

Optimal decision oracles

How to optimize for picking the best decision, given information available?

Oracle scorecard

cost of corruption

dispute power

finality delay

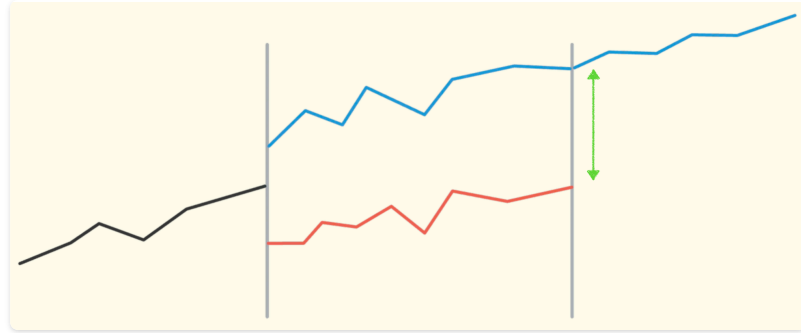
truth clarity

liveness

collusion resistance

governance surface

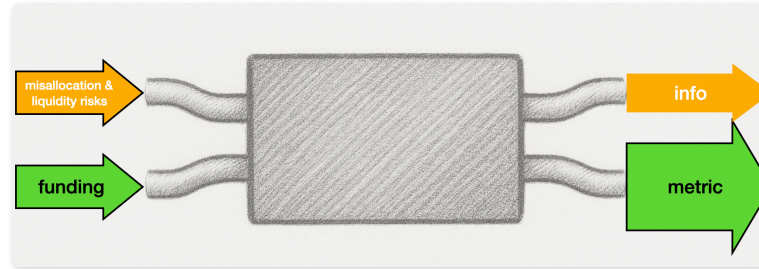
Counterfactual spread is all you need



$$\mathbb{E}[u(M \mid \text{do}(A)) - u(M \mid \text{do}(B))]$$

Decision market engineering

Conditional funding markets



$$\eta = \frac{u(M)}{\underbrace{F}_{\text{funding}} + \underbrace{C_{\text{liq}}}_{\text{liquidity revelation}} + \underbrace{C_{\text{id}}}_{\text{causal identification}}}$$

Markets-as-computation: knapsack oracles

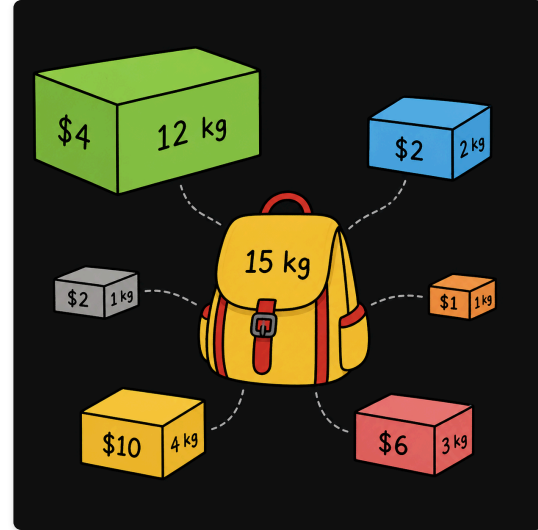
x : an allocation (proposals, levels, within budget).

Market estimates each EV:

$$\hat{E}[u(M) \mid \text{do}(x)]$$

Funder maximizes:

$$\max_x \hat{E}[u(M) \mid \text{do}(x)]$$



Butter's conditional funding markets in 2025

Optimism Foundation (May 2025, play-money)

Uniswap Foundation (Jul 7–11 2025, real-money)

Unichain TVL

metric

\$100k

grant allocated

\$185M

Morpho's predicted TVL (by
the CFM)

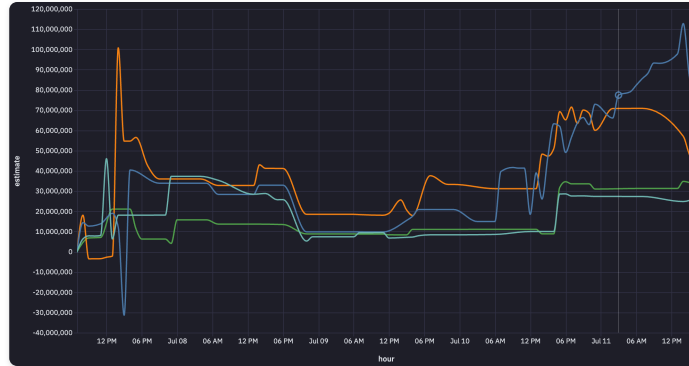
\$207M

Morpho's actual TVL (+11.8%)

Challenges in practice:

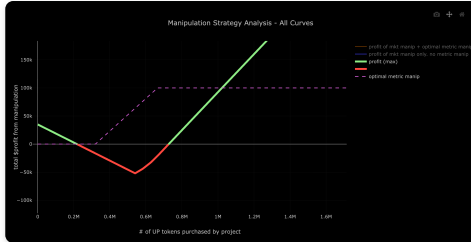
- **collusion resistance:** metric manipulation
- **cost of corruption:** guaranteed profitable by metric manipulation
- **dispute power:** unclear incentive to challenge

UF-Morpho close-up



Morpho's funded-branch flow $\approx 4\times$ Euler's, 6 instant spread reversals.

The metric-manipulation case

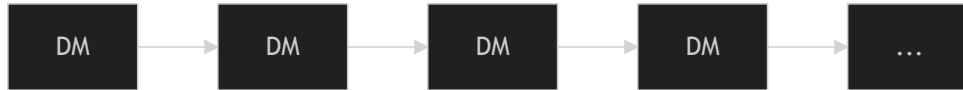


distbit, Manipulation Strategy Analysis

Attack:

1. Buy the *funded* outcome token cheap
2. Inflate the metric yourself
3. CFM resolves your way
4. After settlement, collect trade profits

Repeated DMs: the meta-mechanism hijacks the oracle



Temptation. Manipulator pushes UP price up; metric doesn't follow. Kick them next round.

Cost. Traders stop pricing the conditional. They price *what survives the next-round filter*. The DM is no longer the oracle.

Decision markets governance howto

KPI vs asset futarchy

	truth-revelation	economic security
asset futarchy (<i>MetaDAO</i>)	bounded by token supply	self-bounded
KPI futarchy (<i>Butter</i>)	unbounded shorting	upper-bounded by external oracle's security

Regulatory & economic imperatives

Coin-voting DAOs were necessary by regulatory conditions.

Coin prices: when they were high, there was something to govern.

UNification, canonical:

- SEC closed Labs investigation, **Feb 2025**
- GENIUS + CLARITY by **July 2025**
- **Dec 2025**: tokenholders vote **99.9%** to fold UF into Labs

Median DAO governance token: -73% over 18 months.

The road to sane decision markets

Both sides need many iterations.

Markets. Sane markets take years of iterated stress-testing until traders, regulators, and consumers believe the prices. Polymarket / Kalshi are the *prequel*.

Deployer. Dialing in the mechanism (KPI choice, horizon, randomization...) takes **programs of experiments**. Orgs need to commit.

Decentralized Autonomous Organizations

Change DAOs form factor to automated agents-inspired structures.

Ralph Merkle's *DAO Democracy*: goal-driven organizations, with future-oriented value functions and self-modifying source code.

The recursive-improvement loop:

evaluator + search over modifications + commitment to implement the winning modification

Thank you

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