

# **Systematic Intraday Trading Strategy Documentation: Quantification of Entry, Exit, and Hold Conditions for NSE Equities**

## **I. Introduction to Intraday Market Dynamics and Research Context**

### **1.1. Background and Definition of Intraday Trading (NSE Context)**

Intraday trading, commonly referred to as day trading, constitutes the practice of buying and subsequently selling (or selling and then buying) financial instruments within the confines of a single trading session.<sup>1</sup> This approach fundamentally differs from delivery trading, wherein assets are held overnight or for extended periods. On the National Stock Exchange (NSE), intraday execution necessitates precise timing and rigorous discipline, as all positions must be mandatorily squared off prior to the market's closure.<sup>1</sup> The focus is exclusively on capturing short-term price fluctuations driven by momentum, market news, and fleeting technical patterns.

Effective systematic trading relies on choosing highly liquid stocks, which facilitates minimal slippage and immediate order execution, both critical prerequisites for successful high-frequency trading. Liquid assets, often large-cap equities listed on the NSE such as Reliance Industries (RELIANCE), HDFC Bank (HDFCBANK), and ICICI Bank (ICICIBANK)<sup>2</sup>, along with highly active technology firms like Tech Mahindra and HCL Technologies<sup>3</sup>, are preferred candidates. Their high daily transaction volume ensures that entry and exit points defined by the strategy can be achieved reliably under normal market conditions.

### **1.2. The Imperative for Structured Intraday Research and Documentation**

The inherent volatility of the intraday market dictates that reliance on chance or intuition is an unsustainable method for generating positive returns over time.<sup>4</sup> A formal research structure and systematic documentation are necessary to impose discipline, ensure repeatability, and allow for quantitative performance measurement, thereby mitigating the detrimental effects of emotional decision-making, such as fear or greed, which are amplified in rapid trading environments.<sup>5</sup>

The documentation of a trading strategy must facilitate robust validation through

backtesting.<sup>6</sup> This process involves applying the defined entry, exit, and hold rules to historical, real-world data sets to analyze the strategy's potential profitability, consistency, and risk exposure, including volatility.<sup>6</sup> It is essential that backtesting accurately accounts for realistic transaction costs, which can significantly affect the realized Profit/Loss (P/L) margins in a high-frequency trading system.<sup>6</sup> The ability to test, optimize, and re-test parameters enables the continued fine-tuning of the strategy toward favorable outcomes.

### **1.3. Overview of Intraday Return Predictability and Market Microstructure**

Academic investigation into high-frequency trading data across developed markets confirms that stock returns exhibit exploitable intraday predictability.<sup>8</sup> This phenomenon is driven by the confluence of market microstructure factors and measurable behavioral biases among market participants.

The identified intraday effect is often characterized as time series momentum (ITSM), which has been shown to be both economically sizeable and statistically significant.<sup>8</sup> ITSM is particularly pronounced when certain market conditions are met:

1. **Liquidity is low:** Reduced ease of execution can amplify price moves.
2. **Volatility is high:** Larger price swings offer greater opportunities for short-term capture.
3. **New information is discrete:** Sudden information arrival causes rapid, directional market reactions.<sup>8</sup>

A deeper understanding of this dynamic reveals a continuous feedback loop between behavioral economics and market microstructure. High volatility, a microstructure factor, often triggers exaggerated emotional responses—namely, panic selling or FOMO-driven buying (behavioral biases). These collective reactions amplify existing momentum, making the ITSM measurable and exploitable. The systematic technical analysis framework detailed in this document is specifically designed to identify the exact confluence of high-volatility price action and confirmed momentum necessary to capture these documented, short-lived inefficiencies and subsequent predicted returns.

## **II. Foundation of Technical Frameworks for Intraday Analysis**

The strategic foundation for this systematic approach rests on employing indicators that serve two complementary purposes: establishing the market context (support and resistance levels) and confirming the momentum required for entry or exit.

### **2.1. Dynamic Support and Resistance: Pivot Points and VWAP**

Structural price levels provide the necessary context for setting stop-loss and take-profit

orders prior to execution, mitigating reactive decision-making.<sup>5</sup>

### 2.1.1. Classic Pivot Points (PP)

Pivot Points (PP) define predictive, static support and resistance levels derived from the previous day's trading activity.<sup>9</sup> The standard five-point system utilizes the previous day's High (\$H\$), Low (\$L\$), and Closing (\$C\$) prices to calculate the central Pivot Point (\$P\$), along with two support levels (\$S1, S2\$) and two resistance levels (\$R1, R2\$).

The calculation for the central Pivot Point is:

$$P = \frac{H + L + C}{3}$$

The first levels of resistance (\$R1\$) and support (\$S1\$) are calculated as:

$$R1 = (2 \times P) - L$$

$$S1 = (2 \times P) - H$$

These pre-determined levels are critical for framing the expected daily trading range and identifying potential reversal zones where volatility and decision-making will be concentrated.<sup>9</sup>

### 2.1.2. Volume Weighted Average Price (VWAP)

The Volume Weighted Average Price (VWAP) is an essential single-day indicator that averages the transaction price, weighted by the volume traded at that price.<sup>9</sup>

The calculation for VWAP is a running total throughout the day:

$VWAP = \frac{\text{Cumulative} (Price \times Volume)}{\text{Cumulative Volume}}$

Because the calculation is cumulative, VWAP is reset daily, making it a purely intraday tool for gauging institutional trading sentiment.<sup>9</sup> VWAP functions as a dynamic mean-reversion line: when the price consistently trades above VWAP, it signals a bullish bias dominated by buyers; conversely, trading below VWAP suggests institutional bearish sentiment. A price movement breaking below VWAP, especially when accompanied by rising selling volume, provides strong confirmation for a bearish trend.<sup>11</sup>

## 2.2. Momentum and Trend Strength Indicators

To confirm directional conviction, the strategy relies on two distinct momentum indicators: the Relative Strength Index (RSI) and the Moving Average Convergence Divergence (MACD).<sup>12</sup>

### 2.2.1. Relative Strength Index (RSI)

The RSI measures the speed and magnitude of price changes, evaluating whether the market is in an overbought or oversold condition by comparing average gains and losses over a specified period (typically 14 periods for intraday analysis).<sup>13</sup>

Standard interpretations provide critical signals:

- **Overbought:** RSI readings exceeding 70 suggest the asset may be due for a reversal or consolidation.<sup>13</sup>
- **Oversold:** RSI readings dropping below 30 signal that the asset may be due for a bounce.<sup>13</sup>

The RSI also helps define the macro trend environment: in a strong uptrend, RSI typically remains range-bound between 40 and 90, whereas in a downtrend, it hovers between 10 and 60.<sup>14</sup>

### 2.2.2. Moving Average Convergence Divergence (MACD)

MACD is a trend-following momentum indicator that highlights changes in the strength, direction, momentum, and duration of a price trend.<sup>12</sup> It is derived from the difference between the 12-period Exponential Moving Average (EMA) and the 26-period EMA (the MACD Line).<sup>13</sup> A 9-period EMA of the MACD line, termed the Signal Line, is plotted to generate buy and sell triggers.<sup>15</sup>

Primary signals generated by the MACD include:

- **Crossover Signals:** A bullish indication occurs when the MACD line crosses above the Signal Line; the converse generates a bearish indication.<sup>15</sup>
- **Zero-Line Crossover:** A move above the zero line confirms the transition into a bullish trend, while a move below confirms a bearish trend.<sup>16</sup>

The MACD Histogram, which visually represents the difference between the MACD Line and the Signal Line, serves as an immediate indicator of momentum acceleration or deceleration.<sup>15</sup>

### 2.3. The Synergy of Confirmation: Integrating MACD and RSI

While both MACD and RSI are momentum indicators, they measure distinct aspects of market movement; the MACD tracks the relationship between EMAs, while the RSI evaluates price change relative to recent highs and lows.<sup>13</sup> Combining these indicators significantly enhances trading accuracy by providing confirmation signals, which is vital for reducing the frequency of false entries in volatile markets.<sup>12</sup>

RSI is generally viewed as a leading indicator, meaning it often anticipates price movement but can generate premature signals.<sup>16</sup> Conversely, MACD, derived from Exponential Moving Averages, is slower and functions effectively as a confirmation tool for the emerging trend strength.<sup>16</sup> Therefore, the systematic strategy mandates that a potential signal identified by

RSI (e.g., rising from the oversold region) must be confirmed by a subsequent MACD crossover. This ensures that the momentum captured possesses sufficient internal strength and probable duration to sustain a profitable short-term trade, significantly improving the statistical reliability of the entry signal.

Both indicators are also utilized to detect divergence, a strong signal of impending trend reversal.<sup>13</sup> Divergence occurs when the price achieves a higher high, but the indicator fails to mirror that move, making a lower high instead. This warns of trend exhaustion even when price action appears strong.<sup>13</sup>

Table II-1 summarizes the function and role of the three core indicators in the framework.

Table II-1: Comparative Analysis of Key Intraday Indicators

Indicator	Purpose	Standard Intraday Setting (5/15 min)	Primary Signal	Complementary Role
Relative Strength Index (RSI)	Measures velocity of price change (Momentum/Exhaustion)	14 periods	Oversold (<30) / Overbought (>70)	Leading indicator, used to confirm divergence and early exhaustion.
MACD	Measures trend direction and momentum strength	12, 26, 9 periods (EMAs)	Line crossover (Bullish/Bearish)	Lagging indicator, used for trend confirmation and strength assessment.
VWAP	Measures average price relative to total volume	Single session, reset daily	Dynamic support/resistance, mean reversion point.	Confirmation of trend integrity relative to institutional volume.

## III. Formulation of Structured Trading Rules: BUY, SELL, and HOLD Signals

This section details the precise, quantifiable criteria required for generating valid trading signals. A signal is considered executable only when all mandatory criteria across the Contextual, Pattern, and Momentum categories are synchronously satisfied.

### 3.1. The BUY Signal (Long Entry Conditions)

A qualified Long Entry (BUY) is defined by a confluence of structural support, clear bullish pattern formation, and validated momentum ignition.

#### 3.1.1. Contextual Filter (Location)

The entry must occur at a structurally significant price level, maximizing the probability of a bounce and minimizing the stop-loss distance. Valid locations include:

1. A pre-calculated Support Level (Pivot S1 or S2).<sup>9</sup>
2. A recent, established swing low.
3. A confirmed reversal from below the VWAP line, signalling re-establishment of the mean price favored by institutional volume.

#### 3.1.2. Candlestick Pattern Filter (Timing & Decision)

The candlestick pattern acts as the immediate decision trigger, confirming the price reversal at the established structural level (Contextual Filter). The pattern must be observed on the chosen intraday chart (e.g., 5-minute or 15-minute).<sup>17</sup>

##### Bullish Reversal Patterns (For BUY Decisions):

- **Bullish Engulfing:** A two-candle pattern where the current green candle's body entirely encloses the body of the preceding red candle. This signifies a definitive shift, indicating that buyers have overwhelmed sellers.<sup>17</sup>
- **Piercing Line:** A two-candle pattern consisting of a long red candle followed by a long green candle. The green candle typically opens with a significant gap down but then pushes up to close above the midpoint of the preceding long red candle, indicating strong buying pressure.<sup>18</sup> A further bullish candle is needed for confirmation.<sup>18</sup>
- **Hammer or Morning Star:** Other strong reversal patterns, such as the single-candle Hammer or the three-candle Morning Star, can also serve as valid entry triggers when formed at support levels.<sup>17</sup>

#### 3.1.3. Momentum Confirmation Rule Set

Momentum indicators must confirm the entry, validating that the pattern observed is

supported by increasing buying strength:

1. **MACD Signal:** The MACD line must cross from below to above the Signal Line (bullish crossover).<sup>15</sup> This indicates an acceleration of upward momentum.
2. **RSI Signal:** The RSI must be rising, ideally after having dipped into the oversold region (below 30), or show stabilization within the typical uptrend range (40-90).<sup>14</sup>
3. **Dynamic Trend Confirmation:** A shorter-period Exponential Moving Average (e.g., 9-period EMA) must cross above a longer-period EMA (e.g., 20-period EMA), providing further structural confirmation of the emerging bullish trend.<sup>19</sup>

## 3.2. The SELL Signal (Short Entry / Profit Taking Exit)

The SELL signal incorporates criteria for both exiting a long position (profit taking) and initiating a new bearish (short) trade.

### 3.2.1. Profit Taking Exit (Target Reached)

The primary exit for a profitable long position is governed by mechanical, pre-determined thresholds:

- **Fixed Target:** The price reaches the calculated Take-Profit (TP) level (e.g., Pivot R1 or R2).<sup>5</sup> This is typically defined by ensuring a minimum 1:3 Risk-Reward Ratio (R:R) is met.<sup>20</sup>
- **Exhaustion Confirmation:** If the target is not rigidly defined by a Pivot Point, an exit is triggered when the RSI moves into the overbought territory (above 70) and remains there for a sustained period, indicating potential buying exhaustion and an impending reversal.<sup>13</sup>

### 3.2.2. Short Entry Conditions

Short trades are initiated under reversed conditions, confirming structural resistance and bearish momentum.

- **Contextual Filter:** Price is located at a key resistance level (R1, R2, or previous swing high).<sup>9</sup>
- **Candlestick Confirmation:** Identification of a strong bearish reversal pattern (e.g., Bearish Engulfing, Shooting Star).<sup>18</sup>
- **Momentum Confirmation Rule Set:**
  1. **MACD Signal:** The MACD line crosses from above to below the Signal Line (bearish crossover).<sup>16</sup>
  2. **VWAP Breakdown:** A prominent bearish candle closes definitively below the VWAP line, often accompanied by rising selling volume, signalling that sellers are overwhelming buying pressure relative to average traded volume.<sup>11</sup>

## 3.3. The HOLD Signal (Position Management and Risk Mitigation)

The HOLD criteria define the conditions under which an open position remains viable and

dictates the necessary adjustments to risk management mechanisms.

### **3.3.1. Trend Integrity Check**

A position is considered valid and should be held as long as the price maintains its directional alignment with the supporting Moving Averages (e.g., tracking above the 9-period EMA for a long position) and remains consistent with the VWAP trend (i.e., above VWAP for long trades).<sup>19</sup> Significant violation of these moving averages or VWAP necessitates an immediate exit, even if the fixed stop-loss has not yet been triggered.

### **3.3.2. Trailing Stop Loss (TSL) Activation**

To protect accrued profits, the Trailing Stop Loss (TSL) technique must be implemented immediately upon the trade achieving a pre-defined minimum profit threshold (e.g., when the price moves to a 1:1 R:R ratio).<sup>4</sup>

The TSL is a dynamic stop order that follows the asset's price at a set distance, specified either in points or as a percentage, below the highest price achieved (for a long position).<sup>22</sup> If the asset's price reverses and drops by the set trailing percentage, the stop order is triggered, limiting losses and ensuring that gains are realized.<sup>4</sup> The TSL is a critical element of risk management, as it prevents a profitable position from reverting to a loss.

### **3.3.3. Time-Based Exit Rule: Mandatory Liquidation**

A fundamental discipline unique to intraday trading is the mandatory liquidation of all positions before the market closes.<sup>1</sup> Holding a position into the final minutes exposes the trader to unmanaged volatility and potential execution gaps during the closing auction. To eliminate this significant end-of-day execution risk, a systematic exit strategy must enforce a time-based termination rule. This mandates that any open position be squared off at a predetermined time (e.g., 3:15 PM IST on the NSE), regardless of whether the profit target has been reached or if current technical signals suggest continuation. This strict protocol ensures adherence to intraday regulations and eliminates volatility-induced slippage at market close.

## **IV. Robust Intraday Risk Management and Position Sizing**

Sustainable profitability in systematic intraday trading hinges entirely on rigorous adherence to explicit risk management protocols that act as non-negotiable filters for trade selection and position sizing.

### **4.1. Capital Preservation Principles: The 1-2% Risk Rule**

Risk management is intrinsically linked to controlled position sizing.<sup>20</sup> The cornerstone of capital preservation is the rule that a trader must never risk more than 1% to 2% of their total

trading capital on any single trade.<sup>20</sup>

This rule serves as the foundation for determining the maximum allowable loss. For example, if a trader holds a capital base of ₹5,00,000, the maximum risk permitted per trade is between ₹5,000 and ₹10,000.<sup>20</sup> This maximum risk amount, when divided by the Stop Loss (SL) distance determined by technical analysis, directly calculates the maximum number of shares (position size) that may be purchased, ensuring that capital exposure is always strictly managed.

## 4.2. Stop Loss Orders: Fixed vs. Trailing Implementation

### 4.2.1. Initial Fixed Stop Loss

The initial Stop Loss (SL) is set immediately upon entry and is determined by placing the order at a logical structural point below the entry (for long trades) or above the entry (for short trades).<sup>4</sup> This location is typically below a recent swing low, a Pivot S1 level, or below the low of the candlestick pattern that initiated the entry.<sup>17</sup> The fixed stop loss is fundamental because it defines the maximum loss potential *before* the trade begins, removing the emotional element from capital protection.<sup>20</sup>

### 4.2.2. Trailing Stop Loss (TSL) Detail

The TSL is a more sophisticated mechanism designed to protect profits as the position moves favorably.<sup>4</sup> Unlike a fixed stop, the TSL automatically adjusts the stop price upward (for a long position) based on a percentage or point distance from the security's highest recorded price.<sup>22</sup>

For instance, if a stock is bought at ₹1,000 and a 2% trailing stop is set (initial trigger at ₹980), and the price subsequently rises to ₹1,050, the TSL trigger price automatically adjusts to ₹1,029 ( $1,050 * 0.98$ ). This continuous adjustment locks in a minimum profit of ₹29 per share (minus commission) if the price reverses, preventing the trade from becoming unprofitable.<sup>22</sup> TSL is a crucial tool for realizing gains, which is a key component of a disciplined exit strategy.<sup>5</sup>

## 4.3. Risk-Reward Ratio (R:R) Optimization

The Risk-Reward Ratio (R:R) acts as the primary filter for trade selection. This system mandates a minimum R:R of **1:3**.<sup>20</sup> This means that for every rupee risked (defined by the distance to the initial stop loss), the profit target must be set at three rupees.

If a trader determines the maximum loss (SL distance) on a stock to be ₹200, the profit target (TP) must be set at a minimum of ₹600.<sup>20</sup> If the immediate market structure (e.g., the nearest resistance level) prevents the establishment of a 1:3 ratio, the trade is disqualified.

The rationale for enforcing a high R:R ratio like 1:3 is rooted in statistical stability. Strategies

accepting low R:R ratios (e.g., 1:1) require a win rate significantly exceeding 50% just to break even, and even higher to cover transaction costs.<sup>20</sup> By mandating 1:3, the system only requires a win rate slightly above 25% to generate long-term profitability, offering a robust buffer against inevitable loss streaks and enhancing the overall stability of the systematic process.

#### **4.4. Volatility Analysis and System Validation**

Effective risk management also requires the initial assessment of the asset's volatility.<sup>7</sup> Assets exhibiting higher volatility necessitate wider stop-loss distances to prevent premature triggering, although the 1-2% capital risk rule still governs the maximum position size.

Backtesting remains the definitive method for assessing the effectiveness and stability of the entire systematic framework.<sup>6</sup> By simulating the strategy against historical datasets, analysts can quantify the relationship between the chosen R:R ratio and the resulting win rate, refining the parameters to maximize risk-adjusted returns while accurately accounting for trading commissions.<sup>6</sup>

Table IV-1 illustrates how the 1% risk rule strictly controls position size based on trading capital and technical stop-loss distance.

Table IV-1: Intraday Risk Allocation and Position Sizing Matrix (Example)

Trader Capital (₹)	Max Risk per Trade (1% Rule)	Desired R:R Ratio	Required Profit Target (e.g., 1:3)	Max Loss per Share (SL)	Max Position Size (Shares)
5,00,000	5,000	1:3	15,000	₹10	500 shares
10,00,000	10,000	1:3	30,000	₹15	666 shares
20,00,000	20,000	1:3	60,000	₹25	800 shares

### **V. Case Study: Application of the Strategy on an NSE Stock (5-Minute Interval Analysis)**

This section documents a detailed, step-by-step simulated execution of a long position using ICICIBANK Ltd., a highly liquid component of the Nifty 50.<sup>2</sup> The analysis utilizes a 5-minute chart timeframe to illustrate the mandatory application of the defined BUY, SELL, and HOLD rules across intraday intervals.

## 5.1. Simulation Setup and Context Calculation

Stock: ICICIBANK Ltd. 2

Timeframe: 5-minute chart (high-frequency monitoring).

Hypothetical Capital: ₹10,00,000 (Max Risk per Trade: ₹10,000).

**Pre-Market Calculation (Pivots):** The previous day's closing data resulted in the following critical levels:

- Support 1 (S1): ₹1,380.00 <sup>9</sup>
- Resistance 1 (R1): ₹1,400.00 <sup>9</sup>

### Trade Parameters:

- **Entry Price (Buy):** ₹1,383.00
- **Initial Stop Loss (SL):** ₹1,378.00 (Risk per share = ₹5.00)
- **Profit Target (TP):** ₹1,398.00 (Reward per share = ₹15.00, achieving the mandatory 1:3 R:R) <sup>20</sup>
- **Position Size:** 2,000 shares.

## 5.2. Detailed Execution Log: Interval-Based Decision Making

This log tracks the continuous flow of the market and the systematic trading decisions based on the technical rules defined in Section III.

Table V-1: NSE Intraday Trade Execution Log (Stock: ICICIBANK, 5-Minute Chart)

Time	Price (LTP)	Candlestick Pattern / Context	VWAP / MACD / RSI Status	Action	Rationale
09:15	₹1,390.00	Strong opening red candle.	Price below VWAP. MACD Bearish. RSI 55 (Neutral).	MONITOR	Waiting for market stabilization and structural test.
09:30	₹1,383.50	Price moving sharply lower.	Price breaks significantly below VWAP. MACD	MONITOR	Established bearish momentum. Price is not yet at S1 support,

			crosses Signal Line (Bearish Crossover). RSI 40.		disqualifyin g a short entry due to poor R:R.
09:45	₹1,380.50	Small red candle holding S1 (₹1,380.00) .	Momentum slowing (MACD Histogram shrinking). RSI 32 (Approachi ng Oversold).	MONITOR	Price at S1. Waiting for a clear bullish reversal pattern to confirm support hold.
10:00	₹1,380.50	Long red candle followed by a small <i>bullish</i> candle.	RSI 28 (Oversold). MACD momentum is stalling.	MONITOR	Pattern forming at support, but entry criteria (Bullish Candlestick + MACD Crossover) are not yet complete. <sup>16</sup>
10:05	₹1,383.00	<b>Piercing Line Confirmed</b> <sup>18</sup> : Strong green candle closes >50% into prior red candle body.	RSI 35 (Rising from <30). <b>MACD Line</b> <b>crosses</b> <b>above</b> <b>Signal Line</b> (Bullish Crossover) .	<b>BUY (Long Entry)</b>	<b>All Mandatory Criteria Met:</b> Price at S1 (Context), Piercing Line (Pattern), and MACD/RSI (Momentu m

					Confirmation). <sup>10</sup> <b>SL @ 1378.00, TP @ 1398.00.</b>
10:30	₹1,385.00	Continuation (Green Candle). Price now above Entry.	Price holding above 9-EMA. MACD remains bullish.	HOLD	Trend integrity is intact.
11:00	₹1,388.00	Consolidation after rise.	Price reaches 1:1 R:R (₹5.00 profit per share).	HOLD (Adjust TSL)	<b>Profit Protection:</b> Activate TSL, moving Stop Loss dynamically to the entry price (₹1,383.00) to ensure a guaranteed break-even. <small>4</small>
12:00	₹1,395.00	Strong push towards R1 (₹1,400.00 ).	RSI 68 (Strong Uptrend). MACD high and accelerating.	HOLD	TSL continues to trail the price, protecting accrued profit. Holding for the fixed TP. <sup>5</sup>
12:05	₹1,398.00	Price touches the	RSI 70 (Overbought)	<b>SELL (Take)</b>	<b>Fixed Target Hit.</b>

		mechanical target.	t/Exhaustion Zone). <sup>13</sup>	<b>Profit)</b>	Automatic Take-Profit order executed, realizing the full 1:3 Risk-Reward ratio. <sup>20</sup> <b>Trade Closed.</b>
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### 5.3. Deviation Analysis and Time-Based Contingency

The successful trade sequence demonstrates the system's ability to locate a high-probability reversal point (S1 support) and confirm the reversal using strict momentum rules. The utilization of the Trailing Stop Loss at 11:00 AM was critical, shifting the risk profile of the trade to zero loss, ensuring capital preservation regardless of any sudden market reversal. Had the price failed to reach the TP by 3:15 PM, the mandatory time-based exit rule (Section 3.3.3) would have necessitated a forced liquidation at the prevailing market price to avoid unmanaged exposure during market close.

## VI. Conclusion and Future Research Directions

### 6.1. Synthesis of Key Findings

The comprehensive systematic intraday framework successfully translates high-level academic findings on intraday predictability<sup>8</sup> into quantifiable, repeatable trading rules suitable for execution on the NSE. The strategy leverages structural context provided by Pivot Points and VWAP, confirming entry and exit points through the synergistic application of momentum indicators, specifically the leading nature of RSI and the confirming capabilities of MACD.

The efficacy and stability of the system are fundamentally secured by the integration of strict risk management protocols. The mandatory application of the 1-2% capital risk rule combined with the 1:3 minimum Risk-Reward Ratio acts as a necessary pre-trade filter.<sup>20</sup> This discipline ensures that the system maintains a high statistical edge, requiring only a modest win rate for long-term profitability. Furthermore, the deployment of Trailing Stop Loss orders ensures that profitable positions are actively managed, realizing gains and preventing capital erosion due to rapid market reversals, a common vulnerability in high-frequency trading.

### 6.2. Limitations of the Model and Recommendations for Optimization

While robust, trend-following momentum strategies based on EMAs and oscillators like the MACD are inherently prone to generating false signals during sideways or non-trending

consolidation phases.<sup>15</sup> Such periods, characterized by choppy price action, can lead to whipsaws and unnecessary transaction costs.

To refine the strategy, future research should concentrate on incorporating volatility filters and volume metrics designed to specifically disqualify trades during low-momentum environments. This optimization could involve integrating Volatility Spread Analysis (VSA) principles or utilizing volatility-adjusted bands (e.g., Bollinger Bands) to confirm that trades are initiated only when the underlying volatility and directional conviction satisfy a high-confidence threshold.<sup>7</sup> By focusing on filtering out low-quality signals, the system's overall hit rate can be increased without compromising the mandatory 1:3 R:R requirement.

Additionally, further investigation into the dynamic relationship between overnight returns and subsequent intraday patterns, alongside an analysis of how heterogeneous investor behavior varies throughout the trading day, could provide crucial insights for dynamically adjusting the technical parameters or R:R requirements based on specific trading hours.<sup>8</sup> Such optimization would lead to a more adaptive and resilient systematic trading model.

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