

Weekly Hot Take

Prediction Markets: The Next Big Thing?

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Summary

- Prediction markets leverage financial incentives to enhance prediction accuracy. These markets cover a wide range of topics, from sports to political events, and have evolved with blockchain technology to offer transparency and trust.
- Prediction markets are touted for providing accurate and real-time predictions. They offer novel investment and hedging opportunities by allowing users to bet on specific outcomes, acting as financial safety nets against various events that traditional products can't cover.
- Despite their potential, prediction markets face significant challenges. Compared to traditional financial markets and sports betting, they lack appeal to both serious investors and gamblers, resulting in low liquidity.

Figure 1 : The number of traditional media outlets referencing Polymarket is increasing.

Kamala Harris VP Pick: Tim Walz Takes Lead Over Josh Shapiro In Crypto Betting Odds On Polymarket

Minnesota Governor Tim Walz established a lead over the Governor of Pennsylvania, Josh Shapiro on the cryptocurrency-based betting platform,...

Harris odds surge to 43% on Polymarket after Trump's NABJ panel, reaching \$467 million wagered

Discover the latest odds on the Harris Polymarket platform. Find out how political events have influenced the betting landscape.

Bitcoin price to dip below \$60k in August, according to Polymarket

A Polymarket poll shows that Bitcoin price may drop below \$60000 before September as it continues to lose momentum.

Polymarket: Harris' odds up to 46% after Walz VP pick

Polymarket users increased bets on Democratic candidate Kamala Harris becoming president after Minnesota governor Tim Walz was announced as...

Introduction

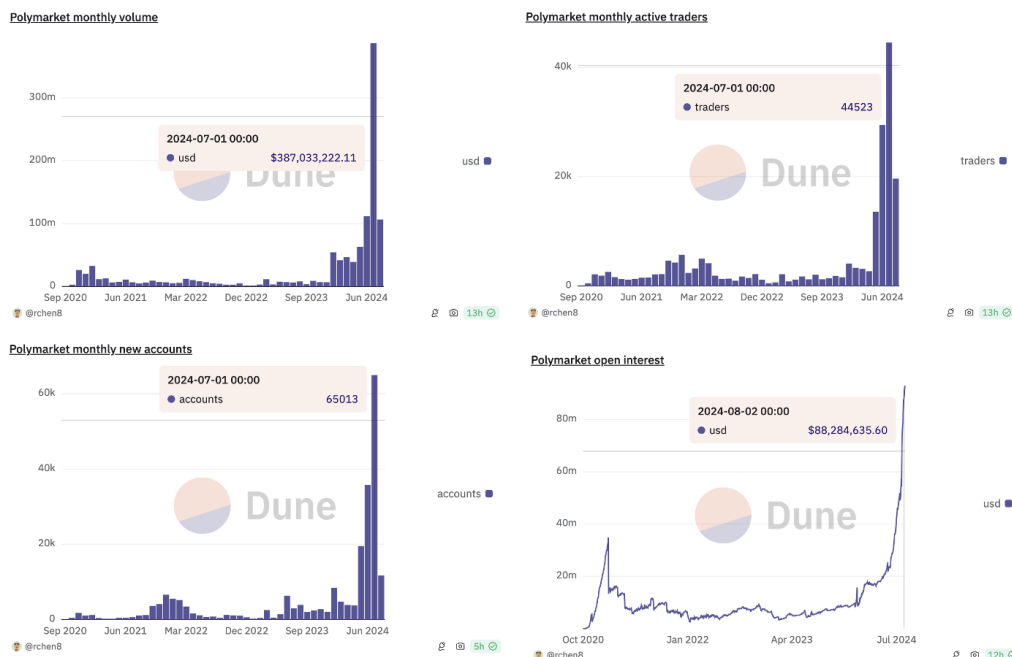
The intertwining of finance and gambling is a phenomenon that dates back to ancient civilizations. In ancient Greece and Rome, people placed bets on various events, from sports competitions to political elections, laying the foundations for the modern financial systems we recognize today. The 17th-century Amsterdam Stock Exchange formalized the practice of speculating on future outcomes through commodities and company shares. This evolved further with the advent of futures contracts in the 19th century, which allowed farmers and merchants to hedge against price fluctuations. In the contemporary era, prediction markets epitomize this age-old connection, leveraging financial incentives to forecast events in domains such as politics, sports, and even weather. By harnessing the collective insights of participants, these markets enhance the accuracy of predictions, underscoring the inseparable relationship between finance and gambling.

What is a Prediction Market?

Prediction markets, also known as betting markets, information markets, decision markets, idea futures, or event derivatives, are instruments that enable individuals to predict specific outcomes using financial incentives. In simple terms, these markets allow participants to place bets on a wide range of topics, from sports outcomes and financial prices to political events and even weather conditions.

The first wave of crypto-based prediction markets began with Augur, launched on the Ethereum mainnet as one of the earliest decentralized applications in the ecosystem on July 9th, 2018. However, Augur struggled to gain significant traction due to high Ethereum gas fees and a lack of liquidity. Today, Polymarket has emerged as the leading on-chain prediction market. Polymarket's cumulative volume for 2024 has already surpassed \$600 million, and its user base has grown to over 150,000. Notably, Polymarket is increasingly cited as a reliable source for gauging the probabilities of various events by mainstream media, demonstrating its growing influence and credibility in the prediction market space.

Figure 2 : The number of Polymarket users is rapidly increasing.



Source: Dune (@rchen8)

Why Prediction Markets Could Gain Traction

Surpassing Surveys in Accuracy

One of the strongest arguments in favor of prediction markets is the assertion that real-money/dollar stakes enhance the accuracy of predictions. Financial incentives compel participants to invest more effort into making informed predictions. Casual guesses about outcomes are often made with little thought. However, when money is on the line, individuals are more likely to analyze line-ups, past performances, and other relevant details to improve their chances of winning. Research supports this notion, indicating that markets involving real money tend to produce more accurate predictions.

Prediction markets have been shown to outperform traditional surveys in accuracy. As Berg, Nelson, and Rietz (2008) noted in "Prediction Market Accuracy in The Long Run," markets with financial stakes consistently yield more precise forecasts than traditional polling methods. This sentiment is echoed in Liester's study, "Prediction Markets vs. Political Polls: Forecasting Election Outcomes," which found that "prediction markets provide a better forecaster for political outcomes." Such research suggests that the data generated by prediction markets surpass traditional surveys like phone polls in precision, offering a clearer and more reliable picture of future events. This makes prediction markets a powerful tool for forecasting a wide range of outcomes and is a reason why even trusted media outlets often reference them.

"Prediction markets" are designed specifically to forecast events such as elections. Though election prediction markets have been being conducted for almost twenty years, to date nearly all of the evidence on efficiency compares election eve forecasts with final pre-election polls and actual outcomes. Here, we present evidence that prediction markets outperform polls for longer horizons. We gather national polls for the 1988 through 2004 U.S. Presidential elections and ask whether either the poll or a contemporaneous Iowa Electronic Markets vote-share market prediction is closer to the eventual outcome for the two-major-party vote split. We compare market predictions to 964 polls over the five Presidential elections since 1988. The market is closer to the eventual outcome 74% of the time. Further, the market significantly outperforms the polls in every election when forecasting more than 100 days in advance.

Real-time Update

Prediction markets offer the most up-to-date prediction data available. Unlike traditional surveys or polls, which can take hours to weeks to produce results, prediction markets reflect information in real time as risks are constantly re-priced via financial transactions. This immediacy allows prediction markets to track public sentiment live, serving as a valuable resource for traditional media seeking up-to-the-minute insights. Their ability to quickly assimilate and reflect current events and opinions sets prediction markets apart from traditional surveys relying on slow data-gathering methods.

New Investment & Hedging Opportunity

Prediction markets also offer novel opportunities for investment and hedging. Take investment in a movie studio, for example. From the perspective of traditional financial instruments, one might invest in the equity stake of a movie studio as a bet on its overall success. A prediction market, on the other hand, would allow more granular and specific bets, such as the number of viewers for a particular movie release. The flexibility of the prediction market makes more precise and targeted risk exposure possible, enabling investors to isolate risks and express their views in a variety of ways.

Moreover, prediction markets function similarly to conventional financial tools by providing mechanisms to hedge against unexpected events. For example, a pizza shop owner in NYC concerned about a potential snowstorm could bet on heavy snowfall in a prediction market. This bet would act as a financial safety net (hedging instrument), compensating for any losses incurred due to the storm. Thus, prediction markets can integrate financial strategies into everyday life, facilitating risk management and uncertainty mitigation.

Figure 3 : Past topics on Polymarket.

Past Topics	
Will Beirut airport close by August 5?	Drake arrested by Friday?
Kanye West retires in July ?	TikTok sale announced before August?
CrowdStrike outage fixed by Noon?	Elon Musk # of tweets July 19~26?
Biden falls asleep during debate?	Will Bronny make a 3 in his next game?
Bitboy KO'd	Fact Check: Was it a real gun?

Source: Polymarket, Presto Research




Leveraging Blockchain Technology

Transparency

The biggest challenge in modern gambling stems from issues of trust with the platform operator, commonly referred to as "the house." Numerous cases have surfaced where these operators manipulate probabilities or delay payouts, undermining the integrity and fairness of the gambling experience. According to a report by the UK Gambling Commission, there were over 8,000 complaints related to gambling operators in 2021 alone, highlighting a significant trust deficit within the industry.

Blockchain technology offers a promising solution to these issues. By leveraging blockchain, gambling platforms can introduce transparency and immutability into their operations. Smart contracts can automate payouts based on predefined conditions, ensuring that winners receive their funds immediately and without the risk of interference from the operator. Moreover, blockchains can prevent tampering or manipulation of game outcomes by recording and making transactions accessible to the public.

Figure 4 : Anyone can track Polymarket bets and payouts.

Buy		Will Michelle Obama win the popular vote in the 2024 Presidential Election? Yes 1¢ 1,167 shares	\$15.17 27 minutes ago
Buy		Will Trump post on X again before election? No 31¢ 40 shares	\$12.40 27 minutes ago
Buy		China wins the most medals in 2024 Paris Olympics? No 100¢ 11 shares	\$10.53 28 minutes ago

Transaction Hash: 0x19d996c043846645c2d170c812b1ce84a9f6f83f02c148d3a566fcb77d3dc928

Status: Success

Block: 60357843 700 Block Confirmations

Timestamp: 27 mins ago (Aug-08-2024 11:26:09 PM UTC)

Transaction Action: Transfer 2333700000 of ERC-1155

Sponsored:

From: 0x811607C0c87De8393A3514F910F7e5a41E2C7E32

Interacted With (To): 0x78769D50Be1763ed1CA0D5E878D93f05aabf29e

ERC-20 Tokens Transferred: 2

All Transfers Net Transfers

From 0x9d84cE03...0f1dC1344 To 0xC5d563A3...15220f80a For 15.16905 (\$15.17) USD Coin (Po... (USDC.e)

From 0xC5d563A3...15220f80a To 0x59ee6c6A...f762B684d For 15.16905 (\$15.17) USD Coin (Po... (USDC.e)

ERC-1155 Tokens Transferred: 2

ERC-1155 For 1166850000 of Token ID [17518600131624...] From 0x59ee6c6A...f762B684d To 0xC5d563A3...15220f80a

ERC-1155 For 1166850000 of Token ID [17518600131624...] From 0xC5d563A3...15220f80a To 0x9d84cE03...0f1dC1344

Value: 0 MATIC (\$0.00)

Transaction Fee: 0.02430671810199857 MATIC (\$0.01)

Gas Price: 102.00006757 Gwei (0.00000010200006757 MATIC)

Source: Polymarket, polygonscan, Presto Research

Frictionless Value Exchange Rail

The signal from prediction markets is more reliable the greater the participants. The odds from the market where only a few thousand dollars worth bets trade can be manipulated more easily than the odds from the market where millions trade. However, attracting sufficient bets in a traditional betting platform can be challenging due to various issues such as jurisdictional hurdles, regulations, and banking inefficiencies.

Blockchain technology can help overcome these problems. Blockchain as a frictionless value exchange rail serves an ideal network upon which a prediction market can be built, given bets can be sourced without limitations of time and space, thus maximizing liquidity aggregation.

Barriers to Becoming Mainstream and What is Needed

The biggest problem facing prediction markets today is liquidity. Even at their peak, attention is mostly short-lived and limited to certain periods like elections, with only the top 3 to 5 markets having enough volume for people to trade in size (e.g., \$1000). So why are prediction markets struggling to attract liquidity, and what should be developed to address these issues?

Prediction Market vs TradFi Market

Despite their potential, prediction markets are more suited to gamblers than traditional investors due to their all-or-nothing payout structure. Although participants can theoretically sell positions before the

resolution date, most markets tend to be decided in a moment rather than over time. For instance, while investors might take profits or stop losses on topics like “who will get the most gold medals in the Olympics,” others, such as “whether Biden will say ‘folks’ in his inaugural speech,” can conclude instantly, making it nearly impossible to set a stop-loss due to rapid market shifts. With the likelihood of losing everything significantly higher than in traditional markets, prediction markets struggle to attract serious investors and institutions because of their inherent structure and volatility.

→ So What Do We Need?

The all-or-nothing payout structure also exists in the traditional financial market in the form of “options.” Options can be divided into two categories: short-dated or 0DTE (zero-days-to-expiration) options and long-dated options. The former are more speculative and have recently gained traction among retail users, which is where prediction markets could potentially attract some users (although I will discuss later why this hasn't happened). Long-dated options, however, are primarily used for hedging rather than as tools for outright directional exposure. It is also important to note that options are often combined with other options or stocks (e.g., straddles, iron condors, covered puts) rather than used as outright calls or puts. Therefore, for prediction markets to attract long-dated options users, they need to go beyond serving as pure “investment” vehicles and also function as effective hedging tools.

Prediction Market vs Sports Betting

Then how about sports betting, which is for gamblers? Even compared to sports betting, prediction markets struggle to attract gamblers due to slow resolution (long-term markets) and a lack of quality subject matters that can only be traded on prediction markets.

Out of the top 10 volume markets in Polymarket, the resolution dates are as below, which contrasts with sports betting, where most resolutions end in a few hours or a maximum of a week. For some markets, people don't know when the resolution will exactly happen or if it will happen before the end date of the market. And this is a key reason why prediction markets struggle to attract 0DTE users, who prefer quick resolutions.

Figure 5 : Resolution dates of the Top10 projects on Polymarket.

	Topic	Volume	Expected Resolution Date
1	Presidential Election Winner 2024	\$523.4M	5-Nov-24
2	Presidential Election Popular Vote Winner	\$67.8M	5-Nov-24
3	Will Biden finish his term?	\$16.0M	20-Jan-25
4	Electoral College Margin of Victory in Presidential Election	\$13.8M	5-Nov-24
5	Fed rate cut by...?	\$9.3M	TBD
6	Democratic Nominee 2024	\$7.1M	TBD
7	Most medals at Paris Olympics?	\$5.1M	11-Aug-24
8	Most gold medals at Paris Olympics?	\$5.1M	11-Aug-24
9	Balance of Power: 2024 Election	\$4.7M	5-Nov-24
10	How many Fed rate cuts this year?	\$3.6M	31-Dec-24

Source: Polymarket, Presto Research

With long resolution dates, the returns in prediction markets are not attractive to many users. Even if you bet on an evenly split market, the return is 2x, which might seem significant but is not appealing to crypto gamblers who can bet on memecoins that might 10x in 10 minutes. From a gambler's perspective, the

risk and opportunity cost of having capital tied up for a long period of time is not appealing, as there are faster ways to make quick bets elsewhere.

→ **So What Do We Need?**

One possible solution to this issue is designing leveraged products that allow users to be more capital-efficient. With leveraged products, users could worry less about their capital being tied up for extended periods. Another solution includes using yield-bearing stablecoins or even designing a lending protocol that allows users to borrow against their positions.

Moreover, the subject matter in prediction markets today is mostly limited to topics that could be bet on elsewhere. The current popular markets include politics (due to the election season), crypto, and sports. Thus, there is little incentive for people to use prediction markets as crypto exchanges and sports betting sites serve as better platforms for these activities, offering more liquidity and a better user experience.

Figure 6 : Most of the volume comes from politics and crypto compared to science.

Top Volume by Categories		
Politics		
1	Presidential Election Winner 2024	\$523.4M
2	Presidential Election Popular Vote Winner	\$67.8M
3	Will Biden finish his term?	\$16.0M
Crypto		
1	Eigenlayer market cap (FDV) one day after launch	\$1.2M
2	Ethereum all time high wen?	\$1.1M
3	Ethereum all time high in 2024?	\$741.0K
Science		
1	2024 July hottest on record	\$1.4M
2	Meissner effect confirmed near room temperature	\$333.5K
3	When will GPT-5 be announced?	\$301.3K

Source: Polymarket, Presto Research

→ **So What Do We Need?**

Currently, platforms like Polymarket thrive on events such as elections and the Olympics, which do not occur frequently and may only generate short-lived interest. For prediction markets to maintain consistent engagement, they need to introduce topics that are as exciting as sports and as regular as CPI releases or Federal Reserve rate hikes but are not tradable in other markets. Identifying subjects that are uniquely or predominantly suited to prediction markets will be key to their growth and sustainability.

Conclusion

While prediction markets offer unique opportunities and advantages, they have only recently started to gain traction in web3 space. The barriers to entry remain high, as participation often requires familiarity with blockchain technology, including cryptocurrency transfers and management (e.g., bridging and using MetaMask). To truly tap into their potential, prediction markets must address these accessibility challenges and focus on creating a more user-friendly experience. With the strategic improvements mentioned above and broader educational efforts, these markets have the potential to redefine how we predict future events and interact with the associated risks.

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