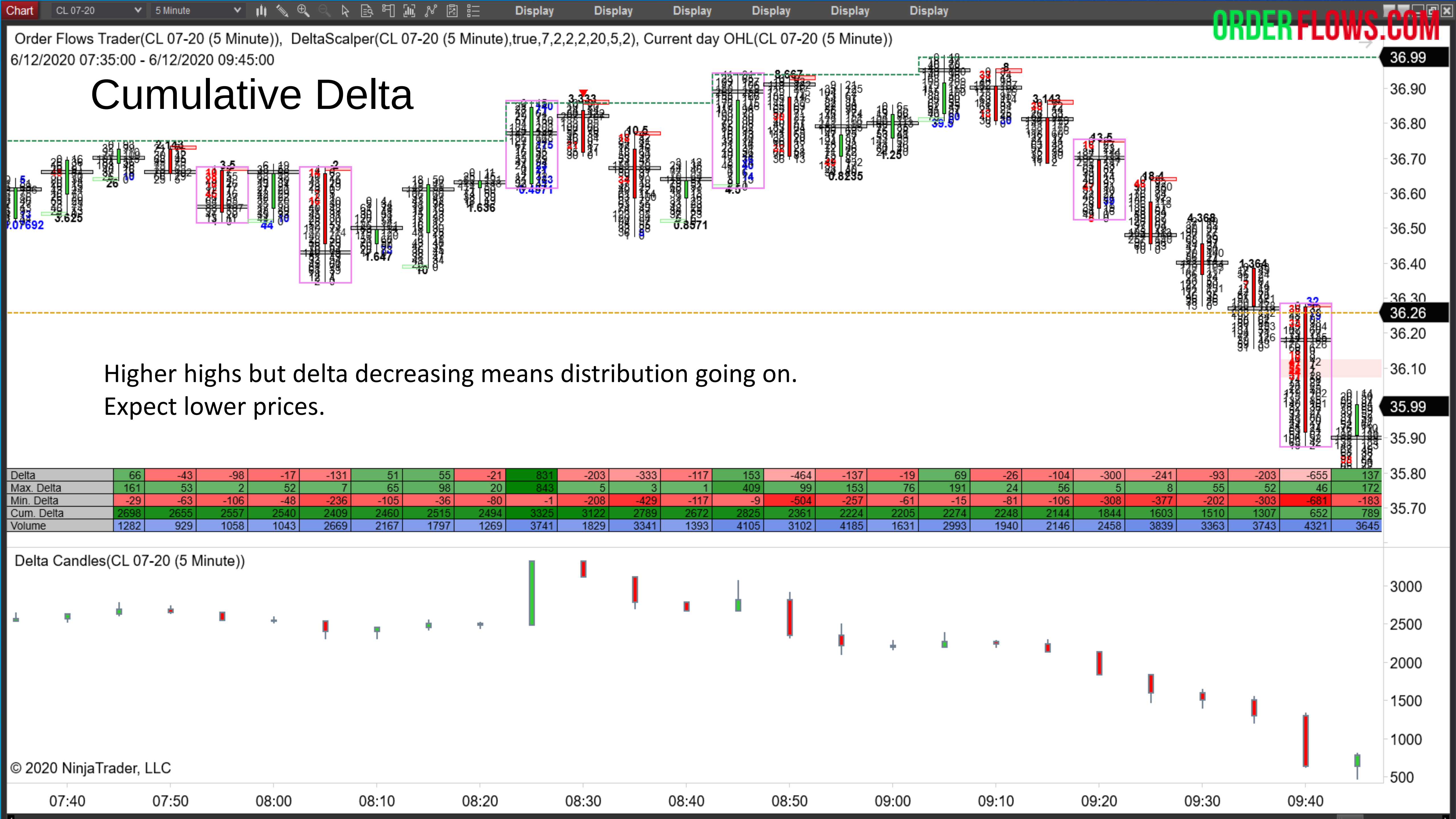
Drawing trendlines on cumulative delta



Cumulative Delta shows distribution and accumulation.

Where are traders going to distribute and accumulate?
Areas where they can move size without moving the market.

Cumulative Delta

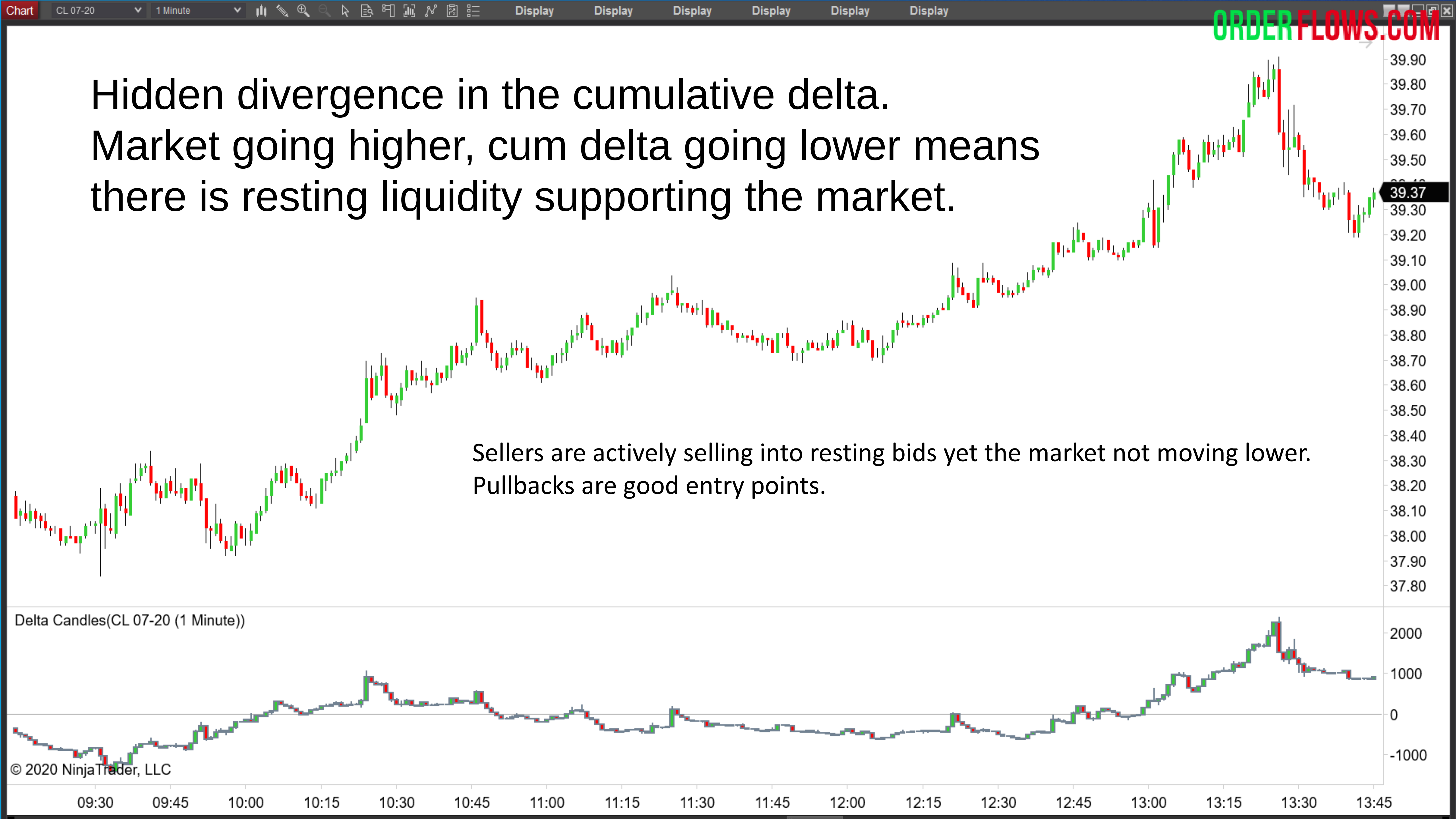


Delta	66	-43	-98	-17	-131	51	55	-21	831	-203	-333	-117	153	-464	-137	-19	69	-26	-104	-300	-241	-93	-203	-655	137
Max. Delta	161	53	2	52	7	65	98	20	843	5	3	1	409	99	153	76	191	24	56	5	8	55	52	46	172
Min. Delta	-29	-63	-106	-48	-236	-105	-36	-80	-1	-208	-429	-117	-9	-504	-257	-61	-15	-81	-106	-308	-377	-202	-303	-681	-183
Cum. Delta	2698	2655	2557	2540	2409	2460	2515	2494	3325	3122	2789	2672	2825	2361	2224	2205	2274	2248	2144	1844	1603	1510	1307	652	789
Volume	1282	929	1058	1043	2669	2167	1797	1269	3741	1829	3341	1393	4105	3102	4185	1631	2993	1940	2146	2458	3839	3363	3743	4321	3645

Higher highs but delta decreasing means distribution going on.
Expect lower prices.

Hidden divergence in the cumulative delta. Market going higher, cum delta going lower means there is resting liquidity supporting the market.

Sellers are actively selling into resting bids yet the market not moving lower. Pullbacks are good entry points.



Cumulative Delta Divergence Buying – when price makes a lower low, but cumulative delta does not. This suggests to me that institutional accumulation has been taking place between the price lows. Even though the market is making a new low, overall there has been consistent buying during this period of weakness.

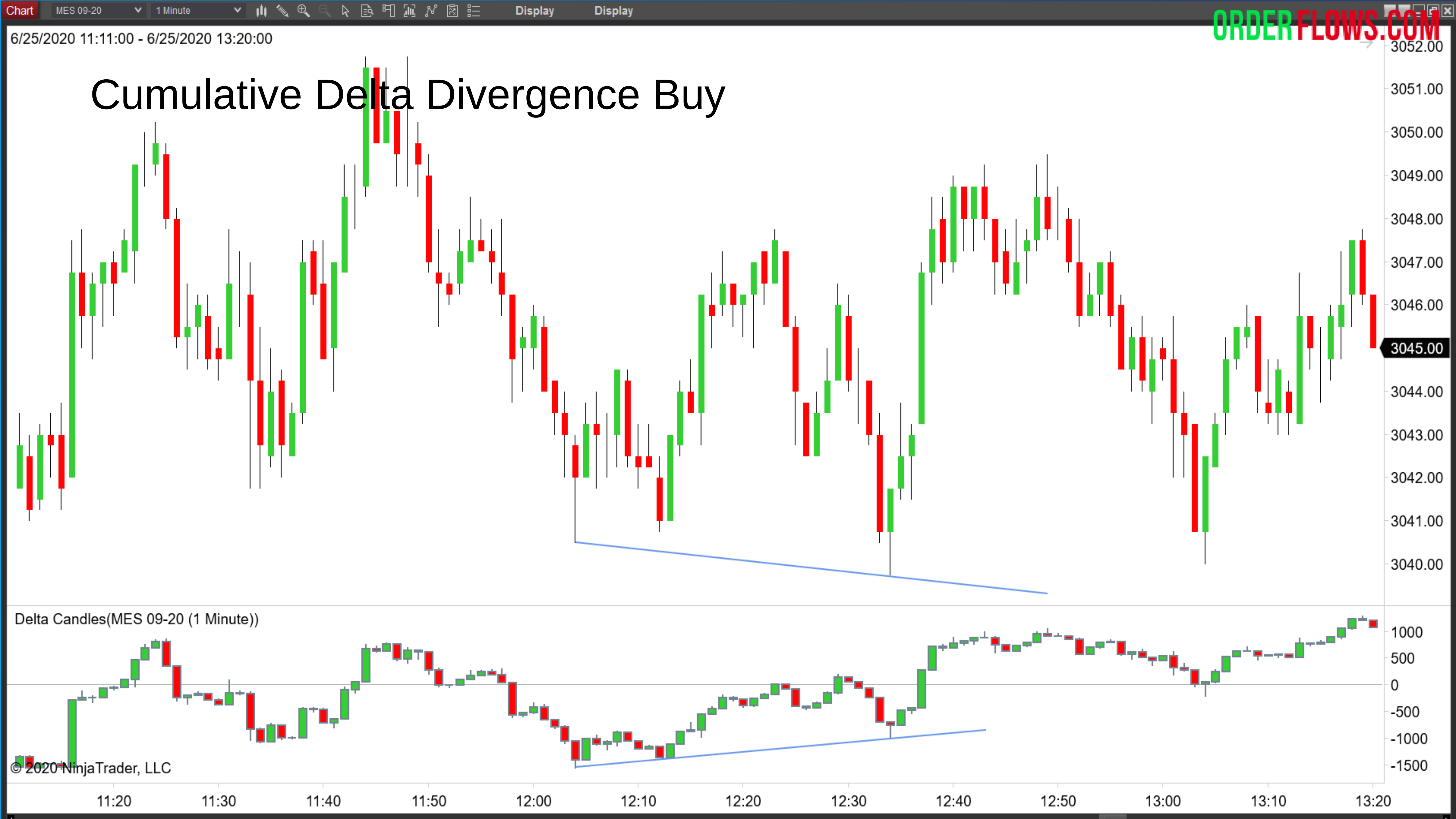


Chart
MES 09-20
1 Minute
Display
Display
ORDERFLOWS.COM
6/25/2020 11:11:00 - 6/25/2020 13:20:00
Cumulative Delta Divergence Buy
3052.00
3051.00
3050.00
3049.00
3048.00
3047.00
3046.00
3045.00
3044.00
3043.00
3042.00
3041.00
3040.00
Delta Candles(MES 09-20 (1 Minute))
1000
500
0
-500
-1000
-1500
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11:20
11:30
11:40
11:50
12:00
12:10
12:20
12:30
12:40
12:50
13:00
13:10
13:20

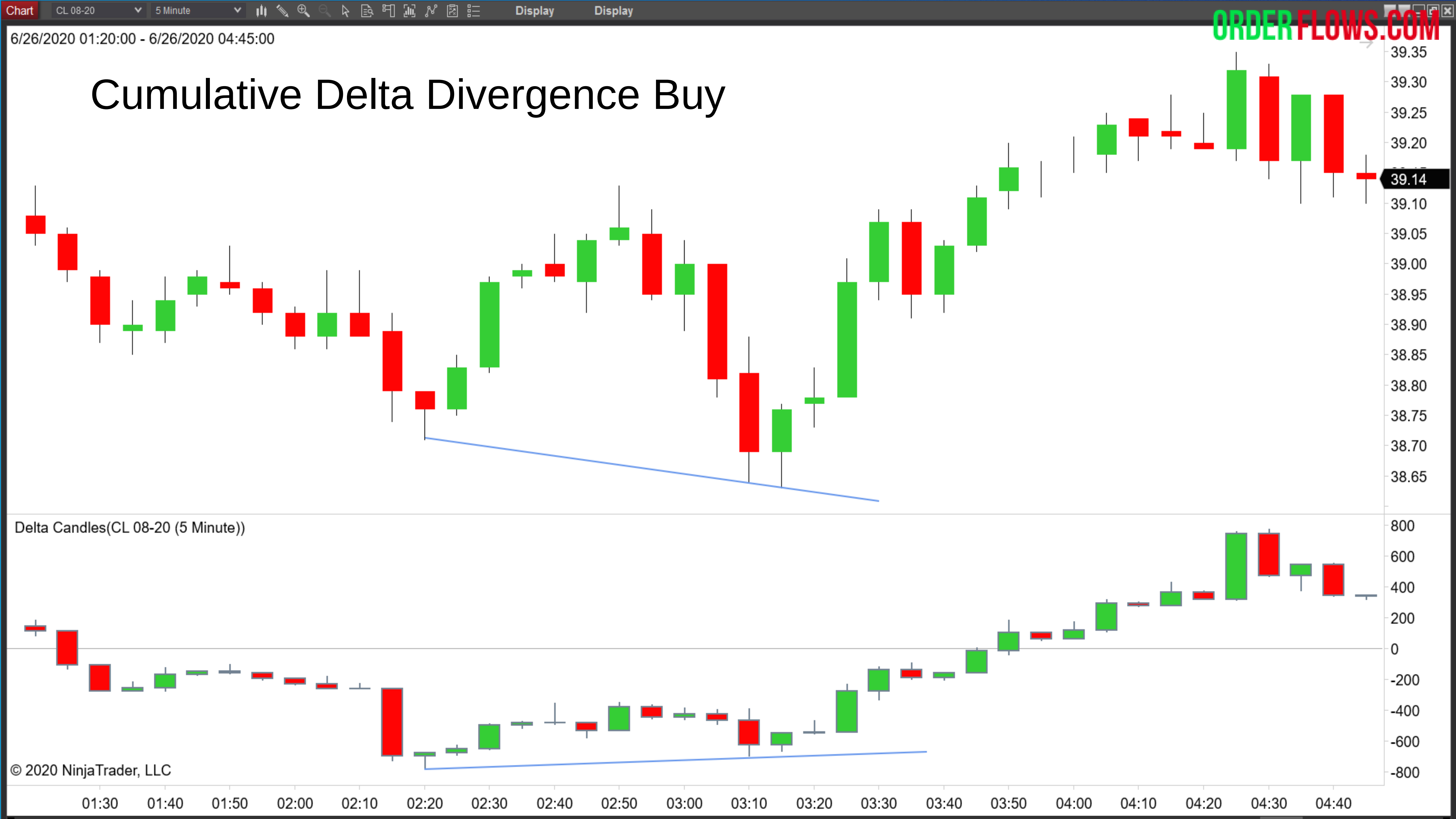
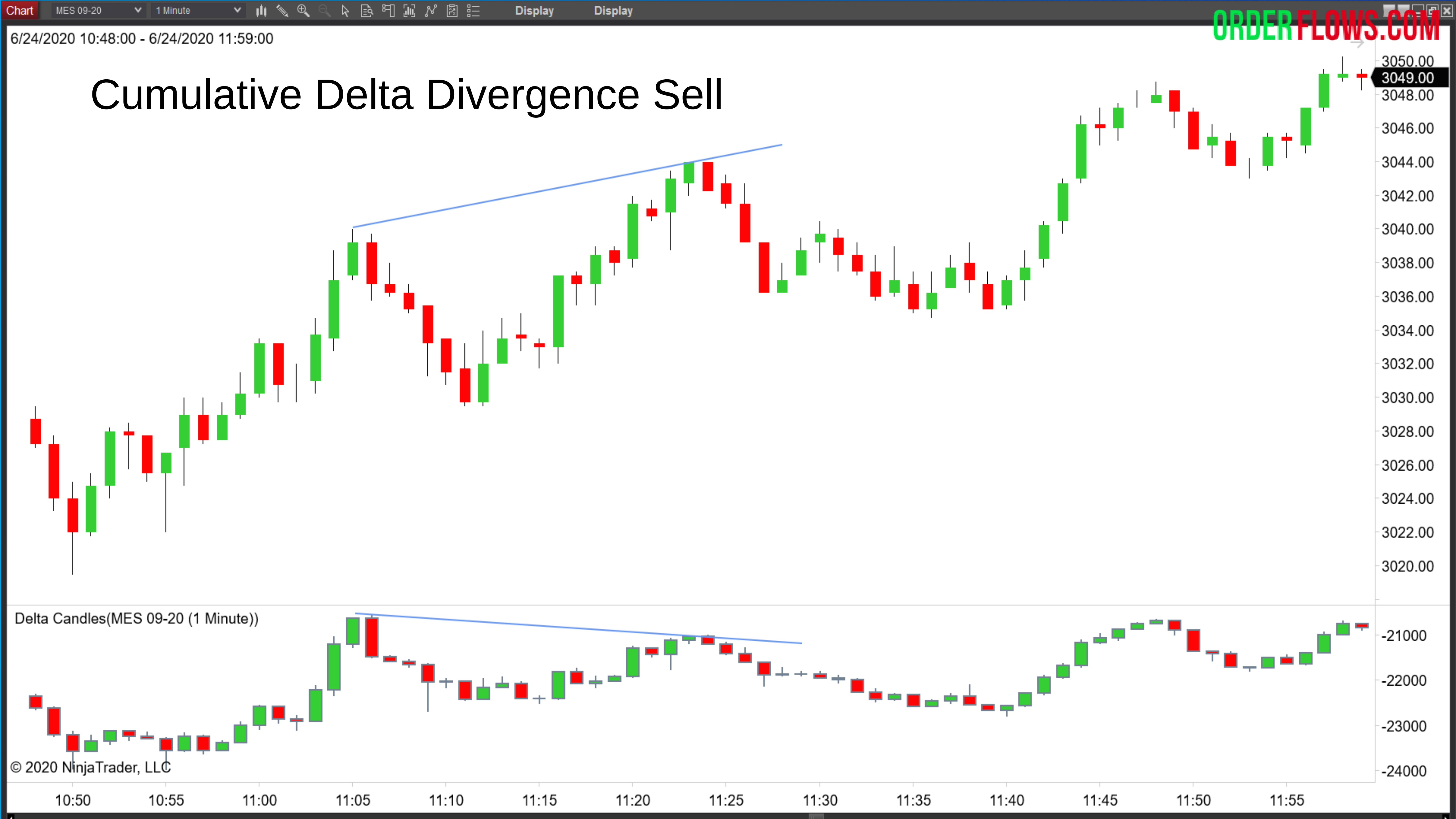


Chart
CL 08-20
5 Minute
Display
Display
ORDERFLOWS.COM
6/26/2020 01:20:00 - 6/26/2020 04:45:00
Cumulative Delta Divergence Buy
39.35
39.30
39.25
39.20
39.14
39.10
39.05
39.00
38.95
38.90
38.85
38.80
38.75
38.70
38.65
Delta Candles(CL 08-20 (5 Minute))
800
600
400
200
0
-200
-400
-600
-800
© 2020 NinjaTrader, LLC
01:30
01:40
01:50
02:00
02:10
02:20
02:30
02:40
02:50
03:00
03:10
03:20
03:30
03:40
03:50
04:00
04:10
04:20
04:30
04:40

Cumulative Delta Divergence Selling – when price rallies to a new high, but cumulative delta fails to make a new high, I expect a decline coming.

Cumulative Delta Divergence Sell



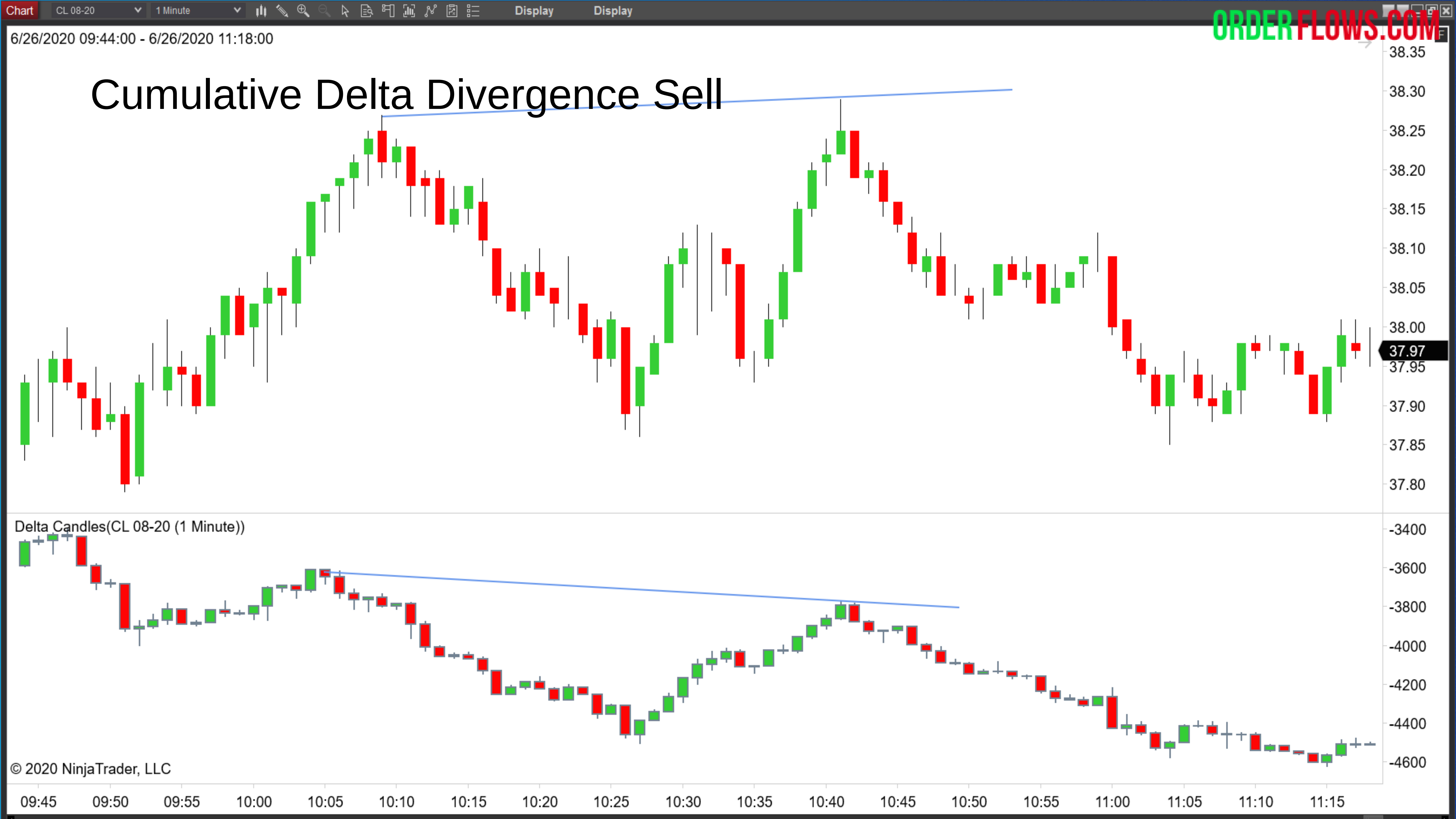


Chart
CL 08-20
1 Minute
Display
Display
ORDER FLOWS.COM
6/26/2020 09:44:00 - 6/26/2020 11:18:00
Cumulative Delta Divergence Sell
38.35
38.30
38.25
38.20
38.15
38.10
38.05
38.00
37.97
37.95
37.90
37.85
37.80
Delta Candles(CL 08-20 (1 Minute))
-3400
-3600
-3800
-4000
-4200
-4400
-4600
© 2020 NinjaTrader, LLC
09:45
09:50
09:55
10:00
10:05
10:10
10:15
10:20
10:25
10:30
10:35
10:40
10:45
10:50
10:55
11:00
11:05
11:10
11:15

Recognizing weakness and strength through cumulative delta.

See pulses of strong negative delta in a weak market or pulses of strong positive delta in a strong market.

Recognizing weakness through cumulative delta.

Recognizing strength through cumulative delta.

Cumulative delta trending lower to its lowest then in 3 ½ bars gained it all back.

Recognizing strength through cumulative delta. Part 2

Signs of strength or weakness do not always disappear quickly.

It can still be there as the market trades sideways over a period of time.

If you identified market weakness going into the high and the market still manages to make a new high, but the high is made on low volume, low delta, you know that chances are this high is probably going to hold and the market is not going to go much higher and probably reverse.

Markets reach highs on strength. But eventually that strength reaches its strongest point and begins to weaken, not in the sense of immediately turning weak, but the move starts laboring, the strength that once was there, the strength that was propelling the markets to new highs is no longer there.

The same is true with lows. The cumulative delta is often at its most negative point at the low and that is where the market can turn.

Cumulative delta helps you to see when a move has lost its strength, either to the upside or downside.

Recognizing strength through cumulative delta.

This concludes Module 3. In Module 4 we will discuss trading vertical versus horizontal markets.