

# BitCoin Market Sentiment Analysis by Rehmah

## Objective:

Analyze how trading behavior (profitability, risk, volume, leverage) aligns or diverges from overall market sentiment (fear vs greed). Identify hidden trends or signals that could influence smarter trading strategies.

## Data:

Column Name	Meaning
Account	Name or ID of the user/trader's account executing the trade.
Coin	The cryptocurrency being traded (e.g., BTC, ETH, SOL, etc.).
Execution Price	The price at which the trade was executed.
Size Tokens	Quantity of the cryptocurrency bought or sold (in tokens).
Size USD	Value of the trade in USD (i.e., $\text{Execution Price} \times \text{Size Tokens}$ ).
Side	Indicates whether it was a <b>buy</b> or <b>sell</b> order.
Timestamp IST	Date and time of the trade in Indian Standard Time (IST).
Start Position	The position (e.g., size) before the trade was executed.
Direction	Likely shows <b>Long</b> or <b>Short</b> (direction of the position).
Closed PnL	Profit or Loss realized when the position was closed.
Transaction Hash	A unique identifier for the transaction on the blockchain (if on-chain).
Order ID	Unique identifier for the order from the exchange or trading system.
Crossed	Indicates if the trade <b>crossed the spread</b> (i.e., market order).
Fee	Transaction or trading fee incurred.
Trade ID	Unique ID for the trade; may differ from Order ID if order was partial.
Timestamp	UTC timestamp or system-generated timestamp (could differ from IST one).

Column Name	Meaning
timestamp	Exact date and time
value	The sentiment index
classification	Categorical label derived from the sentiment value
date	Calendar date corresponding to the <code>timestamp</code>

## Observation of Data:

- Both Datasets have Date and Time Stamp, making a connecting link to make analysis
- Profitability can be studied using 'Side' and 'PnL' columns.
- Risk can be studied using the 'Crossed' column.
- Volume can be studied using 'Size USD' and 'Side' columns.

## Checking for Profitability with Fear/Greed

**Profit:** If a coin is bought and it closed on a profit that's a sign of future upward trend. Similarly if coin is sold and it closed on a loss that means the investor saved themselves from a potential loss.

**Loss:** If a coin is bought and it closed on a loss that's a sign of future downward trend. Similarly if coin is sold and it closed on a profit that means the investor missed out opportunity of profit



## Analysis:

Although the difference between profits and losses is huge, the graph shows that fearful investors have endured the highest loss and greedy investors have gained the most profit. But greedy investors are also 2nd highest in loss endurers.

Extremely Fearful investors have endured the least loss but also gained the least profit

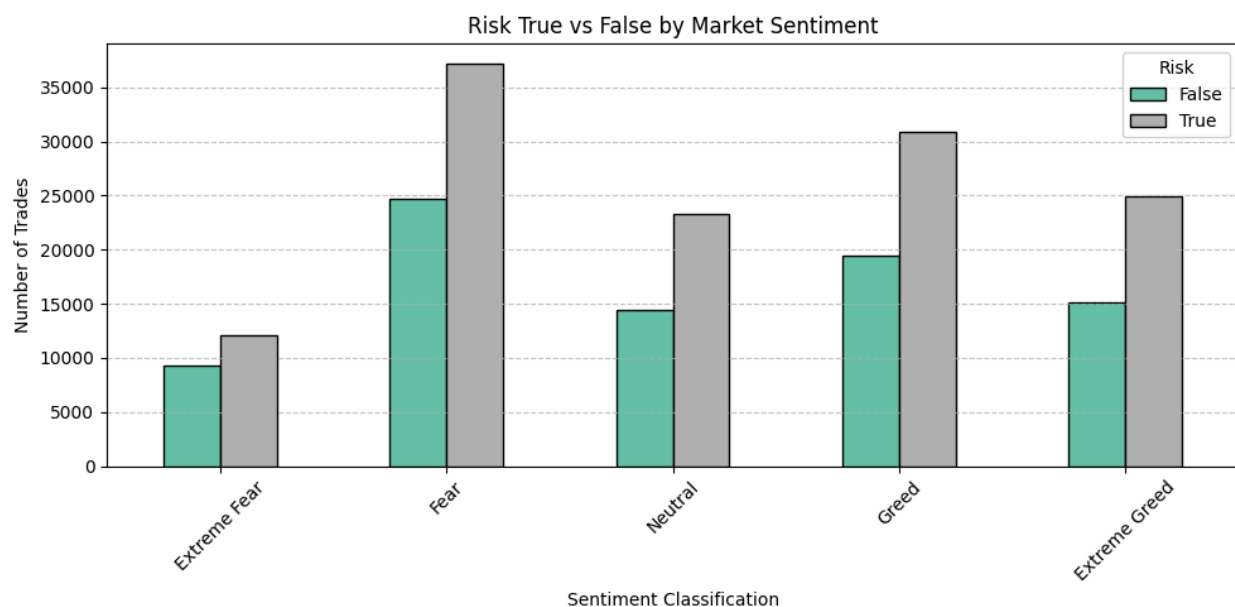
This leads us to believe that while extreme greed and extreme fear may not work while investing in coins, but having determination and taking a few risks will make one thrive in the coin market

Note: This Analysis is purely on the basis of closing price of the same day the transaction took place, thus the analysis is not solid and requires more studies into the transaction history of each coin to be considered Valid.

### Checking for Risk with Fear/Greed

If Crossed = True, the trader crossed the spread, meaning they hit a market order (taker). This makes them Risk takers.

If Crossed = False, they posted a limit order (maker), waiting for the market to come to them. This lets us know the investor invested sensibly with a plan in mind.



### Analysis:

This graph is making it really clear that fearful or greedy all investors are in for risk when investing in coins.

Extreme Fear has the lowest Risk numbers which fits their narrative, Greedy investors being the 2nd highest risk takers which fits them as well.

The shocking discovery of this chart is that fearful investors are the highest risk takers.

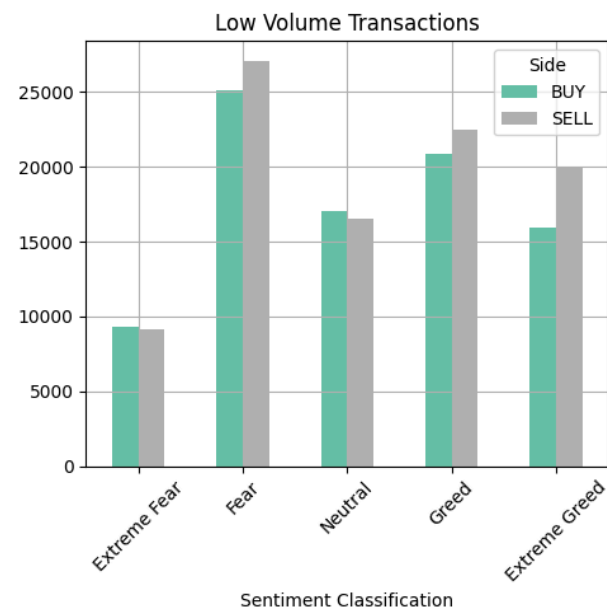
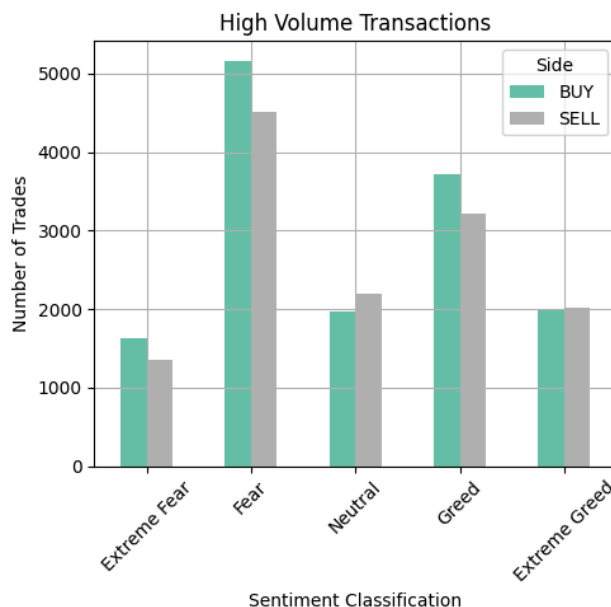
This is not an appropriate logic to look at this as this chart is only based on whether or not a transaction was market or limit, But it gives an idea about the Risk taking tendency of the investor. Many fearful investors might just plan a price in their mind and execute it on spot. So these statistics are not reliable. To get more reliable take on risk takers would give by analysing the transaction history of an investor.

### Checking for Volume with Fear/Greed

This is to check the volumes (high/low) in which fearful or greedy investors buy or sell.

High and Low Volumes are segregated using mean of the transaction size ie 5639.451, which was seen above in the dataset study.

	Execution Price	Size Tokens	Size USD
count	211224.000000	2.112240e+05	2.112240e+05
mean	11414.723350	4.623365e+03	5.639451e+03
std	29447.654868	1.042729e+05	3.657514e+04



**Analysis:**

Extremely Fearful Investors have the lowest number of investments for both High and Low Volumes.

Apart from that, all types of investors have higher transaction numbers in low volume data.

While Fearful Investors Invest the most, they also sell the most. As they save themselves from potential future losses, their sell transactions are the highest.

Neutral Investors tend to work more with low volumes as compared to high volumes as they do desire profits but not at the cost of any risks.

**Trading Strategies Learned**

- Greedy investors may gain the most but also might lose the most. A greedy strategy works for Investors who are in for the High Risk. Greedy investors might realise a miss out on opportunities because of their on-spot decisions.
- Fearful investors may seem like they are risk takers but their transactions are planned and they stick to it. They also may miss out on opportunities due to fear of loss

**The best approach to invest in coins is to be greedy enough to be able to take some losses and fearful enough to not lose too much.**

**A planned but flexible line of transaction that flows along with the market trends can make one thrive in the coin market.**