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Polymarket's Up-or-Down Crypto Markets: 60% of Its Trades, Priced About Right, 1.6% Fee

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ABSTRACT

Vultax counted 15.0 million Polymarket trades over 251 hours: 59.6% were up-or-down crypto bets, 379 wallets made most of them, and takers paid about 1.6% of notional on five-minute trades. In 2,497 markets checked against outcomes, Up won 50.2% and favourites won as often as priced.

CITE AS Vultax Research Team (2026). Polymarket's Up-or-Down Crypto Markets: 60% of Its Trades, Priced About Right, 1.6% Fee. Vultax Research notes 2026-012, Vultax Research, Tallinn, 15 September 2026, revised 28 October 2026. https://vultax.com/research/polymarket-bitcoin-up-or-down-5-minute-markets No DOI has been assigned.

DATA AVAILABILITY Scope revision: Kalshi figures and comparisons were removed, namely one venue-comparison bullet and its source, and the remaining analysis is Polymarket-only. **Calculations checked: proof record**.

LIMITATIONS **Method and limits**, below.

59.6%

Observed Polymarket trades in up-or-down markets. 8.9 million of 15.0 million trades in 251 observed hours, 21 August to 12 September 2026; 15.7% of the money, at $12.82 a trade

58.6%

Up-or-down trades made by 379 wallets. The busiest 1% of the 37,970 wallets that traded them; the ten busiest made 22.8%

74.6%

Half-way favourites that won. At an average price of 75.0¢, 2,276 Bitcoin and Ether markets ending 30 August to 12 September 2026; a minute before close, 79.0% at 79.0¢

≈1.6%

Taker fee on a five-minute trade. Of notional, at Polymarket's published 0.07 crypto rate and 12 September prices; per share, 1.16¢ at the half-way price. Makers pay nothing

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The short answer

Counted by trades, most of what happens on Polymarket is not elections, sports or the Fed but a bet on whether Bitcoin, or another crypto asset, will be higher or lower a few minutes from now. Across 251 hours of Polymarket trading that Vultax recorded between 21 August and 12 September 2026, up-or-down markets took 59.6% of 15.0 million trades. At an average of $12.82 a trade, against $101.80 everywhere else, they carried 15.7% of observed notional. A small, busy group places most of them: 379 wallets, the top 1% of those that traded the format at all, made 58.6% of its trades.

The markets are priced about right. In 2,497 five- and 15-minute Bitcoin and Ether markets that ended between 30 August and 12 September, Up won 50.2% of the time. A minute after the open, half-way through and a minute before the close, the favourite won almost exactly as often as its price implied: 63.9% at an average price of 63.2 cents, 74.6% at 75.0 cents and 79.0% at 79.0 cents.

The consistent number is the fee, which takers pay and makers do not: about 1.6% of notional on five-minute trades on 12 September and, per share, 1.16 cents at the half-way price in the two-week sample. Before it, buying the favourite at any of the three moments was indistinguishable from breaking even; after it, the same purchase lost 0.84 to 1.56 cents a share. A Polymarket trade count now mostly describes this game, not event forecasting.

What an up-or-down market is

Each market asks one question for a fixed window, for example "Bitcoin Up or Down - September 12, 2:45PM-2:50PM ET". It resolves Up if the time-weighted average price of Bitcoin from Chainlink's **BTC/USD 60-second TWAP stream** over the window is greater than or equal to the price at its start, and Down otherwise; the market text says it is "not according to any other sources or spot markets." A new market opens for every window, so a single asset produces 288 five-minute markets a day.

Polymarket runs the same format at five minutes, 15 minutes, one hour, four hours and one day, for Bitcoin, Ethereum, Solana, XRP, BNB, Dogecoin and Hyperliquid, and daily versions for a few stocks, indices and commodities. The five-minute Bitcoin market read on 12 September carried the crypto fee schedule: a 0.07 rate charged to takers only, with 20% of fees rebated to makers, a five-share minimum order and a tick of a tenth of a cent. Polymarket's own series counter showed $9.9 million traded on five-minute Bitcoin markets and $5.0 million on 15-minute ones in the 24 hours to 18:55 UTC that day.

How much of Polymarket they are

The shorter the window, the more trades and the smaller each one. Five-minute markets made 45.7% of every trade Vultax observed but 11.8% of the notional; daily markets were a rounding error on both counts. Over the four days with at least 21 observed hours, the up-or-down share of trades stayed between 53.1% and 62.4%. The low day, Sunday 6 September, was also the day **esports out-traded the Fed on Polymarket**.

Up-or-down markets as a share of all observed Polymarket activity

Share of 14,973,743 trades and of $727.0 million notional, 251 observed hours, 21 Aug to 12 Sep 2026

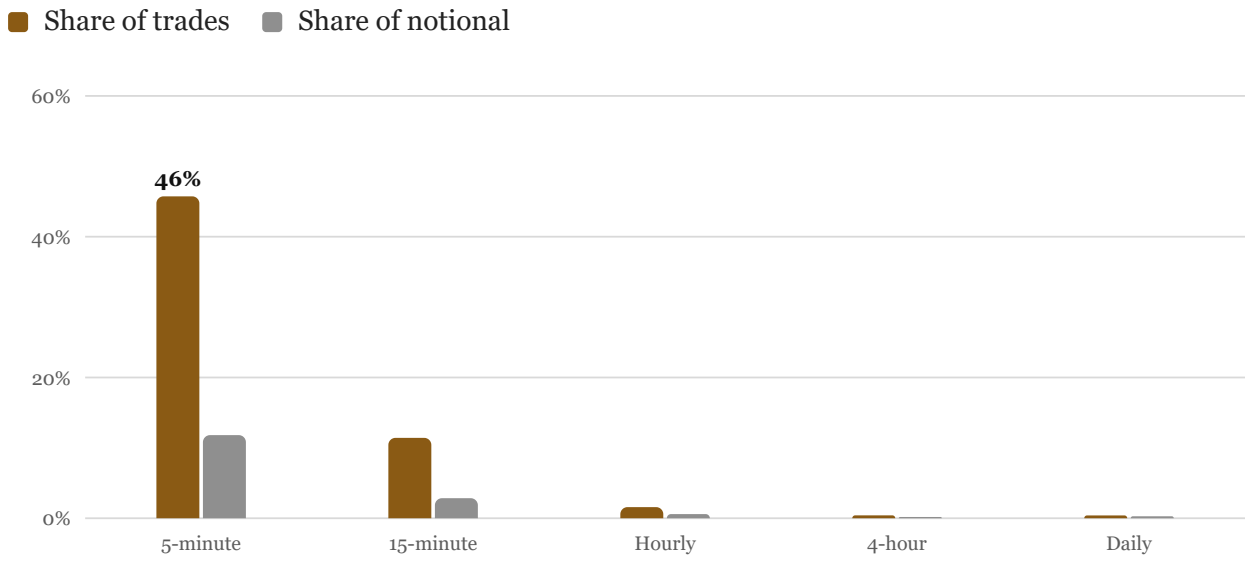

Chart: Vultax Research

▶ Show the numbers

Day (UTC)	Hours observed	Up-or-down share of trades	Share of notional
Mon 31 Aug	21	62.4%	14.2%
Sun 6 Sep	23	53.1%	10.7%
Mon 7 Sep	22	62.4%	17.6%
Fri 11 Sep	24	58.2%	17.4%

Only days with 21 or more of 24 hours in the record are shown; shares are of the trades and notional observed in those hours.

Bitcoin is most of it

Bitcoin up-or-down markets alone made 39.2% of all observed Polymarket trades and 13.2% of the notional. Ethereum was a distant second at 8.2% of trades. Every other asset listed in the format was below 4%, and the stock, index and commodity versions together were 0.3%.

Up-or-down trades by asset, as a share of all observed Polymarket trades

251 observed hours, 21 Aug to 12 Sep 2026. All intervals combined.

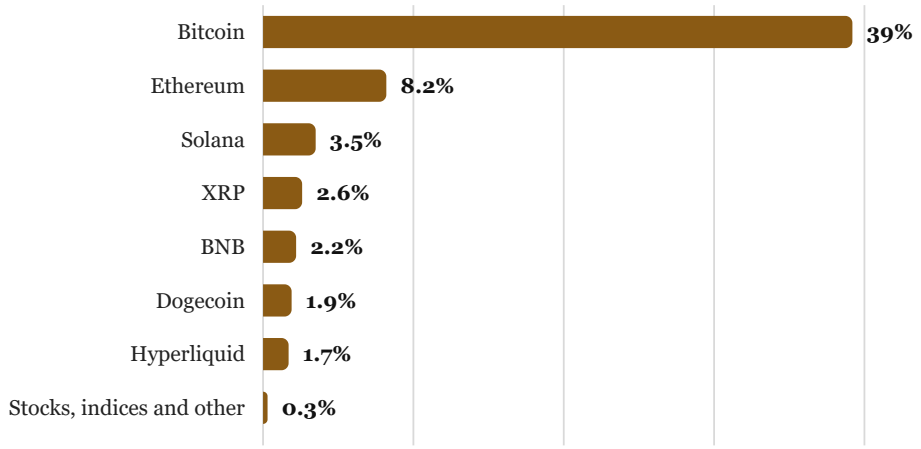

Chart: Vultax Research

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A small crowd does most of the clicking

In a median observed hour, 7,213 wallets traded on Polymarket and 2,795 of them, 38.8%, traded an up-or-down market. Over the whole window 37,970 wallets touched the format, 23.2% of the 163,996 that traded anything. But the trades come from far fewer.

- **Concentration** - the busiest 1% of up-or-down wallets, 379 of them, made 58.6% of the format's trades, and the ten busiest made 22.8%.
- **Persistence** - 1,075 wallets appeared in at least half of the observed hours and made 59.7% of up-or-down trades.
- **Speed** - the median wallet-hour held three up-or-down trades and the 99th percentile 161; the busiest single wallet-hour held 15,157, about four a second, and 11,403 wallet-hours held 100 or more.
- **Specialisation** - 95.3% of wallet-hours with an up-or-down trade contained no other market, so the people playing the format are mostly not the people trading elections or games.

When they trade

The format's share is highest when the rest of the venue is quiet. Between 03:00 and 07:00 UTC up-or-down markets made about 65% of observed trades; between 16:00 and 20:00 UTC, the U.S. afternoon and European evening, the share fell to about 53%. Total activity peaks at 13:00 to 15:00 UTC at roughly 80,000 observed trades an hour, against about 50,000 overnight, a pattern consistent with a steady around-the-clock flow with daytime activity layered on top. That reading is consistent with Vultax's earlier finding that **1.6% of Polymarket wallets never sleep**, but this study did not test whether particular wallets are automated.

Up-or-down share of observed trades, by hour of day

UTC hour. Each point averages 6 to 15 observed hours between 21 Aug and 12 Sep 2026.

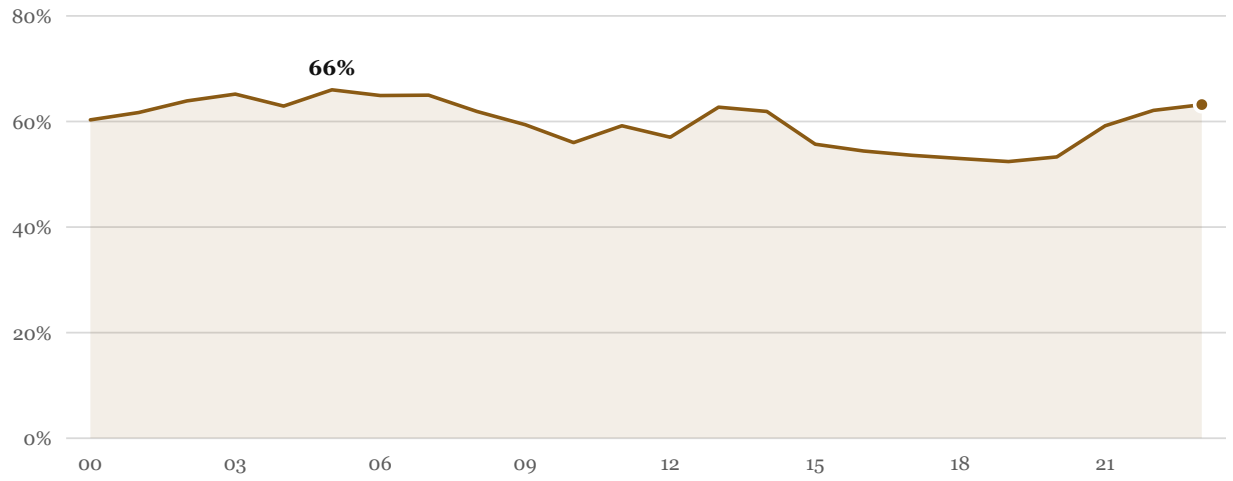

Chart: Vultax Research

▶ Show the numbers

Are they fair? Prices against outcomes

To test the pricing, Vultax took every fourth market in the five- and 15-minute Bitcoin and Ether up-or-down series that ended between 30 August and 12 September 2026, 2,497 of 9,986, and read Polymarket's one-minute price history for the Up side and each final outcome. Up won 1,254 of them, 50.2%, as a fair coin would.

Half-way through each window, contracts priced in each ten-cent band resolved Up at close to the band's price, from 3.8% for Up priced under 10 cents to 96.9% for Up priced above 90. The largest gap in any band was 5.1 points, among 234 markets priced between 20 and 30 cents, which is within what chance produces in samples that size.

How often Up won, against Up's half-way price

2,497 Bitcoin and Ether up-or-down markets, 30 Aug to 12 Sep 2026, grouped into ten-cent price bands

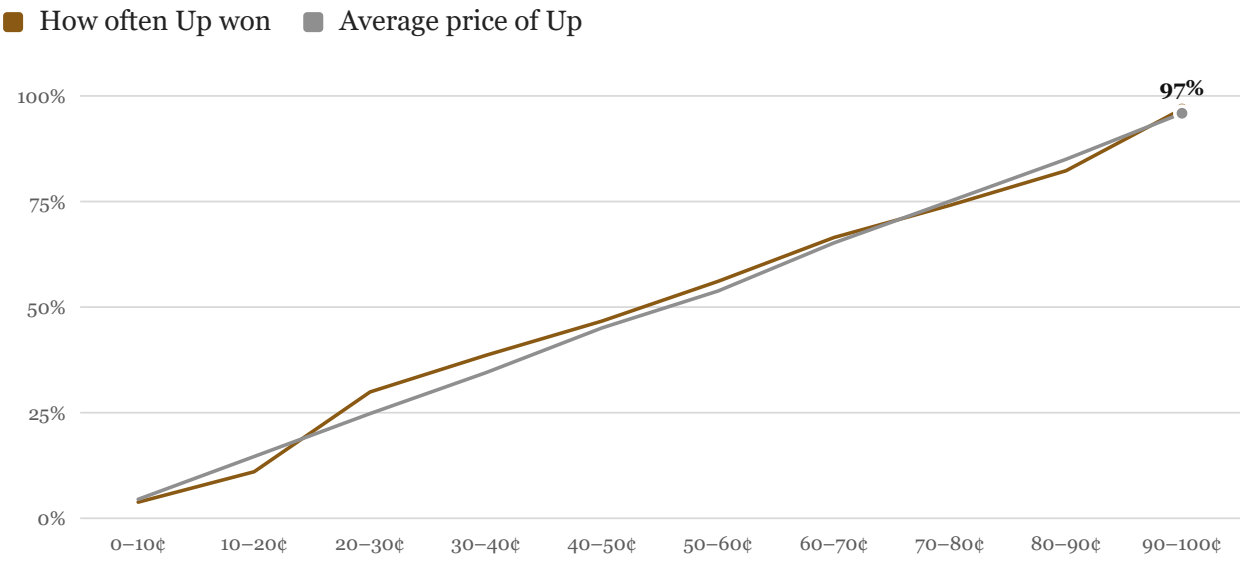

Chart: Vultax Research

▶ Show the numbers

Three moments, no edge before the fee

The favourite at a moment is whichever side was priced at 50 cents or more; markets priced below 2 or above 98 cents were left out because nothing is left to measure there. The markets become more certain as the window runs, as they should: the prices' accuracy, measured against always guessing a coin flip, rose from 17% a minute after the open to 53% a minute before the close. At no point did the favourite win more often than its price by more than the uncertainty allows.

A cross-check on another sample gave the same picture: on 12 and 13 September, 1,028 markets priced from Vultax's own trade record had half-way favourites winning 77.5% of the time at an average price of 78.3 cents.

Moment	Markets	Favourite's average price	Favourite won	Result per share before fees	95% range	After taker fee	Accuracy gain over a coin flip
One minute after open	2,417	63.2¢	63.9%	+0.68¢	−0.82¢ to +2.24¢	−0.84¢	17%
Half-way	2,276	75.0¢	74.6%	−0.40¢	−2.04¢ to +1.23¢	−1.56¢	39%
One minute before close	1,990	79.0¢	79.0%	+0.09¢	−1.59¢ to +1.82¢	−0.90¢	53%

Favourites priced between 50 and 98 cents. Result is payout minus price; the 95% range resamples whole days. After taker fee subtracts 0.07 × p × (1 – p) per share. Accuracy gain is one minus the ratio of the prices' Brier score to that of a constant 50% guess, across all sampled markets.

What it costs to play: the fee is the edge

Polymarket charges takers C × 0.07 × p × (1 – p) on crypto markets, where C is the number of shares and p the price. As a share of the money spent, that is 0.07 × (1 – p): 3.5% at 50 cents, 0.7% at 90 cents. Up-or-down trades cluster at both ends, because a window is either undecided or nearly settled: in a 3.8-hour sample of trades on 12 September, 15.6% printed between 50 and 60 cents and 22.8% at 90 cents or more.

Applied to those prices, the published rate works out at about 1.6% of notional on five-minute markets and 2.2% on 15-minute ones. According to **Pine Analytics' reconstruction of the rollout**, crypto taker fees began on 15-minute markets on 5 January 2026 and reached every crypto timeframe on 6 March.

Per share, the same charge is 1.75 cents near 50 cents; at the favourites' prices in the two-week sample above it averaged 1.0 to 1.5 cents across the three moments and 1.16 cents at the half-way point. That is one fee in two units, from two samples: a share of the money spent on five-minute trades on 12 September, and cents per share of the favourite over two weeks.

With prices this close to fair, the fee is larger than any difference between price and outcome Vultax could detect, so the average taker in these markets gives up roughly the fee on every share, and the **same arithmetic applies to anyone copying these wallets**. The result fits Vultax's **earlier calibration study** of resolved Polymarket markets, where prices were informative but bent at the extremes.

Market	Trades in sample	Notional	Taker fee at the published rate	Share of notional
5-minute	66,448	$987,939	$15,802	1.60%
15-minute	17,209	$269,656	$6,032	2.24%
Hourly	2,771	$53,089	$1,060	2.00%
4-hour	1,120	$23,192	$520	2.24%

Fees are computed from each trade's price and size at the published 0.07 rate, not read from settlement records, and assume the recorded side of each trade is the taker. Sample: up-or-down trades between 15:06 and 18:55 UTC, 12 September 2026. Makers pay no fee and share a 20% rebate.

What this changes about Polymarket's numbers

Anyone using Polymarket activity as evidence should separate the format first. The Vultax market directory lists every open Polymarket market with its 24-hour volume and liquidity.

- **Trade counts** - six in ten observed trades are up-or-down bets, so growth in trades can come from one game rather than broader forecasting interest.
- **Wallet counts** - 38.8% of wallets active in a median hour touched the format, and nearly all of them touched nothing else in that hour.
- **Leaderboards and most-active lists** - wallets that trade every few seconds rank high on activity, which says little about their judgement on events.

Method and limits

The source is Vultax's hourly record of Polymarket trades taken from Polymarket's public data API: for each hour, every wallet's trade count and notional in each market. The record holds 251 hours between 21 August 12:00 and 12 September 18:00 UTC, not all 533; some days have one hour and some all 24, which is why daily figures are shown only for days with 21 or more. Markets were classified as up-or-down when their title contains "Up or Down", and by interval and asset from the market slug; 0.74% of trades were in markets Vultax could not match to its catalogue and count only in the totals.

The calibration test priced each market from the last point in Polymarket's one-minute price history at or before each moment, which can lag a fast-moving book by up to a minute and is not necessarily a price anyone could trade at in size. It tests pricing, not the settlement stream or any trader. Bitcoin and Ether windows, and five- and 15-minute windows ending together, move together, so the 2,497 markets carry less independent information than their count suggests; the ranges resample whole days, which allows for that only in part. Two weeks is a short period and includes no extreme market stress.

Vultax's flow record is not complete. On 11 September, its one fully observed day, it held $12.4 million of up-or-down notional, while Polymarket's own series counters showed about $17.5 million for the 24 hours to 18:55 UTC on 12 September; the windows differ by a day and the counters may define volume differently. Read every share here as a share of observed flow. Wallet identifiers were hashed for the analysis. Fees are implied from published rates, not measured, and makers' rebates are ignored. Nothing here is a recommendation to trade. Challenge a figure at **research@vultax.com**; material changes are logged in the **changelog**.

REVISION NOTES

This page is kept current. Each entry records what changed and when; the live figures above refresh on their own.

`2026-10-28` Scope revision: Kalshi figures and comparisons were removed, namely one venue-comparison bullet and its source, and the remaining analysis is Polymarket-only. The original research dates and the Polymarket samples and results are unchanged; this is a scope revision, not a new measurement. Links to the proof-library records for the earlier text were withdrawn until records for this version are rebuilt.

2026-09-16 Now also shows whether the markets are fairly priced: 2,497 Bitcoin and Ether markets checked against how they resolved, with the taker fee given per share as well as per dollar.

REFERENCES

Polymarket — BTC Up or Down 5m series https://gamma-api.polymarket.com/series?slug=btc-up-or-down-5m

Series volume counter read 18:55 UTC, 12 September 2026

Polymarket — Bitcoin Up or Down, 12 September 2:45PM–2:50PM ET https://gamma-api.polymarket.com/events/slug/btc-updown-5m-1789238700

Market rules, resolution source and fee schedule (crypto_fees_v2, rate 0.07, taker only, 20% rebate)

Chainlink — BTC/USD TWAP 60-second data stream https://data.chain.link/streams/btc-usd-twap-60s-streams

Resolution source named in the Bitcoin market rules

Polymarket — trading fees https://docs.polymarket.com/trading/fees

Taker formula and category rates; crypto taker rate 0.07, makers pay nothing; read 2026-09-12

Pine Analytics — Polymarket fee rollout https://pineanalytics.substack.com/p/polymarket-fee-rollout

Third-party reconstruction of the fee timeline; not a Polymarket announcement

Vultax: 1.6% of Polymarket wallets never sleep https://vultax.com/research/polymarket-wallets-that-never-sleep-trading-cadence

Always-on wallets and their share of trades

Vultax: Polymarket copy trading costs https://vultax.com/research/polymarket-copy-trading-costs-and-tools

Fee arithmetic for followers

Polymarket CLOB — price history https://clob.polymarket.com/prices-history

One-minute price history for the Up token of each sampled market

Polymarket Gamma API — closed up-or-down events https://gamma-api.polymarket.com/events/keyset?closed=true&series_slug=btc-up-or-down-5m

Four series, 9,986 markets ending 30 August to 12 September 2026, with final outcomes

Vultax: Polymarket fair-value calibration https://vultax.com/research/prediction-market-fair-value-calibration

Earlier test of prices against resolved markets

Selected arithmetic checked in Lean 4.35.0 https://vultax.com/datasets/research-proof-library-2026-10-25/articles/polymarket-bitcoin-up-or-down-5-minute-markets.md

Selected exact-rational calculations and displayed-value consistency checks, checked by Lean 4.35.0, Lean kernel replay and Nanoda. Not a proof of the underlying observations, statistical conclusions, legal claims or production code.

Figures describe trades recorded by Vultax's Polymarket flow record in 251 observed hours and are shares of that record, not of all venue volume. Fees are computed from published rates. Calibration figures come from a two-week sample of Bitcoin and Ether markets priced from one-minute history; past calibration does not guarantee future pricing. Nothing here is a recommendation to trade or financial advice.