"Monthly NEPSE Summary of Bhadra 2078"

This Month NEPSE made volatility of 447.56 points. NEPSE made a high of 3226.89 and low of 2812.38 within a Month. Index opened at 3165.69 points and closed at 2889.21 points with the loss of 276.48 points.

Exponential Moving Average:

We have used EMA's of 5 days' time period (Green line), 20 days' time period (red line). At present, NEPSE Index is bellow Exponential moving average indicates up down trend.

Relative Strength Index:

The relative strength index (RSI) is a momentum indicator that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of a stock or other asset. The RSI is displayed as an oscillator (a line graph that moves between two extremes) and can have a reading from 0 to 100.

Relative Strength Index is currently at 33. (close to over sold zone)

This Month market statistics:

Index Open-3165.69 points   **Index closed**-2812.38 points

Index High- 3226.89   points   **Index low**- 2779.33 points

Pivot Points Standard:

A pivot point is a technical analysis indicator, or calculations, used to determine the overall trend of the market over different time frames. The pivot point itself is simply the average of the intraday high and low, and the closing price from the previous trading day. On the subsequent day, trading above the pivot point is thought to indicate ongoing bullish sentiment, while trading below the pivot point indicates bearish sentiment.

The pivot point is the basis for the indicator, but it also includes other support and resistance levels that are projected based on the pivot point calculation. All these levels help traders see where the price could experience support or resistance.

Support and resistance level for according to Pivot Point.

1st Resistance-2888.30 point   **1st support**-2800 point

2nd Resistance-3058.74 point   **2nd support**-2630.22 point

 Current NEPSE index is 2889.21 level, which is below pivot level indicating bearish trend.

"Relationship between Short term interest rates and gain/loss in NEPSE"

Introduction& Objective of Study

Generally, interest rate or expected rate of return forms a part of any formula related with valuation of bonds, debts and share prices as well and thus interest rate is an integral component for most valuation techniques. Theoretically, the prices of financial instruments are inversely related with one another since interest rates is the denominator for most relevant formulas which results in an inverse relationship. Hence, there is ample theoretical and historical evidence of impact of long term interest rate changes on the stock market. However, it is necessary to understand the relationship between short term interest rates and change of market on weekly basis in order to predict the movement of stock markets over the short term.

Scope

This study intends to identify the relationship between change in NEPSE Index & the interbank lending rate. The data used for the purpose of this study shall be based on the weekly average interbank lending rate and the weekly movement in the NEPSE index. For the purposes of this study, the data shall be taken from 12th July,2020 to 10th September, 2021.

Data & Analysis

The total number of weekly observation for the purpose of this study is 61 periods. Table 1 represents the weekly interbank lending rate, Closing Values of NEPSE and Change in NEPSE Index during the aforementioned time period.

Table 1: Weekly Interbank lending rate and Change in NEPSE Index

Week No.	Intra Bank Lending Rate	Closing	Change in NEPSE	Remarks
W1	0.13%	1,394.77	4.77%	
W2	0.43%	1,442.61	3.43%	
W3	0.38%	1,439.06	-0.25%	
W4	0.33%	1,381.37	-4.01%	
W5	0.21%	1,408.79	1.98%	
W6	0.26%	1,397.57	-0.80%	
W7	0.26%	1,458.04	4.33%	
W8	0.26%	1,497.47	2.70%	
W9	0.22%	1,520.69	1.55%	
W10	0.20%	1,572.18	3.39%	
W11	0.17%	1,561.27	-0.69%	
W12	0.17%	1,571.04	0.63%	
W13	0.17%	1,589.63	1.18%	
W14	0.16%	1,562.46	-1.71%	
W15	0.19%	1,606.25	2.80%	Year 1- FY 2077/2078
W16	0.16%	1,645.67	2.45%	

W17	0.15%	1,636.17	-0.58%
W18	0.14%	1,718.50	5.03%
W19	0.14%	1,778.12	3.47%
W20	0.14%	1,893.24	6.47%
W21	0.14%	2,055.45	8.57%
W22	0.13%	1,964.02	-4.45%
W23	0.14%	2,032.51	3.49%
W24	0.18%	2,038.63	0.30%
W25	0.23%	2,087.27	2.39%
W26	0.17%	2,194.48	5.14%
W27	0.18%	2,286.54	4.20%
W28	0.15%	2,374.64	3.85%
W29	0.66%	2,425.29	2.13%
W30	0.87%	2,475.26	2.06%
W31	0.59%	2,526.92	2.09%
W32	0.48%	2,636.68	4.34%
W33	0.47%	2,554.13	-3.13%
W34	0.88%	2,506.68	-1.86%
W35	2.95%	2,458.48	-1.92%
W36	2.44%	2,475.09	0.68%
W37	0.77%	2,548.97	2.98%
W38	0.98%	2,631.89	3.25%
W39	2.02%	2,674.35	1.61%
W40	4.49%	2,735.46	2.29%
W41	3.23%	2,648.00	-3.20%
W42	3.02%	2,611.10	-1.39%
W43	4.83%	2,637.13	1.00%
W44	4.29%	2,684.01	1.78%
W45	1.42%	2,787.18	3.84%
W46	3.09%	2,815.39	1.01%
W47	2.60%	2,856.67	1.47%
W48	3.69%	2,944.78	3.08%
W49	4.79%	2,968.43	0.80%
W50	4.85%	2,843.00	-4.23%
W51	4.65%	2,843.00	0.00%
W52	3.69%	2,825.10	-0.63%
W53	1.46%	2,883.38	2.06%
W54	0.30%	3,004.31	4.19%
W55	0.48%	3,079.83	2.51%
W56	0.87%	3,107.45	0.90%
W57	3.84%	3,179.00	2.30%

Year 2- FY 2078/2079

W58	4.25%	3,180.78	0.06%	
W59	4.75%	3,094.05	-2.73%	
W60	4.81%	2,926.89	-5.40%	
W61	4.90%	2,875.97	-1.74%	

The interbank lending rate has ranged in between 0.1315% to 4.90% during the assessment period. The Interbank lending rate was below 1% for majority of the observations (63.97%), it ranged between 1% & 3% for 9.8%. The interbank lending rate was above 3% for 26.23% of the time. Similarly, the cumulative increment in the NEPSE Index was 79.86% during the assessment period and the change in the NEPSE Index ranged in between -5.4% and 8.57%.

Correlation between Interbank lending rate and Change in NEPSE Index

A test for correlation between the interbank lending rate and change in NEPSE Index was conducted for the 61 observations. The Pearson correlation coefficient was -0.415 which was statistically significant at 99% confidence level.

The negative value of the correlation coefficient indicates inverse relationship between inter banking lending rate and the movement in NEPSE Index which is in line with the widely accepted theory. The correlation coefficient was between 0.4 and 0.5 which indicates moderate correlation between the data.

4 period Moving Average

In order to further understand and describe the relationship between the interbank lending rates and the change in NEPSE Index. A 4 period moving average was created for both the variables which resulted in 58 observations for the assessment period. The following table presents the 4 period Moving Averages for both the variables.

Table 2: 4 period Moving Average- Interbank Lending Rate and 4 period Moving Average – Change in NEPSE

Week #	4 period MA – Interbank lending rate	4 period MA – Change in NEPSE
W4	0.32%	0.99%
W5	0.34%	0.29%
W6	0.29%	-0.77%
W7	0.26%	0.38%
W8	0.25%	2.05%
W9	0.25%	1.95%
W10	0.23%	2.99%
W11	0.21%	1.74%
W12	0.19%	1.22%
W13	0.18%	1.13%
W14	0.17%	-0.15%
W15	0.17%	0.73%

W16	0.17%	1.18%
W17	0.17%	0.74%
W18	0.16%	2.43%
W19	0.15%	2.59%
W20	0.14%	3.60%
W21	0.14%	5.89%
W22	0.14%	3.52%
W23	0.14%	3.52%
W24	0.15%	1.98%
W25	0.17%	0.43%
W26	0.18%	2.83%
W27	0.19%	3.00%
W28	0.18%	3.89%
W29	0.29%	3.83%
W30	0.46%	3.06%
W31	0.57%	2.53%
W32	0.65%	2.66%
W33	0.60%	1.34%
W34	0.60%	0.36%
W35	1.19%	-0.64%
W36	1.68%	-1.56%
W37	1.76%	-0.03%
W38	1.78%	1.25%
W39	1.55%	2.13%
W40	2.07%	2.53%
W41	2.68%	0.99%
W42	3.19%	-0.17%
W43	3.89%	-0.33%
W44	3.84%	-0.45%
W45	3.39%	1.31%
W46	3.41%	1.91%
W47	2.85%	2.02%
W48	2.70%	2.35%
W49	3.54%	1.59%
W50	3.98%	0.28%
W51	4.49%	-0.08%
W52	4.50%	-1.01%
W53	3.66%	-0.70%
Y2W1	2.53%	1.41%
Y2W2	1.48%	2.04%
Y2W3	0.78%	2.42%

Y2W4	1.37%	2.48%
Y2W5	2.36%	1.44%
Y2W6	3.43%	0.13%
Y2W7	4.41%	-1.44%
Y2W8	4.68%	-2.45%

Correlation between 4 period Moving Averages - Interbank lending rate and Change in NEPSE Index

A test for correlation between the 4 period moving averages -interbank lending rate and change in NEPSE Index was conducted for the 58 observations. The Pearson correlation coefficient was -0.544 which was statistically significant at 99% confidence level.

The negative value of the correlation coefficient indicates inverse relationship between inter banking lending rate and the movement in NEPSE Index and the correlation coefficient was above 0.5 which indicates moderately strong correlation between the data. Thus, in comparison to the weekly figures the 4 period moving averages seems to provide a better picture of the overall movement.

ANOVA Test on Interbank lending rate and Change in NEPSE Index

The interbank lending rates were categorized into 3 distinct categories based on the interest rates. The inter banking lending rate below 0.5% is considered to be low, lending rate between 0.5% and 3% is considered to be moderate while the lending rate above 3% has been considered to be high. Based on this categorization an ANOVA test was conducted to identify if there is any statistically significant variance between the groups and in the means of the 3 categories. The results of the ANOVA test are as follows:

Table 3: Descriptive statistics of the 3 Groups

S.N.	Category of Interbank lending Rate	# of Observations	Mean	Standard Deviation	95% Confidence Internal for Mean	
					Lower Bound	Upper Bound
1	Low	32	2.11	0.53	1.04	3.18
2	Medium	11	1.80	0.46	0.76	2.83
3	High	18	-0.41	0.57	-1.61	0.78
Total		**61**	**1.31**	**0.36**	**0.59**	**2.03**

On the basis of the above information and data it is quite apparent that there is an inverse relationship between the two variables. Thus, the low interbank lending rate has facilitated the overall growth in the market and it is during this time frame that the highest gain during the week was achieved for the entire period. (i.e. 8.57%).

Table 4: Result of ANOVA Test

Particulars	Sum of Squares	Degree of freedom (df)	Mean Square	F- Value	Significance
Between the Group	76.642	2	38.32	5.61	0.006*

*Results significant at 99% confidence level

The difference between the 3 groups are found to be statistically significant in the ANOVA Test

Table 5: Results of Post Hoc Tests

I Code	J Code	Mean Difference (I-J)	Standard Error	Significance	95% Confidence Level	
					Lower Bound	Upper Bound
Low	Moderate	0.63	0.87	0.751	-1.46	2.71
	High	2.55	0.81	*0.007	0.61	4.49
Moderate	Low	-0.63	0.87	0.751	-2.71	1.46
	High	1.92	0.98	0.133	-0.44	4.29
High	Low	-2.55	0.81	*0.007	-4.49	-0.61
	Moderate	-1.92	0.98	0.133	-4.28	0.44

*Results significant at 99% confidence level

Based on the results of the Post Hoc Test the null hypothesis can be rejected and thus it can be concluded that there is a statistically significant difference between the mean values of the Low Interbank lending rate and High interbank lending rate. Nevertheless, such effect could not be seen in the moderate rates. This indicates that there is a certain level of inelasticity during this level.

Conclusion

A statistically significant inverse relationship between the interbank lending rate and the change in the NEPSE Index was found during the assessment period. The relationship was found to be moderate when the weekly data were compared but these figures improved when the 4 period Moving Averages were used. This indicates that the relationship between interest rates and the change in NEPSE were more correlated in a longer time frame.

Furthermore, the data were categorized into 3 groups based on the interest rate bands. Interest rates below or equal to 0.5% were deemed low, between 0.5% and 3% were considered to be moderate and interest rates above 3% were considered to be high. After such categorization of data an ANOVA test was conducted which was statistically significant at 99% confidence level. The results indicated that there was a statistically significant difference between the mean values at lower and high category which no such difference could be observed at the moderate level. This indicates that very low or very high interest rates had a larger impact on the change of the NEPSE Index and when the inter banking rates were within the moderate range it did not cause a significant variance in the returns generated by the NEPSE Index.

"Karvy Case"

Hyderabad-based Karvy Group flagship Karvy Stock Broking (KSBL) pledged securities lying in the demat accounts of its clients, without their permission to raise funds from multiple banks and financial institutions. These funds were then diverted into other Karvy group companies like Karvy Realty. Initial estimates showed Karvy Stock Broking (KSBL) pledged securities of over 95,000 clients and raised over Rs 2,300 core via loans against shares from multiple lenders like HDFC Bank, ICICI Bank, Indusind Bank, Axix Bank, Bajaj Finance, Aditya Birla Finance. The case pertains to Karvy unauthorisedly transferring securities of clients into one of its Demat accounts by misusing the PoAs (Power of Attorney) given by its clients. In November 2019, when the case came to light, SEBI moved against Karvy for violating norms, including transferring client shares to itself and pledging client shares to raise money, which it diverted to its real estate arm. Many of Karvy's over 2.35 lakh clients had complained to the regulator about money and securities not coming to their trading accounts. Karvy allegedly misused client accounts without informing them, or reporting to the depository or the stock exchange. Securities lying in Depository Participant (DP) accounts belong to clients and can only be pledged to meet the obligations of the respective clients and KSBL had no legal right to create any pledge on those securities. In its report submitted to SEBI, the NSE had then said that KSBL misused the power of attorney given by its clients to clandestinely sell client securities through entities controlled by it, and used the funds for its own purposes. To hide this, KSBL did not report the DP account (No. 11458979) in its submissions to the NSE from January to August 2019 and this was detected only during inspection.

How much money was involved?

The SEBI order in 2019 said that a net amount of Rs 1,096 crore was transferred by Karvy Stock Broking to Karvy Realty. However, as per the latest figure released by NSE last week, the exchange had settled that funds and securities worth Rs 2,300 crore belonging to about 2.35 lakh investors of KSBL. Sources say some amount may still be there to be settled because of disputes but majority of the amount has been settled. While customers were looking at the stock exchanges for the money and securities allegedly siphoned off by Karvy from their accounts, SEBI started investigating similar diversions of funds from clients' accounts by other broking houses.
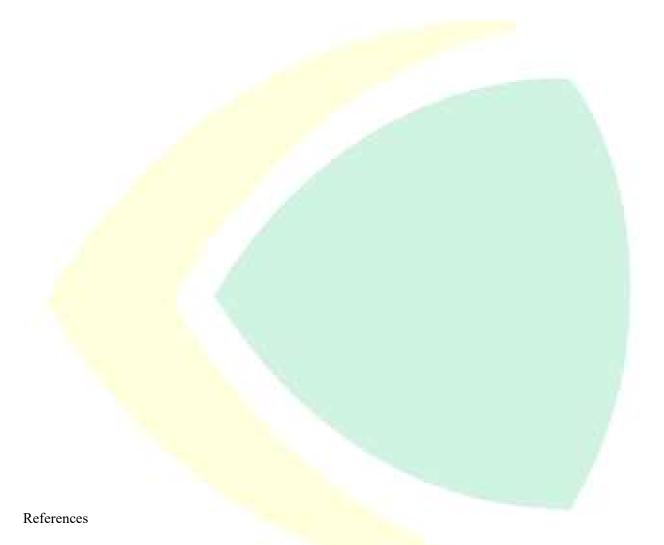
How and when was it unearthed?

On June 20, 2019 markets regulator SEBI came out with a circular on handling client securities which said that brokers could not pledge client securities to raise loans for themselves, which till then was an established market practice. SEBI has set a deadline of September 30, 2019 for brokers to segregate client funds and securities but when KSBL failed to so by the deadline, investors complained to SEBI, which then asked NSE to investigated the matter.

What was the action taken by regulatory agencies?

On November 22, 2019 SEBI issued an order banning KSBL from broking services and said the firm has transferred Rs 1096 core to group company Karvy Realty between April 2016 to October 2019. SEBI also asked NSE to conduct a detailed forensic audit while working closely with depository participants (DPs) and stock exchanges to quickly transfer some of the illegally transferred securities back into the accounts of investors. In January 2020, The Union corporate affairs ministry also ordered the Registrar of Companies (RoC), Hyderabad, to probe Karvy group financial fraud.

What about investor compensation?

In December 2019, soon after the scam came to light, SEBI worked with DPs and stock exchanges to transfer securities of nearly 83,000 out of the over 95,000 scam-hit KSBL clients from Karvy's demat account into their respective accounts. In November, 2020 NSE said it had settle claims worth Rs 2,300 core to around 2.4 lakh KSBL investors with fund balances of up to Rs 30,000. In early 2021, under directions from SEBI, KSBL's demat accounts were auctioned off to IIFL Securities and its trading accounts were auctioned to Axis Securities as part of efforts to compensate investors.

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