

HedgeCoin: A Counter-Cyclical Market for Verifiable Prediction Skill

A short white paper.

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HedgeCoin is a high-risk bet on two linked ideas. The first is that the ability to forecast markets — today locked inside a handful of institutions — can be opened to anyone, scored objectively, and turned into a directly monetizable asset. The second is that demand for that forecasting, and therefore for the token that gates access to it, is counter-cyclical: it rises precisely when markets fall. Together they describe a single two-sided market, built on proven blockchain technology, in which prediction skill is supplied, priced, and consumed.

The opportunity

The market it opens, the competitive landscape, and the counter-cyclical token thesis.

An open market for prediction skill

Today, the ability to forecast markets is locked inside hedge funds and a handful of institutions — effectively the only places a talented predictor can turn skill into income, and only on the institution's terms. Yet the industry spends billions of dollars a year buying forecasts: sell-side research, market data, quantitative signals, expert networks. The money is there; access to it is gated by employment.

HedgeCoin opens that market to anyone. Any individual, firm, or AI system can post predictions on-chain, build an immutable track record — each forecast timestamped before it resolves, so a record cannot be backdated or faked — and sell access to their forecasts directly.

Crucially, this decouples how much capital a predictor has from how much they can earn from being right. A gifted forecaster with no fund, no trading desk, or a mandate that caps their positions can often earn more selling a signal to many buyers than deploying their own limited capital. A model that is reliably right about thousands of small moves may be worth far more as a subscription than as a portfolio. HedgeCoin lets predictive skill be priced and sold on its own merits, independent of the balance sheet behind it — which is exactly why the "any AI" case matters: an AI system can have genuine forecasting skill and no capital at

all.

Not a prediction market

It is worth being precise about what HedgeCoin is not. It is not a prediction market in the mold of Polymarket, Kalshi, or Augur, and the differences are structural rather than cosmetic.

A prediction market needs a crowd to form around every individual question. Bettors take opposing sides, and the market only has liquidity and a meaningful price when enough people care about that specific event to fill both of them. That confines prediction markets to questions popular enough to draw a crowd — elections, major sporting events, a handful of headline macro calls. The forecasts a risk manager actually needs — the relative performance of two mid-cap stocks, the spread between two bonds, where an obscure commodity trades three months out — are precisely the questions no betting market ever forms around.

HedgeCoin imposes no such requirement — no market needs to form around a question at all. A prediction is not a bet matched against a counterparty; it is a claim about a verifiable market price, scored after the fact against what actually happened. No opposing bettor, no crowd, and no pre-existing liquidity is needed for any given question. Coverage is therefore limited only by what can be objectively verified — any security, any pair, any spread, any horizon — including exactly the long-tail questions a prediction market cannot reach.

The economics differ just as sharply. A prediction market pays out on bets: your return is a function of how much you wagered, and your winnings come out of the pockets of other bettors — a closed pool that is zero-sum among its participants. So your upside is capped by your bankroll, and a brilliant forecaster with little money earns little. HedgeCoin instead channels money *into* the system from the buyers who already spend billions a year on forecasts, and pays predictors for the value of their signal to those buyers. A predictor sells the same forecast to many of them and need never take a market position at all. Earnings track the quality and usefulness of the prediction, not the size of a wager. Put plainly: a prediction market is a venue for wagering on popular events; HedgeCoin is a marketplace for the value of forecasting skill across all verifiable markets.

Crowdsourcing without the company

HedgeCoin is also not the first attempt to pay outside predictors for market forecasts — and the attempts that already exist are the strongest evidence that the demand is real. What they share is precisely the limitation HedgeCoin is built to remove: each one is a single company.

Numerai is the closest precedent. Since 2015 it has run a tournament in which data scientists around the world build models to predict stock movements, stake its NMR cryptocurrency on those predictions, and earn rewards scored on both accuracy and originality — predictions that merely echo signals already submitted are discounted as redundant. Tens of thousands of participants and over a thousand staked models feed it every week. It is a genuine proof of concept, and it notably already rewards the same originality that HedgeCoin treats as central. But every one of those models feeds a single hedge fund, run by one company, on data that company provides, scored by rules that company sets, paying rewards that company alone determines. A predictor does not sell a forecast to whoever values it most. There is exactly one buyer.

Estimize crowdsources earnings and revenue estimates from well over a hundred thousand contributors — buy-side, sell-side, independent professionals, academics, and amateurs alike. But contributors are not paid in cash; they contribute in exchange for access to the pooled estimates, while the platform licenses the aggregated data to institutions. The commercial value the crowd creates is captured by the company, not returned to the people who produced it.

Quantopian went furthest, and it shows the deepest risk. Launched in 2011 and backed by major investors — including a reported \$250 million from Steven Cohen — it assembled one of the largest communities of quants ever, licensed the best user algorithms into its fund, and paid their creators a share of the returns. In late 2020 it abruptly wound the community down — historical work deleted, users given weeks to export their code — and the team was absorbed into Robinhood. When the one company hosting the market decides to stop, the market and every track record built inside it vanish with it.

These are three versions of a single constraint. The demand for outside forecasting is proven, but it is trapped: one buyer instead of a competitive market, value captured by the platform instead of paid to the predictor, and a single point of failure that can erase years of work overnight. In each case a predictor's reputation lives inside one company's walls and cannot be carried elsewhere, and in each case the scoring and the accounting must simply be trusted, because they happen privately.

This is what a blockchain is for. On HedgeCoin, the company comes out of the middle. Predictions enter an open market where many buyers compete for access, so what a forecast is worth is set by that market rather than by any single firm — and the value accrues to the predictors who create it rather than to a platform that captures it. The marketplace and every predictor's verified track record live on a ledger no company owns — they persist regardless of any single operator's fate, and they belong to the predictor rather than to a platform. And because scoring is performed on-chain from statistics anyone can reproduce, rather than

inside private books, accuracy and originality can be verified instead of taken on faith. The existing platforms prove the demand; the blockchain is what turns a single company's private tournament into a public, competitive market.

Counter-cyclical demand

On the demand side, access to the scarcest and most valuable predictions — the forecasts, volatility signals, and downside-risk intelligence from the highest-rated predictors — is rationed to the top N HGC stakers. A buyer does not purchase access outright; they compete for it by acquiring and staking HGC, and hold their place only by staking more than the next buyer in line. That design creates a self-reinforcing loop that tightens precisely when markets are under stress:

1. Market stress raises the value of accurate forecasts and risk intelligence.
2. Higher value pulls more buyers into competing for top-tier predictions.
3. Competing means acquiring and staking more HGC.
4. Staked HGC is locked up and can no longer be traded, so the supply available to buy shrinks.

The result is a token whose demand rises while its available supply shrinks — both moving *against* the broader market — so buyers compete for less and less of it, putting upward pressure on its price exactly when markets are weak.

This is structurally different from existing hedges. Gold and Bitcoin are counter-cyclical — when they are — by investor convention; derivatives are counter-cyclical by contractual payoff. HedgeCoin's counter-cyclicity, if it materializes, would be hardwired into the protocol itself: an access-competition mechanism for scarce information, not a market belief or a written contract.

Where HGC sits among counter-cyclical assets

A more technical note for financial professionals: how the token compares, structurally, to the instruments already used to hedge.

Begin with hedging derivatives, since they are the obvious comparison. A put, a VIX future, or a tail-risk overlay is a *zero-net-supply* instrument: every long position has a matching short, so the aggregate value of all positions nets to zero. No wealth accrues to the asset class as such — open interest grows and shrinks, but there is nothing to capitalize. A token is a *positive-net-supply* asset: a rule-governed float whose aggregate value can grow with adoption, the way gold's has. The distinction can be stated in one sentence: a derivative can

transfer wealth counter-cyclically, but only an asset can store it.

Carry is the second structural difference. Counter-cyclical derivatives are insurance, and insurance has negative expected return: puts bleed premium, long-volatility products bleed roll yield, tail-risk strategies pay a steady drag in exchange for crisis convexity — and the position never stops costing, because it expires and must be rolled. Gold's enduring appeal is precisely that it is a counter-cyclical-ish asset with roughly zero carry. HGC's design aims one step further, in two respects. First, it is an asset whose secular expected return is positive if the network grows. Second — and unlike gold, which pays its holder nothing — HGC can pay an income. Because HGC inherits Ethereum's proof-of-stake economics, tokens staked to validate the chain earn a yield with two components: a protocol-issued reward, and a share of the transaction fees on every block the validator proposes. The fee model is likewise Ethereum's: the base portion of every transaction fee is burned — permanently removed from circulation — so network usage steadily tightens the float to the benefit of every holder, staked or not. For a professional audience the decomposition matters: the issuance component of staking yield is, strictly, a transfer from non-stakers to stakers, but the fee and burn components are funded by real marketplace usage — and that usage is, by this paper's central thesis, exactly what rises when markets fall. The spectrum therefore runs: hedging derivatives have negative carry by construction; gold achieves zero; HGC is designed for positive carry whose usage-driven component firms in stress. Crisis convexity without the bleed is a proposition no insurance contract can offer, because the bleed is the price of the contractual payoff.

Derivatives are not the only counter-cyclical instruments, however, and the rest of the landscape is worth surveying, because each entry is counter-cyclical for a different reason. Long-dated government bonds rally in risk-off episodes, but through an interest-rate mechanism with two known failure modes: the upside is bounded by how far rates can fall, and the mechanism inverts outright in inflation-driven bear markets — 2022 being the canonical case, when stocks and bonds fell together and the conventional 60/40 hedge failed exactly when it was needed. Safe-haven currencies spike in crises, but by convention and debt mechanics, with central banks actively leaning against the appreciation. And — the closest structural analog to HedgeCoin — the equities of counter-cyclical businesses: discount retailers, restructuring specialists, and above all derivatives exchanges themselves, whose volumes and revenues rise with volatility. Their mechanism is identical in kind to HGC's: demand for the underlying *service* rises during stress, and the asset capitalizes that demand. Their limitation is the wrapper. They are equities, so the counter-cyclical cash flows arrive diluted through market beta and discount-rate effects; an exchange's earnings can rise in a crash while its stock falls with everything else.

The landscape therefore sorts on two axes. The first is the *mechanism*: is the bear-market bid driven by convention and monetary premium (gold, bonds, safe-haven currencies) or by utility demand that genuinely rises in stress (exchanges, counter-cyclical businesses)? The second is the *wrapper*: is the instrument a bearer asset with uncapped monetary upside (gold, tokens), a claim on cash flows carrying equity beta (stocks), or a capped-payoff contract (bonds, derivatives, currencies)? Every existing instrument occupies one good cell and one bad one. Gold has the ideal wrapper but no utility mechanism — its bear-market bid is psychology, which is why it sometimes simply fails to show up. Counter-cyclical equities have the ideal mechanism but a leaky wrapper. Bonds, after 2022, can claim neither robustly. HedgeCoin's claim to novelty, stated precisely, is that it is built to occupy the empty cell: utility-driven counter-cyclical demand in a bearer-asset wrapper with uncapped upside. Notably, the mechanism keys off *uncertainty itself* rather than the rate cycle — meaning it is designed to be live in precisely the inflation-driven regimes where the bond hedge breaks.

	Mechanism: convention & monetary premium	Mechanism: utility demand that rises in stress
Wrapper: bearer asset, uncapped upside	Gold, Bitcoin. <i>Ideal wrapper, no mechanism — the bear-market bid is psychology, and sometimes fails to appear.</i>	HedgeCoin — the empty cell. <i>Protocol-driven demand for forecasts, capitalized in a bearer asset.</i>
Wrapper: capped payoff or equity beta	Long government bonds; safe-haven currencies. <i>Bounded upside; the bond mechanism inverts in inflation-driven bear markets (2022).</i>	Exchanges (CBOE, CME); counter-cyclical businesses. <i>Real mechanism, leaky wrapper — earnings rise in a crash while the stock falls with everything else.</i>

The token design is what makes that cell reachable rather than merely named. A pure pay-per-prediction token would suffer the velocity problem: buyers acquire tokens just in time, spend them, and sellers dispose of them, so even heavy transactional demand produces little price support. HGC's top-N staking competition converts demand for predictions into demand to *hold* the token continuously — which is what allows stress-driven demand to express itself in price rather than in turnover, and which determines what fraction of the float sits locked with prediction consumers rather than circulating with speculators.

Two honest qualifications belong alongside the claim. First, the empty cell is empty partly because it is hard to occupy: a token wrapper imports crypto-market beta the way an equity wrapper imports equity beta, and in an acute liquidity crunch HGC's utility bid would be fighting the same sell-everything tide that has briefly dragged even gold down. The

mechanism is best understood as a counter-cyclical demand component layered on an asset that also carries market beta — a damping and potentially reversing force, strongest when a large share of the float is staked for access. Second, HGC is not a hedge in the contractual sense. A put pays a deterministic amount; HGC's stress response is probabilistic and depends on the elasticity of prediction demand. The right positioning is therefore not "replaces hedging derivatives" but "an asset whose demand correlates with the demand for hedging" — much as gold's demand correlates with fear without gold paying off any particular contract. That is the more defensible claim, and the more scalable one.

A two-sided flywheel

The two sides feed each other. A deeper roster of credible predictors makes access more valuable, which draws more buyers to compete for it; a larger paying market for forecasts in turn gives more predictors — and more AI systems — a reason to come on-chain. Supply and demand are not two separate bets so much as two halves of one flywheel, each turning the other.

How it works

Measuring forecasting skill, rewarding it through consensus, defending it from attack, and the chain it all runs on.

Rewarding accuracy and originality

Any open market for forecasts lives or dies on one question: how do you separate real skill from luck, and from copying?

HedgeCoin answers it with information theory. Each predictor is scored by the statistical evidence their resolved track record provides for genuine forecasting ability, expressed as *self-information* — a measure of how surprising a correct call was. A prediction that proves right when the outcome was unlikely, and when the consensus said otherwise, carries far more information than one that merely restated what everyone already expected. The protocol pays for information, not agreement.

Concretely, each predictor's accuracy and the uniqueness of their views are converted into rigorous, reproducible statistical quantities — e-values and p-values — that anyone can verify. Accuracy by itself is not enough: a forecast that echoes the consensus is discounted as redundant, and a track record is weighed against how many predictions it took to produce, so a lucky streak does not read as skill. Rewards concentrate where they belong — on predictors who are both right and non-obvious.

Skill, rewards, and consensus

Those calculations of accuracy and non-uniqueness yield standard, reproducible statistics anyone can check — p-values, and the closely related e-values. Neither is convenient to reward on directly: p-values cannot meaningfully be added, and an entire track record cannot be collapsed into a single number the protocol can act on. So HedgeCoin works with their information-theoretic equivalents instead. The self-information of a p-value is its negative logarithm — the number of bits of surprise in a correct call. The matching quantity for an e-value is its logarithm, and that form suits a forecasting record exactly. As each prediction resolves, the protocol forms a likelihood ratio for it — judging the outcome against the null of no skill, with the predictor's own skill inferred from their record so far — and folds it into a single running e-value, the cumulative product of all those per-prediction ratios. The predictor's evidence score is the logarithm of that e-value. In this logarithmic form the evidence behaves — it accumulates cleanly across every resolved prediction, it stays valid even when a predictor's forecasts are not statistically independent, and it places every predictor on one comparable scale of contributed information.

That common scale is what lets the protocol compare predictors directly and reward them in proportion to the information they contribute. A predictor's evidence score sets their share of what the network pays out — the more genuine information their forecasts add, the more they earn — with no regard to how much capital they hold. A predictor need not stake anything to earn: rewards follow being right and being original, nothing else.

This is HedgeCoin's central, patent-pending innovation: a consensus in which forecasting accuracy itself — measured rigorously, expressed in information-theoretic terms, and made Sybil-resistant by the means described next — becomes a first-class source of consensus weight. Ordinary chains let weight be bought with capital alone; HedgeCoin lets it be earned with proven skill.

Two Sybil attacks, two defenses

The scoring is only as trustworthy as the identities behind it, and two distinct Sybil attacks threaten it. HedgeCoin answers each with a different defense.

The first attack manufactures luck. An adversary registers a large number of accounts and has each post different, uninformed guesses. With enough accounts, chance alone all but guarantees that one will compile an impressive record — and the adversary then presents that lucky account as a gifted forecaster and sells its "signal." It is the look-elsewhere effect weaponized: cast enough lines and one will catch.

HedgeCoin closes this at the identity layer with proof-of-personhood. Every predictor account must be bound to a single, unique real participant — a natural person, or in legal-entity variants a verified company or fund — through a credential attestation, verified cryptographically, together with a non-reuse rule that stops the same participant from registering twice. Unable to cheaply mint a thousand identities, an adversary cannot fish for a lucky one; and because the scoring already weighs a record against how many predictions produced it, no single account can pass off a short lucky run as skill either.

The second attack manufactures originality. Here one actor acquires several accounts — through several real people, several legal entities, or different credential sources — and submits the same genuinely good prediction through all of them, perturbing each copy slightly so the forecasts look independent. The aim is to collect the reward several times over, or to fake the appearance of many separate experts independently agreeing, which would lend a single opinion false weight.

Proof-of-personhood cannot stop this one, because each account may be a genuinely distinct participant. So HedgeCoin adds a second defense that works on the predictions rather than on identity, and it turns on a simple fact: the space of things one can forecast — every instrument, every horizon, every moment — is so vast that two predictors working independently are extraordinarily unlikely to produce closely matching track records. When a set of accounts nonetheless produces forecasts that track one another far more tightly than chance alone allows, that resemblance is itself evidence that they are not independent. The protocol measures how improbable the resemblance is under a null of genuinely separate forecasters, expresses that improbability as a p-value, and — like every other quantity in the system — converts it to self-information. That non-uniqueness self-information is then subtracted from the accuracy self-information of each implicated account. There is no need to anoint an "original" and discount the rest: all of the suspiciously similar accounts are debited together, the more heavily the tighter their agreement. Spreading one good prediction across many accounts therefore earns no multiplied reward and manufactures no illusion of independent experts agreeing — the very similarity the attack relies on is what exposes and penalizes it.

Together, these two layers protect the one thing the entire marketplace runs on: that a high score reflects genuine, original forecasting skill, and not the arithmetic of many accounts.

Built on proven technology

HedgeCoin is not a blockchain built from scratch. It is based on battle-tested Ethereum technology, which gives it two things at the outset: the proven economic-security model of proof-of-stake, and full smart-contract capability.

Full programmability is what lets the market run without trusted intermediaries. Its core mechanics — staking for access, escrowed payment, delivery of a forecast on confirmation, and distribution of rewards according to the scoring — are implemented as transparent, auditable smart contracts rather than promises. The same capability makes HedgeCoin extensible: third parties can build subscription services, automated strategies that consume forecasts, refund or insurance mechanisms, and other products directly on top of it, using Ethereum's mature developer tooling rather than a bespoke environment.

Two layers secure the network. Stake provides the ledger's economic security in the well-understood Ethereum model — misbehaving validators forfeit it, and honest ones are paid for operating the chain exactly as Ethereum's are: a protocol reward plus the transaction fees of the blocks they propose, with the base portion of every fee burned so that usage itself reduces the circulating supply. The proof-of-personhood layer described above secures the identities behind every account, so that one actor cannot quietly become many. On that base, consensus weight is earned by demonstrated forecasting skill, as described above: the network is secured by capital and verified identity, yet steered by skill.

The bet

We are not claiming HGC will become a trillion-dollar asset. The claim is narrower, and we think more credible: the architecture gives it a coherent path to that scale if both sides of the flywheel turn — if credible predictors and AI systems bring forecasts worth paying for, and if buyers consistently compete to access them. Neither side is guaranteed. That is the bet.

Sources

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