

# E01-Data Analysis using Pivot Tables

Name: HRISHIKESH S

Roll No: 22B4217

Q2.

Classification of Data Types into Discrete and Continuous

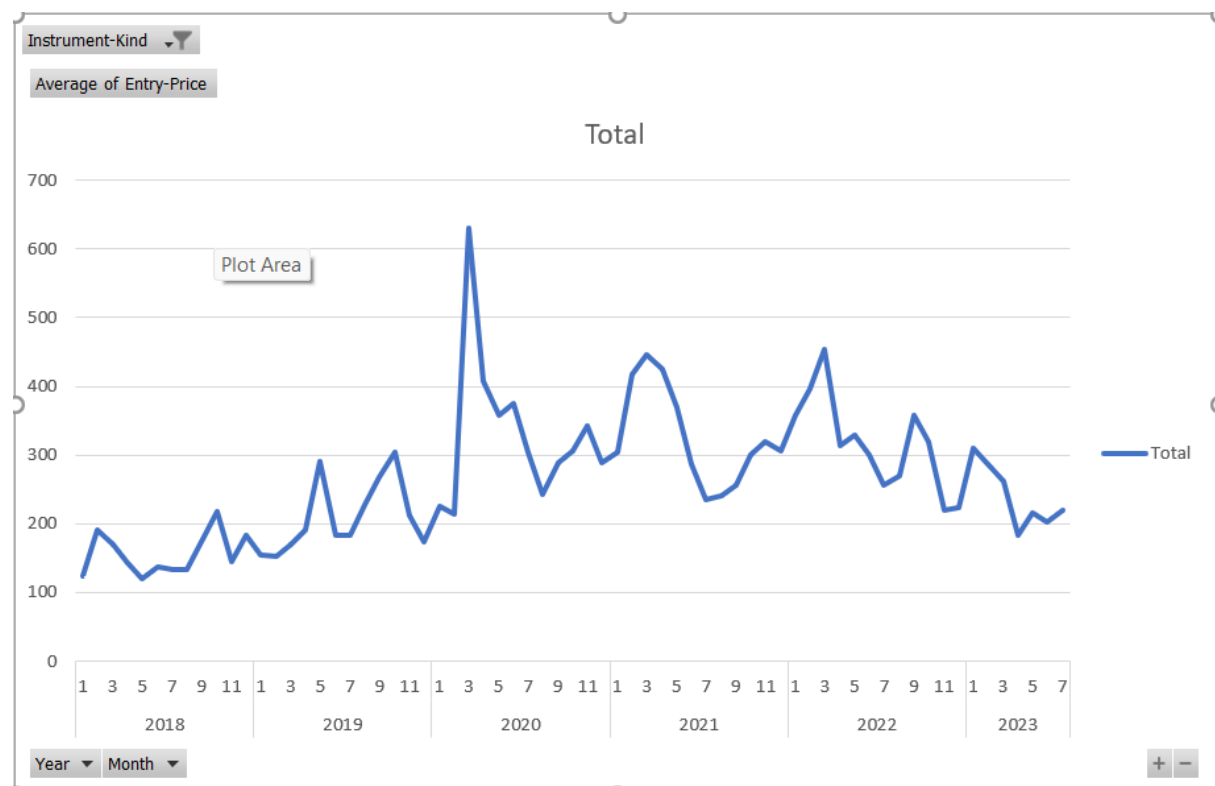
Data Columns	Data Type
Index	Discrete
Entry-Date	Discrete
Entry-Weekday	Discrete
Entry-Time	Continuous
Entry-Price	Continuous
Quantity	Discrete
StrikePrice	Continuous
ExitDate	Discrete
Exit-Weekday	Discrete
ExitTime	Continuous
ExitPrice	Continuous
P/L	Continuous
P/L-Percentage	Continuous
ExpiryDate	Discrete
Highest-From-Entry-To-Exit	Continuous
Lowest-From-Entry-To-Exit	Continuous

Count: 16

Continuous Data Values: 9 and Discrete Data Values: 7

Q6)

Average Entry price over the months



Interpretation: The Average Entry price was continuously growing from December 2019 until March 2020, and suddenly dropped till May, after that dropped again till September, after which growth was witnessed. This change can be safely attributed to COVID-19.

Maximum: 630.85 (Occurs on March 2020)

Minimum: 119.47 (Occurs on May 2018)

Q7)

## Entry Price Behaviour for every day of the week

Assignment 1 options-trading-backtest - Microsoft Office

File Home Insert Page Layout Formulas Data Review View Help Analyze Design Tell me what you want to do

Clipboard Font Alignment Number Styles Cells Editing

Column Labels

Row Labels	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
2018	189.7915094	162.8864583	127.9683673	78.95212766	211.4895833	155.1436735	
1	143.94	168.43	116.8	60.5625	118.2333333	124.6727273	
2	235.525	191.1833333	167.675	115.4	242.275	190.3710526	
3	205.9375	186.4875	128.8	102.325	239.2333333	169.0473684	
4	194.43	148.1125	108.975	73.2	182.3875	143.9452381	
5	156.325	129.8	91.64	66.69	173.0625	119.4727273	
6	164.3625	146.375	114.5875	52.925	197.65	138.1547619	
7	164.67	135.6	114.1375	57.2	187.7875	133.5386364	
8	157.8375	129.7625	125.3666667	69.47	186.77	133.7	
9	205.05	167.725	130.3	104.45	229.05	174.3	
10	254.34	206.875	167.74	116.4166667	325.2875	218.4904762	
11	172.7375	148.925	114.5666667	74.775	204.8625	144.6789474	
12	216.19	222.8666667	152.9625	81.5625	244.5375	183.29	
2019	251.4880435	216.013	174.7691489	108.208	291.4872549	208.4405738	
1	206.725	166.79	133.22	71.57	214.9	154.1043478	
2	182.6625	167.9875	102.775	85.9375	222.9375	152.46	
3	214.05	151.5125	119.5	69.78333333	258.47	169.8894737	
4	248.4375	194.93	175.5833333	89.7	261.5833333	191.5105263	
5	333.875	306.8875	290.475	159.68	372.01	290.1545455	
6	217.55	188.8875	144.1	96.2875	260	183.3263158	
7	216.58	200.87	155.77	88.675	249.95	183.5043478	
8	292.35	238.3	183.1375	114.1875	308.73	228.16	
9	327.9125	311.3833333	206.25	140.825	367.85	268.7105263	
10	429.2	321.1875	249.0375	170.84	446.375	304.1578947	
11	244.1125	233.7166667	185.8	103.975	278.24	211.395	
12	212.57	170.67	154.0833333	78.0625	236.45	173.1666667	

PivotTable F...

Choose fields to add to report:

Search

Index  
Entry-Date  
☒ Entry-Weekday  
☒ Entry-Time  
☒ Entry-Price  
Quantity  
☒ Instrument-Kind  
StrikePrice  
Position

Drag fields between areas below:

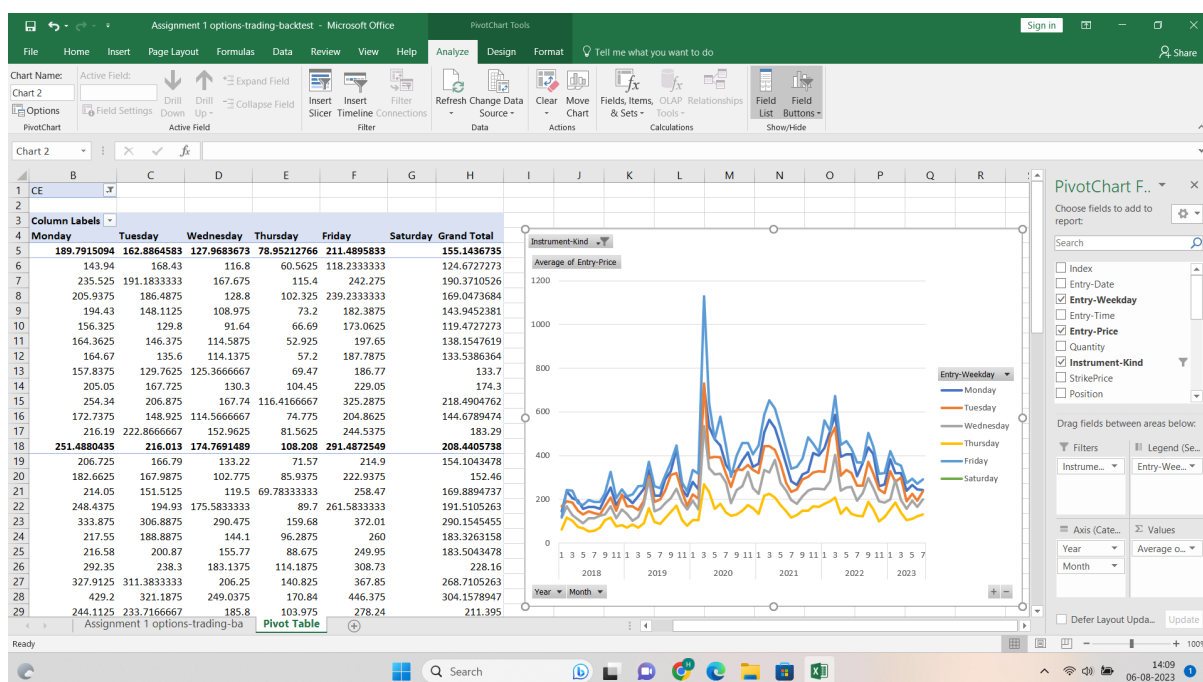
Filters: Instrume... Columns: Entry-Wee...

Rows: Year, Month Values: Average o...

☐ Defer Layout Update Update

Q8)

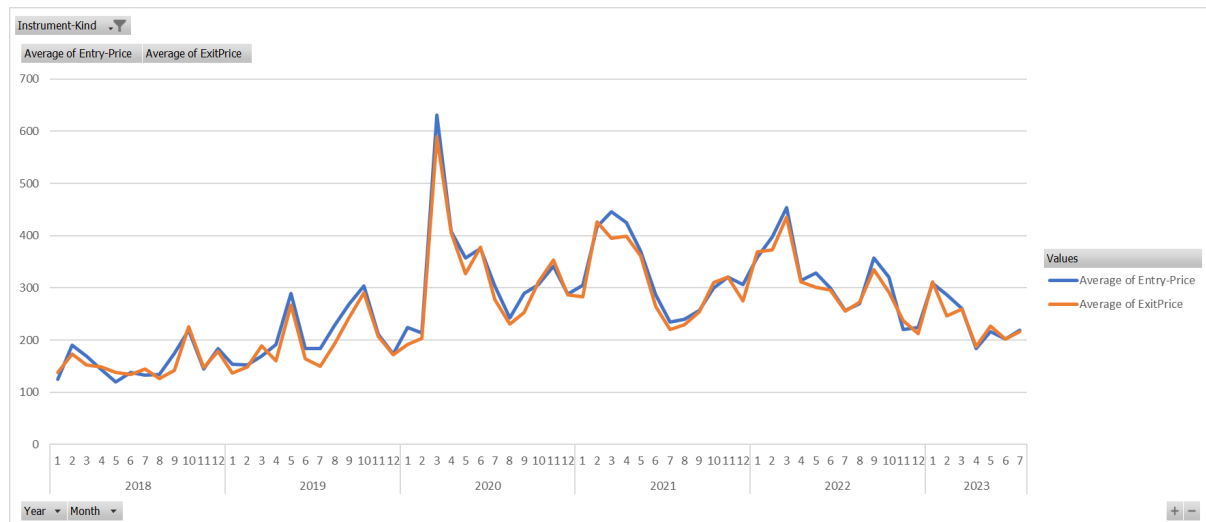
Plot for Q7:



The Maximum entry price is found on Monday and the Least entry price is found on Thursday.

We must also note that the prices on Monday are higher and the prices on Thursday are lower.

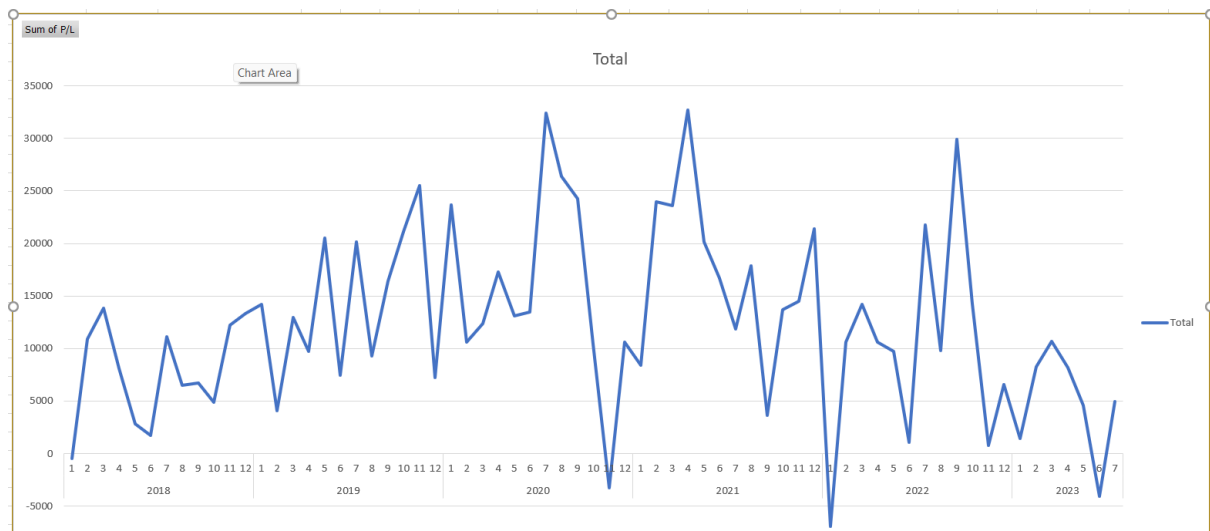
Q9)



We can clearly see from the chart that Average Exit Price is Greater than Average Entry Price.

Its also noteworthy that a sudden dip can be seen in the prices around the period 2020, because of COVID-19.

Q11):



Analysis and Interpretation:

Maximum value: 32730 (2022 April)

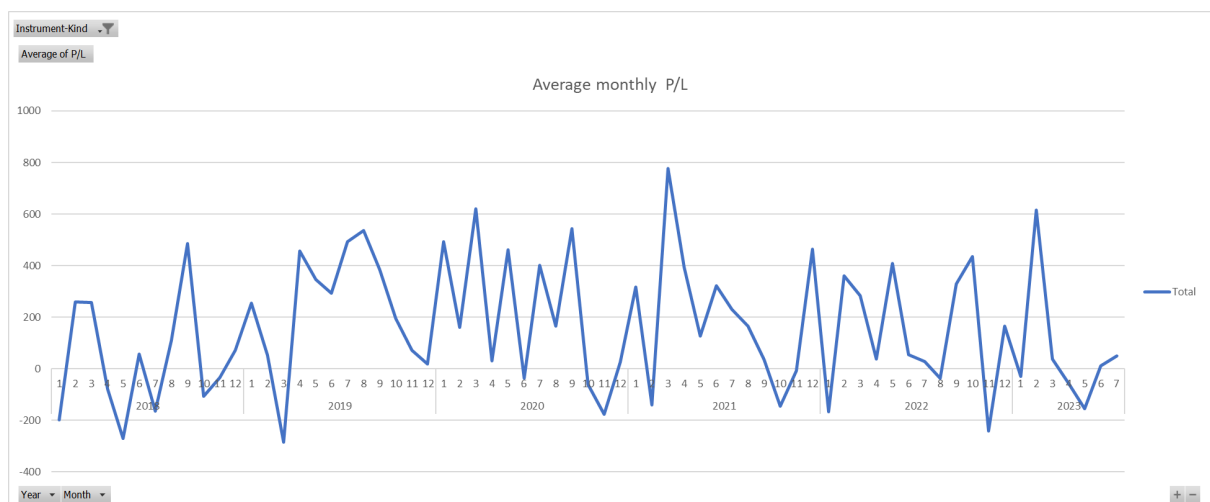
Minimum Value:- 6919.5 (2022 Jan)

Standard Deviation: 8594.95

We can clearly see from the Graph that the Profit decreases steeply after 2020, due to COVID-19, from which it slowly comes up.

Q12)

Average monthly P/L:



Analysis and Interpretation:

Maximum: 776.75 (2021 March)

Minimum: -284.72(2019 March)

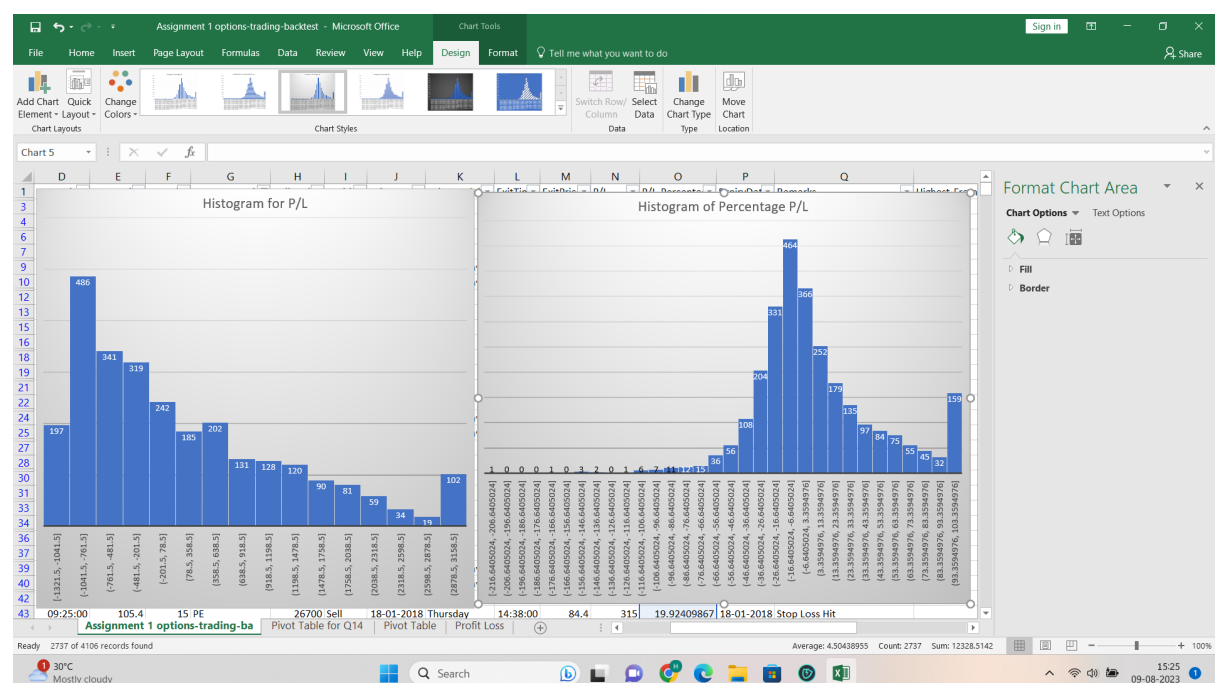
Standard Deviation: 249.23

We can clearly see that there is a dip in the profit percentage around 2020,because of COVID-19.

Q13)

Histogram of P/L and P/L Percentages

a) and b) (both are combined into one graph)



Analysis and Interpretation:

(i)P/L

Maximum: 486

Minimum: 19

We can clearly see that the Histogram rises at first and then decreases continuously.

(ii)Percentage P/L:

Maximum: 464

Minimum: 0

We can clearly interpret from the graph that the Histogram follows a normal distribution.

c) and d):

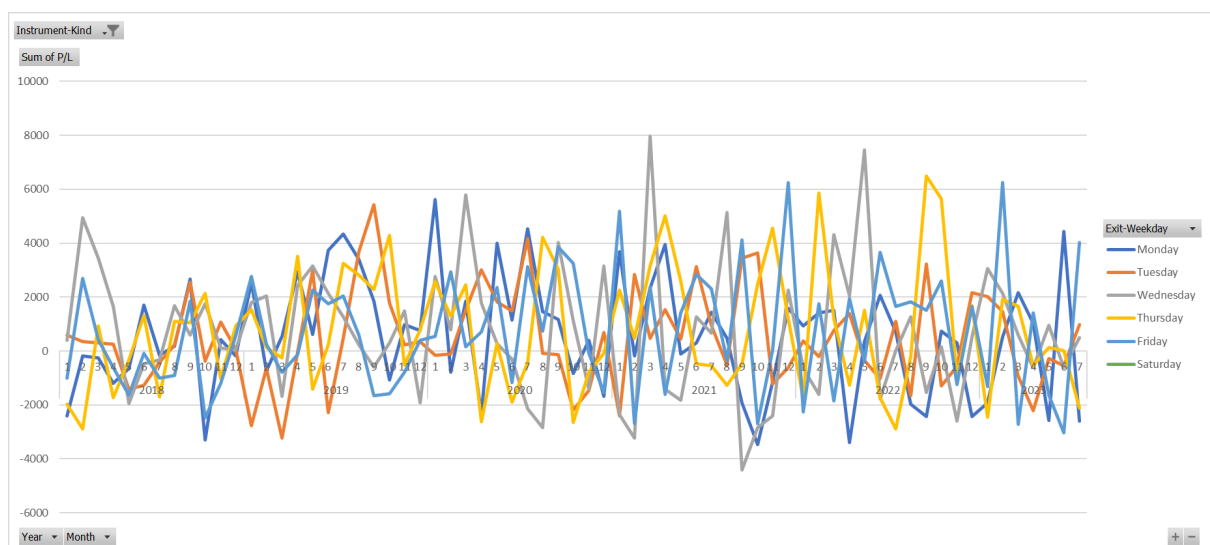
The first graph is plotted for P/L, which varies differently from the second because the second one is a ratio of the difference, it's the relative change expressed in the form of a ratio, as the difference between the numbers does not depend upon the relative jump from one to another but ratio/percentage does. For example,  $200 - 20 = 180$ , but 20 is just 10% decrease from 200.

That is for the same difference caused to a relatively higher number will result in a lower percentage.

Now, since the difference between two numbers can easily cover a wide range, but this is not the case for the percentages of them and thus the first plot can be considered more "distributive", whereas the second one is considered as Normal because the percentage differences can be treated as being clustered around a point.

Q14)

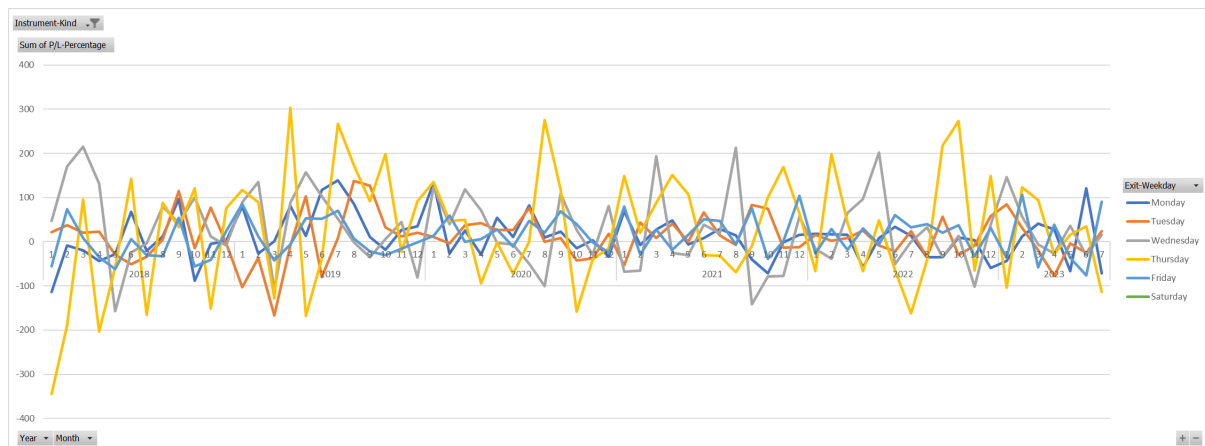
a) Weekday trend of absolute profit:



The Profit is maximum on Wednesdays of 2021 March.

On looking at the graph, we can see that Wednesdays makes more profit as compared to other days in a Seasonal manner.

Weekday trend of percentage profit:



b) We can see that the profits of Wednesdays is seasonal over the months of February, March, April;

having maxima around the mentioned time in the first graph.

c)

(i) 63 Months have ended with profit whereas only 4 Months have ended with Loss

(ii) 32730 is the maximum profit obtained (in April 2021)

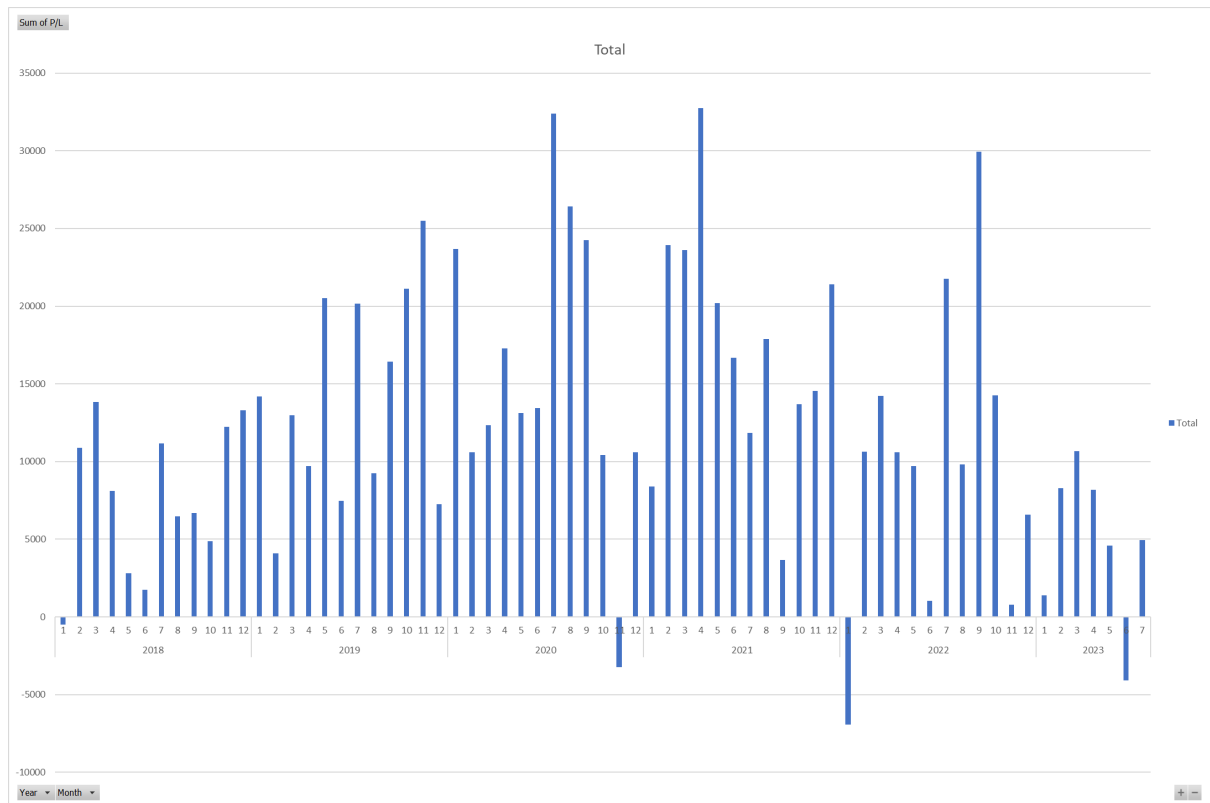
(iii) 6915.5 is the maximum loss encountered (in January 2022)

(iv) The year 2020 witnessed huge losses in a consistent manner compared to the other years.

This is because of the harsh impact of COVID-19.

(v)





I used all the values including CE and PE, and I could not find any consecutive months having losses.