Incentives at Play:
Fee-Induced Volume on a Regulated Perpetual Futures Venue

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Abstract

Kalshi launched the first CFTC-regulated perpetual futures on 3 June 2026. Because the exchange self-certifies every fee and rebate with its regulator, the reward for producing a trade can be reconstructed from public filings and dated to the hour. Using all 26.3 million public trades in the BTC and ETH contracts through 20 September 2026, I find that 39% of BTC and 48% of ETH notional is executed against resting quotes of a fixed dollar size that are taken in full by orders of the same size. Self-clearing members paid no net exchange fee on these trades at any point. When fees went live on 24 June, before a rebate was on the public record, venue-wide volume fell by 80–92% within hours and returned about forty hours later. The fixed-size flow is reconfigured in steps that reach both contracts within minutes, does not respond to a fee change that removed the taker's gross edge, and leaves no position: on the median day the two contracts trade 33 and 61 times their open interest, against 1.3 and 1.6 times on Binance. Gold and silver contracts covered by the same rebate program show no such flow. Order books recorded after the sample are seven to nine times thinner than Binance's. The evidence is consistent with volume that is produced because it is costless to produce, not because it serves a trading purpose.

JEL classification: G12, G14, G18, G23, G28.
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1 Introduction

Reported trading volume is among the most widely used statistics a marketplace produces. Investors read it as a gauge of liquidity and of the cost of entering and leaving a position. Index and data providers use it to decide which instruments to rank, list, and include in benchmarks. Venues compete on it directly, because a contract's volume drives both its network effects and the fee revenue it earns, and volume in turn enters the valuation of the venues themselves, several of which are approaching public markets. These uses give a venue and its members a private incentive to inflate the statistic. A growing literature accordingly treats manufactured volume, that is, trades that transfer no beneficial ownership and express no trading interest, as a first-order threat to the informativeness of market data (Cong et al., 2023; Aloosh and Li, 2024).

The difficulty is one of measurement. On the tape, a manufactured trade is indistinguishable from an ordinary one. Establishing that volume has been inflated has therefore required one of two things. The first is data that identify the counterparties, such as on-chain wallet addresses (Victor and Weintraud, 2021; Sirolly et al., 2025) or an exchange's internal trading records (Aloosh and Li, 2024). The second is statistical regularities of the trade record, such as first-digit distributions and the clustering of trade sizes, which are informative but indirect (Cong et al., 2023). Neither approach observes the incentive to produce volume. Each infers manufactured trading from its footprint, not from the payoff that would motivate it.

This paper studies a setting in which that incentive is observed. Kalshi, a Designated Contract Market regulated by the Commodity Futures Trading Commission (CFTC), launched the first CFTC-regulated perpetual futures on 3 June 2026. As a regulated exchange, Kalshi self-certifies every fee schedule, rebate program, and trading incentive to the CFTC with a stated effective date. The pecuniary reward for producing a marginal trade can thus be reconstructed from the public regulatory record and dated to the hour. The venue is transparent in this one dimension and opaque in another: the public trade tape carries no account identifiers, so the defining legal element of a wash sale, common ownership or prearrangement of the two sides, cannot be observed. My empirical strategy uses the first feature to work around the second. I do not attempt to establish ownership. I ask instead a question that the data can answer: does a given component of reported volume respond to dated changes in fees and rebates as independent, profit-seeking trading would, or does it behave like volume that is produced because it is costless to produce?

The main finding is that a large component of volume fails this test. Over the contracts' entire history, 39% of BTC and 48% of ETH notional is executed against resting quotes of a fixed dollar size that are taken in full by orders of the same size. I refer to these trades as the fixed-size flow, or as ticket trades. The flow is present in the first week of trading. It does not respond to a fee change that removed the taker's gross edge, although other flow on the same venue responds to fees as profit-seeking trading should. It leaves no position, and the money that changes hands on it is a few thousand dollars a day on hundreds of millions of dollars of notional. All figures are computed from the raw trade tape.[1]

[1]The fixed-size pattern first drew practitioner attention in September 2026 (CoinDesk, 2026). A contemporaneous pseudonymous working paper documents it over a two-week window and applies the detectors of the

The analysis proceeds in five steps. First, I assemble the institutional timeline from the regulatory record. The perpetual contracts traded with no exchange fee for three weeks. A fee schedule went live at 10:00 ET on 24 June, and a "Temporary Perpetual Fee Rebate Program" filed the same day returned all net fees to self-clearing members. An update effective 18 August changed the rebate so that takers net a fee of 0.3 bps and makers a credit of 0.3 bps. A further update effective 16 September extended the program to metals and added, for the first time, a clause that excludes wash trades from rebates. Between two members, exchange fees therefore netted to zero from 24 June onward, and a member trading with itself paid nothing.

Second, I document the fixed-size flow over the contracts' whole life. Its dollar size was changed on 10, 18, and 24 August in both contracts. Daily ticket notional rose about tenfold on 10 August and three- to fivefold on 26 June. The cycle on which its quotes are replenished dropped from about 520–730 ms to about 118 ms at 06:07 UTC on 25 August, in both contracts within the same few minutes and 27 hours after the sizes had changed. The flow thus behaves like the output of a single configurable process, and this process was reconfigured twice in two days.

Third, I use the dated fee events as natural experiments. When fees went live on 24 June, venue-wide volume fell by 80–92% within hours. It returned on 26 June, about forty hours later, with ticket volume three to five times its pre-event level and the ETH ticket doubled from \$5,000 to \$10,000. The 18 August change moved the ticket taker from a zero net fee to 0.3 bps, which is roughly its entire gross edge. Neither the taker's volume, nor its selectivity, nor its markouts changed, while volume from identifiable latency arbitrageurs rose several-fold in response to a simultaneous cut in list fees.

Fourth, I use the gold and silver contracts listed on 10 September as a within-venue comparison. These contracts are covered by the same rebate program but show no fixed-size flow. Their size concentration is an order of magnitude below that of the crypto contracts, and their volume falls by 86–96% when COMEX is closed, in line with the reference market. The pattern in the crypto contracts is therefore not a property of the venue's matching engine, its API, or its member base as a whole.

Fifth, I add order-book evidence. Kalshi's public API shows the current order book but keeps no history of it, so I recorded the Kalshi and Binance books for all four contracts from 23 September. Kalshi's crypto books are seven to nine times thinner than Binance's and 120 to 350 times costlier to sweep for \$250,000. At these costs, the turnover documented in Section 7 would cost takers who pay to cross the book 0.4–2.6% of open interest every day. Fixed-size trades move Kalshi's own mid a fifth to three fifths as much as other trades, and neither the flow nor the book changed when Kalshi ended a volume-based incentive program on 13 October.

The paper contributes to the literature on wash trading in crypto markets. Victor and Weintraud (2021) and Sirolly et al. (2025) identify wash trades from wallet-level data on decentralized exchanges and on Polymarket. Aloosh and Li (2024) use the leaked internal records of a bitcoin exchange and evaluate indirect detection techniques against this direct evidence. Cong et al. (2023) detect fabricated volume on unregulated exchanges from statistical and be-

wash-trading literature (OctopusTakopi, 2026). I differ in covering the contracts' full history, in reconstructing the fee and incentive schedule from the regulatory record, and in testing the flow against dated changes in that schedule instead of against statistical benchmarks.

havioral regularities of the trade record. I add a setting in which the incentive to produce volume is written down in public filings and changes on known dates, so that behavior can be tested against the incentive itself. The setting is also a regulated one, in which self-certified fee programs, not the absence of oversight, make volume costless to produce. The paper further relates to work on exchange fee design and maker–taker pricing (Colliard and Foucault, 2012; Malinova and Park, 2015). That literature is concerned mainly with how the split of fees affects order choice and market quality. I show that a fee design that nets to zero across the two sides of a trade can distort the volume statistic itself.

The remainder of the paper is organized as follows. Section 2 describes the institutional setting and Section 3 the data. Section 4 documents the fixed-size flow. Section 5 examines the fee events. Section 6 compares the metals contracts, Section 7 relates volume to open interest, and Section 8 presents the order-book evidence. Section 9 discusses interpretation, and Section 10 concludes.

2 Institutional Setting

Kalshi listed BTC and ETH perpetual futures on 3 June 2026, followed by XRP on 10 June, further crypto contracts through the summer, and gold and silver on 10 September. The contracts trade continuously, are cleared by Kalshi's own clearing house (Kalshi Klear), and settle funding every eight hours. Members trade either as self-clearing members (SCMs) or through a futures commission merchant (FCM).

Table 1 lists every filing that bears on trading costs. I assemble it from the CFTC's rule-filing index for organization KEX and from Kalshi's regulatory notices page. Three features of the timeline matter for what follows.

No fees at launch. The first perpetual fee schedule was filed on 8 June (KalshiEX LLC, 2026a) and, by an exchange notice, implemented at 10:00 ET on 24 June. For the first three weeks after launch, no exchange fee applied to perpetual trades. The schedule that then took effect charged takers 12.0 to 2.6 bps and makers 5.0 to 0.6 bps, depending on 30-day trailing volume across perpetuals and event contracts. Maker tiers could alternatively be reached by holding a minimum share of the venue's total maker volume, up to 10% for the top tier.

Full rebate from the same day. On 24 June Kalshi also filed the Temporary Perpetual Fee Rebate Program (KalshiEX LLC, 2026b), under which all SCMs receive monthly rebates of "all net taker and maker fees" in every perpetual market. The rebate did not take effect together with the fee, however. The cover letter of the filing is dated 24 June, but the filing was submitted through the CFTC portal and date-stamped on 25 June (filing 61360), and Kalshi posted it to its regulatory notices page on that day. Its terms set the effective date at "on or after 5:00 PM ET on July 9, 2026," with an effective period that "may be retroactive to the self-certification filing date," and add that "no Rebates will be earned unless this Program goes into effect." From 10:00 ET on 24 June until the filing was posted on 25 June, members thus faced the full fee schedule with no rebate on the public record and no public assurance that one would apply. Once the rebate was in effect, net exchange fees for members were zero on both sides, retroactive to 24 June.

An update filed on 4 August and effective 18 August changed the terms so that "taker fees will be rebated down to 0.3 bps" and "maker fees will be rebated such that makers net 0.3 bps." The sum across the two sides of a trade remains zero, so a member on both sides of its own trade still pays nothing. The 2 September update, effective 16 September, added metals at 0.018 bps, excluded Kalshi affiliates, and for the first time excluded from rebates any fees on transactions "resulting from, or subject to inquiry or investigation for potential, self-matching, wash trading, pre-arranged trading." The June and August versions contain no such clause.

Other incentives. Kalshi amended its 2025 Market Maker Program on 3 June to add "tailored liquidity conditions and benefits" for perpetuals (KalshiEX LLC, 2026c). The appendices that set out those conditions and benefits were filed with a request for confidential treatment under FOIA Exemption 4 and are not public. Kalshi also filed a referral program (effective 7 August), a clearing-house program that pays 7% a year on open positions (effective 28 August, capped at $7 million; Kalshi Klear LLC, 2026), and a retail deposit-and-trading reward program (filed 15 September). None of these pays for perpetual volume as such at any scale, and none predates the fixed-size flow. Two exchange-wide programs applied in addition. A Volume Incentive Program paid members without a market-maker agreement a share of a fixed reward per market in proportion to their volume, and its terms allowed perpetual markets to be eligible. Kalshi filed its termination on 28 September (KalshiEX LLC, 2026e). A Liquidity Provider Program, effective from 18 May 2026 to 1 December 2027, pays members with a market-maker agreement for meeting quoting obligations, with its selection terms filed as a confidential appendix (KalshiEX LLC, 2026d). I return to both programs in Section 8.

3 Data

Kalshi publishes every perpetual trade through its public API with a price, a contract count, the taker side, and a microsecond timestamp. There is no account field. I collect every trade in the BTC and ETH contracts from listing on 3 June to 20 September 2026 (18.89 million and 7.45 million trades, with notional of $27.1 and $20.1 billion), and every trade in the gold and silver contracts from listing on 10 September (250,000 and 134,000 trades, $150 million each). Cumulative notional matches the exchange's own reported lifetime volume for each contract to within rounding, and no trade identifier appears twice. One BTC contract is 0.0001 BTC and one ETH contract is 0.001 ETH, so that the dollar notional of a trade is price times count times the contract multiplier.

Reference prices are Binance USD-M futures aggregated trades for BTCUSDT, ETHUSDT, XAUUSDT, and XAGUSDT, downloaded from Binance's public archive for the same days (283 million trades in total). I match each Kalshi trade to the last Binance trade price at or before its timestamp, and to the prices 100 ms before and 1, 5, 30, and 300 seconds after. Markouts are signed in the taker's favor and expressed in basis points. They are gross of fees and funding. Because markouts use last-trade prices and not quotes, they carry noise at short horizons, which could bias the taker's edge in either direction by a few hundredths of a basis point. This is the same order of magnitude as the net figures in Section 5.2.

Several limitations of the data should be noted. No history of the order book is public, so

Table 1: Fee and incentive filings for Kalshi perpetual futures

Filed	Effective	Content
4 May	18 May	Liquidity Provider Program (all markets): members with a market-maker agreement paid for quoting obligations, up to $50,000 a week per series; selection terms confidential; runs to 1 Dec 2027.
3 Jun	3 Jun	BTC and ETH perps list. Market Maker Program amended for perps; terms confidential.
4 Jun	18 Jun	Fee Consideration Program: prior volume on Hyperliquid, Coinbase, Binance, KCEX counts toward initial fee tier.
8 Jun	24 Jun 10:00 ET	First perp fee schedule: takers 12.0–2.6 bps, makers 5.0–0.6 bps by 30-day volume; maker tiers also by share of venue maker volume.
24 Jun filed, 25 Jun posted	9 Jul, retroactive	Temporary Perpetual Fee Rebate Program: all net maker and taker fees rebated to SCMs, all perp markets. Effective 9 Jul, retroactive to the filing date; no rebate earned until it takes effect.
4 Aug	18 Aug 17:00 ET	Rebate update: takers net 0.3 bps, makers net −0.3 bps. New fee schedule: takers 4.0–1.0 bps, makers 2.0–0 bps.
14 Aug	28 Aug	Clearing-house Perpetual Interest Program: 7% p.a. on min(OI/2, margin), $7m cap.
2 Sep	16 Sep 17:00 ET	Rebate update: metals at 0.018 bps; affiliates excluded; wash and self-matched trades excluded from rebates. Metals fee schedule.
10 Sep	10 Sep	Gold and silver perps list.
28 Sep	13 Oct (earliest)	Volume Incentive Program terminated. It paid members without a market-maker agreement a share of a fixed per-market reward in proportion to volume; perpetuals exempt from its price range.

Sources: CFTC rule filings 61122, 61074, 61360, 62335, 63563, 63564 and Kalshi Klear's 14 August filing; Kalshi exchange notice of 24 June 2026; Kalshi's Liquidity Provider Program filing of 4 May 2026 and Volume Incentive Program termination filing of 28 September 2026. Effective dates are those stated in the filings; implementation is "upon exchange notice", and for the 18 August and 16 September changes no implementation notice was found, so the stated earliest dates are used.

over the trade sample I infer resting sizes and the replenishment cycle from trade timestamps, and I take open interest from single snapshots of the exchange's API. Section 8 uses order books that I recorded from 23 September, after the end of the trade sample. The metals sample covers eleven days. Event contracts, which account for most of Kalshi's business, are not covered. Nothing in this paper identifies a person or a firm.

I define a *ticket* per market-day, without reference to any prior list of sizes. For every round dollar amount K (a multiple of $100 above $500), the window $[K - 15, K + 1]$ collects trades whose notional is the largest whole number of contracts that fits under K. Any K whose window carries at least 5% of the day's notional is a ticket for that day. The procedure thus recovers every ticket, past and present, from the tape alone. Because the limit is set in dollars, the contract count of a ticket trade moves with the price, which is why tests built on exact contract sizes miss it.

4 The Fixed-Size Flow

4.1 Extent

Over the full sample, ticket trades account for 39% of BTC notional ($10.6 billion) and 48% of ETH notional ($9.7 billion). Figure 1 splits daily notional into ticket and other volume. The

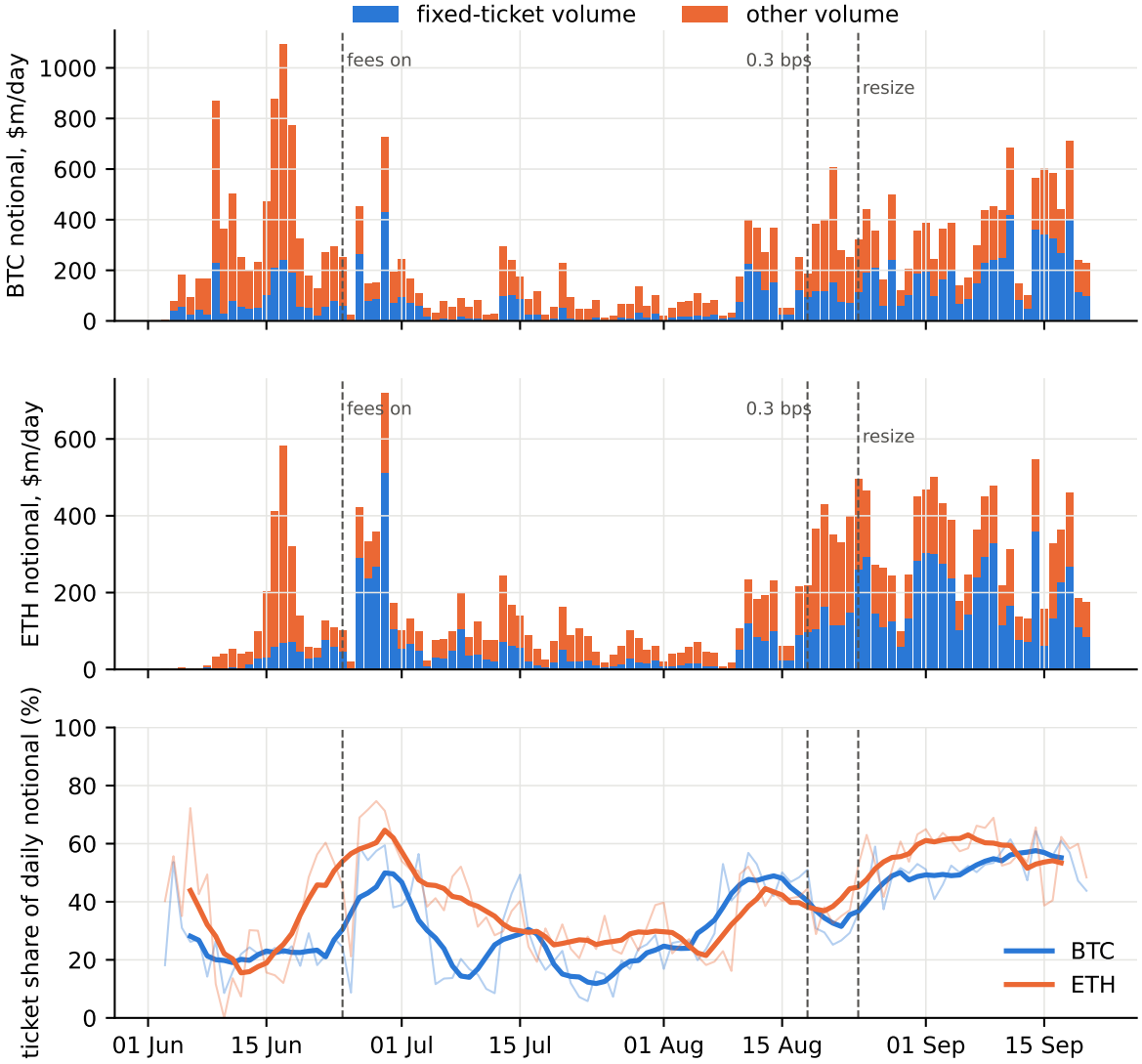


Figure 1: Daily notional in the Kalshi BTC and ETH perpetuals, 3 June – 20 September 2026, split into trades at a fixed dollar ticket (blue) and all other trades (orange), and, in the bottom panel, the ticket share of daily notional for both contracts (daily values faint, seven-day centered mean bold). Dashed lines: fee schedule live (24 June), rebate changed to 0.3 bps (18 August), ticket sizes changed (24 August).

flow is present from the first days of trading. On 3–8 June, when daily volume was in the low millions, tickets of $1,000, $5,000, and $10,000 already carried 35–72% of ETH notional. In gold and silver, the same procedure finds tickets on a handful of launch days only, and these carry 1% of notional overall.

Figure 2 compares the concentration of trade sizes across venues. For each market-day with at least 500 trades, I compute the largest share of notional that falls inside any 1%-wide window of trade size. The median is 37% for Kalshi ETH and 24% for Kalshi BTC. It is 1% or below for every Binance market, including gold and silver, and 7% and 12% for Kalshi gold and silver. The BTC median is below the ETH median because BTC carries two tickets at once and a 1% window captures only the larger of them; together, the two BTC tickets carry about the same share as the single ETH ticket. The Kalshi metals contracts lie between the crypto contracts

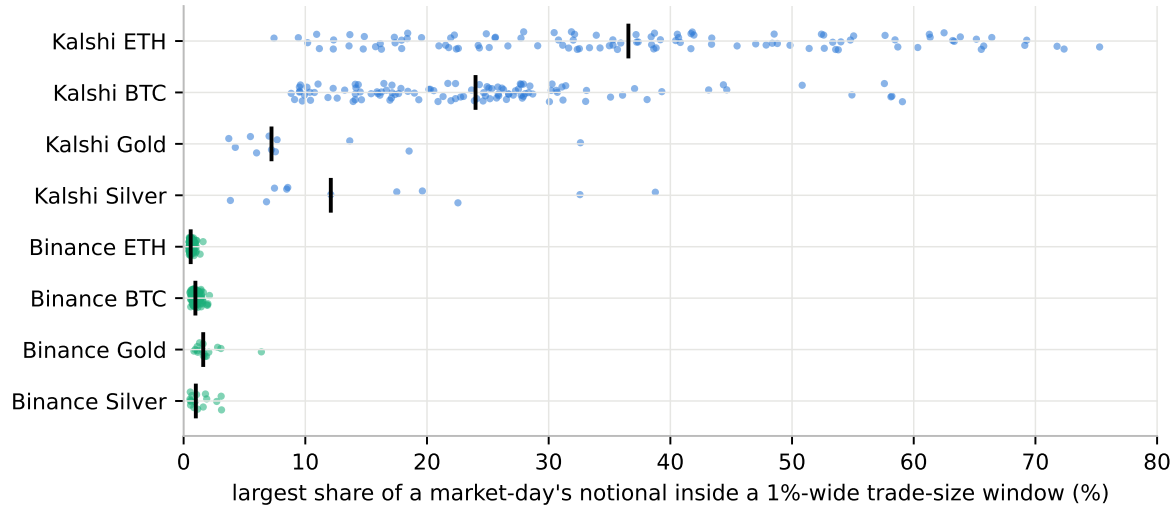


Figure 2: Dollar-size concentration per market-day. Each dot is one market-day with at least 500 trades; the bar is the median. Kalshi contracts in blue, Binance USD-M futures in the same assets in green.

and Binance, but their concentration reflects small launch-day samples and not a persistent ticket.

4.2 Share of volume

The ticket share has risen over the contracts' life, so a single full-sample figure understates what the venue's reported volume consists of at the end of the sample. Figure 3 therefore reports the share by window. In the three fee-free weeks after launch, tickets were 23% of notional in both contracts. Under the full rebate they were 37% of BTC and 48% of ETH notional. From the scale-up on 10 August to the end of the sample they were 49% and 53%, and in the first twenty days of September 55% and 60%, or 57% of the two contracts combined. BTC and ETH account for more than 85% of all perpetual volume on the venue. The same construction appears at lower shares in the smaller contracts. Over 1–20 September, tickets carry 29% of HYPE notional (a $2,400 ticket), 16% of SOL ($3,500), and 11% of XRP, so that the figure for the perpetual complex as a whole is a few points below the BTC and ETH figures.

Two qualifications apply. First, the ticket share measures the volume that fails the economic tests of this paper, in that it is insensitive to fees, leaves no position, and is produced by one configurable process. It is not an estimate of wash trading in the legal sense, which the public data cannot deliver. I interpret it as an upper bound on same-owner or prearranged volume and as a point estimate of volume that does not measure trading interest. Second, a further layer of volume depends on the tickets without being part of them. Latency-arbitrage flow that hits Kalshi quotes within 100 ms of a Binance move of more than 1 bps accounts for a further 24% of ETH and 14% of BTC notional in September, and most of it would not exist without stale fixed-size quotes to trade against. Under this reading, roughly 85% of reported ETH volume is either ticket flow or flow induced by it.

Perpetuals are in turn a minority of Kalshi's business. On 20 September the exchange reported $1.9 billion of total volume, of which the BTC and ETH perpetuals contributed about

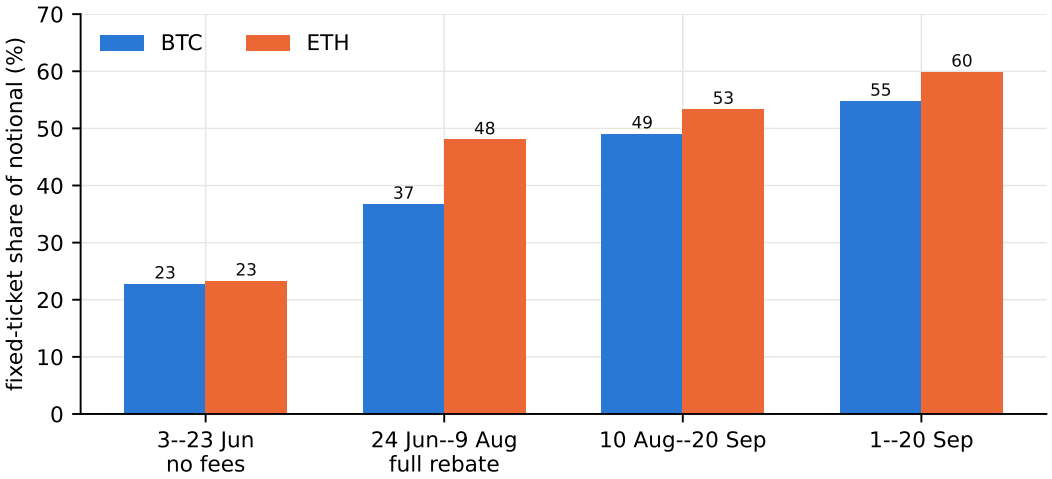


Figure 3: Share of notional executed at a fixed dollar ticket, by contract and window. Tickets are identified per market-day as in Section 3; windows follow the fee regimes of Table 1, with the last window showing the most recent three weeks.

$0.36 billion. The ticket flow is therefore on the order of 10–15% of the exchange's total reported volume on a typical day. I am not aware of a comparable analysis of the event contracts that make up the rest.

Table 2 restates the pattern of Figure 3 as a regression. On the panel of contract-hours, I regress the ticket share of hourly notional on indicators for three later periods, with the fee-free launch weeks as the omitted category, on hour-of-day fixed effects, and on log Binance notional, log realized volatility, and a weekend indicator. I estimate the regression separately for each contract. The three later windows are disjoint here, so the August window ends on 31 August. All three period effects are positive, and a Wald test rejects their joint absence in both contracts.[2] The effects grow over time, from about 15 to 22 percentage points under the full rebate to 21 to 25 points in late August and 33 to 39 points in September, and the September step above August is precisely estimated in both contracts.

Because the periods are consecutive blocks of one time series, I also run a randomization test that holds the period lengths fixed, shifts all boundaries jointly to a random date, and re-estimates the model 1,000 times. The p-value is the share of draws that produce a coefficient at least as large as the observed one. The August and September effects pass this test in both contracts (BTC: 0.01 and 0.02; ETH: 0.06 and 0.001). The full-rebate effect does not. Its randomization p-value is about 0.2 in both contracts, and its unweighted estimate is close to zero (0.01 in BTC, 0.05 in ETH). This effect is therefore driven by the high-volume days in the week after the rebate filing and not by a broad shift over the period; July hours look much like June hours. The negative coefficient on Binance notional anticipates the elasticity result of Section 5.3: other flow rises with the market and ticket flow rises by less, so that the ticket share falls in busy hours.

[2]Newey–West standard errors with a seven-day lag deliver qualitatively similar results. They are 30 to 50 percent larger than the day-clustered errors for the period effects, and every effect that is significant at the 1 percent level with clustered errors remains so.

Table 2: Ticket share of hourly notional by fee period

	BTC	ETH
24 Jun–9 Aug, full rebate	0.145***	0.219***
	(0.044)	(0.058)
10–31 Aug	0.212***	0.250***
	(0.028)	(0.046)
1–20 Sep	0.333***	0.387***
	(0.020)	(0.042)
log Binance notional	-0.070***	-0.175***
	(0.020)	(0.032)
log realized volatility	0.038	0.137***
	(0.040)	(0.052)
Weekend	-0.049*	-0.033
	(0.025)	(0.037)
Hour-of-day fixed effects	yes	yes
Observations (contract-hours)	2,598	2,596
R^2	0.51	0.42
Wald test, all period effects zero (p-value)	<0.001	<0.001

Weighted least squares on contract-hours, 3 June to 20 September 2026, with hourly notional as weights. The dependent variable is the share of the hour's notional executed at a fixed dollar ticket. The omitted period is 3–23 June, when no exchange fee applied (weighted mean share 0.23 in BTC and 0.24 in ETH). Standard errors clustered by day (110 clusters) in parentheses. *, **, ***: significance at 10, 5 and 1 percent on the clustered errors.

4.3 A single configurable process

Three features of the flow change in discrete steps, and the steps coincide across the two contracts. The first is the dollar size of the ticket. The ETH ticket was \$5,000 from mid-June, \$10,000 on 26–29 June, \$5,000 again from 30 June, \$4,000 from 10 August, \$4,500 from 18 August (from about 06:00 UTC, fifteen hours before the fee change of that day could take effect), and \$5,500 from 24 August. BTC moved from \$5,000 to a pair of tickets of \$4,000 and \$2,100 on 10 August, and to \$5,000 and \$2,500 on 24 August. On 24 August the last ETH trade at the old size is stamped 03:07:22.98 UTC and the first at the new size 03:07:24.71, while the first BTC trade at a new size is stamped 03:07:14.73. The two contracts thus switched within ten seconds of each other. The second feature is intensity. Daily ticket notional rose about tenfold on 10 August in both contracts (from \$16 million to \$155 million a day in BTC and from \$9 million to \$87 million in ETH, comparing 1–9 August with 10–14 August) and three- to fivefold on 26 June.

The third feature is timing. Consider consecutive trades of the same ticket on the same side of the book. The first percentile of the gap between such trades estimates the time the quoting process needs to replace a quote that has just been taken. In ETH, this percentile lies between about 520 and 730 ms on 40 of the 51 days from 22 June to 23 August that have more than 2,000 such gaps, and between 116 and 135 ms on every such day from 25 August. BTC shows the same two levels, with more noise from days on which two tickets are hit in one sweep. Figure 5 plots the floor by day.

The change is abrupt. In ETH, the last hour on the old cycle (05:00–06:00 UTC on 25

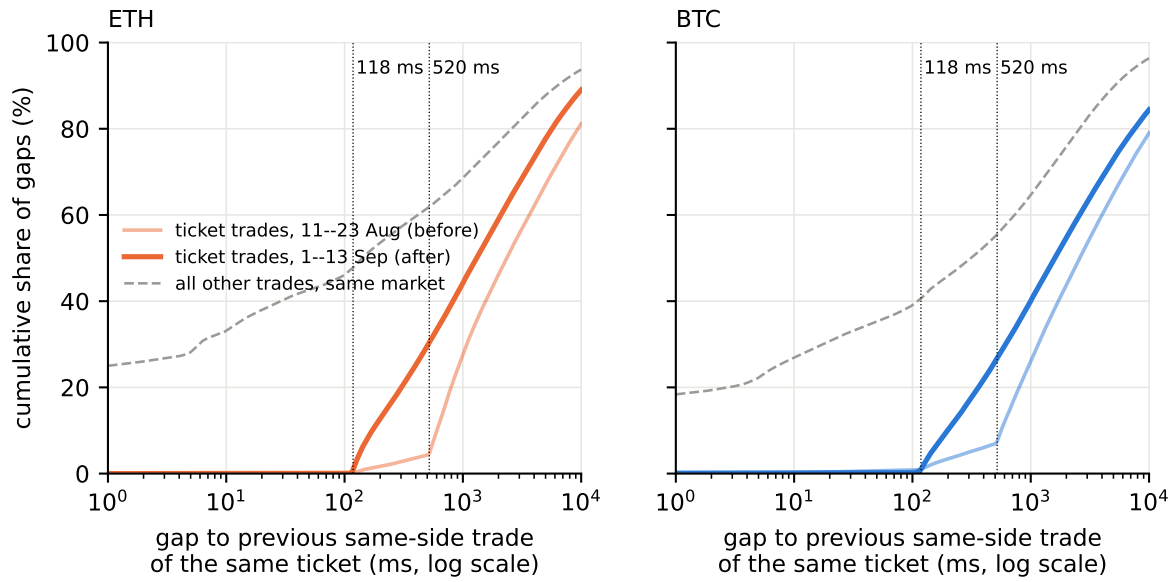


Figure 4: Replenishment cycle of the ticket quotes. Cumulative distribution of the gap between consecutive trades of the same ticket on the same side of the book, for the two weeks before the change (11–23 August) and the two weeks after (1–13 September), against the same gap for all other trades in the same market over both windows.

August) has a first-percentile gap of 546 ms and the first hour on the new one (06:00–07:00) a gap of 120 ms. At one-minute resolution the switch occurs at 06:07 UTC, with no gap under 300 ms in the preceding hour and twenty in that minute. BTC switches between 06:06 and 06:12 UTC. Figure 4 shows the two regimes as distributions. The ticket curves are flat at zero up to the cycle length and turn sharply at 520 ms in the two weeks before the change and at 118 ms in the two weeks after. The curve for all other trades in the same market, by contrast, rises from 20 to 25 percent at one millisecond and has no kink anywhere. The small mass of the pre-change curves between 118 and 520 ms comes from days on which two tickets were active and from sweeps that take two resting quotes of one size in a single burst. Non-ticket trades in the same markets show no floor at all: 36–68% of their same-side gaps are under 100 ms in every month.

The ticket sizes had changed 27 hours earlier, at 03:07 UTC on 24 August, and the cycle stayed at about 520 ms through that change. The two reconfigurations are therefore separate events, each of which reached both contracts within minutes. Neither coincides with an entry in Kalshi's public API changelog, which has no entry between 20 and 27 August and none concerning order handling or rate limits until 10 September, and I found no status-page incident or public discussion of either date. In the 24-hour windows on either side of the cycle change, the taker's markouts are unchanged (0.27 bps at five seconds in ETH before and after), and the BTC ticket share of volume rises modestly, from 33% to 46%. Independent market makers would not be expected to share one cycle time, nor to change it together with their order sizes within two days.

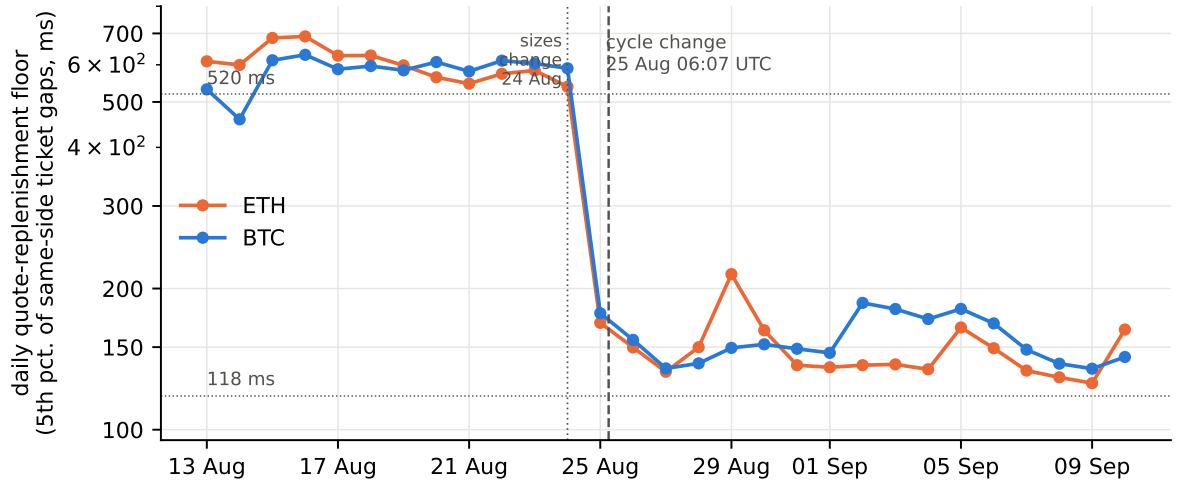


Figure 5: The quote-replenishment floor, by day. Each dot is one day's fifth percentile of the gap between consecutive trades of the same ticket on the same side of the book, a robust estimate of the shortest time the quoting process takes to replace a quote. Both contracts sit at about 520–650 ms through 24 August and drop together to about 150 ms on 25 August; the ticket-size change of 24 August (dotted) leaves the floor unchanged. Days with more than 5,000 same-side ticket gaps, 13 August–10 September 2026. Dotted horizontal lines at 520 and 118 ms.

4.4 No position is left behind

Ticket buys and sells are balanced to within a fraction of a percent (50.3% buys in BTC, 50.1% in ETH), and the absolute net signed ticket flow within an hour is 12% of gross flow in BTC and 6% in ETH. Non-ticket flow is similarly balanced at the hourly level (11% and 10%), so this statistic alone does not separate the two. Combined with the exchange's reported open interest, however, it indicates that ticket volume does not accumulate into positions. On 21 September Kalshi's API reported open interest of $11.1 million in BTC against 24-hour volume of $667 million, and $9.2 million in ETH against $621 million. Open interest thus turned over 60 and 67 times a day, and across all 23 perpetual contracts the ratio is 42. On Binance USD-M futures over 15–20 September, daily volume was 1.4 times open interest in BTC and 1.7 times in ETH, based on the exchange's published open-interest series. Section 7 extends this comparison to the full sample.

5 Fee Events

5.1 24 June: fees are switched on

The timing of the first fee event is described in Section 2. The perpetual fee schedule was implemented "as of 10:00 AM ET" on 24 June, which is 14:00 UTC. From that moment takers owed up to 12 bps and makers up to 5 bps. The rebate that would return those fees carries a cover letter of the same date, but it was date-stamped by the CFTC and posted to Kalshi's notices page only on 25 June, and its own terms set the effective date at 9 July. On the day the fee began, members therefore faced a live fee with no rebate on the public record.

Figure 6 shows what followed, at hourly resolution. Through 23 June and the morning of 24 June the venue trades $10–40 million per hour, or 2–5% of Binance volume, with a pre-fee

median of 3.1% of Binance per hour. Within hours of 14:00 UTC the flow thins, and from about 18:00 UTC on 24 June through all of 25 June trading nearly ceases. The quietest hour, 07:00 UTC on 25 June, saw essentially no trading in either contract and a Kalshi-to-Binance share of zero, against roughly $10 million and 3% in the same hour a day earlier. Over the whole of 25 June, BTC traded $23 million and ETH $21 million, against $296 million and $109 million on 23 June, and ticket volume fell to $2.0 million and $4.5 million. The collapse is venue-wide and affects ticket and non-ticket flow alike. The bottom panel shows that it does not reflect a market-wide lull. Binance BTC and ETH volume was near its June high on 24–25 June, so that Kalshi's share, which removes market-wide variation, falls by more than a factor of ten.

Trading resumed abruptly at about 08:00 UTC on 26 June, some forty hours after fees had gone live, and rose to a peak of $87 million in the 14:00 UTC hour, above anything in the pre-event days. Over the day BTC traded $453 million and ETH $423 million. Ticket volume was $267 million and $292 million, three and five times its 23 June level, and the ETH ticket had doubled from $5,000 to $10,000. This ticket accounted for 69–75% of ETH volume over the next four days.

The sequence follows the fee timeline and not the market. The decline begins in the hours after fees go live and deepens overnight. A fee of up to 12 bps makes volume with a gross edge of less than one basis point clearly unprofitable. The rebound begins on the morning after 25 June, the day on which the rebate filing became public and its retroactive design could be read. An operator that produces volume for its own sake would be expected to stop when volume becomes costly and to restart once a refund of the cost is credibly promised, and the two turning points match this pattern. That the flow returned larger, and with a doubled ticket, is more easily reconciled with one operator resuming under a zero-fee regime than with independent traders gradually returning.

I consider two alternative explanations. A market-wide halt is ruled out by the bottom panel of Figure 6, since Binance was active throughout. A technical outage fits the data less well than it may first appear. Trades print in most hours of 25 June, so trading does not stop cleanly. The withdrawal is gradual over the evening of 24 June and not instantaneous. The one clean gap, 07:00–09:00 UTC on 25 June, is a two-hour window in both contracts that recurs as an ad hoc maintenance pattern later in the sample. I cannot exclude that a maintenance window contributed to the trough on 25 June, and the exchange did file notice of an ad hoc maintenance period on 28 June. An outage, however, explains neither the timing of the onset relative to the fee nor the timing of the recovery relative to the rebate filing. It would have had to begin within hours of the fee and to end within hours of the rebate becoming public. Sensitivity to fees accounts for the joint pattern without a coincident outage.

5.2 18 August: the taker starts paying

The exact implementation hour of the 18 August change is not documented. The filing gives 17:00 ET as the earliest time, and I use it. From 18 August the ticket taker pays a net 0.3 bps where it paid nothing before, and the maker receives 0.3 bps where it received nothing. The sum is unchanged, but the split now determines which side loses money. Table 3 reports the taker's gross markout against Binance by fee regime. At 30 seconds it is 0.30–0.40 bps in BTC

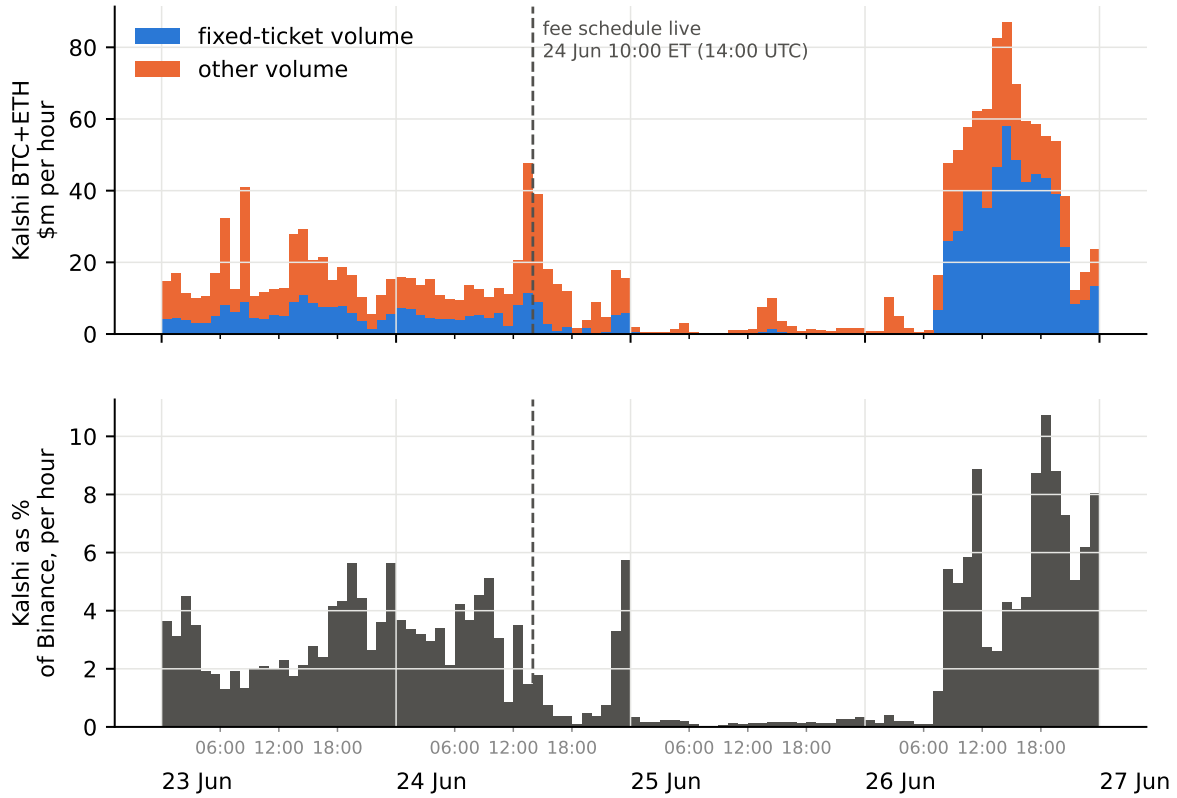


Figure 6: The 24 June switch-on of fees, at hourly resolution. Top: Kalshi BTC+ETH notional per hour, split into trades at a fixed dollar ticket (blue) and all other trades (orange). Bottom: the same Kalshi volume as a percentage of Binance BTC+ETH USD-M volume in the same hour, which nets out any market-wide movement in trading. Dashed line: perpetual fee schedule live, 24 June 10:00 ET (14:00 UTC). Sample: 23–26 June 2026.

and 0.37–0.43 bps in ETH in every regime. At 5 seconds it is 0.27–0.39 bps. Under the third regime the taker's net edge after fees is therefore between zero and 0.1 bps, and the maker's loss net of the rebate is the same amount with the opposite sign.

An independent taker that faces a new fee of 0.3 bps on trades with a gross edge of 0.3–0.4 bps should become more selective and trade less. I compare the days before and after the change in a window from 11 to 23 August, which excludes 18 August itself and ends before the resizing of 24 August. BTC ticket volume was $124 million a day before the change and $107 million after, and ETH ticket volume rose from $75 million to $130 million. The Binance price move in the 100 ms before a ticket trade, a measure of how selectively the taker times its orders, was 0.10–0.19 bps throughout, and five-second markouts were unchanged at 0.24–0.29 bps. The flow that did respond was non-ticket flow arriving within 100 ms of a Binance move of more than 1 bps, which rose four- to six-fold after 18 August. The same filing cut list taker fees for non-members from 12.0–2.6 bps to 4.0–1.0 bps, and this increase is the response one expects from a price-sensitive population whose costs fall.

This test does not reject an independent ticket taker, since a taker at break-even has no reason to change its behavior. What the test does establish is that the sums at stake are negligible. At 0.3–0.4 bps on $180 million a day, the gross transfer between the two sides of the ticket trades is $5,000–7,000 a day, and net of the rebate split it is at most about $1,500 a day

Table 3: Ticket flow by fee regime

	Regime	Days	Vol/day ($m)	Ticket/day ($m)	Share	Ticket taker markout (bps)		
						5 s	30 s	300 s
BTC	3–23 Jun, no fees	22	354	81	0.23	0.38	0.32	0.36
	24 Jun–18 Aug, full rebate	55	133	54	0.41	0.27	0.30	0.34
	19 Aug–20 Sep, taker 0.3 bps	33	364	178	0.49	0.34	0.40	0.45
ETH	3–23 Jun, no fees	22	111	27	0.24	0.39	0.43	0.47
	24 Jun–18 Aug, full rebate	55	122	58	0.47	0.36	0.40	0.40
	19 Aug–20 Sep, taker 0.3 bps	33	331	181	0.55	0.33	0.37	0.32

Markouts are the signed change in the Binance USD-M price from the moment of the Kalshi trade, in the taker's favor, weighted by notional, gross of fees and funding.

in either direction. Before 18 August the maker lost the entire markout on every fill, roughly $2,000–2,500 a day, for eight weeks, with no rebate to offset it and, as far as the public filings show, no other payment. Whatever the purpose of the flow, trading profit on either side is an unlikely one.

5.3 Sensitivity to market activity

Volume that serves a trading purpose rises when markets are active. Table 4 reports regressions of log hourly Kalshi notional on log hourly Binance notional in the same asset, separately for ticket and non-ticket flow and by regime, with standard errors clustered by day. In the launch regime nothing on Kalshi tracks Binance, which reflects the launch ramp and is uninformative about the nature of the flow. From 24 June onward, non-ticket flow has an elasticity of 0.74–0.94 and a correlation of 0.58–0.76 with Binance volume, whereas ticket flow has an elasticity of 0.36–0.86 and a correlation of 0.30–0.49. The ETH ticket is the least responsive (0.36, with a correlation of 0.30, in the third regime) and the BTC ticket the most.

Appendix A tests whether these gaps are statistically distinguishable. It stacks the two flow types in one regression per contract and sample and interacts the Binance variable with a ticket indicator, so that the interaction is the difference in elasticities, with a standard error from the joint covariance. For ETH the difference is negative and significant at the 1 percent level in the full sample and in both post-fee periods, and it widens over time: -0.27 under the full rebate and -0.38 under the 0.3 bps taker fee for Binance volume, and -0.60 for realized volatility in the last period. For BTC the evidence is weaker than the point estimates suggest. Over the full sample and under the full rebate the difference is small and not significant. Only from 18 August is the BTC ticket significantly less responsive than other BTC flow (-0.17 for volume and -0.34 for volatility, both at the 1 percent level). The BTC ticket thus behaved like ordinary flow for most of the summer and decoupled from the market in the final regime, while the ETH ticket was decoupled throughout. In both contracts the gap is largest in the period in which the ticket share is highest. The ticket flow is not indifferent to the market, but where the two can be distinguished it is less closely tied to it than all other flow on the venue. Its hour-of-day profile is also flatter (a coefficient of variation of 0.25 for the ETH ticket against 0.32 for other ETH flow and 0.39 for Binance).

Table 4: Elasticity of hourly Kalshi notional to hourly Binance notional

	Regime	Ticket flow		Non-ticket flow	
		β (s.e.)	corr.	β (s.e.)	corr.
BTC	no fees	0.04 (0.19)	0.02	0.06 (0.24)	0.03
	full rebate	0.86 (0.15)	0.40	0.94 (0.07)	0.66
	taker 0.3 bps	0.61 (0.06)	0.49	0.78 (0.03)	0.64
ETH	no fees	−0.36 (0.24)	−0.16	−0.15 (0.31)	−0.06
	full rebate	0.58 (0.14)	0.32	0.85 (0.10)	0.58
	taker 0.3 bps	0.36 (0.10)	0.30	0.74 (0.04)	0.76

OLS of $\ln V_h^{\text{Kalshi}}$ on $\ln V_h^{\text{Binance}}$ over hours h with positive Kalshi volume; standard errors clustered by day.

6 Metals as a Within-Venue Comparison

Gold and silver perpetuals were listed on 10 September under the same rebate program (at a lower rate from 16 September) and on the same matching engine. If fixed-dollar quoting were a property of the venue's technology, its API, or its members in general, it should appear in these contracts as well. It does not: no persistent ticket appears, and the largest concentration on any gold day after the launch weekend is below 7%.

The metals contracts also permit a test that the crypto contracts do not, because the reference market closes. COMEX gold and silver futures do not trade on Saturdays, on Sundays before 18:00 ET, or in the daily break from 17:00 to 18:00 ET, while Kalshi's contracts trade continuously. Figure 7 shows volume per hour when COMEX is closed as a share of its level during COMEX hours. Kalshi gold trades at 14% of its open-hours rate when COMEX is closed and Kalshi silver at 4%, compared with 10% and 22% for Binance's XAUUSDT and XAGUSDT. The Kalshi metals contracts thus behave like their reference market. During the same clock hours, Kalshi's crypto contracts trade at 32% and 45% of their weekday-hours rate, against 38% and 47% on Binance. Crypto has no reference market that closes, and its profile is unremarkable. The comparison serves as a placebo test. If volume were produced by the venue's own systems or by an exchange-wide arrangement, metals volume would not be expected to fall away when COMEX closes.

7 Volume Relative to Open Interest

The preceding sections suggest that much of the reported volume in the crypto perpetuals does not reflect trading interest. A natural objection is that these are young and small contracts, and that such contracts may simply trade actively relative to their size. I address this objection with a measure that the ticket construction never uses, namely open interest. Turnover, the ratio of a day's traded notional to open interest, scales volume by the size of the positions that the market carries. It is informative here for a simple reason. A round trip that opens and closes a position within the day adds to volume but leaves open interest unchanged, and trades that are self-matched or prearranged create no position at all. If the fixed-size flow does not build positions, turnover in the crypto contracts should be far above that of an established

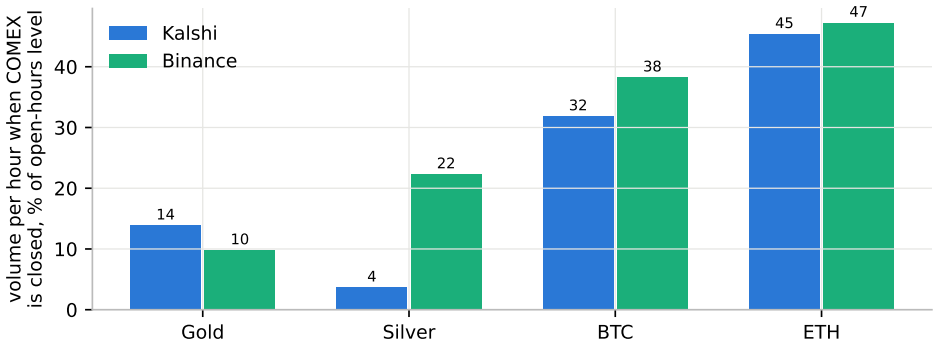


Figure 7: Volume per hour during hours when COMEX metals futures are closed (Saturday, Sunday before 18:00 ET, 17:00–18:00 ET daily), as a percentage of volume per hour during COMEX trading hours, 10–20 September 2026.

venue that trades the same underlyings. In the metals contracts, where Section 6 finds no such flow, it should not be.

I use Binance USD-M futures in the same four underlyings as the benchmark. Open interest for the Kalshi perpetuals is from the exchange's margin-market candlestick history (hourly, in dollars), and for Binance from the exchange's published open-interest metrics (five-minute, in dollars). Volume is each venue's own reported traded notional. Both venues count each trade once, in dollars, which I verify against the raw trade records: Kalshi candlestick volume matches the deduplicated trade tape to within 0.05%, and Binance volume matches its aggregated-trade archive exactly. The two turnover series are therefore measured on the same basis.[3]

Table 5 and Figure 8 report the results. Over the sample, median daily volume is 33 times open interest for the Kalshi BTC perpetual and 61 times for ETH, against 1.3 and 1.6 times on Binance, a difference by a factor of 25 to 38. Kalshi turnover exceeds Binance turnover on every one of the 110 trading days in both contracts. The gold contract behaves differently. It turns over 5.1 times its open interest on Kalshi against 4.7 times on Binance, a ratio of 1.1, and the two series move together from day to day, including the common troughs on weekends when COMEX is closed. Silver lies between the two cases, at 19 against 3.5. The crypto contracts thus carry positions that are very small relative to the volume printed against them. Neither the metals contracts under the same rebate program nor the reference venue show anything comparable.

The comparison supports the conclusions of the volume analysis. The excess is specific to the crypto contracts. Gold, the within-venue placebo, matches the reference market almost exactly, so that Kalshi's clearing, its API, and its member base do not by themselves produce elevated turnover. Open interest plays no role in the ticket construction of Section 4 and is not inflated by round-trip trading, so the agreement of the two approaches is corroborating evidence and not a restatement of the same fact. Turnover of tens of times open interest per day is difficult to reconcile with position-taking and is what one would expect from volume that leaves no position. Two separate pieces of evidence, the response of the flow to dated fee changes

[3]Open interest is single-sided and dollar-denominated on both venues. Turnover uses each day's mean open interest; using end-of-day open interest instead leaves the results unchanged. The sample and dating follow the rest of the paper (BTC and ETH from 3 June, gold and silver from 10 September, through 20 September 2026). The metals series cover eleven trading days.

Table 5: Volume, open interest, and turnover by contract and venue

	BTC	ETH	Gold	Silver
Kalshi				
Mean open interest ($m)	6.5	2.3	2.0	0.6
Mean daily volume ($m)	246	183	14	14
Median turnover (×)	32.8	60.7	5.1	19.2
Binance				
Mean open interest ($m)	7,119	4,616	422	201
Mean daily volume ($m)	10,370	7,952	1,584	612
Median turnover (×)	1.3	1.6	4.7	3.5
Kalshi / Binance turnover	24.5	38.2	1.1	5.5

Turnover is daily traded notional divided by the day's mean open interest; the table reports its median over the sample. Levels are sample means. Kalshi open interest and volume are from the margin-market candlestick history; Binance open interest is from the exchange's open-interest metrics and volume from the USD-M aggregated-trade archive. All figures in US dollars. BTC and ETH cover 3 June–20 September 2026 (110 days); gold and silver 10–20 September 2026 (11 days).

and its volume relative to the positions it leaves, therefore point in the same direction. Neither can establish who operates the process that produces this volume. I take up that question in Section 9, after examining the order book.

8 The Order Book Behind the Volume

Kalshi's public API shows the current order book but provides no history of it, so past states of the book cannot be retrieved (Section 3). From 23 September 2026 I therefore record it myself. I poll Kalshi's full order book for the four perpetuals through the public API five times a second, and I reconstruct the Binance USD-M books for the same assets from the exchange's 100 ms depth stream and periodic snapshots. The record runs from 15:00 UTC on 23 September to 20:00 UTC on 23 October, or thirty days. I compute the following measures on a five-second grid: the quoted spread in basis points of the mid; depth, defined as the dollar value of all quotes within 10 bps of the mid on both sides; the cost of buying $50,000 and $250,000 up the ask, measured as the distance of the average fill price from the mid; and the share of ask depth held by the single largest price level. The window begins three days after the public analysis of 20 September and after the end of the trade sample. It therefore describes the venue while it was under public scrutiny, and it includes 13 October, when a volume-based incentive program ended.

8.1 Depth and the cost of trading

Table 6 reports medians. Kalshi's BTC book holds $6.4 million within 10 bps of the mid against $46.6 million on Binance, and its ETH book $2.7 million against $22.9 million, so that the Kalshi books are seven to nine times thinner. The quoted spread is 0.36 bps in BTC and 0.41 bps in ETH, 30 and 11 times the Binance spread. The gap is largest for size. Buying $50,000 costs

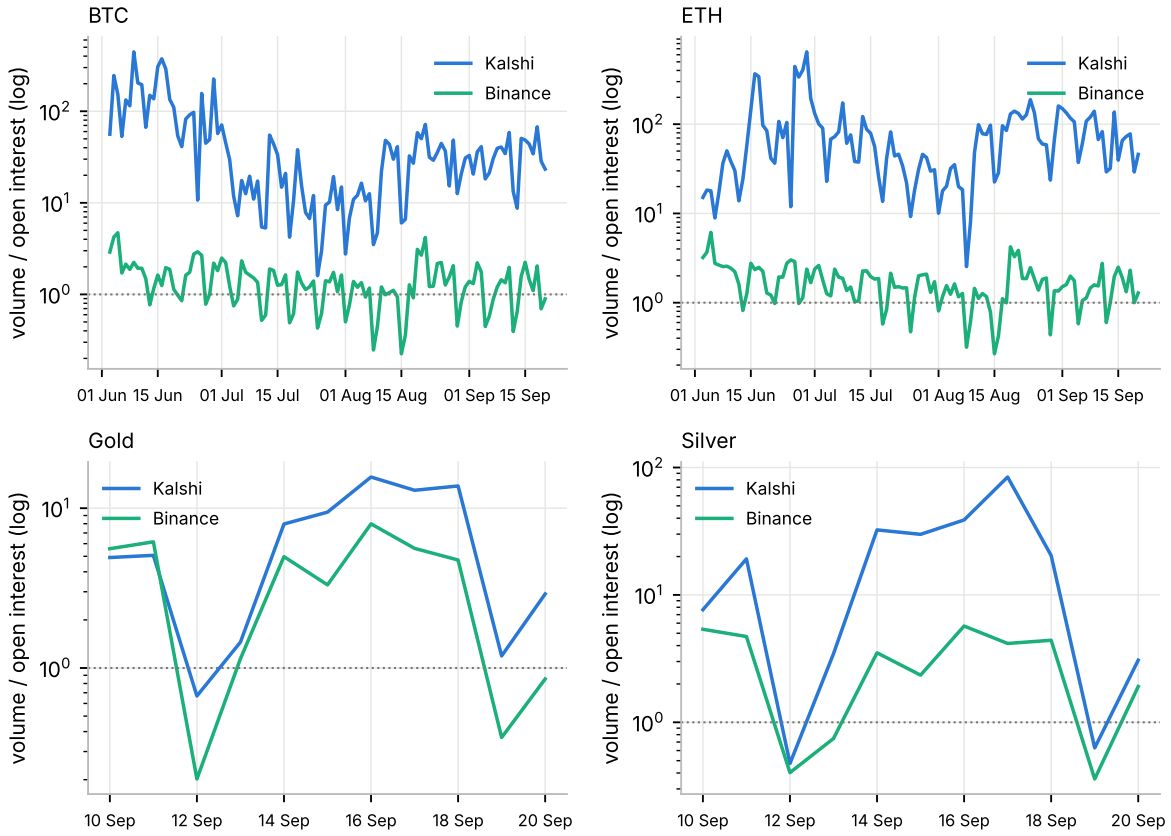


Figure 8: Daily turnover (traded notional divided by mean open interest, USD) for each contract on Kalshi (blue) and Binance USD-M (green), log scale. The dotted line marks a turnover of one. BTC and ETH span 3 June–20 September 2026; gold and silver span 10–20 September. The crypto contracts sit one to two orders of magnitude above the reference venue throughout, while gold tracks it closely, including the shared weekend troughs when COMEX is closed.

1.6 bps in BTC and 1.7 bps in ETH on Kalshi, compared with 0.006 and 0.02 bps on Binance, and at $250,000 the ratios are about 350 and 120 to one. A taker who enters and leaves a $250,000 position on Kalshi pays 4.2–5.1 bps in the book alone, before fees, whereas the same round trip on Binance costs a few hundredths of a basis point.

These costs put the turnover of Section 7 in perspective. On the median day open interest changed hands 33 times in BTC and 61 times in ETH (Table 5). Suppose that every change of hands were a taker crossing the Kalshi book at the half-spread and paying the list fee of 1.0–4.0 bps that applied to non-members from 18 August. ETH takers would then pay 0.7–2.6% of open interest each day, and BTC takers 0.4–1.4%, on positions that are not held. Turnover on this scale is expensive for anyone who pays to cross the book. It is close to free only for members trading under the rebate, and free for a member on both sides of the trade.

8.2 Fixed-size quotes in the book

The book shows directly what Section 4.3 infers from trade timestamps. On the median snapshot the largest price level holds 12% of ask depth in Kalshi BTC and 17% in ETH, against 7% and 6% on Binance. The resting size at the top of the Kalshi book returns to a small set of dollar values day after day. In October the most frequent ETH values were about $4,000

Table 6: Order-book liquidity, Kalshi and Binance, 23 September – 23 October 2026

		Spread	Depth ±10 bps	Cost to buy (bps)		Largest
Asset	Venue	(bps)	($m)	$50k	$250k	level
BTC	Kalshi	0.36	6.37	1.63	2.12	12%
	Binance	0.012	46.57	0.006	0.006	7%
ETH	Kalshi	0.41	2.69	1.74	2.53	17%
	Binance	0.039	22.89	0.020	0.021	6%
Gold	Kalshi	0.25	3.54	1.60	2.24	29%
	Binance	0.024	6.92	0.012	0.19	8%
Silver	Kalshi	1.48	3.46	2.08	2.89	30%
	Binance	1.65	3.59	0.83	1.11	10%

Medians over a five-second grid of order-book snapshots, 15:00 UTC 23 September to 20:00 UTC 23 October 2026. Spread and cost to buy are in basis points of the mid; cost to buy is the average fill price of a $50,000 or $250,000 market buy up the ask, relative to the mid. Depth is the dollar value of bid and ask quotes within 10 bps of the mid. Largest level is the share of ask depth within 2.5% of the mid held by the single largest price level. Kalshi books are polled five times a second through the public API; Binance USD-M books are reconstructed from the 100 ms depth stream and REST snapshots.

and $5,200, alongside an ETH trade size of $4,050 that carried about half of ETH notional in the same weeks. Over the window, trades whose dollar size is within 2% of one of the day's recurring resting sizes account for 58% of ETH trades and 23% of BTC trades.

8.3 Price impact

In its public response to the analysis of 20 September, Kalshi attributed the flow to a market maker's fixed-size resting quotes being taken by faster traders when the price of the underlying moves on another exchange (Kalshi, 2026). A trade that picks off a stale quote carries information. The quote it hits should be replaced at a new price, and Kalshi's mid should move in the direction of the trade. I measure price impact as twice the change in Kalshi's own mid from the last snapshot before a trade to 1, 5, and 30 seconds after, signed in the taker's direction, and I compare trades at a recurring resting size with all other trades (Figure 9).

Fixed-size trades move the mid by 0.010 bps after one second in BTC and by 0.015 bps in ETH, a quarter and a fifth of the 0.041 and 0.078 bps moved by other trades in the same markets. After thirty seconds the figures are 0.038 against 0.066 bps in BTC and 0.039 against 0.079 bps in ETH. Most fixed-size trades thus hit a quote that is replaced at the same price. This finding is in line with the taker markouts of Section 5.2, which show a gross edge against Binance of a few tenths of a basis point, and it is difficult to reconcile with a flow that consists mainly of stale-quote arbitrage.

8.4 The metals books

The metals contracts sharpen the comparison. Kalshi's gold and silver books are no deeper than its crypto books. Each holds $3.5 million within 10 bps of the mid, a $50,000 buy costs 1.6 and 2.1 bps, and close to a third of ask depth sits at a single price level (Table 6). Yet gold

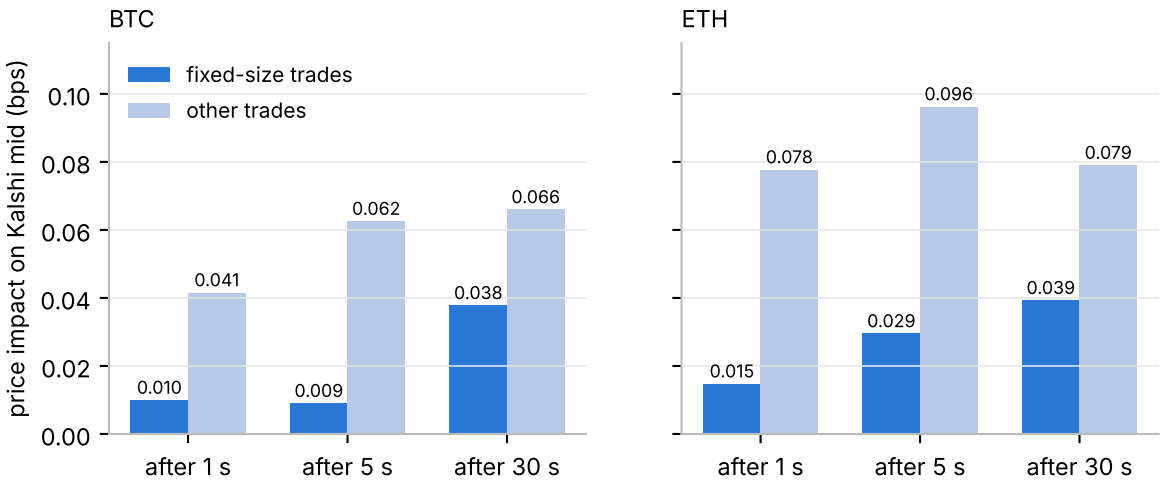


Figure 9: Price impact on the Kalshi mid, 23 September – 23 October 2026: twice the change in Kalshi's mid from the last book snapshot before a trade to 1, 5 and 30 seconds after, signed in the taker's direction, in basis points. Daily values averaged with weights equal to the day's trades. Fixed-size trades are trades within 2% of a dollar size that recurs at the top of the Kalshi book that day.

turned over 5.1 times its open interest over 10–20 September, in line with Binance (Table 5), and on 5 October Kalshi's API reported 24-hour volume of 8 times open interest in gold and 7.5 times in silver, against 35 times in BTC and 67 times in ETH. A thin book does not by itself produce extreme turnover on this venue. The high turnover of the crypto contracts arises together with the fixed-size flow.

8.5 13 October: a volume incentive ends

On 28 September Kalshi filed the termination of its Volume Incentive Program, effective no earlier than 13 October (KalshiEX LLC, 2026e). The program paid members a share of a fixed reward per market in proportion to their volume. Its terms exempted perpetual futures from the price range that limited eligible trades in event contracts, and it excluded members with a Market Maker Agreement. The Liquidity Provider Program, which pays members with such an agreement for meeting quoting obligations under terms filed as a confidential appendix, runs to 1 December 2027 (KalshiEX LLC, 2026d), and the perpetual fee rebate runs to the end of 2026. If the fixed-size flow were produced to earn the volume reward, it should have changed on 13 October.

I find no such change. In the week from 13 October ETH traded $338 million a day against $227 million in the week before, and its most common trade size, $4,050, carried 52% of notional against 45%. In BTC the most common size, $3,050, carried 29% against 28%.[4] The book did not change either. Kalshi's median daily cost of buying $50,000 was 1.69 bps in BTC and 1.74 bps in ETH from 13 October, against 1.58 and 1.71 bps before, and depth within 10 bps was $6.8 million and $2.8 million against $6.1 million and $2.8 million (Figure 10). The fixed-size flow therefore does not depend on a volume reward that was open only to members without

[4] Here the size of a trade is its dollar notional rounded to $50, and the share is that of the most common size above $500. This rule requires no window below a round number, which matters because after 21 September the tickets moved to sizes such as $4,050 and $3,050 that the round-dollar rule of Section 3 does not cover.

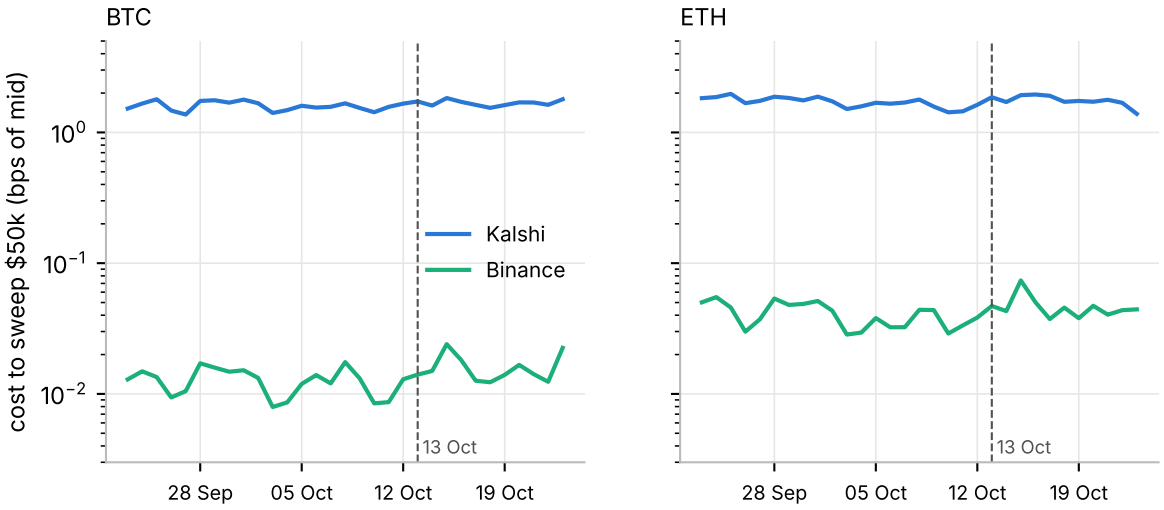


Figure 10: Cost of buying $50,000 up the ask, daily median of hourly averages, Kalshi (blue) and Binance (green), 23 September – 23 October 2026, log scale. Dashed line: 13 October, the earliest effective date of the Volume Incentive Program's termination.

a market-maker agreement.

9 Interpretation

The fee events of Section 5, the turnover comparison of Section 7, and the order book of Section 8 all indicate that the fixed-size flow does not behave like trading and builds no position. The open question is who produces it. I consider three hypotheses. Under H_1, the maker and the taker have the same owner. Under H_2, they are two parties that act under an arrangement, for example a market-making contract with volume conditions. Under H_3, they are independent: a subsidized maker posts fixed-dollar quotes, and an independent arbitrageur takes them.

The evidence against H_3 is circumstantial but consistent. The maker lost the full markout on every fill for eight weeks before any rebate could compensate it, and the taker's edge has been at or below its fee since. The taker's order size tracked the maker's size through three changes, including a same-day change in two contracts. The taker did not become more selective when its fee rose from zero to its entire gross edge, while a separately identifiable population of arbitrageurs on the same venue reacted strongly to a fee cut on the same day. The flow scaled up three- to fivefold within 42 hours of the fee switch-on, once a full rebate was assured, and rose tenfold on 10 August without any public change in incentives. Its order sizes were changed in both contracts within ten seconds on 24 August, and its quoting cycle in both contracts within minutes on 25 August. The order book recorded after the sample adds that fixed-size trades move the venue's own price only a fifth to three fifths as much as other trades, which is not the price response one expects from stale-quote arbitrage. None of this is impossible for two independent firms, but each observation would require a separate coincidence.

The evidence does not separate H_1 from H_2. The market-maker amendment of 3 June for perpetuals is confidential, so that a volume condition or a payment per contract can be neither confirmed nor excluded. The fee schedule itself provides one public motive. Until 24 June,

volume determined each member's initial fee tier, and maker tiers can be reached by holding a share of the venue's maker volume. A maker with half of all volume qualifies for the top tier on that ground alone. After 24 June the tier ceased to matter for members, because all fees were rebated. One public program can be set aside: the flow and the book were unchanged when the Volume Incentive Program, which excluded members with a market-maker agreement, ended on 13 October. If an arrangement exists, it does not run through that program.

What the evidence does establish is that between a fifth and two thirds of the volume reported for these contracts, depending on the week, is produced by a process that does not respond to its own trading profit, leaves no position, and costs nothing to run under the exchange's own rebate design. This is sufficient to conclude that the volume statistic does not measure trading interest. It is not sufficient to identify the parties to these trades.

10 Conclusion

Since their first week, Kalshi's perpetual futures have carried a flow of fixed-dollar quotes that are taken in full by orders of the same size, and this flow now accounts for about half of reported volume. The exchange's own filings show that the flow has been costless for members to produce throughout: no fees applied for three weeks, then a full rebate, and then a split rebate that sums to zero across the two sides of a trade. The flow scaled with the rebate and did not respond to a fee change that removed the taker's edge. Its size changed in both contracts within ten seconds, and its cycle time in both contracts within minutes, on consecutive days. The gold and silver contracts listed under the same program show none of these features and follow the trading hours of their reference market. Order books recorded after the sample show the flow on a book seven to nine times thinner than Binance's, with little effect on the venue's own price, and unchanged when a volume-based reward ended. Whether the two sides of the flow are one firm or two cannot be observed in public data. The data do show that the flow does not reflect trading interest.

These findings have implications beyond the measurement of one venue's activity. Kalshi's chief executive has stated publicly that the company is considering an initial public offering, though not in 2026 (CNBC, 2026a), and press reports describe talks to raise funds at a valuation near $40 billion (CNBC, 2026b), against a reported annualized revenue run-rate of roughly $2 billion. Because the exchange earns transaction-based revenue, a valuation of this order rests substantially on the level and growth of trading in both its event and its perpetual markets. The fixed-size flow documented here is roughly half of the notional in the BTC and ETH contracts, which are themselves the large majority of perpetual volume. To the extent that a material share of reported perpetual volume is manufactured, headline volume and its trajectory may overstate the underlying trading demand on which such a valuation would rest. This distinction matters most for retail investors, who are the natural buyers of a prediction-market exchange at a public listing. They are least able to audit trade-level data and are therefore the least equipped to discount inflated volume statistics and the most exposed if a valuation anchored on them proves fragile. The evidence in this paper does not extend to the event-contract business, which accounts for most of the venue's activity. It does show that reported volume in the

perpetual complex cannot be taken at face value, and reported volume is the first input into any outside assessment of the trading franchise.

A Elasticity of Ticket and Non-Ticket Flow to Market Activity

Table 7 reports the stacked regressions discussed in Section 5.3. Each column is a sample and each panel a Binance variable. The difference row is the coefficient on the interaction of that variable with the ticket indicator.

Table 7: Stacked elasticity regressions with a ticket interaction

	All	No fees 3–23 Jun	Full rebate 24 Jun–18 Aug	Taker 0.3 bps 19 Aug–20 Sep
Panel A: log Binance notional				
BTC				
Non-ticket flow	0.881	0.035	0.961	0.769
	(0.092)	(0.248)	(0.094)	(0.041)
Ticket flow	0.857	0.014	0.885	0.598
	(0.128)	(0.193)	(0.172)	(0.066)
Difference	-0.024	-0.021	-0.077	-0.171***
	(0.070)	(0.097)	(0.107)	(0.064)
Observations	5168	994	2604	1570
ETH				
Non-ticket flow	0.649	-0.297	0.821	0.752
	(0.143)	(0.323)	(0.129)	(0.041)
Ticket flow	0.465	-0.502	0.548	0.374
	(0.154)	(0.250)	(0.169)	(0.097)
Difference	-0.184***	-0.205	-0.273***	-0.378***
	(0.065)	(0.164)	(0.079)	(0.073)
Observations	5137	954	2619	1564
Panel B: log realized volatility				
BTC				
Non-ticket flow	1.088	-0.265	1.152	1.106
	(0.154)	(0.391)	(0.154)	(0.072)
Ticket flow	0.902	-0.301	0.954	0.766
	(0.200)	(0.315)	(0.269)	(0.114)
Difference	-0.187*	-0.036	-0.198	-0.340***
	(0.096)	(0.177)	(0.151)	(0.104)
Observations	5168	994	2604	1570
ETH				
Non-ticket flow	0.531	-0.999	1.058	1.120
	(0.281)	(0.503)	(0.218)	(0.060)
Ticket flow	0.286	-1.238	0.826	0.519
	(0.294)	(0.377)	(0.298)	(0.130)
Difference	-0.245**	-0.239	-0.232	-0.601***
	(0.114)	(0.270)	(0.152)	(0.096)
Observations	5137	954	2619	1564

OLS on a panel of contract-hours stacked over the two flow types (ticket and non-ticket), estimated separately by contract and sample. The dependent variable is log hourly Kalshi notional of the flow type. Regressors are the log of the Binance USD-M variable in the same asset (hourly notional in Panel A, realized volatility from one-minute returns in Panel B), an indicator for ticket flow, their interaction, and hour-of-day fixed effects. The non-ticket row is the coefficient on the Binance variable, the ticket row is the sum of that coefficient and the interaction, and the difference row is the interaction. Standard errors clustered by day in parentheses. *, **, ***: the difference is significant at 10, 5 and 1 percent.

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