OptiSurge Spectrum

Unlocking Versatile Multi-Strategy Power in Diverse Markets

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Introduction

Trading Strategy Overview

- This strategy is a combination of multiple strategies
- The condition of market is categorised into 6 scenarios
- There will be 2 strategies to select and execute
- The condition of the market is identified and the optimal strategy along with the position sizing for that condition is selected for trade.
- The number of trades is limited to 3 per day with proper Risk-to-Reward ratio, and all positions are closed before the end of the trading session for the day.
- If first trade is profit, no second trade; If 2 SL hits on same day, then no third trade
- This is a trading strategy and NOT an investing algo.

Background

Market Conditions

- Market behaviour is unpredictable, yet it follows identifiable cycles, enabling strategic classification.
- Market types can be classified into:
  - **Bull Trend:** Market is on an upward trajectory.
  - **Bear Trend:** Market is trending downward.
  - **Sideways:** Market displays a narrow range.
  - **Volatile:** Market experiences significant and quick swings.
  - **Overbought/Oversold:** Points indicating a potential trend reversal.
  - **Market Influencers:** News, black swan events, elections, and corporate updates.
- The market type is updated at the start of each trading day

Identification of Market Type

Bull Trend & Bear Trend

- Classify market state based on short-term trend performance in the past couple of weeks.
- Utilise OHLC data (Open, High, Low, Close) from the last two weeks for analysis.
- **Bull trend:**
  - Closing price of N-1 week > High of N-2 week
  - Low of N-1 week > Opening of N-2 week
- **Bear trend:**
  - Closing price of N-1 week < Low of N-2 week
  - High of N-1 week < Opening of N-2 week

Identification of Market Type

Sideways & Volatile

- **Sideways markets** are identified using the ADX 14 in daily timeframe.
- If the market is not in bull or bear trend and ADX ≤ 20, then market is identified as sideways.
- The market is declassified from sideways if ADX > 20 or a bull/bear trend is identified
- When the market is not yet identified and ATR 14 in Daily TF increases continuously for 3 days, the market is identified as **volatile**.
- It is declassified from volatile if there is a decline in the ATR for 2 consecutive days or a bull trend, bear trend or sideways is identified.

Identification of Market Type

Oversold/Overbought Zones

- **Identifying Overbought Zone**
  - RSI 14 with EMA on daily timeframe.
  - **Threshold:** RSI > 70.
  - **Condition:** RSI remains above 70 and experiences even a slight decrease.
  - The overbought zone condition is exited if RSI falls below 70.
- **Identifying Oversold Zone**
  - RSI 14 with EMA on daily timeframe.
  - **Threshold:** RSI < 30.
  - **Condition:** RSI remains below 30 and experiences even a slight increase.
  - The oversold zone condition is exited if RSI goes above 30.

Identification of Market Type

Market Influencers - News & Events

- **Understanding Market Influencers**
  - Market influencers are events or news incidents that impact financial markets significantly.
  - These can be social, economic, corporate, geopolitical, or other critical occurrences.
- **Data Collection and Processing**
  - APIs and data feeds are used to gather real-time event and news data.
  - Data feeds include sources like financial news websites, government reports, corporate announcements, and more.
  - The data is structured and organised for further analysis.

Identification of Market Type

Market Influencers - News & Events

- **ML Model for Categorisation:**
  - A Natural Language Processing (NLP) model, often a variant of Recurrent Neural Networks (RNN) or Transformer models like BERT can be employed
  - The model is trained on labeled data to categorise news into five impact levels based on sentiment and context.
  - Pre-existing, pre-trained models are available for immediate utilisation.
- **Categorised News Levels:**
  - **Strong Positive:** Example - "Company X beats revenue expectations, stock soars."
  - **Positive:** Example - "New product launch receives favourable customer reviews."
  - **Neutral:** Example - "Company Y announces quarterly financial results in line with estimates."
  - **Negative:** Example - "Economic slowdown affects market growth projections."
  - **Strong Negative:** Example - "Major corporate scandal shakes investor confidence, stock plunges."

Dual Core Strategies

5 EMA (S_1)

- **Datasets Used:** Real-time asset price quotes ; 5-minute OHLC data; 15-minute OHLC data
- **Indicator:** Exponential Moving Average with length 5

Short Setup

- **Entry Trigger:** When the 5-minute low price(trigger) is above the 5-EMA in the 5-minute interval data.
- **Entry:** When the current price crosses the trigger price.
- **Stop-Loss:** The high of that 5-minute period.
- **Target:** 1:3 risk-reward ratio.

Long Setup

- **Entry Trigger:** When the 15-minute high price(trigger) is below the 5-EMA in the 15-minute interval data.
- **Entry:** When the current price crosses the trigger price.
- **Stop-Loss:** The low of that 15-minute period.
- **Target:** 1:3 risk-reward ratio.

Dual Core Strategies

Inside Candle (S_2)

- **Datasets Used:** Real-time asset price quotes; 15-minute OHLC data
- **Condition for Entry:**
  - The low of a 15-minute interval is higher than the low(sell trigger) of the previous 15-minute interval data
  - The high of a 15-minute interval is lower than the high(buy trigger) of the previous 15-minute interval data

Short Setup

- **Entry:** The current price crosses the sell trigger.
- **Stop-Loss:** The buy trigger is kept as SL.
- **Target:** 1:2 risk-reward ratio.

Long Setup

- **Entry:** The current price crosses the buy trigger.
- **Stop-Loss:** The sell trigger is kept as SL.
- **Target:** 1:2 risk-reward ratio.

Implementation

Risk Management and Capital Deployment

- The loss/trade is limited to *1.25 %* of the capital, let this quantity be X.
- If intensity of news/event favours the trade direction, Y = X/2; else Y = 0.
- In a typical month, there are approximately 20 trading days.
- Even if both daily trades result in losses for a month without profit, the capital available for deployment in the next month remains the same.
- Loss/trade is calculated prior to the trade by the difference in SL and the entry price for both strategies.
- The chart in the next slide illustrates the priority of each strategy and loss-based position sizing of the trade for the different market conditions identified by the algo.

Implementation

Integrating Identification of Market Type, Strategy and Position sizing

Market Condition	Bull	Bear	Sideways	Volatile	Overbought	Oversold	*News/Events
S_1 Long	X	X/2	X/2	X	X	X	X/2 + Y
S_1 Short	X/2	X	X/2	X	X	X	X/2 + Y
S_2 Long	X	X/2	X	X/2	X/2	X/2	X/2 + Y
S_2 Short	X/2	X	X	X/2	X/2	X/2	X/2 + Y

*Based on News/Events intensity, RRR is set at 1:6 for S_1 and 1:4 for S_2 in extremes. Otherwise, RRR is maintained at 1:3 for S_1 and 1:2 for S_2.

Logic

Position Sizing in various market conditions

- **S1 Strategy:** Ideal for short-term trend reversals, offering short SL and excellent RRR.
- **S2 Strategy:** Effective in breakout/breakdown of short-term consolidations, with moderate SL and decent RRR.
- **Bullish Days:** Full Quantity for buying and half quantity selling for S1 and S2
- **Bearish Days:** Full Quantity for selling and half quantity buying for S1 and S2
- **Sideways Markets:**
  - **S1** - Half quantity due to frequent SL hits
  - **S2** - Full quantity since it excels in sideways conditions.

Logic

Position Sizing in various market conditions

- **Volatile Markets**:
  - **S1** - Full quantity, easier to reach target from high price movements.
  - **S2** - Half quantity to manage higher SL hits from huge swings
- **Overbought/Oversold Zones:**
  - **S1** - Full quantity for reversals
  - **S2** - Half quantity due to potential false breakouts.
- **News/Events Impact:**
  - **Neutral:** Half quantity in both directions
  - **Moderate Impact:** Full quantity for next 2 trades favouring news.
  - **Strong Positive/Negative Impact:** Increase RRR for more profits.

Conclusion

Summary & Thanks

OptiSurge Spectrum

- **Objective:** Maximise profits with strategic and disciplined algorithmic trading.
- **Identification:** Accurately identifies varying market conditions.
- **Implementation:** Applies appropriate strategy with optimal position sizing and RRR.
- **Trade Discipline:** No second trade until the first is completed (SL or target).
- **Daily Trade Scenarios:** P (or) LPP (or) LPL (or) LL; P - Profit, L - Loss
- **Exit Strategy:** Closes all open trades at 3 PM for Indian Markets to manage overnight risk and exposure.