```
[3138.7, 200.0]
[3138.65, 50.0]
<---->
[3137.0, 977.0]
[3137.0, 883.0]
[3137.0, 10.0]
[3137.0, 10.0]
[3137.0, 10.0]
BUY SIDE
Volatility : buy = 67.91110229492188
Volatility : sell = 55.32658767700195
Volatility : trade = 20.239490509033203
Current bid ask spread = 1.64990234375
Interval Number: 8
SELL SIDE
[3165.0, 1.0]
[3165.0, 1.0]
[3164.95, 10.0]
[3164.8, 200.0]
[3164.8, 199.0]
<---->
[3160.05, 771.0]
[3160.05, 770.0]
[3160.05, 768.0]
[3160.05, 750.0]
[3160.05, 685.0]
BUY SIDE
Volatility : buy = 64.92167663574219
Volatility : sell = 45.987674713134766
Volatility : trade = 27.317630767822266
Current bid ask spread = 4.75
Interval Number: 9
SELL SIDE
[3159.8, 200.0]
[3159.8, 200.0]
[3157.9, 155.0]
[3157.8, 200.0]
[3157.8, 77.0]
<---->
[3157.1, 200.0]
[3157.1, 200.0]
[3157.1, 25.0]
[3157.1, 9.0]
[3157.0, 200.0]
BUY SIDE
Volatility : buy = 64.81281280517578
Volatility : sell = 43.369224548339844
Volatility : trade = 27.383441925048828
Current bid ask spread = 0.699951171875
Interval Number: 10
SELL SIDE
[3168.9, 21.0]
[3168.8, 200.0]
```

```
[3168.5, 100.0]
[3168.5, 100.0]
[3168.0, 42.0]
<---->
[3166.05, 21.0]
[3166.0, 103.0]
[3166.0, 103.0]
[3165.9, 5.0]
[3165.5, 64.0]
BUY SIDE
Volatility : buy = 64.65841674804688
Volatility : sell = 41.87599182128906
Volatility : trade = 28.293521881103516
Current bid ask spread = 1.949951171875
Interval Number: 11
SELL SIDE
[3169.85, 9.0]
[3169.85, 6.0]
[3169.85, 5.0]
[3169.85, 5.0]
[3169.8, 98.0]
<---->
[3168.0, 59.0]
[3168.0, 2.0]
[3168.0, 2.0]
[3166.0, 50.0]
[3166.0, 30.0]
BUY SIDE
Volatility : buy = 63.58351516723633
Volatility : sell = 41.55133056640625
Volatility : trade = 29.077220916748047
Current bid ask spread = 1.800048828125
Interval Number: 12
SELL SIDE
[3172.0, 10.0]
[3172.0, 10.0]
[3172.0, 10.0]
[3172.0, 5.0]
[3172.0, 2.0]
<---->
[3170.0, 2.0]
[3166.0, 18.0]
[3165.3, 34.0]
[3165.3, 30.0]
[3165.0, 1.0]
BUY SIDE
Volatility : buy = 63.755943298339844
Volatility : sell = 41.25409698486328
Volatility : trade = 30.134565353393555
Current bid ask spread = 2.0
Day : 6
Interval Number: 1
```

2

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SELL SIDE
[3225.0, 1.0]
[3224.9, 185.0]
[3224.8, 25.0]
[3221.0, 25.0]
[3221.0, 25.0]
<---->
[3220.0, 178.0]
[3220.0, 171.0]
[3220.0, 147.0]
[3220.0, 140.0]
[3220.0, 133.0]
BUY SIDE
Volatility : buy = 68.19906616210938
Volatility : sell = 57.61604309082031
Volatility : trade = 24.479005813598633
Current bid ask spread = 1.0
Interval Number: 2
SELL SIDE
[3239.0, 3.0]
[3239.0, 1.0]
[3239.0, 1.0]
[3239.0, 1.0]
[3238.95, 72.0]
<---->
[3237.0, 191.0]
[3237.0, 172.0]
[3237.0, 50.0]
[3237.0, 48.0]
[3237.0, 47.0]
BUY SIDE
Volatility : buy = 66.26300811767578
Volatility : sell = 51.343814849853516
Volatility : trade = 21.784128189086914
Current bid ask spread = 1.949951171875
Interval Number : 3
SELL SIDE
[3227.8, 42.0]
[3227.7, 42.0]
[3227.7, 13.0]
[3227.6, 42.0]
[3227.45, 200.0]
<---->
[3226.0, 566.0]
[3226.0, 100.0]
[3226.0, 5.0]
[3226.0, 5.0]
[3226.0, 5.0]
BUY SIDE
Volatility : buy = 63.88922882080078
Volatility : sell = 48.84955978393555
Volatility : trade = 21.385601043701172
Current bid ask spread = 1.449951171875
Interval Number: 4
```

3

```
SELL SIDE
[3228.5, 200.0]
[3228.45, 200.0]
[3228.45, 103.0]
[3228.4, 200.0]
[3228.35, 37.0]
<---->
[3227.3, 345.0]
[3227.3, 336.0]
[3227.25, 5.0]
[3227.05, 472.0]
[3226.5, 102.0]
BUY SIDE
Volatility : buy = 66.02790832519531
Volatility : sell = 49.57980728149414
Volatility : trade = 21.71639633178711
Current bid ask spread = 1.050048828125
Interval Number : 5
SELL SIDE
[3222.9, 2.0]
[3222.9, 2.0]
[3222.8, 224.0]
[3222.8, 10.0]
[3222.0, 5.0]
<---->
[3221.0, 130.0]
[3221.0, 106.0]
[3221.0, 100.0]
[3221.0, 100.0]
[3221.0, 50.0]
BUY SIDE
Volatility : buy = 66.38448333740234
Volatility : sell = 46.902503967285156
Volatility : trade = 22.211864471435547
Current bid ask spread = 1.0
Interval Number: 6
SELL SIDE
[3218.85, 60.0]
[3218.8, 5.0]
[3218.7, 14.0]
[3218.0, 10.0]
[3217.95, 60.0]
<---->
[3216.0, 241.0]
[3216.0, 200.0]
[3216.0, 200.0]
[3216.0, 188.0]
[3216.0, 188.0]
BUY SIDE
Volatility : buy = 65.89749145507812
Volatility : sell = 46.223445892333984
Volatility : trade = 22.734886169433594
Current bid ask spread = 1.949951171875
```

4

```
Interval Number: 7
SELL SIDE
[3216.0, 100.0]
[3216.0, 93.0]
[3215.95, 1.0]
[3215.0, 5.0]
[3214.85, 86.0]
<---->
[3213.05, 17.0]
[3213.0, 490.0]
[3213.0, 100.0]
[3213.0, 48.0]
[3213.0, 48.0]
BUY SIDE
Volatility : buy = 67.03768920898438
Volatility : sell = 45.75058364868164
Volatility : trade = 22.089420318603516
Current bid ask spread = 1.800048828125
Interval Number: 8
SELL SIDE
[3212.9, 13.0]
[3211.95, 1.0]
[3210.0, 30.0]
[3209.95, 40.0]
[3209.95, 40.0]
<---->
[3205.1, 219.0]
[3205.1, 30.0]
[3205.1, 30.0]
[3205.05, 25.0]
[3205.05, 20.0]
BUY SIDE
Volatility : buy = 71.20586395263672
Volatility : sell = 45.348289489746094
Volatility : trade = 21.39488983154297
Current bid ask spread = 4.849853515625
Interval Number : 9
SELL SIDE
[3200.0, 1.0]
[3200.0, 1.0]
[3197.9, 5.0]
[3195.0, 9.0]
[3192.0, 98.0]
<---->
[3190.6, 29.0]
[3190.55, 20.0]
[3190.55, 20.0]
[3190.3, 10.0]
[3190.3, 1.0]
BUY SIDE
Volatility : buy = 66.46385955810547
Volatility : sell = 44.86442184448242
Volatility : trade = 22.8110408782959
Current bid ask spread = 1.39990234375
```

```
Interval Number: 10
SELL SIDE
[3192.0, 47.0]
[3190.0, 1.0]
[3185.0, 1.0]
[3180.0, 1.0]
[3179.8, 16.0]
<---->
[3175.0, 20.0]
[3175.0, 20.0]
[3175.0, 20.0]
[3175.0, 19.0]
[3175.0, 16.0]
BUY SIDE
Volatility : buy = 66.34049224853516
Volatility : sell = 48.20588684082031
Volatility : trade = 25.665987014770508
Current bid ask spread = 4.800048828125
Interval Number: 11
SELL SIDE
[3180.0, 1.0]
[3179.95, 200.0]
[3179.9, 139.0]
[3164.8, 5.0]
[3154.0, 25.0]
<---->
[3140.0, 590.0]
[3140.0, 559.0]
[3140.0, 405.0]
[3140.0, 400.0]
[3140.0, 400.0]
BUY SIDE
Volatility : buy = 62.500205993652344
Volatility : sell = 48.02073287963867
Volatility : trade = 30.956668853759766
Current bid ask spread = 14.0
Interval Number: 12
SELL SIDE
[3148.0, 400.0]
[3148.0, 400.0]
[3148.0, 200.0]
[3148.0, 200.0]
[3144.0, 200.0]
<---->
[3138.0, 201.0]
[3138.0, 25.0]
[3138.0, 25.0]
[3138.0, 15.0]
[3138.0, 5.0]
BUY SIDE
Volatility : buy = 62.516727447509766
Volatility : sell = 48.35244369506836
Volatility : trade = 31.74559783935547
```

```
Current bid ask spread = 6.0
. .
Day : 7
Interval Number: 1
SELL SIDE
[3107.9, 47.0]
[3107.9, 5.0]
[3107.85, 16.0]
[3107.0, 183.0]
[3107.0, 45.0]
<---->
[3105.0, 157.0]
[3105.0, 62.0]
[3105.0, 25.0]
[3105.0, 25.0]
[3105.0, 20.0]
BUY SIDE
Volatility : buy = 89.98394012451172
Volatility : sell = 74.28715515136719
Volatility: trade = 13.428765296936035
Current bid ask spread = 2.0
Interval Number: 2
SELL SIDE
[3096.9, 200.0]
[3096.85, 92.0]
[3096.8, 87.0]
[3095.0, 19.0]
[3095.0, 1.0]
<---->
[3093.5, 30.0]
[3093.4, 100.0]
[3093.3, 199.0]
[3093.25, 100.0]
[3093.1, 200.0]
BUY SIDE
Volatility : buy = 78.63125610351562
Volatility : sell = 65.45834350585938
Volatility: trade = 15.611896514892578
Current bid ask spread = 1.5
Interval Number : 3
SELL SIDE
[3044.0, 200.0]
[3043.0, 142.0]
[3040.05, 1.0]
[3040.0, 200.0]
[3039.7, 200.0]
<---->
[3032.2, 83.0]
[3032.15, 200.0]
[3032.15, 200.0]
[3032.15, 100.0]
[3032.15, 100.0]
BUY SIDE
```

```
Volatility : buy = 62.3538818359375
Volatility : sell = 65.07156372070312
Volatility : trade = 30.49018669128418
Current bid ask spread = 7.5
Interval Number: 4
SELL SIDE
[2909.95, 25.0]
[2909.25, 100.0]
[2907.95, 200.0]
[2907.95, 38.0]
[2907.95, 1.0]
<---->
[2902.0, 155.0]
[2899.5, 2.0]
[2899.5, 1.0]
[2898.0, 1.0]
[2896.0, 400.0]
BUY SIDE
Volatility : buy = 64.05419921875
Volatility : sell = 87.81092834472656
Volatility : trade = 70.63416290283203
Current bid ask spread = 5.949951171875
Interval Number : 5
SELL SIDE
[2940.0, 800.0]
[2940.0, 200.0]
[2940.0, 200.0]
[2940.0, 200.0]
[2940.0, 156.0]
<---->
[2930.0, 5.0]
[2921.0, 400.0]
[2920.0, 2.0]
[2920.0, 1.0]
[2915.0, 400.0]
BUY SIDE
Volatility : buy = 57.14938735961914
Volatility : sell = 91.04776000976562
Volatility: trade = 76.63226318359375
Current bid ask spread = 10.0
Interval Number: 6
SELL SIDE
[2944.4, 200.0]
[2943.4, 200.0]
[2942.0, 190.0]
[2942.0, 39.0]
[2942.0, 1.0]
<---->
[2940.0, 1.0]
[2938.7, 165.0]
[2936.0, 200.0]
[2935.05, 132.0]
[2935.05, 76.0]
```

```
BUY SIDE
Volatility : buy = 59.917816162109375
Volatility : sell = 89.36720275878906
Volatility : trade = 73.71979522705078
Current bid ask spread = 2.0
Interval Number : 7
SELL SIDE
[2943.95, 77.0]
[2943.9, 100.0]
[2943.75, 200.0]
[2943.75, 200.0]
[2941.05, 2.0]
<---->
[2940.0, 100.0]
[2940.0, 98.0]
[2940.0, 75.0]
[2940.0, 50.0]
[2940.0, 25.0]
BUY SIDE
Volatility : buy = 61.10189437866211
Volatility : sell = 87.0846176147461
Volatility : trade = 72.5932846069336
Current bid ask spread = 1.050048828125
In [94]:
```