Accumulation ↔ Failed Breakout Decision Matrix

Product: Terminal.AI
Purpose: Core market-structure intelligence layer
Scope: Internal decision logic (feeds UI + explanations)
Status: Foundational – lock before further features

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1. Why This Matrix Exists (Very Important)

Markets rarely move in clean labels. Most misclassifications happen because tools: - Detect accumulation **without checking for traps** - Detect breakouts **without checking for absorption**

This matrix forces the system to **decide comparatively**, not in isolation.

> Accumulation, Failed Breakout, and Neutral Consolidation are **mutually exclusive states** at any given time window.

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2. Core Concept

Each zone or event is evaluated across **five dimensions**:

1. Price Structure
2. Volume Behavior
3. Break Attempt Presence
4. Follow-through / Acceptance
5. Failure Signals

The outcome is a **bias classification + confidence**, not a signal.

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3. Decision Matrix (Primary)

Dimension	Accumulation	Failed Breakout	Neutral / No Edge
Price Range	Tight compression	Break beyond range, then re-entry	Loose / noisy range
Time Spent	Sustained (8–20 candles)	Short-lived (1–4 candles post-break)	Inconsistent
Volume	Stable / slightly rising	Weak on breakout OR opposite spike	Low / collapsing

Dimension	Accumulation	Failed Breakout	Neutral / No Edge
Wicks	Lower-wick absorption	Upper-wick rejection	Mixed
Break Attempt	None or absorbed	Yes (clear level breach)	None
Follow-through	Not required	Absent / failed	Not applicable
Outcome Bias	Patient, constructive	Defensive, caution	Wait / ignore

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4. Priority Rules (Conflict Resolution)

When conditions overlap, apply these **hard rules**:

Rule 1: Failed Breakout Overrides Accumulation

If a valid breakout attempt exists **and fails**, the state is:

> **Failed Breakout**
> Even if prior candles looked like accumulation.

Rule 2: Accumulation Requires NO Failure Signal

Accumulation is valid **only if**: - No breakout attempt has failed - No expansion + rejection pattern exists

If ambiguity exists → downgrade to **Neutral Consolidation**.

Rule 3: Neutral Is the Default

If neither accumulation nor failed breakout is convincing:

> The system must explicitly say **“No edge detected”**.

This prevents overfitting and false confidence.

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5. Confidence Scoring Framework

Confidence is derived from **signal alignment**, not prediction strength.

Signal Count Method (MVP)

Confirmations Met	Confidence
1–2	Low
3–4	Medium
5+	High

Confirmations include: - Volume behavior aligned - Wick behavior aligned - Structural context aligned - Time spent aligned - Failure confirmation (for breakouts)

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6. Event-to-State Mapping (Very Important)

A. Accumulation Zone Detected

- No breakout attempts yet
- Compression + absorption present
- State = **Accumulation (Low–Medium confidence)**

B. Breakout Attempt Occurs

- Temporarily mark state as **Breakout Attempt (Pending)**
- Do NOT change bias yet

C. Post-Break Evaluation (1–3 candles)

Outcome	State
Acceptance above level + volume	Breakout (future feature)
Re-entry + weak volume	Failed Breakout
No clarity	Neutral

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7. Explanation Mapping (UI Contract)

The matrix directly feeds explanation tone:

Accumulation Explanation Tone

- "Absorption"

- "Patience"
- "No urgency"

Failed Breakout Explanation Tone

- "Rejection"
- "Trap"
- "Lack of commitment"

Neutral Explanation Tone

- "No edge"
- "Inconclusive"
- "Wait for clarity"

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8. Minimal Pseudocode (Mental Model)

```
if (breakoutAttempt && failureConfirmed) {
  state = 'FAILED_BREAKOUT'
} else if (compression && absorption && !breakoutAttempt) {
  state = 'ACCUMULATION'
} else {
  state = 'NEUTRAL'
}

confidence = countConfirmations(state)
```

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9. What This Matrix Enables (Strategically)

Once locked, this matrix enables: - Distribution Zone detection (naturally) - Cleaner accumulation rules - Honest confidence scoring - Agent personas with different emphasis

This becomes the **intelligence spine** of Terminal.AI.

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10. Non-Goals (Explicit)

- ❌Predict breakouts
- ❌Guarantee direction
- ❌Optimize for hit-rate

The goal is **decision clarity under uncertainty**.

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11. Locking Recommendation

✔️Lock this matrix before: - Formalizing accumulation rules - Adding distribution zones - Adding ML / LLM reasoning

Once locked, everything else becomes simpler and more consistent.