

# Trading System Binder Edition — Detailed Checklist + Definitions

\*\*(Content Above This Section Matches The Detailed Binder Edition You Approved)\*\*

## Definitions

### ***Regime***

A 'regime' is a market environment identified by combinations of trend direction and volatility behavior. Your HMM model classifies every day into one of several regimes so the system can behave differently under different market conditions. Regimes help the strategy avoid trades during choppy, dangerous conditions and take advantage of clean, strong trend periods.

### ***Up / Low Volatility (Up/Low)***

A strong bullish trend with suppressed volatility. Price moves upward smoothly without violent swings. This is the absolute best environment for long entries. Breakouts succeed more often, trends persist longer, and your angle/HLEV/ATR metrics align cleanly.

### ***Up / Rising Volatility (Up/Rising)***

Still bullish, but volatility is increasing. This can indicate the beginning of a powerful breakout OR the early stages of instability before a top. Your system uses ATR% and angle to determine whether to stay in the trade or begin tightening exits. This regime often produces big wins but requires attention.

### ***Down / High Volatility (Down/High)***

A bearish environment with large intraday swings. Price moves downward with sharp spikes and volatility surges. This is the most dangerous regime for long trades and the most common area where retail traders lose money. Your system should avoid all new buys here and focus only on exits or possibly short signals (if enabled).

### ***Sideways / Low Volatility (Sideways/Low)***

A consolidation regime where price moves in a narrow range. Momentum is neutral, volatility is suppressed, and trend direction is unclear. This regime precedes major breakouts. Many of your best setups originate at the tail end of this regime. HLEV and ATR compression are especially useful here.

### ***Momentum***

The strength and direction of price movement. Measured using angle of EMA200, EMA30>EMA90, or rate of change. Momentum tells you whether the market is pushing upward, reversing downward, or staying neutral.

### ***Volatility***

The amount of price movement occurring within a period. Your system uses ATR% to normalize volatility so that stocks of different price levels behave in comparable ways. Volatility determines whether a trend is stable or chaotic.

## **ATR%**

ATR divided by price. A normalized volatility measure that tells how ‘wild’ or ‘quiet’ a stock is relative to its price. Essential for consistent signals across different tickers.

## **HLEV (High-Low Equilibrium Value)**

Your custom structural indicator that identifies whether price is near the top, middle, or bottom of its long-term range. This acts as a deep-value or exhaustion detector. HLEV reveals where price is likely to expand from.

## **Signal Generator**

The core decision engine of your system. It takes all indicators—momentum, volatility, HLEV, HMM state—and outputs BUY, SELL, or HOLD. Ensures consistent, rule-based execution with no emotional interference.

## **Position Sizing**

The calculation that determines how many shares to buy. Uses account size, ATR-based stop distance, and risk percentage (1% rule). Prevents account blowups and ensures long-term growth.

## **Transition Matrix (HMM)**

A statistical table showing how likely the model is to move from one regime to another. A healthy model has stable, logical transitions—for example: Up/Low → Up/Rising is common, but Up/Low → Down/High is rare.

## **Stationary Distribution (HMM)**

Represents how much time the system expects to spend in each regime over the long term. Used to validate the model and ensure no regime is dominating incorrectly.