Bollinger Bands Mean Reversion Buy/Sell Signals

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Presentation

Agenda

- Introduction/Thesis
- The Concepts
- Key Information
- Data
- Strategy
- Results
- Back Testing
- Conclusion

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Introduction/Thesis

Prices have a habit of ping-ponging between bands—especially in range-bound conditions; this makes Bollinger Bounces useful for mean reversion setups. However, these are not blind trade triggers. By identifying potential oversold/overbought conditions in these assets, we aim to generate buy and sell signals. Historical data will be used to back test entry and exit rules and assess the strategy's potential for outperformance.

- **Thesis: This project is focused on using Bollinger Bands and Mean Reversion to create buy and sell signals for $SPY and $ASML**

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WHAT ARE THEY

Bollinger Bands and Mean Reversion

Bollinger Bands

Definition: Momentum lines (bands) plotted two standard deviations (positive and negative) away from the SMA line

Purpose: Indicate price volatility and help identify potential overbought or oversold conditions.

Equation

Mean Reversion

Definition: Theory that asset prices tend to revert to their average over time

Purpose: Capitalize on temporary price extremes, with the assumption prices will revert to their means

Equation

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Key Tools

Market Sentiment: The overall mood of investors towards the market (bullish/bearish). This is useful for our strategy to time the entry and exit points.

- Price changes in relation to the Moving Average, thus sensing greed/fear will help identify buying points.
- Top Band = **Overbought** | Lower Band = **Oversold**

Volume: How much the equity is being traded in a specific period.

- If share prices are rising but there's less volume, this indicates a weak feeling towards the security
- If share prices are falling with high volume, this indicates a strong feeling towards the security

Fear & Greed Index

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Data

Historical Data Needed For SPY & ASML:

- Open
- High
- Low
- Close
- Volume

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