

Volt and the quick buck

On the 27th of September, 2017, As Volt Kesari sat staring at the quotes, his thoughts went back to the days of his Financial Derivatives class, where the professor, a short and bald person with glasses on, kept on repeating the need to look at figures again and again, to enable these to “speak” to us and suggest best combinations. The aim is “to make something out of nothing”, the professor would say, not for the first time.

Volt was scheduled to meet the committee of the Board to get authorizations on certain trading strategies, which he had suggested a few days back. Volt was the Head of Portfolios of the Mumbai division of Green, Red and Yellow Investments (GRY), which managed portfolios for a host of clients. The company had 5 other divisions in various parts of the country. Each division was autonomous in the sense that the strategies and practices were unique, mobilisation of clients was done in a decentralized manner, and the profits and surpluses were assessed separately. Of course, there was the annual retreat conference where all the divisions’ heads of portfolios met and discussed their separate strategies and the success rates of these.

Green, Red and Yellow Investments (GRY)

GRY followed an unorthodox system for their investment management. Each centre was given discretion in the composition of the portfolio, but broad guidelines were issued at the beginning on “red flags”. The term “red flags” in GRY meant that if the allocation went beyond the originally agreed levels with a 10% level of significance, corrective action has to be taken to bring the portfolio back to its original level within a week. If the portfolio is within the declared boundary, the portfolio manager is under pressure to make sure that the required return under a revised CAPM model is obtained for the portfolio.



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The revised CAPM model, involved a departure from the conventional CAPM in that the market return was computed as a weighted average of 4 different indices – BSE Sensex, NSE NIFTY, a portfolio of 5 top information technology companies based on market capitalization, and Junior Nifty. The regression of every individual security in the portfolio with this basket market return will give Beta, which in turn is used for computing the required return. For this purpose, regression was carried out for the 12 months immediately preceding the start of a relevant financial year.

Occasionally, within each centre, GRY also had multiple types of portfolios with consequent differences in required return and target return. This complicated matters, when the portfolio manager achieved targets in some funds and not in others. Usually, portfolio managers in each centre identified common securities and proportion across portfolios and drew up strategies for these. Although they had separate officers for each fund, they remained accountable for the performance. From the HR angle, GRY prided itself in its compensation levels, with the head portfolio manager getting a pay –with fixed and variable components– which compared with international standards.

Portfolio strategies

GRY gave full freedom to the centre portfolio head for devising own strategies. Since some of the portfolios required high returns, heads embarked upon several strategies using derivatives. To assist all centre portfolio managers, there was a team of economists and analysts who shared macro-economic outlook parameters, undertook analysis on volatility, and studied key financial markets the world over. These reports were available on an ongoing basis for all centre heads. The discretion as to the extent to which this is to be used by them was entirely with the respective portfolio head, and GRY did not have any policy regarding this.

Generally, straddle and strangle was used by individual portfolio managers based on volatility perceptions. The long strangle is rarely used at specific points when the market was expected to break but the direction was unknown. The short straddle, though a risky proposition, bets on the market being reasonably steady.

In addition, portfolio managers used the bull and bear spreads in response to suggestions that the market is steady buy slightly bullish or bearish. The risk element in this strategy is low. There is also a suggestion in some quarters that the bull spread's maximum profit/loss pattern at a given time gives an indication as to the future direction of the market. Empirical

studies have not established this. If true, the same principle could be followed from a bear spread analysis as well.

Many of GRY's portfolio managers also set up an "observing" team which scouted for opportunities for arbitrage and use of box spreads. Although rare these chances give good returns without a corresponding risk. In recent times, many of the centre portfolio heads were able to make a killing with these.

Many including Volt have tried to use futures synthetically as proxy for strategies like covered call writing. These have met with mixed success and the discussions that the heads had in the annual retreat have been inconclusive

Unorthodox trading strategies

If the portfolio manager wanted to try out an unorthodox trading strategy involving 30% or more of the net Asset Value of the fund, then a specific authorization is required. Thus, if a new combination is going to be tried out involving multiple derivatives with varied risks and "position deltas", the mapping of potential payoff needs to be presented to the board. Of course, the board cannot be expected to go through all the nuances of the instrument and the strategy, but would give broad clearance for the extent of risk taken.

Volt knew that there are several other unorthodox trading strategies being pursued. These include going long futures and doing a covered call writing. The long futures are carried out by a delta hedge plan so that complete coverage is needed only if the call becomes more and more in the money. Synthetics are created with a combination of puts and calls as well as with futures and these result in payoff over the short duration at around the same level as the real instruments. Thirdly, many traders use a combination of bonds and risky derivatives to make a bonanza from market imperfections, while keeping the portfolio steady with bonds.

Volt was also aware that it would be possible to synthetically participate in an overseas index by doing a cross position in the domestic index and/or swapping returns from the other index fund.

Problem at hand

Volt Kesari studied the quotations of Nifty calls for various strike prices around the at the money level.

Table 1 : NIFTY quotes for calls (All money in Rs.)

Symbol	Date	Expiry	Option	Strike	Call price	Underlying
NIFTY	26-Sep-17	26-Oct-17	CE	9,400.00	512.35	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,450.00	482.5	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,500.00	427.25	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,550.00	394.15	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,600.00	341.6	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,650.00	312.4	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,700.00	258.85	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,750.00	239.3	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,800.00	187.55	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,850.00	155.35	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,900.00	126.55	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	9,950.00	101.15	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	10,000.00	79.55	9,871.50
NIFTY	26-Sep-17	26-Oct-17	CE	10,050.00	60.45	9,871.50

(Source: www.nseindia.com date accessed 27th September, 2017)

Volt realized that strategies involving calls alone may not be good enough. Implied volatility levels for calls and puts are different in some cases at “out of the money” levels and so he wanted to look at the corresponding put prices as well. Further, he desired to try out some synthetics as well. For this he would need futures quotes. These are presented below:

Table 2- NSE put prices (All quotes in Rs.)

Symbol	Date	Expiry	Option type	Strike Price	Settle Price	Underlying Value ₹
NIFTY	26-Sep-17	26-Oct-17	PE	9,400.00	25.2	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,450.00	12.75	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,500.00	35.45	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,550.00	34	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,600.00	50.3	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,650.00	59.55	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,700.00	67.4	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,750.00	80.65	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,800.00	95.45	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,850.00	113.1	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,900.00	131.15	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	9,950.00	151.8	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	10,000.00	179.45	9,871.50
NIFTY	26-Sep-17	26-Oct-17	PE	10,050.00	196.6	9,871.50

Source: www.nseindia.com date accessed 27th September, 2017

NIFTY futures were going as follows:

Table 3. NIFTY futures (all prices in Rs.)

Symbol	Date	Expiry	Settle Price	Underlying Value ₹
NIFTY	26-Sep-17	28-Sep-17	9,866.95	9,871.50
NIFTY	26-Sep-17	26-Oct-17	9,899.85	9,871.50
NIFTY	26-Sep-17	30-Nov-17	9,932.55	9,871.50

(Source: www.nseindia.com date accessed 27th September, 2017)

Now, Volt looked at the somewhat conflicting internal market reports that had been presented by the central team of economists and analysts in the last month or so.

View 1- Market is ready to take off. Macro-economic conditions are stable. Overall corporate performance has been fair. Monsoon has been good and Government's policy initiatives are paying off

View 2- Market can take off, but it will be slow. Macro-economic conditions are showing potential for stability but have not quite become so. Corporate performance has been good only in certain sections.

Volt's problem was one of timing. He was marginally underperforming in his portfolio over the last 4 months. Unless some new things are tried out, his figures can fall well short of the target. That alone cannot be the reason for him to embark on unorthodox strategies. He has to establish that the market pricing patterns and volatility estimates indicate a clear direction. So he turned his attention to the volatility figures given by his immediate team. First he took the abstract of the frequently asked questions about the volatility index taken from the NSE web site and the latest historical data:

Table 4. Volatility index from NSE

Date	Open	High	Low	Close	Prev. Close	Change	% Change
05-Sep-17	13.165	13.4425	12.475	12.8875	13.165	-0.28	-2.11
06-Sep-17	12.8875	13.495	12.035	13.12	12.8875	0.23	1.8
07-Sep-17	13.12	13.1275	11.175	13.0075	13.12	-0.11	-0.86
08-Sep-17	13.0075	13.0975	11.7725	12.9625	13.0075	-0.05	-0.35
11-Sep-17	12.9625	12.9625	11.5475	12.36	12.9625	-0.6	-4.65
12-Sep-17	12.36	12.36	11.52	11.7575	12.36	-0.6	-4.87
13-Sep-17	11.7575	11.865	10.68	11.755	11.7575	0	-0.02
14-Sep-17	11.755	11.8775	10.36	11.47	11.755	-0.29	-2.42
15-Sep-17	11.47	12.0175	10.0175	11.6775	11.47	0.21	1.81
18-Sep-17	11.6775	11.6775	10.835	11.4425	11.6775	-0.24	-2.01
19-Sep-17	11.4425	11.6425	10.3975	11.465	11.4425	0.02	0.2
20-Sep-17	11.465	11.8775	10.115	11.6325	11.465	0.17	1.46
21-Sep-17	11.6325	12.1825	9.2575	11.6325	11.6325	0	0
22-Sep-17	11.6325	12.9925	11.005	12.81	11.6325	1.18	10.12
25-Sep-17	12.81	13.84	11.5075	13.34	12.81	0.53	4.14
26-Sep-17	13.34	13.625	12.6325	12.9275	13.34	-0.41	-3.09

Source: www.nseindia.com visited on 27th September, 2017

Volt perceived that this did not show remarkable changes over the last month. Yet he had to find something to make a quick gain.

Discussion questions

1. Discuss the broad pattern of portfolio management in GRY compared with general practices
2. Is it a good idea to give autonomy to various centres rather than centralizing operations?
3. Do you think that the system of assessing the performance of each centre in GRY is correct?
4. Do you agree with the concept of “red flags” that they follow? What could be alternatives?
5. What is an unorthodox trade and why should these be risky?
6. Do you agree with the GRY policy of calculating market returns based on a revised CAPM?
7. Do you think it is a good idea to refer some deals to the Board as GRY is doing? What is the alternative?
8. What approaches will you follow for making quick gains given the quotes in the case?
9. What else will you do if you were Volt Kesari?