

MOMENTUM BASED TRADING USING MACD and RSI

```
//@version=5
```

```
strategy("MACD & RSI Momentum Strategy", overlay=true)
```

```
// MACD settings
```

```
fast_length = 12
```

```
slow_length = 26
```

```
signal_length = 9
```

```
// RSI settings
```

```
rsi_length = 14
```

```
overbought_level = 70
```

```
oversold_level = 30
```

```
// Calculate MACD
```

```
[macdLine, signalLine, histLine] = ta.macd(close, fast_length, slow_length,  
signal_length)
```

```
// Calculate RSI
```

```
rsi = ta.rsi(close, rsi_length)
```

```
// Entry conditions
```

```
longEntry = ta.crossover(macdLine, signalLine) and rsi < oversold_level
```

```
shortEntry = ta.crossunder(macdLine, signalLine) and rsi > overbought_level
```

```
// Exit conditions (using 'stop' for trailing stop loss)
```

```
longExit = rsi > overbought_level
```

```
shortExit = rsi < oversold_level
```

```
// Entry and exit logic
```

```
if (longEntry)
```

```
    strategy.entry("Long", strategy.long)
```

```
if (shortEntry)
```

```
    strategy.entry("Short", strategy.short)
```

```
if (longExit)
```

```
    strategy.exit("Exit Long", from_entry="Long",  
stop=strategy.position_avg_price * (1 - 0.01))
```

```
if (shortExit)
```

```
    strategy.exit("Exit Short", from_entry="Short",  
stop=strategy.position_avg_price * (1 + 0.01))
```

```
// Plot indicators
```

```
plot(macdLine, color=color.blue, linewidth=2, title="MACD Line")
```

```
plot(signalLine, color=color.orange, linewidth=2, title="Signal Line")
```

```
plot(rsi, color=color.purple, linewidth=2, title="RSI")
```

```
hline(overbought_level, color=color.red, linestyle=hline.style_dashed)
```

```
hline(oversold_level, color=color.green, linestyle=hline.style_dashed)
```

```
// Plot entry and exit signals
```

```
plotshape(longEntry, style=shape.triangleup, color=color.green,  
size=size.small)
```

```
plotshape(shortEntry, style=shape.triangledown, color=color.red,  
size=size.small)
```

```
plotshape(longExit, style=shape.triangleup, color=color.red, size=size.small)
```

```
plotshape(shortExit, style=shape.triangledown, color=color.green,  
size=size.small)
```



This strategy focuses on identifying and capitalizing on short-term price momentum. It does not rely heavily on long-term trend analysis. However, understanding the overall market sentiment (bullish or bearish) can be beneficial for filter trades.

Entry Criteria:

MACD Crossover: Buy when the MACD line crosses above the signal line, indicating a potential bullish momentum. Sell when the MACD line crosses below the signal line, indicating potential bearish momentum.

RSI Divergence: Buy when the RSI shows a bullish divergence (price making a new low while the RSI makes a higher low), suggesting potential momentum reversal. Sell when the RSI shows a bearish divergence (price making a new high while the RSI makes a lower high), suggesting potential momentum reversal.

Exit Criteria:

Trailing Stop Loss: Set a trailing stop loss based on a predetermined percentage of the current price to limit potential losses. Adjust the stop loss as the price moves in your favor.

Target Profit: Define a specific profit target based on risk-reward ratios or technical analysis.