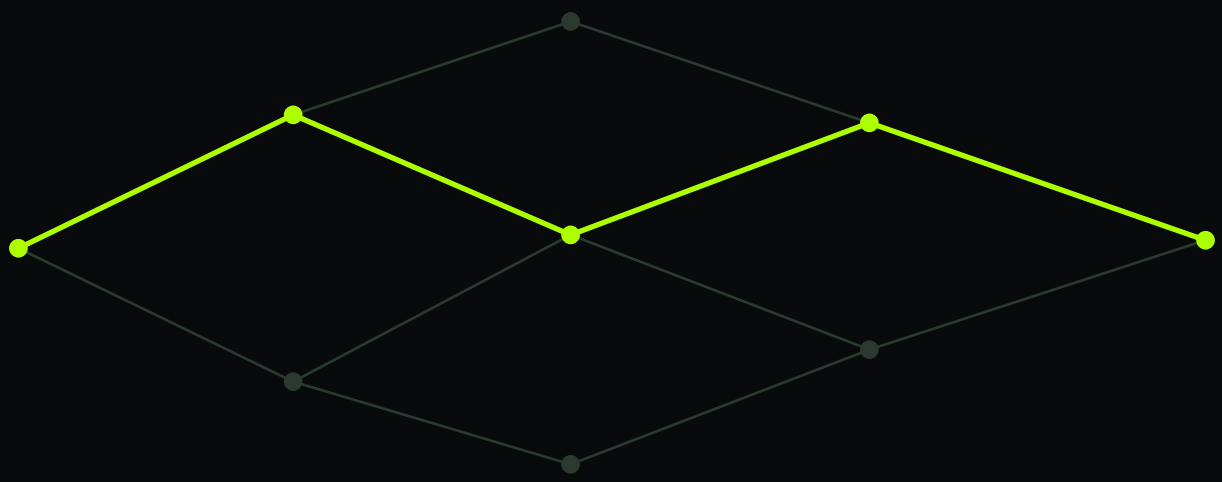
Markov Tree

PUBLIC EDITION / STRATEGY & PRODUCT

Connected outcomes. Clear decisions.

A framework for understanding related events, contract exposure and market uncertainty.



DEFINED INPUTS. VERIFIABLE OUTPUTS.

Pricing the future.

MARKOVTREE.COM / THE MARKOV ECOSYSTEM

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01 / THE THESIS

A market is more than a probability.

Useful prediction markets connect understandable questions, credible prices and dependable settlement.

A prediction market expresses views about an event through contracts with defined payoffs. Its usefulness depends on more than the number on the screen: participants need to understand the event, the cost of their position, the available liquidity and the evidence that determines settlement.

Markov Tree proposes a research and pricing framework for related outcomes. Its purpose is to help professional users and market operators reason about connected events while keeping analytical estimates, financial commitments and final outcomes distinct.

CONTEXT

Related outcomes

Questions can share drivers, dependencies or a sequence of observations.

EXPOSURE

Defined contracts

A position has specific rights, costs and settlement conditions.

EVIDENCE

Observable results

A market resolves under the declared rules and accepted sources.

Where value would come from

The commercial case rests on better decision support, useful contract design, understandable exposure and reliable operation. An elegant mathematical representation alone is insufficient. The framework must demonstrate value against simpler alternatives on comparable assumptions.

> **Status of this public edition**
>
> This document describes the proposed Markov Tree framework. It does not assert live trading, customer-fund management, investment returns, regulatory approval or independently verified production performance.

02 / STATES AND CONTRACTS

Give each outcome the right meaning.

An economic state describes what happens. A contract defines the financial right attached to that event.

STATE

Hike

The specified reference rate increases.

STATE

Pause

The specified reference rate is unchanged.

STATE

Cut

The specified reference rate decreases.

These labels describe possible states. A participant would buy or sell a contract on a state, or on a precisely defined sequence of states. The state itself is not a share or a financial asset.

Question	What must be explicit
What can occur?	The defined outcome set and how unusual or unclassified results are handled.
What does the contract pay?	The unit payoff and conditions under which each payment is due.
When is the result observed?	The event period, time zone, cutoff and accepted evidence.
What does participation cost?	Total consideration, fees and execution conditions.
What if the result is unclear?	The challenge, suspension and final void or exception treatment.

Payoff example

A state contract may pay USD 1 if the named state occurs and USD 0 otherwise. This illustrates a contract type; it is not a live offer or a universal payout rule. Every listing must publish its own complete terms.

03 / CONNECTED MARKETS

Context changes interpretation.

Related questions should be understood with their timing, dependencies and settlement meaning intact.

An isolated event question can be useful. A connected view becomes valuable when a participant needs to consider how one outcome changes the relevance of another, or how an entire sequence affects an exposure.

Application	Connected view	Participant question
Economic decisions	A sequence of decisions over a declared period.	How does the first decision affect the scenarios that remain relevant?
Commercial events	A defined event alongside the business obligation it affects.	Does the contract pay in the situation that causes the business loss?
Expiry ranges	A stated reference value falling within a defined range.	Which range or tail best represents the exposure being considered?

Conditional views preserve context

A conditional probability asks how likely an outcome is given a stated condition. For example, the likelihood of a later Cut given an earlier Pause may differ from the likelihood of a Cut without that condition. The condition, observation period and assumptions must remain visible.

A model view and a market price serve different purposes

A model estimate depends on information, assumptions and the time horizon. A quoted price also reflects the conditions under which a contract can be traded. Neither determines the final outcome: settlement follows the contract and its evidence rules.

> ### Time matters
>
> A long-term tendency should not be presented as a near-term forecast without validation. Markov Tree is intended to make horizon and model uncertainty visible in the interpretation of its outputs.

04 / THE PARTICIPANT JOURNEY

Clarity before commitment.

The intended experience makes the event, price, obligation and result understandable at every stage.

01

Discover the market

Identify the event family, outcome question and observation period.

02

Read the rules

Review payouts, settlement evidence, exclusions and eligible participants.

03

Review the quote

See the requested size, total cost, fees and execution conditions.

04

Manage the exposure

Monitor positions and understand how liquidity affects the ability to exit.

05

Follow resolution

See the published result, evidence and available challenge process.

06

Confirm settlement

Reconcile the contractual payment and the final transaction record.

What a probability does not promise

A high implied probability does not guarantee a payout. A displayed valuation does not guarantee an executable exit price. Participants must understand both the contractual outcome and the conditions of trading.

05 / CAPITAL AND RESPONSIBILITY

Every obligation needs a clear owner.

The analytical framework must respect the financial and legal boundaries of the products that use it.

Boundary	Required distinction
Participant position	The participant owns the rights stated by the contract and bears its disclosed economic risk.
Market capacity	The permitted size and depth of the market depend on the support available for its obligations.
Operating resources	Company expenses and operating capital must not be confused with customer entitlements.
External venue account	Assets, orders and settlement at another venue remain subject to that venue's arrangements.
Research output	An analytical estimate is not a deposit, a guaranteed return or authority to move funds.

Loss must be stated before commitment

For a fully paid, non-leveraged purchased contract, the amount paid and applicable fees can be lost. Other positions require their own clearly stated exposure limits. A model estimate does not protect a participant from loss.

Depth has an economic cost

More attractive execution conditions require sustainable support. A commercially viable service must cover the cost of capital, data, custody or settlement arrangements, adverse selection and ongoing operation. Trading volume by itself does not establish profitability.

> ### Product-specific responsibility
>
> Any future offering must identify its operator, counterparties, customer eligibility, custody and settlement arrangements. Markov Tree's place in an ecosystem does not automatically transfer authority or financial responsibility between entities.

06 / GLOBAL COMMODITY WORKFLOW

Connect the event to the trade.

A conceptual application for commodities traded across global markets.

A trader may find a price difference between an origin and a destination. Freight disruption, late receipt, policy changes or demand shifts can reduce the expected margin before completion. A suitable event contract may provide a conditional cash offset for a defined part of that exposure.

01 / SOURCE

Identify supply

Confirm availability, specification and commercial terms.

02 / MATCH

Identify demand

Compare destination requirements and achievable proceeds.

03 / ASSESS

Map the uncertainty

Identify the observable event that could impair the trade.

04 / REVIEW

Check the contract

Compare the payout event, deadline, cost and settlement evidence.

05 / EXECUTE

Manage both positions

Monitor the physical trade and any event-contract exposure separately.

06 / RECONCILE

Measure the outcome

Compare actual commercial results, contract settlement and total costs.

An offset has limits

The contract event may not match the commercial loss exactly. Timing, size, liquidity and evidence can create gaps. A cash payout does not deliver the goods, make a counterparty perform or eliminate operating risk.

07 / COMMERCIAL DIRECTION

Earn adoption with a useful application.

The proposed opportunity is a reusable analytical capability for professional users and market operators.

USER

Professional teams

Research and risk teams evaluating connected event exposures.

CHANNEL

Market operators

Venues seeking clearer product definitions and analytical context.

VALUE

Decision support

A consistent view of outcomes, assumptions and exposure.

Potential commercial models

Model	What must justify the price
Research access	Recurring analytical value, useful coverage and reliable information.
Technology licensing	Demonstrated utility, dependable operation and suitable rights to use the technology.
Integration services	A defined implementation scope and measurable customer benefit.

These are commercial options, not announced contracts or revenue forecasts. Product permissions, data rights, counterparties and operating arrangements must match the activity that is actually offered.

Evidence of an advantage

The strongest case would combine repeat customer use, useful analytical results, reliable settlement and sustainable unit economics. None should be inferred from a document, a demonstration interface or a constructed example.

08 / GOVERNANCE AND DEVELOPMENT

Validate before extending the promise.

Markov Tree should advance through evidence of usefulness, reliability and economic viability.

Stage	Evidence needed to progress
Research validation	Clear assumptions, credible comparison with simpler methods and results tested beyond the examples used to develop the approach.
Product definition	A narrow use case, identifiable users, understandable terms and reliable settlement evidence.
Controlled evaluation	Independent assessment, clear responsibilities and appropriate limits under the intended operating arrangements.
Wider availability	Repeat demand, dependable operation and permissions suitable for the product and audience.

Risks that remain

Models can be wrong; data can be late or revised; trading conditions can deteriorate; and real-world events can be disputed. Contract design, independent review and clear customer information help manage these limitations but do not remove them.

Public information and controlled documentation

Public materials explain product purpose, customer-facing rules and limitations. Full engineering specifications, internal research methods and other detailed implementation materials are maintained separately and shared through reviewed access arrangements.

Publication basis

Prepared from the internal Markov Tree V3.1 methodology and companion documents. Markov Tree draws on established probability theory, including the Markov chain tree theorem. Those foundations are not claimed as exclusive inventions. This public edition contains no implementation specification and makes no claim of a proven trading advantage.

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Public edition dated 26 November 2026. Future product documentation governs any actual customer offering.