

General Information

- Strategy Name: TRENDFOLLOW - ATR Stops 1:3 RR (No Breakeven)
- Type: Trend-following breakout with dynamic zones and stepped RSI
- Entry/Exit Logic: Based on SMI zones, stepped RSI crossovers, ATR-based stop loss, and fixed reward-risk ratio (1:3)
- No Breakeven, No Trailing Stops
- Platform Target: MQL5 (MetaTrader 5 Expert Advisor using CTrade class)
- HTF Logic: All indicators use values from higher timeframes

Inputs

Timeframe Settings

Name	Type	Default	Description
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kkbTF	ENUM_TIMEFRAMES	PERIOD_D1	Higher timeframe for kkb SMI
metroTF	ENUM_TIMEFRAMES	PERIOD_D1	Higher timeframe for Metro RSI

Indicator Periods

Name	Type	Default	Description
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lengthK	int	26	%K period for SMI
lengthD	int	8	%D (EMA smoothing) for SMI
lengthEMA	int	6	EMA smoothing for SMI
periodRSI	int	32	RSI period for Metro RSI
stepSizeFast	float	12.0	Step size for fast Metro RSI
stepSizeSlow	float	21.0	Step size for slow Metro RSI

Risk Management

Name	Type	Default	Description
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atrLength	int	14	ATR period for SL calculation
atrMultiplier	float	2.0	Multiplier for ATR-based Stop Loss

| riskRewardRatio | float | 3.0 | Take Profit multiplier relative to SL (1:3)|

Indicator Calculations

SMI (Stochastic Momentum Index) - From Higher Timeframe (kkbTF)

- SMI Formula:

$$\text{SMI} = 200 \cdot [\text{EMA}(\text{EMA}(\text{relativeRange}, \text{lengthD}), \text{lengthD}) / \text{EMA}(\text{EMA}(\text{highestLowestRange}, \text{lengthD}), \text{lengthD})]$$

where:

- $\text{relativeRange} = \text{close} - ((\text{highestHigh} + \text{lowestLow}) / 2)$

- $\text{highestLowestRange} = \text{highestHigh} - \text{lowestLow}$

- Zone Definitions:

- inBuyZone: $\text{SMI} < -40$

- inSellZone: $\text{SMI} > 40$

Metro RSI Stepped Filter (From metroTF)

- $\text{fastStep}[i] = \text{clamp}(\text{rsiHTF} - \text{stepSizeFast}, \text{rsiHTF} + \text{stepSizeFast}, \text{fastStep}[i-1])$

- $\text{slowStep}[i] = \text{clamp}(\text{rsiHTF} - \text{stepSizeSlow}, \text{rsiHTF} + \text{stepSizeSlow}, \text{slowStep}[i-1])$

- Cross Conditions:

- $\text{fastCrossSlow} = \text{crossover}(\text{fastStep}, \text{slowStep})$

- $\text{slowCrossFast} = \text{crossunder}(\text{fastStep}, \text{slowStep})$

Trading Logic

Entry Conditions

Long:

- $\text{higherSMI} < -40$ AND $\text{higherSMI} > \text{higherSMI}[1]$ AND $\text{fastStep} > \text{slowStep}$

- OR fastStep crosses over slowStep

Short:

- $\text{higherSMI} > 40$ AND $\text{higherSMI} < \text{higherSMI}[1]$ AND $\text{fastStep} < \text{slowStep}$

- OR fastStep crosses under slowStep

Exit Conditions

- Stop Loss = $\text{ATR}(\text{atrLength}) \cdot \text{atrMultiplier}$

- Take Profit = StopLoss riskRewardRatio

Long:

SL = entry - stopLossDistance

TP = entry + takeProfitDistance

Short:

SL = entry + stopLossDistance

TP = entry - takeProfitDistance

State Tracking

- entryPrice

- buySignalTriggered, sellSignalTriggered

- Reset when SMI leaves current zone

Miscellaneous

- No breakeven or trailing stop

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