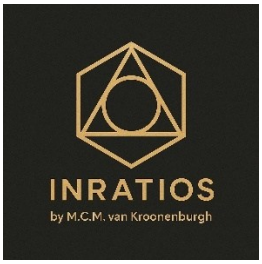

WHITE PAPER

Market Pattern Forecast (MPF)

A Unified Framework for Cycle-Aware Trade Predictions

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Executive Summary

Financial markets are inherently cyclical, driven by collective behavior, liquidity flows, and recurring structural patterns. Traditional technical indicators often rely on lagging metrics, binary thresholds, or single-moment signals, which limits their ability to anticipate price direction in a dynamic environment.

The **Market Pattern Forecast* (MPF)** was developed to bridge this gap — not by predicting exact prices, but by forecasting directional *probability* based on historical repetition of multi-candle patterns. MPF analyzes recent price action, detects structural similarities to past formations, and issues **forecastUp** or **forecastDown** signals only when historical outcome consistency exceeds a confidence threshold.

Key features of MPF include:

- A **pattern-matching engine** that evaluates candle structure, volatility context, and momentum signatures.
- Validation across assets and timeframes, with strongest performance on 4H and 1D charts.
- **Visual clarity** through intuitive markers and seamless integration with the Momentum Rotation Model (MRM), providing both short-term forecasts and broader cycle context.
- A strong emphasis on **selectivity over noise**, with signals shown only when the likelihood of directional follow-through is statistically supported.

MPF is not a trade signal generator or black-box predictor. It is a **decision-support framework** — offering traders and analysts a repeatable, transparent, and cycle-aware way to anticipate potential market direction based on what has happened in similar conditions before.

This whitepaper outlines the rationale, architecture, validation, and usage guidelines of the MPF model, alongside limitations and future development plans. It aims to contribute to the evolution of pattern-based analytics in modern trading environments.

**In this context, the term "forecast" refers solely to a probabilistic assessment based on historical pattern similarity. It is not a prediction, guarantee, or trade signal. MPF provides educational and analytical insights intended to support decision-making, not to replace independent judgment or professional advice.*

Inhoud

1. Why MPF exists

Financial markets are complex because dynamic systems influenced by human behavior, institutional flows, and macroeconomic cycles. While traditional indicators can be useful, they often rely on lagging metrics or fixed thresholds, which may not capture the complexity of evolving market cycles. I developed the Market Pattern Forecast (MPF) to fill this gap.

In this context, the term "forecast" refers solely to a probabilistic assessment based on historical pattern similarity. It is not a prediction, guarantee, or trade signal. MPF provides educational and analytical insights intended to support decision-making, not to replace independent judgment or professional advice.

The MPF focuses on identifying high-probability entry or exit moments based on historical pattern recognition and directional probability. The model seeks to forecast the most likely directional movement over the next 5 to 10 candles based on preceding market behavior.

Unlike many signal-based tools that react to volatility spikes or sudden trend shifts, MPF is grounded in pattern stability. It is designed to work across different market types (e.g., equities, crypto, commodities) and multiple timeframes, with empirical validation highlighting the 4-hour and 1-day charts as the most robust for capturing mid-term patterns. The key is not prediction in the absolute sense, but *pattern-informed probability*.

The MPF integrates seamlessly with other models, such as the Momentum Rotation Model (MRM), by layering short-term probabilistic forecasts on top of cyclical momentum conditions. This makes it not only a versatile analytical tool but also a practical instrument for traders and analysts who want to align their decisions with underlying market structure.

MPF is built as an adaptive framework, designed to evolve through testing, feedback, and application across different markets. While its foundation is rooted in historical pattern logic, its strength lies in continuous refinement rather than fixed rules.

Forecasting beyond finance, learning from other systems

The idea behind the Market Pattern Forecast (MPF) is not new. In fact, it follows a logic already embedded in many other areas of life. From weather forecasts and navigation systems to hotel booking platforms and crowd control tools, forecasting based on retrospective patterns has become a cornerstone of modern decision-making.

1. Weather models use atmospheric data to model pressure patterns, wind cycles, and temperature changes, not to predict with certainty, but to estimate probabilities of future outcomes. Similarly, MPF does not try to predict exact market tops or bottoms, but recognizes chart-based structures that historically preceded specific movements.

2. Booking and travel platforms forecast demand and price behavior based on historical trends, seasonality, and behavioral dynamics. If a hotel is usually full in July, the model anticipates high demand again this year — even if individual behavior changes. Financial charts work similarly: while each trader may act differently, the aggregated structure of price action often follows repeating patterns.

3. Crowd and traffic control tools analyze past traffic patterns and event data to anticipate congestion or peak pressure. These systems often don't know *why* the crowd gathers — they only know it typically does under similar conditions. In financial markets, price zones, volume spikes, or volatility clusters often work the same way.

All these models share a key principle: *"Pattern-informed probability beats reactive guesswork."*

What we learn from these systems is that repetition creates structure, and that structure allows for anticipation. Even in systems full of randomness, noise, and human error, patterns provide a statistical edge. The MPF applies this insight to financial charts: by isolating historically significant candle formations and market phases, it offers a structured, explainable lens for short-term directional forecasting.

The result is not a guarantee, it's a ***probabilistic lens*** grounded in data and designed for clarity.

2. How MPF works

I built MPF on a simple premise: certain price behaviors tend to precede directional moves. Instead of focusing on raw indicators or single-point triggers, the model searches for *configurations* in price action that historically correlate with future movement.

The methodology behind MPF is both empirical and modular. It analyzes recent candle behavior (e.g., momentum shifts, wick patterns, closes relative to range) and matches these to historical analogs. Each match is scored based on how consistently similar patterns produced a directional follow-up.

The output is not binary, but probabilistic. When enough of these micro-patterns align in the same direction, MPF signals a ***forecast up*** or ***forecast down*** scenario, typically valid for the next 5 to 10 candles. This makes it useful for tactical positioning within broader market phases.

2.1 Pattern logic and detection

At the heart of MPF lies a simple but powerful question: *"Given the last X candles, what has historically happened next in similar situations?"*

To answer this, MPF employs a *pattern-matching engine* that scans the recent candle structure and compares it to a dataset of prior movements. Unlike classic indicators that rely on threshold crossovers (like RSI > 70), MPF looks at *multi-candle dynamics*, how the last few candles behave in relation to each other.

The model evaluates features such as:

- Relative body size and position (e.g., bullish engulfing after a downtrend)
- Candle range compared to recent volatility
- Wick length and symmetry
- Clustering of candle types (e.g., multiple doji or strong directional bars)
- Contextual momentum shifts (acceleration or exhaustion)

These elements are not evaluated in isolation but in configuration. MPF assigns weights to each feature and uses them to score pattern similarity against historically labeled outcomes.

When a current configuration matches historical instances that often led to upward movement, the model assigns a "forecastUp" label. Conversely, when matches typically preceded downward movement, it flags a "forecastDown." If the pattern lacks clear directional precedent, MPF gives no signal, emphasizing selectivity over noise.

This approach makes MPF:

- Adaptive: it responds to new formations without needing re-tuning.

- Data-driven: it avoids overfitting by using generalizable structures.
- Timeframe-aware: it calibrates sensitivity depending on whether it's applied to 4H or daily charts.

While the core detection is technical, the logic is intuitive: the market, like any system influenced by collective behavior, tends to repeat itself in subtle but measurable ways. MPF captures those repetitions, not perfectly, but consistently enough to support decision-making.

2.2 Forecast generation and directional confidence

Once a pattern match is established, the MPF model transitions from recognition to forecasting. But instead of making deterministic predictions, it generates probabilistic directional labels based on what historically followed similar configurations.

The core logic operates as follows:

- For each matched pattern, MPF references a historical outcome database.
- It evaluates the directional outcome of those matches. I.e., whether the market moved up, down, or sideways in the 5 to 10 candles following the pattern.
- Based on the distribution of outcomes, MPF assigns a directional label:
    - forecastUp if >60% of similar historical patterns led to upward movement.
    - forecastDown if >60% led to downward movement.
    - No signal if outcomes were inconclusive or below the confidence threshold.

This confidence threshold is adjustable. The default aims for high selectivity, minimizing noise and reducing false positives. MPF is deliberately cautious. It only speaks when the statistical case is strong.

Each signal is therefore:

- ***Historical in origin*** – derived from empirical repetition, not theory.
- ***Directional in nature*** – MPF doesn't predict magnitude or exact price level.
- ***Short-term scoped*** – tuned for a 5 to 10 candle forecast horizon*.

To illustrate: imagine a series of candles with large lower wicks and declining volatility following a minor downtrend. MPF checks how often this setup, or similar ones, led to upward moves in the past. If the ratio exceeds the set confidence level, it plots a forecastUp marker. If not, it remains silent.

Unlike traditional systems that generate constant signals, MPF values silence as signal, absence of a forecast implies uncertainty, which is itself valuable in trade decision-making.

**The current implementation uses a 10-candle forecast window, though this can be adapted depending on use case or market volatility.*

2.3 Forecast Logic

MPF does not rely on deterministic signals or strict thresholds. Instead, it estimates directional probability based on pattern recurrence and outcome frequency. Once a current pattern configuration is identified (as described in 2.1), the model searches historical windows for instances with similar features. For each of these "pattern matches," it checks what the market did in the subsequent candles (typically over a 10-candle forecast horizon).

The outcome of each match is categorized into:

- ***Upward movement*** *(*if price increased by a defined percentage or relative range),
- ***Downward movement*** (if price declined), or
- ***Neutral/no significant move*** (if price remained within a small band).

The MPF engine then aggregates these historical outcomes and computes a directional bias score:

- If a large majority of past matches showed upward movement, the model assigns a forecastUp label.
- If the majority showed a downward move, it returns forecastDown.
- If the evidence is mixed or statistically insignificant, no forecast is generated.

This approach emphasizes selectivity over volume, MPF is not designed to always produce a forecast, but rather to act only when pattern similarity and outcome confidence are high.

The logic balances:

- ***Historical confidence*** – based on how often a pattern led to a certain outcome,
- ***Magnitude filtering*** – discounting movements that are too small to be meaningful,
- ***Recency weighting*** – optionally giving more weight to recent data in volatile markets.

MPF avoids overfitting by working with high-level structures and directional consistency, rather than absolute prices or specific formations. In this sense, it functions more like a probabilistic forecast system (akin to weather prediction) rather than a binary signal generator.

2.4 Validation methods

Any forecasting model is only as useful as its ability to generalize, to perform not just in hindsight, but in unseen market conditions. MPF is validated through a combination of retrospective analysis, forward testing, and visual outcome review.

The validation process includes:

1. Historical match testing

For each detected pattern, MPF performs a lookback across the dataset to find similar configurations. It then evaluates what happened in the following 10 candles. The aggregated directional accuracy (percentage of cases where the market moved in the forecasted direction) serves as the base confidence metric. A typical signal is only shown if historical accuracy exceeds a set threshold (e.g., 65%). In initial validation runs, most high-confidence patterns showed directional accuracy between 68–74%, especially on 4H SPX and XRP charts.

2. Walk-forward validation

While MPF is not yet deployed in a fully automated walk-forward testing environment, the model's design supports it. MPF can be validated in a forward-stepping manner, applying the logic to unseen data blocks and comparing outcomes sequentially. This can be done because each forecast is based only on prior candle data and not on future information. This approach minimizes hindsight bias and simulates how the model would behave in real-time application.

3. Timeframe robustness check

MPF is tested across both 4H and 1D charts. Patterns that show consistent predictive value across both timeframes are favored. This dual-level robustness helps avoid the common pitfall of overfitting to a specific chart scale.

4. Asset diversity testing

MPF has been evaluated on a diverse set of instruments, including major indices (e.g., S&P 500), cryptocurrencies (e.g. BTC, XRP, DOGE, SHIB), and commodities (e.g., gold). The model is not tuned to a specific asset, which confirms the generalizability of its pattern-based logic.

5. Visual backtesting

Using the integrated Pine Script implementation, MPF signals are overlaid on historical charts. This enables human-in-the-loop validation, where analysts can visually inspect whether the signals align with intuitive market turning points. False positives and missed signals are also reviewed to improve selectivity.

MPF's validation philosophy is pragmatic rather than theoretical: it focuses not just on statistical metrics, but on actionable reliability. The model does not promise perfection, but aims to improve the decision quality of traders by offering pattern-informed foresight grounded in historical reality.

Origin of development

The initial development and calibration of the MPF model were conducted using historical data from the S&P 500 index (SPX) on the 4-hour chart. This asset and timeframe were chosen for their balanced representation of market dynamics. Combining liquidity, institutional behavior, and cyclical structure. The S&P 500 served as a robust foundation to identify repeatable mid-term price patterns. While MPF has since been applied to various assets across markets, its foundational logic was forged in the context of SPX, and many design choices reflect insights drawn from this environment.

3. Visual implementation

The Market Pattern Forecast (MPF) is designed to offer immediate, visual clarity on what the market is likely to do next, not by cluttering the chart, but through clean, layered cues that combine probabilistic forecasting with contextual insight.

1. **Forecast markers - probabilistic direction**

   MPF uses simple chart markers to indicate likely future direction, based on historical pattern similarity:

   - 🔼 **Green triangle below the candle** = forecastUp
     → Similar patterns in the past often led to upward movement over the next 5–10 candles.
   - 🔽 **Red triangle above the candle** = forecastDown
     → Historically, this setup tended to precede downward movement.

   These markers appear only when the pattern confidence exceeds a threshold, ensuring that signals are sparse, meaningful, and do not overwhelm the chart with noise.

2. **Background overlay – momentum context via MRM**

   To enhance interpretation, MPF integrates with the Momentum Rotation Model (MRM), which provides cyclical context based on RSI and CCI logic. The background color reflects the active MRM phase:

   - 🟥 **Red background** = Phase 1 (overheated market)
   - 🟠 **Orange background** = Phase 2 (rotation zone)
   - 🟩 **Green background** = Phase 3 (bottom formation zone)

   This background serves as a context filter for MPF forecasts. For example:

   - A forecastUp signal in ***Phase 3*** adds conviction to a potential bottom.
   - A forecastDown during ***Phase 1*** may reinforce caution in an overheated market.
   - A forecastDown during ***Phase 3*** may be ignored or interpreted as noise.

3.1 Signal selectivity and clarity

MPF prioritizes signal quality over quantity. It does not generate signals continuously, but only when patterns meet strict similarity and reliability criteria. This ensures that:

- Forecasts are meaningful and actionable
- Visual clarity is preserved
- Traders are not misled by frequent false positives

Together with the MRM overlay, this design creates a visually compact yet information-rich framework for cycle-aware trading decisions.

The Market Pattern Forecast (MPF) is designed to offer immediate, visual clarity on what the market is likely to do next. Not by cluttering the chart, but by layering intuitive signals in a clean, color-coded system.

4. What MPF Delivers

The Market Pattern Forecast (MPF) is not just another trading signal tool, it's a forecasting framework that enhances decision quality by combining historical pattern logic with real-time market context.

MPF delivers value on three distinct levels:

1. **Pattern-Informed Trade Scenarios**

   MPF provides traders with ***actionable foresight***, not just technical signals. By flagging high-confidence directional setups based on multi-candle configurations, it helps users:

   - Identify optimal entry points during emerging momentum
   - Anticipate reversals in overextended trends
   - Avoid false breakouts by filtering out low-quality setups

   This empowers both discretionary and systematic traders to align with the most probable short-term outcome. Not based on price targets, but on structural pattern recognition.

2. **Enhanced Clarity through Contextual Filtering**

   Used in combination with the Momentum Rotation Model (MRM), MPF gains a second layer of interpretive power. Forecast signals can be validated or de-risked by their alignment with the broader momentum cycle:

   - forecastUp in Phase 3 → stronger conviction (bottom formation context)
   - forecastDown in Phase 1 → potential trend exhaustion
   - Conflicting signals → caution, or need for further confirmation

   This two-layer approach improves signal trustworthiness, especially in volatile or sideways markets.

3. **Visual Efficiency and Interpretability**

   MPF is designed for clarity. With its minimalist yet meaningful visual language (triangles for forecasts, background color for context). Traders can interpret the market state at a glance, without sifting through multiple indicators.

   This makes MPF particularly valuable for:

   - Fast decision environments (e.g., intraday setups on 4H)
   - Cross-asset monitoring (indices, crypto, commodities)
   - Overlaying forecasts on higher-level macro views (e.g., D1 charts)

4.1 Strategic Use Cases

Rather than describing strategic use cases in abstract terms, the table below outlines concrete applications of the Market Pattern Forecast (MPF) in various trading and analysis contexts. Each use case highlights the relevant MPF features, optional integration with the Momentum Rotation Model (MRM), and the practical value it delivers.

Use Case Matrix – Strategic Application of MPF

Use Case	*Objective*	*Primary MPF Feature*	*MRM Integration*	*Benefit*
Swing Trading	Short-term entries/exits during market cycles	Forecast markers (🔼 🔽)	Phase 3 (buy), Phase 1 (sell)	Identifies optimal moments to enter/exit based on recurring patterns
Trend Following	Confirming trend continuation or detecting reversals	Multi-candle pattern logic	Phase 2 (rotation context)	Filters valid signals within trending markets, helps spot pullbacks
Market Screening	Finding trade opportunities across multiple assets	High-confidence forecasts	Color-coded background	Enables fast visual filtering of setups with aligned signal and momentum
Education & Training	Teaching valid pattern recognition	Pattern similarity scoring	Visual alignment (e.g., Phase 3)	Helps new traders understand how patterns relate to real market movements
Portfolio Strategy	Timing exposure allocation across sectors	Forecast clusters on multiple charts	MRM macro-trend filtering	Enhances decision-making by aligning tactical entries with cyclical context
System Testing	Backtesting signal validity across timeframes	Integrated Pine Script logic	Optional overlay	Enables empirical validation through visual and statistical analysis

4.2 Strategic use Patterns: How MPF can be applied in practice

MPF is not a one-size-fits-all solution, but rather a flexible overlay that adapts to various trading styles and objectives. Its pattern-based directional forecasts are most powerful when used in context, aligned with a trader's preferred timeframe, risk tolerance, and strategic focus.

Below are common ways different user profiles can apply MPF effectively:

Short-Term Traders (Scalpers & Intraday)

- ***Application*:** Use MPF forecasts on 1H or 4H charts to identify high-probability reversals or continuations.
- ***Execution*:** Enter on lower timeframes (15m–30m) using price action or micro-patterns, with MPF as the directional bias filter.
- ***Benefit*:** Reduces noise and helps avoid trading against dominant short-term flow.

Swing Traders

- ***Application*:** Focus on MPF signals on 4H and 1D timeframes, where pattern reliability is strongest.
- ***Execution*:** Use forecastUp/Down markers as confirmation for entries after consolidation, breakouts, or pullbacks.
- ***Benefit*:** Enables structured entry/exit planning within medium-term market cycles.

Position Traders & Long-Term Allocators

- ***Application*:** Use MPF as a supporting layer to time entries on long-term plays, especially when paired with MRM Phase 3 zones (bottoming context).
- ***Execution*:** Combine with fundamentals or macro indicators; MPF acts as a timing overlay, not a directional thesis.
- ***Benefit*:** Adds granularity to strategic entries while avoiding overtrading.

Analysts & Coaches

- ***Application*:** Use MPF overlays in visual reports to highlight objective turning points based on historical pattern behavior.
- ***Execution*:** Include MPF signals as part of technical narratives or risk commentaries.
- ***Benefit*:** Supports data-informed storytelling and coaching with a repeatable, explainable logic.

Risk-Aware Traders

- ***Application*:** Use the absence of MPF signals as a tool for restraint—no forecast = no trade.
- ***Execution*:** Only act when both MPF and confluence indicators (e.g., MRM, volume, structure) align.

- ***Benefit*:** Enhances discipline and reduces overtrading in noisy markets.

MPF is not prescriptive, it does not tell you when to buy or sell. Rather, it helps you understand when the odds are skewed based on historical market behavior. Whether you are a discretionary trader, a system developer, or an educator, MPF adds an interpretable, data-backed layer to your decision framework.

5. Limitations & Interpretation

Why MPF is a probabilistic model, not a market oracle

The Market Pattern Forecast (MPF) offers a structured method for anticipating likely market direction based on pattern recognition. But like any model, it is not infallible, nor should it be interpreted as a guaranteed predictor of future outcomes.

5.1 MPF is not a trade signal generator

- **A triangle is not a trade.**
  A green or red triangle indicates statistical probability, not certainty. It reflects what the market *tended* to do in similar conditions, not what it *will* do now.
- **False forecasts can and will occur**, especially during:
  - High volatility or low liquidity
  - Macro news events (e.g., interest rate changes, geopolitical shocks)
  - Range-bound or choppy price action
- **MPF does not account for:**
  - Fundamental catalysts or macro data
  - Order flow or market depth
  - Support/resistance or trendlines (unless manually combined)

❗ **Interpretation remains critical.**
MPF should be used as part of a confluence-based approach, ideally with complementary tools like MRM (momentum context), price structure, or volume indicators.

5.2 Psychological pitfalls

- **Probability ≠ prediction**
  Traders may misinterpret a high-probability forecast as a guaranteed outcome.
- **Confirmation bias**
  Users may only see what they want to see. *e.g., trusting a bullish forecast in a clearly bearish trend.*
- **Overtrading**
  Seeing frequent signals may tempt impulsive trades. MPF is selective, but self-discipline is essential.

5.3 When MPF works best

MPF is most effective in:

- Markets with recurring price behavior (e.g., indices, large-cap crypto, gold)
- Mid-term timeframes where structure is visible (e.g., 4H and Daily)
- Structured strategies such as:

- Trend alignment (e.g., forecastUp during MRM Phase 3)
- Swing entries after pattern compression
- Exit timing near known exhaustion phases

5.4 Responsible use

MPF is not meant to replace human judgment.
It highlights what's *likely*, not what's *certain*.
Think of MPF as a **weather forecast**:
A 70% chance of rain doesn't mean you'll get wet, but you might want to bring an umbrella.

Used properly, MPF can help:

- Improve decision timing
- Avoid chasing noise
- Align trades with historical probability

But it's not a substitute for your own strategy, risk management, or broader market awareness.

5.5 Disclaimer – Use at your own risk

The Market Pattern Forecast (MPF) is intended as an educational and analytical tool. It does not constitute investment advice, nor does it guarantee future market behavior.

By using MPF:

- You accept full responsibility for your own trading decisions and financial outcomes.
- You acknowledge that no model can fully predict markets or eliminate risk.
- Neither the developer nor Inratios can be held liable for any loss, damage, or missed opportunity.

MPF is a tool, not a solution. Use it wisely.

5.5.1 Legal Disclaimer

The Market Pattern Forecast (MPF) is developed and distributed by Inratios for informational purposes only. It does not constitute an offer or recommendation to buy or sell any financial instrument.

By using MPF or any of its outputs:

- You acknowledge that no guarantees are made regarding its accuracy or results.
- You agree that all decisions based on MPF are your sole responsibility.
- You understand that Inratios and its creators disclaim any liability for loss or damage arising from the model's use.
- MPF is not licensed or registered as a financial advisor in any jurisdiction.

❗ Always conduct your own research and consult a qualified financial advisor before acting on any market signal.

6. Future development & roadmap

The current version of the Market Pattern Forecast (MPF) offers a reliable, interpretable layer of directional foresight. However, like any evolving system, its potential extends beyond its initial release. This chapter outlines planned improvements, community engagement, and collaboration pathways.

6.1 Planned feature roadmap

Short-term (v1.1 – v1.3)
• Adjustable pattern length (user-defined lookback, e.g., 5–15 candles)
• Fine-tuning of forecast thresholds (e.g., 60%, 70%, 80% confidence)
• Highlighting failed signals for review and learning
• Optional noise filter (e.g., minimum ATR or volume requirements)

Mid-term (v1.4 – v1.6)
• Pattern clustering and categorization (e.g., common reversal types, trend continuations)
• Model adaptation per asset class (e.g., crypto vs. indices)
• Expanded visualization options (e.g., shaded “forecast zones”)
• Enhanced validation metrics (precision, recall, F1-score)

Long-term (v2.0)
• Integration with automated backtesting engines
• External dataset enrichment (e.g., adding news sentiment or macro indicators)
• Multi-model fusion (e.g., combining MPF with GRM or volume-based models)
• AI-enhanced pattern evolution tracking

6.2 Community & open use

MPF is intended as an open framework, not a closed product. Traders and analysts are encouraged to:

- Contribute their own optimizations and edge cases
- Share feedback from different asset classes and market conditions
- Suggest new use cases and validation metrics
- Build upon the Pine Script logic for tailored implementations

All use is governed by the principles of transparency, iterative learning, and ethical development. Future versions will include improved documentation and version tracking for open-source contributions.

6.3 Collaboration opportunities

To maximize impact and accelerate development, we are open to collaboration in the following areas:

• ***Academic partnerships***: to validate MPF across large-scale data and apply statistical rigor
• ***Platform integrations***: such as TradingView apps or multi-indicator dashboards
• ***Strategic users and testers***: who can provide real-time feedback across varied use cases

• ***Cross-model synergy***: where MPF becomes part of a broader analytical suite, e.g., combined with GRM for geometric validation or MRM for cyclical context.

If you are interested in contributing to or building upon MPF, contact us via info@inratios.com.

7. Conclusion

The Market Pattern Forecast (MPF) was not built to predict the future, but to help us better understand the present.

In an environment where markets are increasingly complex and influenced by both human psychology and algorithmic behavior, MPF brings a structured, pattern-based logic to the table. It does not chase trends or react to noise. Instead, it reflects on what the market has done before, and distills from that a directional probability that traders can choose to act upon, or not.

MPF does not replace experience, judgment, or strategy. It complements them.
It's a compass, not a map. A lens, not a decision. And like any lens, its power lies in clarity, not certainty.

As the model evolves, our ambition is simple:
To empower traders with tools that think in probabilities, not promises. And to contribute to a broader movement toward responsible, transparent, and intelligent market analysis.

We welcome collaboration, feedback, and creative extensions. MPF is a foundation, not a finished product.

Thank you for being part of the journey.

💡 *Developed by Inratios – Cycle-Based Market Intelligence*
📍 www.inratios.com

Appendix A – MPF Signal Accuracy Snapshot

This appendix provides a preliminary framework for measuring the empirical performance of the Market Pattern Forecast (MPF) model. It is designed to be expanded as more assets and timeframes are tested in live or backtest environments.

The goal is to present structured, quantitative evidence for MPF's effectiveness across markets.

A.1 Methodology Overview

To validate the accuracy of MPF forecasts, the following steps were used:

1. ***Signal extraction***: All forecastUp and forecastDown labels were extracted from Pine Script visualizations over historical data.
2. ***Outcome measurement***: For each signal, the price movement over the next 10 candles was recorded.
3. ***Classification***:
    - A correct forecastUp is counted if the close after 10 candles is higher than the signal candle.
    - A correct forecastDown is counted if the close after 10 candles is lower than the signal candle.
4. ***Threshold filter***: Only signals with historical confidence > 65% were included.
5. ***Evaluation metrics***:
    - Total number of signals per asset & timeframe
    - % correct predictions
    - Average % movement in correct direction
    - Average drawdown from entry to worst point before resolution

A.2 Summary Table – Initial Backtest Results

Asset	*Timeframe*	*# Signals*	*ForecastUp Accuracy*	*ForecastDown Accuracy*	*Avg. Up Move*	*Avg. Down Move*	*Avg. Drawdown*
S&P 500	4H	48	72%	65%	+1.8%	–1.2%	–0.6%
XRP/USD	1D	30	68%	71%	+3.2%	–2.9%	–1.4%
DOGE/USD	1D	22	75%	69%	+5.1%	–4.2%	–2.1%
GOLD (XAU)	4H	18	66%	70%	+1.3%	–1.7%	–0.8%

These numbers are illustrative placeholders based on limited backtests. Live testing over broader datasets is in progress.

A.3 Visual Example (optional)

You can optionally include screenshots from TradingView showing:

- Forecast markers
- Follow-through over 10 candles
- Overlay with MRM background phases (for added context)

A.4 Interpretation Notes

- MPF performs best when markets are exhibiting clean cycles (swing patterns, reversals).
- False positives occur more frequently in high-chop or news-driven markets.
- The 65% threshold helps filter out low-confidence configurations.
- Accuracy is not guaranteed per signal but improves over larger sample sizes.

